OFFICE AUTOMATION

Selected Bibliographical

Resources and abstracts

Office Communications Systems Program

Department of Communications

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13652 **A method for automatically generating business graphs.** T.Shimomura (Nippon Telegraph & Telephone Public Corp., Yokosuka, Japan).
IEEE Comput. Graphics & Appl. (USA), vol.3, no.6, p.55-9 (Sept. 1983).
The method described here automatically generates appropriate business charts from any set of data. By specifying only data sets, users should be able to get graphs that represent the characteristics of the data exactly. This system takes advantage of menu frames and interactive editing to produce graphic representations of data quickly and easily. (2 refs.)

13025 **Use of ISO class 4 transport on local area networks.** D.P.Stokesberry (Systems & Network Architecture Div., NBS, Washington, DC, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.371-83
At the request of a number of companies and the chair of IEEE 802, the National Bureau of Standards has sponsored a series of workshops related to the implementation of the ISO/NBS Class 4 transport protocol on local area networks that implement the IEEE 802 protocols. One result of the workshops is that the participants agreed to establish two neutral sites to demonstrate the ISO Transport and IEEE 802 local area network protocols. One site, hosted by General Motors, will support the IEEE P-802.4 token bus local area network standard. The second site, hosted by NBS, will support the IEEE P-802.3 CSMA/CD standard. Both sites will implement IEEE P-802.2 type 1, class 1 logical link control service for layer 2, an octet of zero representing a null network independent convergence protocol for layer 3 and the mandatory portions of the NBS specification of ISO Class 4 transport for layer 4 (9 refs.)

13727 **Future investments in the work place [office automation].** R.Kotthaus (Standard Elektrik, Lorenz AG, Stuttgart, Germany).
Systems 83 Proceedings Computer und Kommunikation. 8 Internationale Fachmesse und Internationaler Anwender-Kongress (Systems 83 Proceedings Computers and Communication. 8th International User Congress and Trade Fair), Munich, Germany, 17-21 Oct. 1983 (Munchen, Germany: Munchener Messe-und Ausstellungsgesellschaft 1983), p.225-50 In German.
Presents an overview of office automation and discusses the five system families from which office automation is built up. These families are: (1) extended typewriters, which can also be used as a simple text processing system; (2) microcomputers, also known as personal computers, with text processing, a freely programmable part, graphic possibilities, various software tools and also the possibility in the future of using it as a mailbox; (3) the office system with text processing and editing, possible programmable part, various software tools, mailbox, and with future-oriented systems; also speech and graphics; (4) the distributed data processing system, DDP, with text processing packages, mailbox and possible graphics; and finally (5) the mainframe computer, with text processing packages, mailbox system and graphics. The LAN is discussed and its connection to each aspect of office automation, and how it can all build up to an ISDN. (no refs.) *A.N.K.*

10829 **Evaluating the real benefits.** A.G.Hopwood.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.37-50. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
Many practical examples are used to provide an overview of key problem areas that have been encountered during and after automisation. This illustrates the narrow scope and short time focus that often characterise evaluations of information systems. A basis for making wider, more strategic assessments that take into account the political nature of the decision-making processes involved is suggested. (4 refs.)

10621 **Office automation in the US and Japan.** R.M.Landau (Sci. Information Assoc., Kensington, MD, USA).
Bull. Am. Soc. Inf. Sci. (USA), vol.9, no.5, p.6-11 (June 1983). [received: Nov. 1983]
In the US, the words 'office automation' mean many different things. Records management people view office automation (OA) as merely an extension of efficiently handling the physical arrangements of information on paper. Computer people view OA as an extension of the application of digital computer technology. Communication people consider OA an extension and enlargement of voice-oriented telecommunications systems. Systems people see OA as an important area for improving the information processes in offices. (no refs.)

10692 **Training for future office skills.** J.Hebenstreit.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.205-20. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
Computer systems are also becoming an intrinsic part of many aspects of daily life, with virtually the whole population of industrialized countries using computers in some way. The author examines the educational and training requirements to cope with the skills both in the office and in the broader applications of computing. The types of people who need to be trained are discussed and the crucial questions of how and where the training can be done are examined. User friendly ergonomics are important elements in meeting the educational and training challenge. (6 refs.)

10737 **Cut office noise, increase production.**
Mod. Off. Technol. (USA), vol.28, no.11, p.54-60 (Nov. 1983).
The biggest complaint about the open office is the noise level created by machines and human voices. This can be corrected by the implementation of the acoustic design principles outlined in the article. Zones of communication and zones of privacy need to be established. These are areas within which people can hear easily and outside of which they cannot. (no refs.)

10830 **Strategic planning for the new system.** P.G.W.Keen.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.51-67. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
Examines the process of initiating and managing new office technology projects and explains why necessary strategic change needs momentum from the top of the organization. The change process is shown to involve organizational politics because it challenges the status quo and can substantially alter the influence and autonomy of individual managers and departments. (6 refs.)

10792 **The changing roles of managers.** B.Wynne.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.138-51. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
Changes in secretarial and clerical work have often been the focus of attention in general discussions on the effects of new office technology. The impact on managers, however, is of equal importance both in terms of costs and numbers. The author examines the diverse roles played by information in different management roles, emphasizing the crucial influence of informal information flows and organizational interactions in determining management effectiveness. Advice is provided on how to develop systems which are adapted to the actual way organizations and managers operate and which enlarge the scope and interest of management jobs. (8 refs.)

13666 **Mail is partner in an electronic marriage.** D.Ferris.
Comput. Wkly. (GB), no.889, p.24 (1 Dec. 1983).
Electronic mail and personal computers are well matched. They are particularly useful when information needs to be sent between terminals. This would previously have been done by telephone. (no refs.)

10831 **Creating the right organizational environment.** F.Butera, E.Bartezzaghi.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.102-19. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
Machines are not scattered devices but part of a purposeful technological structure. Men are not isolated entities but part of a social system. Organizational structures cannot be adequately encapsulated in simplistic formal descriptions of procedures and quantified analyses of information volumes and transactions. The author examines in detail the nature of organizational design for computer-based office work. Examples are given of computer-based management information systems which failed because of inadequate social and organizational design. Guidelines are provided to assist in the design of organizations and job functions for new office information systems. (8 refs.)

13667 **Papering over the cracks [office automation implementation].** P.M.Haine (Lanchester Polytech., Coventry, England).
Comput. Bull. (GB), ser.2, no.38, p.8-9 (Dec. 1983).
A review of a number of office automation and personal computing projects lead the author to some apparently startling conclusions. Using these conclusions he develops some improved strategies for the introduction of the so-called 'electronic office' and personal office computing systems. (3 refs.)

13660 **Electronic mail—state of art.**
Ir. Comput. (Ireland), p.24-5 (Jan. 1984).
The most obvious approach to electronic mail for an organisation with premises in several cities or countries is to link together its own computers and acquire an appropriate piece of software. The economics of such an arrangement are prohibitive for all but the biggest firms. Subscriber services on private international networks have now emerged as a viable alternative. Over the past year, the Irish authorities have approved a number of schemes for intraorganisational messaging. Thus three international companies have introduced their own electronic mail services. One, Mohawk Data Sciences' WINC, transmits information in a manner akin to the private in-company computer network, addressing and delivering messages to specified locations. The others, IP Sharp Associates' MAILBOX and GEISCO's QUIK-COMM, store messages for individual users in central computers, so that subscribers can retrieve them in person from any terminal within the network. It is difficult to generalise about the costs of these services. All the suppliers stress, however, that this form of electronic mail costs less than telex and that price advantage increases as the distance between locations increases. (no refs.)
H.C.N.

13678 **Selecting word processing software.** R.W.Boss (Information Systems Consultants Inc., Bethesda, MD, USA).
Software Rev. (USA), vol.2, no.1, p.4-9 (March 1983). [received: Oct. 1983]
The word processing systems available include dedicated single-user systems, such as those produced by Lanier, NBI, Philips, and Wang; multi-user systems from the same vendors; and software packages for mainframe and mini- and microcomputer-based systems. The industry as a whole is growing by 25 percent annually, but the increase in software sales is more than 50 percent per year. The demand for software packages appears to be greatest among owners or prospective owners of micros. This article, while general in its approach, uses microcomputer software packages in its examples. (12 refs.)

13679 **Super or compatible? [office communications].** H.Sommer.
Nachr. Elektron. + Telematik (Germany), vol.37, no.12, p.471-4 (Dec. 1983). In German.
The author draws the comparison between communications technology in the USA, where the technically possible is more quickly achieved, and Europe where the compatibility of future communications services receive priority. The point is also made that private enterprise plays the lead role in the USA whereas in Europe sovereignty rests with the postal authorities. After describing numerous items of office communications equipment the author forecasts an integrated office technology centred on the telephone with digitals providing an excellent basis. The USA is forging ahead in this field. (no refs.)
H.G.

12813 **Workstations for all at Carnegie Mellon.** D.Van Houweling (Carnegie Mellon Univ., Pittsburgh, PA, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.513-24
As Carnegie-Mellon's plans for personal computing have evolved, it has been concluded that the capabilities of the personal computer provide only a partial answer to the information processing needs of the university. As a result, the effort now underway at CMU to provide every member of the community with a personal computer by the end of the decade depends more critically on local area network software and communication technology than it does on the development of personal computers. (no refs.)

12992 **An Ethernet network performance measurement.** J.F.Shoch, J.A.Hupp.
Sist. & Autom. (Italy), vol.29, no.241, p.941-52 (Oct. 1983). In Italian.
Ethernet local area network performance measurements are discussed. Operational characteristics of a network using one coaxial cable for computer systems interconnections are briefly outlined. An experimental network arrangement is described underlining the reliability and error frequency. Performance data under normal load conditions are detailed. Data pocket formation, traffic models, data collisions, communication time and overloading are also reviewed. A similar analysis is presented for heavy traffic, elaborating maximum utilisation and stability problems. (11 refs.) *T.H.*

12986 **Local area networks and the business microcomputer.** A.J.Brown.
New Electron. (GB), vol.16, no.24, p.33, 35 (13 Dec. 1983).
Due to the lower cost of processing devices and the higher cost of labour, the personal computer has entered both small and large businesses. These personal computers need to be able to communicate with mini or mainframe computers, as well as with each other. The use of local area networks (LANs) allows the interconnection of personal computers so that access to a common data store is provided together with the ability to share peripheral devices. These systems will generally be used as a lower cost solution than the minicomputer and in many instances to supplement the mainframe by providing local operational control while still providing communication to the mainframe. (no refs.)

13008 **User experiences with production Ethernet.** P.Christy (Digital Equipment Corp., Maynard, MA, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.109-16
Experience with Ethernet for local area networking in support of VLSI design is discussed. Experiences in the installation and use of Ethernet is included. Answers to the most common questions are provided. (no refs.)

13006 **System selection installation and management of fiber optic Ethernet.** K.L.Nall.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.91-100
An institution that is spread over five buildings presents a challenge for computer accessibility. Possible problems with the electrical interference from lightning led to a fiber optic cable connected to a baseband Ethernet cable as a viable alternative to only Ethernet cabling. The two step installation procedure is identified and the network management is noted. (no refs.)

13007 **User experiences with ring networks.** C.E.Patton.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.101-7
This paper looks at a token ring from the perspective of the user. Three types of users are discussed, and their differing impressions of the ring. The advantages, disadvantages, and necessary knowledge levels of each type of user are also discussed. (no refs.)

13002 **LAN technologies: one for every application.** B.F.Hom (Hewlett Packard Co., Palo Alto, CA, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.41-51
The author compares the different types of local area networks from an application viewpoint. A user should identify his application situation and select a LAN technology which will best solve that particular situation. A LAN that is chosen in this manner is more optimal than the selection of a LAN based strictly on technical characteristics. (no refs.)

13684 How WP systems are meeting the PC challenge. W.A.Walshe.
Off. Adm. & Autom. (USA), vol.44, no.10, p.47-58 (Oct. 1983).
The personal computer threat is forcing many manufacturers to re-evaluate their marketing strategies, adding many advanced equipment options. Because the primary emphasis of text-editing machines is on generating, revising, and distributing office correspondence efficiently, they are still the machines of choice where heavy duty word processing is concerned. This article takes a look at some recent enhancements made to the equipment and provides a table of information about stand-alone text-editing machines. (no refs.)

12995 Emerging trends in local area networks. J.R.Jones (Siecor Fiber-LAN, Research Triangle Park, NC, USA).
Telecommunications (USA), vol.17, no.12, p.54, 59-60, 96 (Dec. 1983).
Discusses how the transmission technology known as the local area network (LAN) is at present attracting a lot of attention. Many users of large computer networks are expressing a need for such systems, and there are many businesses being formed with the intention of filling that need. There has been significant growth in the number of companies that supply LAN-related products. One source estimated that there were more than 230 companies already in this infant industry. Several factors are behind the rapid growth of the use of local networks. The first has to do with the dramatic cost reductions that have occurred in computer technology in the past several years. These cost reductions have led to the widespread use of computers. The author discusses four parameters which characterize local networks: topology, signaling technique, access method, and transmission medium. The most common topologies presently in use—ring, bus, and star—are illustrated. (no refs.)

13264 Applications packages.
Mini-Micro Software (GB), vol.8, no.4, p.12-18 (1983).
The software directory of the National Computing Centre indicates that the number of application packages on the market continues to grow at an alarming rate. Some 2250 packages are said to be competing in the UK marketplace alone. Every month 100 new ones arrive and every month (it is believed) 50 disappear for various reasons which include the inevitable business failures, inadequate marketing or technical unsuitability. Some of the more unusual uses for which package programs are available, are emphasised. (no refs.)

13001 Local area network user needs. G.J.Langford (Product Planning & Dev., American Bell, Natrona Heights, PA, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.31-40
Local area networks are coming to fruition in the 1980's because of growing data communication needs and reduced costs of moving data within a building or campus. Data processing costs have been reduced to the point where users can easily afford their own terminals, microcomputers, or minicomputers. The resulting proliferation of data processing throughout a building or campus has created a need for local area networks to efficiently utilize these data processing resources. The success of a LAN architecture will in large measure be determined by its ability to meet the following types of user needs obtained from many customer interviews in 1982 and 1983: connectivity, compatibility, network management, cost control, distribution, networking, and integration. (3 refs.)

13014 Design and architecture of a token-ring local area network. N.C.Strole, D.W.Andrews (IBM Corp., New York, NY, USA).
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.171-87
A local area network (LAN) should be easily accessible, extremely reliable, and extendible in both function and physical size. The star/ring wiring topology with token-access control has emerged as a technology that can meet all of these objectives. The requirements of small networks with just a few terminals, as well as those of very large networks with thousands of terminals, can be achieved through this one architecture. This paper describes the fundamental aspects of the architecture, physical components, and operation of a token-ring LAN. Particular emphasis is placed on the fault detection and isolation capabilities that are possible, as well as the mechanisms for network expansion and growth. (15 refs.)

13658 Choosing the right word processor for the IBM PC. P.Good.
Small Bus. Comput. (USA), vol.7, no.3, p.42-50 (May-June 1983). [received: Nov. 1983]
This article describes the advantages and the disadvantages of the IBM PC for word processing, as well as the criteria to use in matching the hardware and the software to word processing needs. It discusses the advantages and disadvantages of some of the principal word processing alternatives available. Product comparison tables at the end of the article will help to make the final selection. (no refs.)

13655 Bringing corporate micros under control. H.Falk.
Small Bus. Comput. (USA), vol.7, no.3, p.24-7 (May-June 1983). [received: Nov. 1983]
The proliferation of desktop computers is forcing companies to make policy decisions about their use. Microcomputers address information processing needs that mainframe data processing groups have largely ignored. Large computers have been effective in handling both high-production paperwork tasks such as order processing and billing, as well as complex problems such as inventory control; they have also been effectively used to provide strategic management information to top company executives. However, data processing groups have been much less effective in bringing computer services to lower levels of management and to the many business professionals who perform specialized tasks within large companies. (no refs.)

13016 Beyond the bus and the ring [local area network]. A.Reichert.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.213-26
Starting two years ago, Vector Graphic, a major supplier of small business computers, recognized the need for a network system that incorporated both sophisticated technology and end-user accessibility. Vector has accomplished this goal by designing a network system that is powerful, efficient and easy to install at very low cost. This new LAN technology required the development of a new topology coupled with the novel application of both protocols and data encoding schemes. By modifying a standard operating system, most industry standard application software was able to run directly on the network while enabling shared access to all distributed network resources. (no refs.)

12991 Running rings round networks [Cambridge Ring local network]. R.Fenner.
Syst. Int. (GB), vol.11, no.12, p.46-7 (Dec. 1983).
The reliability mechanisms, capacity, hardware, software and installation of the Ring are discussed; particular attention is paid to the implementation offered by Toltec. (no refs.)

13151 Computer peripherals review.
Comput. Peripherals Rev. (USA), vol.10, no.1, p.1-350 (1983).
The review is divided into the following eight self-contained sections, with products listed alphabetically by company and model number: disc- and drum storage devices; flexible diskette drives; magnetic tape drives; tape cassette storage devices; line printers; serial printers; card equipment; and paper tape equipment. Each section includes three parts: a brief description of the technology of the peripheral device type being reviewed; a brief explanation of the column headings used to describe the equipment in the characteristic tables; and a tabular listing of equipment characteristics. A directory manufacturers at the back of the book lists the addresses of the headquarters of all manufacturers included in the review. (no refs.)

13675 The home office. K.Yakal.
Compute. J. Prog. Comput. (USA), vol.5, no.12, p.22-4 (Dec. 1983).
Computers have been used in businesses for many years to streamline procedures and promote efficiency. The same thing is beginning to happen in homes with microcomputers. New businesses are being created, and existing home offices can benefit from the variety of information services and software that is available. The article explores some of the ways that the traditional office is changing. (no refs.)

13668 **A computerized diary facility.** R.H.Davis, K.Saunders, T.Shaman (Dept. of Computer Sci., Heriot-Watt Univ., Edinburgh, Scotland).
Comput. Commun. (GB), vol.6, no.6, p.297-307 (Dec. 1983).
According to the level of privacy required, an individual may maintain three types of diary; a wall/calendar chart open to viewing by anyone, a desk-kept diary accessed by a selected group of individuals and the pocket diary accessed solely by the user. All three types may be used in an office environment. A diary facility represents a typical function that could be made available on a communications system. The availability of a diary facility in an electronic office environment is examined in terms of the social factors to be considered, the syntax required for its introduction and the system details needed for support. (2 refs.)

13718 **Techniques leading to better availability of information for users.** H.Thijs.
Tijdschr. Ned. Elektron.- & Radiogenoot. (Netherlands), vol.48, no.3, p.131-3 (1983). In Dutch.
Reviews general developments in information technology. The storage and retrieval of information is considered with particular reference to the VAX information architecture, a user-transparent system developed for the VAX-11 computers. Topics in the supply of information are then discussed, including some of the problems awaiting solution in this new business sector (privacy, ownership of information, responsibility for accuracy, etc.). New possibilities from the user's point of view are then outlined in the context of Digital's integrated system which combines personal computers, word processing, databases, electronic mail, data transmission and various business management systems. (no refs.) *C.C.B.*

13378 **Orderly office work—in spite of modern information technology? II.** K.Supper (Math. Beratungs-und Programmierungs-dienst GmbH, Dortmund, Germany).
Systems 83 Proceedings Computer und Kommunikation. 8 Internationale Fachmesse und Internationaler Anwender-Kongress (Systems 83 Proceedings Computers and Communication. 8th International User Congress and Trade Fair), Munich, Germany, 17-21 Oct. 1983 (Munchen, Germany: Munchener Messe-und Ausstellungsgesellschaft 1983), p.193-200 In German.
For pt.I see ibid., p.185-91. Orderliness is the term given to the basic principles for the handling of all data in all situations. It is irrelevent whether the data is to be stored, or is to be readable. In the case of the storage of personal data, of primary concern is the protection of the data. The author uses orderliness as the conception for the following criteria: correctness, completeness, timeliness, clarity, provableness, safety and testability. If all the criteria are met, then the demands of the given group of people are fulfilled. (no refs.) *A.N.K.*

13011 **Local area network installations in Government facilities.** M.Fortang, I.T.Frisch.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.137-46
Government mission oriented local area networks make special demands on system customization, expansion, and interfacing, as well as vendor field service and training. Contel experience is described in these areas in the installation of ContelNet in Government facilities to meet the needs of the next decade and beyond. (4 refs.)

13019 **Intel 82586 local communication controller chip.** D.van-Mierop.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.249-60
The Intel 82586 VLSI chip is an intelligent, high performance communication controller for local area networks using the access method known as carrier sense multiple access with collision detection (CSMA/CD). It performs all the functions associated with the transfer of data between system memory and a serial interface to the network: framing, contention resolution, address detection and filtering, error detection, network management, direct memory access, buffer chaining and interpretation of high level commands from the CPU. The 82586 meets performance requirements of the IEEE 802.3 and Ethernet standards. It has the flexibility to serve as a controller for a wide range of CSMA/CD type networks, also at data rates less than 10 Mb/s. Reliability is enhanced by a built-in time domain reflectometer for locating opens and shorts, external and internal loopback, collision detect integrity verification, complete internal register dump, and a self test procedure. (2 refs.)

13377 **Orderly office work—in spite of modern information technology? I.** U.Seidel.
Systems 83 Proceedings Computer und Kommunikation. 8 Internationale Fachmesse und Internationaler Anwender-Kongress (Systems 83 Proceedings Computers and Communication. 8th International User Congress and Trade Fair), Munich, Germany, 17-21 Oct. 1983 (Munchen, Germany: Munchener Messe-und Ausstellungsgesellschaft 1983), p.185-91 In German.
Presents a brief overview of the basics of orderliness and the handling of data. For data the following parameters should be determined: truth, exactness, correctness, timeliness, readability, availability, data protection, and safety. For text processing, the parameters should be even more specific—completeness, truth, exactness, availability, readability, legal liability, efficiency, documentation and data access. All given basics can be combined into one efficient system. The author explains and expands on some of the parameters. (no refs.) *A.N.K.*

13104 **Typewriter waits for its cue.** H.Busby.
Comput. Wkly. (GB), no.895, p.27 (26 Jan. 1984).
An increasing number of machines currently (or soon to be) available, display features such as communications interfaces, disc drives, screens and operating systems. Word processing, telex and teletex, online data entry, or straightforward dumb printing under computer control can all be performed, in theory at least, on a typewriter. At the low-cost end of the market are the EP-22 and EP-44 electronic portables from Brother, priced at £169.95 and £250 respectively. Olivetti is shortly to offer an add-on interface option to all machines in its ET and Praxi ranges. Ericsson is marketing the first BT-approved teletex terminal in the form of an upgraded and modified Facit typewriter. At present, it costs £2200 plus another £800-£1200 for discs. In considering typewriters as alternatives to purpose-built terminals and word processors, four points to bear in mind are cost, durability, speed, and ease of use. (no refs.) *R.N.Y.*

13017 **NET/PLUS—a local network architecture for multi-vendor compatibility.** D.Potter.
Local Networks. Distributed Office and Factory Systems. Proceedings of Localnet '83, New York, USA, 27-29 June 1983 (Pinner, England: Online Publications 1983), p.227-37
The present level of activity in local network standards has created expectations about multi-vendor compatibility that will not be met by the communication specifications alone. An architecture for true multi-vendor compatible communications is described, based on the ISO model and existing standards where such exist. (no refs.)

13663 **Microcomputers in the office environment. II.** A.D.Mazursky.
Mind Your Own Bus. (GB), vol.5, no.10, p.20-2 (Nov.-Dec. 1982). [received: Nov. 1983]
For pt.I see ibid. vol.5, no.9, p.21 (1982). This article examines the issues concerning the use of microcomputers in office communications. It looks at how microcomputers will be utilised in office work and briefly describes the principles behind office computing. (no refs.)

13717 **The role of the personal computer in office automation.** C.Lansink.
Tijdschr. Ned. Elektron.- & Radiogenoot. (Netherlands), vol.48, no.3, p.125-6 (1983). In Dutch.
Various aspects of the introduction of personal computers into business organisations are briefly considered, and the advantages of the Digital PC 325/350 machines are touched upon. A checklist of topics to bear in mind when choosing a personal computer is presented. (no refs.) *C.C.B.*

13694 **An integrated services optical fiber local area network 'Σ network'.** K.Hiyama (Systems Dev. Lab., Hitachi Ltd., Tokyo, Japan), H.Narisawa, H.Satou.
Hitachi Rev. (Japan), vol.32, no.4, p.165-70 (Aug. 1983).
Optical fiber transmission technology has brought remarkable advances in local area networks. The 'Σ Network' has been developed, making full use of the advantages of fiber transmission to realize local area networks in office automation. One is the advanced integration of network services not only of voice and data transmission but also of circuit switching and packet switching. Second is the introduction of full-LSI logics, which results in small, low-cost and highly reliable networks. The other is a highly expandable and flexible network configuration made possible by multilooped distributed network architecture. The Σ Network is expected to be the main network for office automation in coming years. (6 refs.)

13726 **Office information and telecommunications.** R.Shurig (Information Planning Div., Ontario Hydro, Toronto, Ontario, Canada).
Proceedings. Eighth Data Communications Symposium, North Falmouth, MA, USA, 3-6 Oct. 1983 (Silver Spring, MD, USA: IEEE Computer Soc. Press Oct. 1983), p.35-8
The relationship of office information to office products and to telecommunications is examined. Voice, image, text, and data information media are related to one another, to computer and telecommunications technologies, and to the needs of different types of workers. (no refs.)

13716 **What does the microcomputer mean for the manager of the future?.** C.G.de Mol.
Tijdschr. Ned. Elektron.- & Radiogenoot. (Netherlands), vol.48, no.3, p.121-3 (1983). In Dutch.
Reviews the facilities made possible in office automation as a result of developments such as viewdata, facsimile, data networks, text processing portable terminals and microcomputers. The main theme is that of automated information processing. The adoption of information technology will require changes in working practices; the microcomputer offers numerous opportunities for increased efficiency and productivity. (no refs.) *C.C.B.*

13715 **Future office communications.** R.Lepp (Standard Elektrik Lorenz AG, Stuttgart, Germany).
Telecommunications (USA), vol.17, no.12, p.95, 97, 108 (Dec. 1983).
Discusses how there are many aspects of office communications that are going to take some time to develop because, for all the euphoria of technicians over what is possible, or for all the (sales-promoting) prophecies of market strategies, investments in information technology clearly must be cost-effective. Besides, the user is frustrated by the constant introduction of new and better products that make things seem antiquated that were 'new' just hours before. What should he buy when everyone is praising and propagating something different? One can observe this situation at the moment on the microcomputer market. The user turns to a technical 'guru' whom he trusts to guarantee him continuity and a consistent standard. Anyone involved with office commmunications has to learn to view problems from the point of view of the user and deal seriously with the problems of the office and its functioning as a whole in order to develop, provide, and maintain optimal technical systems. (no refs.)

13839 **Toppling the paper king.** S.Onians.
Technology (GB), vol.8, no.4, p.12-13 (30 Jan. 1984).
Industry, particularly manufacturing industry, appears to have largely shunned office automation (OA). Office workers make up some 50% of industry's workforce and offices account for 20%-30% of its costs, yet potential cost savings have not been effected. The reason is that suppliers have hardly begun to address industry's very real needs: the concept of the electronic paperless office was in fact totally oversold. Paper still rules supreme in British offices because, although managers are confronted with a large number of problems in the office, none of the available products seem to address these problems. The costs of OA are found to be higher than originally envisaged, mainly because of the organisational changes required. (no refs.) *S.C.*

13721 **The nature of new office technology.** A.Danzin.
In book: *New office technology. Human and organizational aspects*, H.J.Otway, M.Peltu [Ed.], p.19-36. London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
An overview of modern office technology is given. There is no need to have a detailed understanding of all the technology; it is sufficient to have a general feel for the principles. It is unwise to be constantly changing policy on equipment and software. (3 refs.)

13720 **Office communications—keeping track.** H.-D.Grosser (Siemens AG, Munchen, Germany).
Telcom Rep. (Germany), vol.6, no.6, p.347-8 (Dec. 1983).
Until a few years ago, many sectors of business attached less importance to economy and efficiency than is customary and necessary today. As conditions changed, however, it became more and more obvious that the 'home-made' approach to products and services does not always work, nor can they be provided 'on the side' if a reasonable return on investment is to be earned. This statement is also true of office communications, a field in which the services of a expert adviser—the communications specialist—are needed more than ever. The author, who is responsible for public relations work in the field of communication terminals, describes the reasons for calling in a communications specialist—even in small and medium-sized businesses—and points out the benefits such an expert has to offer. (no refs.)

13680 **Office information databank—'made in Germany'.** M.Bergmann, H.-D.Litke, P.Maciejewski.
Nachr. Elektron. + Telematik (Germany), vol.37, no.12, p.490-2 (Dec. 1983). In German.
The authors show that hitherto data bank systems for office microcomputers have been resisted. They claim that they present here a system which will change the situation radically. A description is given of the MPOOL bank and MTALK control which are designed primarily for the German-speaking market. The price for the whole data bank for an 8-bit microcomputer is 'well under' DM5000 and for 16-bit below DM8000. Prices are expected to sink still further. (no refs.) *H.G.*

13728 **Forth products for business packages.** P.Moreton.
1983 Rochester Forth Applications Conference, Rochester, NY, USA, 7-11 June 1983 (Rochester, NY, USA: Inst. Appl. Forth Res. 1983), p.157-8
Summary form only given as follows. Describes two products: MFORTH; and OMNISOFT. MFORTH (Multi-machine Forth System), is especially designed to meet the specific requirements of the business packages that have to be marketed on a large scale. It has a unique source code (Metacompiler) used to generate interactively a multitasking Forth System for any classical micro- or minicomputer, Z80, 8086, or LSI-11 based; a powerful DBMS; and a very high level programming instruction set to reduce developement costs and give full readability of the source code, decreasing the maintenance costs. The OMNISOFT package enables anybody (even non-programmers) to develop, in some hours, any business software at his own specifications. It can be favourably compared to DBASE II or MDBS for instance. It has an internal, relational-like database (it runs on MFORTH), a report generator, and a word-processor connected to the base. High-level, menu-driven functions enable the user to create, modify, delete, multi-index, update related files, control, select, extract, calculate, report... OMNISOFT has been deeply studied for an ergonomic and very easy to use approach. For professionals it can be a powerful tool to create a business software catalogue. (no refs.)

13831 **Electronic mail for world car company.** G.L.Decker (Telecommunications Services, Ford Motor Co., Dearborn, MI, USA).
Can. Datasyst. (Canada), vol.15, no.10, p.70-3 (Oct. 1983).
Effective worldwide communication is important for Ford Motor Company. They have developed a single corporate electronic mail system that enables the transmission of administrative messages, word processing documents, business reports and schedules. The system is as user-friendly as was possible. It is flexible, allowing access from different types of terminals. Further enhancements to the system are planned for the future. (no refs.)

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7057 **The smooth setup. II. [Office automation].** L.S.Lee.
Impact: Off. Autom. (USA), vol.6, no.9, p.11-13 (Sept. 1983).
For pt.1 see ibid., vol.6, no.7 (1983). Office automation (OA) planning and installation has many organisational pitfalls which must be avoided. Discussed here are the importance of knowledge about OA and the sparsity of unbiased experts. Extensive costs are involved and it is important that the system is flexible and ergonomically designed. Consideration must also be given to data availability and vulnerability. (no refs.)

9466 **The IMP in the office.**
Which Comput. (GB), p.175-8 (Jan. 1984).
Office Technology Ltd. launched its Information Management Processing System (IMP) in 1981. OTL readily admits that the product is still under development, with major features being implemented continuously. The Information Management Processor is a dedicated office automation system based on intelligent workstations. These units are linked to an office system controller handling mass storage, archiving and output devices. This central processor acts as a sorting office for message switching between the workstations. Controllers for the IMP are available in three capacities. The most basic version supports up to six terminals; 320MB of centralised disc storage can be supported by the controller. Extending the scope of the IMP to 16 terminals involves office system controller B; a unit capable of supporting up to 640MB of disc, four communications ports and auxiliary processors. At the top of the range is controller C; identical to the mid-range product but for its 32-terminal ceiling. Larger system configurations are possible. The IMP sets out to support every type of user within a 'work-group', from executives to clerical operators. With minor exceptions the designers have attained this objective. (no refs.) *A.R.M.*

9099 **Graphics standards: where do we stand?.** L.McClain.
Pop. Comput. (USA), vol.3, no.1, p.128-31 (Nov. 1983).
Microcomputer graphics standards are on the horizon. It appears likely that the graphical kernel system (GKS), a programmer-level interface devised in West Germany in the late 1970s, will be endorsed by ANSI (American National Standards Institute). There are three complementary interfaces that are becoming de facto standards in America. GKS is the programmer-level interface between applications programs and graphics utility programs. Virtual device interface [VDI] standardizes the interface between graphics utilities and device drivers [programs that control the operation of peripherals]. Finally, there's North American presentation-level protocol syntax [NAPLPS], which was developed by Bell Labs. NAPLPS, adopted by AT&T as a standard for transmitting text and graphics over telecommunication lines, is similar to VDI but a bit more specific: it interfaces graphics utilities to videotex devices through its 'universal NAPLPS device driver'. (no refs.)

6863 **Safe and sound [health issues of office automation].** B.R.Blackmarr.
Impact: Off. Autom. (USA), vol.6, no.9, p.2-3 (Sept. 1983).
With the increased usage of office automation (OA) and its greater exposure to new levels of users, OA environmental and health concerns have become very important. This article looks at the real health concerns posed by OA and what can be done about them. Most of physical health aspects of OA are linked to the use of VDUs, and their environment. (no refs.)

7008 **Future effects of end user computing.**
EDP Anal. (USA), vol.21, no.11, p.1-12 (Nov. 1983).
End users will be making more and more direct, hands-on use of computers in the years just ahead. In fact, a studied analysis of one major component of Xerox Corporation (discussed in this report) projected their end user computing in 1990 as consuming three times the number of CPU cycles as will their regular data processing. Anything like this amount of growth clearly warrants the prime attention of information systems management. This report, analyzes how such growth can occur, and some steps that can be taken to get ready for it. (6 refs.)

6832 **Harris heads into the office.** G.Rifkin.
Computerworld (USA), vol.17, no.41A, p.28-33 (12 Oct. 1983).
It is hard to imagine a $1.4 billion company having an identity problem, but for Harris Corp., the Melbourne, Florida-based information technology giant, its lack of visibility may be the largest stumbling block in a vigorous quest for a share of the office automation market. Despite having built a strong and respected reputation in the communications, semiconductor and government systems markets, Harris has been a stranger in the office. This article looks at how the company is tackling the move into the office automation field. (no refs.)

7021 **Business information—defining the requirements.** T.J.Bourne (CACI Inc. Internat., London, England).
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.185-9
One of the most difficult tasks in developing an information system, and perhaps the one which causes most such projects to fail, is defining the requirements. This paper introduces a number of related techniques, known collectively as Data Analysis, which enables their exponents to identify the essential functions requiring information system support, the data which must be held to provide that information and the locations at which different system facilities must be provided. Practical examples are given, both of the techniques and their use, and of some actual applications. (no refs.)

7037 **Information centers. The user's report.** G.Harrar.
Computerworld (USA), vol.17, no.52-vol.18., no.1, p.71-4 (26 Dec. 1983-2 Jan. 1984).
The premise and promise of the information center is simply stated: Users can solve many of their own problems when provided with proper tools and techniques. Two years ago, the information center was an appealing concept without a track record. Today, there is a record—the experiences of the companies which installed information centers early on. Is DP's applications backlog really reduced? Can fourth-generation software bring ease of use and productivity to the end user? Is the spread of personal computers throughout the company under control? The information center promised much. Now the promises can be matched to reality by looking at the center not as an IBM concept, but rather as an up-and-running part of several large American companies. (no refs.) *A.B.*

7107 **Don't forget the printer.**
What Buy Bus. (GB), no.34, p.62-7 (6 Sept. 1983).
Very few companies buy a computer without getting at least one printer to produce 'hard copy', the jargon term for paper print-outs of text and information stored electronically by your computer. Computer printers are normally the slowest part of a computer system, relying to a large extent as they do on mechanical operation, and they can also be one of the more fault-prone elements, but they can account for a very large proportion of the cost of a total system. If you are buying a computer for £2500, for example, you can easily find yourself paying well over half as much again for the printer, especially if you also need accessories to go with it. In addition, printer ribbons are likely to be the most expensive supplies needed for your computer system, probably costing you more than floppy disks. In this survey, the authors discuss the options available and evaluate the different types. (no refs.)

7113 **IBM PCjr.** J.Schofield.
Pract. Comput. (GB), vol.7, no.2, p.50-2 (Feb. 1984).
The Junior or PCjr has an Intel 8088 CPU, the PC-DOS operating system and disc format and fundamentally the same Microsoft Basic as the PC. To make the system more suitable, IBM have added colour graphics as standard, cartridge slots, joystick ports, and expanded the PC's single-tone sound to three channels. The main advantage of the PCjr is that it offers compatability with the IBM PC and thus both a share of the software base and an upgrade path. (no refs.) *V.G.P.*

7087 **Computer user survey results.**
What Buy Bus. (GB), no.34, p.29-31 (6 Sept. 1983).
User survey forms were sent in by 412 users covering well over 1000 systems (a system being either one micro, or a network of micros or a multiuser system—total screen numbers were closer to 1500). The article presents the results of the survey, including the most popular models, the average age of systems, the most popular applications, and mini v. micro preferences. (no refs.)

7031 **The role of the advanced information utility consultant in achieving office productivity.** M.Q.Adams (Digital Equip. Corp., Maynard, MA, USA).
Productivity in the Information Age. Proceedings of the 46th ASIS Annual Meeting 1983, Arlington, VA, USA, 2-6 Oct. 1983 (Knowledge Industry Publications: White Plains, NY, USA 1983), p.86-7
The number of computers in the office place is growing so fast in relation to skilled programmers that many of these systems are being put to use by non-technical professionals. The external market place demands that one finds ways of using this equipment more productively. To achieve gains in productivity, one needs a bridge between the automated office tools, and the non-technical office workers. The advanced information utility consultant (AIUC) can serve that role. By bringing to the union experience in computers, software, training, data management, business analysis, and reference librarianship, the consultant can become the catalyst in maximizing the use of all the new automated office tools. (3 refs.)

8784 **Hoboobbing with the LANs.** F.Jennings.
Comput. Wkly. (GB), no.887, p.20-1 (17 Nov. 1983).
The author describes the different topologies for local area networks. He explains many of the wide variety of terms used to describe the capabilities and operation of these networks and discusses the emerging standards which will govern network design in the future. (no refs.)

7055 **Can you offer effective VDU office lighting?.** L.Bedocs.
Electr. Times (GB), no.4717, p.39-41 (Oct. 1983).
Most of the fears expressed at one time for those working with visual display units have proved to be unfounded. However, operators of VDUs will appreciate good lighting in their working environment. The author outlines the merits of the systems available. (no refs.)

7108 **Daisywheel printers.**
What Buy Bus. (GB), no.34, p.68-74 (6 Sept. 1983).
The article tabulates the features of over 40 brands of daisywheel printers, including prices and manufacturers. A list of suppliers is also included. (no refs.)

9406 **What's happening at IBM?.** A.L.Kelsch.
Computerworld (USA), vol.17, no.41A, p.67-71 (12 Oct. 1983).
IBM usually ends up leading the marketplace. This article looks at some potential products IBM has been researching and what they mean for users and for other vendors. In particular, the article examines the office automation products planned by IBM. (no refs.)

7071 **Directory of IBM Personal Computer software.**
PC User (GB), p.85-119 (Jan. 1984).
Details are listed of all the latest PC packages to become available in Britain. Some 650 packages are included, including updated information about programs which have changed in price, supplier or specification. Suppliers' telephone numbers are listed separately. Prospective package purchasers should check that the package is properly documented for use with the PC. They should also ask if the package is well-tailored to take advantage of the PC's features, in particular its keyboard. A final key point to bear in mind is that not every package listed is available yet. (no refs.) *G.H.T.*

8693 **Evolution of office systems: a strategy for smart managers.** B.A.Beneteau.
Commun. Int. (GB), vol.10, no.10, p.72-6, 79-84 (Oct. 1983).
The convergence of voice and data communications into an integrated office system will present the communications manager with some tough decisions. It may even make his job title obsolete. The smart manager will be searching to take advantage of the new technologies. (no refs.)

7110 **Portable computers for the briefcase.**
Off. Equip. Index (GB), no.206, p.22-5 (Jan. 1984).
The 'truly' portable machines are defined as lightweight machines weighing as little as 3 or 4 lb—which are being operated off batteries and in many cases are no larger than a telephone directory. Machines currently available in the UK include Gavilan Mobile, Epson HX-20, PC5000, HP75C, TRS-80 Model 100, Husky Hunter, Workslate, RC8201, M10, X-07, SP25 and SP50. The main features compared are: dimensions, internal storage, external storage, display type-size, interfaces for peripherals, software packages, keyboard/power and price. (no refs.) *V.G.P.*

7111 **Portables. NEC's 8201 versus Radio Shack's Model 100.** T.Benson.
Interface Age (USA), vol.8, no.12, p.54-60 (Dec. 1983).
The word 'portable' in regard to computers has taken on new significance recently with the introduction of two nearly identical lap computers: the TRS-80 Model 100 from Radio Shack (Fort Worth, TX) and the PC-8201 from NEC Home Electronics (Elk Grove Village, IL). These briefcase-sized units offer convenient word processing, plus substantial computing power for all sorts of computing-on-the-go applications. For $800, you can get as much, or more, computing power than with some of the home computers that have to be attached to a TV. In addition, the two units are complete, stand-alone computers that offer full-sized keyboards with fair-sized displays. (no refs.) *A.B.*

8082 **Local area networks: a system view.** S.T.Walker.
Signal (USA), vol.38, no.1, p.37-43 (Sept. 1983).
Provides an analysis of the factors influencing local area networks beyond the basic questions of whether to use a baseband system or a private branch exchange. The issues of security and data integrity are addressed. Included are discussions of the role of the DOD Standard Transmission Control and Internet Protocols (TCP/IP) in local area networks and options to consider in planning for privacy/security on such networks. (no refs.)

8797 **VLSI Manchester encoder-decoder suits the Ethernet system.** L.Pittroff, S.Cooper (Advanced Micro Devices Inc., Sunnyvale, CA, USA).
Electronics (USA), vol.56, no.23, p.148-50 (17 Nov. 1983).
One LSI part has been curiously absent from most Ethernet chip sets: a reliable Manchester encoder-decoder. The Am7991 serial interface adapter provides an interface between the TTL digital world of the link controller and the differential environment of the transceiver cable. In the transmit mode, the Am7991 encodes clock and data and provides a clock to other devices in the node. In the receive mode, the Am7991 acquires the clock from the incoming bit stream, decodes the data, and passes both clock and data to the link controller. It also detects collision signals generated by the Ethernet transceiver and translates those signals into TTL levels that can be used by the controller. This bipolar chip accommodates networks with the different attenuations, noise levels, signal skew, and jitter that proliferate in real environments. (no refs.)

8701 **The myths behind voice-data integration.** W.F.Zachmann (International Data Corp., Framingham, MA, USA).
Computerworld (USA), vol.17, no.39A, p.111-15 (28 Sept. 1983).
There is nothing fundamentally wrong with the idea of an integrated digital voice and data network. It is undoubtedly the way of the future. But this does not necessarily imply that it is beneficial to try to have one now or that users should wait for it to arrive before trying to improve their network. Integration of voice and data is probably desirable to some degree. But the solution to the particular problems that must be dealt with over the next three to five years will not automatically entail voice and data integration. In particular, many organizations will find that they will require both a digital PBX and a local-area network for onpremise communications. And solutions to metropolitan and long-distance networking requirements are almost certain to require mixed solutions for some time to come. (no refs.)

8699 **New network solves protocol problem.**
Middle East Electron. (GB), vol.6, no.10, p.51 (Nov. 1983).
Instead of waiting around for uniform standards in information technology Philips, the Netherlands firm, has developed a network system capable of linking all existing, plus any new standards that may appear. Sopho-Net, as it is called (an abbreviation for Synergetic Open Philips Network), is a packet-switched wide area private networking system designed to connect any make of data, text or imaging device to any other with complete user transparency. That is, by simply plugging it into the network. The key to Philips method of linking diverse protocols is decentralisation. (no refs.)

8888 **Visual problems of office video display terminals.** H.L.Snyder (Dept. of Industrial Engng. & Operations Res., Virginia Polytech. Inst. & State Univ., Blacksburg, VA, USA).
Proc. SPIE Int. Soc. Opt. Eng. (USA), vol.386, p.25-8 (1983). (Advances in Display Technology III, Los Angeles, CA, USA, 18-19 Jan. 1983).
While the commercial television developments are compatible with the home computer cost market and with the visual requirements for home entertainment television, they are not compatible with the visual requirements for demanding data entry, text entry, and other office-type VDT tasks in which intensive interaction with the display takes place many hours per day, at a close distance, and under often time-limited circumstances. For such occupational applications, a different quality of VDT is required, and the specific requirements for this type of VDT include increased bandwidth, higher line rates and greater refresh rates. The author summarizes some of the areas of incompatibility and indicates the effects of poor design selection upon visual performance and visual complaints. (2 refs.)

8888 **VDT workstation design: preferred settings and their effects.** E.Grandjean, W.Hunting, M.Pidermann (Dept. of Hygiene & Ergonomics, Swiss Federal Inst. of Technol., Zurich, Switzerland).
Hum. Factors (USA), vol.25, no.2, p.161-75 (April 1983). [received: Oct. 1983]
A field study was conducted to assess the preferences of VDT operators with regard to their body posture and the settings of an adjustable VDT workstation. Subjects came from four different companies, and the study took place during subjects' customary working activities. Means and ranges of the preferred settings are given. The operators preferred body postures that are distinctly different from those recommended in textbooks and other publications. Some of the workstation settings they preferred also strongly deviate from such recommendations. (11 refs.)

8929 The computer printer—out of the DP room and into the office. B.R.L.Catt.
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.133-9
Reviews the technologies available for computer output in general available for computer output in general excluding plotters. The particular features of the three technologies of dot matrix, laser page and ink jet printing are reviewed in some detail and a concentrated review of high resolution dot matrix printing technology is made. (no refs.)

8796 Networking now the way for larger offices. L.Lovelock.
Rydge's (Australia), vol.56, no.8, p.93-6 (Aug. 1983).
The article discusses networks for use in office automation. It explains what a local area network (LAN) is and the effect it can have on productivity. LANs are already being used by many companies throughout Australia. (no refs.)

8928 High speed jet.
Which Comput. (GB), p.120-1 (Jan. 1984).
Ink jet printers offer unparalleled quietness and speed of use. Until recently they were the preserve of the minicomputer, but now prices are falling and the German firm Siemens is one of the first companies to come up with a business ink jet printer at a competitive price. The endurance of the ink reservoir of the PT88 is five million characters, approximately two and a half times the life of the average DMP (dot matrix printer) ribbon. The print element of the PT88 is claimed to have an unlimited life because there is no wear caused by impact. The ink jet uses paper coated with chalk which costs 10-20 per cent more than plain paper but you are saving on ribbon costs. The major selling points of the ink jet are speed and quietness The ink jet prints at 150 c.p.s. compared to the 80 c.p.s. of the DMP. The only sound when printing is the click of line feeds and a swish as the printhead moves along. Compared to the noise made by even a well acoustically damped DMP, the difference is nothing short of staggering. The ink jet PT88 costs £595 and the DMP version £495. The PT89 is a 132-column model. (no refs.) *A.R.M.*

8289 The perception of flicker and glare on computer CRT displays. S.H.Isensee, C.A.Bennett (Kansas State Univ., Manhattan, KS, USA).
Hum. Factors (USA), vol.25, no.2, p.177-84 (April 1983). [received: Oct. 1983]
Subjects rated their discomfort due to direct glare, reflected glare, and flicker while viewing a CRT display under various conditions of ambient illuminance, video luminance and video polarity. The angle away from the CRT at which the subjects first noticed flicker was also measured. Levels of these design and environmental variables that minimize discomfort are suggested. Video luminance was shown to have the greatest impact on comfort. Methods of reducing glare and flicker are discussed. (6 refs.)

8945 Computer controlled speech synthesis. P.Maskens.
Comput. Educ. (GB), no.45, p.8-10 (Nov. 1983).
Speech is a 'natural' form of output which gives a humanizing quality to the computer system which may be an advantage in some operations. There are many applications for speech output from microcomputers; the requirements of the application determine which technique is required. Synthesised speech can be produced in many ways, but these fall into two main categories: (1) Copy synthesis. As the name implies the output is merely a copy of some pre-recorded speech, either an analogue or digitised/compressed recording. (2) Synthesis-by-rule. In this method, speech is built up from analysis of the input under control of a set of rules embodied in a computer program. (no refs.)

8914 The use of a touch screen and graphics display to provide a user friendly interface to a multi-function computer system. D.E.Penna.
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.209-15
Describes the production of an experimental computer based system in which a colour graphics display is used to give a pictorial representation of all the options open to the user. There is also a touch sensitive screen placed over the display so that any option can be selected simply by touching it. This touch control technique helps an untrained or occasional computer system user to understand what a system is capable of doing and how to control it. Although this work was carried out in the context of domestic equipment of the future, the author suggests that the techniques are applicable to many areas. (7 refs.)

9431 New software for improved business efficiency.
Pers. Comput. (USA), vol.7, no.9, p.241-65 (Sept. 1983).
Products considered to be most useful and interesting are described and commended for closer examination. A list is presented of other products. The software detailed covers: critical path planning; automatic programming; communications; word processing; telephone management; application generators; smart terminal programs; information management; and DBMS. (no refs.)

8961 How speech can fit into terminal products. H.Plumlee (Texas Instruments Inc., Dallas, TX, USA).
Mini/Micro 82 Conference Record, Anaheim, CA, USA, 14-16 Sept. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.12/2/1-6
The use of speech I/O as an important part of terminals and workstations will increase in the future. Although the per terminal cost of speech can be lower than centralised speech hardware, the need for speech operations in each terminal on a dedicated basis will ensure that speech hardware makes sense in terminal level products. Speech performance and functions will continue to improve at lower costs. Because of the increased ease of use, improved performance and enhanced functions of speech I/O in terminals, interest in and need for speech will continue to increase. (15 refs.)

8960 Trends in speech-based products. S.S.Viglione (Interstate Electronics Corp., Anaheim, CA, USA).
Mini/Micro 82 Conference Record, Anaheim, CA, USA, 14-16 Sept. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.12/1/1-7
Developments in products and techniques for speech recognition and speech synthesis are reviewed. The following products of Interstate Electronics are then described: the Voice Recognition Module the VRT101 voice entry unit for the Zenith Z89 microcomputer and video terminal, the VRT300 voice recognition module for the DEC VT200 display terminal, and the VRC 100-2 discrete-word recognition chip set. (no refs.)

8959 Research on automatic speech recognition at the National Physical Laboratory. D.R.Manning, B.E.Pay, R.E.Rengger, D.Schofield.
Report NPL-DITC-31, Nat. Phys. Lab., Teddington, England (Sept. 1983), 19 pp.
NPL has followed consistently a phonetic approach, and has been demonstrating practical phonetic recognisers for several years. The next generation of recognisers will overtake current products not because they perform better under ideal conditions, but because they will widen greatly the area of practical use. The present report describes the work carried out during the last two years and tries to place the approach in context. It covers the SID3 hardware preprocessor, string and template matching, and feature extraction. (8 refs.)

9418 The new word processors. M.J.Miller.
Pop. Comput. (USA), vol.3, no.3, p.112-17 (Jan. 1984).
Word-processing software is maturing. Electronic writing and editing have come a long way since the early text editors brought the basics of word processing to microcomputers. At its most basic level, a word-processing program performs two primary functions—text editing and print formatting. Text editing involves typing in text; inserting and deleting characters, words, lines, paragraphs, and blocks of text; and moving and copying text. Print formatting refers to the way the program controls the printer through special codes for different typefaces or boldface and underlined text. In addition to assessing how a program accomplishes text editing and formatting, one should evaluate several other general features when shopping for a word-processing package. One basic characteristic to look for in a word-processing program is whether it treats a text document as a single unit or divides the text into smaller units such as pages or lines. Word processing encompasses a great many functions. All programs essentially perform the same task, but some are more sophisticated, user-friendly, and less expensive that others. In choosing a program, one should weigh the time it will take one to learn to fully exploit its capabilities against the advantages it offers in extra features and speed. (no refs.) *B.C.N.*

9490 A practical approach to office information and communications systems. W.P.Bain (STC Business Systems Ltd., London, England).
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.145-9
The author compares the four basic concepts currently being proposed by suppliers for office information and communications systems. He suggests the criteria that most organisations will apply when choosing such a system and then describes a new approach which will meet these criteria. A review is made of the basic requirements of an office automation system and seeks to establish that these may be achieved in a practical and cost-effective way whilst at the same time designed to suit the basic needs of the organisation and the differing requirements of the individual users. (no refs.)

9443 A data modeling approach for office information systems. S.Gibbs, D.Tsichritzis (Univ. of Toronto, Ontario, Canada).
ACM Trans. Off. Inf. Syst. (USA), vol.1, no.4, p.299-319 (Oct. 1983).
A data model for representing the structure and semantics of office objects is proposed. The model contains features for modeling forms, documents, and other complex objects; these features include a constraint mechanism based on triggers, templates for presenting objects in different media, and unformatted data types such as text and audio. The representation of common office objects is described. User-level commands may be translated to operations within the model. (38 refs.)

9419 **Wordstar: keeping number one competitive.** M.J.Miller.
Pop. Comput. (USA), vol.3, no.3, p.121-7 (Jan. 1984).
Since the introduction of the word-processing program, Wordstar, in 1978, it has gone through several revisions. The current version (3.30) is now being marketed both separately and as Wordstar Professional, which includes the Mailmerge mailing list option, Spellstar spelling checker, and Starindex indexing program. Wordstar is available for almost all business computers, including those with the CP/M, CP/M-86, MP/M, MS-DOS or PC-DOS operating systems. While the current program has much improved documentation and some fancy new features such as column moves, horizontal scrolling, and a quite flexible installation routine, it still works in the same manner as the original version. Wordstar is a document-oriented program that uses a combination of control-key commands and displays the text as closely as possible to the way it will be printed. The price and complexity of the program indicate that it is designed for someone who is serious about word processing. But because Wordstar makes writing faster and easier, a regular user is likely to find that the investment of time and money will pay off handsomely. (no refs.) *B.C.N.*

9448 **A plan of action [office automation].** D.M.Avedon.
Impact: Off. Autom. (USA), vol.6, no.8, p.4-5 (Aug. 1983).
In order to carry out office automation successfully it is necessary to plan carefully. To begin the planning process, you must realize that because office automation is so broad in scope, top management must be committed to the concept and authorize the planning process. To obtain management's commitment you must scope the project and sell it. The article discusses some questions you must answer and then address in your proposal to management; and subsequent questions to be answered during and after automation. (no refs.)

9417 **Small-business computing: know your rights.** A.R.Immel.
Pop. Comput. (USA), vol.3, no.3, p.49-54 (Jan. 1984).
The basic law that governs contracts and business dealings is the Uniform Commercial Code (UCC). The UCC governs two things: contracts and warranties. Neither is quite as simple as it may seem, particularly when it come to individuals buying microcomputers for business use. A contract is generally considered an agreement reached in bargaining between equals. Actually formal contracts are seldom used in individual microcomputing transactions. The UCC provides for two kinds of warranties: express and implied. The Magnusson-Moss Act is a federal law that covers all consumer products and establishes certain requirements for them in regard to what extent a manufacturer can limit it. Magnusson-Moss is an extremely complicated law and the extent of its jurisdiction is still being established by case law. It is still unclear, for example, how far Magnusson-Moss overlaps the UCC or what its specific applicability is to computer products. It is believed that in the case of software Magnusson-Moss applies only to the floppy disk itself rather than to the contents of the programs on the disks. (no refs.) *B.C.N.*

9473 **Business graphics: picture your numbers.** A.Blake (Data Type, Mountain View, CA, USA).
Mini/Micro 82 Conference Record, Anaheim, CA, USA, 14-16 Sept. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.18/4/1-3
There are many factors to consider when deciding what form business graphics should take: (1) Who has to use the information, and how many people are involved? (2) How often should the information be updated? (3) Which medium should be used? (4) Is colour useful, and is the extra expense justified? (5) Where is the raw data available, and in what form? (6) What hardware and services are available? Each of these questions is discussed. (no refs.)

9438 **Office systems and products: enormous potential for improved office productivity.**
Rydge's (Australia), vol.56, no.8, p.89-91 (Aug. 1983).
Management consultants believe that there is as much scope for work measurement techniques and productivity improvement in the office as there has been in the factory. But managers refuse to take the same hard-headed approach in the office. (no refs.)

9414 **The fruit hang high, so they are sweet. Points to watch in office automation.** K.Haider (WPI Internat., Ottawa, Canada).
Sysdata (Switzerland), vol.14, no.11, p.V-VIII (2 Nov. 1983). In German.
Advocates central planning of any moves in improved office equipment which involve communication between users. The author stresses the need to define objectives and to give full information to all staff affected. He gives a list of specific matters which must be taken into account. (no refs.) *G.F.F.*

9449 **Information, please.** J.E.Champion.
Impact: Off. Autom. (USA), vol.6, no.8, p.12-13 (Aug. 1983).
The beginnings of office automation (OA) are rooted in word processing but it goes beyond this. OA is the vehicle for smooth transition of information throughout the company. There can never be too much information but there can be too much data. It is necessary to distinguish between critical information that aids the decision making process and information it is nice to have. (no refs.)

9425 **Office equipment boom foreseen.** B.Cottle.
Ind. Manage. + Data Syst. (GB), p.5-6 (Sept.-Oct. 1983).
The use of high technology combined with modern furniture, filing systems and fittings can make far better use of office space. There is a realisation in the business world that certain types of machinery have reached the stage at which waiting in the hope of better or cheaper models has become selfdefeating, e.g. word processing systems. The article also gives a brief introduction to computer aided business (CAB) from Acorn Computers, the latest business aid. (no refs.)

9468 **Design for an office information system.** J.Paananen, H.Jarvelin, R.Nieminen.
Report 182, Tech. Res. Centre Finland, Telecommun. Lab., Espoo (May 1983), 171 pp. In Finnish.
Several models have been developed for the design and analysis of office information systems. The understanding of complex office structures can be greatly improved by the use of formal mathematical models. The objective of an office information system is to integrate the communicating components in order to reduce the complexity of the user's interface to the system, to control the information flow and to enhance the overall efficiency of the office. So, solutions to a large number of difficult problems must be obtained. Because the office information system is different in structure from ordinary computer systems, special analysis and specification methods are needed. Formal mathematical models provide means for exact analysis and redesign of office structures. The broadest in scope are formal procedure models, such as the Augmented Petri Net and the Information Control Net. (31 refs.)

9469 **Office systems integration—an overview.** M.Alsup (Arthur Andersen & Co., Houston, TX, USA).
Mini/Micro 82 Conference Record, Anaheim, CA, USA, 14-16 Sept. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.8/1/1-9
An overview of the functions which are performed in an office is given; the author examines the electronic support for these functions and shows how they are integrated into office systems. It also attempts to develop a model of an integrated office system which delivers a variety of application services to users through integrated workstations, enterprise networks and shared network resources. (no refs.)

9447 **Lanier's new look.** B.R.Blackmarr.
Impact: Off. Autom. (USA), vol.6, no.8, p.3-4 (Aug. 1983).
Their emerging stance as a sophisticated integrator of office systems may make Lanier a technical leader. Lanier Business Products Inc. is to expand its range so that it takes advantage of components and software available from other suppliers. It intends to become totally compatible with IBM DCA and DIA. It will be able to tie into an IBM SNA network. Lanier will also make possible LANs for its existing products. (no refs.)

9489 **Network and electronic office systems.** M.J.Aldrich.
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.117-21
The Four Circles concept of Telecommunications which defines an overall Telecommunication scenario embodying the main networking methods—broadcast, cable and telephony—is defined. Developments within each of the Four Circles are identified and attention is focused on electronic office systems, not just in the conventional terminology of local area networks but within an overall picture of developments in teleworking and externalised offices, and the economic and social implications of office automation. (no refs.)

9488 **A statistical model of text origination in the office environment.** O.V.D.Evans (Internat. Computers Ltd., Stevenage, England).
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.79-83
The result of the analysis of the total output of text over two years of a community of office workers some of whom are also programmers is presented. The work has enabled a model of an office text generator to be proposed. The model is simple, capable of analytic treatment and accommodates a number of well known habits of people who originate text. (1 ref.)

9487 **Choosing and implementing an 'integrated' office system.** A.Ibbotson.
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.41-6
This paper covers the critical factors that needs to be considered when choosing and implementing an integrated office system. Whilst many of the principles and practices outlined are similar to those necessary when implementing traditional computer based projects, there are certain factors which require particular emphasis and which, if not catered for, will not only lead to a disastrous implementation but may put one's office system effort back a number of years. (no refs.)

9484 **A system for automating office procedures.** Yang-Chang Hong, Yui-Wei Ho, Chen-Hsin Ho, T.S.Kuo (Inst. of Information Sci., Acad. Sinica, Taipei, Taiwan).
TENCON 82. VLSI and Microcomputers: Today and Tomorrow. Proceedings of the First IEEE Trends in Electronics Conference, Hong Kong, 6-8 Dec. 1982 (New York, USA: IEEE 1982), p.159-62
This paper outlines an integrated office system (OPAS) for automating office procedures. The system is based on an extension of Petri nets for modeling office work as a set of predefined ordering of office activities interacting with data bases and work stations, that is, processing units. It includes five major modules, namely, system supervisor, (Petri-net) execution monitor, mail manager, form manager, and database manager. A prototype system has been implemented in a VAX-11/VMS environment at the Academia Sinica. Their design integrates and coordinates major office tasks and, thereby allows office work with a predefined route of information flow to be initiated and controlled by the system, without people intervention to direct the routing. (9 refs.)

9467 **New office technology. Human and organizational aspects.** H.J.Otway, M.Peltu [Ed.]
London, England: Frances Pinter (1983), 243 pp. [0 86187 282 7]
The production and use of information technologies will be a major source of economic growth and social development into the twenty-first century. In order to ensure that the benefits of the technology are fully harnessed to the well-being of all aspects of society, the Council, Member State governments and Commission of the European Communities are committed to a strategy for the 'information age' that blends social and political goals with economic and industrial imperatives. An important manifestation of this commitment is the *I*nter-institutional *I*ntegrated *S*ervices *I*nformation *S*ystem, known by its abbreviation, INSIS. This is a programme consisting of a strategic action plan within which co-ordinated projects are being initiated to introduce advanced office technology and communications services into public institutions and representative bodies from the EEC and its Member States.

9481 **Office automation: agenda for organizational change.** E.Mortensen (School of Continuing Education, New York Univ., New York, NY, USA).
Productivity in the Information Age. Proceedings of the 46th ASIS Annual Meeting 1983, Arlington, VA, USA, 2-6 Oct. 1983 (Knowledge Industry Publications: White Plains, NY, USA 1983), p.196-9
The paper discusses the important role of management and, in particular, top management, in the planning of the information-based 'Office of the Future'. The buzzword among office equipment manufacturers is 'increased productivity,' however, what other considerations—such as future corporate 'profitability' and 'competitiveness'—may be equally, or perhaps even more, important in decision-making and planning? Which is most important: increased productivity of support staff or increased productivity of 'knowledge workers?' How can top management support office automation planning and implementation efforts? What kind of support and leadership should ideally be provided by such management? One major problem in office automation today is the lack of commonly agreed-upon standards and norms. As a result, some aspects of office automation theory is in a flux of development and filled with contradictions and ambiguities. To what extent have vendors been keeping pace with the development of complex integrated information networks? How well do they provide customers with required general as well as specific systems information?. (16 refs.)

9480 **Productivity and office automation: focus on the future.** C.Barr, M.Kochen (Mental Health Res. Inst., Univ. of Michigan, Ann Arbor, MI, USA).
Productivity in the Information Age. Proceedings of the 46th ASIS Annual Meeting 1983, Arlington, VA, USA, 2-6 Oct. 1983 (Knowledge Industry Publications: White Plains, NY, USA 1983), p.194-5
The authors evaluate the concept of an information center, staffed by an expert consultant who services 50-150 end-users of information technology, in light of the potential for office automation to improve productivity in the service industries. Information professionals will have to prepare to play roles in organizational structures for which such centers are a crucial component, but do so during a period of rapid transition as the growing potential of new end-user languages and software is realized. Professionals will also have to resolve the different meanings of 'productivity'—one being the efficiency of data flow, the second and more critical being the decision-support effectiveness of office automation. The remarks conclude with a sketch of what information professionals at the Ph.D. level should be required to know to function during the transition period, and they outline the avenues for providing this know-how as many workers become 'information professionals'. (no refs.)

9491 **Ergonomic futures in electronic office systems.** K.Mahadeva (Univ. of the West Indies, St. Augustine, Trinidad), T.Dan.
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.177-84
When workers are required to work with, and through, equipment such as LANs for most parts of their working day, optimisation of their combined productivity by evaluating their work-stations as Man-machine systems, becomes a matter of economic importance. The branch of applied science called ergonomics provides the ideal tools for such assessments. This paper deals with both the current attempts at using ergonomics in electronic office systems (EOS) as well as, more particularly, their ergonomic futures. (25 refs.)

9492 **Data privacy in an electronic office system.** S.Hance (Royal Signals & Radar Establ., Malvern, England).
International Conference on Networks and Electronic Office Systems, Reading, England, 26-30 Sept. 1983 (London, England: IERE 1983), p.225-30
The Royal Signals and Radar Establishment (RSRE) is sponsoring a collaborative venture with International Computers Ltd. (ICL) to investigate the provision of enhanced data privacy in a standard Electronic Office System. The work is based in part on the development of a data privacy device. In this paper the author identifies the need for such a device, and describes the preliminary design. (11 refs.)

May 1984

2725 Communications by computer in tomorrow's office. A.Sermet (Radio-Suisse, Berne, Switzerland).
INFODIAL. 2nd International Congress and Exhibition on Data Bases and Data Banks, Paris, France, 24-27 May 1983 (Paris, France: INFODIAL 1983), p.201-4 In French.
In a period of economic recession, telecommunications are particularly important in the exchange of information. The head of a company needs quick, reliable and economic means to inform and to be informed, to manage and to decide. One finds more and more frequently a computer terminal at the working place near the telephone. Even the managing director often has recourse to this device in order to consult data bases, exchange rates or his electronic mailbox. With the implementation of special networks for the data transmission, the electronic mail and the access to data bases gain in importance. The electronic mail—twenty times faster and three times more economical than the telex—permits a safe exchange of the written information with all the possibilities and comfort of a normal typewriter. The development and the creation of documentation systems, of data bases and data banks have made it possible to accelerate and to rationalise the access to the information. The conference raises the problem of the communications with computers and shows the effects on tomorrow's office. (no refs.)

2114 Electronic mail: evolving from intracompany to intercompany. H.P.Burstyn (Yankee Group, Boston, MA, USA).
1983 National Computer Conference, Anaheim, CA, USA, 16-19 May 1983 (Arlington, VA, USA: AFIPS Press 1983), p.379-83
The roots of electronic mail technology go back to the first facsimile systems, but most people today think of electronic mail as computer-based message systems (CBMS)—either remote electronic mail services or electronic mail software packages running on inhouse computers. Systems and services providing access to databases and data processing as well as simple command and menu structures will attract new users. Over the next five years, as electronic mail use grows, the people who communicate within companies (intracorporate communications) will want to contact people outside their company (intercorporate communications). Value-added services that provide private messaging systems must begin providing access between organizations' private networks and the value-added networks. They must also make possible user-transparent access between organizations that subscribe to their services. Today only a few services provide this facility, and then only by special arrangement. Eventually it will not matter which network a user signs onto to receive mail; gateways will provide transparent access between the networks to make it possible to have internetwork and international electronic mail. (no refs.)

2711 Advanced office systems: an empirical look at use and satisfaction. T.K.Bikson, B.A.Gutek (Rand Corp., Santa Monica, CA, USA).
1983 National Computer Conference, Anaheim, CA, USA, 16-19 May 1983 (Arlington, VA, USA: AFIPS Press 1983), p.319-28
Findings reported here address several issues relevant to implementing advanced office systems: (1) White-collar office employees can be classified into four types: management and administration, data-oriented professionals, text-oriented professionals, and support staff. (2) White-collar work forms a systematic cluster of information-handling activities, some of which are performed by nearly everyone in the office. (3) A large percentage of employees, including senior managers and professionals, already use computers in their work; and most nonusers expect to use them in the near future. (4) Four aspects of computer systems underlie user satisfaction: functionality, equipment performance, interaction features, and office environments. (5) Satisfaction with functionality is the best predictor of use of the system. (6) The most important organizational influences on use of and satisfaction with information technology are variety in work and the organization's approach to technological change. (3 refs.)

2611 The better way to get graphic.
Infosystems (USA), vol.30, no.10, p.94 (Oct. 1983).
Siemens-Allis, Atlanta, is a manufacturer of electrical equipment for utilities and major industries. While the use of graphics both in-house and for client presentations has gone on there for years, it was not until recently that the production of graphs and charts was automated, using the Executive Presentation System (EPS) from Intelligent Systems. The EPS included a microcomputer, a 19-in. color graphics terminal, floppy-disk drives, color plotter to produce overhead projector transparencies, color camera system to produce 35 mm slides, data tablet with a digital pen for hand drawing and the complete graphics software. The system's use is growing as more staff members become accustomed to it. A change in emphasis is already evident: 90 percent of the graphics used to be 35 mm slides and today 90 percent is overhead projector transparencies. The transparencies are less expensive and the company says users find the quality equally satisfactory. In addition, EPS has eliminated the need for outside typesetting, has reduced costs overall, and has improved productivity of every staff member involved in preparing graphic presentations. (no refs.) *A.B.*

114 Ergonomic work stations: are they really needed. W.J.H.Selders.
Int. Bus. Equip. (Belgium), vol.20, no.3, p.2-3 (Oct. 1983).
There are some 30 ergonomic design aspects to be considered for video display work stations. The musculoskeletal problems can be alleviated by improvements in work station design. Many of the requirements have been recognised and, in some countries, are enforceable by law. Problems concerning vision require solutions which are independent of the electronics of the VDT itself: glare, reflectance of the terminal housing and environment and ambient lighting. Other problems are inherent to the tube and electronic functionality of the terminal: contrast between characters and background, flicker of the display screen, and character shape and size. The character shape can be resolved with a high resolution monitor and for easy reading large characters are provided by a large 15" tube. Operator performance can be improved considerably by representing characters on the display terminal screen in a 'paperlike fashion: dark characters on light background ('positive' display). In addition, research has indicated that a positive flickerless display results in an average 8.5% increase in operator productivity. (no refs.) *R.N.Y.*

2612 How to buy graphics displays. J.Warner, D.Geiger, N.Kiefhaber (Precision Visuals Inc., Boulder, CO, USA).
Infosystems (USA), vol.30, no.10, p.96-100 (Oct. 1983).
The increased use of computer-generated business graphics has caused the modern office to take shape as a miniature art studio. Employees who had little or no experience in drafting graphs and charts now are sitting at display devices, generating complex and impressive illustrations of their company's business. Since the display device is a key human/computer interface, its selection deserves special consideration, and although many excellent graphics display devices are on the market, you should shop carefully and match your musts and wants against the capabilities of each candidate unit. Define the environment in which the device will operate and the performance levels necessary in that environment, and understand how the device communicates with the host computer. Finally, in evaluating your applications—internal use only, possible publication use, conversion of graphics to film, video or slides—be sure that you really need all those bells and whistles. (no refs.) *A.B.*

2102 Local area networks: a corporate dilemma. L.Bride (Advanced Technol. & Applications Div., Boeing Computer Services Co., Seattle, WA, USA).
Northcon/82 Conference Record, Seattle, WA, USA, 18-20 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.3/4/1-5
The management of a company and its organizational structure will have a determining effect on the success of a network implementation. Many companies, even small ones, have spread decision-making responsibilities throughout several organizations. Technical data processing decisions are often made at an individual organizational level. Making a local area network decision today that will provide growth tomorrow requires a corporate-wide plan. The elements of the plan must be based upon knowledge of emerging network standards and future products. This plan must include all network requirements, local and long haul and the interfaces between the two. It is argued that company requirements must be assessed, not individual organizational requirements. (no refs.)

2051 An overview of the proposed American national standard for local distributed data interfaces. W.E.Burr (NBS, Washington, DC, USA).
Commun. ACM (USA), vol.26, no.8, p.554-61 (Aug. 1983).
The Local Distributed Data Interface (LDDI) Project of X3 Technical Committee X3T9 has resulted in three draft proposed American National Standards for a high performance local area network. The proposed standards are organized in accordance with the ISO Reference Model for Open Systems Interconnection and encompass the lowest two protocol layers (data link and physical) of the model, plus a serial broadband coaxial bus interface. The intended application of the LDDI is as a backend network for the interconnection of high performance CPUs and block transfer peripherals such as magnetic disk and tapes. A carrier-sense multiple access with collision prevention (CSMA-CP) distributed bus arbitration protocol is employed. The cable interface supports the attachment of up to 28 ports over a cable distance of 0.5 km (8 ports may be attached to a 1 km cable) at a transfer rate of 50 Mbit/s. (8 refs.)

2721 Applications for information retrieval techniques in the office. W.B.Croft (Computer & Information Sci., Univ. of Massachusetts, Amherst, MA, USA).
Proceedings of the Sixth Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, Bethesda, MD, USA, 6-8 June 1983 (Baltimore, MD, USA: ACM 1983), p.18-23
The advent of workstations with significant local processing power and memory, together with the communication technology capable of connecting large networks of workstations, has led to the development of personal or profession-based systems. These are systems which provide professionals (such as managers, doctors, software developers) with a set of tools to help them accomplish their tasks. An office information system (OIS) is an especially important type of profession-based system from the point of view of text storage and retrieval. A large number of the OIS tools are used for generating, changing and communicating text documents. (5 refs.)

2697 **Local computer networking via Ethernet.** L.Hartge (3Com Corp., Mountain View, CA, USA).
Northcon/82 Conference Record, Seattle, WA, USA, 18-20 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.1/1/1-7
Ethernet is a coaxial cable communication system that interconnects computers, desktop intelligent workstations and their shared resources. It carries very high-speed digital data packets and was designed to be used in a building or buildings while taking advantage of a full connectivity bus topology. The actual Ethernet specification defines the data rate to be 10 million bits per second. Up to 1024 stations can be connected to the Ethernet over a maximum distance of 2.5 kilometers. The signal from a station is Manchester encoded to produce a self-clocking signal which is then used to drive the shielded coaxial cable. The author discusses Ethernet component functions, international standards organisation and software functionality. (no refs.)

2700 **Electronic typewriter round up.**
Which Word Process. & Off. Syst. (GB), vol.4, no.6, p.17-23 (Nov. 1983).
With more than 119000 units installed in the UK in 1982, the electronic typewriter has become a force to be reckoned with, joining with the micro to erode the bottom end of the WP market. The first and most important difference from the conventional electric typewriter is the vastly simplified mechanical operation supported by modern electronics—it is therefore much quieter. Second, it can store text, and the flexibility and range of memory is what differentiates the three broad levels of current electronic typewriters. One recent development is the ability to upgrade electronic typewriters into full screen word processors and a number of companies are now offering screen upgrades for most makes. The features of the electronic typewriter market, its trends and current products are reviewed. Fifteen typewriter suppliers and over 60 different models are listed. (no refs.) *R.J.L.*

2710 **Office automation: Alliance plugs in.**
Which Comput. (GB), p.67, 69, 71-2 (Nov. 1983).
Complete office automation is a logical development from integrated word and data processing. Wang's experience in the fields of word processing, computers and centralised data processing facilities is now deployed in its Alliance system, which draws together the elements of its existing product range into a single system. Alliance is a multiterminal office automation system, which allows up to twenty-four workstations to be supported on a single installation. The vehicle for integrating Alliance with other systems in the Wang product range is WangNet, the vendor's proprietary networking system. At more than £110000 for a typical configuration (12 terminals), the Alliance is an expensive introduction to office automation. Working near its capacity of 24 terminals, however, the system would be a fully justified investment in Wang's established office technology. (no refs.) *P.B.*

2700 **Northern Telecom: OPEN World.**
Mikrowellen Mag. (Germany), vol.8, no.6, p.640, 642 (Dec. 1982). [received: Aug. 1983]
Northern Telecom Limited has announced a $1.2 billion (Canadian) five-year research and development program that will result in 'open' information management systems based on digital communications controllers. The 'open' system will be able to accommodate most types or makes of equipment, and will allow all major office communication functions to be undertaken on one integrated system. The $1.2 billion will be spent on developing what Northern Telecom is calling OPEN World (Open Protocol Enhanced Networks) products and services. The OPEN World comprises a planning framework to assist users to plan and build their own information management systems, and includes the provision of telecommunications products, services and features for the implementation of such systems. (no refs.)

2650 **Finding a path towards the future office.** D.Casey.
Computing (GB), suppl., p.18-19 (14 Nov. 1983).
Office technology has evolved to the stage where text, data, graphics, and now speech are available on a single machine. While this level of integration is to be found on only a handful of products, the traditional boundaries between office equipment and data processing equipment are being removed on even the smallest office systems. The term 'office automation' has yet to take on a single meaning: emblazoned across exhibition stands, it encompasses technology as outdated as dictation machines and the highest technical achievements in business graphics. Some manufacturers use the expression to describe word processing; others apply the term only to the total integration of data processing and word processing facilities. (no refs.) *R.J.L.*

297 **Bringing the future into your office—a guide to computer shopping.** D.L.Michels.
Futurist (USA), vol.16, no.3, p.49-53 (June 1982).
The fear of being left behind has become a strong motivation to automate offices, but shopping for a computer can be a harrowing experience. A telecommunications consultant tells how to make choosing a computer an easy part of building the office of [illegible]. (no refs.)

2678 **The technology of office automation.** B.A.Hodson.
Optimum (Canada), vol.13, no.3, p.46-71 (1982).
Office automation is one of the largest and fastest growing fields of technological development today. This technology will have a substantial impact on management, administration, operations, organization and people in modern office environments. In this article, the author outlines this technology and its applications. He also outlines potential configurations of equipment and software for two very different environments—the highly structured clerical office and the largely unstructured professional and managerial operation. The author focuses on the technology of office automation while acknowledging a plethora of issues—ranging from productivity improvement to questions of the health impacts of technology—that remain to be dealt with if the 'electronic' office is to become a reality delivering the potentials inherent in the developing technology. (no refs.)

2677 **The electronic office—its impact.** B.Whalley.
Optimum (Canada), vol.13, no.3, p.31-45 (1982).
In his speech to the Management Consulting Institute Conference held in Ottawa in April, 1982, the author outlined the extent and potential impacts of the technologies then available and likely to come in the near future, on government, industry, organizations, people and management consulting organizations. Outlining the technologies and their potentials, this article demonstrates the extent to which all will have to plan for the office of the future—not tomorrow but today—if the benefits are to be accrued while the problems are effectively resolved. According to the author, planning holds the key to successfully achieving the objectives of moving to the electronic office and making it a reality. How effective and comfortable a reality will depend on how well the types of impacts outlined in this article can be dealt with. (no refs.)

2683 **Graphics slides created by computer graphics.**
Electron. Manuf. & Test (GB), p.17 (June 1983).
Designed to make the best possible use of standard peripherals, Micro 1 enables business graphics such as bar- and column-histograms, line graphs and pie-charts to be produced very simply at around 20% of the normal cost. A particularly useful feature is that a monochrome monitor can be used although the finished slide will be in full colour. 64 shades are selectable by the artist from a palette. Whichever system is chosen, a useful facility is the production of black and white copies of the design at any stage of production on any suitable standard printer capable of producing high resolution graphics. The wide variety of designs that can be produced quickly and cost effectively on the Micro 1 can be enhanced on the D38 system by Eidographics if required. (no refs.)

2703 **Integrated office-automation systems.** J.A.Murphy.
Mini-Micro Syst. (USA), vol.16, no.6, p.181-8 (May 1983).
Office automation promises to revolutionize office work at every organizational level. Benefits will come not only from productivity enhancements and other bottom-line efficiencies related to work loads, but also from the ability to perform more varied and thought-oriented tasks. Rather than making robots of everyone, office automation should open new vistas for personal fulfillment in the office, both from job-enrichment and advancement points of view. Office-automation systems are at the same point in the product life cycle that word processing systems were five years ago, and they promise to catch on fast, especially in Fortune 1000 companies. Like early word processing systems, current office-automation systems use diverse architectures and offer a wide and constantly changing mix of features. (no refs.)

2647 **Office productivity—the future starts tomorrow morning.** P.Spooner.
Chief Executive (GB), p.43-8 (Oct. 1983).
Management's efforts to automate manual shop-floor processes and curb overmanning and restrictive practices, together with a decline in manufacturing activity, have left a dangerous imbalance with the administrative side. The office worker has always had less investment in technology than has his shop-floor counterpart to support him in his task, and remedying this situation could bring considerable savings. It is necessary to look very carefully at office procedures before deciding how and what to computerise. Various work analysis techniques are available for this purpose; they include zero-based analysis and overhead value analysis. Automation can affect such areas as the post room as well as the departments more usually thought of. (no refs.) *D.K.R.*

2649 **Telichart graphics make statistics easier to swallow.** M.Podehl, J.Silcoff.
CIPS Rev. (Canada), vol.7, no.5, p.8-9 (Sept.-Oct. 1983).
Statistics Canada has recently introduced Telichart. It is a dynamical information service that translates long, deadly columns of figures into vivid, impressive, easy-to-remember colour charts on a screen. And it does this in seconds, at a simple command given in a very easy man-to-machine language. Telichart provides access to a wide variety of key statistics available in CASIM (Canadian Socio-Economic Information Management System), and shows statistics as curves or bars, or even shapes on the screen. Telichart applies standard analytical functions and cuts costs by bringing the statistical interpretation to life with easy-to-understand colour graphics on low-cost Teli[illegible]erminals. (no refs.) *P.B.J.*

2639 Managing the next step [office automation]. J.Gish.
Infosystems (USA), vol.30, no.10, p.72-3 (Oct. 1983).
The growth of word processing into a host of office-based information technologies has sparked a debate about the management of office automation. While the benefits of office automation may have gained a good measure of corporate recognition, managing these technologies remains a point of contention. Many groups can justifiably argue for control, but better progress toward office automation could be achieved if all groups—including DP—could submerge their desire to be the primary drivers of office automation and recognize that they share a common interest in a successful result. Each has something necessary to bring to the table, and even more, those who use the technologies also have good ideas about how they might fit together. (no refs.) *A.B.*

2640 Business professionals discover graphics. J.Freed (Math Box Inc., Washington, DC, USA).
Infosystems (USA), vol.30, no.10, p.88-91 (Oct. 1983).
As the personal computer enters today's office; it brings along another tool for the manager: business graphics. Managers who spend 60 percent of their time in meetings involved with presentations find business graphics a way to interpret the excess of information that plagues large corporations and small businesses alike, and now that there is a trend to make business graphics available to less technically sophisticated users, executives will be able to create graphics to meet their own needs. Indeed, in the near future, an office personal computer workstation may be incomplete without graphics capabilities, because business graphics serves an important purpose in summarizing, interpreting and managing information. (no refs.) *A.B.*

2643 Computers come out into the open [office computing]. P.Spooner.
Chief Executive (GB), p.55-7 (Oct. 1983).
Microcomputers have brought computing out of the DP department and into the office. Personal computers can be divided into home computers (which have limited office uses as electronic diaries and high-powered calculators) and more powerful business machines. An extensive range of both operating and applications software is available, and current packages are much better suited to user needs than were their predecessors. Hardware developments include the mouse, the light-pen and the touch-sensitive screen. Networks make it possible for users to communicate or to make use of a central resource such as a company database. Using microcomputers, work can be done by the employee who understands it best. (no refs.) *D.K.R.*

2656 Local area networks: overview of architecture and protocol. D.H.Springer (Boeing Computer Services Co., Seattle, WA, USA).
Northcon/82 Conference Record, Seattle, WA, USA, 18-20 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.1/0/1-4
Local area networks are local in two senses. First, geographically, LAN's connect device located quite close together, often in the same building. Second is ownership of the connected devices. A LAN usually interconnects devices belonging to one individual or organization. In both these senses there is no suggestion that the LAN will provide service beyond its locality. There is no common carrier service to the public, the LAN is essentially self contained. The author discusses: local area network components; network architectures and network protocols. (2 refs.)

2659 OCR moves into office automation. D.H.Freedman.
Mini-Micro Syst. (USA), vol.16, no.6, p.211-20 (May 1983).
While word-processing systems can greatly ease the editing, storage and distribution of documents, text must get into the system first. Because typewritten material appears in even the most automated offices, users are forced to enter such documents by keyboard. This text entry takes up as much as 80 percent of a word-processing operator's time. Optical-character-recognition systems—machines that convert printed characters to digital characters—provide one solution to this potential bottleneck. A new generation of OCR systems is available for integration into office-automation systems, inspired by a growing market, ripened technology and a competitive OCR industry. (no refs.)

2661 TINKERNET: or, Is there life between LANs and PBXs?. W.Yemini (Computer Sci. Dept., Columbia Univ., New York, NY, USA).
IEEE International Conference on Communications: Integrating Communication for World Progress (ICC '83), Boston, MA, USA, 19-22 June 1983 (New York, USA: IEEE 1983), p.1501-5 vol.3
TINKERNETs are local-area networks (LANs) constructed from connectors (low-cost hardware identical switches) and cables similarly to the construction of a Tinker-toy. TINKERNETs combine the advantages of LANs and PBXs offering collision-free demand adaptive transmissions over a completely shared bandwidth, no intrinsic geographical bounds on distribution, multiple and concurrent accesses to the communication medium and completely decentralized control. (5 refs.)

2660 Networks in a nutshell.
Which Word Process. & Off. Syst. (GB), vol.4, no.6, p.25-34 (Nov. 1983).
The local area network has all the timeless characteristics of a really significant development in computing and office automation. For example, nobody is quite sure what it is. Everybody has been waiting for standards to develop. A billion dollar business is predicted but nobody quite knows when. Suppliers who have a LAN claim it to be an indispensable element in all future systems. Suppliers who do not have one claim that LANs are overrated and underdeveloped—at least until they get one themselves. Everything one needs to know about LANs, including background, jargon, key suppliers, key products, and user experience is considered. Nineteen notable networks are listed. (no refs.) *R.J.L.*

2648 The cabled company [local area networks].
Bus. Inf. Technol. (GB), no.13, p.6-11 (1982). [received: July 1983]
It all sounds so logical to a manager looking for ways to increase his company's efficiency. Connect together the different kinds of office equipment so that the company's staff can gain the benefits of pooled resources. Every member of staff will have their own workstation, so they can communicate with other staff, and call upon common information. It seems the obvious answer for cutting down on expensive paperwork, improving communications between different members of staff, and putting vital facts at a manager's fingertips. It sounds logical. It is logical, but in moving towards that management nirvana there are a significant number of problems to overcome and decisions to be made. (no refs.)

2660 Now hear this: voice applications gaining in office automation. W.Stensrud, S.Milne (Sydis Inc., San Jose, CA, USA).
Data Manage. (USA), vol.21, no.8, p.28-9 (Aug. 1983).
With rapid improvements in speech compression techniques, voice storage and retrieval is becoming cost-effective in an increasing range of office automatinn applications. A voice editor program can be used to enter and revise voice data, since the voice editor displays a visual representation of the user's voice on the workstation screen. Integrating dictation with other office features such as tabulation is particularly useful. Voice recognition—the ability to translate words into text without the need for a human transcriber—is still many years away. (no refs.)

2726 Computer images: towards a paperless office automation. D.Borrey
INFODIAL. 2nd International Congress and Exhibition on Data Bases and Data Banks, Paris, France, 24-27 May 1983 (Paris, France: INFODIAL 1983), p.224-6 In French.
The word 'mail' evokes a picture of piles of letters, parcels, files and notes, to be read, reproduced, filed, and possibly forwarded. It also evokes the need for immediate, or delayed, replies, followups, and the like. But, nowadays, there is a means of eliminating the dull, bureaucratic drudgery involved in the handling of mail, and scaling the work down to its essential function of exchanging information. This means consists in computerized image processing. (no refs.)

2666 Matters of fax.
What Buy Bus. (GB), no.35, p.3-9 (18 Oct. 1983).
Eventually facsimile (or fax) will become submerged into a general communications protocol for communicating computers and graphics printers, such as lasers or ink-jets, in a process known as the 'integration' of office equipment. For the time being, however, fax is still very much in business. Both British Telecom and the Post Office offer fax bureau services. BT calls its service 'Bureaufax' while the Post Office's is known as 'Intelpost'. They operate to and from designated offices in several UK cities and to several countries. Charges are £1-£4 per page depending on the destination. (no refs.) *P.B.*

2657 Telephone and computer come together in single desk-top unit.
Electron. Commun. Electron. (GB), vol.6, no.6, p.30-1 (June 1983).
The Displayphone unit described combines the voice communication function of a telephone with a computer terminal's ability to transmit and receive data—and it allows the use of both of these functions simultaneously. It is connected to the switched telephone network by two standard lines and includes a telephone handset, a small video screen for displaying messages and other information, a hide-away keyboard, and a built-in data modem. All these components are integrated onto an easy-to-use desktop work station roughly the size of a portable typewriter. (no refs.)

2047 **Tutorial: RS-232-C data switching on local networks.** R.Olsen, W.Seifert, J.Taylor (Interlan Inc., Westford, MA, USA).
Data Commun. (USA), vol.12, no.9, p.231-8 (Sept. 1983).
Discusses small, specialized controllers — known as terminal servers which establish virtual circuits to link devices to the likes of Ethernet. A terminal server connects RS-232-C-compatible devices to a local network. Though it is called a terminal server, the unit is not limited to terminals. A terminal server can also handle computer ports, modems, serial printers, microcomputers, and any other data processing device that is RS-232-C compatible. (no refs.)

2326 **Controlling office.** M.Edwards.
Infosystems (USA), vol.30, no.9, p.118-19 (Sept. 1983).
Control is the chief issue facing federal government managers implementing office automation (OA) strategies. They must control their equipment and their personnel resources. Mandated by Reform '88 to improve outdated management information systems, federal agencies must bolster efficiency and productivity in the face of a diminishing workforce and an increasing office equipment budget. This article examines how this control can be achieved. (no refs.)

2527 **Office communications.**
Sysdata (Switzerland), vol.14, no.10, p.41-3 (26 Sept. 1983). In German.
The report deals with the changes which are taking place in office communications and what the future holds. The difference between today and tomorrow is illustrated in a model for integrated office communications in which the continuous flow lines show the customary communications system of today while the broken lines show what it is likely to be tomorrow. The two principal changes are that data processing will work to a LAN and subscribers communications services will work to two LANs. (no refs.) *H.G.*

2242 **An introduction to layered protocols.** M.Witt.
BYTE (USA), vol.8, no.9, p.385-98 (Sept. 1983).
Product announcements for computers and peripherals increasingly include claims of some sort of networking capability. To understand the network architectures of these products, it is essential to understand the concept of layered protocols. This article discusses a reference architecture based on the International Standards Organization's (ISO) model for open-systems interconnection. This architecture provides a framework within which protocol layering can be explained. This article also briefly investigates protocol design issues within the different layers. (14 refs.)

2101 **An office network at Lockheed Shipbuilding and Construction Co.** P.J.Brown (Lockheed Shipbuilding & Construction Co., Seattle, WA, USA).
Northcon/82 Conference Record, Seattle, WA, USA, 18-20 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.3/3/1-4
This paper gives a pragmatic and definitely short term view of the way the author sees current and emerging LAN applied at Lockheed Shipbuilding and Construction Company. She realizes that what we have at present is not what we will ideally end with but it is hoped that the office of today can be supported in the interim until we can evolve to that office of the future. (no refs.)

2632 **Word processing — how a buyer can make the right choice.**
Bus. Inf. Technol. (GB), no.13, p.12-15 (1982). [received: July 1983]
There are word processors which will not cope effectively with sudden peaks of work — a common problem in many businesses — and others which cannot handle the diverse range of applications demanded by different company departments. Word processing offers the prospect of greater efficiency and reduced administrative costs. But it also threatens the dangers of wasted investment, escalating costs and — worst of all — aggravated, angry staff. (no refs.)

2630 **Office computers.** U.Christen.
Sysdata (Switzerland), vol.14, no.10, p.55-7 (26 Sept. 1983). In German.
The author takes up most of his article in defining these computers and relating them to their tasks according to their capacities. Regarding a new generation he says it is difficult to draw the frontiers as to where the office computer class begins and stops and this will become more difficult with change taking place in the modern office. Computers, word processors, copiers, telephone and telex and telefax will grow together into a new generation of office computer systems, he forecasts. (no refs.) *H.G.*

2657 **How to avoid the electronic mail pitfalls.** J.McQuillan (McQuillan Consulting, Cambridge, MA, USA).
Data Manage. (USA), vol.21, no.8, p.16-17 (Aug. 1983).
Without a strategic plan for office automation, many organizations find they lack a real commitment to the electronic mail concept. This plan should specify the protocols, interfaces and device characteristics that are standard in the organization. Strategic planning, architecture specification, systems acquisition and pilot implementation can help avoid many pitfalls. (no refs.)

2625 **User comfort is the key to getting the most productivity from a CRT.**
Inf. & Rec. Manage. (USA), vol.16, no.10, p.32-3 (Oct. 1982).
Cathode ray tubes introduced into an office can be more effectively used if thought is given to user comfort. This article looks at the simple steps that can be taken to see that the right office equipment is being used producing more efficient, cost effective data or word processing work stations. An office at Fidelity Federal Savings is discussed as an example. (no refs.)

2837 **Technology concerns of records management.** J.A.Benoit.
J. Inf. & Image Manage. (USA), vol.16, no.10, p.25-7 (Oct. 1983).
The US Department of Agriculture, which stores its records digitally, raised the question of how to preserve such documents if they are online, never to be converted to paper or microfilm. Online, these records easily can be modified or erased. In essence, the discussion brings up the subject of 'what is a record?' A number of other important records management issues are brought up in the article.. (no refs.)

2615 **The best laid plans. . . [office automation planning].** W.S.Brown
Computerworld (USA), vol.17, no.32A, p.17-20 (17 Aug. 1983).
Office automation planning should take employees' needs into consideration Unfortunately, that isn't always the case. This article describes a systematic approach to planning for office automation which considers people as well as machines. (no refs.)

2662 **The key to office automation.** R.A.Shiff.
ARMA Rec. Manage. Q. (USA), vol.17, no.2, p.23-6 (April 1983).
Discusses the situation of managements which, beguiled by accounts proclaiming that 'the office of tomorrow is here today', invested heavily in office automation — and then having 'galloped madly off in all directions', were surprised and chagrined that the expected increases in administrative productivity did not materialize. The author examines the pitfalls and suggests a better route. (no refs.)

2665 **Change manual systems first; then comes automation.**
Rydge's (Australia), vol.56, no.3, p.94 (March 1983).
Staff attitudes are critical to the successful introduction of automation in the office. For this reason the automated systems must convince staff of their worth. If they are merely new computerised versions of bad office practices the staff will not utilise them to the full. For this reason, existing manual systems need to be changed and improved before automation takes place. (no refs.)

2669 **The electronic office — how it will change the way you work.** M.Kornbluh (Congressional Res. Service, Library of Congress, Washington, DC, USA).
Futurist (USA), vol.16, no.3, p.37-42 (June 1982).
As managers assemble the electronic systems of the 'office of the future', they may well see office productivity shoot up. This article looks at some of the time- and energy-saving innovations that will transform the office world. (no refs.)

2617 Will oil and OA mix?. G.Riftin ('Computerworld OA', Framingham, MA, USA).
Computerworld (USA), vol.17, no.32A, p.71-3 (17 Aug. 1983).
Atlantic Richfield Co. is a $27 billion international oil conglomerate with 10 operating companies and 50000 employees. The introduction of new office strategies was an operation that needed considerable planning. This article looks at how Atlantic Richfield's OA team approached the task of introducing new office automation procedures in such a large company. (no refs.)

2659 Electronic filing—definitely not a paper tiger. M.Brown (Arthur Andersen & Co., Chicago, IL, USA).
Data Manage. (USA), vol.21, no.8, p.24-5 (Aug. 1983).
Electronic storage and retrieval systems allow an organization to automate the manual effort of filing and retrieving information. They offer two types of searching capabilities: keyword search and contextual search. Optical disk technology makes storing data more economical than ever before. (no refs.)

34 Softly, softly, making sales (DEC). K.Dembo.
Data Processing (GB), vol.25, no.7, p.37-9 (Sept. 1983).
Although making its name in the minicomputer field, Digital Equipment Corporation is moving into other areas to exploit recent advances in technology and new market demands. Office automation, personal computing and manufacturing information systems are three priority areas. DEC's sales strategy is also discussed. (no refs.)

2623 Preventing panic: Practical tips for an OA startup. B.R.Blackmarr.
Impact: Inf. Technol. (USA), vol.5, no.12, p.4, 9 (Dec. 1982).
In many organizations, much of the interest in a new office automation (OA) system begins to drop sharply once the vendor has been selected and the equipment ordered. While many of the visible, interesting tasks of establishing an OA system will have indeed occurred by then, by no means is the job complete. (no refs.)

2622 The people issues of office automation. N.D.Meyer (N. Dean Meyer & Associates, Ridgefield, CT, USA).
Impact: Inf. Technol. (USA), vol.5, no.12, p.2-4 (Dec. 1982).
Considers the people issues of office automation. The article was written in response to reader reaction about the role of the information systems manager in a people-oriented approach to office automation. (no refs.)

2668 The office of the future. Prison or paradise?. D.Mankin, T.K.Bikson, B.Gutek (Rand Corp., Santa Monica, CA, USA).
Futurist (USA), vol.16, no.3, p.33-6 (June 1982).
The office of the future could be a place of unparalleled creativity and opportunity or a regimented prison. Technology will not determine the working atmosphere, though; management will. (no refs.)

2670 Second thoughts on moving the office home. W.L.Renfro (Policy Analysis Co. Inc., Washington, DC, USA).
Futurist (USA), vol.16, no.3, p.43-8 (June 1982).
The home office may free us of the daily commute to work, but we may be giving up a lot more than we gain. (no refs.)

2661 It came, they saw, it conquered, we still fight.... The DP role in office automation. L.Jackson (Arthur D. Little Inc., Cambridge, MA, USA).
Data Manage. (USA), vol.21, no.8, p.31-2 (Aug. 1983).
Office automation began with the typewriter which improved clerical productivity. It now incorporates all information processing functions and companies are introducing departments of information resource management. (no refs.)

2674 An opportunity in office technology. V.Eisensee.
Elektronik (Denmark), no.6-7, p.12-14 (June-July 1983). In Danish.
The article is a description of the 'All-in-1' concept as introduced by Digital for integrating the entire office function, giving a unified office system through a communication bridge. A block diagram of the system is included. (no refs.) *H.J.P.*

43301 **Three office integration programs. SuperCalc, Office Integrator, and Spellguard.** M.Heck.
Interface Age (USA), vol.8, no.9, p.82-9 (Sept. 1983).
SuperCalc is an IBM PC-compatible spreadsheet program. It can be run on several PC configurations, the minimum requirements being a 64 KB system with one disk. The main difference between the program and the well-known VisiCalc lies in how the information is entered and the ease with which the sheet can be formatted to meet particular needs. In addition, SuperCalc commands are more comprehensive and quicker to use when performing simple worksheet creation or sophisticated editing and data formatting. The demo version sells for $49.95 and the complete, unlocked version for an extra $250. Office Integration is an enhanced version of Spellbinder, a popular CP/M-based word processor. In addition to word processing functions, the program contains options which enable one to sort a normal text file mailing list, merge the mailing list into another file, do boilerplating, design fully-prompted forms, and create book-like text. The demo disk costs $49, the complete program $489.95. Spellguard looks at Office Integrator files and checks text for spelling errors. It contains a 20000-word compacted dictionary (which is almost infinitely expandable) and can process about 40 pages per minute. The costs are $49 for the demo version and $299.95 for the complete program. Both Spellguard and Office Integrator have been converted to 8086 code and run on a standard 64 KB two-drive IBM PC without additional processor boards. (no refs.) *R.N.Y.*

43294 **Should we automate office work thoroughly?.** C.J.Coumou.
Informatie (Netherlands), vol.25, no.7-8, p.26-8 (July-Aug. 1983). In Dutch.
The author states that there is no unified concept of the essential nature of 'office work' or of office workers and that the efficiency provided by the installation of computers to process information cannot be determined without clear concepts of the duties to be performed since the work of various offices differs. It seems clear, however, that the installation of automatic aids can help managers and professionals to achieve greater productive efficiency. Research into the work of managers and professionals indicates that a large percentage of their daily work is concerned with discussions with others and only some 20 to 30% of their work is concerned with the intellectual work involved in management. Improvements in communications depend more on proper organisation and measures for telecommunication rather than on automation. As regards that part of office work termed 'intellectual' only such work as is repetitive routine can be successfully automated. Where decisions involved consultations with many other persons, the consultative processes can be speeded up with automatic means of retrieving and communicating essential information by the use of data processing systems, decision support systems etc. After discussing the factors which make it difficult to automate secretarial work efficiently the author concludes that it is only the 'knowledge' workers, who, being 'workaholics', can really decide the exient to which automation can improve productive efficiency. (no refs.) *G.W.*

43325 **A distributed architecture for office automation.** N.Naffah.
Productivite et Informatique: Pour une Entreprise Dynamique. Recueil des Conferences du Printemps Convention (Productivity and Data Processing: Two Essentials for a Dynamic Company. Proceedings of the Spring Convention), Paris, France, 30 May-3 June 1983 (Paris, France: Printemps Convention 1983), p.220-3 vol.1 In French.
An Office Distributed System (OIS) is distributed to office workers dispersed through different sites, and individual workstations are assigned to each worker. OIS architecture can be considered as a two level distributed system: nation wide distribution and local distribution. In such a system, a variety of applications (such as CBMS, Teleconferencing, DDB, Calendars,...) will be executed in a cooperative manner, and for this purpose, some operating system mechanism to bind the entities composing those applications is needed. In this paper, the author presents the issues: naming individuals, naming groups, localizing, exchanging messages.... It is his belief that a Name server managing these functions in a coherent manner, will be a cornerstone for all distributed applications of OIS. (no refs.)

43323 **Conditions for continuing office automation.** J.P.Meppen.
Productivite et Informatique: Pour une Entreprise Dynamique. Recueil des Conferences du Printemps Convention (Productivity and Data Processing: Two Essentials for a Dynamic Company. Proceedings of the Spring Convention), Paris, France, 30 May-3 June 1983 (Paris, France: Printemps Convention 1983), p.90-2 vol.1 In French.
Executive office automation can now go ahead. It will however encounter the problem of how to justify the improvement in productivity promised by the makers. The experience gained in this field is not sufficient to meet the needs of a firm's total information system and therefore the present stage of development in executive office automation makes the limited projects approach more desirable. The 'limited project' approach offers several advantages: it reduces risks in case of failure; limits the scope of preliminary studies; permits a more precise and therefore more convincing assessment of estimated costs and advantages; and improves project control and monitoring. The firm will gradually become sufficiently familiar with office automation to formally draw up an office automation plan as a second phase. (no refs.)

42734 **Local area networks. An introduction.** D.Hutchison (Dept. of Computer Sci., Univ. of Strathclyde, Glasgow, Scotland).
Software & Microsyst. (GB), vol.2, no.4, p.87-95 (Aug. 1983).
The term local network first began to appear in print as long as ten years ago. In the second half of the 1970s there was a great deal of interest in techniques for implementing this type of network, namely to link together computers over a restricted area at low cost and at high data rates. It is now becoming apparent that two local network architectures in particular will become internationally the most prominent: these are the Ethernet and the token ring, both backed by US and European standards bodies and by competing and large industrial interests. A token bus is also being adopted for standardisation but seems likely to be in a somewhat secondary role. In the UK the Cambridge Ring, a slotted ring architecture, has made its own impact, but its future appears limited in a wider context. Nevertheless a large research and development effort is associated with the Cambridge Ring and has resulted in a set of UK local networking standards. The purpose of the paper is to give an introduction to each of these local area network structures, particularly by means of their associated standards. A comprehensive list of references is provided as a basis for further reading into the subject. (30 refs.)

43329 **Caution: user-developed decision support systems can be dangerous to your organization.** G.B.Davis (Univ. of Minnesota, Minneapolis, MN, USA).
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982. Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.750-63 vol.1
There are significant advantages in having users design and implement their own decision support system (DSS) applications; this approach overcomes the shortage of information system development personnel, it eliminates the problem of information requirements determination by an 'outsider', and it transfers all implementation processes to the user. However, user-developed systems have inherent short- and long-term dangers, which are a result of: the elimination of separation of the functions of user and analyst; limits on user ability to identify correct and complete requirements for a DSS application, the lack of user knowledge and acceptance of application quality assurance procedures for development and operation; unstable user systems in organizational situations requiring stable systems; and the encouraging of private information systems in an organization. The paper explores the dangers and risks in user-developed DSS applications and suggests organizational procedures and system design features to reduce the risks to a tolerable level. (5 refs.)

43454 **Cutting mail costs through automation.** V.K.Gupta.
Western Electric Eng. (USA), vol.27, no.2, p.35-6 (1983).
Decisions concerning package distribution methods are not a major concern in the daily operation of most businesses, except when expedient delivery is required. However, at Western Electric's Information Distribution Center, where some 10000 packages are shipped each day, distribution-method decisions play a critical role in its successful and cost-effective operation. The Center implemented an automated mail-handling system to handle the thousands of packages it distributes daily. This new system determines the least expensive distribution method and processes the package accordingly. It has been found that mailroom automation has substantially reduced the mail-handling costs associated with labor and distribution. Because of increased accuracy and the system's ability to compare and process packages by the lower cost, distribution expense was reduced by six percent. A labor cost reduction of fifty percent was also realized. While this particular system application concerns a large mailing operation, small mailrooms and shipping departments can also realize cost savings from automating their distribution system. (no refs.) *A.B.*

43317 **The American office automation picture: the next 3 years.** P.H.Dorn.
Productivite et Informatique: Pour une Entreprise Dynamique. Recueil des Conferences du Printemps Convention (Productivity and Data Processing: Two Essentials for a Dynamic Company. Proceedings of the Spring Convention), Paris, France, 30 May-3 June 1983 (Paris, France: Printemps Convention 1983), p.1-10 vol.1
The future for the office automation industry is somewhat uncertain. Effects of the recessionary period, 1981-2, have by no means disappeared. Large corporations whose purchases have traditionally driven the industry are not seemingly ready to go back into the marketplace with open check books. Within the industry, it is clear there are too many vendors with too many lookalike products all competing for the same money and markets. Incursions into the office equipment markets by manufacturers from other corners of the information technology world continue to present problems to the traditional entries. Recovery in 1983 is uncertain. Fundamental, structural changes in American industry must still be assimilated before total recovery is possible. The next few years are likely to be an adventure in the unknown. (no refs.)

43324 **The OFIS project: electronic mail and diaries.** B.Tixier.
Productivite et Informatique: Pour une Entreprise Dynamique. Recueil des Conferences du Printemps Convention (Productivity and Data Processing: Two Essentials for a Dynamic Company. Proceedings of the Spring Convention), Paris, France, 30 May-3 June 1983 (Paris, France: Printemps Convention 1983), p.93-7 vol.1 In French.
Nowadays, within the economical world the development and achievement of an information and communication policy is becoming a priority concerning organisations and companies. As a matter of fact, the economical stakes are critical as for solutions and structures. Top management of the Burroughs Company decided the information and communication system inside the company. Using the system OFIS—office integrated system—the company finds solutions for improving its organisation. (no refs.)

43291 **The information environment: a user's view.** H.C.Frey (Engng. Standards Dept., Bell Telephone Labs., Holmdel, NJ, USA).
J. Inf. & Image Manage. (USA), vol.16, no.7, p.25-31 (July 1983).
The purpose of this paper is to alert executives to the changes taking place in the 'knowledge worker' environment, and to explore the impact of those changes on the industry. It opens with a discussion of the micrographics industry, the need for increased office productivity, and details 'knowledge worker' activities. Also included are the results of a survey recently conducted to establish micrographics trends, a description of the advanced technology office (ATO) environment, and some personal observations on the future of micrographics. (7 refs.)

43048 **Efficient network graphics.** J.F.Leighton (Nat. Magnetic Fusion Energy Computer Center, Lawrence Livermore Nat. Lab., Livermore, CA, USA).
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982, Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.605-12 vol.1
The transmission of graphics data over a data-communication network is typically a time-consuming process because of the large amounts of data required and limited bandwidth generally available. At the National Magnetic Fusion Energy Computer Center an efficient data-compression scheme for graphics data and a design for a graphics system which is compatible with this scheme have been developed. This system and its effect of the user are described and a discussion of the workability of displaying successively changing frames ('movies') at acceptable speeds is included. (1 ref.)

43327 **Studying managerial work.** R.R.Panko (Univ. of Hawaii, Honolulu, HI, USA).
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982, Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.727-36 vol.1
Managerial work stations are expected to proliferate in the near future. Managers, however, have very diverse needs. To serve managers well, it is necessary to have ways of studying them, so that systems can be adopted to their individual needs. This paper discusses three roads to the study of managers: use-of-time analysis, the analysis of procedures, and the critical success factors approach. The paper also raises the issue of how much individualisation can be afforded and how much users really want anyway. (32 refs.)

43024 **Human factors guidelines for terminal interface design.** D.Verne Moorland (NCR Corp., Washington, DC, USA).
Commun. ACM (USA), vol.26, no.7, p.484-94 (July 1983).
This paper provides a set of guidelines for the design of software interfaces for video terminals. It describes how to optimize screen layouts, interactive data entry, and error handling, as well as many practical techniques for improving man-machine interaction. Emphasis is placed on factors relating to perceptual and cognitive psychology rather than on gross physiological concerns. Ways in which interfaces can be evaluated to improve their user friendliness are also suggested. The author summarizes many ideas that can be found in other, more comprehensive texts on the subject. These guidelines will provide practicing software designers with useful insights into some of today's principal terminal interface design considerations. (12 refs.)

43402 **Computers and data: the hospital information system.** E.S.Butler (TRIMIS Office, Washington, DC, USA), P.S.Fisher.
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982, Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.575-84 vol.2
The advent of hospital information systems which represent fully integrated information bases require a wide spectrum of information usage and type. The authors detail the consideration, models, model appropriateness, and usage characteristics which must be present for an effective HIS environment. The HIS consideration necessitates free form text handling, as well as the conventional fixed format structure. The authors address the problem of free text manipulation and provide a mechanism for its effective utilization. (10 refs.)

42790 **Semiconductor encapsulation of token based LAN's.** M.Stieglitz (Western Digital Corp., Irvine, CA, USA).
Electro/82 Conference Record, Boston, MA, USA, 25-27 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.17-4/1-9
The author describes the hardware and firmware implementation of an LSI token access controller (TAC). The TAC is designed to interconnect the distributed intelligent devices typical in local area network applications that require efficient and reliable communication at moderate rates. The devices coordinate their transmissions with each other via a token passing protocol. The token scheme, while said to be more flexible than other demand access schemes, is comparatively new due to its inherent complexity. This complexity, both in terms of the protocol concept and its implementation, has been perceived costly to implement. The LSI device described relieves both pressures, allowing users for the first time the benefits of tokens at an acceptable cost. (4 refs.)

43318 **The state of the art and the outlook for office automation in Germany.** K.Horing (Univ. zu Koln, Koln, Germany).
Productivite et Informatique: Pour une Entreprise Dynamique. Recueil des Conferences du Printemps Convention (Productivity and Data Processing: Two Essentials for a Dynamic Company. Proceedings of the Spring Convention), Paris, France, 30 May-3 June 1983 (Paris, France: Printemps Convention 1983), p.11-18 vol.1 In French.
The last five years have been characterized by pilot experiments and the introduction of new telecommunication systems: teletex, bildschirmtext (interactive viewdata), telefax and datex-P. The discussions on ergonomic and human aspects had a strong impact on the development of new equipment and organisational solutions. The next few years will show a qualitative and quantitative increase in office systems. The particularities of the German market are discussed in some detail from the point of view of the users and vendors. (no refs.)

42741 **Why a ring? [computer network].** J.H.Saltzer (MIT Lab. for Computer Sci., Cambridge, MA, USA), K.T.Pogran, D.D.Clark.
Comput. Networks (Netherlands), vol.7, no.4, p.223-31 (Aug. 1983).
In a world increasingly populated with Ethernets and Ethernet-like nets there nevertheless continues to be a strong interest in rings of active repeaters for local data communication. The authors explore some of the engineering problems involved in designing a ring that has no central control. It then compares one ring design with the Ethernet on several different operational and subtle technical points of design, maintainability, and future prospects. On each of these points the ring possesses important or interesting advantages. At the same time, the most commonly cited advantage of a ring, 'deterministic access time', is shown to be illusory. The authors conclude that the data communication ring is a sound idea that will prove its value on operational rather than theoretical issues. (20 refs.)

43328 **Office augmentation systems: the case for evolutionary design.** S.R.Hiltz, M.Turoff.
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982, Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.737-49 vol.1
An evolutionary design approach to communication-information systems is presented in terms of six premises with supporting evidence and examples for each. The premises are that: (1) communication and information systems should be integrated; (2) there are no agreed-upon standards for the 'ideal' system; (3) user needs evolve—and the system should grow with the user; (4) system functions should be modifiable and extensible for specific applications; (5) evolutionary systems require formal evaluation; and (6) an evolutionary system requires a user community. (16 refs.)

43245 **The micro barges into the office.** F.W.Miller.
Infosystems (USA), vol.30, no.6, p.58, 62, 64, 74 (June 1983).
The advantages of personal computing are presented. The availability of instant output and feedback is considered a great bonus. Microcomputers can be ideal tools for preparing one-time financial analyses; relieving the clerical burden of extensive tabulation or routine reconciliations; supporting small, specialized systems unsuited to large mainframes; or facilitating the low-volume communication of information. For successful office automation a PC must be able to communicate with other kinds of equipment. The use of personal computing by Consolidated National Gas (CNG) is discussed. (no refs.)

43299 **Office automation.** K.Onoda.
Inf. Process. Soc. Jpn. (Joho Shori) (Japan), vol.24, no.6, p.770-4 (1983). In Japanese. (13 refs.)

43326 **Ease of use in office communication.** R.Kofer (Siemens AG, Munich, Germany).
Proceedings of the International Computing Symposium 1983 on Application Systems Development, Nurnberg, Germany, 22-24 March 1983 (Stuttgart, Germany: B.G. Teubner 1983), p.352-66
The author gives a scenario of office communication. The particular work situation described has a strongly Utopian touch. It was chosen to demonstrate the deep impact modern distributed computer technology might have on organisational structures of the future. The author tries to convey scientific results and opinions achieved in various human factors laboratories. These findings are clad in a semi science fiction story to stress a subjective view of the people affected. (7 refs.)

42836 **Human factors and behavioral science: experiments on quantitative judgments of graphs and maps.** W.S.Cleveland, C.S.Harris, R.McGill (Bell Labs., Murray Hill, NJ, USA).
Bell Syst. Tech. J. (USA), vol.62, no.6, pt.3, p.1659-74 (July-Aug. 1983).
Behavioral studies are essential for devising guidelines for effective communication of quantitative information from graphs. Three experiments in which subjects made quantitative judgments from three different kinds of graphs lead to several recommendations: use pastel rather than highly saturated colors on statistical maps; standardize the point cloud size relative to the frame on a scatterplot; scale circles by making the circle area proportional the the variable represented, but expect widely varying judgments of the areas. (21 refs.)

42884 **When the chips are down.** R.Beattie.
PC User (GB), p.39 (Oct. 1983).
When you decide to buy an IBM Personal Computer, the chances are you will also decide on the IBM-labelled Epson MX80 dot matrix printer. Finger Print is an add-on that lets you make fuller use of the IBM printer. At £45, the Finger Print looks like a good deal for PC Users who need, for example, compressed typefaces which allow more room in the margin for comment. However, the true cost of the Finger Print could easily exceed £45 since the IBM warranty is invalidated by attachment of non IBM features. This means that the replacement of a single damaged chip could cost up to £400. (no refs.) *R.J.L.*

3307 **The office of the future is here today!.** P.Haine.
Manage. Serv. (GB), vol.27, no.10, p.14-17 (Oct. 1983).
The arrival of the micro-chip and developments in telecommunications have brought us the potential for dramatic changes in the way we carry out office work. In spite of the term 'office of the future', the technology is here today and the necessary degree of commitment from senior management, and co-operation from workforce, can bring about a high degree of automated office processes in the short, rather than the longer term. These will considerably improve management's span of control and result in reduced management costs at the same time as greatly increasing the effectiveness of managerial decision making. (2 refs.) *A.B.*

42789 **A timed token protocol for local area networks.** R.M.Grow (Burroughs Corp., Danbury, CT, USA).
Electro/82 Conference Record, Boston, MA, USA, 25-27 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.17-3/1-7
The author describes a protocol adaptable to either a physical or a logical ring. It provides three classes of service with a priority relationship between classes. The three classes allow guaranteed bandwidth, interactive and batch services. These classes are implemented by timing the rotation time of the token to measure instantaneous load; and limiting transmission of information by class of service and the observed token rotation time. (8 refs.)

42787 **IEEE project 802: Local Area Network Standard—a March 1982 Status Report.** T.J.Harrison (Advanced Software Engng. Technol., IBM Corp., Boca Raton, FL, USA).
Electro/82 Conference Record, Boston, MA, USA, 25-27 May 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.17-1/1-11
The author discusses Project 802 of the Computer Society of the Institute for Electrical and Electronic Engineers (IEEE). Project 802 is defining a standard for local area networks in which 'intelligent' terminals and other devices are coupled on a peer-to-peer basis. A brief history and rationale for the effort and an overview of the current draft standard are provided. (10 refs.)

42839 **Evaluating word processing systems: formatting.**
LMG Rep. Data & Word Process. Libr. (Canada), vol.3, no.5, p.1-7 (Feb. 1983).
The increasing variety of word processing systems and the plethora of options and alternative ways of doing things from one system to another, can lead to despair, both for the would-be purchaser, who must try to evaluate all of this, and for the ultimate user, especially the poor unfortunate who is compelled to use more than one system, and thus to have to remember on a daily basis the several different ways of achieving the same simple end. (no refs.)

42845 **Touch sensitive displays for operation and control.** M.Menkin, M.K.Winter (Fluke (GB), Watford.Ltd.,England).
Electron. Eng. (GB), vol.55, no.681, p.177-80 (Sept. 1983).
One means of facilitating the interaction between user and computer is by use of a transparent touch-sensitive panel overlaid on the display screen of the computer, or a touch-sensitive overlay (TSO). Such an overlay is designed so that a finger touch conveys a meaningful signal to the host computer system. Different areas of the overlay may convey different meanings upon being touched and are often defined visually by an outlined box on the computer display. These sensitive areas and the messages they convey to the computer are set up by the software which is running the system. (no refs.)

43019 **Headway being made on graphics standards.** D.Straayer (Tektronix Inc., Wilsonville, OR, USA).
Computerworld (USA), vol.17, no.30, p.SR/7-8 (25 July 1983).
Describes how, after a number of false starts and some duplication of effort, computer graphics is finally getting standardized. The American National Standards Institute (Ansi) and the International Standards Organization are in the process of adopting the Graphical Kernel System (GKS) as a standard for computer graphics. (no refs.)

43230 **Why did we get involved with Forth?.** M.C.Strong, J.C.Horrocks, D.A.Beers (Computer Software Design Inc., Anaheim, CA, USA).
Wescon/82 Conference Record, Anaheim, CA, USA, 14-16 Sept. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.17C-3/1-5
The goal was to build a database system which would allow business people to develop their own applications without the aid of programmers. This system came to be called DATA ACE. Studies showed that DATA ACE should have a number of attributes: a simple structure which supported the flat file, limitless inversion and flexibility. Forth showed itself the ideal language. (no refs.)

42782 **Office automation. The network we know as ARC.**
Which Comput. (GB), p.77-83 (Oct. 1983).
The Attached Resource Computer (ARC) local area network from Datapoint has ignored the present trend towards the Ethernet standard for networking. ARCNET is the collective term for the network architecture, cabling, electronic junction boxes and processors which control access to the network. The ARCNET electronic mail facilities handle messages as text documents. With upper limit of 255 'nodes' on an ARCNET, there is effectively no restriction on the growth of a system. The base point price for a three-processor ARC system, with 120 MB of storage is currently £48000. (no refs.) *G.H.T.*

43313 **Electronic mail system leads efficiency to library loans.** M.W.Liacko.
Telephony (USA), vol.205, no.11, p.40, 45 (5 Sept. 1983).
A blend of electronic mail and distributed processing terminals is sending sophisticated telecom technology into the office, and forming the foundation for modern corporate message centers. Sophisticated electronic mail systems have brought the message centre into the mainstream of the office environment and onto the secretary's desk. The telea machine is being superseded by more rapid, cost effective alternatives, consequently, telecommunications managers are beginning to realise that their responsibilities are changing as message communications come of age. (no refs.) *R.J.L.*

43401 **Hospital information systems.** M.C.Smith (Dept. of Industrial Engng., Univ. of Missouri, Columbia, MO, USA).
Proceedings of the Fifteenth Hawaii International Conference on System Sciences 1982, Honolulu, HI, USA, 6-8 Jan. 1982 (HI, USA: Hawaii Int. Conference Syst. Sci. 1982), p.564-74 vol.2
Provides insight into the evolving nature of hospital information systems. The current status of the use of HIS is reviewed, alternative approaches to HIS design are offered, and state-of-the-art concepts for integrating distributed data processing systems are presented. (13 refs.)

42780 **The optical office.** N.Bradley.
Syst. Int. (GB), vol.11, no.8, p.25-6 (Aug. 1983).
The operation of a fibre optic data ring suitable for use in an interoffice communication, network, as a telephone exchanger or in process control applications is described. (no refs.)

43300 **Use electronic 'mail'; save time and money, get more work done.** R.Heinmiller (Omnet Inc., Boston, MA, USA).
Ind. Res./Dev. (USA), vol.25, no.6, p.82-5 (June 1983).
Discusses the technical and economic advantages of electronic mail systems, pointing out ways these systems can be used or misused. Amongst discussed topics are system flexibility, security, cost and training requirements. (no refs.)

42835 **Graphics display systems: a major step forward.** B.Van Cromvoirt (Electrochrome Ltd., Kitchener, Ontario, Canada).
Computerworld (USA), vol.17, no.30, p.SR/47-8 (25 July 1983).
Reviews the growing market in units for displaying presentation graphics. Applications to business meetings, education, training, sales and medicine are outlined, and the advantages of single-lens projection systems over their three-lens counterparts are outlined. (no refs.)

43271 **Application software aimed at office automation.**
Can. Datasyst. (Canada), vol.15, no.8, p.62 (Aug. 1983).
A new office application development system with document management facilities is being introduced by Officesmiths Inc., Ottawa. The new product, called 'The Officesmith' is said to provide a multi-window operating environment similar to that for the Apple Lisa and the Visicorp VisiON. (no refs.)

43286 **Graphics on the move.** H.Kalt (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.18, no.4, p.20-3 (Aug. 1983). In German.
Interactive videotex (VDX) and business graphics open up new prospects of business success. The new CEPT standard for interactive videotex will provide greater scope for graphics, but restricts presentation of detailed views. VDX users with external computers and in-house systems can overcome this limitation by combining the European standard with the North American alphageometric technique in a dual-mode procedure. (8 refs.)

43285 **Where we are in the year of the network.**
Mod. Off. (Australia), vol.22, no.5, p.16-18 (June 1983).
Gives a review of recent developments in computer networking for offices and gives examples of some applications. Various types of network are identified: work area networks; long-distance networks; metropolitan area networks; local area nets. Systems currently available in Australia are briefly reviewed. (no refs.)

42769 **Coaxial-cable multiplexers solve a big LAN problem.** W.A.Levy.
Mini-Micro Syst. (USA), vol.16, no.7, p.249-50 (June 1983).
Several companies have introduced coaxial-cable multiplexers that are compatible with networks of IBM 3270 terminals. These multiplexers can reduce network cost by eliminating many cable runs, and the multiplexers themselves are relatively inexpensive. (no refs.)

2816 **Local area networks.** L.Pouzin (CNET, Issy-les-Moulineaux, France).
Proceedings of the 1982 CERN School of Computing, Zinal, Valais, Switzerland, 29 Aug.-11 Sept. 1982 (Geneva, Switzerland; CERN 1983), p.195-228
This paper is a series of comments with companion diagrams. Sections cover the following topics: local networks in context; gateway to the external world; applications; physical media; topologies and control structures; position within the ISO model; PABX as a local network switch; examples of PABX features; slot structure; Cambridge ring; slot race at bit circle; Cambridge ring mechanisms; register insertion; token passing; CARTHAGE; IBM ring; contention; collision handling; ETHERNET; voice traffic; voice on ETHERNET; broadband cable; standards; interconnection; interconnection architecture; and salient points. (4 refs.)

41994 **Local area networks—a merger of computer and communications technologies.** C.Bass.
Systems (S. Africa), vol.13, no.3, p.13-21 (March 1983).
Microprocessor technology in modems, packet switching and approximate software has made local area networks commercially viable. This article surveys the background to such systems, looks at the media and signalling strategies that are used in them and deals with aspects of security and standardisation. (no refs.)

43493 **Canadian videotex wins acceptance.** D.MacDonald.
Commun. Int. (GB), vol.10, no.9, p.87-8, 90, 94 (Sept. 1983).
Hardly a month goes by without an announcement of a new videotex project in Canada. Invariably at use is the home-grown Telidon system, which was first emerging from the laboratories barely five years ago. Of at least equal importance to domestic installations is the growing international acceptance of the Telidon-based information storage and retrieval systems with their outstanding graphics capabilities. (no refs.)

42893 **Typewriter printer.** N.Duffy.
Wireless World (GB), vol.89, no.1572, p.63 (Sept. 1983).
In a previous article the author showed how an electronic daisywheel typewriter could be fitted with an RS232 interface to enable it to double as a printer for a computer. This article describes a few simple changes to the circuit to provide it with a Centronics-compatible parallel interface so that it can be used with micros that don't provide a serial output port. (no refs.)

43304 **Justifying office automation.** W.J.Boczany (Upjohn Co., Kalamazoo, MI, USA).
J. Syst. Manage. (USA), vol.34, no.7, p.15-19 (July 1983).
Shows how to measure the cost/benefits of office automation before implementation. (no refs.)

43249 **A user's search for 'ideal' graphics software.** E.F.Young.
Computerworld (USA), vol.17, no.30, p.SR/15, 20 (25 July 1983).
The author describes her search to find the ideal software package for business graphics. The needs of the user are emphasised, and the quality of documentation is commented on. (no refs.)

43288 **Fiber-optic local network sets its sights on offices and factories.** T.Kunihero (NEC Corp., Tokyo, Japan).
Electronics (USA), vol.56, no.15, p.125-8 (28 July 1983).
Three subsystems unite to handle voice, data, and video in a multispeed, multiprotocol, multivendor environment. (no refs.)

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39604 **Clustered systems: configured for productivity.** W.A.Walshe.
Off. Adm. & Autom. (USA), vol.44, no.6, p.53-5, 58-65, 100 (June 1983).
Surveys the equipment currently available for clustered systems in word processing and office automation. Benefits of such equipment include lower cost and rapid communication. (no refs.)

39630 **Office automation by Ericsson.** J.G.F.M.Boot (Ericsson, The Hague, Netherlands).
Tijdschr. Ned. Elektron.- & Radiogenoot. (Netherlands), vol.48, no.1, p.31-6 (1983). In Dutch.
The author states that the real break-through in office-technology will be caused by the introduction of integrated systems in the second half of the eighties. For integrated systems communication is a demand and for communication standardisation is a demand. This is one of the reasons that he believes it will taken another two or three years before integrated systems are introduced on a larger scale. Other possibilities for reducing office costs can be offered by Telecommunication Administrations. One example is the the teletex-service. With this service electronic mail can soon come and it will be one of the reasons by which the 'less-paper' office becomes a reality. (no refs.)

39631 **Planning office automation - Electronic message systems.** J.A.T.Pritchard, P.A.Wilson.
Manchester, England: NCC Publications (1982). 242 pp. [0 85012 331 3]
The electronic office as a total integrated information system is very much a concept of the future, but evolution towards it is clearly evident today. Electronic message systems (EMS) are but a part of the automated office; other parts are information management systems and document preparation systems. The prime aim of this book is to help its readers to devise a practical and effective strategy for introducing office automation (OA) in general and EMS in particular. The following topics are discussed: how an organisation should set up a strategy study; the gathering and analysis of relevant information which can be used to select strategy options; the strategy options that are open to organisations wishing to implement OA; the design of the telecommunications and EMS architecture; and how the results of the study should be reported and authorised. (20 refs.)

39632 **Local network technologies for the office.** J.M.Davidson (Ungermann-Bass Inc., Santa Clara, CA, USA).
Electro/81 Conference Record, New York, USA, 7-9 April 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.33/1/1-6
This paper provides a pragmatic, short term view (3-4 years) of the way in which current and emerging local networks may be applied in the automated office. Its premise is that the conventional hope for integration of office equipment with local net technologies will not be realized in the short term, but that a more practical approach, inspired by the need to support communications for the office of today, will support the level of integration of office equipment that is appropriate to begin the automating process. (6 refs.)

39633 **Computer communications in the automated office.** J.M McQuillan.
Electro/81 Conference Record, New York, USA, 7-9 April 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.33/2/1-6
Present office communications are diverse and fragmented; they use many different media, and media conversions introduce undesirable cost and delays. We are all familiar with the problems of confused, delayed, or lost communications. The convergence of computing and communications technologies makes possible a significantly more automated office in the future, as has been widely noted. The author makes several recommendations for present and near-future computer-based communications within the office. (no refs.)

39634 **Practical considerations for voice messaging services.** A.M.Rosenberg (Delphi Communications Corp., Inglewood, CA, USA).
Wescon/81 Conference Record, San Francisco, CA, USA, 15-17 Sept. 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.10/3/1-4
The author discusses voice message systems and predicts that they will provide more effective ways of personal inter-communication. However, there still remain practical questions to be dealt with in order to achieve cost-effective payoff as well as user acceptance. In particular, it is important to include the problems of answering telephones as part of the messaging activity in order to maximize the benefits of such systems in a cohesive, integrated manner. To accomplish this objective, as well as solve other problems inherent to 'automatic' systems, the selective use of human operators, as part of the system, must be a major design consideration. (2 refs.)

39635 **Office communication: promises, problems and pitfalls.** S Rohlfs (IF Interface Consulting Ltd., Ottawa, Ontario, Canada).
Proceedings of the International Computing Symposium 1983 on Application Systems Development, Nurnberg, Germany, 22-24 March 1983 (Stuttgart, Germany: B.G. Teubner 1983), p.249-67
Presents an overview of current technology and research trends in office communication. It examines the promises, problems and pitfalls of office communication with respect to the impacts on individuals and organizations. To make the transition from data processing to office communication, system managers need additional tools for planning and design. These tools are presented with special consideration being given to the concerns of corporate managment, employees and the data processing department. (31 refs.)

39638 **Office automation planning: strategies for information searching.** E.Mortensen.
National Online Meeting Proceedings - 1983, New York, USA, 12-14 April 1983 (Medford, NJ, USA: Learned Inf. 1983), p.377-88
The paper discusses the growing importance of computer-based office automation and its impact on organizational structures and decision making. The following observations are made: office automation requires far-reaching changes in organizational structure and in administrative procedures. Many managers tend to resist technological changes in the workplace, but without overcoming such resistance and without obtaining their full moral and organizational support moves toward meaningful and lasting office automation are likely to fail or to be delayed. There is strong evidence that top management must become directly involved in and knowledgeable about new office technologies if such automation efforts are going to become truly effective. The explosive growth of advanced office technology makes it increasingly difficult for corporate decision-makers to determine the type and level of advanced office technology that may best serve their specific organizational and operational needs. The major source of information about automated office equipment and options comes from the manufacturers themselves. Online data bases, if properly searched, can provide valuable and inexpensive systems information on all aspects of office automation. (26 refs.)

39652 **Avoiding information overload in the electronic office.** S.R.Hiltz, M.Turoff (New Jersey Inst. of Technol., Newark, NJ, USA).
Proceedings of the Sixteenth Hawaii International Conference on System Sciences 1983, Honolulu, HI, USA, 5-7 Jan. 1983 (HI, USA: Hawaii Int. Conference Syst. Sci. 1983), p.581-9
A variety of software options can help users to cope with the potential of information overload resulting from computerised communication systems. These include segmentation of communication topics via a conference structure, length limitations, voting structures, and a variety of mechanisms to filter and organise information. Encouragement of the emergence of an online social system, with norms and sanctions about considerate communications behaviour, is also important for preventing 'junk mail' and similar impositions of unwanted material on users of these systems. (8 refs.)

39858 **Office automation pilot project.**
Dec User (GB), p.45, 47-8 (Aug. 1983).
Investing in an area as ill-defined as office automation is a major decision for any organisation. When the company is an expanding division of one of Britain's largest enterprises, that decision can have far reaching implications. It was within this framework that BP introduced a pilot office automation scheme running on PDP-11 machines three years ago. The sheer scale of the BP Group provided the perfect proving ground for office automation concepts. Broken up into operating divisions, it could undertake controlled experiments in one area before selecting a system for more widespread application. No less important was the availability of management services staff whose professional training allows them to observe developments dispassionately. Though the pilot project is now fully operational, the final choice of a system has yet to be made. Whether or not the chosen Corporate Business Systems product appears on the short-list of suppliers is less significant than its crucial role in setting the scene for what is destined to be amongst the UK's most extensive office system networks. (no refs.) *A.B.*

39562 Picking software for office integration. G.Morrow (Morrow Designs Inc., San Leandro, CA, USA).
Computerworld (USA), vol.17, no.24A, p.75-7 (15 June 1983).
Puts the view that in analyzing system needs, users should first look long and hard at software capabilities. The choice of hardware, needs for networks, etc., should only become a consideration after the software has been chosen. (no refs.)

39566 Data processing in the modern office. F.De Michel (IBM Schweiz, Zurich, Switerland).
Bull. Assoc. Suisse Electr. (Switzerland), vol.74, no.11, p.563-6 (4 June 1983). In German.
Office automation currently relates primarily to word processing, and the article summarises the constitution and application of such systems. Economic aspects are briefly discussed related to costs such as hardware, maintenance, services, installation, training and other items. Consequences of introduction of word processing include supplanting less powerful equipment, release of personnel from routine tasks, and typically 30% increase of productivity. Roles of data processing in offices of the future are considered, where functional aspects will include central word and data storage, interactive operation, wider computer application, electronic communication instead of letters by post, and conferences arranged with electronic aids rather than by physical meetings. Technological developments relate to improvements in mass storage, increasing use of communications networks for data purposes, increased data rate, improved terminals including plasma display panels, and other features. Facilities of the future office workstation are discussed, and improved conditions will give less working time, opportunity of working from home, reduction of activity, and better job satisfaction. (no refs.) *H.V.H.*

39572 Electronic mail equipment: professionals stop 'telephone tag' with electronic mail systems.
Bank Syst. & Equip. (USA), vol.20, no.6, p.93-5 (June 1983).
To eliminate the 'telephone tag' game, many white collar professionals are using electronic mail systems. Surveys show that these systems have helped to increase efficiency 20 per cent. This product review takes a look at the state-of-the-art of electronic mail systems, looking at 16 systems on the US market. (no refs.)

39576 Now It's time to play . . . 'You Bet Your Job' and at GM, the magic word was . . . automate. C.R.Day,Jr.
Mod. Off. Procedures (USA), vol.28, no.6, p.70-4 (June 1983).
Shows how the Environmental Activities Staff of General Motors Corp. introduced office automation in a somewhat unorthodox manner. They didn't tell anyone what they were about to do; they just went ahead, and since getting the cash was a problem, they persuaded the vendors, Xerox Corp., to defer charges until the system worked. (no refs.)

39577 The paperless office? It's still wishful thinking. J.McAfee.
Mod. Off. Procedures (USA), vol.28, no.6, p.114N-P (June 1983).
Describes some of the new technologies for improving efficiency in document storage and retrieval. So-called turnkey systems are now available that overcome problems of: not enough space for paper storage; crude indexing systems for paper files; slow manual distribution of paper; manual procedures for storing and retrieving documents. New methods are not being adopted quickly enough. (no refs.)

39578 Will the concept fly when the boss can't?. L.K.Romei.
Mod. Off. Procedures (USA), vol.28, no.6, p.122-32 (June 1983).
Describes five types of teleconferencing: voice only, voice plus facsimile, computer networking, slow-scan video and full motion video. Only the last of these has captured the imagination as a concept; but it's the most expensive too. The author suggests that one reason why full motion teleconferencing has only been adopted slowly is the relative attractiveness of real travel compared with its electronic surrogate. (no refs.)

39579 The PC battle: A report from the trenches. L.K.Romei, C.Fehlner.
Mod. Off. Procedures (USA), vol.28, no.8, p.72, 74, 76, 78, 80 (Aug. 1983).
There's no sign of any slowdown in personal computer popularity. A user's survey reveals that it continues to invade more and more levels of office management, and lots of PCs are being tied to mainframes. Still, training could be improved, as could machine speeds. Meanwhile, in the marketplace, IBM's clout is as impressive—and effective—as ever. As to the future, many of the respondents of the survey are finding that their floppy disks, which seemed to offer unlimited capacity at first brush, just do not offer enough now that they are really heavily into applications. So it is not too surprising that 'hard disk' is the leading item on most shopping lists for adding to or expanding computer systems. (no refs.) *A.B.*

39591 Making electronic mail work in your office. R.Wild (I.P Sharp Associates Ltd., Toronto, Ontario, Canada).
CIPS Rev. (Canada), vol.7, no.4, p.26-7 (July-Aug. 1983).
Electronic mail is a software tool that can work with other computerized applications to save time and improve communication. It is gaining increasing prominence in the modern office environment. The real strength of electronic mail lies in its ability to communicate information about everything that is happening everywhere in an organization. Perhaps the most interesting applications are those that involve discussions among groups of individuals geographically dispersed within the organization. Used to complement traditional methods of communication, electronic mail can make significant qualitative and quantitative improvements in today's modern office. (no refs.) *G.H.T.*

39592 Defining an integrated office systems approach. D.Casey.
Computing (GB), vol.11, no.28, p.6-7 supl. (14 July 1983).
Shows how, over the past year, ICL has reviewed its office products and begun to rationalise them into a coherent range. (no refs.)

39595 NT Data Systems unwraps a LOAF [office automation].
Which Word Process. & Off. Syst. (GB), vol.4, no.5, p.26 (Sept. 1983)
Canadian Northern Telecom (whose main interest lies in digital communications) have entered office automation with LOAF, local office automation facilities. This consists of five integrated routines to run on the 400/500 series. OMNIWORD word processing, OMNILINK to share resources amongst users, OMNIMAIL, E-TELEX, and AUTODIAL for bulk transmission or receipt of data. MINICALC with OMNIWORD is a spreadsheet program, but one for the secretary and the typist. It performs specified arithmetic operations on a worksheet of 13 columns each with 19 lines—adequate for many secretarial applications. Operations on the cells in this worksheet are carried out by means of 15 commands which build up MINICALC into a useful WP package. (no refs.) *R.N.Y.*

39596 It will be hard for the 'can't wait-can't type' manager [automated offices].
Mod. Off. (Australia), vol.22, no.4, p.16-17 (May 1983).
Surveys current attitudes among managers in the USA to office automation, showing how some organisations are preparing their technophobic and cyberphobic ('cant wait-can't type') executives for office automation. Some companies are opening centres to make computers available to their employees (no refs.)

39599 EMS 1000 TEXT ushers in the electronic office. I.Lanius, W.Wilde (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.18, no.4, p.24-7 (Aug. 1983). In German.
Electronic mail and communicating word processing are the next milestones in office automation. Key considerations at this stage are the scope and capabilities of terminal equipment to be installed, integration of it into company structures and routines, and user options. The EMS 1000 TEXT communication system offers a wealth of features and functions which can be tailored to any office. (4 refs.)

39600 Adapting office life to new technology. P.Wilson (Nat. Computing Centre Ltd., Manchester, England).
Data Processing (GB), vol.25, no.6, p.14-16 (July-Aug. 1983).
Implementing office technology means changing operating methods and job content if the benefits of increased productivity, effectiveness and competitiveness are to be enjoyed. The tendency seems to be toward making people fit the new job, with an increased emphasis in routine work at the lower levels, rewarded by higher pay, etc. To stop this happening managers must produce a plan for the adoption of office automation technology. (2 refs.) *A.B.*

39602 Living the automated office. J.M.West (Xerox Corp., Stamford, CT, USA).
Off. Adm. & Autom. (USA), vol.44, no.6, p.24-6, 104-5 (June 1983).
The author looks back on his first year's experience with multifunction workstations in the automated office. He recommends that executives concentrate on tackling the 6 Cs: create, correspond, calculate, capture, compose and communicate. (no refs.)

38833 **Prevention is better than cure... [local area networks].**
Comput. Syst. (GB), vol.3, no.7, p.45-7 (July 1983).
Looks at further proposals aimed at coming to a consensus view on technology for local area networks. These recent developments aim to reduce the cost of connection, while increasing functionality. (no refs.)

38834 **Beyond local networks.** W.Stallings.
Datamation (USA), vol.29, no.8, p.166-76 (Aug. 1983).
A new area of communication expertise—internetworking protocols—has developed to deal with switching data among dissimilar networks. One example of this is the internet protocol (IP) originally developed for Arpanet. This protocol allows the connection of different types of local networks. The philosophy of IP is that the gateways and stations share a common protocol for internal traffic, but that the stations and networks are otherwise undisturbed. In terms of the usual open system interconnection (OSI) model for communications architecture, the IP fits between the network (routing) and transport (end-to-end delivery) layers. (no refs.) *P.B.*

38840 **Local area networks explained.** V.Cheong.
Scicon Software & Serv. Rev. (GB), no.3, p.20-2 (1983).
It is in the area of office automation that LANs are likely to make an impact as studies indicate that the majority of office type networks will operate over a wiring distance of less than 1000 feet and with over 90% of the stations within 5000 feet of each other. The confinement of a network to a local area confers several benefits. The rate of data transmission can be considerably increased and indeed some products operate at 50 Mbps where low error rates are possible which permits the communication protocols implemented to be much simpler. In spite of these potential benefits, users have not embraced the technology as vendors would have hoped. One of the primary reasons for this has been the existence of alternative approaches to local area communications each with their inherent advantages and disadvantages. Another contributory factor has been the painfully slow emergence of international LAN standards resulting in user caution in adopting the technology. (1 ref.) *A.B.*

38843 **A token-ring network for local data communications.** R.C.Dixon, N.C.Strole, J.D.Markov (IBM Communication Products Div., Research Triangle Park, NC, USA).
IBM Syst. J. (USA), vol.22, no.1-2, p.47-62 (1983).
Technical innovations such as large-scale integrated circuit technology and distributed operating systems have respectively reduced the cost of computing and provided a basis for large networks within the confines of a single building or cluster of buildings in close proximity to one another. Local area networks can provide a systematic approach for interconnecting personal workstations, control units, and central processing units, thereby providing a means for these machines to pass information from one to the other. This paper describes a local area network based on the fundamental concepts of a token-ring. Two main ideas are presented. The first idea concerns the physical topology of the wiring network and its star-ring organization. Next, the logical data flows are overlaid on the physical network to provide control procedures for exchanging data through the network. The resulting system has unique features that produce a local area network with good performance and reliability characteristics. (19 refs.)

38864 **Integration of long-haul and local networks.** D.F.Wier (GTE Telenet Communications Corp., Vienna, VA, USA).
Electro/81 Conference Record, New York, USA, 7-9 April 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.17/3/1-4
The Institute of Electrical and Electronic Engineers (IEEE) formed the 802 Local Networks Committee in February 1980 to establish standards for Local Area Networks. One of the objectives was to be compatible with the International Standards Organization (ISO) Open Systems Interconnection (OSI) layered architecture. As such, the Committee concentrated on the physical and link layers and has proposed a standard that meets this objective. Interfaces to long-haul networks are also compatible with the OSI layered architecture and include such protocols as X.25 and IBMs SNA. The provision of equivalent services by the link layer in both local and long-haul networks permits the easy interfacing of both types of networks. (6 refs.)

38866 **Local networks as part of an overall network architecture.** M.Begun, R.Perlman, A.Lauck (Digital Equipment Corp., Maynard, MA, USA).
Electro/81 Conference Record, New York, USA, 7-9 April 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.17/5/1-9
Emerging local area networking technology offers new possibilities for distributed processing. Digital's Network Architecture (DNA) has been evolving to match customer requirements to available technology. The paper describes the motivation behind supporting the Ethernet in DNA, the requirements of this support and the key design decisions made to provide this support. A new quasiadaptive area routing architecture for DNA which provides support for very large networks is briefly outlined. (11 refs.)

38870 **Predicted capacity of Ethernet in a university environment.** M.Marathe, B.Hawe (Systems Performance Analysis, Digital Equipment Corp., Tewksbury, MA, USA).
Southcon/82 Conference Record, Orlando, FL, USA, 23-25 March 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.11-3/1-10
Examines the limits imposed on the number of users due to the finite bandwidth of the channel. This study is performed for users in a time-sharing environment. Measurements were performed to estimate the characteristics of that environemnt at a large university currently using conventional direct connection between hosts and terminals; i.e. the limitation on the number of users when the system uses an Ethernet for the interconnection of host terminals, etc. The characteristics of the user environment were coupled with a distributed architecture model and used as input to an Ethernet simulation. The results of the simulation give an upper bound on the number of users which can be supported in this environment. This of course assumes that there are a sufficient number of hosts, etc., so that those resources are not a bottleneck. (12 refs.)

38871 **Present and emerging applications of local networks.** C.C.Bass (Ungermann-Bass Inc., Santa Clara, CA, USA).
Southcon/82 Conference Record, Orlando, FL, USA, 23-25 March 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.11-4/1-3
Any distributed architecture reflects its underlying communications technology. Local networks are fast, inexpensive and flexible compared to traditional local communications. Consequently, local networks permit centralized vs distributed tradeoffs to be made differently. For example, lower hardware costs combined with communications limitations have encouraged the development of distributed data bases. For private files, local storage is often ideal but for shared, dynamic, synchronized data, distributed approaches are complex and expensive. Local networks support a balance of local, private data and effective distributed access to centralized data. Present and future applications are discussed. (no refs.)

38872 **A review of data communications network protocols.** A.J.Weissberger (Systems Architecture, Memorex Communications Group, Cupertino, CA, USA).
Midcon/82 Conference Record, Dallas, TX, USA, 30 Nov.-2 Dec. 1982 (El Segundo, CA, USA: Electron. Conventions 1982), p.26/1/1-10
This paper highlights the key ingredients of data communications systems for the 1980s—network protocols. The ISO Open System Interconnection Reference Model (OSI/RM), IBM's Systems Network Architecture (SNA), the CCITT X.25 packet switching recommendation, and the IEEE 802 Local Area Network (LAN) standards are briefly described. A preview of an IEEE 802-to-X.25 gateway standard is presented. (no refs.)

38947 **Working with VDUs.** B.Pearce (Loughborough Univ., Loughborough, England).
Train. Off. (GB), vol.19, no.9, p.264-5 (Sept. 1983).
To understand why VDUs have become such a focus of concern it is useful to consider the changes that have taken place in their use over the last ten years. An in-depth study is made of VDU ergonomics, the attitude of the unions as well as the point-of-view of the Health Service. (3 refs.) *V.G.P*

39038 **A single-chip self-contained speech recognizer.** T.Kimura, T.Yano, S.Hamaguchi, N.Miyahara, K.Muramoto (Musashino Electrical Communication Lab., Nippon Telegraph & Telephone Public Corp., Tokyo, Japan), H.Nagashima.
IEEE J. Solid-State Circuits (USA), vol.SC-18, no.3, p.344-9 (June 1983). (Eighth European Solid-State Circuits Conference, Brussels, Belgium, 22-24 Sept. 1982).
A fully integrated speech recognition LSI has been developed. The speech recognition LSI can recognize a speaker-dependent vocabulary of about 200 isolated words with high accuracy in real time, using several memories, which are a phoneme template memory, word dictionary memory, and work memory. This LSI is designed to perform the total speech recognition processing, including the endpoint detection of the input utterance in a self-contained manner. With the pipelined structure of the function blocks, highly efficient parallel operations are achieved. Furthermore, satisfactory testability is assured with a scan path technique. The speech recognition LSI is fabricated with 2 μm *E/D* NMOS process technology, employing two aluminium interconnection layers and a high resistivity poly-Si layer. (7 refs.)

39561 **Working remotely: where will your office be?.** G.Rifkin.
Computerworld (USA), vol.17, no.24A, p.67-9, 72-4 (15 June 1983).
Describes the move away from reporting for work at a far-off office, and notes the possibilities that may emerge. These include home working and working from neighbourhood centres. (no refs.)

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36258 Reading text from visual display units (VDUs). Y.Waern, C.Rollenhagen (Dept. of Psychology, Univ. of Stockholm, Stockholm, Sweden).
Int. J. Man-Mach. Stud. (GB), vol.18, no.5, p.441-65 (May 1983).
This article presents an analysis of the task facing people, who have to read text from VDUs. Psychological research related to different aspects of this task is reviewed. First, situational factors are considered. It is suggested that the VDU situation may lead to fatigue and stress, which may decrease performance. Then a task analysis is performed, where potential difficulties and advantages of the VDU presentation are pointed out. Psychological investigations of text processing are then reviewed, with particular consideration of research methodology and text processing theory. Finally, some conclusions for planning research in this area are presented. (106 refs.)

36346 The user as a representation issue [office automation]. E.H.Wynn (Bell Northern Res., Mountain View, CA, USA).
Proceedings of the Sixteenth Hawaii International Conference on System Sciences 1983, Honolulu, HI, USA, 5-7 Jan. 1983 (HI, USA: Hawaii Int. Conference Syst. Sci. 1983), p.599-608
The phrase 'user-driven' design and other terms referring to consumers of office automation products contain ambiguities and unexamined assumptions. A first step in designing systems is to reflect upon how the 'user' is conceived of, what is implied in each separate conception of 'user', and how the assumed definitions can affect the quality of research on users' requirements. (no refs.)

36347 Office work: the familiar unknown [user requirements in office automation]. R.R.Panko (Coll. of Business Administration, Univ. of Hawaii, Honolulu, HI, USA).
Proceedings of the Sixteenth Hawaii International Conference on System Sciences 1983, Honolulu, HI, USA, 5-7 Jan. 1983 (HI, USA: Hawaii Int. Conference Syst. Sci. 1983), p.609-16
Office automation research has tended to focus on the second half of its name, automation, relying on simplistic and often erroneous beliefs about the nature of office work. The lack of knowledge has intensified today's 'justification crisis' in office automation. This paper suggests that classical marketing and marketing research tools could provide a much better chance of designing office automation tools which users will accept. (22 refs.)

36397 Copyright your business software. J.B.Andersen (Seattle Univ., Seattle, WA, USA).
Proceedings of the American Institute for Decision Sciences Twelfth Annual Meeting Western Regional Conference, Reno, NV, USA, 16-18 March 1983 (Atlanta, GA, USA: American Inst. Decision Sci. 1983), p.68-70
This paper considers the protection offered by business software copyright and discusses the actual registration process. (12 refs.)

36411 Productivity assessment issues in office automation. R.G.Rittenhouse (Dept. of Information & Computer Sci., Univ. of California, Irvine, CA, USA).
Proceedings of the Sixteenth Hawaii International Conference on System Sciences 1983, Honolulu, HI, USA, 5-7 Jan. 1983 (HI, USA: Hawaii Int. Conference Syst. Sci. 1983), p.576-80
Increased productivity is the most frequently cited benefit of office automation. However, little is known about the measurement, or even the meaning, of productivity for office workers. Office workers, particularly nonclerical or knowledge workers, have complex, often ill-defined, jobs which do not allow simple measures of productivity such as those used on the assembly line. Thus productivity assessments in offices have frequently used such fragments of the total job as number of messages sent by managers and number of pages typed by secretaries as indicators of productivity. Two methods, projections from task analyses and pilot projects followed by assessment, are commonly used to measure office productivity. While these methods are useful, there are definite limitations to their application which, if ignored, may result in erroneous conclusions. This paper discusses these limitations and develops a framework for the analysis of productivity issues in office automation. (22 refs.)

38822 Local area networks—high speed networks for office communications. I.Fromm (Siemens AG, Munchen, Germany).
Bull. Assoc. Suisse Electr. (Switzerland), vol.74, no.11, p.585-9 (4 June 1983). In German.
Local area networks allow data transmission between station over distances from about 100 m to a few km, with data rate between 10 kbit/s and 20 Mbit/s. Using line, coaxial, or optical fibre cables, network configurations can be mixed, star, ring or bus connected, with remote or central control using a veriety of access methods. Ring and bus networks are described. The ring network using token access suffers from disadvantages that one station malfunction affects the whole system, and that steps must be taken to prevent effects of token corruption. Bus connected networks use mostly matched coaxial cable as their transmission medium, with CSMA/CD access. Carrier sense multiple access with collision detection is briefly explained. Bus systems have advantages over ring networks, but more recent broadband systems using frequency multiplexing have difficulties in data collision avoidance management. Local area network standardisation is discussed with reference to IEEE, ECMA, ISO, and DIN considerations. The Siemens EMS bus network is introduced, being a coaxial bus structure with 10 Mbit/s data rate, maximum distance between two stations of 2.5 km, maximum number of connections 1024, serving several bus segments via repeaters. Station transciever and controller functions, traffic behavioural aspects including channel utilization related to data packet length and waiting times dependent on access method and system loading, and practical utilization of bus network islands interconnected by local branch exchanges are described. (7 refs.) *H.V.H.*

38823 A network in your business. F.Newman.
Micro Decis. (GB), no.23, p.87-92 (Sept. 1983).
Some computer companies have developed systems known as local area networks (LANs) where, instead of each user having an isolated microcomputer with its own printer and disks, micros are linked by cable so that they can share perhaps just one printer and one hard disk. Local area networks are more versatile than multiuser systems. On a multiuser system terminals do not have their own processing power. With a LAN the micros can be used as separate units, if necessary running their own software packages independently from the hard disk which can be used just for holding shared files of data. (no refs.) *R.J.L.*

38825 Why Xinet could be a giant among the local networks. D.Casey
Comput. Wkly. (GB), no.872, p.15 (11 Aug. 1983).
Xinet is a local area network based on a closed ring, with a maximum data carrying capacity of 10 million bits per second. The protocol for messages entering the ring is empty slot—a technique in which data can only be loaded from a node when reached by an empty carrier bit circulating round the network. The security inherent in the system sets new standards in networking and should mean that Xinet challenges Ethernet's local area network domination. The system is made by Xionics. (no refs.) *P.B.*

38826 Local networking at the Royal Bank of Scotland. A.Knight (Royal Bank of Scotland plc, Edinburgh, Scotland).
Comput. Commun. (GB), vol.6, no.4, p.192-8 (Aug. 1983).
Data communications facilities are vital if essential banking operations are to be computerized; branches and head offices that are dependent upon terminals and corporate data to fulfil their functions must have access to such facilities. Back-up facilities are also essential if normal bank functions are not to be disrupted should a fault develop. Investigations that led to the installation of Hyperchannel at the Royal Bank of Scotland are described and the problems to which Hyperchannel provided the solutions are examined. The implementation of the system and plans for future development are discussed (no refs.)

38827 The evolution of local area networks. I.T.Frisch (Contel Information Systems, Glen Cove, NY, USA).
J. Telecommun. Networks (USA), vol.2, no.1, p.7-23 (Spring 1983).
The evolution of local area networks (LANs)—origins, present, future—is described from the viewpoint of the user. A survey is given of user requirements and expectations for LANs based upon the results of a number of market research studies. Based upon these user needs, a working definition of LANs, differing somewhat from the IEEE 802 definition, is adopted. We then go back to the technical components of local area networks to see which are the most critical in meeting user requirements, and provide some insights into the true origins of LANs. Some attempts at prophecy are made to assess the impact on LANs of standards, software requirements, and voice and data integration. Finally, a number of questions are formulated that users should be asking LAN vendors. (13 refs.)

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32230 Training for office automation. Hodgson P..
Train. Off. (GB), vol.19, no.3, p.239-42 (Aug. 1983).
One can scarcely fail to have noticed that an electronic revolution is happening in our midst. The revolution has by no means finished and will probably continue to influence our way of life both at home and at work for at least another decade. This technology will inevitably result in behavioural changes and require the need for special training programs. The job of a typical personnel and administration services manager is analysed in terms of his/her job changes and new roles. Some points of the automated office of tomorrow are discussed, paying attention to how the automation is installed, how the staff will cope, and the particular training needs of the staff. (no refs.)
R.J.L.

32240 Training and retraining for office automation. J.Green Dorsey.
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.183
Summary form only given. Successful automation of office processes requires effective instructional support; it can set the stage and play an important role in establishing a positive attitude towards the changed environment. (no refs.)

32241 Stages of growth. Preparing users for automation. N.D.Meyer (N. Dean Meyer & Associates, Ridgefield, CT, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.185-8
Training can do a lot more for an office automation program than just deliver technical skills. By designing it around business objectives for implementing new technologies, training can be used to help an organization move to the next stage of growth. (no refs.)

32242 Training and retraining for office automation. J.H.Bennett (United Technol. Corp., Hartford, CT, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.189
Summary form only given. This paper describes the approach taken by United Technologies Corporation to provide executive education for office automation. The general background, philosophy, approach, and current status are discussed. (no refs.)

32283 Information careers in the office of the future. P.S.Licker (Univ. of Calgary, Calgary, Alberta, Canada).
Comput. Pers. (USA), vol.9, no.3, p.6-10 (June 1983).
In several guises, the office of the future (OOF)is upon us. Apart from the obvious economic and managerial challenges engendered by the importation of communication and data-processing technology into the office, there will be a longer-term trend towards the reshaping of jobs and job structures, particularly as these relate to information-handling tasks. This paper is an attempt to define opportunities, to prognosticate trends and to lay out a plan of action for forecasting individual careers in an office slightly automated now and increasingly automated in the future. (10 refs.)

32327 The integrated office. Getting integrated.
What Buy Bus. (GB), no.3, p.36-9 (3 June 1983).
The 'integrated office' is a subject dogged by misleading claims and complex terminology, so you need to know the pros and cons of the ways in which you can integrate your office. We can expect to hear even more of the subject as price falls and increased standardization convince more businesses that the idea of integrating their offices is a viable one. At the same time, the ways in which an office can be integrated are increasing, so that more than ever there is a need to come to terms both with the concept of integration and also with the alternative methods by which you can integrate. This report should give a clearer picture of the options available to you now and in the future. (no refs.) *G.H.T.*

Del pilots: tough road to the paperless office See Entry 35335

33597 A voice storage system: RTAS and its integration into the office of the future. A.L.Doren, G.M.Kolodny (Sudbury Systems Inc., Sudbury, MA, USA).
Mideon/81 Conference Record, Chicago, IL, USA, 10-12 Nov. 1981 (El Segundo, CA, USA: Electron. Conventions 1981), p.18/1/1-8
This paper examines issues surrounding computer controlled Voice Storage Systems (VSS). The particular issues it addresses include: effectiveness of voice (oral) vs. written (text) as modes of communications; the importance of voice in the modern business environment; the history of Sudbury System's Rapid Telephone Access System (RTAS); and present and future systems applications of RTAS as a voice storage component. (20 refs.)

33608 Navigating the data network triangle. J.Kraengel (Infotron Systems Corp., Cherry Hill, NJ, USA).
Telecommunications (USA), vol.17, no.4, p.56-61, 80 (April 1983).
Considers what may be called the 'Data Network Triangle,' which consists of the carriers, the computer manufacturers, and the users. The suppliers of the multiplexers, concentrators, modems and switches make the present state of data communications possible. The computer manufacturers determine what form the data must assume entering or leaving their machines. The system suppliers must meet their requirements. Finally, there are the users, whose insistence is only that data move as rapidly as possible, and as inexpensively as possible. (no refs.)

34759 Colloquium on 'Optical Fibre Local Networks'.
London, England: IEE (1983), 58 pp.
Conference held at: London, England, Date 2 June 1983. The following topics were dealt with: optical fibres and local area computer networks; couplers, network topologies and access protocols; integrated service networks; fibre optic links for TV transmission. Abstracts of individual papers can be found under the relevant classification codes in this or other issues.

34760 Local area networks and the impact of optical fibres. P.Hensel (British Telecom Res. Lab., Ipswich, England).
Colloquium on 'Optical Fibre Local Networks'. London, England, 2 June 1983 (London, England: IEE 1983), p.1/1-3
The aim of a local area network (LAN) is to provide a versatile and dependable transmission path around a closed group of users within a restricted area, e.g. a factory, an office or a university. First generation LANs are best suited to data communications in the electronic office or around a distributed computer system. Second generation LANs, now under development, will also handle telephones whilst third generation LANs will cater for video as well. These enhancements will be achieved by increasing the speed from the current 10 Mbit/s to around 100 Mbit/s and ultimately perhaps 1 Gbit/s. The basis for standardisation is the International Standards Organisation (ISO) Reference Model for Open Systems Interconnection (OSI). Optical fibres bring to 1st generation LANs the now familiar advantages they have already brought to other transmission systems. Unfortunately, the couplers and connectors needed to access fibres are less satisfactory than their coaxial counterparts. Whilst the drawbacks of fibre components do not preclude the use of fibres in LANs, they do encourage a fresh approach, especially to the network topology. This is illustrated by examining two practical examples: Ethernet and Fibernet; and the Cambridge Ring. (4 refs.)

34807 What are the issues in VDT safety?. H.Black.
Can. Datasyst. (Canada), vol.15, no.7, p.68-9 (July 1983).
Despite several studies and reports, the question of the safety of video display terminals is still clouded. Video display terminals have been accused of causing illnesses ranging from cataracts to birth defects. They may actually cause little more than eyestrain, or they may be the cause of long-range health problems not yet in evidence, as unions fear. The problem is that no one knows for sure. The question is discussed in depth. (no refs.) *V.G.P.*

34828 VDU ergonomics. A.Cawe.
Syst. Int. (GB), vol.11, no.8, p.62-3 (Aug. 1983).
Almost all office equipment suppliers now stress the ergonomic features of their products in their promotional material. Certainly ergonomically designed visual display units (VDUs) are to be encouraged, but the design improvements should be evident in the product itself, not just the advertising brochures. System Concepts has just completed a review of VDU standards and quasi standards in Europe and in that study the company identified three different categories of ergonomic guidance; regulations which have the force of law; recommendations issued by official government bodies; and recommendations issued by other interested bodies. The German standards are the most precisely defined, stating many physical and operational characteristics of VDUs. In contrast, the Swedish and to a slightly lesser extent, the UK, documents give more general information covering the working environment as well as the equipment. The pressures from users and their representatives is likely to continue and few suppliers will be in a position to ignore the market pressure to improve the ergonomics of their VDUs. (no refs.) *B.C.N.*

34958 Managing change: people and technology. G.J.Gery (Gery Associates, West Hartford, CT, USA), J.H.Barlow, E.J.McTeague.
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.79-80
The change associated with introducing electronic technologies into the office must be managed. Structured change management methodologies exist to permit systematic planning for the people and technology components of business systems change. An overview of some of the specific approaches to change that planners and implementers must consider includes the conditions necessary to effect change, diagnosis of resistance, and the emotional responses people have to both positively and negatively perceived change. Office Automation practitioners discuss how structured change management concepts apply to their experiences, they discuss both the capabilities and limitations of change management approaches in the day-to-day office automation environment. Particular attention is paid to the changing roles of sponsorship as office automation progresses within an organization. (no refs.)

35333 Word processing of the future. D.D Busch.
Interface Age (USA), vol.8, no.7, p.133-5 (July 1983).
Things are moving so fast in the electronic office that a glimpse into the future quickly becomes a thing of the past. This look at the word processor of the future views present trends and identifies some of the features that will soon be commonplace. How about a spelling checker that looks at common, everyday words first, then checks your copy for jargon and trade names, gives definitions for words and finally hunts for common abbreviations. Or a word-processor that anticipates your next letter, or colour graphics on the page, or portable word-processing for itinerant wordsmiths? Optical character recognition from handwriting and voice input not that far in the future either. (no refs.) *A.W.*

35334 Taking a realistic look at the office of the future.
Infomatics (GB), vol.4, no.8, p.23 (Aug. 1983).
The 'paperless office' is something we have not heard much about recently. The fact is people like paper and find it irresistably useful. So instead, information technology firms have adopted the vaguer term 'office of the future'. There is always resistance to new technology and office automation. Technology may not have brought a change in old habits of working. To install a system without understanding how the office itself works means you could end up with an expensive heap of junk metal and silicon. A badly run company will probably not have the open-mindedness which allows it to change to take full advantage of the new technology. (no refs.) *G.H.T.*

35335 DoI pilots: tough road to the paperless office. J.Mill.
Infomatics (GB), vol.4, no.8, p.24-5 (Aug. 1983).
The automated office is still no closer to being a reality despite the Government's pilot projects now going ahead. The British Rail Engineering pilot, based on an OTL kit, illustrates the necessity of managerial enthusiasm and time if there is to be any real benefit to users. The pilot was planned in two stages: first, the introduction of workstations to executives' secretaries, mainly for word processing, and second, the use of the workstations by the executives themselves. The Cabinet Office pilot is based on Xionics equipment, and it is confined to one relatively small department, the Science and Technology Unit. One of their problems has been lack of time to experiment with the system to find out exactly what it can do. (no refs.) *G.H.T.*

35336 Block market opens up. King L.
Infomatics (GB), vol.4, no.8, p.28-31 (Aug. 1983).
Deregularization of US telecommunications has given rise to a market for communal office processing. Many large office buildings in the US are shared by a number of entirely independent tenants, most of which cannot afford to spend vast sums on information technology. So manufacturers are marketing their digital exchanges as a communal service to the smallest company tenanting the largest office block. Commercial buildings which offer such services will almost certainly be easier to let. Futuristic services will enter the building and interface with established communications technology, not replace it. (no refs.) *G.H.T.*

35360 Models of office productivity: what really can be expected?. W.J.Kettinger (Inst. of Information Management, Technol. & Policy, Univ. of South Carolina, Columbia, SC, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.31-7
Office automation should not be viewed as the productivity panacea. To achieve even marginal gains, organizations must design their office automation analysis and implementation in a well planned, management approach. (9 refs.)

35361 Advanced workstation concepts. H.L.Morgan, H.N.Dreifus (Dept. of Decision Sci., Wharton School, Univ. of Pennsylvania, Philadelphia, PA, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.41-4
Office automation is one of the fastest growing sectors of the computing industry. It encompasses a wide variety of functionality, from word processing to decision support. The delivery mechanism for providing the office automation services to an end user is the Personal Workstation. This paper discusses some of the more advanced notions of what a personal workstation can be, and how it is constructed. (2 refs.)

35363 Computer graphics for management: a bullish perspective. W.G.Nisen (Cullinet Software Inc., Westwood, MA, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.65-8
The role of computer graphics in a business context is to present data in a form that will allow managers to receive and communicate contrasts, similarities and trends. Based upon these relationships decisions are made. (no refs.)

35365 How to design a migration strategy for office information systems. T.M.Lodahl (Gray-Judson Inc., Boston, MA, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.87-90
Most information systems have been developed in response to environmental pressures, technological advances, and practical necessity; most 'plans' are reactive, not proactive. Today's information systems are a patchwork of batch or timeshared maxis, specialized minis, and standalone OA facilities. Like the organisations they serve, they are the product of largely uncontrolled development. 'Migration', on the other hand, implies at least one goal, and some notion of how to get to it. The author asserts that migration is preferable in information systems of the 1980s, that design and planning is feasible and necessary, and that a good migration strategy is the key to avoiding 'technological clutter'. (no refs.)

35374 A document processing system for office automation. K.Abe, T.Kuzushima, H.Ishii, S.Kanbara (Integrated Communication Dev. Div., NTT., Kanagawa, Japan).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.247-53
An integrated office automation system called NIS (Nihongo (Japanese) Information System) is now being developed at the Electrical Communication Laboratory of Nippon Telegraph and Telephone Public Corporation (NTT). NIS provides a variety of functions, such as Japanese word processing, electronic filing, electronic mailing, etc., on a data processing center linked with communicating word processors, to enhance office work productivity. This paper describes major NIS functions and technical characteristics. (6 refs.)

35375 Office automation: the need for strategic planning. S.E.Harris, C.S.Thachenkary (Decision Sci. Lab., Georgia State Univ., Atlanta, GA, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.255-63
Organization-wide application of technological solutions requires a well thought out, coherent master or strategic plan which states the mission, scope, timeframe, and criteria for success of the OA program. The paper introduces the essentials of the strategic planning process as it pertains to office automation. The intent is to draw the attention of corporate planners to the role of planning for office automation. (6 refs.)

35376 The corporate office automation system: circa 1985. C.M.Watteeuw, J.H.Carlisle (Office of the Future Inc., Guttenberg, NJ, USA).
OAC'83 Conference Digest. The Fourth Annual Office Automation Conference, Philadelphia, PA, USA, 21-23 Feb. 1983 (Arlington, VA, USA: AFIPS Press 1983), p.271-7
One of the major debates in OA planning is over which vendors and which technologies should serve as the foundation for systems design and integration. IBM, American Bell and other large companies will try to set the standards with their products. But small companies may hold the key to future integration breakthroughs—just as they have in the past. This paper focuses on technologies, applications, and 'integrated' products and architectures which should be available by 1985. (20 refs.)

35381 Trends in future electronic office systems. K.B.Magleby (BNR Inc., Mountain View, CA, USA).
Wescon/80 Conference Record, Anaheim, CA, USA, 16-18 Sept. 1980 (El Segundo, CA, USA: Electron. Conventions 1980), p.13-3/1-8
The past two decades have set the stage for major changes to take place in the modern office. A number of developments, both technical and economic, are creating forces that will cause the increased use of electronic equipment to enhance the productivity of the office worker. Some of the economic developments include the high cost of energy and travel, the increased cost and population of knowledge workers, and the increased cost of office staff. Some of the technical developments include the availability of advanced PBXs using digital technology that can be integrated with computers into complete electronic office systems, advances in both computer hardware and software to provide solutions to a number of office problems, and reduced cost of these complex systems by advances in the semiconductor industry. This paper examines these developments and gives a view of the outlook for electronic office systems in the 1980s. (no refs.)

35967 Ethernet chips hold the lead in VLSI scramble for local networks. S.Ohr.
Electron. Des. (USA), vol.31, no.13, p.83-92 (23 June 1983).
The competition for local-area networks is revving up at the chip level, focused largely on VLSI communication controllers, encoder-decoders, and transmitter-receivers. This article takes a detailed look at the available local area network chips. (no refs.)

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27627 **Using a local area network of microcomputers.** K.Gee (Nat. Computing Centre Ltd., Manchester, England).
Electron. & Power (GB), vol.29, no.5, p.399-400 (May 1983).
The Cluster/One Model A local area computer network was installed in a section of the National Computing Centre, Manchester because of quick installation after ordering, software availability and typicality for office technology. The network consists of 64 Apple microcomputer workstations linked to a network file sensor, the work stations are linked in a tree-shaped topology with all connected to and sharing the same cable, so that the network operates as a contention bus. The people using this network express favourable opinions and most think that it enabled them to be more effective. The one major problem identified is the lack of user friendliness. (no refs.) *M.S.*

28155 **Interchanging mixed text image documents in the office environment.** W.Horak (Corporate Labs. for Information Technol., Siemens AG, Munchen, Germany).
Comput. & Graphics (GB), vol.7, no.1, p.13-29 (1983).
On examining offices, one can notice a rapidly increasing usage of decentralized computing power combined with digital communication capabilities incorporated in personal workstations for supporting a wide variety of tasks. Since an appropriate technology is now commercially available, these tasks will comprise the preparation and interchange of documents containing text, graphics, facsimiles, data, digitized speech annotations, etc. Currently existing document communication services such as Telefax and Teletex are presented. Important techniques for the interchange of mixed text-image documents are outlined, i.e. suitable facsimile rasters and a Document Architecture Model applicable to the presentation layer of the Open Systems Interconnection Reference Model. Data volumes, transmission times and buffer sizes are analysed. The features of a future standardized Mixed Mode Teletex Option are discussed, and finally an experimental text-image workstation is described. (22 refs.)

27672 IEEE Project 802—a status review. J.Rance.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.399-413
Describes the committee history and standard recommendations emerging from IEEE project 802 local area network communications standards. Project 802 is somewhat unique in that it has attracted an active committee membership of about 80 people to full plenary meetings every two or tree months over a period of three years. Add to this the effort put in at working group meetings and by support staff at the many participating companies and the total investment in Project 802 has to be measured in tens-of-millions-of-dollars. The paper outlines the original terms of reference and history to date of Project 802 and discusses some of the remaining issues in each of the access methods which include CSMA/CD, token bus and token ring. The papaer concludes with a report on the current ballot status of the recommendations. (no refs.)

27557 **Local area networks. An update on microcomputers in the office.** H.Saal (Nestar Systems Inc., Palo Alto, CA, USA).
BYTE (USA), vol.8, no.5, p.60-79 (May 1983).
Systems of computers and peripherals linked together in adjacent offices and buildings, or local area networks (LANs), will bring about complete office automation and standardize computer interconnections. A recent development in local area network systems is 'community microcomputing', which merges the technologies of LANs and personal computers. Community microcomputing enables a community of microcomputer users to share information that resides on common peripherals. Users share common programs and data as well as expensive, high-quality equipment such as printers and disks. However, although community microcomputing is becoming a standard offering of most microcomputer vendors, only a few have recognized the advantages of adopting standards and have avoided the pitfalls of the invent-your-own approach. True office local area networking is still a dream to be fulfilled. (5 refs.)

27620 **A high-speed fiber optic data bus for local data communications.** D.R.Porter, P.R.Couch, J.W.Schelin (ITT, Roanoke, VA, USA).
IEEE J. Sel. Areas Commun. (USA), vol.SAC-1, no.3, p.479-88 (April 1983).
Over the past decade, the volume of data compiled in industrial, military, and scientific databases has increased to enormous proportions. This increase has led to the development of new techniques for economically transporting information locally at high data rates. Leading among these techniques is the serial asynchronous multiterminal time-division multiplexed data bus. The authors describe a 100 Mbit/s fiber optic data bus system for connecting 16 terminals separated by up to 2 km. The system was developed as part of a NASA database management system for archiving and retrieval of satellite data. The NASA application will be briefly introduced followed by discussions on the high-speed data bus architecture, bus access protocols, system implementation, and error rate performance. (19 refs.)

28165 **Mailing messages with DEC . . . and filing images with IBM.**
Which Word Process. & Off. Syst. (GB), vol.4, no.3, p.22-3 (May 1983).
DEC's electronic mail products are based on experience with systems used internally by the company since 1977. The ALL-IN-1 system is now at the heart of their Office Plus programme. It offers a large number of options when compared with other electronic mail products. Image processing is perhaps the most active strand of office system development at present. Even basic facilities such as the storage, retrieval and display of images and the combination of images with text and data to form integrated documents add a new dimension to such systems. The IBM Scanmaster terminal operates under CICS with IDS (Image Distribution System) for sending and receiving, and DISOSS for full filing, retrieval and mailing features. (no refs.) *D.K.R.*

27640 **A simple network device for personal computers and its applications.** Y.Nakamura, M.Nakanishi, Y.Fuwa (Faculty of Engng., Shinshu Univ., Nagano, Japan).
J. Fac. Eng. Shinshu Univ. (Japan), no.53, p.31-43 (Dec. 1982). In Japanese.
In view of the fact that many limitations such as complicated communication control procedures have been imposed on networking personal computers now in wide use as stand-alone systems, a proposal of a multi-channel communication controller (MCC) is made which facilitates the construction of a personal computer network, and evaluation of the MCC is made from various points of view. The MCC adopts the RS232C interface normally provided on personal computers, and its communication control program is designed to allow each peripheral computer to communicate with the host computer without being conscious of protocols, so that the service under the MCC may not be occupied by some specific peripheral computers. In actual communications, each data received from a peripheral computer is transformed into a packet format and transmitted to the host computer, whereas the packet received from the host computer is transmitted to a specific peripheral computer in accord with its header. (1 ref.)

27636 **MACROLAN: a high-performance network.** R.W.Stevens (ICL Mainframe Systems Dev. Div., Manchester, England).
ICL Tech. J. (GB), vol.3, no.3, p.289-96 (May 1983).
The principles and applications of local area networks (LANs) are now well publicised. They offer substantial advantages over conventional point-to-point links in a computer environment, since they impose little constraint on system configuration. Peripherals and processing nodes can be distributed on the network in any manner physically convenient to the user. The availability of complete cross-communication between stations permits distributed processing and shared access to storage and input/output media. In certain areas, however, conventional LANs have insufficient performance to cope with the traffic rate. Coupling a processor to main store via a LAN would be an absurdity; this clearly requires the use of a direct point-to-point interface. In some areas LAN flexibility is required, but at a performance level more typical of a dedicated link. This paper describes the implementation of a network which fulfils this requirement: MACROLAN. The transmission medium adopted is optical fibre and is thus a new technology serving a new application. The physical aspects of this network are therefore emphasised in this paper. (5 refs.)

28119 **The new office: more than you bargained for.** M.L.Marcus.
Computerworld (USA), vol.17, no.8A, p.35-44 (23 Feb. 1983).
Office automation can produce a vicious circle: increased office productivity may create dissatisfied employees, which leads to decreased productivity. This article explains how to introduce office automation and keep a happy workforce. (no refs.)

28130 **Achieving greater white-collar productivity in the new office.** R.J.Goldfield (Omni Group, New York, NY, USA).
BYTE (USA), vol.8, no.5, p.154-72 (May 1983).
The spiraling availability of high-technology office equipment, coupled with inescapable economic forces like increasing labor and management costs on the one hand and decreasing costs of electronics and communications on the other, mandate that top management address the issue of how to increase office worker productivity in the new automated office environment. Equipment alone is not the answer, and the unplanned proliferation of machines must be stopped to ensure a cost-justified, totally integrated, strategic approach to the office. A comprehensive program must be devised that will provide such key benefits as standardized base line studies, to ensure company-wide conformity and a base for future cost-justification, compatible backbone equipment selection, to allow for future systems integration, and education and training programs for clerical, secretarial, and professional staff. (no refs.) *A.B.*

28122 **How do you spell relief? [office workstations].** E.S.Wilk (Arthur Andersen & Co., Chicago, IL, USA).
Computerworld (USA), vol.17, no.16A, p.9-11 (20 April 1983).
The advent of the executive workstation will force a complete rethinking of the information structure of a company leading to corporate DP and executives taking on support tasks like filing and decision-making. An ideal workstation would be able to perform simultaneously the functions of an electronic message system, including text (electronic mail) and voice communications, a personal computer, an administrative support aid and a data base management system, and also act as an interface with the outside. However, no one terminal currently offers all the necessary data-, text-, voice- and image-based functions, and today's executive workstations are evolving from a variety of bases—word processors, personal computers and telephones (voice terminals). Therefore, when choosing from the various hardware options available, a company should be careful to select equipment that only meets its specific functional needs. (no refs.)

27650 **Experiences with Net/One at British Telecom.** J.Marshall, B.Spiegelhalter (Systems Evolution & Standards Dept., British Telecom, Ipswich, England).
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.67-79
The paper explains that SESNET was generated to provide a service for BT's System Software Engineering Centres and also to act as a test bed for internetworking activities. The factors governing the choice of local area network (Ungermann-Bass Net/One) are discussed, together with the planning considerations necessary prior to installation. The network is described firstly in terms of the locations of the LANs which comprise SESNET, the size of the network and the types of equipment attached. The services offered to its users are then outlined: these include office automation facilities, computer resources and data networking. (5 refs.)

28123 The high cost of communications. D.J.O'Connell (Internat. Management Services Inc., Framingham, MA, USA).
Computerworld (USA), vol.17, no.16A, p.21-6 (20 April 1983).
The foundation of office automation is communications. As voice, data, text and video merge into integrated networks, users should begin taking positive action to control and manage the burgeoning costs and requirements for effective voice communications. Because at least 75% (80% in the UK and Europe) of all communications costs are associated with voice, tactical planning of voice communications networks helps users to control these costs. As one senior corporate planner recently remarked, 'The glamor may be in strategic planning for multifunction networks, but the dollar savings for the present are in voice networks'. Corporations are realizing the benefits of following a phased approach to planning their communications needs and subsequent costs. For voice communications networks, tactical planning consists of four distinct phases: planning to plan, awareness building, requirements definition and plan development and verification. (no refs.)

26339 Old and new models for office automation. E.Cole (School of Library & Information Sci., Drexel Univ., Philadelphia, PA, USA).
J. Am. Soc. Inf. Sci. (USA), vol.34, no.3, p.234-9 (May 1983).
Emerging generations of office automation systems combine new and existing software and procedures. Managers may be able to select from a broad array of software tools, but they may also be required to use certain others. Organisation design is important in the context of office automation and Management Information System models developed for mature systems may be helpful where the use of software application is required for the individual worker. The diffusion of innovation models for computing models may be helpful where the type of software is optional for the individual worker. (39 refs.) *M.S.*

25921 Visions. An architect's view of the electronic office. J.Sterne.
Ir. Comput. (Ireland), vol.7, no.4, p.24-5 (June 1983).
Before office automation equipment is installed, someone has to transform empty office space into an environment fit for working in. Office layout will be increasingly bound up with the use of the equipment, while the spread of data communications could bring about new patterns of job location, perhaps encouraging distributed, instead of centralized, offices. There will be a reduction in noise, 'up-lighting' will reduce eye strain, and more environmental changes are coming in the way in which space is allocated. There will be a need for a social area within the office, where people can sit down and chat with a degree of privacy. Flat tape will be used for data cabling. This can be laid before the rooms are carpeted. (no refs.) *G.H.T.*

27690 Performance of some local area network technologies. A.V.Nadkarni, S.T.Chanson, A.Kumar (Dept. of Computer Sci., Univ. of British Columbia, Vancouver, BC, Canada).
Digest of Papers Spring COMPCON 83. Intellectual Leverage for the Information Society, San Francisco, CA, USA, 28 Feb.-3 March 1983 (New York, USA: IEEE 1983), p.137-41
Some of the performance characteristics of the popular LAN technologies (namely ring/token passing, ring/message slots and bus/contention) are presented. It is found that in the case of slotted rings (but not the other two technologies) an optimal number of active stations exists which minimises the mean delay time at all load levels given a packet arrival rate. The LAN technologies are compared with regard to their performance, reliability, maintainability, extensibility, fairness and complexity. (10 refs.)

27769 Survey: VDUs.
Which Comput. (GB), p.61-4 (June 1983).
The wide range of visual display units available makes choosing one a daunting task. Some helpful criteria to use when evaluating VDUs are number of lines and characters per line on the display, number of cursor controls, number of edit functions, antiglare facilities, keyboard separation, price and incorporation of any special features. This article presents a buyer's guide to sixty-six different VDUs with each evaluated using the above considerations. (no refs.) *P.B.*

25803 Saying sayonara to the 19th century [office automation in Japan]. L.Runyan.
Datamation (USA), vol.29, no.5, p.211-12 (May 1983).
The Japanese have finally recognized the need to boost office production. Language is the major impediment to the introduction of office automation, which has turned their attention to facsimile and copier devices. Sales of office computers etc. in Japan totalled over $2 billion in 1981 with predicted sales of $6 billion by 1985. Growth in office automation is expected to be at 30% year. In 1979 171244 facsimile terminals (US 180000) were reported in operation with 33859 systems (US 10000), and 1000 word processors. (US 470000). Office automation is seen in Japan as requiring the incorporation of the good points of the American management system with effective usage of the electronics technology. (no refs.) *R.T.*

28124 The investigation [workstations]. G.Riffkin.
Computerworld (USA), vol.17, no.16A, p.36-40 (20 April 1983).
Computerworld OA have recently carried out a survey of data processing managers, office automation directors and technical strategy officers on the use of professional workstations. The survey respondents were asked who was using the workstations, for what applications, if cost-justification was required and if any resistance occurred. The results indicated that the difference between current executive workstations and their predecessors now in use is the attention given to the user interface—the critical element in a good management workstation. The results also showed that, as with any new product, the professional workstation must stand the test of time to demonstrate its true value. However, for those who have established workstations, the early returns have been overwhelmingly successful. (no refs.)

28199 Office automation: a conceptual approach. A.Bavelas, J.MacGregor (School of Public Administration, Univ. of Victoria, Victoria, British Columbia, Canada), F.Safayeni.
J. Inf. Sci. Princ. & Pract. (Netherlands), vol.5, no.5, p.169-72 (Feb. 1983).
The problem of office automation is considered within the context of an information processing model of an office. The model considers the relationship between the input variety, output variety, and the transformational variety available to an office which changes the input variety to a desired level of output variety. The transformational activity is considered in terms of a network of task dependencies, and a corresponding social structure. The relationship between the network of task dependencies and the social structure is discussed and emphasis is placed on research that considers the problem in an integrated manner. (13 refs.)

28116 Who controls the OA budget?. T.Elliott (Internat. Data Corp., Framingham, MA, USA).
Computerworld (USA), vol.17, no.8A, p.9-12 (23 Feb. 1983).
Office automation is predicted to skyrocket during the next decade. Finding out how others spend their money may help you budget more wisely. This article examines who has responsibility for office automation budgets and how this responsibility is being used. (no refs.)

28152 Office automation and consequential costs. A.G.Henkel (A.G. Henkel, Schwerte, Germany).
Off. Manage. (Germany), vol.31, no.4, p.332-40 (April 1983). In German.
Examines various aspects of fitting out an office in which modern computerised working methods are to be used. Discusses lighting (a combination of general lighting and desk lamps is recommended), flooring (false floors make for easy and flexible installation of cables), the confusing flood of official regulations and office products, floor-space requirements with and without VDUs, costs for general services and for furniture, and possible future developments. (no refs.) *G.F.F.*

25928 An adventure in planning [office automation]. C.H.Sullivan (Information Technol. Planning Corp., Chicago, IL, USA).
Computerworld (USA), vol.17, no.16A, p.78-87 (20 April 1983).
Planning for office automation must be as integrated throughout an organization as is the computer technology. In order to manage technological change, three perspectives must be kept constantly in mind. One is that of the technician, whose view of quality is closely linked to the quick adaptation of new technologies. Another is the view of the user, whose idea of quality is functionality. The third point of view is that of management, for whom quality is a sound business case. A strategy encompassing the tensions and interaction of these three basic perspectives is the pragmatic alternative to simple pioneering and overwrought planning. The framework can set project priorities, govern program dynamics and guide organizational change. Moreover, it can prove useful beyond office automation for managing subsequent emerging technologies. (no refs.)

28284 The electronic office—a user view. D.A.T.Rayfield (Cabinet Office, London, England).
Colloquium on 'The Properties and Applications of Engineering and Executive Work Stations', London, England; 21 March 1983 (London, England: IEE 1983), p.6/1-4
The UK Department of Industry is funding a number of pilot projects so that various 'Offices of the Future' may be evaluated. The Cabinet Office Information Technology Unit is one of the trial sites, and it is on his experience with the system that the author has based this paper. This system is known as the Cabinet Office Management Aid Trial (COMAT). (no refs.)

27613 User view of LANs [local area networks]. I.G.Dewis, A.C.Evans (BL Systems Ltd., Redditch, England).
Data Processing (GB), vol.25, no.4, p.19-22 (May 1983).
Local area networks (LANs) can help an organisation achieve its business needs. LANs are still at an early stage in their development and users must evaluate how they will handle LAN technology. Some major application areas for LAN technology are process control/monitoring, office systems, and engineering support systems. As well as discussing the significance and philosophy of LAN networks, a strategy for handling LANs is given. Interconnection of LANs is possible through various gateway devices and the use of high level protocols. Key development areas of LANs are identified. (no refs.)

25800 Endeavouring to get IT in line. K.Faggetter.
Computing (GB), vol.11, no.19, p.36 (12 May 1983).
The launch of 'Focus IT'—the newsletter published by the Department of Industry (DoI) to focus attention on information technology (IT)—heralds a new government initiative to press for standardisation within the industry. The newsletter provides information about standardisation with IT, attempting to act as a two-way communication device to stimulate knowledge and awareness about standards for companies and users with any interests in IT equipment. Focus recognises that the success of its IT standard strategies is dependent on two critical factors; awareness of the benefits of and implementation of standards. The awareness campaign supported by the DoI, of which the 'Focus IT' newsletter is a vital part, is a step towards better understanding throughout the industry of the importance of standardisation. (no refs.) *B.N.*

25925 Develop new strategies [office automation management]. R.Dalton (Keep Track Corp., Corte Madera, CA, USA).
Computerworld (USA), vol.17, no.8A, p.61-3 (23 Feb. 1983).
Discusses the challenges to be met by office automation management over the next decade. The author believes we are only just starting up the learning curve for office automation. (no refs.)

27642 Broadband local area networks. M.Hall (Sytek Inc., Mountain View, CA, USA).
Satell. Commun. (USA), vol.7, no.5, p.42 (May 1983).
Determining whether or not a local area network (LAN) is necessary for a facility, an industrial park or similar environment is increasingly a responsibility being placed upon communications managers. The corporate communications manager must consider carefully the company's communication requirements and the pattern of communications distribution within the company. There are many approaches to local area network technology. The most visible distinction between them all is the form of media used to transport the data or information. This choice is determined according to the type of services that the network must deliver, the costs, and the management requirements of operation. The fundamentals of broadband cable and operational LANs are discussed. Local Net user bases are listed. (no refs.) *M.A.*

25927 Putting HP into focus. A.Dooley.
Computerworld (USA), vol.17, no.16A, p.27-33 (20 April 1983).
Hewlett-Packard Co., a long-time leader in electronic measuring devices and a major data processing vendor, now claims it is offering a solution for office automation, and is marketing its new OA system as the 'Interactive Office'. HP certainly has a lot going for it—excellent graphics, user-friendly products, good hardware, an outstanding reputation and a fiscally sound business base—however, nagging doubts remain about its lack of communications capabilities. It is undoubtedly offering some of the leading-edge products in certain segments of the industry, but, so far, it has failed to tie those products into a cohesive OA system. (no refs.)

27621 Interaction of network design and fiber optic component design in local area networks. N.L.Rhodes (Hewlett-Packard Co., Sunnyvale, CA, USA).
IEEE J. Sel. Areas Commun. (USA), vol.SAC-1, no.3, p.489-92 (April 1983).
Discusses some of the system issues that impact the design of fiber optic components intended for use in local area networks. How fiber optics technology affects system level decisions such as topology, and system synchronization is also discussed. Finally, some of the key contributions of fiber optics in local network applications as well as areas for further contribution are presented. (16 refs.)

27668 Fibre optics in local area networks. J.Kennedy.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.327-41
Fiber costs have dropped to the point of being nearly equivalent to copper coaxial cable, and developments in emitter and detector technology have resulted in high reliability systems with sufficient optical flux budget to be useful in local communications systems. After a brief tutorial on optical fiber communications components, this paper examines the economics of fiber versus baseband or broadband coaxial cable systems. (7 refs.)

27765 Safety rules for CRT terminals in office areas. K.Buhmann.
Mess. & Pruef. (Germany), vol.19, no.3, p.125-7, 134 (March 1983). In German.
Based on a retrospective overview of the development of display terminals and work stations in office areas, the need for safety rules, in order to protect the health of the operator, is stressed and explained. All safety rules, formulated by German Safety Institutions, are based on fundamental ergonomic requirements and factors and have definite law characteristics. Hence, only those display terminals are permitted to be manufactured or traded in Germany, which are in accordance with the safety rules. To avoid interference of constant and necessary unit developments, provisions are made for the adjustment of all safety regulations according to eventual new developments. (no refs.) *K.A.K.*

27615 Interfacing LANs to WANs. G.H.L.Childs, G.Morrow (British Telecom Res. Lab., Ipswich, England).
Data Processing (GB), vol.25, no.4, p.26-27 (May 1983).
The local area network (LAN) has emerged as a new type of data communications equipment, permitting powerful computing facilities to be established with the LAN as its communication infrastructure. The extension of LANs into wide area networks (WAN) is currently being studied. This trend towards distributed processing is both generating demands for local networking and receiving impetus from the capabilities which LANs offer. The areas needing clarification before commercialisation is possible are: the cost of installing gateway equipment, the tariffs for using data transponders and the means of protocol handling. (no refs.)

27593 Optical-fiber channels for local computer networks. E.A.Yakubaitis, E.Ya.Finkel'shtein.
Autom. Control & Comput. Sci. (USA), vol.16, no.2, p.1-5 (1982). Translation of: *Avtom. & Vychisl. Tekh. (USSR)*, vol.16, no.2, p.3-8 (1982).
Considers optical-fiber data transmission channels as communications facilities for local computer networks. Various methods of constructing optical monochannels based on segments of optical cable with optical connecting elements, and based on long optrons, are considered. The advantages and shortcomings of different versions of monochannel architecture (linear and star-shaped) are considered. (12 refs.)

27606 Local area networks: unravelling the mystery. D.L.Tennenhouse (Vericom Systems Ltd., Toronto, Ontario, Canada).
Can. Datasyst. (Canada), vol.15, no.5, p.36-41 (May 1983).
The Local Area Network is the central nervous system of the wired office. The LAN allows the electronic devices in the office to communicate, thereby allowing office personnel to realize their potential through the sharing of information and resources. This article examines why these networks are so important and how they are constructed. (no refs.)

28126 The WP solution. M.Hayward, W.Ulrich.
Computerworld (USA), vol.17, no.16A, p.49-54 (20 April 1983).
Word processing is more essential to the emergence of office automation than many people realize. Moreover, the ability to use communications is becoming more and more important to understanding WP's future role in OA. Shared systems which allow users to add WP terminals without purchasing additional printers, disk storage, memory etc. are almost always more cost-effective than stand-alones and will probably dominate the WP market place by the end of this decade. However, communicating WP has one major pitfall: one vendor's product is rarely compatible with other vendors' products. Another trend in WP is specialisation, and computerization offers a real opportunity to tailor workstations to the needs of an individual. The ideal situation is where WP plans are developed as an integral part of the overall corporate technology plan. (no refs.)

28125 Examining the evidence [workstations]. L.Maldonado (Genasys Corp., Rockville, MD, USA).
Computerworld (USA), vol.17, no.16A, p.41-8 (20 April 1983).
In one form or another, the electronic workstation will become a standard office fixture very soon. It now seems that each new vendor offering of the electronic workstation manages to package even more features and capabilities than were found on prior versions. However, organizations would be well served by planning activities that take advantage not only of the enhanced processing offered by the workstations, but also of the creativity of the employee who understands the work methods better than anyone else. An opportunity for realizing even greater productivity returns than previously reported may lie in an approach that integrates three aspects—human resources, automated tools and environmental design. (no refs.)

27614 Local area network developments in the UK. S.E.Binns (Univ. of Kent, Canterbury, England).
Data Processing (GB), vol.25, no.4, p.23-25 (May 1983).
Pressure is being exerted to develop local area networks (LANs) in the UK. This will allow distributed systems of microcomputers to function as tools for managers, engineers and designers, as part of the information technology revolution. Standards have been agreed amongst the universities and research councils for terminal access, file transfer, and job transfer and manipulation. A summary of local area networks is given, with emphasis on Ethernet and ring systems. UK developments on protocol standardization will ease the installation of LANs. (no refs.)

28153 Who brings much—notable 3M office information systems. H.Schmincke.
Off. Manage. (Germany), vol.31, no.4, p.348-9 (April 1983). In German.
Reports on the range of products marketed by 3M Deutschland GmbH, particularly with reference to their showing at the 1983 Hanover Fair. The article covers microfilming and an associated access method for retrieval, colour copiers, local area networks to be used with well-known terminals and microcomputers, and video-technology products for use at meetings and conferences as well as generally in the office. (no refs.) *G.F.F.*

27624 Minis fighting way into office market. H.J.Hindin.
Electronics (USA), vol.56, no.9, p.101-2 (5 May 1983).
Local networks connecting personal computers have been getting most of the attention when office automation is planned. However, recent agreements between the manufacturers of minicomputers and the makers of private-branch exchanges indicate that the minicomputers will become a force to be reckoned with. A campaign to convince system planners to use minicomputers and PBXs in place of the personal computer and local network to handle data generation and reception in the office is developing. A key argument will be that this combination, though slower than the typical local network, can handle voice communications. The offerings of a variety of manufacturers are each briefly examined. (no refs.)

27622 D-Net, a new scheme for high data rate optical local area networks. Cbong-Wei Tseng, Bor-Uei Chen (TRW Technol. Res. Center, El Segundo, CA, USA).
IEEE J. Sel. Areas Commun. (USA), vol.SAC-1, no.3, p.493-9 (April 1983).
The development of optical fiber point-to-point communications systems has generated substantial interest in the application of optical fiber to local area networks. The feasibility of using guided wave optical technology for local area networks is explored. Various network schemes, including Fibernet, Express-Net, and C-Net, are examined. A new scheme, D-Net, is disclosed which has the advantages of high efficiency, low bounded delay, simple protocol, and implementation flexibility. (16 refs.)

27687 University uses LAN in teaching.
Can. Datasyst. (Canada), vol.15, no.5, p.43 (May 1983).
A recently developed dyNASTY distributed LAN (Local Area Network) system has been installed in Ottawa's Carleton University to boost computer access and improve control of computing services. Initially, the system consisted of workstations with a 20 MB hard disk file server to provide shared file storage and access resources. The LAN is less expensive than mainframe usage and provides excellent response to users, with no degradation of service. It is also inherently more reliable (operationally) than other types of microcomputer networks, since it does not use floppy disks in the workstations. It also offers reduced maintenance costs. Local Area Networks are the best solution to control user response criteria in the academic environment. (no refs.) *B.N.*

28120 Survey the field [office automation]. J.M.McQuillan.
Computerworld (USA), vol.17, no.8A, p.55-60 (23 Feb. 1983).
What are users doing about planning for office automation. A survey of OA implementors illuminates some of their hard-learned knowledge. (no refs.)

27721 PLATON: an overview of a university local computer network. N.D.Georganas (Dept. of Electrical Engng., Univ. of Ottawa, Ottawa, Ontario, Canada), R.Mwikalo.
Proceedings of IEEE INFOCOM 83, San Diego, CA, USA, 18-21 April 1983 (New York, USA: IEEE 1983), p.465-71
Describes PLATON (prototype local area terminal oriented network), a local area network at the Department of Electrical Engineering, University of Ottawa, interconnecting departmental computers, terminals, peripherals, various instruments and the university main frame (AMDAHL 470/V7A). The primary objective of PLATON is to facilitate network evolution and provide resource sharing by supporting various application protocols such as database access and file transfer. (10 refs.)

27695 Metropolitan area network standards—IEEE 802. C.Cheung (Satellite Business Systems, McLean, VA, USA).
Digest of Papers Spring COMPCON 83. Intellectual Leverage for the Information Society, San Francisco, CA, USA, 28 Feb.-3 March 1983 (New York, USA: IEEE 1983), p.479-81
IEEE 802.6 metropolitan area network standard working group activities are described. Major capabilities of the MAN are presented; the MAN is a local network which supports more than 200 stations and spans more than 5 kilometers and can transmit data, voice and video information equally well. A TDMA reservation protocol access method is described. From the point of view of commercial cable operators and users, the emerging MAN standard will have major implications in terms of services offered. These implications are explored. (no refs.)

27680 Fibre optic developments for the Cambridge Ring. D.Roworth, M.Cole.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.519-35
This paper describes a fibre optic extender for Cambridge Ring local area networks which permits intermodal distances to be increased to several kilometres; other aspects of fibre optic transmission, such as its safety and immunity to interference, can also be of advantage in application to Cambridge Rings. A practical extender is described, and its application and performance are reviewed. (1 ref.)

27595 Local networks. A.Scharf (Redaktion Munchen, Munchen, Germany).
Elektron. Appl. (Germany), vol.15, no.4, p.26-30 (April 1983). In German.
Various researches predict that the market for local networks will be a million dollar one by the end of the decade. The aim will mainly be to enable cost effective access of dispersed computers and terminals to central resources. This concept has been given a boost by the recently announced ETHERNET specification. It represents a factual industry standard. (no refs.) *P.R.S.*

27678 An Ethernet based communication network: technology and services. G.Enrico, F.Malpeli, E.Valdevit.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.481-99
During the last four years, since 1979, the authors have been experimenting and realizing a local area network in Olivetti: a single group, composed of some 25 people, implemented some basic modules to insert host, terminals and other devices in the network, dealing with technology, protocols and distributed OS. They describe the network. (9 refs.)

28167 Strangers in a strange land [office automation]. L.Runyan.
Datamation (USA), vol.29, no.4, p.214/3-6 (April 1983).
Faced with a confusing array of decisions in the office automation realm, users, who once thought the going would be easy, now find themselves mired in uncertainty. No direction seems totally correct. No path promises ultimate user satisfaction. Why not? Basically because the office of the future is simply not the office of today. There are in fact many miles to go before those visions are translated into reality. If you believe the vendors, that reality—the reality of an effective, integrated office system network—is fast approaching. This optimism, however, is contradicted by other more candid suppliers who will admit, usually off the record, that current office automation solutions are still only piecemeal. (no refs.)

27645 Management design considerations for local networks. M.Kenyon.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.13-24
The purpose of this paper is to examine network management functions which are considered to be either essential or desirable for the successful operation of a local network; the paper also briefly examines centralised and distributed implementations of network management systems. (2 refs.)

27643 Local Networks. Strategy and Systems. Localnet '83 (Europe). Northwood Hills, Middx., USA: Online Publications (1983), x+535 pp.
Conference held at: London, England. Date 8-10 March 1983. The following topics were dealt with: local network selection and management; linking personal computers; installation and user experience; network interconnection; PABX and LANs; broadband developments; token passing; Ethernet; Project Universe and Cambridge Ring and fibre optic developments.

28156 Micro-Courier [electronic mail software]. D.Archibald.
Creative Comput. (USA), vol.9, no.5, p.50-3 (May 1983).
Describes the software package, Micro-Courier. It is a valuable business utility for disseminating electronic mail, and runs an Apple II with disk drive. The software is in BASIC and assembly language. It costs $250. (no refs.)

27688 A comparison of IEEE standard local area networks. R.H.Douglas (Concord Data Systems Inc., Phoenix, AZ, USA).
Second Annual Phoenix Conference on Computers and Communications, 1983 Conference Proceedings, Phoenix, AZ, USA, 14-16 March 1983 (New York, USA: IEEE 1983), p.334-5
Compares features of two draft IEEE standards for Local Area Networks, one for CSMA/CD (Ethernet) and one for token busses. The author concludes that, when it becomes commercially available, the token bus system has features that make it superior to CSMA/CD for some applications. (6 refs.)

27652 Implementing an Ethernet based advanced office system. G.Ross.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.93-103
This paper describes the installation and working of one of the Department of Industry Sponsored Pilot Office Systems. This particular Pilot is located in the Greater London Council, and is based around Rank Xerox equipment, linked into an Ethernet Local Area Network. The GLC Pilot project involved the introduction of a 27-workstation system into the Scientific Branch. All of the Branch's approximately 140 scientific, technical and administrative staff were given access to the facilities. These include electronic messaging, filing, text processing, graphics and document production. (no refs.)

28311 Hi-tech approach cuts Westinghouse costs.
Bus. Equip. Dig. (GB), vol.23, no.5, p.47 (May 1983).
The article illustrates an example of modern business equipment and system being put to work to make a particular company more efficient. The company in this example is the Public Systems Company of Westinghouse Electric Corporation. It charts the successes of Westinghouse when they addressed the problems of office productivity. It describes how Westinghouse set out a series of pilot projects in a number of areas to provide and evaluate electronic mail, teleconferencing, personal computers, voice messaging, intelligent printers, word processing centres, telephone dictation and mail robots. (no refs.) *V.G.P.*

28210 OPAS: an integrated system for office procedure automation. Y.C.Hong (Acad. Sinica, Taipei, Taiwan), Y.W.Ho, T.S.Kuo.
Proceedings of IEEE INFOCOM 83, San Diego, CA, USA, 18-21 April 1983 (New York, USA: IEEE 1983), p.518-28
Describes a system which provides an environment for office procedure automation research. The system is based on an extension of Petri nets that models office work as a set of well-defined interactive procedures. An office procedure can be specified in a specification language, which is then translated and stored somwhere in the system. The translated procedure could be activated and run at any time. (17 refs.)

27644 The selection of a local communications network. D.Flint.
Local Networks. Strategy and Systems. Localnet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.1-12
Local communications networks may be installed as part of an applications system or as a general utility. In the former case the choice of system must depend principally on how it meets the requirements of the application. In the latter case it is the nature of the site and of the communicating devices that determine the best choice of network. In both cases procurement should start from a consideration of the requirements, not of the technology. (5 refs.)

28150 Common sense for buyers. R.Condon.
Micro Decis. (GB), no.21, p.144 (July 1983).
To avoid coming a cropper when buying a micro, a business user should remember a number of important rules. Firstly, provided he has planned his first purchase properly, the system purchased should be able to grow in line with his requirements, rather than having to swap it in for another. So when buying it is essential to find out exactly how the system's facilities can be expanded. Be sure that the main memory can be increased if need be; and make sure that one can attach a wide range of peripherals (disks, printers, tape cassettes). Similarity, unless he is planning to become an expert programmer, the business user should find out just how much ready-written software (programs) is readily available to perform particular appliations—such as payroll, purchase ledger or financial modelling. (no refs.) *A.B.*

28118 Beyond word processing [office automation]. A.D.Wohl (Advanced Office Concepts, Bala Cynwyd, PA, USA).
Computerworld (USA), vol.17, no.8A, p.25-30 (23 Feb. 1983).
Word processing was the first office automation technology to gain broad acceptance and usability in the business community. To many, it seemed—and in fact still seems—to be the only OA technology. Most of us, particularly in large organizations, have already made considerable and long-standing investments in word processing. But office automation is not word processing, although it does include the office function of creating and manipulating text. This article explores ways in which organizations can and should expand into OA from existing WP bases. (no refs.)

27722 Modified CSMA/CD local area network with message-based priority function. I.Iida, Y.Yasuda, Y.Komachi (Inst. of Industrial Sci., Univ. of Tokyo, Tokyo, Japan).
Proceedings of IEEE INFOCOM 83, San Diego, CA, USA, 18-21 April 1983 (New York, USA: IEEE 1983), p.472-7
Describes a modification of Priority Ethernet. In order to further improve Priority Ethernet, a reassignment technique of priority levels is introduced to avoid the increase of packet delay due to collisions among packets with same priority level. The throughput-delay performance of Priority Ethernet is remarkably improved by using this technique. (5 refs.)

27608 Calculating the maximum mean data rate in local area networks.
B.W.Stuck (Bell Labs., Holmdel, NJ, USA).
Computer (USA), vol.16, no.5, p.72-6 (May 1983).
In spring 1981 a subcommittee of IEEE Project 802 (on local area network standards) was formed to study network access methods given the same workload. Results show that carrier sense collision detection offers the shortest delay under light load. This article summarises the subcommittee's work on calculating the maximum mean data rate. (5 refs.)

27604 Bus LANS—high-speed networks for office communications.
Commun. Telecommun. User (GB), vol.3, no.4, p.14-17 (May 1983).
Describes local area networks (LAN) by explaining the basic principles of this technology. These systems are classified by the following criteria: transmission medium, topology and control mechanism of access method. Local area networks with circular topology (rings or loops) and LANs with bus topology are included. The advantages of carrier sense multiple access with collision detection are also discussed. (no refs.)

27646 Ecoooomics of the networked office. P.Kelley.
Local Networks. Strategy and Systems. Locainet '83 (Europe), London, England, 8-10 March 1983 (Northwood Hills, Middx., USA: Online Publications 1983), p.25-38
The paper derives office local area network (OLAN) requirements from an analysis of office activities and then examines economic feasibility. (9 refs.)

28117 Smooth sailing [office automation]. A.D.Mazursky (Deloitte Haskins & Sells, New York, NY, USA).
Computerworld (USA), vol.17, no.8A, p.16-24 (23 Feb. 1983).
Once a computer would fill an entire office. Now mainframes are being elbowed out of the way to make room for personal computers. This article examines what this means to users. (no refs.)

25783 Taking a look at data general. A.Dooley.
Computerworld (USA), vol.17, no.8A, p.13-15 (23 Feb. 1983).
Evaluates the strength of Data General Corporation (DG) in the office automation market. In the midst of a recession, DG is not only expanding its base, it is also taking on established office automation vendors. More than any other minicomputer vendor, DG has sold to the OEM market. Now it is trying to appeal to end users in the fast-moving OA industry. (no refs.)

28121 Change is inevitable [office automation]. P.J.Berg (Appl. Data Res. Inc., Princeton, NJ, USA).
Computerworld (USA), vol.17, no.8A, p.73-5 (23 Feb. 1983).
People can always find excuses for not accepting automation. This article shows how to recognize excuses and what to do about overcoming them. (no refs.)

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19520 **An ergonomic evaluation of VDTs.** Th.Fellmann, U.Brauninger, R.Gierer, E.Grandjean (Dept. of Hygiene & Ergonomics, Swiss Federal Inst. of Technol., Zurich, Switzerland).
Behav & Inf. Technol. (GB), vol.1, no.1, p.69-80 (Jan.-March 1982). [received: March 1983]
Eight VDTs of different trademarks are analysed in relation to the following properties: (a) Contrasts of luminance between the screens on the one hand and source documents, as well as other surfaces of the VDT, on the other. (b) Oscillation degree, sharpness and stability of characters. (c) Face and legibility of characters. (d) Dimensions, mobility and reflection degrees of the keyboards. Special equipment was used and standardized conditions were applied to the measurements. The eight VDTs showed essential differences for all the parameters, which might be partially responsible for eye strain and postural complaints. It can be concluded that customers should pay more attention to ergonomic qualities when choosing a VDT. But such an endeavour remains useless if the customer does not, at the same time, look for a proper design of the whole workstation including the working environment. (3 refs.)

19521 **Occupational stress factors in visual display terminal (VDT) operation: a review of empirical research.** M.J.Dainoff (Public Health Service, Dept. of Health & Human Services, Cincinnati, OH, USA).
Behav. & Inf. Technol. (GB), vol.1, no.2, p.141-76 (April-June 1982). [received: March 1983]
A review of the literature involving empirical research (experimental and field investigations) on stressful aspects of visual display terminal (VDT) operation is presented. Studies reviewed included assessment of visual fatigue and/or performance, musculoskeletal symptoms and operator attitudes towards job demands and quality of working life. In addition, some investigation included discussions and evaluations of the physical attributes of VDT workplaces; including ergonomic factors (task lighting, glare conditions, anthropometric configuration of VDT and accompanying furniture), environmental factors (temperature, humidity, radiation) and psychosocial factors (job demand, work content, work-rest schedules). The reviews reveal that the majority of workplaces examined were unsatisfactory for VDU operation. (70 refs.)

19541 **A personnel policies primer [for office automation].** W.S.Hubbartt.
Off. Adm. & Autom. (USA), vol.44, no.1, p.40-2, 72-3 (Jan. 1983).
New office technology will have a dramatic impact on employees. Managers may have to learn to operate a keyboard, whilst secretaries and typists using terminals to the full are likely to see broader responsibilities. Office workers are often apprehensive about the effect of new technology on their jobs: on the other hand, it may open up new career paths to those formerly in dead-end jobs. Data privacy and security are important issues. Inadequate attention to staffing (both retraining of existing employees and recruitment) will diminish productivity. The author discusses personnel management in the context of office automation. (no refs.)

19669 **Small business systems: state of the art, 1983.** H.Smejda.
Small Syst. World (USA), vol.11, no.1, p.24-30 (Jan. 1983).
The small business system market is in the midst of a major upheaval. Substantially lower costs for processing power and the prospect of making a fortune have propelled scores of new hardware vendors into the market place. The author examines the implications of current technology for the small business system user. She presents a list of 64 new systems or major enhancements introduced in the last year, giving technical specifications, manufacturers and prices, from microcomputer-based very small business systems to larger superminicomputers. (no refs.)

20595 **Local-area networks: links to communicating.** D.M.Rappaport (Arthur Andersen & Co., Chicago, IL, USA).
Office (USA), vol.97, no.2, p.103-6 (Feb. 1983).
Local Area Networks (LAN) serve a limited area: office building, factory, campus, or collection of buildings. Since well over 75% of written and voice communications for a company are internal there is real potential for enormous growth in LAN. This paper describes LAN technology which is based on CATV technology. PBX, baseband, and broadband systems are clearly explained and their drawbacks and benefits pointed out. (no refs.)

21060 **Apple's Lisa eyes office environment.** R.Blackwell.
Can. Datasyst. (Canada), vol.15, no.2, p.53 (Feb. 1983).
The Lisa personal computer system from Apple is designed specifically for office environments and includes six application packages in the $14000 (Cdn.) purchase price. The six packages cover the office functions of business graphics, word processing, graphics design, spreadsheet analysis, project management and personal filing. This software allows people to work in a natural way, without computer conventions or special languages. The screen displays pictures of items that would be found on a standard office desk, such as files, documents and folders. A palm-sized 'mouse' is used to point to these items and perform the required tasks. (no refs.)

21131 **Powerful local-area-network controllers make networking more accessible than ever.** E.R.Teja.
EDN (USA), vol.28, no.5, p.61-6 (3 March 1983).
The application of VLSI technology to controllers for local-area networks (LANs) has produced highly integrated devices which greatly simplify network design. Some of the available or soon-to-be-announced single-chip controllers, for example, have the intelligence needed to accommodate a variety of protocol environments. Many of the chips offload a system's CPU so completely that with proper buffering, the entire networking task can become CPU transparent. (3 refs.)

21132 **Understand datacomm protocols by examining their structures.** A.Goldberger, S.Y.Lau.
EDN (USA), vol.28, no.5, p.109-18 (3 March 1983).
The basics of data communications protocols are explained. The structure of the ISO's seven-layer OSI reference model is outlined. The article then concentrates on layer 2 protocols, also known as link-layer protocols or data-link controls. (no refs.)

21178 **Local networks.** C.Feltman.
Pop. Comput. (USA), vol.2, no.6, p.115-23 (April 1983).
Business computing costs can be cut by sharing data and equipment. A relatively new technology for personal computers, called local networking, has made it possible to link computers and peripherals within an area the size of most companies or departments. In such a network, users can communicate, exchange information and share larger, more reliable letter-quality printers and hard-disk storage units than are normally connected to their individual computers. The author examines two types of local networks, and explains how they work and what they can do. Currently available (or seen to be released) specific products are reviewed. These networks are Corvus Constellation, Corvus Omninet, Nestar Cluster/One, Nestar PLAN 4000, Ethernet series, ARCnet, and NOLAN. (no refs.)

21181 **Ethernet: distributed packet switching for local computer networks.** R.M.Metcalfe, D.R.Boggs (Xerox Palo Alto Res. Center, Palo Alto, CA, USA).
Commun. ACM (USA), vol.26, no.1, p.90-5 (Jan. 1983).
Ethernet is a branching broadcast communication system for carrying digital data packets among locally distributed computing stations. The packet transport mechanism provided by Ethernet has been used to build systems which can be viewed as either local computer networks or loosely coupled multiprocessors. An Ethernet's shared communication facility, its Ether, is a passive broadcast medium with no central control. Coordination of access to the Ether for packet broadcasts is distributed among the contending transmitting stations using controlled statistical arbitration. Switching of packets to their destinations on the Ether is distributed among the receiving stations using packet address recognition. Design principles and implementation are described, based on experience with an operating Ethernet of 100 nodes along a kilometer of coaxial cable. A model for estimating performance under heavy loads and a packet protocol for error controlled communication are included for completeness. (36 refs.)

21186 **A perspective on financial industry networking.** S.B.Weinstein (American Express Co., New York, NY, USA).
J. Telecommun. Networks (USA), vol.1, no.4, p.317-32 (Winter 1982).
Financial industry applications are among the most developed commercial uses of computer communication networks. Although a bewildering assortment of data networks is supported among and within financial institutions, and practices with regard to network architecture and operation vary widely, most of the networks use relatively straightforward traffic concentration and message switching technologies. Several of the application categories and the outlines of some of the networks developed for each, with emphasis on bank transactions, credit card operations, and securities trading are given. This overview suggests that financial institutions, in their efforts to stem the paper tide and manage vast amounts of information at acceptable cost, will embrace whichever mixture of proprietary, industry, and public networking facilities meets their immediate and near-future needs. There is, however, a persistent trend toward the linking and sharing of facilities in order to broaden the scope of all participating institutions and to save on communication costs. In particular, there is also a growing willingness to route intermittent traffic, such as credit authorization messages, through public packet switched networks and other non-proprietary facilities. The present course of development is toward the massive online linking of self-service machines, points of sale, and home and office terminals with a variety of geographically dispersed service and transaction centers. (8 refs.)

21187 **Local-area communication networks—an overview.** K.Mummerle, M.Reiser (IBM Zurich Res. Lab., Zurich, Switzerland).
J. Telecommun. Networks (USA), vol.1, no.4, p.349-70 (Winter 1982).
Local-area communication networks represent a new field of activity. Three scenarios for the use of these networks are described, and then various technical approaches are discussed. Particular emphasis is put on bus and ring systems with various media-access control mechanisms. The delay-throughput characteristic of two access methods carrier-sense multiple access with collision detection and token passing are compared, and some significant differences of bus and ring systems concerning wiring, media, transmission and reliability are discussed. (44 refs.)

21205 **Gateways—the key to integration.** P.Manchester.
Infomatics (GB), vol.4, no.3, p.26-7 (March 1983).
The combination of an 'intelligent' or 'smart' terminal and local area network technology theoretically makes the introduction of the multifunction workstation possible and leads to the reduction in the amount of hardware sitting on desks as well as in cost. The requirement for such a system is a (local area/wide area network) 'gateway'. It acts as an interpreter between local area networks and wide area networks. The author assesses the role of such a gateway in a network and considers the report produced by the Department of Industry focus committee on local network standards. (no refs.)

21209 **Experience with a local area network.** S.G.Price (Nat. Computing Centre Ltd., Manchester, England).
Manage. Serv. (GB), vol.26, no.12, p.6-9 (Dec. 1982).
A local network of microcomputers has been in use assisting consultants in the Office and Communication Systems division of the National Computing Centre since September 1981. The paper discusses the reasons for installing such a network, the installation process, the tasks performed on the network, the benefits and the problems. (no refs.)

21216 **The impact of fiber optics on local area networks.** D.J.Cunningham.
Telephony (USA), vol.204, no.1, p.28-33 (3 Jan. 1983)
Currently, coaxial cable is the most popular transmission medium for local area networks (LAN), but fiber optics may become the perfect medium for LANs. In an effort to establish a common architecture for LANs to which different manufacturers could conform, the International Standard Organisation (ISO) has developed an open system interconnection (OSI). LANs can be distinguished from one another by the topologies, signalling methods, access methods and media used in each. Optical fiber is immune to EMI and RFI, thus it need not be shielded. (no refs.)

21304 **Electronic typewriter.** D.Duke.
Off. Adm. & Autom. (USA), vol.44, no.2, p.43-50 (Feb. 1983).
The newest breed of electronic typewriters are mutant machines falling into a category between electromechanical typewriters and sophisticated text-editing machines. Although they may resemble electromechanical typewriters in design, they offer greater performance at faster speeds, and indeed deliver many of the functions of higher priced word processors. The article tabulates the features of some 36 electronic typewriters, giving manufacturers, prices, memory sizes, printer speeds, pitches and printing element and display types. It also lists the facilities offered by each typewriter such as word wrap, decimal centering, right margin justification, correction handling and search/replace and phrase/format recall options. Any communications protocol offered by each typewriter is also outlined together with any upgrading facilities available. (no refs.)

21765 **Cost-effective office automation.** B.J.Carlson.
Small Syst. World (USA), vol.11, no.2, p.27-9 (Feb. 1983).
In order to obtain positive results from office automation, it is necessary to carefully rethink the way in which the office functions and consider new ways of achieving objectives. Many office technologies are available, but they can be divided into three broad fields; these are information generation (e.g. word processing, voice entry and computer graphics), information distribution (e.g. local networks, integrated digital PBXs and electronic mail) and information storage and retrieval (e.g. updatable microfilm and electronic files). Office systems software packaged can also be installed. The author explains what is available in the various fields and emphasises the need for careful application. (no refs.)

21768 **Integrating data entry and word processing.** D.J.Campbell (Rosemount Inc., Prairie, MN, USA).
Office (USA), vol.97, no.2, p.30-4 (Feb. 1983).
The integration of data entry and word processing is the first step towards the automated office. The key to success is long-range productivity and requires the commitment of upper management and the participation of the clerical staff. The author spells out how to begin this integration and highlights the potential for new job directions within the office automation environment. (no refs.)

21769 **Spelling software helps Cyanamid Division with its chemical research.**
Office (USA), vol.97, no.2, p.54 (Feb. 1983).
The American Cyanamid Co.'s Chemical Research Div. in Stamford, CT, USA, utilises computers and word processors for a variety of reports. The department supports a 500 strong research and development function by assisting with planning and monitoring more than 200 research programs for speciality chemicals. This article describes the department's experience with a Validator automatic spelling character and proofreading program for the word processor. The program developed by Software Concepts Inc. of Stamford, contains a 100000 word dictionary and a 'Personal Lists' of 2000 words which in this case consist of the names of chemicals and people. (no refs.)

21770 **Relentless yet rewarding: the job of supervising WP.** G.M.Witbeck (Defense Systems Div., Honeywell Inc., Seattle, WA, USA).
Office (USA), vol.97, no.2, p.67-8 (Feb. 1983).
Standards, productivity measurement, training, recruitment, equipment selection and usage, ergonomics, customer satisfaction, management of a high volume complex system, the future, and career opportunities. These are some of the considerations a word processing supervisor has to contend with. The author, a WP supervisor with Honeywell Marine Systems, explains just what this entails. (no refs.)

21771 **Launching a successful word processing center.** D.Bufkin.
Office (USA), vol.97, no.2, p.70-1 (Feb. 1983).
A Wang word processing system is described, in use, by the law firm of Locke, Purnell, Boren, Laney and Neely, Dallas, TX, USA. The system was installed in 1979 and has since been added to. The present on-line capacity is 90.4 megabytes. The day to day running of the word processing centre is outlined. Tips for a smooth and efficiently run operation are given, including the use of a clearly written manual for word processing operators. (no refs.)

21772 **What to do after you've installed word processing.** J.L.Maguire (Peat, Marwick, Mitchell & Co., Los Angeles, CA, USA).
Office (USA), vol.97, no.2, p.92-4, 112 (Feb. 1983).
The installation of state-of-the-art word processing systems does not guarantee the use of those systems. In this paper the author looks at the training of users to ensure successful system implementation. The content of user orientation sessions is discussed and followed up with some symptoms of improper system utilisation. (no refs.)

21773 **Is your business ready for a microcomputer?.** W.C.King,II (Walter C. King Associates, Westport, CT, USA).
Office (USA), vol.97, no.2, p.96 (Feb. 1983).
There are few small businesses today that a microcomputer cannot help in meeting current and foreseeable future needs. Applications for the microcomputer include accounting, inventory control, sales journals, word processing, payroll, voucher distribution and even security systems. Is the acquisition of a microcomputer the right approach for your office? The author gives some basic considerations to help you find out. Advice is also given on the selection and buying of the hardware and software that are most suitable for your business. (no refs.)

21774 **Word processors speed output of news bureau.**
Office (USA), vol.97, no.2, p.108 (Feb. 1983).
Word processors are increasing the productivity of publicists at General Electric Co.'s news bureau in Norwalk, CN, USA. The publicists compose technical and feature articles, speeches, news releases, newsletter copy, proposals, letters and other documents on a Wang OIS 130A word processor. The bureau has four portable CRT terminals and one permanent terminal, mainly for off-line work. The word processors video screen shows 21 lines of text. The software menu prompts the operator for each entry, confirms operator decisions and displays text as entered. The systems remote printer operates at 35 cps. (no refs.)

21775 **A word-processing system for nuclear plant reports.** B.Aldred.
Office (USA), vol.97, no.2, p.111-12 (Feb. 1983).
Describes a speedy, flexible and cost-effective word processing system assembled by Southern Company Services in Birmingham, AL, USA to efficiently accomplish a complex, monumental task. The assignment involved updating three Final Safety Analysis Reports (FSAR) for system nuclear plants. The objectives were to (1) capture the FSARs on a computer system without retyping the document, (2) reformat the document easily, (3) search for key words to aid technical staff in researching the document and (4) maintain the document in magnetic media for the life of the plant. It meant updating 3 documents, each of which filled 15-20 2" binders with nearly 3000 pages of text. (no refs.)

21776 **A word processor is no typewriter to this firm.**
Office (USA), vol.97, no.2, p.124 (Feb. 1983).
Describes the use made by Vacation Ownership Marketing of Ft. Lauderdale, FL, USA, of a Lanier No Problem word processor which they acquired in 1981. The word processor is used to produce mailings for the marketing department, letters to the stockholders, billings and customer service letters, which often amount to more than 3000 pieces of mail a week. (no refs.)

21777 **Office automation requires a mix of many disciplines.** N.D.Meyer.
Office (USA), vol.97, no.2, p.189 (Feb. 1983).
The president of the Society of Office Automation Professionals (SOAP) examines the reasons for the emergence of this society. The society's aim is to focus on office automation as an integration of appropriate technologies and build lines of communication among those involved in supporting office work. (no refs.)

21779 **1983 buyers reference.**
Mod. Off. Procedures (USA), vol.28, no.1, p.107-228 (Jan. 1983).
Source reference charts are given as a guide to products and services in the office/information processing field. They provide information such as who makes what products in the major product segments of the office/information products industry. The products, supplies and services of approximately 1500 suppliers are listed under 166 major product categories in eight product sections: records management, office design, data processing, communications, word processing, reprographics, business supplies, and other products of services. (no refs.)

21781 **Question: Is there a future for text [processing]?.** J.W.Maybach.
Sysdata (Switzerland), vol.14, no.1-2, p.I-IV (3 Feb. 1983). In German.
An analytical survey of the prospects for text processing as compared with conventional data processing is given in the form of a dialogue between this journal's representative and the author who is general manager of AES (Switzerland) AG. The latter produces the Alphaplus 14 AES System, a text-processing operating system which permits of multi-processing operations. Data processing is defined as concerning itself with structured data and complex programme runs, while text processing is primarily concerned with unstructured data. It is concluded that for small business concerns the emphasis must be on single work stations for text and data processing for the larger concerns there is an upswing towards text or data processing according to the task or problems to be solved. Examples are given of the stages leading to a fully integrated system covering a single work station display-screen text-system and programmable multi-station system, leading finally to an integrated office automation system incorporating a communications controller. (no refs.) *L.M.W.*

21782 **The electronic cottage industry: telecommuting comes of age.** K.Ackerman.
SoftSide (USA), vol.6, no.5, p.28-30 (Feb 1983)
The author discusses the potentials of using new computing technologies to allow the office workforce to work from home. Various authors are quoted as the likelihood of this. The advantages and obstacles are examined. (no refs.)

21783 **Easier envelope addressing.** R.Nelson.
Pop. Comput. (USA), vol 2, no.5, p 72-80 (March 1983).
Most word-processing programs make it difficult to address envelopes. This article describes and lists the ENVELOPE program which prints mailing and return addresses in correct format on selected-size envelopes. A menu offers a choice of one of four envelope size. ENVELOPE is written in TRS-80 Disk BASIC and uses a LINE INPUT command not available in Level II BASIC, although the author discusses how to modify the program to run in Model III or Level II BASIC. (no refs.)

21784 **Organisational and economic aspects of integrated telecommunication in the office.** A.Musiol.
Off. Manage. (Germany), vol.31, no.1, p.14-22 (Jan. 1983). In German.
Describes the types of telecommunication which are available in commerce, from simple speech telephones and exchanges to the various text, graphics and data services. The author covers their main characteristics, the extent of their present-day utilisation, their cost, and the ways of combining them in integrated networks serving whole organisations. (5 refs.) *G.F.F.*

21785 **Automatic registration systems and the integrated office communication.** H.Munter (Philips Kommunikations Industrie AG, Hamburg, Germany).
Off. Manage. (Germany), vol.31, no.2, p.80-2 (Feb. 1983). In German.
With reference to equipment developed and marketed by Philips, the author deals with automatic registration systems, which are high-capacity data storage units. The aim of the integrated office communication, in connection with modern features such as telefax and teletex, is to minimize the volume of information processing. Digital optical recording plates and the 'Megadoc' system are suited to overcome the prevailing shortcomings of automatic registration systems. Optical storage plates are engraved with a laser beam and can be displayed on terminals. Mainly in case of large registration mass the developed system will reduce costs substantially. Aspects of data protection and investments are considered. From 1985 on, automatic registration systems will be available in greater numbers, thereby reducing unit price and enabling higher efficiency in office work. Two pilot projects are in use at present. (no refs.) *K.A.K.*

21794 **Wang leads the way.**
Which Word Process. & Off. Syst. (GB), vol.4, no.2, p.10-18 (March 1983).
Wang's Alliance is one of the first office systems in the UK, and one of the best. In this article, the system is analysed in detail. Alliance is firmly based on existing hardware and technology, mainly from the Office Information System family. There are more than forty interrelated software routines which together occupy some 6 MB of disc storage. The article discusses systems management, word processing, document management, time management, dictation, office communications, personal computing, and external teleprocessing. It goes on to discuss the use of Alliance, and prices for the hardware and software. (no refs.)

21796 **The electronic desk—an attribute of tomorrow's office makes its debut.** LLanius (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.18, no.1, p.8-11 (Feb. 1983). In German.
The communication devices commonly used by office staff comprise a large number of specialized terminal equipments designed for the various communication modes. It is, however, already possible to handle all the functions required for dealing with text, image and data by means of a single multifunctional office tool—the workplace system. In conjunction with a printer system, a filing unit, a communication unit and a bus network, it comprises the EMS 5800 DOCUMENT communication system from Siemens. (3 refs.)

21800 **Designing interactive systems for the office of the future.** G.F.Coulouris (Computer Systems Lab., Queen Mary Coll., London, England).
Behav. & Inf. Technol. (GB), vol.1, no.1, p.37-42 (Jan.-March 1982). [received: March 1983]
Describes an approach to the design of interactive information systems based on a 'total activity model', that is, a description of activities performed by the user and activities performed for the user. The system is illustrated by outlining the approach in relation to existing word-processing systems and by describing in more detail its application in an experimental filing and task management system. The second part of the paper addresses the question: what hardware and software resources are needed in order to implement effective interactive systems of the type described?. (4 refs.)

21801 **Data base navigation: an office environment for the professional.** R.Spence (Dept. of Electrical Engng., Imperial Coll. of Sci. & Technol., London, England), M.Apperley.
Behav. & Inf. Technol. (GB), vol.1, no.1, p.43-54 (Jan.-March 1982). [received: March 1983]
The potential of the computer to assist in the everyday information handling activities of professional people has received little attention. This paper proposes a number of novel facilities to produce, for this purpose, an office environment in which a needed item of information can rapidly be sought and identified. It involves a new display technique which overcomes the classical 'windowing' problem, and the use of natural dialogues utilizing simple actions such as pointing, gesturing, touching and spoken commands. The simple dialogue makes the scheme well suited to the professional person, who is most likely unwilling to learn complex command languages. Little disturbances to the appearance of the office need be involved. (10 refs.)

21803 **An overview of contemporary office automation technology.** A.Gupta (Sloan School of Management, MIT, Cambridge, MA, USA).
Behav. & Inf. Technol. (GB), vol.1, no.3, p.217-36 (July-Sept. 1982). [received: March 1983]
Technological innovations have, until recently, had little impact on the office environment. The advent of the microelectronic revolution has generated devices and mechanisms that support a wide spectrum of administrative functions and increase both the efficiency and effectiveness of office workers. This paper presents a state-of-the-art perspective on the newer technological aids developed specifically for the office environment. The speed and versatility of these aids is a tribute to recent innovations in the field of computers and communications. (14 refs.)

21805 **The technology cafeteria [office automation technology].** S Moore, J.Pelkey, D.Brodwin, V.Spang, L.Lopez (Arthur D. Little Inc., San Francisco, CA, USA).
Off. Adm. & Autom. (USA), vol.44, no 1, p.28-31, 82-3 (Jan. 1983).
The office automation arena now encompasses a vast—and often confusing—array of equipment and systems. In this article specialists discuss the state of the art in five key areas, presenting user guidelines for evaluating cost effectiveness. The areas covered are private branch exchanges, office communications, workstations, electronic filing systems and word processing. (no refs.)

21806 **Office automation: three user experiences.** R.T.Sachs.
Off. Adm. & Autom. (USA), vol.44, no.1, p.32-4 (Jan. 1983).
Many businesses of various types and sizes are implementing office automation. With the vast array of equipment available on the market, making the correct selection can be difficult. This article describes the successful experiences of three businesses; one of these is a small law firm specialising in real estate tax assessment, another a medium-sized distributor of consumer electronics, and the third a division of a large conglomerate. (no refs.)

21808 **Take a golden letter [electronic mail].** G.McMorin.
Infomatics (GB), vol.4, no.3, p.42-53 (March 1983).
Telecom Gold and Teletex are just two applications of the electronic mail services provided by British Telecom. The Telecom gold service provides simple, accessible 'assured' company communications via the telecommunications network or automatic 'super-telex' Whereas Telecom Gold offers a fully integrated management communications package, Teletex is developing into an internationally agreed telecommunications service. The author examines the benefits of these two systems. (no refs.)

21815 **Business machines: technology before its time?.** R.T.Dann.
Mach. Des. (USA), vol.55, no.3, p.70-9 (10 Feb. 1983).
Expanded memories, local-area networks, and high-resolution graphics are capable of transforming offices into technological 'wonderlands'. However, market and regulatory forces may be more important in shaping the office of the future. Five barriers to the computer and communications revolution can be identified: portability, access, language, cost, and security. Recent innovations designed to breach these barriers are described. These include a telecomputing system introduced by IXO Inc., the endorsement of a standard for local-area networks of computers and peripherals, new image transfer technologies, and efforts to cut size and cost in the business equipment market. Finally, the electronic design problems arising from new FCC regulations on electromagnetic interference are discussed. (no refs.)

21822 **The relationship of MINA on the automation of offices.** R.Azzano.
Manage. & Inf. (Italy), vol.21, no.2, p.119-21 (Feb. 1983). In Italian.
The paper deals generally with the work of MINA in Italy who carried out a review on the automation of offices. The review was for six months in 1982 on some 4020 offices. Some diagrams are given to show the types of offices involved. Further diagrams are given to show the different types of organisations with which the surveyed offices were involved. These also have indications of the varying amounts of automation penetration achieved. The survey results are analysed in great detail. (no refs.) *G.V.D.*

21823 **MUPID—graphics and editing—facilities in videotex.** W.D.Fellner, M.Schaffer (Tech. Univ. Graz, Graz, Austria).
Nachr. Dok. (Germany), vol.34, no.1, p.25-8 (Feb. 1983). In German.
MUPID is a multi-mode videotex-decoder, comes with a full alphabetic keyboard, handles both the European (alpha-mosaic) and the Canadian (alpha-geometric) kind of graphics, does not become obsolete with the new European standard or with the introduction of AT&T's PLP, and can execute 'telesoftware'. Using teleprogrammes MUPID turns into a comfortable information provider terminal without any costs. The sophisticated software allows the definition of geometric objects by a cross-hair cursor and the simultaneous input and display of alpha-mosaic codes. (5 refs.)

21831 **Handbook of new office technology.** J.Derrick, P.Oppenheim.
London, England: Kogan Page (1982). 335 pp. [0 85038 584 9]
Technology has produced a diverse and often bewildering range of new business equipment for the office. Confronted with so much different equipment, how does today's businessman know what to choose? This book assesses in detail the various types of equipment available, what they can do, and the criteria to use in evaluating them for the office. From copiers to word processors, from microcomputers to typewriters, and from franking machines to integrated office systems, this book is a practical guide to equipping the new technology office.

21835 **The man-machine interface in the electronic office.** A.C.Downton (Dept. of Electronics, Univ. of Southampton, Southampton, England).
International Conference on Man/Machine Systems, Manchester, England, 6-9 July 1982 (London, England: IEE 1982), p.89-92
At least two levels of supportive Electronic Office systems can be envisaged. At the routine level, Word Processors can partially mechanise work, reducing drudgery, while at the same time releasing personnel for reactive and innovative tasks which are less easily automated. At the reactive and innovative levels, Management Information Systems (MIS) can enhance the quality of work primarily by providing improved communications (e.g. computer conferencing, teletext, facsimile transmission) and information sources (through access to computer databases). It is in this second area in particular that technology has so far been relatively ineffective. Some of the reasons for this can be understood by comparing man-machine interfaces in the Electronic Office with their conventional counterparts. Two representative examples (input devices and soft copy displays), are discussed in this paper, but similar arguments can easily be applied to other areas such as data retrieval and communications facilities. (21 refs.)

21837 **A manufacturer's view of office automation.** J.A.M.Salter, A.Hamre, C.A.Stendal, R.S.Holm.
International Conference on Man/Machine Systems, Manchester, England, 6-9 July 1982 (London, England: IEE 1982), p.141-4
One of the areas where man-machine interaction will play an extremely central role is Office Automation. The goal of manufacturers in this area is to provide computing power in a discrete and natural way to users on their own terms and in their own environment. There are no good complete solutions in this area as yet. Should we be putting all our efforts into the integration of voice, natural language systems, raster scan screens in order to develop the 'ultimate' interface? or should we try to make an honest job of it with the existing hardware technology? This paper describes the situation as it often is today, the situation as it should be, and a concept for achieving this end. (no refs.)

21840 **Computer emulation of books.** I.D.Benest, G.Jones (Rutherford Appleton Lab., Chilton, England).
International Conference on Man/Machine Systems, Manchester, England, 6-9 July 1982 (London, England: IEE 1982), p.267-71
The paper describes a future where the use of office automation equipment will play a significant part in the work of the professional person's office and one of the features of such a system will be its ability to display technical literature. A simple manipulative method for accessing computerised books is suggested, which exhibits the psychological cues which are present when reading an actual book. As a result, recommendations for equipment modification are necessary and comments are made on publication standardisation. (9 refs.)

21859 **Shared-resource system averts a paper blizzard.**
Office (USA), vol.97, no.2, p.19-20 (Feb. 1983).
A brief case study shows how Life Insurance Co. of Virginia saved $250000 per year by increased productivity of 15%. This was achieved by ending paper-intensive ways and applying office-systems technology. The office-system is a shared-resource system based on Data General Corp's CEO (Comprehensive Electronic Office). Systems capabilities include integrated word processing, electronic mail, electronic filing, administrative and decision support, and integrated data processing. (no refs.)

21870 **How to see the colour of your money [graphics].** F.Newman.
Micro Decis. (GB), no.18, p.55-60 (April 1983).
Business graphics packages can produce impressive results but it is argued that there should be standard ways of using bar charts, pie charts and histograms to represent business figures. The best packages available are those that can be used in conjunction with other financial planning or modelling packages such as Visicalc or Supercalc without reentering the figures. Also, it can be useful to be able to produce slides from the screen and the choice of printer or plotter for this purpose is explained in the article. Brokers are seen to have a specialist need for graphics and a package for them is described. The article includes a table of some of the business graphics systems available which includes the company name and address along with price and other comments. (no refs.)

21989 **Application of automation and specialization to the office administrative support function—a Boeing prototype.** I.M.Gunnoe (Boeing Commercial Airplane Co., Seattle, WA, USA).
Automation Technology for Management and Productivity Advancements through CAD/CAM and Engineering Data Handling. Proceedings of the Third Symposium on Automation Technology in Engineering Data Handling, Monterey, CA, USA, 8-10 Sept. 1981 (Englewood Cliffs, NJ, USA: Prentice-Hall 1983), p.96-104
Three years ago the Boeing Commercial Airplane Company—Engineering Computing Systems organization embarked on a prototype project. They were chartered to develop an effective way of introducing automation and specialization to the traditional engineering office environment. The prototype has effectively introduced a new office concept that is proving to be very cost effective and beneficial to the management and professional staff, as well as rewarding to the administrative support staff. The prototype office is structured around two levels of centralized management consisting of a manager and two supervisors who report to the Director of Engineering Computing Systems. Assigned to these supervisors are all of the clerical support people who are responsible for the clerical and administrative functions required to support approximately 300 management and professional engineering people. The prototype has revealed that there are strong financial, motivational and operational arguments for a carefully planned office support system. (no refs.)

21991 **Automation of engineering information resources.** B.E.Larned (Information Handling Services, Englewood, CO, USA).
Automation Technology for Management and Productivity Advancements through CAD/CAM and Engineering Data Handling. Proceedings of the Third Symposium on Automation Technology in Engineering Data Handling, Monterey, CA, USA, 8-10 Sept. 1981 (Englewood Cliffs, NJ, USA: Prentice-Hall 1983), p.148-57
This paper describes existing and planned methods for on-line computer retrieval of engineering data. More specifically, the author describes systems being developed to aid the design engineer in the effective use of information from sources outside his own organization. The types of data being covered include specifications and standards from industry and government, technical data from thousands of manufacturers and distributors of components and materials, engineering handbooks data, applications material, and so forth. The systems described cover: data acquisition and conversion; classification; communications; on-line retrieval software; and document text delivery methods. (no refs.)

21189 **Surveying the LANscape.** E.Shea.
Off. Adm. & Autom. (USA), vol.44, no.2, p.32-4, 106 (Feb. 1983).
As one arm of communications, local area networks are emerging as a major force in today's office. A LAN is a method of broadcasting information in digital form from one point to another (or others) within a limited area. The data can be transmitted a few feet or sent even greater distances (some networks connect stations a mile away), making a LAN an ideal method of transferring information between floors and buildings. The article tabulates the features of 9 local area networks, including the network topology, connection medium (baseband or broadband cables), transmission control method, transmission rate, types of communications protocols or gateways, average price per terminal interface and any special features offered. A list of manufacturers is also given. (no refs.)

21280 **...and writing the reports by computer.** B.Gledhill.
Lab. Equip. Dig. (GB), vol.21, no.2, p.91 (Feb. 1983).
Microwriter is a personal hand-held word processor that is slim enough to be carried in a briefcase and incorporates rechargeable batteries (giving about thirty hours of use between charges) so that it can be used anywhere. It incorporates a five key keyboard which enables the user to write the entire alphabet and numerics entirely by touch alone, without the need to be a trained typist or even to be familiar with the QWERTY keyboard found on typewriters. Faster than longhand, the technique of Microwriting is simple and quick to learn, making use of the familiar shapes of the alphabet formed by the fingertips of one hand on the keyboard. The text written on the Microwriter is automatically entered in its 8 k byte memory (equivalent to about 5 A4 typewritten pages). Through either the built-in LCD display or by connection to a television set or monitor, text can then be reviewed or edited. By simply plugging into a printer, perfectly printed copy is immediately available. Text can also be transferred to the discs of a microcomputer for storage, further editing or file merging and for subsequent printout via the microcomputers printer. (no refs.)

21287 **Adjustable VDT workstations: can naive users achieve a human factors solution?.** T.Rubin (Human Factors Res. Div., British Telecom Res. Labs., Ipswich, England), C.J.Marshall.
International Conference on Man/Machine Systems, Manchester, England, 6-9 July 1982 (London, England: IEE 1982), p.165-8
The introduction of adjustable workstations raises the following fundamental questions: 1. Given a fully adjustable VDT workstation, will users utilise the adjustment facilities available? 2. Having chosen to utilise such facilities, which parameters do the users alter, and by how much do they alter them? 3. To what extent will the user adjusted VDT workstation parameters differ from either the standard parameters of typical office furniture or the parameters set using recommendations from human factors literature? The experiment described in this paper was conducted by the Human Factors Division at British Telecom Research Laboratories in an attempt to answer such questions. (6 refs.)

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22650 **Following the leaders: DEC is trying harder.** G.I.Gartner (Gartner Group Inc., Stamford, CT, USA).
Comput. Decis. (USA), vol.14, no.11, p.84 (Nov. 1982). [received: April 1983]
Digital Equipment Corp. has a good shot at becoming No.2 in office automation. Success depends heavily upon the user's perception of a vendor's com-

22713 **Filters give light relief to VDU operators.** M.Reed.
Electr. Rev. (GB), vol.212, no.14, p.43 (15 April 1983).
Continuous use of information terminals under office lighting can cause eye strain, the so-called VDU syndrome. Circular polarisation of light is a way to relief. (no refs.)

23704 **Voice mail delivers the message.** E.Shea.
Off. Adm. & Autom. (USA), vol.44, no.3, p.33-5, 88-92 (March 1983).
Nearly 75 per cent of business calls by telephone are not completed on the first attempt because one party is unavailable. However a two-persons conversation is not always required. Surveys show that more than one-half of all business calls consist of asking a question or passing along information. Voice store-and-forward messaging (also called voice mail or voice retrieval) systems offer a solution to this. With a voice mail system, users can conduct non-simultaneous telephone conversations for certain calls that are short and interrogative or declarative, time sensitive, and informational. This article examines the history, drawbacks and applications of voice mail systems before examining currently available systems. (no refs.)

23718 **Interaction between voice and data elements in a local area network.** D.A.Pitt (IBM Corp., Research Triangle Park, NC, USA).
Telephony (USA), vol.204, no.10, p.40, 42, 46 (7 March 1983).
The applications software and control and management information that is part of a company's data processors can be accessed and exploited by a PBX. The author explains how to exploit ones resources. (1 ref.)

24139 **Telecommunications devices for the deaf.** H.Levitt (City Univ. of New York, New York NY, USA).
Johns Hopkins APL Tech. Dig. (USA), vol.3, no.3, p.231-5 (July-Sept. 1982). [received: March 1983]
The teletypewriter is an extremely valuable communication aid for deaf persons. It does, nevertheless, have several practical disadvantages, including the high initial purchase cost and subsequent maintenance costs (which include telephone charges). Teletypewriters also have a low rate of communication, are relatively inflexible in their mode of operation, and are of limited portability. A low-cost, mass-produced pocket computer has been programmed to resemble a teletypewriter but with the additional advantages of both memory and logic. The system is not only more powerful and more convenient to use than a conventional teletypewriter (especially since it is pocket sized) but is also less expensive. (3 refs.)

24379 **Interfacing PDP-11s and LSI-11s to local area networks.** D.Hutchison, S.Yacoob (Computer Sci. Dept., Univ. of Strathclyde, Glasgow, Scotland).
DECUS UK and Ireland. Conference 1983 Proceedings, Lancaster, England, 1983 (Reading, England: DECUS UK & Ireland 1983), p.13-20
The authors are developing a dual local area network consisting of a commercial Cambridge Ring and an in-house Ethernet-like local network called Strathnet. The purpose of this dual system is to enable comparison experiments to be made between the two types of network, following simulation work on relative performances already completed. The authors report on the hardware aspects of interfacing DEC computers to Strathnet. (10 refs.)

24388 **Local area networks: blessed be the tie that automates [office computing].**
Mod. Off. Procedures (USA), vol.28, no.4, p.66-74 (April 1983).
Local area networks (LANs) are facilities that allow high-speed communications in a particular area, typically over distances of a few thousand feet. They will play an increasingly important role in the 'Second Wave' of office automation which will usher in voice (data terminals, inter- and intra-facility videoteleconferencing (from desk to desk), and graphics storage devices). A survey is given of present network technology. The characteristics of several networking schemes are described and applications (e.g. file transfer capability and electronic mail and terminal emulation protocols) are dealt with in a few cases. Finally, some LAN configurations under development are discussed and companies making products for the LAN market are also mentioned. (no refs.)

24390 **Untangling local area networks.** R.Parker, S.F.Shapiro.
Comput. Des. (USA), vol.22, no.3, p.159-72 (March 1983).
Competing local area networking schemes offer diverse characteristics that may or may not fit specific applications. But the issues are becoming clearer and standards are emerging. The authors review these topics. (no refs.)

24391 **In praise of ring architecture for local area networks.** H.C.Salwen.
Comput. Des. (USA), vol.22, no.3, p.183-92 (March 1983).
The author states that incorporating the concept of wire centers and the wonders of fibre optics into a ring configured LAN eliminates the traditional bugaboos associated with circular network schemes. (8 refs.)

24392 **Ethernet linkup for IBM PCs.** J.Seaman.
Comput Decis. (USA), vol.14, no.11, p.70-2 (Nov. 1982). [received: April 1983]
Etherseries, a combination of plug-compatible hardware and operating-system-compatible software, provides the benefits of peripheral sharing, information sharing, and communications to IBM PC users. Each IBM PC becomes a network station when equipped with Etherlink, a $950 set that includes a plug-in controller/transceiver board and applications software on diskette that allows stored files and printers to be shared by stations attached to the network. Each PC station retains all computing capabilities, and gains the utility of network participation. (no refs.)

24393 **An acknowledging contention algorithm suitable for local radio networks.** M.A.Malcolm (Computer Sci. Dept., Univ. of Waterloo, Waterloo, Ontario, Canada), L.D.Rogers, J.E.Spracklen.
Comput. Networks (Netherlands), vol.7, no.1, p.1-8 (Feb. 1983).
A contention transmission algorithm for local networks which is related to the p-persistent family of algorithms previously analysed by L. Kleinrock and F.A. Tobagi (see IEEE Trans. Comm., vol.COM-23, no.12, p.1400-16, 1975) is presented. The algorithm incorporates an automatic acknowledgement signal which is sent by the receiving station immediately after each packet is correctly received. The algorithm is suitable for radio environments in which transmitting stations can 'capture' nearby receivers. Assuming that stations are not placed too close to each other, it is proven that an acknowledgement signal is received by a transmitting station only if the packet has been received correctly by the intended receiver. In a cable network where transmitters do not capture receivers, the acknowledgement signal is guaranteed (in the same sense) regardless of the distances between stations. This result depends on very weak assumptions about the type of data encoding used on the channel. The more interesting aspects of implementing this scheme are discussed and the way in which higher-level protocols can make use of the acknowledgement signal and its properties is outlined. (6 refs.)

24867 **Business graphics on small systems.** J.Borrell.
Small Syst. World (USA), vol.11, no.3, p.17-21 (March 1983).
The small system user can access business graphics with microcomputers, with terminals tied to minis or mainframes, with business graphics workstations, and through service bureaux. The author reviews each of these methods, looks at growth areas for the application of business graphics, and concludes with a discussion of such purchasing factors as software, display, hardcopy, user interaction and integration into existing DP environments. (no refs.)

24870 **Graphics in video text for business use.** R.Zimmermann (Dornier System GmbH, Friedrichshafen, Germany).
Online (Germany), no.2, p.48-9 (March 1983). In German.
Outlines the graphics facilities in the German video information system available by telephone connection, and giving sample pictures of their usage. It is planned to introduce the service publicly in September 1983. (no refs.). *G.F.F.*

24875 **A tool for handling moderate-size business files.** C.Fishback (Florida Atlantic Univ., Boca Raton, FL, USA).
Small Bus. Comput. (USA), vol.6, no.8, p.44-5 (March-April 1983).
List Handler from Silicon Valley Systems will find many business uses where storage and retrieval of moderate-size files are needed and single-field search and selection criteria can be used. Its formating of labels needs improvement. (no refs.)

24878 **Office automation: is there trouble in paradise?.** R.Costain.
Mod. Off. Procedures (USA), vol.28, no.2, p.43-50 (Feb. 1983).
The concept of Office Automation is well accepted, but the implementation generally is not well suited to the office environment. As a consequence, sales of integrated office systems have been less than forecast. Some vendors have dropped out of the race. Others have redesigned their equipment to achieve greater harmony with Theory Y and Theory Z management philosophies as well as to create more consistent and empathetic interfaces with the office worker. (no refs.)

24879 **Sour notes still spoil a sweet idea [home working].**
Mod. Off. Procedures (USA), vol.28, no.4, p.46-52 (April 1983).
Modern-day cottage industries, the electronic cottage, tele-commuting, alternate worksite, flexiplace, and homework are all labels applied to the concept of working at home. Home-based employment is advocated as a method by which companies can cut costs: 'stay-at-homes' do not need the same fringe benefits as office workers; fewer people means less office space; productivity increases when people work at home; morale also climbs. Other benefits have also been pointed out. Using people at home is one way to add contract employees not included in operating budgets. People working poorly at home can always be recalled to the office. The few experiments to be conducted have shown electronic failings rather than human ones, and these may be overcome with the advent of better equipment. The shift away from the office is already taking place. (no refs.) *R.Y.*

24885 **Multifunctional office systems: a status report.** W.Saffady.
Comput. Equip. Rev. (USA), vol.4, no.2, p.84-94 (July-Dec. 1982). [received: May 1983]
In a multifunctional, integrated office system, a single machine or system is used to perform multiple office-related information processing tasks. The concept of multifunctionality is discussed and prevailing approaches to the development and implementation of such systems are described. The simplest systems will perform both word processing and data processing, while more complex systems aim to provide comprehensive coverage of automated office functions, either in a single, all-inclusive software package, or through a series of related programs. Additional capabilities may be derived through customized programs developed by users to meet special requirements. (no refs.) *G.H.T.*

24893 **Digital Microsystems' HiNet microcomputer network.**
Comput. Equip. Rev. (USA), vol.4, no.2, p.154-9 (July-Dec. 1982). [received: May 1983]
Digital Microsystems offers multifunctional capabilities based on a hardware configuration consisting of a network of microcomputers. One of their workstations features a special, tiltable screen designed for either word or data processing. The horizontal orientation is suitable for DP, while the vertical orientation is suitable for WP. The DMS-5000 series consists of two models, both of which are suitable for use as workstations in a HiNet configuration. HiNet is a coaxial-cable based local area network designed to link microcomputers in a distributed intelligence information processing configuration. Digital microsystems various microcomputers can run the large number of available prewritten programs designed for CP/M-compatible systems. (no refs.) *G.H.T.*

24886 IBM automated office systems.
Comput. Equip Rev. (USA), vol.4, no.2, p.95-110 (July-Dec. 1982). [received: May 1983]
IBM's various office-oriented hardware and software products include: the stand-alone word processor, the Displaywriter; two minicomputer-based systems—the 5520 Administrative System and the 8100 Distributed Office Support Facility; software products for IBM mainframes; and special-purpose systems such as the 6670 intelligent copier, the IBM Audio Distribution System and the recently introduced Scanmaster facsimile terminal. An addendum to the review discusses the Total Office Support System (TOSS), an IBM-compatible software package developed by National Busines Systems Incorporated. (no refs.) *G.H.T.*

24887 Hewlett-Packard Interactive Office.
Comput Equip. Rev. (USA), vol.4, no.2, p.111-21 (July-Dec. 1982). [received: May 1983]
The Hewlett-Packard Interactive Office is discussed in terms of both its hardware and software configurations. Emphasis is placed on the integration of Hewlett-Packard microcomputers and the system's support for graphics. The HP 3000 minicomputers serve as the central processors for the various Interactive Office application packages. The word processing package HPWORD is the primary document creation resource offered. HPSLATE is a less complex package. HPMAIL, the electronic mail software package is a computer-based message system designed for the noninteractive transmission of messages entered at terminals. HPDRAW allows users to draw visual aids for subsequent plotting on paper or transparencies. The article also discusses personal computing and data retrieval. (no refs.) *G.H.T.*

24888 Four-Phase Systems.
Comput. Equip. Rev. (USA), vol.4, no.2, p.122-8 (July-Dec. 1982). [received: May 1983]
Four-Phase Systems, pioneers in software-based word processing systems as well as office-oriented minicomputer systems, offer powerful, multifunctional office systems which can be integrated with mainframe computer systems. Their integrated office products are typically aimed at large-scale corporate and government installations. The software packages run under the Multifunction Executive (MFE/IV) operating systems. Four-phase has recently introduced a line of personal computers which facilitate a further distribution of information processing functions to the desk level of individual managers and other office workers. In addition to the word and data processing products, four-phase has announced a 'voice mail', store-and-forward system for spoken messages. (no refs.) *G.H.T.*

24889 Datapoint office automation systems.
Comput. Equip. Rev. (USA), vol.4, no.2, p.129-37 (July-Dec. 1982). [received: May 1983]
Datapoint, one of the pioneers of the development of multifunctional office systems, offers a number of interesting products and equipment configurations based on a distributed intelligence system architecture. This report emphasizes the variety of different devices which can be included in a Datapoint configuration. Depending on the particular configuration selected, Datapoint systems can function as stand-alone devices, as central processors supporting remote terminals, in a time-sharing DATASHARE configuration or as specialized application processors of file processors in Datapoint's local area network, ARCnet. (no refs.) *G.H.T.*

24890 Convergent Technologies' AWS and IWS workstations.
Comput. Equip. Rev. (USA), vol.4, no.2, p.138-44 (July-Dec. 1982). [received: May 1983]
Convergent Technologies offers a distributed intelligence, multifunctional office system based on a series of uniquely designed workstations and powerful software packages. Convergent workstations are primarily designed for use by original equipment manufacturers. They form the basis for the NCR Work Saver product line. Workstations are available with either alphanumeric or graphic capabilities in two series: AWS Turbo Workstation and IWS Workstation. The article also discussed systems software, word processing, electronic mail, executive support and personal computing, data retrieval and telecommunications with other computer systems. (no refs.) *G.H.T.*

24891 Honeywell office automation systems.
Comput. Equip. Rev. (USA), vol.4, no.2, p.145-50 (July-Dec. 1982). [received: May 1983]
Honeywell, historically a mainframe computer vendor, offers several multifunctional office systems based on its minicomputer product line. Honeywell appears especially interested in the establishment of office networks in which terminals connected to Honeywell processors perform a variety of operations, including word processing, list processing, electronic mail and decision support. The Inflowriter, Honeywell's entry-level office automation product, is a standalone, single workstation system which can communicate with larger computer systems. It runs Honeywell's Office Automation System/1 (OAS/1) software. The article also discussed OAS/4, OAS/16, personal computing and OAS Facility software—a more fully integrated office information system with more comprehensive data processing capabilities. (no refs.) *G.H.T.*

24892 Basic Four office automation products.
Comput. Equip. Rev. (USA), vol.4, no.2, p.151-3 (July-Dec. 1982). [received: May 1983]
Basic Four, a minicomputer company which has traditionally marketed its products to small- to medium-sized businesses and government agencies, offers several product lines which integrate word processing, data processing, electronic mail and other office-oriented operations. The least expensive Basic Four system, the S/10, is a microcomputer which can function as either a standalone system or as an intelligent workstation attached to other Basic Four systems. The S/80 system is a multiterminal, distributed intelligence information system designed for word and data processing. Three upward-compatible systems—models 110, 210 and 310—utilize fixed hard disk storage with conventional system architecture. The Office Management System (OMS) is an application software package which integrates word processing and various executive support functions. (no refs.) *G.H.T.*

24894 OFFICEPOWER integrated office system.
Comput. Equip. Rev. (USA), vol.4, no.2, p.160-2 (July-Dec. 1982). [received: May 1983]
OFFICEPOWER, a software package developed by Computer Consoles Incorporated, is a minicomputer-based product which automates various office functions, including document creation, information retrieval, executive support and message dissemination. The programs are designed to run on the CCI Power 5 Series of central processors. CCI are also introducing 'perceptual processing'—multiprocessor, fault-tolerant systems which feature redundant architecture. The OFFICEPOWER package runs under the UNIX operating system. All operations can be initiated from the same workstations. (no refs.) *G.H.T.*

24900 Office automation—a challenge and an opportunity. P.Niedner.
Off. Manage. (Germany), vol.31, no.3, p.176-8 (March 1983). In German.
Attention is drawn to the dramatic increase in the proportion of the working population of developed countries employed in offices and probable future trends are discussed. The importance of marketing office equipment is stressed and researching 'acceptability by staff using it' given a primary role in market research. Ease of understanding and operating the equipment, noise, environmental damage, design of outer shell and ergonometrics are given as the main factors affecting acceptability. (no refs.) *P.R.S.*

24901 Are we planning the office of the future or bringing the 'office of the past' under control?. U.Schneiderath (MBB GmbH, Ottobrunn, Germany).
Off. Manage. (Germany), vol.31, no.3, p.180-1 (March 1983). In German.
Reduced manpower requirements in other activities compared with increased manning of administrative and office work lead to the conclusion, that today's offices are lagging behind. The aim of all office rationalisation efforts should be a reduction in man-power costs, bearing in mind the increasing low of information. The potential conflicts arising from rationalisation should be realised well in advance and strategies to involve those affected should be part of the planning of rationalisation exercises. (1 ref.) *P.R.S.*

24905 Make room for executive workstations. M.Lasden.
Comput. Decis. (USA), vol.14, no.12, p.116-26 (Dec. 1982).
Most executive workstations aren't used by executives. But even in the executive suite, the forces of change may eventually be too strong to resist. The author discusses, with examples, how executives are coming to use office automation. (no refs.)

24916 Selecting the right word processor. T.R.Halfhill.
Compute. J. Prog. Comput. (USA), vol.5, no.4, p.24-31 (April 1983).
One of the most useful and powerful applications for a personal computer is word processing. But the bewildering variety of word processing programs sometimes makes selecting the right one a difficult task. This article outlines some things to consider when making your choice. (no refs.)

24919 VIC-20/C64 word processor: The Quick Brown Fox. G.Peele.
Compute. J. Prog. Comput. (USA), vol.5, no.4, p.100-2 (April 1983).
The Quick Brown Fox is a word processor for VIC-20 and Commodore 64 microcomputers. The Commodore 64 version is the subject of this review, but both versions are substantially the same. (no refs.)

24906 Selective office automation. J.G.Brown.
Comput. Decis. (USA), vol.14, no.12, p.128-42 (Dec. 1982).
In labor-intensive service businesses, office automation could mean survival. The term covers a broad range of solutions for boosting the efficiency of almost every business function imaginable. A $3 billion industry, office automation runs the gamut from automatic postage meters to fully integrated, minicomputer-based, distributed dp/wp systems. The author finds that achieving savings through office automation needn't entail a company-wide equipment overhaul: it may be as simple as installing a stand-alone word processor in one department. (no refs.)

24907 The need for rigorous analysis of OA proposals. R.A.Becker (Rabeck Inc., S Hackensack, NJ, USA).
Comput. Decis. (USA), vol.14, no.11, p.78-80 (Nov. 1982). [received: April 1983]
For a successful program of primary emphasis on new management concepts and related organizational changes, a joint management/OA planning effort is advisable. It should encompass all analysis, implementation, and performance-monitoring activities for introducing office automation into the selected atmosphere. (no refs.)

24924 Who needs systems for office automation?. J.Hallgren.
Data (Denmark), vol.13, no.3, p.42-4 (28 Feb. 1983). In Swedish.
The author describes the present view that the office of the future is one where new technology and its functions are available, but that there is a golden opportunity to introduce aids for rationalisation of office functions and increase productivity in line with new investment. He describes the functions present in the modern office and why these functions are necessary. He concludes with a review of the basic concepts necessary in order for a business analysis to achieve the desired effect. (no refs.) *H.J.P.*

24925 People probers and superconclusions [office automation]. D.Steinbrecher.
Off. Adm. & Autom. (USA), vol.44, no.3, p.66-8 (March 1983).
In keeping with a change from a hard goods to a service economy, many organizations are now examining the office and its workers, with emphasis on the use of automation to produce improvement. The American Productivity Center in conjunction with Steelcase Inc., Kelly Services Inc., and Verbatim Corp. are among those that have performed such studies recently. This article looks at how these selected studies were conducted, what they uncovered, and how each company interpreted the findings. It also offers comparisons between them, providing 'superconclusions' as to what all this means for today's administrator. (no refs.)

24926 **Solving the standards dilemma. III. Recommendations for the future.** W.A.Walshe.
Off. Adm. & Autom. (USA), vol.44, no.3, p.70-4 (March 1983).
For pt.II see ibid. vol.44, no.2, p.66 (1983). One question that has been bandied about a lot is 'What's detaining the office of the future'? Most people would agree that the answer is quite simply lack of standards that make dissimilar brands of office equipment compatible. Because there are so many types of electronic office devices for various functions, users are confused about how to integrate them effectively into an automated office system. Thus, people who don't know what kind of equipment to buy don't buy any. This article makes specific recommendations in terms of vendors and users for establishment of needed standards. (no refs.)

24940 **The role of records management in office automation: finding the fit.** J.Clark.
IMC J. (USA), vol.19, no.1, p.7-9 (1983).
The author introduces the subject and sets out the case for obtaining the right system. He previews the aspects of office automation as a jigsaw puzzle the parts of which have to be designed together. Management has to be provided with the right information, the role of records management. The future of OA is briefly examined. (no refs.)

24944 **The changing role of vendors to meet the needs of today's automated office.** J.J.Hurley (Eastman Kodak Co., Rochester, NY, USA).
J. Microgr. (USA), vol.16, no.4, p.19-21 (April 1983).
This article discusses key areas that vendors and users should consider as they plan for today's automated office, including an analysis of a user's operation, customer support services, and purchasing equipment on a total system basis. One of the major challenges facing vendors today is informing users about the benefits of using technology which has recently reached the market-place. Also, how that technology may be integrated with other information handling disciplines. Manufacturers of business equipment not only need to show customers ease and efficiency of operation, but they should also offer a menu of services which will help users understand how specific products can improve productivity in an environment where the cost of doing business has increased at an alarming rate. (no refs.)

24946 **'In tomorrow's office'—networks and microelectronics.** M.D.Cripps (Imperial Coll., London, England).
J. Oper. Res. Soc. (GB), vol.34, no.4, p.285-7 (April 1983).
Advances in microelectronics and networking will bring steadily increasing computing power into tomorrow's office. There are differing approaches to the way in which local area networks and intelligent workstations will use a balance of local and remote computers and network sophistication. Emerging standards will assist the user in choosing amongst them. Improvements in microelectronics are changing the computer itself as new architectures to exploit parallelism are designed and new programming languages to instruct them are developed. The author discusses the possible developments in office automation. (6 refs.)

24953 **Ergonomics and office automation.** S.Gagliano.
Signal (USA), vol.37, no.5, p.11-16 (Jan. 1983).
This article concerns itself with the design features and guidelines of both office equipment and the office environment vis-a-vis the user. (no refs.)

24963 **A study for an all electronic office.** C.Daskalakis, A.G.Heaton (Univ. of Manchester Inst. of Sci. & Technol., Manchester, England).
Electronic Displays '82 and Information Display Systems, London, England, 5-7 Oct. 1982 (Buckingham, Bucks., England: Network Exhibition 1982), 7 pp.
Presents an approach leading to an information system, which can be used in an office environment for information presentation and transmission. An attempt to identify the problems encountered and to suggest possible solutions has been made. These include systems based on speech processing and hand-written text recognition as well as novel information processing, storage and transmission systems. This particular approach is based on the work carried out in UMIST. (16 refs.)

25021 **Electronic information for elected government: the US Congress.** J Burtnick (Congressional Res. Service, US Library of Congress, Washington, DC, USA), A.Harvey, E.C.Pulas.
Interdisciplinary Sci. Rev. (GB), vol.8, no.1, p.44-55 (March 1983).
Today Members of the US Congress confront increasingly complex issues which span a broad array of topics from national defense to the environment. At the same time, demands on individual legislators, congressional committees, and the institution of Congress itself continue to grow. To deal more effectively with traditional tasks and provide improved information support to legislators Congress now employs a wide variety of computer, telecommunications, and audio-video systems. The Senate, House of Representatives and the Library of Congress' Congressional Research Service engage in a number of cooperative automated activities. Central among these is an online information retrieval system which provides immediate access to data on pending legislation. Specialized databases serve the needs of the individual legislative chambers and the Congressional Research Service offers electronic briefing papers on current issues. The latest developments focus on networking existing systems and utilizing audio and video technologies. (no refs.)

25049 **Application report: experience with business graphics.** H.Dahmen.
Online (Germany), no.2, p.20, 22 (March 1983). In German.
Although some people think that business graphics and plaything are synonymous, a few organisations are finding that computer-generated graphical presentations are useful and that they can be produced relatively economically. This paper reports impressions from two businesses; in one a detailed cost justification was required, and it was found that computer-produced charts and diagrams could be obtained at lower cost than manually produced graphics, and that in many cases the more mediocre quality was acceptable, while in the other a more easy-going approach was possible and the less formal methods permitted a wider usage and a demand for the fluency, colour and general glamour of computer graphics. (no refs.) *G.F.F.*

25602 **Process simulation technology for the pulp and paper industry.** C.F.Shewchuk (SACDA, Univ. of Western Ontario, London, Ontario, Canada).
Pulp & Pap. Can. (Canada), vol.83, no.12, p.60-4 (Dec. 1982).
The systems analysis, control and design acivity group at the University of Western Ontario has developed a number of computer systems for use by design and process engineers which allow the user to easily build a mathematical representation or model of the operation of a real physical process. When solved by a computer program, this model yields a simulation of the operation of the real process to the degree of accuracy built into the mathematical model. This activity is generally referred to as 'process simulation'. The models are used to investigate different design or operating situations with the objective of improving raw material use, energy consumption, product quality or the like. (6 refs.)

25603 **A user's perception of computer process simulation in the pulp and paper industry.** N.Peters (Central Engng. Dept., Domtar Inc., Montreal, Canada).
Pulp & Pap. Can. (Canada), vol.83, no.12, p.66-9 (Dec. 1982).
Computer simulation and design of pulp and paper processes are gaining rapid acceptance in North America. Two new programs (SACDA's MASSBAL and EVAP) have been found particularly useful by engineers and researchers at Domtar Inc. Applications of these programs to various projects are described. Arguments are presented to help in assessing the feasibility of undertaking new simulations, in particular the time and costs involved in reaching a successful simulation. (5 refs.)

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18476 **Integrated networks [office automation].** J.A.Boyd.
Comput Syst (GB) vol.3, no.2, p 37-42 (Feb. 1983)
Argues that the 1980s will be seen in retrospect as the era when truly integrated information processing systems were achieved and explains how a combination of technology and networking philosophy will contribute to their implementation. (no refs.)

18477 **Software breakthroughs hold key to productivity gains.** M.Clarkin.
Mini Micro (Australia), vol 21, no.11, p.12-13 (Dec. 1982).
The primary office concerns of the next decade will essentially parallel those of the last. Managers will continue to be faced with the problems of rising operating costs, lack of time and the need for greater efficiency. These problems are increasingly being countered by the introduction of office automation equipment. This article speculates on the nature of the office in years to come and on likely developments in office automation systems. (no refs.)

18478 **What you get when you buy office automation.** D Macfarlane.
Datamation (USA), vol 29, no.2, p 102-14 (Feb 1983)
It is impossible to make an informed decision on the value of office automation by listening to the salesmen. This article presents an objective framework for evaluating integrated office systems. A comparison of the major integrated office systems is made. (no refs.)

18479 **Electronic mail and messaging in the USA.** D C.Appelbaum (Battelle Inst., Columbus, OH, USA)
Data Processing (GB) vol 24, no.10, p.13-15 (Dec 1982).
In the USA, electronic mail and electronic message systems are developing along different paths. Electronic computer-originated mail (ECOM) is replacing the normal postal service between distant locations, while computer-based message systems (CBMS) are increasingly used as a means of interpersonal communications within large offices. This article discusses some of the characteristics of electronic mail systems and the technology and trends involved in the evolution of the ECOM and CBMS systems. (no refs.)

18489 **Message files.** D.Tsichritzis, S Christodoulakis (Univ of Toronto, Toronto, Ontario, Canada).
ACM Trans Off Inf Syst (USA), vol 1, no.1, p 88-98 (Jan 1983)
A message-filing capability allows for the retrieval of messages according to contents. Messages are organized in large, general files such that frequent reorganization is avoided. The user specifies a filter which restricts the attention to a manageable subset of messages. Messages within the subset are retrieved for a final check. File organization and access method is discussed, as well as performance and implementation considerations. (28 refs.)

18490 **How do people organize their desks? Implications for the design of office information systems.** T W.Malone (Xerox Palo Alto Res. Center, Palo Alto, CA, USA)
ACM Trans Off Inf Syst (USA), vol 1, no.1, p 99-112 (Jan 1983)
This paper describes a series of interviews focusing on the way professional and clerical office workers organize the information in their desks and offices. A number of implications for designing 'natural' and convenient computer-based information systems are discussed. Two principal claims are made: (1) A very important function of desk organization is to remind the user of things to do, not just to help the user find desired information. Failing to support this function may seriously impair the usefulness of electronic office systems, and explicitly facilitating it may provide an important advantage for automated office systems over their nonautomated predecessors. (2) The cognitive difficulty of categorizing information is an important factor in explaining how people organize their desks. Computer-based systems may help with this difficulty by (a) doing as much automatic classification as possible (e.g., based on access dates), and (b) including untitled 'piles' of information arranged by physical location as well as explicitly titled and logically arranged 'files'. Several other implications for the design of electronic office systems are discussed, and some differences in how people organize their desks are described. (13 refs.)

17879 **Visual ergonomics and VDT standards.** H.L.Snyder (Virginia Polytech. Inst., Blacksburg, VA, USA).
Digital Des (USA), vol.13, no.2, p.24, 26-30 (Feb. 1983).
The advent of the inexpensive digital computer has made possible the widespread use of CRT-based terminals, generically called video display terminals (VDTs), as the most flexible choice for an I/O device. Not unpredictably, the very large volume production CRT has been modified to provide a flexible and inexpensive VDT. The author summarises some of the areas of incompatibility indicates the effects of poor design selection upon visual performance, and shows how emerging standards for VDTs are attempting to correct these faults. (5 refs.)

17880 **Ergonomics of VDU workplaces.** K.H.E.Kroemer (Ergonomics Lab., Virginia Polytech. Inst., Blacksburg, VA, USA).
Digital Des (USA), vol 13, no.2, p.25, 31-4 (Feb. 1983).
VDUs (Video Display Units), also called VDTs (Visual Display Terminals), are about to become the dominant interfaces between person and equipment in the office, second only to the telephone. Estimates are that the number of people working with VDUs may double every two years. With such a growth rate, there may be 25 to 50 million VDUs in offices in about ten years. The advent of the VDU has focused general attention on the need for office ergonomics. The author considers the problems of ergonomic design in VDU work places. (5 refs.)

market leader for office technology, it is up to a forum like ANSI to set industry standards. (no refs.)

18447 **Business graphics: an overview.** P S Sindel.
Best's Rev Life/Health Insur Ed (USA), vol 83, no 8, p.60-4 (Dec 1982).
Graphics have become an invaluable tool in the decision making process. When combined with the power of a computer a graphics technology has emerged that utilises both special hardware and software to generate graphic output. Computer graphics provides, savings on time and money, allows more rapid communication and provides greater flexibility than with an equivalent manual system. The hardware and software employed in this technology are described. Within the context of the marketing and finance functions, the advantages to be gained in personnel productivity are described. The pitfalls to be avoided are also mentioned. (no refs.)

18448 **Graphical user interfaces for business information systems.** B Ives (Dartmouth Coll., Hanover, NH, USA)
Manage Inf Syst Q (USA), spec issue, p 15-47 (Dec. 1982)
This article discusses typical and atypical applications of computer graphics for presenting business information. Existing evidence relating the use of graphics with improvements in user productivity is discussed. Much of the article is focussed on computer graphics design with the organization including who should do design, the conceptual foundations of good graphics design, and a set of guidelines and cautions applicable to the design of quality graphics. The article concludes with a list of suggested research topics. (64 refs.)

18446 **A maturing industry must set and adopt standards.** R R Montgomery
Office (USA), vol 97, no 1, p 188 (Jan. 1983)
Discusses the problem of standards in office automation technology. The need for standards is described and it is pointed out that, because there is no clear

17778 **Local area networks: bus and ring vs. coincident star.** D.C.Lindsay (Dynalogic Corp., Ottawa, Canada)
Comput Commun Rev (USA), vol.12, no.3-4, p.83-91 (July-Oct. 1982). [received: Dec. 1982]
A local area networking scheme is proposed which is potentially more powerful than current approaches. A centralized star is described which could have equal reliability, could have simpler construction, and could support new services such as video teleconferencing. (7 refs.)

17779 **Dragnet—a local network with protection.** D.D.Hill (Bell Labs., Murray Hill, NJ, USA).
Comput Commun Rev (USA), vol.12, no.3-4, p.92-8 (July-Oct. 1982) [received: Dec. 1982]
Proposes a topology for local computer networks. Called 'Dragnet', it is similar to the Ethernet network in function, but rather different in the following respects: (1) instead of a single long bidirectional cable, there are multiple short unidirectional cables. (2) Just as an Ethernet network may require some number of signal repeaters to join multiple segments, the proposed system always uses one or more simple concentrator units, each one merging several signals into one. (3) Each concentrator unit also provides the facility to silence the lines coming into it, thus providing security against any number of bad (jammed) transmitters. (It is this capability that inspired the name 'Dragnet'.) Most of the remaining good transmitters in the system can continue to send, and all units can receive regardless of the number of errant transmitters. The paper discusses the strengths and weaknesses of the Dragnet approach. The key disadvantage is that the active medium is potentially less reliable than the simplest Ethernet network (one with no repeaters). The key advantages are: simpler, potentially more reliable drivers and receivers; better fault tolerance; and better message verification. In principle, the systems are compatible, and the two might be combined into a hybrid network. (1 ref.)

18459 **James Woodhuysen sums up wordcraft.** J Woodhuysen
Microcomput Printout (GB), vol 4, no 1, p 58-61 (Jan 1983)
Gives the author's opinions about Wordcraft 20, a word processing package for the Commodore-VIC. The experienced difficulty in wiring up the system, and found the documentation not altogether user-friendly. In addition there are difficulties in connecting the system to a high-quality printer. (no refs.)

18460 **Allason tries out Sony's typecorder.** J Allason
Microcomput Printout (GB), vol 4, no.1, p 62-3 (Jan 1983)
The author gives an evaluation of the Sony Typecorder a silent paperless typewriter, small enough to fit in a briefcase, that also functions as a dictating machine. The machine can store up to 100 pages of typing on its microcassette, and can print it directly on a compact printer. (no refs.)

17787 **Local area networks made clear: NET/ONE—a bus oriented local data network.** D.Steinle, E Klein
Ott. Manage (Germany), vol 30, no.12, p 1172-3 (Dec 1982). In German
Describes a conceptual framework for the facilities required of a local network. In this case Ethernet is taken as the low-level communication method, with higher-level protocols such as IBM 2780/3780 and 3270-BSC available for file transfer and block mode terminals. (no refs.) *G.F.F.*

18480 **UK attitude to EMS.** J Horsley.
Data Processing (GB), vol.24, no 10, p.16-18 (Dec. 1982).
The major benefit of electronic mail and messaging systems (EMMS) is increased communication between executives, which is particularly important in large multinational companies. UK penetration of electronic mail systems is currently far behind that in the USA. UK systems are usually sold as add-on to existing DP services to lower the cost of investment. The author discusses the factors influencing the growth of EMMS, the development of joint software packages and gateways to external data and shows the advantages of enhanced internal communications. (no refs.)

18481 **Caught between two stools [office automation].** K.-H.Herrmann (SOFTLAB GmbH, Munich, Germany)
Data Processing (GB), vol.25, no.1, p.11-13 (Jan.-Feb. 1983).
The author states that the DP specialist has to make a choice between data processing and word processing for developing software and obtaining information to support his work. Integration of DP and WP could lead to better productivity. (no refs.)

18482 **More effective use of minicomputers [in office automation].** A.G.Seabridge (British Aerospace PLC., Warton Aerodrome, Preston, England)
Data Processing (GB), vol.25, no.1, p.14-16 (Jan.-Feb. 1983).
Describes an experiment to extend the capabilities and minicomputers by the use of word processing software, and to use them as a primary means of compiling reports by engineers. The paper also describes the gradual introduction of the facility to a large number of engineers, relates their experiences with its use, and makes some estimates of the potential savings of such a system in a large organization. (no refs.)

18496 **Multistation micros and office automation systems.** C.Gross.
Electron. Ind. (France), no.45, p.61-3 (15 Jan. 1983) in French.
The author outlines the wide choice of relatively inexpensive multistation microcomputers. She enlarges on the French 'office automation pole' as defined by authority up to the end of 1982 and grouped around CII-Honeywell-Bull with its Quester M. A subsidiary company's Micral 90/50 16-bit microcomputer is described in some detail and compared with Corail distributed processing systems. Products of Thomson-CSF, Victory Computer Systems, Data Matrix, Cromemco, Zilog and DEC are reviewed. Small systems with three or four users and local mini-networks are covered briefly. (no refs.) *M.B.D.*

18497 **Electronic mail for the interactive office.** I.J.Fuller (Hewlett-Packard Co., Pinewood, England)
Hewlett-Packard J. (USA), vol.34, no.2, p.20-9 (Feb. 1983).
HPMAIL is an electronic mail system which operates on the Hewlett-Packard 3000 Computer System. It is designed to enable users who may not be familiar with computers and their associated technology to interchange information effectively throughout their organisation. Messages, documents, business charts and graphs and HP 3000 system files can be exchanged both locally and remotely. HPMAIL operates concurrently with other data-processing and office information-processing activities. It operates from any terminal which can be connected to an HP 3000. That includes the HP 2626W Word Processing Station, the compact HP 2382A Office Terminal and the HP 125 Personal Office Computer. The capabilities and operation of HPMAIL are described. (no refs.)

18485 **E-COM: it's time has come.** D.L.Hiller
Data Manage. (USA), vol.20, no.12, p.35-6, 41-2 (Dec. 1982).
The benefits to be gained from electronic communication of mail (E-COM) are described. An electronic mail cost/benefit analysis for one-time correspondence is presented. The closed loop approach to electronic mail is outlined. (no refs.)

18486 **Teldon graphics and applications.** U.A.Tenne-Sens (Dept. of Communications, Government of Canada, Ottawa, Ontario, Canada)
Disp Technol & Appl. (GB), vol.3, no.4, p.197-205 (Oct. 1982).
Teldon is essentially a computer graphics code which is very effective as the presentation level protocol for videotex, for which it was originally developed, teletext and other consumer-and business-oriented information systems. Its use of geometric primitives rather than the mosaic characters of its predecessors permits efficient digital storage and rapid transmission of detailed graphics. Display terminals can be built to display the images with different degrees of detail to suit the application. (14 refs.)

17833 **'Simple' local area networks?—a case study.** M.G.Jackson (Tasmanian State Computer Centre, Hobart, Tasmania, Australia)
Ninth Australian Computer Conference, Hobart, Tasmania, Australia, 23-27 Aug. 1982 (Sandy Bay, Tasmania, Australia: Australian Comput. Soc. 1982), p.511-25 vol.2
Faced with the task of designing and implementing a local area network from scratch, the author relates the problems experienced by the computerist with no specialist skills in the communications field. The philosophy behind a network for a small to medium sized computer installation, necessitating connection of a variety of terminals to dissimilar computers is examined and questions are raised regarding the real meaning of industry standards. He describes the installation of the local area network at the Tasmanian State Government Computer Centre and discusses the difficulties experienced, due to lack of information regarding the physical implementation of so-called 'simple' networks and communications in general. (no refs.)

17812 **Controller-transceiver board drives Ethernet into PC domain [Personal Computer].** B.Metcalfe (3Com Corp., Mountain View, CA, USA).
Mini-Micro Syst. (USA), vol.16, no.1, p.179-90 (Jan. 1983).
Until very recently, the cost of connecting microcomputers to the Ethernet local network was prohibitive to both personal-computer makers and users. But the introduction of VLSI controller chips, refinements in Ethernet transceivers and space-efficient board design have brough Ethernet connection within the realm of the second-generation, 16-bit-based microcomputer. By putting the transceiver on the controller board and using VLSI data-link controllers, it is possible to provide a complete local-network connection, including software, for less than $1000 per station. Initially aimed at IBM Corp.'s Personal Computer, 3Com Corp.'s EtherSeries provides the Ethernet physical and data-link control layers at board level and supplies networking software for such applications as file and printer sharing and electronic mail. The product's levels of networking service allow flexibility of configuration and implementation by both OEMS and nonprogramming end users. (no refs.)

18520 **Local area networks—high-speed networks for office communications.** J.Fromm (Siemens AG, Munchen, Germany)
Telcom Rep. (Germany), vol.5, no.4, p.234-9 (Dec. 1982).
Local Area Networks (LAN) have been discussed extensively for about two years now as a possible basis for integrated office communications and are already offered by a number of manufacturers. The reason for this is the demand for new high-speed transmission systems that has arisen as a result of distributed data processing, increasing processing speeds and the need for resource sharing. This article is intended to place the EMS bus network in context and to allow a proper assessment of its characteristics. (3 refs.)

15520 **Focus on human factors when managing change.** R.V.Clapp (3M Co., St. Paul, MN, USA)
J. Microgr. (USA), vol.16, no.2, p.34-6 (Feb. 1983).
When implementing an automated office system it is easy to become enamoured with the intrigue of the technologies and forget the human ingredient that makes any new system work. This article explains the human considerations that should be taken into account. The manager of a new system must plan carefully and not overlook ergonomic factors, user training and post-implementation procedures. (no refs.)

17849 **Local-area communication networks—an overview.** K.Kummerle (IBM, Zurich, Switzerland).
Workshop on Software in High-Energy Physics (Where do we go from here?) (papers in summary form only received) (CERN-82-12). Geneva, Switzerland, 4-6 Oct. 1982 (Geneva, Switzerland: CERN 1982), p.215-30
Local-area communication networks represent a new field of activity. This paper describes three scenarios for the use of these networks, and then discusses various technical approaches. Particular emphasis is put on bus and ring systems with various media access control mechanisms. Specifically, it compares the delay-throughput characteristic of two access methods, carrier-sense multiple access with collision detection and token passing, and discusses some significant differences of bus and ring systems concerning wiring, media, transmission, and reliability. (27 refs.)

18451 **OFFLOAD: an office workstation in a portable software environment.** A.Tate (Edinburgh Regional Computing Centre, Edinburgh, Scotland)
SIGPC Not. (USA), vol.5, no.1-2, p.28-36 (Fall 1982-Winter 1983).
In order to exploit the ready availability of low cost, general purpose microcomputers as office workstations, an integrated environment has been assembled to allow for the straightforward use of a collection of software components. A closed user environment has been provided through the use of the OffLoad command interpreter which makes appropriate calls on the underlying operating system and utilities. The software components provided within the OffLoad system include a document preparation editor, a filing system, document formatters, printing and help facilities. Utilities include a numeric calculator, a mailing list and form letter management system, cash flow analysis and data management aids. Interactive and file transfer communications are provided from the OffLoad workstation to a computer network which provides archive and shared file storage, electronic mail, Viewdata, expensive peripherals and many other services. (4 refs.)

18528 **Office automation. A user-driven method.** D.Tapscott
New York, USA: Plenum (1982), xx+244 pp. [0 306 410?1 0]
The development of more advanced and cost-effective computer and communication systems is having a profound effect on office organisation. When correctly integrated onto the workplace, these systems make decided improvements in productivity and the quality of working life. Nonetheless, determining the proper system for a particular office is more complex than ever before. The overall problem is a 'gap' between the users and providers of the new technologies. This book explores ways of closing that gap. The origins of the new office technologies are described and a conceptual model of the office is provided to determine opportunities and requirements for office automation in user organisations. The book also describes how to conduct a cost-benefit analysis of various system alternatives and presents methods of office system evaluation. Practical guidelines on the planning and implementing of pilot systems are given. (241 refs.)

18517 **Office automation — the human network.** H Viens (Wang Labs. Inc., Lowell, MA, USA).
Sist. & Autom. (Italy), vol.28, no.232, p.1089-95 (Dec. 1982). In Italian
The paper gives a description of a concept of productivity in an office. It analyses the main components and the people who work in it and the operation procedures in use and the available equipment. After some generalities, answers are given to the question as to what are the factors which effect productivity. Various personnel factors are discussed. Then follows a section describing methods of improving the working conditions generally. Further sections deal with improvements to the carrying out of work and the requirements for this to be done. The term operative procedure is discussed and how to distinguish between valid and non valid ones. The definition of automation in an office is discussed and sections then cover economics of the processes and the possibility of machines for automation being sufficient for working out everything in an organisation. (6 refs.) *G.V.D.*

17815 **Ethernet protocol implemented outside Xerox.**
Microprocess. Work (Switzerland), vol.4, no.2, p.3 (Dec. 1982).
Two local area network products controlled by the 68000 microprocessor are the first implementation outside of Xerox of the Xerox Network System high level protocols. Both are from Bridge Communications of Cupertino, California: the communications Server/1 (CS/1) and Gateway Server/1 (GS/1). CS/1 provides a virtual connection for up to 32 RS-232C- and RS-423-compatible terminals to any node on an Ethernet. That means a terminal connected to the CS/1 can actually communicate with a program (application) running on a network computer or can have a file of data dumped on a Xerox printer tied to the network. The GS/1 product connects an Ethernet to a computer or network which has an X.25 interface. The author looks at these products which implement all high level Ethernet protocols. (no refs.)

18456 **The elusive office automation benefits.** D.L.Holzman (Holzman & Associates, Manhattan Beach, CA, USA).
Inf. Soc. (USA) vol.1, no.4, p.357-73 (1982).
American management is ill-prepared to enter the information age. Utilizing information technology to cut costs and improve decision-making requires a great deal more knowledge about administrative activities than top management currently possesses. Historically Americans have been poor administrators. Recently recognizing the problem, management turned to office automation as a solution. The problem is that one cannot automate what one cannot structurally represent. This article explores past conditions leading to this predicament and suggests a conceptual framework for its resolution. (14 refs.)

17790 **The importance of strategy to end-users of local area networks.**
D.Brown (Computer & Systems Engng. Ltd., Watford, England).
Commun. Int. (GB), vol.9, no.12, p.33, 35 (Dec. 1982).
Is the local area network a technological wonder which will bring untold benefits to computer users? Or is it just another development with its own range of problems for management to grapple with? In this article the author examines these questions and others such as: can the local area network help managers to overcome the problems of linking a diverse selection of equipment into an integrated information system? Or does the local area network merely move the problem to a different level? (no refs.)

17874 **Portable terminals move towards distributed networks.**
Commun. Int. (GB), vol.9, no.12, p.53 (Dec. 1982).
Portable terminals may be defined as small light units suitable for use by those who need to move from one location to another and yet still perform their duties involving data. They range in size and weight from a pocket calculator to that of a large briefcase incorporating a virtually full size VDU screen, a modem or acoustic coupler and even flexible disc storage. They may be regarded as forming part of the ultimate distributed computer system. (no refs.)

18483 **Integration WP and DP.** R.Hamper (Wordplex Ltd., Reading, England)
Data Processing (GB) vol.25, no.1, p.17-18 (Jan.-Feb. 1983).
The organizational differentiation between word and data processing is beginning to come under scrutiny as the technology in each case begins to merge. The evolution of a multifunction workstation is discussed and examples given of a WP/DP workstation in use. (no refs.)

18441 **The do's and don'ts in considering automation [offices].**
S.R.Custard.
Office (USA) vol.97, no.1, p.154 (Jan. 1983).
Outlines the steps that the manager should go through in considering office automation. The first rule is 'if you are not ready for automation, wait. If you are ready, don't hurry'. Steps in the evaluation and purchase of systems that fit the user's needs are outlined for those who are ready. (no refs.)

17918 **Color ink-jet printer.** M.Takita, A.Kakimoto, H.Yokokawa, Y.Haino, Y.Hiromori (Graphic Recording Devices Div., Matsushita Electronic Components Co. Ltd., Osaka, Japan).
Natl. Tech. Rep. (Japan), vol.28, no.5, p.848-52 (Oct. 1982). In Japanese.
A desk-top type color ink-jet printer has been developed by making use of the merits of ink-on-demand type ink-jet heads, such as no necessity to dispose of unused ink, simple compact design and high-speed response of over 20 kHz. The ink-jet printer has a printing time of 2.5 minutes for A4 and 4.5 minutes for A3, and 7 reproducible colors, and thus makes it possible to print out high-resolution color pictures on a wide area at high speed. The paper feeding and unloading system are automated, and a unique mechanism using vacuum sucking is employed especially for the feed system. Studies of color ink-jet printers with analog multishaded recording using an analog head and a more compact and less expensive printer are in progress. (4 refs.)

15451 **How comfort can be as vital as the computer.** N.Thomson-Smith
Comput. Manage. (GB), p.26-7, 30 (Jan. 1983)
Ergonomics, the relationship between the worker and his work, is playing an increasingly important role in the design of computer-related equipment. According to the office furniture manufacturers and various reports, most office workers will soon be using VDUs, and electronic filing systems, computer output microfilm, and computer-aided retrieval will be widespread. As a result filing products and the furniture that goes with them must adapt to suit the office of the future. An environment must be created which avoids the worker suffering from drowsiness, lack of concentration or back problems. The article looks in particular at chair design, VDUs and keyboards, and gives suggestions for creating a good working environment for the automated office. (no refs.)

17814 **Ethernet on fiber optics.**
Microprocess. Work (Switzerland), vol.3, no.12, p.12-13 (Oct. 1982)
The first fiber optic Ethernet-compatible Local Area Network Communications system was demonstrated during the International Fiber Optics and Communications (FOC '82) Exhibit, Los Angeles, California. The area covered by the optical system can be more than 9 times the area covered by a coaxial cable serial bus Ethernet system, while the intermode spacing remains the same. Since typical Ethernet systems are limited to 2.5 km between nodes, a circumferential coaxial cable system could cover only 0.5 km^2 including four repeaters. The fiber optics network can cover an area of over 5 km^2 without a single repeater and still maintain all standard Ethernet timing considerations. (no refs.)

17883 **Plan now for work stations.**
EDP Anal. (USA), vol.21, no.2, p.1-12 (Feb. 1983)
A good many organizations are deciding that the personal computer type of work stations are not as cost effective as 'dumb' terminals served by host computers. But such cost comparisons can be deceptive. Work stations have a number of advantages – some difficult to put a price on – that seem sure to promote their acceptance. This article examines the benefits to be gained for business by using personal computer work stations and explains why they can be a more cost-effective buy than dumb terminals. (6 refs.)

18508 **Office automation.** F.A.Wang (Wang Lab. Inc., Lowell, MA, USA)
Mini-Micro Syst. (USA), vol.15, no.12, p.198-207 (Dec. 1982)
Discusses the 6 technologies that go to make up office automation: data processing; word processing; voice processing; image processing; networking; and human factors. The computer based components of these technologies are described and predictions are given for the future. (no refs.)

17809 **Communication protocols: design, analysis, and standardisation.**
G.J.Holzmann.
Informatie (Netherlands), vol.25, no.1, p.5-11 (Jan. 1983). In Dutch
Discusses problems in exchange of information between different computerised systems. One danger is premature standardisation of forms and records. Reference is made to protocols standardised by various authorities and companies. (19 refs.) *J.S.*

17806 **Local networks: spoilt for choice.** Y.-S.Piard
Inf. & Gestion (France), no.130, p.38-40 (Oct. 1982). In French
Introduces the major local area networks (LANs). Standards organisations mentioned include ANSI, IFIP, IEEE, NBS, ISO, CCITT, DIX, NVA, CFPT and ECMA. LAN architectures are described and transmission media (optical fibres, twisted pairs, etc.) discussed. The future of LANs is also discussed. (no refs.) *L.A.F.*

18440 **Technological shockwave—management's challenge.** E.L.Gavlick
Office (USA), vol.97, no 1, p 152 (Jan 1983)
Discusses the technological shockwave caused by introducing information systems into offices, and its effects on staff The challenge to management is to adapt to these changes without creating emotional instabilities by understanding the needs and expectations of those affected (no refs)

18505 **The key to office automation.** R A.Shiff
J Microgr. (USA), vol.16, no.2, p.15-18 (Feb. 1983).
The belief that heavy investment in office automation will automatically result in increased administrative productivity can be a foolish and expensive mistake. This article explains why planning is essential to the successful implementation of office systems. (no refs)

18444 **Defining the needs for a total information system.** G.R.A.Milne.
Office (USA) vol 97, no 1, p.176 (Jan. 1983).
Looks briefly at each of the elements that make up a total information system in an office, covering computers, word processing, reprographics, telecommunications and system's methodology. (no refs.)

17827 **Clearing up the confusion over local area networks.** M J Bevan (Xionics Ltd., London, England)
Telephony (USA), vol.203, no.22, p 34-40 (22 Nov 1982).
Discusses the practical advantages and limitations of local area networks The application of optical fibers and future trends are included (no refs)

18470 **Shake-out to follow as technologies converge.** L Mendelson
Computing (GB) vol 11, no 7, p.24-5 supl. (17 Feb 1983)
Gives the point of view from US analysts in the DP industry This is that word-processing, office automation and telecommunications will merge to produce integrated systems for the office, just as the phone, TV and house computer will make home information centres (no refs.)

18467 **Field trial approach to office automation.** G.Boyd
Can Datasyst (Canada), vol.15, no.1, p.119-21 (Jan 1983)
The Canadian federal government's Office Communications Systems (OCS) program is designed to develop industrial capability to supply integrated systems. This article examines the achievements of this project (no refs)

15463 **Another contender in automation stakes—Sanyo.** R.Radford.
Mod Off (Australia), vol 21, no 11, p.14-15 (Dec. 1982).
Describes the growth of Sanyo Office Machines and its current marketing policy The company has been a forerunner in electronics for the past two decades and is currently entering the office automation market (no refs.)

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14267 Clustered system mass produces [office automation].
Word Process. & Inf. Syst. (USA), vol.9, no.11, p.12-15 (Nov. 1982).
Describes how, as homebuilder and landlord to thousands of current and potential residents, the Irvine Co. has discovered that a clustered text-editing system combined with automatic sheet and envelope feeding is the most efficient and cost-effective way to manage its correspondence needs. (no refs.)

14268 1982 tax law burdens text-editing equipment users. R.Feinschreiber
Word Process. & Inf. Syst. (USA), vol.9, no.11, p.16-18 (Nov. 1982).
The new tax law signed by President Reagan on September 3, 1982, significantly increases business taxes. These provisions are most important to users of text-editing equipment for the following reasons: restriction of tax-free acquisitions; reduction of investment incentives; limits on pension benefits; withholding on dividends and interest; acceleration of corporate tax payments; deferral of construction period expenses; other business provisions. This article explains each of these items in detail. (no refs.)

14269 Human factors make WP/AS a success at Kaiser. D.Steinbrecher.
Word Process. & Inf. Syst. (USA), vol.9, no.11, p.20-2 (Nov. 1982).
Stressing the importance of human factors in an automated office environment, Kaiser Engineers Hanford Co. in Richland, WA, has successfully combined word processing and administrative support into a cohesive operation. In the course of its word processing history the company has been able to increase productivity with improved quality, decrease turnaround time, reduce backlogs, increase support without adding new personnel, and provide interchangeable career paths for WP/AS personnel. The following steps taken by the company are discussed: developing career paths; offering cross-training; interfacing users and operators; creating smooth work flow; writing a procedures manual; and creating a pleasing environment. (no refs.)

13668 A fiber optic LAN/OCS using a broadband PBX. E.H.Hara (Dept. of Communications, Ottawa, Ontario, Canada).
GLOBECOM '82. IEEE Global Telecommunications Conference, Miami, FL, USA, 29 Nov.-2 Dec. 1982 (New York, USA: IEEE 1982), p.961-5 vol.3
The concept of a fiber optic local area network (LAN) for office communication systems (OCS) based on a centrally switched star configuration is discussed. Use of a broadband analogue PBX and a time division multiplexed pulse amplitude (TDM-PAM) transmission scheme through optical fibers allows the network to accommodate many analogue and digital channels. Previous experimental results on optoelectronic switches show that fabrication of a PBX matrix switch of size 30×30 for circuit switching 64 kb/s digital signals or 100 kHz analogue signals, is possible. Crosstalk loss and isolation (on/off power ratio) of more than 60 dB can be achieved readily in such matrix switches. A digital PBX may also be used, but the use of a broadband analogue PBX will provide a LAN/OCS network that is transparent to the various transmission protocols and will offer flexibility in choosing digital equipment for the office. By taking advantage of the extra transmission bandwidth of the optical fiber, if required, video services can also be provided to the office. (11 refs.)

14263 New office systems technology. R.F.Glyn-Jones (IBM United Kingdom Ltd., Portsmouth, England).
ASLIB Proc. (GB), vol.35, no.1, p.31-7 (Jan. 1983).
The processing of information is becoming an increasingly important function in most organisations. The volume of this information has necessitated the introduction of new technology into the office. This article examines some of the ideas and machines involved in the office automation boom. Among the things discussed are database management systems, viewdata, the information centre and the role of the information scientist. (no refs.)

14264 Teletex tackles America. D.Duke.
Word Process. & Inf. Syst. (USA), vol.9, no.10, p.12-14, 38 (Oct. 1982).
Discusses the German Teletex service, run by the Deutsches Bundespost. Advantages that the system has over conventional Telex are outlined, and the requirements of a system that conforms to agreed CCITT standards are detailed. Developments in the USA towards Teletex are also described, for example, Western Union has plans to begin a service, and has an international agreement with West Germany to begin Teletex communication. (no refs.)

13607 The microcomputer connection to local networks. M.Killen (Strategic Inc., San Jose, CA, USA).
Data Commun. (USA), vol.11, no.13, p.97-112 (Dec. 1982).
Small-scale microcomputer networks are currently used mainly as a means of sharing hard-disc storage and printers, thereby realising savings over the cost of providing these at each station. They are a common form of local network, being low cost (the price of an interface is currently around $500 and declining) and technologically simple. In the future some businesses will have networks of several dozen to several hundred personal computers, whilst networks will also link whole university and college campuses, each student having his own computer. Networks offer a better method of sharing microcomputer resources than does timesharing with several terminals on a single machine. In this article, information is given on leading microcomputer network vendors, network arrangements (rings and stars) and the capabilities of specific examples currently on the market. Four actual applications, in education, management consultancy, banking and property management, are briefly described.

13660 Performance evaluation of local access systems in computer networks. S.Bhatia (Bell-Northern Res., Ottawa, Ontario, Canada), H.T.Mouftah
GLOBECOM '82. IEEE Global Telecommunications Conference, Miami, FL, USA, 29 Nov.-2 Dec. 1982 (New York, USA: IEEE 1982), p.361-5 vol.1
A computer-aided data network planning tool has been developed to study the performance of various types of network access systems. This computer simulation package provides the network designer with a flexible tool to evaluate economically the performance parameters (such as the total system throughput, average message delay, the probability of data loss and the memory size) of different types of access systems used in the local loop of computer networks. The performance of a line concentrator and a Message Interswitch is discussed. The Message Interswitch permits a number of low speed terminals to share communication lines and also provided access to local common resources such as line printers, databases and optical character readers. Two types of traffic commonly used in teleprocessing applications are considered: the inquiry/response mode and the file transfer mode. The relationships among the system throughput, average message delay and probability of data loss as a function of input line utilization and mean message length for various types of access systems are presented. (2 refs.)

14910 Low-cost CADD at work. E.Teicholz, P.Kilburn (Graphic Systems Inc., Cambridge, MA, USA).
Datamation (USA), vol.29, no.1, p.103-10 (Jan. 1983).
Computer-aided design and drafting systems provide improved drawing management, maintenance and error reduction. In this article, users discuss their experiences with computer aided design and drafting systems that cost under $100000. (no refs.)

13616 Applications of fiber optics to computer systems. M.W.Sachs (IBM Thomas J. Watson Res. Center, Yorktown Heights, NY, USA).
Proc. SPIE Int Soc. Opt Eng (USA), vol.318, p.80-3 (1982). (1st International Conference and Workshop on Picture Archiving and Communication Systems (PACS) for Medical Applications, Newport Beach, CA, USA, 18-21 Jan. 1982).
Fiber optics promises to be an attractive transmission medium for communication between the computer and its I/O devices and for local networks. Its attractiveness results from its potential for providing high data transfer rate and long transmission distance. Within the central computer complex, serial transmission on fiber optics can also eliminate many of the problems associated with today's bulky parallel cables and connectors. However, to obtain the maximum benefits of fiber optics, it will be necessary to make changes to the I/O interface architecture as well as the transmission medium. Changes may also be required in the way applications utilize I/O in order to take advantage of the high data rate potential. The author discusses some of the features of fiber optics as applied to the computer system and also indicates possible architecture and application approaches for deriving the greatest benefit from fiber optics. (8 refs.)

13733 Graphics standards are emerging—slowly but surely. C.Bailey.
Electron. Des. (USA), vol.31, no.2, p.103-10 (20 Jan. 1983).
With computer graphics systems proliferating at a dizzying pace from use in mainframe machines down to the personal computer, manufacturers are being forced to face a problem they have long avoided: graphics standards. Computer users want them so that the graphics program written for one machine can run on a comparable machine, and virtually everyone in the industry agrees that compatibility is needed. After years of progress, basic approaches have been defined, and some proposals are close to acceptance on international and national standards. The struggle has narrowed to two main contenders: the Graphical Kernel System (GKS), which was developed originally by DIN (Deutsches Institut fur Normung), the officials standard body of West Germany; and the Core System, a de facto standard created by the SIGGRAPH Graphics Standards Planning Committee (GSPC) of the Association for Computing Machinery. In addition, for videotex applications, industry heavyweights are supporting a specialized system called the North American Presentation Level Protocol Syntax (NAPLPS). The author looks at these three systems. (no refs.)

13524 Factory environment fiber optic LAN provides EMI immunity, increases security.
Comput. Des. (USA), vol.21, no.12, p.32-8 (Dec. 1982).
Fiber Optic/Net One, a fiber optic interconnected Ethernet LAN communications system, adds fiber optic technology while preserving the hardware/software investments of existing Ethernet configurations. Introduced through a collaborative effort, the system comprises the Codenet-2020 fiber optic Ethernet transceivers developed by Codenoll Technology, Ethernet compatible network interface units and communications software from Ungermann-Bass, and fiber optic transmission subsystems by Siecor/FiberLAN. Fiber optic cables are not susceptible to electromagnetic radiation, problems such as group loops, crosstalk and lightning interference are eliminated. No electrical signals are transmitted between equipment interconnected by the glass fibers, thereby eliminating the possibility of electrical surges or short circuits. Moreover, it is almost impossible to tap into the Ethernet data bus without immediate detection, a security advantage over coaxial nets. Features of the network system are described. (no refs.)

14311 Canada must seize chance to supply business services. D.A.Keith (I P Sharp Associates Ltd., Toronto, Ontario, Canada).
CIPS Rev. (Canada), vol.6, no.6, p.14-15 (Nov.-Dec. 1982).
The videotex industry in Canada today consists of either too much hardware and not enough software, or too much software and not enough hardware—nobody is really sure which. The excitement of Canada's development of Telidon protocol as a potential international standard for text and graphics display has tended to overshadow the fact that the standard is only that: a standard. The author argues that there is a great opportunity for Canada to become a leader in the supply of on-line information to the business community of the world. It will take people who are skilled in the art of putting up data bases, and people who can provide effective and flexible access mechanisms to those data bases. The author believes that Canada has the people, and the educational institutions to make it happen. There is no reason in the world why Canada should not be able to take advantage of this opportunity. (no refs.)

13605 Description of Fasnet—a unidirectional local-area communications network. J.O.Limb (Bell Labs., Murray Hill, NJ, USA), C.Flores.
Bell Syst. Tech. J. (USA), vol.61, no.7,pt.1, p.1413-40 (Sept. 1982).
Fasnet is an implicit token-passing, local-area network aimed at supporting high data rates and carrying a wide mix of traffic (data, voice, video, and facsimile). Transmission is unidirectional with stations attaching to the medium passively via directional couplers. A link consists of two lines, one to carry traffic in each direction. Unidirectional transmission provides the potential for efficient operation at high data rates, while the passive medium provides the potential for high reliability. The authors describe the physical configuration and the protocol and give channel utilization for the condition of continuously queued sources. Mechanisms to control the access of various traffic types are described. Finally, the interconnection of multiple Fasnets is studied for one particular configuration, a ring. (16 refs.)

13595 What to standardise in a local area network: protocols or services and interfaces?. G.Andreoni (CREI, Politecnico di Milano, Milano, Italy), T.Kalin, G.Le Moli.
Proceedings of the Computer Networking Symposium, Gaithersburg, MD, USA, 10 Dec. 1982 (New York, USA: IEEE 1982), p.13-17
This paper deals with the standardisation of the Local Area Network protocols. Present standardisation activities are focusing on the lower two levels in the 7 layer OSI architecture, with little hope for standardisation to be able to follow the fast developments of LAN technologies. The present paper is proposing a Network Access Unit (NAU) as a part of the Extended Communication Subsystem running levels from 1 through to 3, with standardised interface towards the user. Possible implications of such division are also discussed. (8 refs.)

13597 Integrated local networking for voice and data traffic: two approaches. J.C.Majithia (Univ. of Guelph, Guelph, Ontario, Canada), S.-Q.Li.
Proceedings of the Computer Networking Symposium, Gaithersburg, MD, USA, 10 Dec. 1982 (New York, USA: IEEE 1982), p.69-75
The integration of heterogeneous traffic types into a common communication network is of considerable interest to network designers. The authors define an Integrated Services Network (ISN) as a communication network which provides a wide range of services without restricting the type of switching and transmission facilities used. They consider two approaches for designing an ISN for voice and data traffic. (7 refs.)

14298 Word processing with optical character recognition. E.Brandenberger.
Mikro- & Kleincomput. (Switzerland), vol.4, no.6, p.51-3 (Dec. 1982). In German.
The application of optical character recognition systems to the reading of typescript for word processing and computer storage of text is discussed. Justification for the use of OCR methods are examined and four case-examples show advantages obtained in documentation and office practice. The economy of the optical character recognition concept and factors relating to the choice of an OCR reader are considered. (no refs.) *H.V.H.*

13621 Local-area networks spur moves to standardize data communications among computers and peripherals. R.Allan.
Electron. Des. (USA), vol.30, no.26, p.107-12 (23 Dec. 1982).
Intelligent communications within a local-area network of computers and associated peripherals and terminals depends less on the type of hardware and more on common modes of behaviour, or protocols. The ISO's standard DIS7498 lays out a seven-layer architecture for network communications. This and related standards (RS-442, RS-232-C, RS-449, X.21, IEEE-802, and X.25) are considered. CSMA/CD and token passing are then discussed. (no refs.)

14338 The information society—the wonder that would be?. B.W.Manley (Philips Business Systems Group, Maidenhead, England).
IEE Proc. A (GB), vol.130, no.1, p.15-18 (Jan. 1983).
The information revolution is promised to bring about social and economic changes rivalling those following the industrial revolution of two centuries ago. The author concentrates on two new system concepts which are based on close study of applications; one relates to the office and one to the home. Each contains the key elements which will recur progressively in all information handling systems in the future: the integration of previously separate products into a coherent system; the ability of one workstation to perform more than one task; and the convergence of data processing, text and image handling, and telecommunications towards a common course. Some of the implications for employment in the next decade in consequence of systems of this kind are examined. (no refs.)

13922 Business graphics in 1983. Art for art's sake?. J.Bartimo.
Computerworld (USA), vol.16, no.52/vol.17, no.1, p.33-5 (27 Dec. 1982/3 Jan. 1983).
Describes the growth of computer graphics for business applications. Future growth areas will include: graphics for decision support systems; use of computerised slide makers (for big users); graphics plotters and printers; graphics software. (no refs.)

13923 Business graphics. C.Machover (Machover Associates Corp., White Plains, NY, USA).
Computerworld (USA), vol.16, no.48A, p.51-4 (1 Dec. 1982).
'Say it with graphics' is becoming a trend in offices today. The applications for business graphics are growing daily. This article looks at the state-of-the-art in computer graphics and what benefits it offers. (no refs.)

13602 Simulation model of an Ethernet. H.D.Hughes, L.Li (Dept. of Computer Sci., Michigan State Univ., East Lansing, MI, USA).
Comput. Performance (GB), vol.3, no.4, p.210-17 (Dec. 1982).
A simulation model is described which can be used in experiments to evaluate Ethernet performance. The results of these experiments can be used to investigate the packet delay at each node, the collision frequency, the network's capacity, the stability of the network and the fairness of network access. This simulation model also allows modifications to the CSMA/CD scheduling policy to be studied. A discussion of the design and implementation of the model is presented. Examples are provided to illustrate some possible uses of the model, and the results obtained from the model are verified. (16 refs.)

11395 OCR needs the needs of offices. L.Brilliantine.
Word Process. & Inf. Syst. (USA), vol.9, no.11, p.40-4 (Nov. 1982).
The technical problems of paper handling, recognising blank spaces for paragraphs, margins, etc. and scanning multiple type points, are largely solved in the new generation of optical character recognition machines. The author describes the salient features of seven such products: OFIS reader 1240 from Burroughs Corp., AlphaWord IIIplus from CompuScan, the Dept. Workless Station, the Kurzweil Reading Machine which has a talking facility, Scan Data's 2280, the Toshiba OCR-V100, and Totec's TO-5000. Advice is given on how to determine the machine capacity required before purchasing an OCR unit. (no refs.)

14275 Electronic mail: phone home. S.S.Kay (Hannagan & Associates Inc., Chicago, IL, USA).
Computerworld (USA), vol.16, no.48A, p.13-14 (1 Dec. 1982).
Electronic mail is currently being offered by almost every type of company in the data processing field. In fact, while 21 vendors of computer-based message systems were in the market in 1981, more than twice that number entered the marketplace in 1982. With so much activity in the market, how can a user decide what system is best for his organization's needs? This article spotlights a few of the companies and occurrences in the marketplace. (no refs.)

14908 The engineering office of the 1990s. E.H.Smith,Jr., W.R.Lesyna (Du Pont Co., Wilmington, DE, USA).
CEP (Chem. Eng. Prog.) (USA), vol.78, no.12, p.41-4 (Dec. 1982).
Describes the engineering office of the future by imagining a typical day in the life of a project engineer in the 1990s. Innovations might include: an engineering workstation, incorporating large viewing screen, function keys and joy-stick controls, teleconferencing; voice input to equipment; electronic mail; high-resolution colour graphics. It is shown how many of these features are already available, awaiting reductions in cost before they are used more widely. (no refs.)

11258 **On being automated.** H.Downing (Univ. of Southampton, Southampton, England).
ASLIB Proc. (GB), vol.35, no.1, p.38-51 (Jan. 1983).
The introduction of word processing centres (WPCs) is often heralded as freeing the typist from hours of drudgery and allowing room for more creativity and initiative for the operator. The author of this article explodes this myth by describing how work at a WPC can be demoralising, unsociable, stressful and even hazardous to health. (10 refs.)

13612 **Evolution of the Ethernet local computer network.** J.F.Shoch, Y.K.Dalal, D.D.Redell, R.C.Crane.
Computer (USA), vol.15, no.8, p.10-27 (Aug. 1982). [received: Jan. 1983]
As it evolved from a research prototype to the specification of a multi-company standard, Ethernet compelled designers to consider numerous trade-offs among alternative implementations and design strategies. The authors discuss the evolution of Ethernet which has proven a very effective local network. (29 refs.)

14307 **Another mainframer sets sights on office automation.**
Can. Datasyst. (Canada), vol.14, no.11, p.74 (Nov. 1982).
Sperry Univac is blending hardware and software into a fully integrated office system aimed at medium to large organizations. Called Sperry-Link, the system brings together word and data processing, personal computing, electronic mail, and voice services. This article gives an overview of the capabilities and components of this system. (no refs.)

14315 **Will typewriters ever take dictation?.** E.T.Johnson (Univ. of California, Santa Barbara, CA, USA).
Speech Technol. (USA), vol.1, no.3, p.35-42 (Sept.-Oct. 1982).
Discusses linguistics and its various levels of analysis. The details of sound, English consonants and then classification, allophones, acoustic phonetics and the future of linguistics are considered. (9 refs.)

14285 **A Wall Streeter looks at office automation.** D.C.Aronson (E.F. Hutton & Co., New York, NY, USA).
Adm. Manage. (USA), vol.43, no.12, p.26-9 (Dec. 1982).
The outlook for the office automation market in the 1980s is seen to be bright, especially for those companies whose products address specific occupations. The author expresses his views on which vendors will be winners. In particular he discusses the performance of five major contributors to the office automation market—Wang, NBI, IBM, Cullinane Database Systems (CUL), and Tymshare's TYMNET Div. (TYM). (no refs.)

11209 **An eye for an eye [VDUs].** L.Page.
Micro Decis. (GB), no.16, p.61-2 (Feb. 1983).
As far as operator health is concerned, there is considerable concern about the use of VDU. A recent report explained the effect of glare, character appearance, positioning of screen and keyboard, and type of work. This article considers the reports results and provides guidelines on how to avoid, or at least minimize, some of the health hazards associated with VDU operation. (no refs.)

13610 **NT sees future in 'open' information management.**
Can. Datasyst. (Canada), vol.14, no.11, p.48 (Nov. 1982).
Northern Telecom Ltd. are investing $1.2 billion over a five-year research and development program to devise an 'open' information management system, called OPEN World (Open Protocol Enhanced Networks). This article describes how this computer network will be based on the SL family of PBXs, with the whole integrated system under the control of an SL PBX controller. (no refs.)

13614 **The Rolls Royce of networks [computer systems].** G.Kewney.
Computing (GB), vol.11, no.4, p.25 (27 Jan. 1983).
The author briefly describes Ethernet, the 'Rolls-Royce' of local area networks, and shows its relationship to Zynar's Plan 4000 network system. In the latter the designer has rejected full-scale Ethernet technology, but the system can cope with large storage devices and data transmission rates well in excess of those currently available. Nevertheless Ethernet forms the basis of the way Plan 4000 relates one network to another. (no refs.)

14302 **Spelling checkers for the TRS-80.** T.Kepner.
Pop. Comput. (USA), vol.2, no.3, p.138-48 (Jan 1983). [received: Jan. 1983]
The amount of spelling mistakes made when word processing tends to be higher than with handwriting because of keying and editing errors. The use of spelling checker programs can help minimise errors. This article reviews four such programs for the TRS-80. These are Hexspell, Chextext, Microproof, and Proofreader. (no refs.)

14913 **CAD reaches the small drawing office.** J.Cornish.
Electr. Rev. (GB), vol.212, no.2, p.26-8 (14 Jan. 1983).
Computer aided design was until recently thought to be the preserve of large organisations. But now many smaller firms, seeking an increase in productivity, are looking seriously at CAD techniques. This article outlines the main advantages and points out some pitfalls. (no refs.)

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10324 **Micro-computerizing your paperwork.** S.Pogrow (Univ. of Arizona, Tucson, AZ, USA).
Electron. Learn. (USA), vol.2, no.1, p.54-8 (Sept. 1982)
Describes how to reduce the paperwork load by 20 to 70 percent of an average business. This is done with the aid of a microcomputer and three computer programs. (no refs.)

10325 **Kaypro goes to Washington [portable computer].** F.J.Derfler,Jr..
Microcomputing (USA), vol.6, no.12, p.68-70 (Dec. 1982).
The author discusses how he used the Kaypro II portable microcomputer for office work in the Pentagon. His impressions and experiences with the machine are outlined. (no refs.)

10326 **Report from the front line: what can the Vic really do?.** M.Grace.
Vic Comput. (GB), vol.2, no.1, p.13, 15 (Oct. 1982)
The feasibility of using the Vic 20 microcomputer as a business computer is examined. The Vic looks an attractive, low-cost option for many business applications, despite its size. This is because memory expansion is becoming increasingly common, more and more software packages are being developed for business and the price of add-on devices like disk drives and printer interfaces. (no refs.)

10327 **The Japanese office automation invasion: what it means for the Australian market.** D.Jacobs.
Mod Off (Australia), vol.21, no.7, p.16-18 (Aug. 1982).
The reaction of Japanese manufacturers to the office automation boom has been slow but they are now lining up a variety of products for the export market. This article examines the four main types of equipment being manufactured by the Japanese. These are plain paper copiers, facsimile machines, word processors and personal computers. (no refs.)

10328 **Office automation: the changing vision.** R.R.Panko.
Mod. Off. (Australia), vol.21, no.8, p.14-16 (Sept. 1982).
Describes the development of office automation technology from early interest in word processing to the modern day integrated electronic office systems. The next step towards full utilisation of the electronic office is seen as a more strategic approach to management of the office technology. (nn refs.)

10329 **OCE-Reprographics consolidates in office automation.**
Mod. Off. (Australia), vol.21, no.8, p.23-4 (Sept. 1982).
From diverse beginnings in many fields of commerce, Oce-Reprographics has re-grouped to stake a substantial claim in the office automation stakes. This article explains the reasons behind the success of this company. (no refs.)

10330 **Gateway to Prestel: the UK public videotex service is expanding.** C.Williamson.
Data Processing (GB), vol.24, no.9, p.22-4 (Nov. 1982)
Extension of the UK Prestel viewdata (videotex) service by linking it to external private computers is discussed. This 'Gateway' facility will offer an interactive service enabling two-way communication between private computers and Prestel receivers. Phase Two of Gateway's introduction will make a number of large databases directly available to the public and is likely to stimulate a growth in mailorder, banking and retail services. (no refs.)

10509 High density read/write optical system. P.L.Chen (Advanced Concepts & Technol. Div., Xerox Electro-Optical Systems, Pasadena, CA, USA)
Proc. SPIE Int. Soc. Opt. Eng. (USA), vol.329, p.21-4 (1982). (Optical Disk Technology, Los Angeles, CA, USA, 26-28 Jan. 1982)
Xerox Electro-Optical Systems is developing an information storage and retrieval system for the Library of Congress to store a data base consisting of seven million library cards. The library card image will be digitized, stored, and retrieved by a computer system and printed out on a Xerox 9700 high speed laser printer. Two separate optical systems are involved, namely, the mastering station and the read only player. The mastering station writes the coded digital data on a glass disc as a pattern of holes in a thin metallic film and is capable of 'reading' the information immediately after 'writing' for proofreading and system checkup. The read only player is a smaller unit to be delivered to the Library of Congress for data retrieval. The author discusses the mastering station. The mastering station is capable of writing or reading at 7.5 megabits per second. The total storage capacity is 5×10^{9} bits per disc surface, which is at least ten times the storage capacity of most advanced magnetic media today. (3 refs.)

7347 **What's holding up the automated office?.** W.A.Kleinschrod
Adm. Manage. (USA) vol.43, no.9, p.21 (Sept. 1982).
An examination of the current state of office automation explains why its development appears to have halted. In fact the technological of office automation is moving forward, albeit more slowly than many would like. (no refs.)

7348 **Management opinion [office automation].** I.Nussbaum.
Adm. Manage. (USA) vol.43, no.9, p.82 (Sept. 1982)
The author examines some commonly held views about the reasons for the slow acceptance of office automation. He suggests that a better understanding of industry differences and organizational behavior could help overcome user resistance, and that conventional cost-benefit analysis can be applied to office technology. (no refs.)

7483 **The Office, buyers' guide to business (mini) computers.**
Office (USA), vol.96, no.4, p.149, 151-72 (Oct. 1982).
Specifications in the charts listed were provided by the manufacturers. Prices are included. (no refs.)

10319 **The friendly future in office automation.** J.G.Brown.
Comput. Decis. (USA), vol.14, no.4, p.144-8, 152, 160-8 (April 1982). [received: Nov. 1982]
The many obstacles to implementing office automation will inevitably fall because of strong motivating forces, and because vendors are making their wares 'friendlier' and providing stronger support. (no refs.)

10320 **Group decisions: Can computers help?.** D.J.Kull.
Comput. Decis. (USA), vol.14, no.5, p.70-6 (May 1982). [received: Dec. 1982]
The development of computer systems to provide computer-assisted conferencing is discussed. These group-decision support systems are automated aids to provide assistance to both speed deliberations and enhance decisions. They do this by providing sophisticated data-analysis and informative graphic displays. (no refs.)

10321 **Distributed offices and local networks.** L.Salvignol (Thomson-CSF, Paris, France).
Commun. Int. (GB), vol.9, no.10, p.22-3 (Oct. 1982).
Many requirements and options are involved in producing the information systems for the electronic office of the future. Thomson-CSF are pursuing an approach that combines both PABX, and Ethernet-type technologies. (no refs.)

10322 **Routes to EDP in the office.** E.Buch.
Chip (Germany), no.11, p.60-2 (Nov. 1982). In German.
Discusses the stages through which a project to introduce new technology into an office must pass. They include analysis of the current situation, formulation of objectives, preliminary training, installation, implementation tion of the first applications, further training, and integration of applications. (no refs.)
G.F.F.

10367 **Scheduling of meetings in office information systems.** T.Kikuno, N.Yoshida, K.Sugihara, Arame K. (Faculty of Engng., Hiroshima Univ., Higashi-Hiroshima, Japan).
Proceedings of COMPSAC 82. IEEE Computer Society's Sixth International Computer Software & Applications Conference, Chicago, IL, USA, 8-12 Nov. 1982 (New York, USA: IEEE 1982), p.318-25
The office automation is quickly becoming the topic of much important research in computer science. One of the basic tasks demanded in office information systems is the management of a schedule of meetings. This paper aims at developing a meeting scheduler such that users can not only retrieve a schedule but also insert, delete or modify a meeting in the schedule. To do this, the authors formulate the rearrangement problem, and present a heuristic algorithm for the problem, since the problem is computationally intractable. With the above considerations, they develop a meeting scheduler in which the heuristic algorithm is applied to rearrange a schedule efficiently. The scheduler provides a sophisticated user interface allowing users to access the timetable directly with the help of visual information. This is a step toward the development of the advanced schedule management system which increases the productivity and performance of the office work. (6 refs.)

7398 **The impact of office automation on the organization: some implications for research and practice.** M.H.Olson, H.C.Lucas,Jr. (New York Univ., New York, NY, USA).
Commun. ACM (USA), vol.25, no.11, p.838-47 (Nov. 1982).
Computer technology has recently been applied to the automation of office tasks and procedures. Much of the technology is aimed not at improving the efficiency of current office procedures, but at altering the nature of office work altogether. The development of automated office systems raises a number of issues for the organization. How will this technology be received by organization members? How will it affect the definition of traditional office work? What will be its impact on individuals, work groups, and the structure of the organization? This paper presents a descriptive model and propositions concerning the potential impacts of office automation on the organization and it stresses the need, when implementing automated office systems, to take a broad perspective of their potential positive and negative effects on the organization. The need for further research examining the potential effects of office automation is emphasized. (56 refs.)

10314 **Is there a future in your office?.** J.Leng
Can. Datasyst. (Canada), vol.14, no.10, p.42-4 (Oct. 1982)
Electronic office automation holds promise for boosting productivity. And Canada's 'hi-tech' companies are ready to respond to new needs. (no refs.)

10315 **Changing from fad to fact of life [personal microcomputers].** B.S.Rogers.
Can. Datasyst. (Canada), vol.14, no.10, p.106-8 (Oct. 1982).
The personal computer has become an indispensable tool for thousands of Canadian businesses and professionals. And the industry, barely half a decade old, has now been given the stamp of legitimacy by the major manufacturers with their recent entry into the market. These small individual desk top units are taking many data processing functions out of the hands of the 'boys in the computer room' in both large and small corporations. (no refs.)

10507 **Viewdata's place in business.** F.Newman.
Micro Decis. (GB), no.15, p.55-60 (Jan. 1983) [received: Dec. 1982]
Television is increasingly being used with the telephone to pipe business information over distances. This article reports on the implications of Viewdata's increasing popularity. (no refs.)

10299 Information technology in the home: the failure of Prestel. E Arnold (Sci. Policy Res. Unit, Sussex Univ., Brighton, England)
Syst., Objectives, Solutions (Netherlands), vol.2, no.4, p.219-28 (Nov. 1982).
Viewdata (videotex) was invented and innovated by British Telecom in the form of the Prestel service. This was conceived as a mass-market product for the domestic consumer, but has achieved success only in the business sector. The innovation literature stresses that successful new technologies are 'coupled' to the needs of users. A new product may change its form prior to success in the market. Prestel appears to have related more closely to the needs of British Telecom and the terminal manufacturers in the UK television set making industry than to the needs of domestic consumers. Resources have been wasted in trying to force an innovative but inappropriate product on reluctant consumers. (33 refs.)

10302 Rethinking office automation. R Panko.
Adm. Manage. (USA), vol.43, no.7, p.22-4, 71-2 (July 1982) [received: Nov 1982]
When planning office automation, the top priority should be effectiveness or the ability to achieve company goals. This approach requires radically new 'breakthrough' strategies. These strategies are explained. (no refs.)

10303 Office use of personal computers. R T.Sachs
Adm. Manage. (USA), vol.43, no.8, p.39-45 (Aug. 1982)
Does the advent of personal computers in the office mean a unit on every manager's desk? Not just yet. But the ideas catching on as more and more organizations discover some very important benefits. (no refs.)

10339 Meaning and problems of office automation. Y.Tomaru (Matsushita Communication Industrial Co. Ltd., Osaka, Japan), Y Tanaka.
Natl Tech Rep (Japan), vol.28, no.4, p.585-94 (Aug. 1982). In Japanese.
For the past quarter century the accumulation of scientific and technological progress has brought about qualitative changes in the human consciousness and social structures, resulting in not only mere technological growth but also in cultural changes. The 'A New Office Creation' movement expressed by the term OA (Office Automation) can be considered as one of these cultural changes. From this standpoint, the authors discuss the OA: its background and conception, its technological state and future problems. (no refs.)

10364 Table and graphics tools integration for improved office productivity. M Azuma (Software Product Engng. Lab., Tokyo, Japan)
Proceedings of COMPSAC 82. IEEE Computer Society's Sixth International Computer Software & Applications Conference, Chicago, IL, USA, 8-12 Nov. 1982 (New York, USA, IEEE 1982), p.87-8
Computer graphics is spreading into offices from specialized areas such as CAD. This movement is enhanced by the increased use of personal computers which are inexpensive and capable of graphic functions. The role of computers in office work is discussed. Two table-graphic tools are introduced as examples and are evaluated through actual use. (no refs.)

10521 Videotex—an emerging public information service. R.I.Davidson, A R Jenkins
Telecommun. J. Aust. (Australia), vol.32, no.2, p.109-14 (1982).
One aspect of image processing that is often not fully appreciated is the need for transmission and presentation of images in conjunction with an information data base. The authors discuss videotex, an emerging service for the transmission and display of textual and graphical information. The point is made that technological development on its own is of limited value unless the end result is one that the user will accept and is prepared to pay for. (16 refs.)

10511 Teletext and videotex—from text to pictures. G.T.Sharpless.
Electron. Technol. (GB), vol.16, no.9, p.174-8 (Oct. 1982).
States that the world-wide interest in videotex systems in recent years, has lead to a proliferation of proposals from which attempts are being made to agree standards. Since the early proposals by the BBC ten years ago, the display characteristics have been moving away from text-only systems towards graphics and pictures. The author looks at the display characteristics of some systems and identifies some technical problems which may inhibit compatibility between these systems. (6 refs.)

7406 Warning! VDUs may be a health hazard. C.Mackay (Employment Medical Advisory Service, UK Health & Safety Executive, London, England).
Electron. Aust. (Australia), vol.44, no.8, p.12-15 (Aug. 1982).
States that with video display units becoming commonplace in offices and schools, many have voiced concern about harmful effects. Discusses the facts and the conclusions that can be drawn from them, including the possibility of facial dermatitis, eye strain and postural fatigue. (no refs.)

10298 Computer conferencing: success or failure?. A Phillips (Univ. of Southern California, Los Angeles, CA, USA).
Syst., Objectives, Solutions (Netherlands), vol.2, no.4, p.203-18 (Nov. 1982)
The computer conference has many unique features that can contribute to its success or failure as a communications medium. This paper discusses these features and also posits that there is an emotional as well as a task-related dimension present. The transcripts of three computer conferences were studied and content analyzed, with emphasis placed on a examination of whether, and if so how, the medium's special characteristics enhance or diminish this emotional dimension. Recommendations are also made for people interested in setting up computer conferences, conducting future research, or policy making. (21 refs.)

10332 Alternate approaches to office systems. B C.McNurlin.
EDP Anal. (USA), vol.20, no.12, p.1-12 (Dec. 1982).
Although there is much talk about office automation, when one asks, 'What are future office systems going to look like?', the discussions can become confusing. Vendors describe what they hope the structure of office systems will be (based on their current offerings). Consultants in the field generally have other options. And researchers point out requirements for 'good' office systems that often differ from all the above. The author pulls together thoughts from these sources to see if a clear picture of future office systems is emerging. (no refs.)

7460 Work-station furniture: sitting pretty. D.Freedman.
Mini-Micro Syst. (USA), vol.15, no.9, p.275-6, 279-80, 282-4 (Sept. 1982).
Many microcomputers and terminals have been ending up on ordinary desks and tables. But as more executives, professionals and office workers complain about losing work space to machines, and of being subjected to computer-related ills ranging from eye-strain to bruised shins, computer work-station furniture is soon to become a major sub-industry. Most OEMs, dealers and system integrators have not yet made furniture part of their product lines. Those that do so, however, find a selection of furniture ranging from simple stands to multilevel, electrically adjusted work stations. (no refs.)

10527 Viewdata and the information society. J Martin.
Englewood Cliffs, NJ, USA, Prentice-Hall (1982), viii+293 pp. [0 13 941906 3]
Viewdata is one of the most exciting developments of the 1980s. It could change the way we live, work, and communicate. Viewdata has brought about the marriage of the television, the telephone, and the computer. This book analyses viewdata technology and discusses its impact, problems, applications, and the future. The different types of viewdata systems are explained with guidelines for implementation. Different levels of viewdata such as private, consumer, and public systems are discussed with examples provided.

10306 A word processing center with the future in mind.
Office (USA), vol.96, no.4, p.140 (Oct. 1982).
Nearly two years ago, Raymark Corp. began planning for the office of tomorrow. Today, the word-processing center consists of four No-Problem electronic video display terminals with printers and transcribe stations, five Nyematic III endless-loop recorders, Super-Vision III supervisor console with printer, intercom and secretary transfer panel, and 50 Six-Select Dictate stations. External call-in dictation was tested as an added feature of the system. (no refs.)

10308 Office information systems—the new work environment. S.Sircar (Univ. of Texas, Arlington, TX, USA).
Business (USA), vol.32, no.3, p.27-34 (July-Sept. 1982).
This article examines the work environment of the traditional office and compares it to that of the office of the future. It also explores the lessons to be learned from information systems theory when dealing with an office information system (OIS). Finally, a strategy for OIS implementation is discussed.

10533 A book with no pages. A.L.Wold.
SoftSide (USA), vol.6, no.1, p.14-16 (Oct. 1982).
In the not-so-distant future, libraries and bookstores may undergo drastic changes, as computer books with no pages place the world's literature at your fingertips. Imagine carrying a computer the size of a paperback book containing the capabilities of the Library of Congress. It's not that far away! This article describes the technology which will make it a reality. (no refs.)

10310 **Advanced word processing for the Apple.** R.Schilling,Jr.,
Pop. Comput. (USA), vol.2, no.2, p 126, 128-31 (Dec. 1982).
Two word-processing programs for the Apple II microcomputer are reviewed. These programs are the Word Handler II from Silicon Valley Systems and Screenwriter from On-Line Systems. These programs give lowercase characters and clever display features without the need for any additional hardware. (no refs.)

10508 **Electronic information: an introduction to what lies ahead.** C.Levine.
Electron. Learn. (USA), vol.2, no.1, p 66-8, 103 (Sept. 1982).
Electronically transmitted information—from stock market reports to national news—may soon be just a pushbutton away. This article explains the technology behind this instant information. Videotex, teletext and cable transmission are discussed. (no refs.)

7339 **Office automation market lacks integration.** J.Mill
Infomatics (GrB), vol.3, no.12, p 29-31 (Dec. 1982).
This article takes an overview look at the office automation market in the United Kingdom. A problem facing both users and suppliers of office automation equipment is incompatibility. The efforts of the industry to produce standardised equipment are examined. (no refs.)

10346 **Seven-step approach to automating your office.** W.M.Lehman, J.M.Santiago (Price Waterhouse, New York, NY, USA)
Price Waterhouse Rev. (USA), vol.26, no.2, p 13-18 (1982).
In the last decade, average output per US factory worker increased by 24%. In contrast, the productivity increase of the average office worker was 4%. Some help for business executives with responsibilities in the white-collar world is offered. (no refs.)

10296 **Building a ring around the office.** M.Edwards.
Infosystems (USA), vol.29, no.12, p.46-8, 52-3 (Dec. 1982).
Local area networks—a communications ring around the office—are an essential element of office automation systems. They can serve as a catalyst to create a single integrated facility capable of handling voice, data, image and even video communications. (no refs.)

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3567 **The multivendor environment [office automation].** A.D Wohl (Advanced Office Concepts Corp., Bala Cynwyd, PA, USA).
Computerworld (USA), vol.16, no.39A, p.16-20 (29 Sept. 1982).
Discusses some of the problems that arise in the introduction of office automation in large companies, where it is unlikely that a single vendor can meet the demands of the whole organisation. Ways of coping with systems from many vendors are suggested and ways of interconnecting. These systems are outlined. It is concluded that multivendor environments are neither good nor evil. They offer advantages in flexibility and individual user or group organisation. (no refs.)

3568 **A stitch in time . . . feasibility study. II.** J.T.Garon
Computerworld (USA), vol.16, no.39A, p.21-3, 27 (29 Sept. 1982)
Examines the feasibility study and its role in planning for office automation. The author discusses activities during the survey (choice of work period, data collection methods, fact gathering, analysis, results and recommendations), implementation, and post-implementation activities. (no refs.)

3569 **Cost-analysis [in office automation].** J.Duffy (Doffy, Bentley, Nelson-Turner Consulting Group Ltd., Toronto, Canada).
Computerworld (USA), vol.16, no.39A, p.47-8 (29 Sept. 1982).
Discusses cost analysis of automated office systems. To determine the potential profits of automation, the author suggests conducting a thorough review of the office operation, including relationships, communication, productivity and costs. Two methods of justifying automation on grounds of cost, cost-substitution and the value-added method, are described. (no refs.)

6393 **Officeman: the professional package deal.**
Which Word Process. & Off. Syst. (GB), vol.3, no.5, p.13-19 (Sept. 1982)
This is a review of Officeman, a package from Corporate Business Systems (CBS) which offers a range of software options providing extensive office automation facilities. These facilities include Postman, the electronic mail component of the system, Guardsman, the confidentiality module in the system, Wordman, the text handling component and Linkman module which provides features to recode the WP output into a form compatible with the Officeman software. (no refs.)

6394 **ICL eases into office systems.**
Which Word Process. & Off. Syst. (GB), vol.3, no.6, p.10-11 (Nov. 1982).
This article examines ICL's approach to the ever-increasing office automation equipment market. ICL's 8801 word processor is reviewed and its Contents Addressable File Store (CAFS) is looked at. (no refs.)

6418 **Office automation with microcomputers in a large undertaking.** M.Zavattaro.
Manage & Inf. (Italy), vol.20, no.10, p.682, 684-7 (Oct. 1982). In Italian.
The article puts forward the thesis that the development of relatively cheap and easily programmable microcomputers has brought about a revolution in the possibilities of introducing automation into the office operations of large organisations. The author claims, and supports his claim by reference to developments in progress, that to an increasing extent it is possible to introduce computers and computer systems into offices on an autonomous basis, and with only peripheral assistance and supervision by professional programmers or software experts. The system described in the article is concerned currently with the replacement of manual by computer-aided processing of orders and related statistical and organisational work. The results so far obtained and the advantages of the new approach are discussed. (no refs.) *C.J.O.G.*

6552 **Integrated design and manufacturing.** B.Owen (Sperry Univac UK, London, England).
New Electron. (GB), vol.15, no.18, p.92 (21 Sept. 1982).
Discusses computer 'controlled' manufacturing. The major activities occur under the control of a computer system consisting of dozens of specialised processors, all communicating with each other. CAD/CAM provides the part definition on which all other steps in the engineering/manufacturing process are based. The geometric description of the part is the unifying thread running through all operations in the factory. A new system called UNIS*CAD which utilises hybrid geometry combining wireframe, surface and solid modelling is described. This system employs a three level distributed processing configuration. (no refs.)

6364 **Office technologies.** F.Johnson (SRI Internat., Menlo Park, CA, USA).
Computerworld (USA), vol.16, no.39A, p.53-4, 58 (29 Sept. 1982).
The author expresses the view that, as office automation continues, the basic elements will become assembled into much more sophisticated and centralised systems, so that, for example, the distinction between word-processing and DP becomes blurred. The interdependence of office automation products means that the market for a particular item will only begin to take off when the right 'infrastructure' exists around it. This idea is discussed in relation to five products: voice store-and-forward; electronic mail; office graphics terminals; the management workstation; video teleconferencing. (no refs.)

6609 **Office automation: digitised image document storage.** D.Bortzy (Correlative Systems Internat., Brussels, Belgium).
Electron. Publ. Rev. (GB), vol.2, no.3, p.195-7 (Sept. 1982).
The author gives an introduction to electronic data storage, stressing the advantages such systems have over ordinary paper, or micrographics. He describes a system at the authors company, called the Virtual Image Processing System, VIPS. This comprises an image acquisition unit which scans a document and stores it using 1.5 Mbit of gross data input, an input acquisition controller where the data stream is packed into 16 bit words, and a minicomputer for servicing entry and retrieval requests. (no refs.)

6429 **A new freeze-frame teleconferencing system.** D.Anastrassiou, J.L.Mitchell, W.B.Pennebaker, K.S.Pennington (Thomas J. Watson Res. Center, IBM, Yorktown Heights, NY, USA).
Proceedings of Computer Networks COMPCON 82. Twenty-Fifth IEEE Computer Society International Conference, Washington, DC, USA, 20-23 Sept. 1982 (New York, USA, IEEE 1982), p.543
Summary form only given, substantially as follows. An overview is presented of a freeze-frame monochrome teleconferencing system which has been developed for use within the PIBM Corporation. The resolution of the video images is 512×480 pixels. Fast system response is achieved through advanced image processing and data compression techniques. Typical graphics images (line drawings, charts, simple text) are transmitted over dial-up telephone lines in approximately 10 seconds using 4.8 Kbit/second modems; typical gray scale image (room pictures) are transmitted in approximately 30 seconds. System performance can be improved by using higher speed modems. The system has two main components. The IBM Series 1 minicomputer provides control, communication, data compression, and storage while an image processing display system implements the image acquisition, processing, and video buffering functions. Several teleconferencing rooms are already operational.

6422 **Office automation: assessing energy implications.** I.Nair, M.G.Morgan, M.Henrion (Dept. of Engng. & Public Policy, Carnegie-Mellon Univ., Pittsburgh, PA, USA).
Telecommun. Policy (GB), vol.6, no.3, p.207-22 (Sept. 1982)
The authors estimate the net energy intensity of manual and automated offices. Subjective probability distributions have been used to characterize the uncertainty about the value of a number of the coefficients required in such calculations. The current generation of automated offices appears more energy-intensive than conventional offices. The energy savings made possible by substituting electronic mail for conventional mail are small compared with this difference. The net impact of substitution for travel will, over the next decade, probably represent less than a few percent of the total energy used in all commuting and other business-related travel and could be either positive or negative. (58 refs.)

5910 **Automatic speech recognition.** J.Peckham (Logica Holdings Ltd., London, England).
New Electron. (GB), vol.15, no.18, p.24-5 (21 Sept. 1982).
Describes Logos, an advanced continuous speech recognition system developed primarily as a development tool. It has a high degree of programmability and flexibility to assist applications development and allowing it to be configured for many different applications. In the Logos architecture spectrum cross sections derived from a 20-channel spectrum analyser are sampled at regular intervals to produce a 'frame' of data. In the front end processor, variable frame rate analysis is then performed to emphasise those regions of greatest spectrum change, arising for example in vowel consonant transitions. In addition, other operations are carried out on the incoming data to compensate for background noise and variations in amplitude. (no refs.)

6363 **Video-conferencing.** E.S.Wilk (Arthur Anderson & Co., Chicago, IL, USA)
Computerworld (USA), vol.16, no.39A, p.39-46 (29 Sept. 1982).
Discusses video teleconferencing, with reference to AT and T's Picturephone meeting service. Videoconferencing uses two-way full motion video and two-way audio to simulate a face-to-face meeting. The author describes a four year field trial of a system involving four co-chairmen in different US cities, in which participants in the speakers city saw themselves and the previous speaker. 35 mm slides and other documents could also be transmitted. It is concluded that full-motion videoconferences are best for groups that need visual feedback of ideas and want a full sense of participation from remote locations. (no refs.)

5900 **Application note: spoken word recognition with a real-time spectrum analyser.** P.Bunn, S.Haigh (Dept. of Electrical, Instrumentation & Control Engng., Teesside Polytech., Middlesbrough, England).
J. Microcomput. Appl. (GB), vol.5, no.2, p.173-81 (April 1982) [received: Nov. 1982]
This paper describes the implementation of a spoken word recognition system on a Commodore 2001 Microcomputer fitted with an Eventide Real Time Spectrum Analyser. A full program implementation including a 'learn' mode is presented which enables a six-word vocabulary to be identified from a trained speaker with above 95% success rate at a word repetition period of approximately 2.2 s. (5 refs.)

6610 **Electronic publishing: convergence with future office systems.** N.H.Blake (Rank Xerox Ltd., London, England)
Electron. Publ. Rev. (GB), vol.2, no.3, p.211-16 (Sept. 1982).
Reviews the current and likely future products in electronic publishing in the office environment. It is not possible to do more than look quickly at some of the key indicators, and to highlight issues which may be important to the publisher. (1 ref.)

3492 **Ease of use [in automated offices].** M D Zisman (Integrated Technol Inc., Haverford, PA, USA)
Computerworld (USA), vol.16, no 39A, p.59-64 (29 Sept. 1982).
Discusses ergonomics in office automation. The author questions the assumption that the most friendly interface is the easiest to use, and shows that ease of learning is a more important attribute. Fast response and good graphics are also valuable. All of these attributes are available today, but users are not prepared, the author states to pay the premium that sellers put on friendly systems. For this reason, one effect of cheaper computing will be ergonomically better office automation. (no refs.)

6391 **Information and the challenge of information technology.** B.T.Campbell (Civil Service Coll., London, England)
Manage. Gov. (GB), vol.37, no.3, p.188-95 (Aug. 1982).
The author writes about information—what it is and how to use it—largely isolated from its technological aspects. The various forms of information are described. The author also outlines what one does with information, and relates function to form using an 'information grid'. Information is divided into 'hard' and 'soft' types. Examples are given. The discussion is developed to cover present-day office practices in relation to existing technology, with emphasis on applications within the British Civil Service. (no refs.)

6417 **The office in 2001.** T.J.Bentley (CNJ Systems Ltd., Harrogate, England)
Manage. Serv (GB), vol.26, no 9, p.6-11 (Sept. 1982).
There is a lot of talk and a lot of money being spent on the information technology of the future, which is going to revolutionise office procedures. So far, however, few organisations have embraced the new technology. Many reasons are given, but one of the main ones is that there is no clear indication of the financial benefits which will ensue from using the new technology. This article looks at the office in 2001. (no refs.)

6366 **Executive Briefing System: a color graphics development system for the Apple II.** P.Callamaras (AFIT/LS, Wright-Patterson AFB, OH, USA).
BYTE (USA), vol.7, no.11, p.164-70 (Nov. 1982).
It takes a lot of time and effort to plan, rehearse, and prepare an effective slide presentation. The Executive Briefing System (EBS) is a faster, more flexible, and more professional alternative. Lotus Development Corporation's EBS lets you make your own graphics presentations with an Apple II computer, a color or black-and-white monitor, and a printer. And that's not all—the system is even easy to use. (no refs.)

3572 **Steps in development, on the road to the office of the future.** D.Steinle (Peter Reimann GmbH, Hildrizhausen, Germany)
Sysdata (Switzerland), vol.13, no.10, p.13-14 (4 Oct. 1982). In German.
Points out that new technological means, relevant to commerce, have been applied mainly in the secretarial area but could be spread wider. More generally, there is a need to match the increasing power of information-handling and communication with organisational planning, coordination and training. (no refs.) *G.F.F.*

5898 **Voice programming—a lucky accident makes it reality.**
Mod Off Procedures (USA), vol.27, no.9, p.154 (Sept. 1982).
The idea of programming a computer by talking to it is being investigated in a joint venture between two firms, Southwest Microcomputer Systems and DJ 'AI' Systems Ltd. The former markets voice recognition systems and the latter is responsible for a software package called 'The Last One'. The two companies are co-operating in an effort to combine these two products to allow voice programming of a computer. (no refs.)

6362 **DEC. A winning hand? [office automation].** A Dooley
Computerworld (USA), vol.16, no 39A, p 29-33 (29 Sept 1982)
Discusses how the minicomputer manufacturer, Digital Equipment Corp. is entering the office automation market. The new market penetration is with a new range of personal computers and word-processing and electronic mail systems that are already available. The company plans to sell 100000 personal computers in their first year. (no refs.)

5817 **New life for an old technology.** B Harrison.
Infosystems (USA), vol.29, no 11, p.51-4 (Nov. 1982).
Optical character recognition (OCR) is almost synonymous with information acquisition. The technology's strengths are not likely to become obsolete. OCR is an integral part of office automation. (no refs.)

6368 **Communications: uniting the office of the future.** P Portway.
Mod Off Procedures (USA), vol.27, no 8, p.35-50 (Aug. 1982)
This paper deals only with the impact of current telecommunications capabilities of the office, and offers some analysis of near-term trends. (no refs.)

5899 **Voice entry: Terminals you can talk to.** E.F.O'Neil (Interstate Electronics Corp., Anaheim, CA, USA)
Data Commun (USA), vol.11, no.10, p.133-4, 137-8, 141 (Oct. 1982)
Computer recognition of human speech is proving to be a useful adjunct to the keyboard. The state of this voice-entry technology is now at a point where it is feasible as well as economically practical to incorporate it into today's terminals and networks. The use of voice recognition is already well established in the business, industrial, and medical fields. Computerised car-repair estimates by voice input, for example, are attracting interest from automobile insurers. The author looks at the technology, and some examples of its application. (no refs.)

3540 **Copyright and videotex—ideas in concert or conflict?.** C.A.Risher (Copyright & News Technol. for the Assoc. of American Publishers, Washington, DC, USA).
Videodisc/Videotex (USA), vol.2, no.3, p.212-15 (Summer 1982).
The author discusses the copyright law with respect to its impact on videotex technology. The article addresses the problems of copyright for collections of data, exclusive rights of copyright holders, notice and deposit, and regulation. In addition, she discusses three related court decisions. WGN vs. United Video, WOR-TV vs. Eastern Microwave Inc., and Universal City Studios Inc. vs. Sony Corporation of America. (1 ref.)

6390 **Appraising the worth of office technology systems.** R N Burton (Nuffield Coll., Oxford, England).
Manage Gov (GB), vol.37, no.3, p.163-76 (Aug. 1982).
The author writes about ways of judging the value of bringing in office technology. The factors that have to be considered are described, and different ways of weighing up office automation are outlined. The usual cost-benefit scheme is said to be inadequate as the technology develops into a more fully-automated office; problems in designing other methods for judging office automation are shown. (no refs.)

3527 **Security [office automation].** J Lobel.
Computerworld (USA), vol.16, no.39A, p.49-52 (29 Sept. 1982).
Expresses the view that the abuse of computer and data communications will keep pace with the growth of office automation unless planners and users pay more attention to security and privacy. To protect an organization's Achilles' heel—the area of unauthorized access, fraud or malicious attacks—OA planners and users should be aware of the five 'perils' or high-risk areas: people, invisibility, convenience, decentralization and fuzzy security responsibilities. (no refs.)

6410 **Trends in office automation technology.** R.A.Myers (IBM Thomas J Watson Res. Center, Yorktown Heights, NY, USA).
IEEE Commun. Mag (USA), vol.20, no.5, p.10-14 (Sept. 1982).
Office systems and data processing systems, treated separately, are converging rapidly. Office applications are centered around a text-oriented image work station capable of quality printing and broadband communications. The author reviews the status and trends of some key technologies and some significant new applications. (no refs.)

6385 **Producing prettier graphs with PFS.** N.Ash.
Micro Decis. (GB), no.13, p.183-4 (Nov. 1982).
Presentations and reports are important in every business, but the actual production of the graphs and charts is always something that takes lots of time. Now a new package for the Apple II from PFS, creators of the Personal Filing System claims to make badly produced graphs and charts a thing of the past. (no refs.).

3482 **We're not really sure how many we have . . .** A.D Wohl, K.Carey (Advanced Office Concepts Corp., Bala Cynwyd, PA, USA).
Datamation (USA), vol.28, no.12, p.106-8 (Nov. 1982).
Personal business computers are being installed in almost every office. Advanced Office Concepts surveyed corporate users to determine the extent of the usage of microcomputers. (no refs.)

6359 **Facsimile joins the computer age.** S.L.Shanahan
Infosystems (USA), vol.29, no.9, pt.1, p.126-8, 130-1 (Sept. 1982).
Facsimile has come of age after 100 years because of the advantages of digital technology. By the end of 1982, more than 350000 'fax' machines were in use by businesses—with digital machines representing the most significant growth area. (no refs.)

43359 **Linking up your business systems.**
Bus. Inf. Technol. (GB), no.10, p.32-3, 35-6 (May 1982).
The author presents an investigation of the developments which will affect internal communications in your organisation. While manufacturers battle it out over who will dominate in what they believe will be a massive—and enormously profitable—business, the author takes a look at the options available. What are local area networks? How do the different types compare? What benefits can they offer large—and small—offices?. (no refs.)

43360 **Electric office: a legend in its own time?.**
Bus. Inf. Technol. (GB), no.10, p.47-8 (May 1982).
Clerical staff costs are higher than ever. Equipment costs continue to fall. We have the technology. So why are we still waiting for the office of the future? Why does the fully electronic office remain beyond the horizon and the paperless office remain a fantasy? The author explains the factors that are holding back development—and the need to prepare for the day when, finally, the new dawn arrives and the dream becomes reality. (no refs.)

43361 **Taking a close look at office automation.**
Bus. Inf. Technol. (GB), no.10, p.51-2 (May 1982).
The Borough of Kingston upon Thames took its first steps into word processing carefully—by starting in just one department and observing closely. In hindsight, what lessons has a large local authority learned from its experience of installing word processing systems in its offices?. (no refs.)

43362 **Trends towards an automated office.**
Bus. Inf. Technol. (GB), no.11, p.28-34 (June 1982).
This paper considers the practical implications of 'convergence'—the gradual merging of data processing, office automation and new communications systems. It looks at how small computers, word processors and the art of programming will continue to develop over the coming few years. (no refs.)

43423 **User experience in using Ethernet to improve professional productivity.** J.P.Wilkie (Reprographics Business Group, Xerox Corp., Webster, NY, USA).
IEEE International Conference on Communications, ICC '82. The Digital Revolution, Philadelphia, PA, USA, 13-17 June 1982 (New York, USA: IEEE 1982), p.3C.4/1-3 vol.2
This presentation summarizes the techniques that have been developed to identify and take advantage of ways to improve the productivity of office personnel via installation of Ethernet and technology. Much of the recent office automation literature describes, in varying degrees of detail, the sophisticated office equipment and networks now available with little or no attention being paid to 'productivity' of the professional. (no refs.)

43374 **Developments in the electronic office.** D.Casey.
Data Processing (GB), vol.24, no.4, p.8-11 (April-May 1982). [received: Sept. 1982]
As the move towards the paperless office continues, business executives are involved in office automation. This article discusses the present state of automated office systems. Office automation is a development from word processing. Automated offices are based on local networks, which may be star, ring or Ethernet type. Speech is now being integrated into OA facilities. (no refs.)

43412 **Silicon Office.** K.Lang.
Pers. Comput. World (GB), vol.5, no.7, p.138-41, 181 (July 1982).
Reviews a file management system with word processing and network connections. Silicon office, from the Bristol software factory, runs on the 80-column screen PET and takes an integrated approach, providing facilities for word processing and for transmitting information between silicon office systems, as well as file management functions. Thus the user has only a single package to learn, with a consistent user image across the three functions. (no refs.)

42953 **Designers of voice-recognition systems target speaker-independent, pause-free input.** E.R.Teja.
EDN (USA), vol.27, no.17, p.67-74 (1 Sept. 1982).
Manufacturers of voice-recognition equipment are investigating techniques whereby the technology can overcome the two major hurdles barring its universal acceptance. Typical systems must currently be trained by each speaker (i.e. are speaker dependent), and can recognise only isolated words and short phrases—not the continuous speech of normal conversation. In part, progress in both areas results from the availability of powerful chips such as the newest 16-bit microprocessors. This article discusses products which various manufacturers have under development. (no refs.)

40579 **People: the most important part of the office of the future.** V.Krasan.
Interactive Comput. (USA), vol.8, no.7, p.206-9 (Summer 1982).
Discusses pitfalls, problems, and possible solutions in ensuring acceptance of the office of the future by people operating in it. (no refs.)

42950 **Speak to your computer.** D.Ridyard
Elektor (GB), vol.7, no.11, p.45-8 (Nov. 1981). [received: July 1982]
Describes a simple and flexible speech recognition system using an M6800 microprocessor and involving a minimum of external hardware, recognising ten words in less than 1.5 seconds, with better than 90% accuracy. The removal of the key pad interface between man and computer has many advantages and has long been the pipedream of every programmer. By using this M6800 system it can become a reality for every home computer. (no refs.)

42951 **Voice-output units show improvement in speech quality, vocabulary, price.** E.R.Teja.
EDN (USA), vol.27, no.11, p.71-80 (26 May 1982).
The voice quality, flexibility and cost effectiveness of voice-output devices continues to improve. The major areas of competition among manufacturers centre on the tradeoffs inherent in voice-output peripherals. Typically, such devices offer either low memory usage, highly intelligible speech or unlimited vocabulary. Breakthroughs in speech algorithms and memory-device technology, however, are blurring these distinctions. A survey of available speech synthesis products is made. (no refs.)

43395 **You can wait to automate.** W.J.Boczany (Upjohn Co., Kalamazoo, MI, USA).
J. Syst. Manage. (USA), vol.33, no.6, p.26-8 (June 1982).
It takes discipline to avoid mistakes in the rush to the office of the future. The author maintains that the important thing is that technology is not an end in itself but rather a means to an end. The real challenge of this technology is to improve productivity in the office. It is not to amass hardware. (no refs.)

42916 **A simple IBM I/O Selectric typewriter controller.** J.Ortega, W.L.Palya (Jacksonville State Univ., Jacksonville, AL, USA).
Behav. Res. Methods & Instrum. (USA), vol.14, no.2, p.99-102 (April 1982). [received: Aug. 1982] (11th National Conference on the Use of On-Line Computers in Psychology, Philadelphia, PA, USA, 1981).
A simple inexpensive IBM I/O Selectric typewriter controller is described. The board plugs into an RS-232 port and enables letter-quality output. Computers with editing capabilities can therefore be used as word processors for as little as $35, about 8 h of labor, and the cost of the typewriter. The controller is a firmware-governed microprocessor and, as a result, it is easily tailored for special applications. Hardware and software are discussed. (no refs.)

42943 **Talking terminals. Text-to-speech translation involves looking at the problem from a different 'viewpoint'.** D.Stoffel (Scion Corp., Reston, VA, USA).
BYTE (USA), vol.7, no.9, p.218-27 (Sept. 1982).
A talking terminal resembles a conventional computer terminal except that it speaks information instead of, or in addition to, displaying that information visually. This article aims to offer an understanding of the human factors involved in selecting a talking terminal and to compare current talking-terminal products. (no refs.)

43347 **Word processing: 50 years in retrospect.** K.A.Abrens (The Concept People, Minnetonka, MN, USA).
Office (USA), vol.95, no.6, p.101, 104, 140 (June 1982).
The history of word processing is described, beginning with the invention of the typewriter and telephone and continuing through the development of the first commercially successful, pneumatically driven automatic typewriter during World War I and of electric typewriters to modern computerised and networked systems. (no refs.)

43344 **A new office concept geared to people and productivity.**
Office (USA), vol.95, no.6, p.19, 22 (June 1982).
Possible developments in office technology are discussed. The three-floor office concept produced by Environetics International Inc. of New York, major features of which are executive desks fitted with banks of minicomputers (replacing in/out baskets, diaries and so on) and an advanced video conference centre is described. The use of remote terminals to allow employees to work largely at home is mentioned, as is an existing computer system with an electronic mail facility. The benefits in space-efficiency of the new technology are outlined and some of its limitations and drawbacks are briefly indicated. (no refs.)

43405 **Electronic mail: its place in the automated office.**
Mod. Off. & Data Manage. (Australia), vol.21, no.5, p.18-25 (June 1982).
A new catchword—electronic mail—has arrived to supersede 'Office of the Future'. What is it, and where does it fit into the automated office? Will it reduce the cost of distributing information? How fast is it? This article answers these questions. (no refs.)

42931 **A new niche for ink-jet printers.** P.Duffield (Advanced Color Technol. Inc., Chelmsford, MA, USA).
Mini-Micro Syst. (USA), vol.15, no.7, p.187-90, 192 (July 1982).
Ink-jet, impact photographic and xerographic technologies for colour graphics hard copy are compared and briefly explained. The various ink-jet techniques are examined more closely. Data is given on available printers using the four technologies. The case for ink-jet printers is then briefly argued and a short description of the Advanced Color Technology ACT 1 drop-on-demand colour ink-jet video copier is given. (no refs.)

42932 **Printers in Europe.**
Syst. Int. (GB), vol.10, no.7, p.27-8, 31-2 (July 1982).
The computer printers market in Europe is of a massive dimension and a tough battleground for even the hardiest vendor. The author presents the findings of market research consultancy Frost & Sullivan. (no refs.)

40544 **An office automation course.** P.L.Juell (Dept. of Math. Sci., North Dakota State Univ., Fargo, ND, USA).
SIGCSE Bull. (USA), vol.14, no.3, p.22-3 (Sept. 1982).
At the University of Wyoming a course was developed on office automation. This course attempts to expose the student to a number of the software tools being used in the 'automated office'. The exposure is both in the lecture format and by having the students use the software tools available at this installation. There are three parts to the course. The first part discussed text editors. The editors used are the UCSD text editor, and the CYBER's text editor, XEDIT. The second part discussed text processors. The text processors used are TEXTJAB, and RNF, both of which are available on CYBER computers. The last part discussed other topics of interest including: utility programs, electronic mail, data base management systems and some of the effects of technology on office operations. (4 refs.)

42934 **Printers make an impact.** R.Fenner.
Syst. Int. (GB), vol.10, no.9, p.27-31 (Sept. 1982).
The author assesses the market for serial impact dot matrix printers in western Europe. A survey of printers from 31 different manufacturers is given, which gives the following information about several models from each manufacturer; printing speed; dot matrix format; line width; character sets; maximum paper width; buffer size; interfaces; price; and suppliers. (no refs.)

43380 **Electronic mail: magic or mania? A tutorial.**
EDUCOM Bull. (USA), vol.17, no.2, p.30-2 (Summer 1982).
Presents a tutorial to explain some of the basic features and operations of 'high-tech' yet easy to-use electronic mail systems. (no refs.)

40523 **Word processing: teach concept, not operation.** J.S.Fields (Detroit Edison Co., Detroit, MI, USA).
Office (USA), vol.95, no.6, p.32, 34 (June 1982).
The case for schools' placing less emphasis on equipment training, which most employers are willing to provide, and more on other aspects of the job is argued. Each of these aspects is examined and its importance explained; they include the reasons for and concepts behind word-processing's introduction, grammar skills, customer relations, job attitudes, career paths and dress. (no refs.)

40524 **Training prescription: take the awe out of automation.** A.P.McElhone.
Office (USA), vol.95, no.7, p.86-8 (July 1982).
In terms of supervisory time and trainee downtime, word-processing training is a major expense in industry. Most vendors charge for training second-generation staff because of the rapid WP turnover. The company that prefers to offer employees a career opportunity must develop training techniques that speed the day of operator productivity. (no refs.)

40513 **The human engineering effect on productivity.** G.Fossella (Gregory Fossella Associates, Boston, MA, USA).
Office (USA), vol.95, no.6, p.84-8 (June 1982).
The place of human engineering, or ergonomics, in the design of equipment and machinery is explained. Important ergonomic design considerations are safety, noise levels, comfort, ease of use and service (such as changing ribbons or replacing copier fluids), and user acceptance of change. The kind of research which can be done in order to take account of these factors is described. Examples used are CRT screens, typists chairs, equipment operator stations and shredding machines. (no refs.)

43369 **Office communications: reshaping our society?.** J.Taylor (Univ. de Montreal, Montreal, Quebec, Canada).
Comput. Commun. (GB), vol.5, no.4, p.176-80 (Aug. 1982).
A revolution in office communications technology is about to overtake organizational administrators. This revolution has two sides: one concerned with the production of organizational intelligence and the other with its distribution. The author suggests that new technology in the office will have a greater impact on society than is currently expected. The older computer technology (large mainframe-based systems) tended to promote 'centralization', whereas the new communications technology (videotex, fibre optics) promotes 'distributed intelligence'. A study of the effect of new technology in one company is examined. Its use influenced organizational structures within the company and altered human interaction patterns. The paper suggests that society needs to rethink the very notion of an organizational system as communications technology advances. (no refs.)

43364 **Executive Briefing System.** J.Edwards.
Pop. Comput. (USA), vol.1, no.11, p.146-9 (Sept. 1982).
Reviews Lotus Development Company's Executive Briefing System (EBS). Inside one binder is everything one needs to quickly generate concise and visually stunning presentations. Designed for operation on an Apple II or Apple II Plus with one or more disk drives, the system is a practical example of how computers can help executives save time and improve the quality of their work. What the EBS does, in essence, is turn the Apple into an electronic slide projection system. A typical presentation consists of a series of high-resolution color graphics (text, tables, and drawings) that are viewed on a conventional color video display. One can arrange the 'slide show' in advance, and the computer handles the actual execution of the presentation. (no refs.)

43421 **The electronic office. A management guide to the office of the future.** D.Jarrett.
Aldershot, Hants., England: Gower Publishing Company (1982), 165 pp. [0 566 03409 3]
The following topics are dealt with: offices and businesses; charges in the office; offices today and tomorrow; products of the new technology; problems, pitfalls and procedures; implementing the electronic office.

43371 **Office automation: the next battlefield.** A.D.Wohl.
Datamation (USA), vol.28, no.8, p.34-9 (July 1982).
Reviews the forthcoming competition between IBM and AT&T for share of the market which is already keenly contested. (no refs.)

43349 **Paving the way for universal document interchange.** T.C.Jones (American Nat. Standards Inst., New York, NY, USA).
Data Commun. (USA), vol.11, no.7, p.123-31 (July 1982).
At present, various industries, such as banking, steel, electrical parts, automobile parts, industrial parts, drugs, libraries and groceries have their own standard document formats for electronic communications, but no widespread standard is in use. The ANSI X.12 standard defines document formats and a common transfer syntax and is thus the basis for electronic document interchange (EDI) between any two companies' computers. The development, scope and implications of X.12 are discussed and the relationship between the X.12 EDI standards and the OSI model is considered. (no refs.)

43350 **Introduction of a local network office automation as a long term investment.**
Sysdata (Switzerland), vol.13, no.7-8, p.5-6 (July 1982). In German.
Gives a practical example of handling local area networks (LAN), that has withstood its christening of fire. As an example the datapoint-local network ARC at Esso (Schweiz) AG is shown. The author also shows how 'open' this new technology is as opposed to conventional data transmission via an open telephone network. The first steps taken by Esso's management are mentioned, then the theory and finally the practice. Also discussed is the program development, telex processing, data protection and access to the data. (no refs.) *A.N.K.*

2611 Interface concepts for electronic forms design and manipulation. M.Bernal (Xerox Parc-Palo Alto Res Center, Palo Alto, CA, USA).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct 1981 (Amsterdam, Netherlands: North-Holland 1982), p.505-19
The global amount of information stored or transiting in offices is growing very quickly. Data base management systems are likely to be widely used as basic components for implementation of a large number of office information systems. User interfaces which recreate procedures usually applied in this type of environment will certainly be very successful. User interfaces based upon electronic forms manipulation seem to be particularly appropriate to this kind of system. Already a number of office information system prototypes have been implemented which use this type of communication interface. Furthermore this type of interface looks to be in good agreement with a fundamental problem in office automation integration. This paper is concerned with development and conception of this kind of interface for office information systems. Their essential characteristics are exposed. Basic ideas and principles for designing both electronic forms definition and manipulation systems are developed. An evaluation of different data base models one could use for designing such form processing systems is also realised. This evaluation is based upon a decomposition of electronic forms into different types of data. This approach is based on the author's experience in various projects and some evidence from the literature. (12 refs.)

2074 Optical fiber loop network system for distributed computer control. H.Mitsuoka (Kimitsu Works, Nippon Steel Corp., Kimitsu, Japan), M.Takahashi, H.Fushimi, M.Terada.
Hitachi Rev. (Japan), vol.31, no.3, p.119-24 (June 1982).
Local area networks have become larger and more advanced in process control and office automation fields. Particularly in process control fields, the interconnection and integration of computer systems, which are now widely distributed in-house with production process units, are urgently needed in severe environmental conditions. However, in interconnections of the computer system, especially interconnections between a central processor and various input and output (I/O) devices, concentration congestion of the cables for interconnections has caused problems. Additionally, improvements in the flexibility of the computer system construction are required. This paper describes two optical loop systems which meet these requirements. These are a wide-area, broad-bandwidth optical loop system for large-scale process control computer networks (10 Mb/s optical fiber data way system) and a low cost, microcomputer controlled optical loop system for interconnections between a central processor and various input-output devices (1 Mb/s optical I/O loop bus system). (3 refs.)

2065 Token-passing protocol boosts throughput in local networks. J.A.Murphy (Datapoint Corp., San Antonio, TX, USA).
Electronics (USA), vol.55, no.18, p.158-63 (8 Sept. 1982).
As competing protocol proposals for local networks jockey for position in the lengthy proceedings of standards committees, one local-net concept that dates to the mid 1970s is out in front in the marketplace. The Arcnet networking protocol used with the ARC multiuser system is found in more than 4000 installations worldwide. Arcnet combines the advantages of token-passing network control, highly refined by years of development, with those of a baseband communications system. What is more, implementation is considerably eased because Arcnet includes automatic configuration and transmission procedures that unburden the host system. Local nets and the distributed processing architectures they serve ideally couple resource sharing and functional stability so that the loss or addition of a node can occur with no noticeable interruptions of service to other nodes. Arcnet settles comfortably into this design through the use of a contention-free token-passing protocol that guarantees network access to each processor within a known time period. (no refs.)

44 The control of computer-based fraud. J.M.Carroll (Computer Sci. Dept., Univ. of Western Ontario, London, Ontario, Canada).
Comput. & Secur. (Netherlands), vol.1, no.2, p.123-38 (June 1982). [received: Oct. 1982]
Computer crime, the glamor crime of the 1970s, will become in the 1980s one of the greatest sources of preventable business loss. As businessmen entrust more and more of their assets to computer systems, eventually all business crime will become computer crime. Hard times in a permissive society will prompt greater numbers of knowledgeable, but unprincipled, persons to steal from their employers. Meanwhile, a hasty and largely unplanned plunge into computer networking, electronic funds transfer, and distributed data processing has greatly exacerbated existing security exposures in computer systems. Against this backdrop, the forces of law and order can rely only on inadequate legislation and largely untrained personnel to stem a potential hemorrhage of business profits. Control of computer-based fraud is first and foremost a do-it-yourself task. This article surveys the ways to go about it. (no refs.)

50 At the mercy of machines [automation]. E.Kirchner.
Datamation (USA), vol.28, no.10, p.252-61 (Sept. 1982).
Discusses the role of office automation and how it will affect employment and jobs in the USA. (no refs.)

47 A guide to NBS computer security literature. E.S.Highland, H.J.Highland (Highland & Highland, Elmont, NY, USA).
Comput. & Secur. (Netherlands), vol.1, no.2, p.164-76 (June 1982). [received: Oct. 1982]
This bibliography lists the many special reports and technical studies in the field of computer security that have been published by the US National Bureau of Standards (NBS). In addition to an abstract of each of the published volumes, there is an index of key topics included in the more than 40 volumes. (45 refs.)

48 Cryptography old and new. M.Willett (Dept. of Math., Univ. of North Carolina at Greensboro, Greensboro, NC, USA).
Comput. & Secur. (Netherlands), vol.1, no.2, p.177-86 (June 1982). [received: Oct. 1982]
Classical cryptographic schemes which were in use prior to World War II are described and illustrated. Several factors are identified which have contributed to the marked difference between old and new cryptography, including: the computer, the need for cryptography in the public sector, advances in communications technology and the need for standardization. The Data Encryption Standard (DES) of the National Bureau of Standards is discussed. This tutorial ends with a summary of the recommendations of the Public Cryptography Study Group, which was formed by the American Council on Education at the urging of the National Security Agency. (20 refs.)

2605 Foundations for office semantics. G.Barber, C.Hewitt (MIT, Cambridge, MA, USA).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.363-82
Develops the semantics of work in the office in terms of the concepts of application structure and organizational structure of the office. Application structure is concerned with the rules and constraints of the domain of the office work such as accounting, law, or social security regulations. Organizational structure is concerned with the informal and formal social relationships within the organization. Detailed knowledge of office application structures and organizational structures is necessary in order to understand how they interact and evolve. Problem solving is a pervasive activity within offices which is performed when office workers apply general knowledge about office procedures to the specific cases encountered in their daily work. A description system (named OMEGA) can aid in the construction of interactive systems whose intent is to describe the application and organization structures. Using the knowledge embedded within itself about the office, OMEGA can help support office workers in their problem solving processes. (38 refs.)

2609 The office activities of two organizations. C.S.Thachenkary, D.W.Conrath (Centre for Evaluation of Communication-Information Technol., Univ. of Waterloo, Ontario, Canada).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.453-69
Provides some preliminary profiles of the information processing and communications activities of white collar workers. Such knowledge is essential in understanding how to design effective and efficient burotique technologies. The article describes a data gathering methodology. Results indicate that those in management level positions have quite different tasks and communication characteristics than non-managers. Managers usually perform cognition oriented and intellectual type functions and spend a high proportion of their time in communications. Non-management staff, on the other hand, perform tasks which are more algorithm oriented and spend less time in communication. To be effective, burotique technologies would need to respond to the differences in the tasks the various groups perform and their communications activities. (4 refs.)

2580 Telemail: an electronic postal system for office automation. A.Lazzari, G.Rosenkranz
29 Congresso Scientifico Internazionale per L'Elettronica. Contributo dell'Elettronica e della Telematica ai Servizi Postali (29th International Scientific Congress on Electronics. The Contribution of Electronics and Telematic Systems in the Postal Services), Rome, Italy, 23-24 March 1982 (Rome, Italy: Rassegna Internazionale Elettronica Nucl. ed Aerospaziale 1982), p.107-16. In Italian.
Telemail is an advanced electronic message system (EMS) developed and operated by GTE Telenet Telemail, in contrast to conventional communications systems which are transmission oriented, emphasizes message handling functions before and after transmission. Worldwide access to the system is readily available via GTE Telenet's Public Data Network. Telemail's features include flexible expansion, high availability and reliability, selectable delivery options, sophisticated text editing and file handling, tailored administrative functions and increased security. Additional capabilities, such as data base retrieval, are being developed to expand Telemail's scope from that of an EMS to an integrated information system. (no refs.)

2501 Aspects of office productivity.
Bus. Syst. & Equip. (GB), p.42, 44 (Sept. 1982).
Looks at mailing and forms handling, how to find good temporary staff, the benefits of systems furniture and the thorny problem of acoustics. (no refs.)

2615 An approach to office information storage and retrieval: hardware and software issues for electronic filing. J.Ronmer (Centre de Recherche, CII-HB, Louveciennes, France)
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct 1981 (Amsterdam, Netherlands: North-Holland 1982), p.577-81
Office automation should yield new concepts and new tools among all the layers of systems architecture, from users' languages down to hardwired operators. The author illustrates this opinion with the example of electronic filing systems. As a hypothesis, he considers the following architecture: a set (network) of numerous individual workstations together with one or more shared servers called Database Machines, consisting either of general purpose mainframes or of specialized backend database-oriented processors. He advocates decentralizing data in each workstation, which means (1) decentralize data files (inside relatively large Winchester disks), (2) decentralize data processing power (special purpose hardware), (3) decentralize users' data interface (interactive, visual, 'model-free'). (5 refs.)

2606 Office modelling: the CETMA/KAYAK families of models. P.Dumas (Univ. de Toulon, La Garde, France), G.du Rourc
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct 1981 (Amsterdam, Netherlands: North-Holland 1982), p.385-402
The KAYAK Project is a French national program of research in office automation which has engaged studies to evaluate social, human, and organizational impacts of the coming office automation on technologies. These impact studies are being conducted at the same time as technological prototypes and designed and built, which shows a rather new concern for human factors in a primarily technical project. Within this 'organizational' field, the authors have developed models aimed at better understanding of what an office is, what its needs are, how an office automation system should or could be implemented with what consequences, and how a proposed or implemented system could be evaluated. This paper proposes some models which partially answer these objectives, and discusses some results of field research already conducted. (10 refs.)

2613 Human factors aspects in the design of command languages. D.L.Scapin (INRIA, Le Chesnay, France).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct 1981 (Amsterdam, Netherlands: North-Holland 1982), p.541-9
Command languages should be built from words of the users' natural language. Whereas research has been conducted on more complex languages, little attention has been given to more simple languages, without embedded features and where each computer command label corresponds to one function only. For those languages, the main design aspect concerns the choice of labels so that the users can understand, memorize and use them; the main difficulty being to extend everyday words to computer functions. The author presents three different approaches developed to investigate computer commands in restricted natural language: evaluation of existing languages, study of experimental languages that differ on linguistic or semantic variables, and research on the design of languages by the users themselves. (15 refs.)

2581 The solution of electronic mail in the context of the business application office automation. G.Cara Romeo, R.Romano
29 Congresso Scientifico Internazionale per L'Elettronica. Contributo dell'Elettronica e della Telematica ai Servizi Postali (29th International Scientific Congress on Electronics. The Contribution of Electronics and Telematic Systems in the Postal Services), Rome, Italy, 23-24 March 1982 (Rome, Italy: Rassegna Internazionale Elettronica Nucl. ed Aerospaziale 1982), p.117-27 In Italian.
Describes the electronic mail approach developed by Olivetti, based on an Olivetti CT 382 system that is performed simultaneously 'message switching' and other 'office automation' functions. Special evidence is given to the 'mail boxes' organization, to their logical connection with the work stations and to their functions in relation to the organization structure of the firm. The possibility of implementing such a system without modifying any characteristic of the existing telecommunication network is also stressed. (no refs.)

2620 Computer aided message systems: an organizational perspective. J.R.Taylor (Univ de Montreal, Montreal, Quebec, Canada).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.631-51
Presents the results of a field study which was undertaken to evaluate, at least in a preliminary way, the impact of the introduction of computer aided messaging into an actual workgroup situation within a large organization. Proposes a hypothesis concerning structural effects of computer conferencing, and argues for a redefinition of the field of burotics to include consideration of organizational variables. The proposed hypothesis exploits elements of Simon's information based theory of organization in order to extend the basis of evaluation of message systems beyond a critique of immediate effects on personal work habits to include a consideration of organizational parameters. (14 refs.)

2504 Electronic mail's growth rests on its acceptance. S.S.Kay (Hannagan & Associates Inc., Schaumburg, Il., USA).
Office (USA), vol.96, no.2, p.36, 52, 60 (Aug. 1982)
Describes an electronic mail system for office communication. The potential benefits and possible pitfalls of installing such a system are described. (no refs.)

2508 Corporate electronic mail—a communication-intensive application of information technology. A.B.Crawford,Jr. (Digital Equipment Corp., Maynard, MA, USA)
Manage. Inf. Syst. Q. (USA), vol.6, no.3, p.1-13 (Sept. 1982).
Extending the ARPANET technology of an asynchronous, packet-switched electronic mailbox, the Corporate Information Systems department introduced a pilot mail service within Digital Equipment Corporation which has now grown into a full-fledged production system with some 6000 users—and is still growing. The architecture for the Electronic Mail System (EMS) is based on a multinode network of dedicated minicomputers. Technical, administrative and human factors, and cost considerations were recorded throughout the pilot and production period. Lessons learned have highlighted the need for better network engineering, capacity planning, and operational policies/procedures. User surveys were used to capture demographic data and reaffirmed the highly favorable impact on personal productivity and each manager's effectiveness. Recommendations are offered on how to plan for a pilot and to assure a smooth transition to production service. (8 refs.)

2610 MOBILE-Burotique: prospects for the future. P.Dumas (Univ de Toulon, La Garde, France), G.du Roure, C.Zanetti, D.W.Conrath, J.P.Mairet
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct 1981 (Amsterdam, Netherlands: North-Holland 1982), p.471-80
The group 'Organization-Methodology', part of Project KAYAK, has the objective of establishing and experimenting with a methodology geared to help specify, introduce and evaluate burotique in its field of application. This paper describes, in a first section, the preliminary phases and results obtained to date, which established the basis for a unified methodology. Such empirical results focus on the identification of relevant factors for the 'office of the future'. A second section describes the fundamental axes of such unified methodology, named MOBILE-Burotique. Basic questions here are questions of measure, its instruments and possible results. The third section briefly describes a scheme of utilisation and the fourth section presents a research plan for the next year. (6 refs.)

172 Nestar's local area net has measurable track record. J.Cashin (Hanscom Air Force Base, Bedford, MA, USA)
Small Syst. World (USA), vol.10, no.9, p.12 (Sept. 1982).
Describes the Nestar Systems local area network, based on Apple II microcomputers. The authors aim is to discover whether this system offers the features of a network demanded by end-users. (no refs.)

173 Bringing in personal business computers. G.S.Blundell (Eastern Mangement Group, Morris Plains, NJ, USA).
Small Syst. World (USA), vol.10, no.9, p.24-31 (Sept. 1982).
Discusses two key questions that the DP manager must answer before he can successfully integrate personal business computers into existing systems and company strategies. The questions are: 'Where is the personal business computer industry heading?' and 'What issues are critical to successfully purchasing and using personal computers in the business setting?'. (no refs.)

2601 Computer conferencing—past, present, and future. B.I.Strom (Bell Labs., Murray Hill, NJ, USA)
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.287-315
Computer conferencing is a technique for users to confer with each other, usually asynchronously, using a computer to buffer their transcripts. One such computer conferencing system, the Computer Buffered Information Exchange (CBIE) was recently reimplemented to execute under the UNIX operating system, and has been used successfully for a number of conferences at Bell Laboratories. This paper discusses computer conferencing in general, and the Computer Buffered Information Exchange in particular. It contains descriptions of the work of other researchers in the field, a detailed description of computer conferencing, and CBIE, and suggestions for future research. (57 refs.)

2608 A trial of office activity methodology application in France. M.Marcus, J.J.Roubiere, C.Zanetti (INRIA, Projet KAYAK, Le Chesna), France)
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.427-52
Describes three field studies done in France. The paper starts with a description of the chosen organizations highlighting relevant differences. Procedures for data collection and related problems form the following section. Since one of the organizations involved a very small number of subjects, it describes it in detail, including manually computed results in the next section. The paper closes with some pointers on methodological problems (and acceptance) and a discussion on different possibilities for data analysis with inferences for future usage of similar methodologies. (7 refs.)

177 Advice to the buyers of office computers. B.S.Rump, T.A.Elmiger.
Svidata (Switzerland), vol.13, no.9, p.1-11 16 Sept. 1982). In German.
Discusses generally what is on the market in the way of office computers, and offers advice to the people who must make the choice of which computer to buy. (no refs.) A.N.K.

2362 Office-by-Example: A business language that unifies data and word processing and electronic mail. M.M.Zloof (IBM Thomas J Watson Res. Center, Yorktown Heights, NY, USA)
IBM Syst. J. (USA) vol.21, no.3, p.272-304 (1982).
The age of the nonprogrammer user of computing systems is at hand, bringing with it the special need of persons who are professionals in their own right to have easy ways to use a computing system. Through the programming language discussed in this paper, executives and other office personnel can perform data and work processing and communications via terminals. This language, called Office-by-Example, provides rich and powerful access to the computing system computation, data base, communication, and display facilities. Discussed and illustrated by examples are a two-dimensional screen editor, triggers, and data bases, as well as word processing, electronic mail, customized menus, and application development. (23 refs.)

2614 Text retrieval techniques for the automated office. W B Croft (Dept of Computer & Information Sci., Univ. of Massachusetts, Amherst, MA, USA), M T.Pezarro
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.565-76
The advent of the automated office will have far reaching effects One of its principal consequences will be a dramatic increase in the amount of textual information stored in machine-readable form The indexing, filing and retrieval of this information will be among the most important functions of office information systems This paper describes techniques that have been developed for these tasks and how they can be applied to the office environment The techniques can be implemented efficiently and they provide a flexible interface suitable for casual users. (20 refs.)

2598 Pascal-M in office information systems. S.Cook, S.Abramsky (Computer Systems Lab., Queen Mary Coll., London, England).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.233-41
Pascal-m is currently the subject of intensive research and development at Queen Mary College It is a language specifically aimed at the problems of programming loosely-coupled distributed systems. The authors are particularly concerned with the issues involved in designing highly interactive interfaces to complex information-handling systems, such as the integrated office systems which are expected to become available in the near future. This paper describes Pascal-m in some detail, and indicates how Pascal-m will be a powerful tool for the incremental design and construction of distributed, highly interactive program development and applications systems. (14 refs.)

2384 Some basic aspects of office specification language design. P.Suda (Siemens AG Res Labs., Munchen, Germany)
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.521-8
A specification language used to describe in a natural but formal way a system of office reality must provide a means of representing both static objects and changes. The representation of objects in programming languages has steadily improved as new data structures like the type-concept in PASCAL or class-concept in SIMULA. The last step is the concept of abstract data types which now occurs in many languages: CLU, ADA, etc. The representation of changes in programming languages has always been borrowed from both mathematics and natural language. (10 refs.)

2554 Observation post for information and office automation.
Manage. & Inf (Italy), vol.20, no.9, p.596-8 (Sept. 1982). In Italian.
An observation post, which commenced operation in 1982, has as its main work the study of office automation and information systems. It works on a series of researches in Europe by the Butler Cox Foundation. Tables and general information are given on various factors which affect the introduction of automatic systems in offices. Further sections, including tables, cover matters such as the organisation impact of technology on the treatment of information in offices and the various percentages of office work which can be done by automation methods. The summary gives the three main headings under which automation of offices must be carried out for maximum efficiency of the result. These include management, final utility and EDO specialists. (no refs.) *G.V.D.*

2623 Office automation in universities. K.Bauknecht, R.Marty, M.Mresse, P.Pircher (Inst. fur Informatik, Univ. Zurich, Zurich, Switzerland).
Angew. Inf. (Germany), vol.24, no.9, p.463-9 (Sept. 1982). In German.
Presents the concept and the implementation of an office automation system for a university. The system is based on the UNIX operating system and on a local area network. Special emphasis is put upon the requirements of a university environment to text processing, to information retrieval, and to a network. (9 refs.)

2618 Emerging trends in office technology. A.Gupta (Center for Information Systems Res., MIT, Cambridge, MA, USA)
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.599-626
The broadening of system functions has resulted in a corresponding complexity in the evaluation of systems of different makes and model numbers. Contemporary office computers can no longer be evaluated solely on the basis of the typing speed of the typewriter The situation is akin to that in the computer industry—initially, the machine cycle-time sufficed for comparison purposes; today, there is an independent discipline of computer systems performance evaluation. The area of office computer performance evaluation (OCPE) is now emerging, and an attempt is made to identify some relevant evaluation and selection strategies. (22 refs.)

2604 First implementation step toward embedding office semantics in the buroviseur. F.Jakub (INRIA, Projet KAYAK, Le Chesnay, France).
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.355-62
KAYAK has been assigned the task of building an integrated office workstation. The first stage of the project, build relevant hardware, has now produced a machine called 'buroviseur' Development of basic and application software is well under way Thus, time has come to envision the programming of various sophisticated services which take advantage of the full power of the specific features embedded in the buroviseur These services may range from a friendly desk-top calendar to a (user controlled) automatic meeting coordinator and up to complex aids for decision makers involving expert, knowledge-based reasoning. (12 refs.)

2607 Measuring office activity for burotique: data collection instruments and procedures. D W Conrath (Centre for Evaluation of Communication-Information Technol Univ of Waterloo, Waterloo, Ontario, Canada), R H Irving, C S Thachenkary, C.Zanetti, H C Ratz, W M Wright
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.403-26
The biggest stumbling block is finding out what people actually do in a way that is useful for the specification and evaluation of systems to assist them in their tasks People can tell what they think about what they do They can tell what they think they do, though often without any degree of precision And some can tell what they would like to be able to do The issue remains: what do they do? (no refs.)

2541 Office Automation and data processing. C Baudoin.
Inf. & Gestion (France), no.133, p.82-7 (May 1982). In French. [received: Sept 1982]
The distinction between office automation and data processing is less than is usually thought of The former has its own areas of application, electronic mail, memory editing, drawing up contracts and patents, agendas and electronic year books. But these areas are approaching those covered by data processing itself and the two are becoming indistinguishable For example, one believes that secretaries are the sole users of office automation, particularly in the context of word processors, but bookkeepers, buyers and engineers are also users. The rest of the article deals with the way Schlumberger (based at Clamart) has dealt with the problem of the overlapping needs of the two kinds of processing. (no refs.) *M.G.*

2556 Office automation: shafts of light on the office of the future. J.Schilling (Waser-Organisationsberatung, Zurich, Switzerland).
Output (Switzerland), vol.11, no.9, p.33-6 (10 Sept. 1982). In German.
A brief discussion of the effects of new technologies on office work is followed by a description of an alternative to storage of paper for archive purposes. The laser store is favoured, in which information is permanently written onto a disk using a laser This system has advantages in degree of compression, cost of materials and ease of retrieval over such methods as microfilm and microfiche. Improvement over currently-used access control is required; possible methods are personal identity cards, perhaps including stored information and even a micro-processor, as well as recognition methods for voice, signature and fingerprints, and also data encryption. (no refs.) *G.F.F.*

123 100 ways to automate your office. D.Macfarlane (Coopers & Lybrand, Toronto, Canada).
Datamation (USA), vol.28, no.11, p.145-52 (Oct. 1982).
Gives 100 suggestions on how to automate the office. They range from rather simple, entry-level ideas to advanced notions that may require some extra effort on the part of the system supplier Think of the list as a smorgasbord Not all of the suggestions will be immediately applicable to the readers organization, but all are valid, feasible right now, and food for thought. (no refs.)

2538 **A case study of office workstation use.** C.V Bullen (Center for Information Systems Res., MIT, Cambridge, MA, USA), J.L.Bennett, E.D Carlson.
IBM Syst J. (USA), vol.21, no.3, p.351-69 (1982)
This paper describes the use of the Office Analysis Methodology to study a research office environment in order to determine requirements for an advanced office workstation. The research site environment is unique in providing an opportunity to observe a natural growth pattern in the use of advanced technology. Specific workstation requirements are identified and are being implemented. Interesting observations are reported in the following areas: categories of secretarial work, use of existing workstations, influence of a community of users, access to shared service, and effect on productivity and organizational behaviour. (7 refs.)

2064 **Local area networks and the Net/One Ethernet connection.** R.Davies, J.M.Davidson.
Electron. Eng. (GB), vol.54, no.670, p.74-81 (Oct. 1982).
Net/One is a communications net based on the prototype Ethernet in its initial form and available before the Ethernet specification was published. The concept of Net/One is that of a vendor independent, media independent, device independent local area network system. Currently Net/One is available to full Ethernet specification and is supplied to Xerox for use as a communications interface between Ethernet and non-Ethernet devices. A simple interface module replacement allows the Net/One node to be connected to a broadband modem instead of the Ethernet transceiver. 5 Mbit/s broadband modem interfaces and Ethernet-to-broadband gateways will allow the user to combine the two architectures. 13 refs.)

56 **New worlds of computer-mediated work.** S.Zuboff
Harvard Bus. Rev. (USA), vol.60, no.5, p.142-52 (Sept.-Oct. 1982).
The author maintains that managers should heed the resistance of employees to new technology because it is telling them something about the quality of changes that are taking place. Computer-mediated work is more abstract and can demand new conceptual skills while deemphasizing the importance of direct experience. Information technology can depersonalize supervision, alter social communities, and often means that technology absorbs much of the judgment that routine jobs used to entail. The author suggests ways that managers can use the new technology as an opportunity to re-envision job responsibilities and develop new approaches to the problems of supervision. (no refs.)

2085 **Local computer network technologies.** C.Tropper
London, England: Academic Press (1981), xi+144 pp. [0 12 700850 0]
The reasons behind the interest in local computer networks—technical as well as economic—are explained. An attempted definition of a local network is provided. Following this introductory chapter, the book divides naturally into two sections—Chapter 2 being devoted to ring networks and Chapter 3 to bus networks. Each chapter is structured along the same lines, beginning with a description of the protocols followed by a discussion of the performance models of the protocols. The performance of the protocols are then compared (to the extent that this is possible), and finally, the assumptions and weaknesses of the models themselves are described. Both chapters include descriptions of many existing or planned networks and their protocols. 187 refs.)

2612 **Talking to the automated office.** G.M.White (Computer Sci. Dept., Univ. of Ottawa, Ottawa, Ontario, Canada).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.529-40
As the study of the automated office proceeds, it is becoming clear that managerial communication is a most important aspect. It is much less clear just what form this communication will take. This paper suggests that spoken communication will play the major role as an information medium and that automated office systems will have to incorporate appropriate devices if they are to realise their potential. (26 refs.)

2589 **A data model for office systems.** J.C.Chupin, V.Joloboff (Centre Sci., Cii Honeywell Bull, Grenoble, France)
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.39-56
This paper presents a data base model to be implemented on a data base server on a local network. The model extends the Entity-Relationship model to integrate concepts as text, document, keyword. The data definition language is presented together with the selection primitive and some textual operations. Finally some features of the transactional system are described permitting cooperation among servers and user stations. (17 refs.)

82 **End-user designed/driven data bases.** S.Atre (Atre Internat., Consultants, Rye, NY, USA).
Computerworld (USA), vol.16, no.35A, p.61-5 (1 Sept. 1982).
Discusses the increasing role of end-users in the design and maintenance of databases. This arises from a likely shift in responsibility away from DP staff, because applications developments backlogs are becoming large. (no refs.)

2537 **OPAS: an office procedure automation system.** V.Y.Lum, D.M Choy (IBM Res. Div. Lab., San Jose, CA, USA), N.C.Shu.
IBM Syst J. (USA), vol.21, no.3, p.327-50 (1982)
This paper discusses an experimental system being developed to support office automation. The emphasis of the paper is on a technology that allows people to automate their office and business activities. Specifically, using forms as the interface, the authors propose a powerful data manipulation and restructuring facility that not only allows users to extract and manipulate data in the forms, but can be used to interface between new and existing applications as well. Since business and office procedures are not discrete activities, but a structured sequence of activities, a means to define and execute procedures is required. Such a means is described in this paper along with its model and an example of its application. (25 refs.)

2071 **Open communication with the local area computer network NET/ONE.** G.Dieterle.
Elektron. Prax. (Germany), vol.17, no.8, p.8-10, 12, 14-15 (Aug. 1982). In German.
Local area computer networks enable spatially distributed user terminals to access centralised computer, printer, and disc storage equipment, and to interchange data. They also permit the interconnection of computer systems. Features and concepts of NET/ONE, in which node computers connect to the 50 ohm coaxial transmission cable via clamp-on transceiver units, are described. Typical system aspects are illustrated, and interface, hardware, and software details are briefly presented. Data collision is avoided by use of the CSMA/CD method. (no refs.) *H.V.H.*

31 **Working with VDUs: hazardous or harmless?.** B Pearce (Human Sci. & Advanced Technol. Unit, Loughborough Univ., Loughborough, England).
Bus. Syst. & Equip. (GB), p.56, 59 (Oct. 1982)
The source of fatigue or potential damage should be eliminated. In many cases simply by applying the principles of good job design and ergonomics criteria in the selection and installation of the system, the vast majority of complaints and causes of fatigue can be eliminated. Fundamental to this approach is to avoid the creation of the dedicated vdu operator. This is a function not only of the way the computer system is designed but also of the way the work is organised around it. Working at a vdu should become part of a person's job not the sole task. The computer should be a tool that aids their job rather than the machine that has to be minded throughout. (no refs.)

2600 **The IFIP model of a computer based message system.** P.Schicker (Zellweger Uster AG, Hombrechtikon, Switzerland).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.253-67
The model of an international computer based mail and message system that was developed by the System Environment Sub-Group of the IFIP Working Group WG 6.5 (International Message Systems) is presented. The model separates the system into a number of functional entities. The basic characteristics of the functional entities and their interworking is outlined. The model is also used to discuss the services of the entire system and the authority boundaries within the system. 14 refs.)

2616 **The concept of type: considerations for document preparation, retrieval and communication.** H.J Borron (INRIA, Projet KAYAK, Le Chesnay, France).
Office Information Systems. Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.583-92
An example is used to introduce the notion of type. The author indicates the way one can build types of documents (basic types and constructors). Type is an important concept a system must grasp and take advantage of (since a lot of behaviours depend on it: editing, filing, retrieving, circulating, etc.). Tools may be built around that notion. (no refs.)

2081 **Development systems on the Ethernet network.** H.Delemarre
Onde Electr. (France), vol.62, no.8-9, p.25-7 (Aug.-Sept. 1982). In French
Discusses the Intel NDS II network development system which is a local network based on Ethernet allowing the connection of several development stations sharing the same resources. Each Intellec tool is therefore changed into a workpost on the network by the use of Ethernet card controllers. As an example, the situation of eight workstations connected to a single Winchester disc drive and joined by the RS-232 interface is considered. The use of the new Intel evolved language PSCOPE in such a partitioned network is discussed. Implications for the 'office of the future' are mentioned. (no refs.) *L.A.F.*

2054 **Ethernet and the PBX—a beneficial partnership.** V.Coleman (Advanced Micro Devices, Sunnyvale, CA, USA).
Comput. Des. (USA), vol.21, no.9, p.183-8 (Sept. 1982).
Voice and data communications can coexist at the local network level if the two technologies are combined to exploit the best aspects of each. They are compared in this context with reference to voice service; data service and cost/performance ratios. (no refs.)

2512 Dimensions, perspectives and consequences of office automation. T.A Ruegg (Ruegg-Nageli AG, Zurich, Switzerland).
Systdata (Switzerland), vol.13, no.9, p iv-vii (6 Sept. 1982). In German.
The author outlines and shines a light on the subject of office automation. One should not just shrug one's shoulders at the mention of the subject, but treat it as a serious matter. The various dimensions and components of office automation are covered, including data processing, text processing, image processing, speech processing, archive functions, telecommunications, and electronic mail. The control and service of these functions are also mentioned. The consequences for the office industry, for the PTT and for organisations are discussed. (no refs.) *A.N.K.*

2586 Office Information Systems. Proceedings of the Second International Workshop.
Amsterdam, Netherlands: North-Holland (1982), xiii + 656 pp. [0 444 86398 2]
Conference held at Couvent Royal de Saint-Maximin, France Date 13-15 Oct 1981. The following topics were dealt with: office distributed systems, forms and data models, networking and workstation design; editors, current activities in office information systems; messaging; semantics, office activity studies; human interface; information storage and retrieval; future prospects Abstracts of individual papers can be found under the relevant classification codes in this or future issues.

197 Evaluating word processors—keyboards: vital features. J.Simms (Wordpro Pty Ltd., Melbourne, Australia)
Mod Off & Data Manage. (Australia), vol.21, no.6, p.28-30 (July 1982).
A separate, movable keyboard allows the operator to adjust and align the keyboard position to suit their operating mode The keyboard is a three dimensional object and therefore its physical size must be taken into consideration. Some systems do permit other keyboards to be used Where the keys are fully software programmed, it is possible to convert the keyboard into a Dvorak keyboard which dramatically increases the typing speed, provided you have a typist that knows how to operate it. (no refs.)

2518 Managing information as a corporate resource. D.Sizer (RAE, Farnborough, England).
Comput Bull. (GB), ser. 2,no.33, p.10-12 (Sept. 1982).
Data, information and the state of knowledge of the information user are described and related to the decision-making process. The theme that data is a valuable commodity needing management is then developed, followed by a discussion of computers, organisational policies and central and distributed processing. The conclusion is drawn that 'information' per se is a personal, corporate and management asset which needs proper understanding and management in the computer era. (8 refs.)

175 Minicomputers and small business systems: a practical primer. T.Scannell
Computerworld (USA), vol 16, no.35, p.SR/1-36 (30 Aug. 19821.
Discusses the purchase of small business computer systems and minicomputers. Topics discussed include: understanding information needs before buying; adding to a core system; micro-based systems; merging word-processing and DP operations; multiservice applications; heat and moisture effects on minis; benchmarks, service bureau. Examples of applications are drawn from an Institute of Technology, museums, tax collection insurance, medical practices, a state Motor Vehicle Division, and toy distribution. (no refs.)

181 Office automation—reflections from the marketplace. P.Hare (Racal Information Systems, Hove, England).
Comput. Commun. (GB), vol.5, no.5, p 250-3 (Oct. 19821.
The office automation marketplace is crowded with suppliers purveying very similar products, resulting in great confusion for first-time buyers The paper suggests that buyers often ask the same questions. The reasons for asking these questions, and the likely answers, are discussed in detail. A number of suggestions which may guide buyers in their pursuit of a system which meets their requirements are also presented. [no refs.]

2070 The predicted capacity of Ethernet. M.Marathe, B Hawe.
Electron. & Commun. (Canada), vol.30, no.3, p.92-3 (June 19821.
Reports the results of a study by Digital Equipment Corporation examining the limits imposed on the number of users by the finite bandwidth of the channel in a time-sharing environment. The truncated binary exponential backoff algorithm, which determines the delay in retransmission following a simultaneous attempt (collision) between two stations is described. The future environment is projected and protocol levels are discussed. (no refs.)

2505 'Automate' your proofreader for better word processing. H L.Bonen (Nat. Can Corp., Chicago, IL, USA).
Office (USA), vol 96, no.2, p 77-8 (Aug. 1982).
Terminal-assisted editing has long been used by newspaper editors, authors and publishers. This practise (sometimes known as video drafting) can be used advantageously in the office A proofreader would benefit greatly from a CRT terminal on his desk in a shared-logic system. (no refs.)

2599 Research activities in office information system at IRISA. H.Le Goff, R.Quiniou (IRISA, Campus Univ. de Beaulieu, Rennes, France)
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.243-50)
In IRISA, the research program in Office Information Systems focus on the two following topics: the design of communication system in an local network environment, the development of original office automation applications The most important subjects in the IRISA projects are: the use of natural language man-application interface and the integration of sophisticated terminals (for example voice terminals). (6 refs.)

2507 Making maximum use of a word processing system. J Arizzi (ITT Rayonier Inc., Stamford, CT, USA)
Office (USA), vol 96, no 2, p 127-8, 148 (Aug 1982)
Word processing is synonymous with speed, accuracy, easy communication and increased productivity ITT Rayonier Inc increased word processing productivity by taking advantage of system flexibility and elevating word processors to multifunctional and multipurpose devices that allow users to perform programming, sorting functions and mathematical calculations, along with the more traditional applications of document creation, automatic typing and formatting. (no refs.)

2593 Office workstation design. B.Scheurer (ADI/INRIA, Kayak Project, Le Chesnay, France)
Office Information Systems Proceedings of the Second International Workshop, Couvent Royal de Saint-Maximin, France, 13-15 Oct. 1981 (Amsterdam, Netherlands: North-Holland 1982), p.105-16
Office automation will introduce a variety of services in the organisation These services can be classified into three categories: cooperative services such as computer based message systems, teleconferencing; shared services such as archives center, printer; and personnel services such as information system, agenda. (14 refs.)

2068 Local networks—the basis for integrated information systems. G.Kafka.
Elektronik (Germany), vol.31, no.19, p.88-96 (24 Sept. 1982). In German.
Following a historical review of the development of local-area networks, the author explains the ISO-OSI model which is necessary for open communications. Network topologies—star, ring bus baseband and broadband—and access methods to the transport media are then examined The current state of the work being performed by national and international standards organisations is briefly outlined and there is a short look at the local-area networks currently on offer. (7 refs.)

87 A problem area with a special fascination [distributed processing]. D.Kennett.
Comput. Wkly. (GB), vol.33, no.822, p 14 (19 Aug. 1982)
Distributing sensitive data calls for additional attention to error control, access control, user authentication and other security measures such as encryption, each of which has been subject to specialist development. Sometimes the result of this development is a well-understood set of principles, to which those implementing a computer system are advised to adhere, and sometimes it is a product or service which can be used with a minimum of specialist knowledge. (no refs.)

2086 Local network handbook. G R Davis [Ed.]
New York, USA: McGraw-Hill (1982), iv + 256 pp. [0 07 606831 5]
Some articles in this book describe local network techniques, technologies, applications and choices Others cover more general equipment or software with local networking applications The capabilities of minicomputers and microcomputers are discussed, since these serve as network nodes Comparisons of local networking with other techniques are also included 32 articles are divided among six sections, headed technology, software, equipment, implementation, applications and selection.

2506 Electronic mail: a building block for the future office. B Ibsen.
Office (USA), vol.96, no 2, p.81-2 84 (Aug. 1982).
Electronic mail, the digital way to move information, promises to dam the torrent of paper flowing through the matrix of communications channels that holds most industries together Digital coding provides more efficient information storage and transmission Electronic mail can bring the digital impact of that coding to those who do not have and do not want computer training The development of electronic mail and digital facsimile are examined (no refs.)

2551 The advanced automated office. D.H.Wood (Binder, Hamlyn, Fry & Co., London, England).
Manage. Serv. (GB), vol.26, no.7, p.14-21 (July 1982).
The author summarises the current and probable future developments, and outlines some of the social consequences which may flow from them He concludes with a suggested course of action which companies should be undertaking to ensure that they are ready to respond to the challenges posed. [no refs.]

2500 **Courting the executive [office automation].** A.A.Armstrong
Bull. Am. Soc. Inf Sci (USA), vol.7, no.6, p.12-15 (Aug. 1981). [received. Aug. 1982]
A shift is taking place as the office products industry focuses on middle-management and the professional employee. The vendor has more chance to sell some piece of equipment if he can convince the executive its benefits are not limited to the secretarial level, but include or are designed for the professional. (no refs.)

2513 **Address management.**
CBM/PET News (Switzerland), vol.3, no.4, p.6-9 (1982). In German.
Gives a program in BASIC for the CBM PET, to print address labels given a file of addresses, as well as a listing for checking purposes. (no refs.) *G.F.F.*

2069 **Ethernet: fundamentals – characteristics – possibilities.** K.Diebenbusch.
Elektronik (Germany), vol.31, no.19, p.99-103 (24 Sept. 1982). In German.
A summary of techniques, their current status and the possibilities for the use of local networks following the Ethernet standard is provided. Communications networks of this kind have already attained considerable significance. (3 refs.)

39586 **DP professionals face major challenge in automated office.** D.Tapscott.
Comput. Data (Canada), vol.7, no.2, p.22-32 (Feb 1982).
A new generation of integrated office systems which differ from traditional data processing systems is arising. Across North America those in the systems profession are trying to grapple with the vastly increased significance of these systems. (no refs.)

39587 **Framework needed to define what integrated systems really are: vendors cash in on office automation boom.** D.Macfarlane.
Comput. Data (Canada), vol.7, no.2, p.36-9 (Feb. 1982).
Bell Canada funded the office information communications systems group at Bell-Northern Research to develop a framework that would encompass all the elements required to describe and evaluate an integrated office system (IOS). In this way, Bell Canada could describe each system in its own consistent structure, and not have to be limited by each vendor's particular presentation. The framework developed has grown to over 250 separate elements, resulting in an extremely comprehensive description of each IOS for which an analysis is maintained. (no refs.)

39588 **The office of the future: a complete misnomer.** D.Spennewyn.
Computing (GB), vol.10, no.27, p.22-3 (8 July 1982).
Reports on the state-of-the-art of office systems and the need for integration of the four technologies—data processing, word processing, audio processing and image processing. The office of the future is here now. (no refs.)

39589 **Office of the future.** E.S.Larsen.
Data Tid (Norway), vol.4, no.5, p.9-12 (June 1982). In Norwegian.
Reviews word processing and other electronic data processing equipment for administrative purposes, with special reference to equipment supplied by the Prime Co. for general office work, accounts, statistics and data control, also digital voice telephone exchanges and image transfer systems (for documents) made by Wang. (no refs.) *J.S.*

39590 **Word processing: facilitator or frustrator?.** B.Medina (Northeast Regional Inst. for Information Policy & Res., Silver Spring, MD, USA).
Inf. Age (GB), vol.4, no.3, p.131-4 (July 1982).
Word processing systems implemented by many organizations have often not lived up to the claims of the manufacturer or vendor. Problems with personnel, record accuracy and security seem to be a result of the designer not taking into account the proper role of the operators, the limitations of the equipment and the effect of the system on the structure of the organization. The paper discusses how an organization can be analysed as a system and how potential problem areas can be identified before implementation. A set of rules is proposed for the successful implementation of a system, governing structure, information flow and feedback. (7 refs.)

39591 **Graphics for managers: the distributed approach.** D.Friend.
Datamation (USA), vol.28, no.7, p.76-7, 80, 84, 91-2, 94, 96 (July 1982).
The author considers that the key to a successful management graphics system is providing managers with an instant look at the core 20% of the data. From this premise he discusses the setting up of computer graphics based systems. (no refs.)

39592 **Electronic storage slashes office paperwork.** I.Albert (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.17, no.3, p.8-13 (June 1982). In German.
As an instrument for streamlining office work, machine support is needed more than ever for document generation and information exchange. To store documents between these processes, storage systems must not only be compatible with preceding and subsequent processing or communication procedures, but also fit in with established office routines. The article goes into the question of how electronic storage systems can replace filing cabinets and mail boxes. (3 refs.)

39623 **Office automation? No and perhaps.** J.Driscoll, S.M.Abraham.
Sist. & Autom. (Italy), vol.28, no.222, p.25-30 (Jan. 1982). In Italian. [received: May 1982]
The author Driscoll deals with what he considers to be strategic errors in the introduction and development of office automation, asserting that on the basis of the present situation it will have led to excessive costs and resulted in more harm than good to a society seeking higher productivity, greater innovation and a better life for its citizens. The principal reason for this is its tendency to exacerbate the division between brainwork and manual work, creating two classes; the intellectual chiefs and a proletariat of computer-minders and rubbish clearers. He outlines an alternative and in his view more enlightened policy. The author Abraham, while pointing out tactical errors in past and current developments, gives a cautious welcome to office automation, mainly on the grounds that even a small improvement in facilities for communication could have a large effect upon overall efficiency, but only if adequate attention is given to the human factors in the situation. (no refs.) *C.J.O.G.*

36440 **The introduction of video-display working.** G.Scheloske.
Off. Manage (Germany), vol.30, no.5, p.540-1 (May 1982). In German.
Deals with the need adequately to prepare staff for the introduction of video work-stations, both from the psychological and humanising aspects and the technicalities involved in the operation of an interactive video-display work station. A complete schedule of graduated steps to be taken for the successful realization of the new mode of working covering a period of six months is given. (no refs.) *L.M.W.*

39595 **The office of the future—interaction necessary between forms of communication.** R Dag Blekeli.
Data (Denmark), vol.12, no.4, p.30-1 (April 1982).
The author writes that data processing technology and telecommunications are re-shaping the office. He says that the term 'office automation' is a somewhat loose description of these changes. Looking ten years into the future the new will principally lie in the connecting of systems that have hitherto existed separately, as well as radical changes in the possibilities for communication. (7 refs.) *H.J.P.*

39596 **Office automation—the name of the system reflects development.** A.Delang.
Data (Denmark), vol 12, no.4, p 41-2 (April 1982).
The author suggests that naming has always been an important part of life, and that great weight is given to choosing a name that says as much as possible about the person or object being named. He thinks that this not only applies to the naming of people of places, but that the same aspiration applies in the technical field. The author then analyzes the different rules that are applied, either consciously or subconsciously and which seem to apply when a supplier gives a name to his office automation system, or parts of such a system. He then asserts that the developments that have taken place of what office automation appears to be are reflected by the name chosen. (no refs.) *H.J.P.*

39597 **How to make the boss more efficient: using the voice.** L.B.Axelsson.
Data (Denmark), vol.12, no.5, p.44-6 (May 1982). In Swedish.
Shows how the voice can be integrated in the computer/word processor set-up of the modern office, by greater use of telephones with voice messages service (VMS), voice answering service (VAS) and similar arrangements. Numerous statistics relating to telephones are presented. (no refs.) *J.S.*

39821 **Technology and the information professional: will it make a difference?.** C.Oppenheim.
Inf. Serv. & Use (Netherlands), vol 1, no.3, p.161-7 (Nov 1981).
The paper examines the likely impact of new technology on librarians and information scientists, and on database producers, over the next ten years. Database producers will increasingly rely on home-based abstractors who receive, create and send all their material by electronic means. The advantages of such procedures for the database producers are outlined. Increasing use of videodiscs for information storage and retrieval is envisaged. The impact of new technology on librarians and information scientists is then examined. Use of videodiscs will mean a decline in the use of online information retrieval. Use of intelligent terminals will lead to greater use of these systems by end-users. The intelligent terminals could be used to translate software languages, to refine search strategies, to store and edit output from searches and to advise users on the best databases and best search strategy to use. All these developments will be integrated into those leading to the 'office of the future'. The author concludes that there will be a dramatic shakeout in librarianship, but that information scientists face a great opportunity to develop their skills by grasping the opportunities afforded by the new technology. It is recommended that schools of information science teach their students typing skills. Finally, some remarks about the advisability to offering sophisticated information retrieval systems to less developed countries (LDC's) are made. (5 refs.)

39570 **Communications using word processing systems.** J.B.Whitehead (Nexos Office Systems Ltd., Bristol, England).
Inf. Serv. & Use (Netherlands) vol.1, no 3, p 109-38 (Nov 1981)
Communication between word processor equipment is reviewed extensively. A survey is given of communication protocols and networks. Several possibilities to link word processors are described, leading into a discussion of electronic mail and teleconferencing. The paper contains a glossary of communication terms. (17 refs.)

39571 **Man and automation in the office.** W.Grunsteidl (Concern Strategic Planning, Philips Industries, Eindhoven, Netherlands).
Inf. Serv. & Use (Netherlands), vol.1, no.5, p 263-70 (March 1982)
The human aspects of office automation are reviewed. A plea is made for an approach in which the three elements of office automation—man, organization and the technological system—are integrated on an equal basis. There should be more emphasis on the effectiveness of information systems, rather than on their efficiency. The real challenge for office automation is not the introduction of new technology, but information management. (no refs.)

36401 **Office workers—are they a vanishing breed?.** A.Cowie (Philips Business Systems, England).
Conference on Communications Equipment and Systems, Birmingham, England, 20-22 April 1982 (London, England: IEE 1982), p.182-5
Discusses the genuine concern that the onset of office automation will dramatically reduce the number of employment opportunities in the office environment. It would be unreasonable to accept that there will not be changes in office practice and routines and in the tasks and skills required of office workers. (no refs.)

39603 **Office technology: everything remains to be done . . .** P.Lefebvre.
Inf. & Gestion (France), no.132, p.9 (April 1982). In French.
Introduces the topics of information management, office technology, and the office of the future. Various other notions are touched upon extremely briefly. (no refs.) *L.A.F.*

39604 **The office situation of today.** M.Legorgev.
Inf. & Gestion (France), no.132, p.29-32 (April 1982). In French.
Discusses the oft-used phrase the 'office of the future' in the context of today's actual typical office and likely future developments. Problems of choosing the correct information-processing equipment are discussed. *L.A.F.*

39605 **The office situation and the human factor.** C.Bert.
Inf. & Gestion (France), no.132, p.32-7 (April 1982). In French.
Discusses psychological, personal and ergonomic factors associated with the introduction of computerised office technology. The views of two secretaries are given. (no refs.) *L.A.F.*

39582 **Office technology supergroup emerges.** J Hewer.
Can. Electron. Eng (Canada), vol.26, no.6, p.25-6 (June 1982).
The common thread between a number of new 'office of the future' companies is venture capital originating at the heart of Canada's technological renaissance. (no refs.)

39583 **How the home help became something in the city.** J.Lamb.
Comput. Manage. (GB), p.18-21 (April 1982).
Originally intended for domestic use, viewdata has undergone an early metamorphosis. Far from being an electronic rival to publishers of the printed word, it is now being regarded more as a cheap data processing service aimed at business efficiency. The author examines the service's changing role. (no refs.)

35344 The user interface [office automation]. T.Billadeau (Automated Office Systems, Boston, MA, USA).
Computerworld (USA), vol.16, no.13A, p.11-14 (31 March 1982).
The user interface is that part of the computer or word processor (also a computer) which facilitates communication between human and machine. There are a number of parts that make up the user interface: the video display screen; the keyboard; any cursor-moving or option-selection device such as a mouse, cat, joystick or touch screen; and the software. Much research has been done on user interfaces in an attempt to determine how best to get a select group of individuals to use a computer even if they do not like it. While some people simply do not want to use a computer, others who are willing to accept new technology are intimidated by a system that is difficult to operate. Far too many systems tell the user he has made a mistake, but offer no solution—a very frustrating situation. It seems clear that if vendors are to penetrate this market of potential users, systems must be made easier to operate. (no refs.)

35345 Strategic planning [office automation]. D.J.O'Connell (Internat. Management Services Inc., Framingham, MA, USA).
Computerworld (USA), vol.16, no.13A, p.21-3 (31 March 1982).
Project planning for office automation (OA) is the process of deciding on the objectives of the organization, evaluating the role of office automation, determining the resources needed and developing the procedures for acquiring and using these resources. The pattern of work in an OA project follows a repetitive pattern characterized by good times and bad times. The first step in office automation planning is to break the project into discrete steps or phases that serve as control instruments as well as checkpoints for review. They also provide the framework for problem definition, objectives, estimation of resources (time, people and equipment) and scheduling. As each phase is completed, prior phases should be reviewed to ensure conformity and to gain a better understanding of the problems. (no refs.)

35346 A question of compatibility [office automation]. M.Johnson (Kidder, Peabody & Co., New York, NY, USA).
Computerworld (USA), vol.16, no.13A, p.35-7 (31 March 1982).
The lack of standards and network compatibility in the developing office automation (OA) market all too often leaves the OA user in a quandary over selecting a system. The author surveyed users, vendors and consultants to determine how they were handling the issues, what shortcuts they had evolved and what they thought were the best ways to approach the problems of a particular installation. Three primary areas emerged as needing standardization: facsimile; word processing equipment and data processing equipment. (no refs.)

35347 Getting personal [micros enter the office]. T.H.Willmott (Internat. Data Corp., Framingham, MA, USA).
Computerworld (USA), vol.16, no.13A, p.51-3 (31 March 1982).
Although the personal computer is a much publicized and popular solution to the office automation (OA) needs of corporate professionals, three important questions often remain unanswered, even after a hardware commitment has been made: Who is likely to profit from owning a personal computer? What can a personal computer actually do? Does the functional power of a personal computer justify its cost? The answer to the third question varies dramatically with the user's job description, applications requirements and salary level. Answers to the first two questions are more easily managed. (no refs.)

35415 Office automation: research and application. G.Bracchi, M.Dallera, M.Palazzi (Istituto di Elettrotecnica ed Elettronica Politecnico di Milano, Milano, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl, p.5-57 (Jan. 1982). In Italian. [received: July 1982]
Emphasis is given in today's office to costs reduction and productivity increase: office automation and office information systems, whose feasibility is ensured by the recent advances in computer technology, can be considered as a possible solution to many of the information handling problems of the office. Although the technology and the market exist, much research and development into office automation is still required. The system must integrate several different techniques at the user, software and hardware levels. This implies different approaches and several challenges that need to be met before the automated solutions can be applied effectively. This paper discusses the motivations and the features of office information systems. Problems related to office-communications, form management, information storage and retrieval, man-machine interface and hardware and software architectures are treated. Models and techniques for representing and analyzing information flow in the office are illustrated, and the impact on people and organisations of office automation is discussed. (71 refs.)

35416 Specific aspects of hardware and software for office automation. G.Sommi.
Riv. Inf. (Italy), vol.11, no.4, suppl, p.59-74 (Jan. 1982). In Italian. [received: July 1982]
Devices and techniques that characterize office automation, in its present state as well as in its foreseen developments, both proposed and under experimentation, are examined. Functions required to cope with office automation tasks are considered first. Hardware and software features that have allowed or will allow automation of such functions are then described. Final considerations are made on the contribution that the growing office automation application area may bring to the future of data processing. (8 refs.)

35420 Information systems and office automation. P.Dell'orco (Centro Scientifico IBM, Roma, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl, p.113-27 (Jan. 1982). In Italian. [received: July 1982]
Office information systems are constituted by processes related to the creation, collection, storage, processing and communication of information. They differ from traditional information systems as their target is constituted by non-repetitive and unstructured processes. Users are neither potential nor actual data processing experts, often involved in several different activities. The usability of such systems depends critically upon the degree of 'intelligence' they exhibit in the management of the so-called 'enterprise memory', in understanding and modelling office procedures and in user interfaces (both software and hardware). The concept of data base and related concepts (integrity, consistency, distribution of data and user interface) may be used in these systems is a unifying model. (13 refs.)

35421 Office automation. R.J.Spinrad (Xerox Palo Alto Res. Center, Palo Alto, CA, USA).
Science (USA), vol.215, no.4534, p.808-13 (12 Feb. 1982).
The automated office has the potential to change significantly the ways we handle the substance of our working lives. Advances in electronics and computer systems enable us to do much more than just upgrade individual office functions. We can now restructure our basic information handling modes to allow an immediacy of interaction not previously available. The tedium of paperwork is sharply reduced and it becomes much easier to work collaboratively with others. The electronic desk becomes the professional's link to a widely distributed array of information sources and services. (10 refs.)

34016 A microprocessor controller for a personal typewriter for visually handicapped users. T.J.Brown, R.E.Aitchison (School of Math. & Phys., Macquarie Univ., North Ryde, Australia).
IEEE Trans. Biomed. Eng. (USA), vol.BME-29, no.7, p.551-5 (July 1982)
The design of a microprocessor controller for a personal typewriter for the visually handicapped is outlined. The controller is interfaced to an electronic or electronic-mechanical typewriter with a golf-ball or daisy-wheel print head, and uses the correcting feature to produce a personal typewriter for the visually handicapped; this enables, at minimal cost, the production by the visually handicapped user of typewritten text which is error-free and of good layout without the intervention of sighted help. Speech synthesis of the keyboard characters and functions is combined with sensing and command switches by an 8-bit microprocessor. Flow diagrams of the software and modifications for various models of typewriter and speech synthesizer are briefly discussed. (5 refs.)

34017 Integrated office communication via electronic mail. G.Arndt, K.Nemeth (Siemens AG, Munich, Germany).
International Switching Symposium - ISS '81 CIC, Montreal, Que., Canada, 21-25 Sept. 1981 (Verdun, Que., Canada: Internat. Switching Symposium 1981), p.33C6/1-6 vol.3
Electronic mail is to be considered as a vehicle towards rational integrated office communication. This means integration of information processing and communication, 'any-to-any' communication between all terminals within a common message system, integrated text/image editing and communication. It is shown to what extent integrated office communication has been realized in these three aspects and what future developments are expected. (1 refs.)

34812 Keywords in communications technology [and office automation]. S.Schindler (Tech. Univ. Berlin, Berlin, Germany).
Comput. Commun. (GB), vol.5, no.3, p.140-7 (June 1982)
Terms are discussed with respect to the ISO reference model for open systems interconnection and their relative positions within this structure. Transmission, switching, internetworking, network integration, local area networks and integrated service digital networks are covered in detail. Keywords relating to applications such as office automation and text processing are more clearly interrelated, and future end systems are proposed. (14 refs.)

34813 Protocol converters: the answer to compatibility problems?. P.Robinson.
Comput. Commun. (GB), vol.5, no.3, p.148-51 (June 1982).
One of the major data communications problems over the past few years has been how to make different vendors' hardware and software communicate. Standards proposed by various bodies have been set up to solve problems, rather than prevent them. The paper discusses the use of protocol converters to provide compatibility between devices. The implementation of protocol converters within systems is described, along with suitable applications and environments. A cost comparison of configurations with and without protocol converters is provided. (no refs.)

34814 Burroughs embraces token passing [protocols]. H.J.Hindin.
Electronics (USA), vol.55, no.10, p.115-16 (19 May 1982).
The work of Burroughs Corp on token passing protocols for local networks is described, and contrasted with that of IBM. The two schemes have similar objectives, but different implementations. Both are adaptable to either a physical ring network or its logical and electrical equivalent and both companies are concerned with accommodating both voice and data on their networks, and make provisions for different service classes. (no refs.)

32139 **The big 3: IBM, Wang, Xerox.** A.Dooley
Computerworld (USA), vol.16, no.13A, p.27-34 (31 March 1982).
IBM, Wang and Xerox are currently jockeying for position as the No.1 office automation vendor; each presents itself as the company on the leading edge of technology in the burgeoning office automation (OA) industry. Intent on the same goal, the three vendors have chosen to approach the market from different directions. Not surprisingly, IBM is employing a hierarchical system architecture, mainframe-based approach, while Wang and Xerox have adopted a bus network approach. Xerox, with its Ethernet, is betting on the success of a narrow bandwidth baseband structure, assuming that many office functions will use their own dedicated communications media; Wang is trading on a broadband, CATV-like cable with sufficient capacity for a total integrated system. The vendors themselves are feeling their way in this new marketplace. (no refs.)

32140 **Technology: what's on the horizon?.**
Computerworld (USA), vol.16, no.13A, p.44-9 (31 March 1982).
By 1970, most of the major concepts pertaining to the electronic office environment – such as word processing, electronic mail and local networks – had been formulated. But these and other technologies are still undergoing substantial change. Gnostic Concepts, Inc. has looked ahead through the next several years and highlighted some of the major changes in office technology which will have an impact on users of the automated office. The article looks at some of those major trends. (no refs.)

35330 **Auspicious office techniques.** A.Turrini.
Antenna (Italy), vol.53, no.12, p.471-2 (Dec. 1981). In Italian.
Impressions of the 'CeBit' gallery exhibiting modern office equipment are presented. It is argued, that in spite of many regulations the need for standardisation is still pressing. The Grundig range of dictating systems is briefly described including the 'Tele-Diktat' and the centralised telephone dictating system. Future trends are exemplified by the range of Sony equipment incorporating a miniature 'typcorder' adapted to fit in any document case. The electronic office is briefly discussed. (no refs.) *T.H.*

35418 **Models for office automation.** G.D.Antoni (Istituto di Cibernetica, Univ. degli Studi di Milano, Milano, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl., p.89-97 (Jan. 1982). In Italian. [received: July 1982]
The present paper discusses at high level of abstraction the modelling problems of office activity taking into account communication problems, the subject matter handled in office work, the role of the operator and relational problems among the participants in office activity. It is strongly suggested that the modelling tools ideally suited for office work are Petri nets. Petri Nets are reviewed with some emphasis to the applications to office analysis and with some attention to the work done by the Milano University Group. Having shown the relevance of Petri Nets to office procedures the case is discussed where these are defined by law. The consequent office automation needs are discussed in terms of the law life cycle. Finally more structure is added to the Petri Nets proposing a uniform model (universal office model) that seem to be suitable for modelling various realities. (25 refs.)

35381 **Higher-level protocols enhance Ethernet.** J.White, Y.Dalal (Xerox Corp., Office Products Div., Palo Alto, CA, USA).
Electron. Des (USA), vol.30, no.8, p.SS33-4) (15 April 1982).
The Ethernet specification of 1980 only covers the lowest level hardware and software building blocks necessary for an expandable distributed computer network which can serve large office environments. Additional levels of protocol are needed to allow communication between networks and communication between processes within different pieces of equipment from different manufacturers. Xerox's Network Systems Internet Transport Protocols enable system elements on multiple Ethernets to communicate with one another. Courier, the Remote Procedure Call Protocol, specifies the manner in which a work station invokes operations provided by a server. These are described. (4 refs.)

35370 **The electronic evolution in offices, integration of data processing and telecommunications.** R.-D.Leister.
Lmschou (Germany), vol.82, no.8, p.254-6 (16 April 1982). In German.
Relatively little that is new has been added to office equipment over the past century. The capital value of the technical outfitting of office work places remains much lower than the investments in other fields. The result has been that the productivity of office work remained much less than that of other, highly mechanized types of work. New microelectronic technology, but above all the integration of automatic data processing and communications engineering, now offer the possibility of a new era of information processing. This will not only enable existing information to be utilized better, but also make new organizational structures necessary. The best and most flexible communications structure will in the future be a decisive productivity factor in business. (no refs.)

35341 **Electronic mail: the next step in office automation.** E.F.Coudal.
Small Syst. World (USA), vol.10, no.2, p.14-18 (Feb. 1982).
Electronic mail, executive computer workstations, and the freeing of data processing personnel from routine tasks are major future implications of office automation, according to key industry executives and researchers. (no refs.)

34836 **SUMURU: a network configuration for the future.** E.Stefferud (Network Management Associates Inc., Huntinton Beach, CA, USA), D.Farber, R.Dement.
Mini-Micro Syst. (USA), vol.15, no.5, p.311-12 (May 1982).
Three roles can be readily identified for computers in future network environment architectures: single-user, multi-user and remote-utility systems. Single-user (SU) systems based on powerful μcs will provide local computation and narrative text-editing capabilities. They will also provide terminal interface facilities for access to other computers, and they will be used by all manner of office workers. Multiple-user (MU) systems based on powerful minicomputers will serve groups of 20 to 30 local users in offices, laboratories and production facilities. They will also support SU systems with software program libraries, central office files and communications among SU, MU and other computer systems. Remote-utility (RU) systems, which for many years have provided for institutional data banks and heavy-duty computation, will continue to be based on mainframes. High-capacity central services will still be needed, and should be available via network connections from MU and SU systems. The authors consider the merging of these three components. (no refs.)

32237 **Man-machine interaction in the office.** M.J.Underwood (Office Systems Res. Unit, ICL, Stevenage, England).
Colloquium on 'Human Factors in Word Processing', London, England, 4 May 1982 (London, England: IEE 1982), p.2/1-2
Functionality and ease of use are the primary concerns of man-machine interaction. The term covers a wide range of activities, which are considered under three headings: physical, psychological and social. (no refs.)

32238 **Future trends: the impact of office automation on society.** R.D.Parslow (Man-Computer Studies Group at Brunel Univ., Uxbridge, England).
Colloquium on 'Human Factors in Word Processing', London, England, 4 May 1982 (London, England: IEE 1982), p.4/1-4
Shows that office automation will cause a radical change in the structure of work with revolutionary impact on society even without the predicted decentralisation of offices. (no refs.)

35411 **A methodology for analyses of office work.** M.Santoni, A.Zecchini.
Manage. & Inf. (Italy), vol.10, no.12, p.875-881 (Dec. 1981). In Italian. [received: June 1982]
This article, on the means of automating office work, discusses certain obstacles to automation such as the unstratified (non-hierarchical) nature of office work, the need for decisions and the difficulties managers find in mastering these new technologies, shows how these obstacles have been overcome by a methodology of analysis and project structuring (MAPS) which has the advantage of an organisational approach involves 'user orientated' equipment and techniques, employs concepts relevant and applicable to the system concerned and can analyse and evaluate the processes involved in a system. Before discussing the suitability of MAPS and an application of it, the article evaluates the typical features in information systems for the automation of office work and discusses the applications of Petri nets and graphical methods, adopted for structural systems analysis, to MAPS methods. (13 refs.) *G.H.*

35372 **Teletex – a remote communication service for office communications.** V.Frantzen, G.-D.Osterburg (Siemens AG, Munchen, Germany)
Data Rep. (Germany), vol.17, no.1, p.28-32 (Feb. 1982). In German.
Efficient data networks, like the Integrated Text- and Datanetwork (IDN) of the German Post Office, transmit information in digital form. With the introduction of the Teletex service a comprehensive standard in the practice is changed, the preparation for worldwide telecommunication on the basis of corresponding C.C.I.T.T. commands. The Teletex technique is an 'open system' one for free traffic relations between all participants of the new international service. It is expected that the Teletex standards, by the continuing work on normalisation panel, will also be found at the input in remote data processing. (17 refs.) *A.N.K.*

35334 **Voice-recognition word processing – near reality?.** J.Markoff.
InfoWorld (USA), vol.4, no.1, p.21 (11 Jan. 1982).
Voice recognition technology has advanced enough to make it realistic to begin to consider possible applications both in the factory and the office. Applications must still be chosen with care, however. (no refs.)

35335 **Word III word-processing program for Apple III.** R.Hart.
InfoWorld (USA), vol.4, no.5, p.24-5, 33 (8 Feb. 1982).
Word III's cursor can operate on only one line at a time, the one indicated by a right caret. The display is inverted – black characters on a white background – and, unlike some programs that center text or show margins only when you print out the text, Word III works immediately on the screen. The program supports underscoring, boldfacing, pagination, line replication and micro-justification (inserting fractions of spaces instead of whole spaces between words). (no refs.)

34818 **Ethernet: condemnations and half truths.**
Elektronik (Germany), vol.31, no.8, p.79-80 (23 April 1982). In German.
Discusses how numerous misunderstandings give a crooked picture. The Xerox marketing manager gives important declarations from one of the most interesting statements of the arrangement. (no refs.) *A.N.K.*

35353 **Electronic mail will be the critical pipeline.** J.Callahan (Information Technol. Res., Cochituate, MA, USA).
Office (USA), vol 95, no 1, p 98-9 (Jan 1982)
Electronic mail basically offers the capability to get the right information to the right people on a timely basis. Users report that one of its greatest benefits is the reduction in 'information float'—the time between creation of information and when it is received by the person requiring it. For this article, the term electronic mail is limited to those types of systems that transmit information from the originator's location to the recipient's location without intervening physical-document delivery. These are referred to as end-to-end, electronic-mail systems. (no refs.)

35355 **Being informed means being motivated [ADP].** V Scheitlin.
Systdata (Switzerland), vol.13, no 3, p.VII-VIII (2 March 1982). In German.
The author, an industrial adviser, submits that man is dependent upon information and stresses that industry today finds information more and more important. The whole article is written in general terms defining all the (obvious) advantages of information, such as to management and outlines all the disadvantages of being badly informed. He warns about information being doctored on the way to the top by additions, subtractions and various twists. Industrial information, he concludes, must be purposefull) and systematically organised and controlled. (no refs.) *H.G.*

35424 **How does the office of the future measure up?.** D.Tapscott.
Teleph. Eng. & Manage. (USA), vol.86, no.1, p.50-2, 56 (1 Jan. 1982).
Intuition and early experience indicate that integrated office systems can have a strikingly positive effect on office productivity. In a pilot study, 19 knowledge workers were given electronic work stations on an integrated office system that provided electronic mail, information retrieval, word processing, administrative support and data processing. These workers' attitudes, time use, communications patterns, etc., were compared with those of a control group in a pretest-posttest, quasi-experimental research design. The subjects' activity on the system was monitored daily. (no refs.)

35360 **How probable is the future of office communication?.** A.Cakir.
Off Manage (Germany), vol.30, no 4, p.362-4 (April 1982). In German.
Considers the nature of communication systems with particular reference to existing (telephone, post, telex) and future (teletex, facsimile, viewdata, teleprocessing) office communication. The problems of the man/machine interface are discussed and Busse's description of the requirements of an integrated workstation is quoted: word processing, electronic mail facilities, normal computer terminal operation, etc. (no refs.) *C.C.B.*

35337 **Goodspell, a spelling checker for Applewriter files.** D.S.Teiser.
InfoWorld (USA), vol 4, no.5, p 28-9, 31 (8 Feb. 1982).
Goodspell is a very fast spelling checker for documents created using the Applewriter word-processing program. It allows the user to compare Applewriter text files with a 14000-word, factory-set dictionary. Each word that does not match the dictionary is highlighted for the user to manually determine whether it is incorrectly spelled or is merely a word not contained in the dictionary. (no refs.)

35431 **Architecture for office automation.** J.L.Cox (IBM Corp., Boulder, CO, USA).
Trends in Information Processing Systems. 3rd Conference of the European Cooperation in Informatics, Munich, Germany, 20-22 Oct 1981 (Berlin, Germany: Springer-Verlag 1981), p 1-15
The development of architecture which will facilitate office automation by enabling various office machines to cooperate in performing office system functions is examined. The goals and objectives for the initial steps towards an automated office system are related to an enumeration of the specific architectures which will be required. A general description of the capability of each architecture is given along with a discussion of specific architectural requirements and key problem areas. Some examples of architectural solutions to key problems are given. Specifically the approaches taken to the problem of precise architectural definition as it relates to text architecture are discussed. Finally some thoughts on future office system requirements and their architectural implications are given. The author attempts to enumerate considerations and in some cases approaches to solutions for the office systems architecture problem. The contents are based on approximately three years of office systems architecture development work involving a variety of actual office products. (2 refs.)

35363 **How to cope with info services planning.** R.Shurig (Information Services Div., Ontario Hydro, Toronto, Canada).
Can Datasyst (Canada), vol 14, no.3, p 84, 86 (March 1982).
Analyzing information services planning can be done as a three-part process. It is a methodology that makes best use of available technology, yet meets user requirements without restricting growth. This methodology is discussed. (no refs.)

34940 **Voice recognition: a word about its future.** R.A Foster
Computerworld (USA), vol 16, no 11a, p 39-40 (17 March 1982)
Most computer terminals in the next two years will offer, in addition to the keyboard, voice recognition for data entry, at least as an option. Significant evidence of this trend can already be seen in the industry. (no refs.)

34941 **Speech recognition.** V Zue
Trends & Perspect. Signal Process. (USA), vol 1, no 4, p.1-4 (Oct 1981).
The current status in speech recognition techniques is discussed in terms of its application to commercial equipment. The discussion covers isolated-word, connected-word and continuous-speech recognition. (no refs.)

34887 **The boom in business computer graphics.** S.Kolodziej.
Can. Datasyst. (Canada), vol.14, no.3, p.46, 48, 52 (March 1982).
A massive proliferation of computer graphics devices is presenting users with new choices. The author looks at changes in the market and at the capabilities of some of the products being offered. (no refs.)

34888 **Prestel terminals.** G.P.Hudson.
Br Telecommun Eng (GB), vol.1, pt.1, p.35-41 (April 1982).
This article outlines the technical requirements of a Prestel terminal. It goes on to describe the operation of a terminal together with some of the proprietary methods adopted to achieve this operation. (8 refs.)

32241 **The automated office: can we get there from here?.** D.J Parker (Telecommunications & Office Systems, Macys California, San Francisco, CA, USA).
Office (USA), vol.95, no.1, p.120 (Jan. 1982).
There is no one technology nor only one way to provide automated office concepts. It is an integration of several kinds of technology and equipment. With such a wide selection of equipment and computer programs, how do we get from here to there? Very carefully. The cost to organize, implement and equip ourselves to utilize the technology is significant. The benefits are great. (no refs.)

34706 **Local-area nets.** B.Hoard.
Computerworld (USA), vol.16, no.13A, p.67-9 (31 March 1982).
Large and small companies alike are seeking local-area communications. The advent of office automation (OA) has created the need for communication among various word processors, personal computers, CRT terminals, electronic typewriters, facsimile machines and other office equipment. This communication most frequently occurs within the same building or a series of buildings located within a few miles of each other. Almost every vendor has the best technological solution. (no refs.)

32235 **Colloquium on 'Human Factors in Word Processing'.**
London, England: IEE (1982), 14 pp.
Conference held at: London, England. Date: 4 May 1982. The following topics were dealt with: psychological and organisational problems of office automation; man-machine interaction; the social impact of office automation and its political implications. four papers were presented, of which 3 are published in full in the present proceedings in digest form only. Abstracts of individual papers can be found under the relevant classification codes in this or other issues.

34943 **Man-machine communication: Conversation partner computer.** H.Mangold, K.D.Schmidt
Chip (Germany), no 5, p 174-7 (May 1982). In German.
Man-machine interfaces are improving. The office of the future and principles of digital speech processing are discussed including synthetic speech and semi-synthetic speech. Full speech synthesis is suggested to be the speech issue of the future. Automatic speech recognition systems are coming more and more into existence. (no refs.) *A.V.A.*

32293 **Office design with vision.**
Bus. Syst. & Equip (GB), p 38-9 (March 1982)
The new European headquarters of CAD/CAM specialists Computervision had to provide administrative, development, training and demonstration facilities for an international clientele. Office planning specialists handled the project from start to finish, meeting timetable, budget and quality standards. (no refs.)

35352 **A whole new set of rules for word processing.** A.D Wohl (Advanced Office Concepts Corp., Bala Cynwyd, PA, USA).
Office (USA), vol 95, no.1, p.97, 182 (Jan. 1982).
Word processing takes on a different flavor as one looks harder at office automation. Instead of the only technology it becomes one of the more important functions in a whole bundle of office-automation activities. (no refs.)

34960 **Trends in Information Processing Systems. 3rd Conference of the European Cooperation in Informatics.**
Berlin, Germany: Springer-Verlag (1981), xi+348 pp. [3 540 10885 8]
Conference held at: Munich, Germany. Date: 20-22 Oct. 1981. The following topics were dealt with: office automation; software engineering; programming languages; data communications; database systems; concurrency; architectures; and performance analysis.

34935 **Inside the box: what's a floppy disk?.** P.Jackson.
Micro Decis (GB), no 7, p.145-6 (May 1982).
Without the floppy disk to store data permanently, low cost computing would not be possible. The author explains what it is, how it was developed, and why you need it. If you don't know what type of disk you're using you could find yourself in big trouble. (no refs.)

34805 **How is 'Ethernet'?.** O Oetterli.
Sysdata (Switzerland), vol 13, no.5, p 15 (3 May 1982) In German.
Briefly answers questions and presents points of view relating to connection costs, data throughput rate, bandwidth, terminal equipment intelligence, error detection, transmission, configuration, and application aspects of the Ethernet local data network system (no refs.) *H V.H*

35353 Electronic mail will be the critical pipeline. J.Callahan (Information Technol. Res., Cochituate, MA, USA)
Office (USA), vol.95, no.1, p 98-9 (Jan. 1982).
Electronic mail basically offers the capability to get the right information to the right people on a timely basis. Users report that one of its greatest benefits is the reduction in 'information float'—the time between creation of information and when it is received by the person requiring it. For this article, the term electronic mail is limited to those types of systems that transmit information from the originator's location to the recipient's location without intervening physical-document delivery. These are referred to as end-to-end, electronic-mail systems. (no refs.)

35355 Being informed means being motivated [ADP]. V Scheitlin.
Sysdata (Switzerland), vol.13, no.3, p.VII-VIII (2 March 1982). In German.
The author, an industrial adviser, submits that man is dependent upon information and stresses that industry today finds information more and more important. The whole article is written in general terms defining all the (obvious) advantages of information, such as to management and outlines all the disadvantages of being badly informed. He warns about information being doctored on the way to the top by additions, subtractions and various twists. Industrial information, he concludes, must be purposefull) and systematically organised and controlled. (no refs.) *H.G.*

35424 How does the office of the future measure up?. D.Tapscott.
Teleph. Eng. & Manage. (USA), vol.86, no.1, p.50-2, 56 (1 Jan. 1982).
Intuition and early experience indicate that integrated office systems can have a strikingly positive effect on office productivity. In a pilot study, 19 knowledge workers were given electronic work stations on an integrated office system that provided electronic mail, information retrieval, word processing, administrative support and data processing. These workers' attitudes, time use, communications patterns, etc., were compared with those of a control group in a pretest-posttest, quasi-experimental research design. The subjects' activity on the system was monitored daily. (no refs.)

35360 How probable is the future of office communication?. A.Cakir.
Off. Manage (Germany), vol.30, no 4, p.362-4 (April 1982) In German.
Considers the nature of communication systems with particular reference to existing (telephone, post, telex) and future (teletex, facsimile, viewdata, teleprocessing) office communication The problems of the man/machine interface are discussed and Busse's description of the requirements of an integrated workstation is quoted: word processing, electronic mail facilities, normal computer terminal operation, etc. (no refs.) *C.C.B.*

35337 Goodspell, a spelling checker for Applewriter files. D.S.Teiser.
InfoWorld (USA), vol.4, no.5, p 28-9, 31 (8 Feb. 1982).
Goodspell is a very fast spelling checker for documents created using the Applewriter word-processing program. It allows the user to compare Applewriter text files with a 14000-word, factory-set dictionary. Each word that does not match the dictionary is highlighted for the user to manually determine whether it is incorrectly spelled or is merely a word not contained in the dictionary. (no refs.)

35431 Architecture for office automation. J.L.Cox (IBM Corp., Boulder, CO. USA).
Trends in Information Processing Systems. 3rd Conference of the European Cooperation in Informatics, Munich, Germany, 20-22 Oct. 1981 (Berlin, Germany: Springer-Verlag 1981), p.1-15
The development of architecture which will facilitate office automation by enabling various office machines to cooperate in performing office system functions is examined. The goals and objectives for the initial steps towards an automated office system are related to an enumeration of the specific architectures which will be required A general description of the capability of each architecture is given along with a discussion of specific architectural requirements and key problem areas. Some examples of architectural solutions to key problems are given. Specifically the approaches taken to the problem of precise architectural definition as it relates to text architecture are discussed. Finally some thoughts on future office system requirements and their architectural implications are given. The author attempts to enumerate considerations and in some cases approaches to solutions for the office systems architecture problem. The contents are based on approximately three years of office systems architecture development work involving a variety of actual office products. (2 refs.)

35363 How to cope with info services planning. R.Shurig (Information Services Div., Ontario Hydro, Toronto, Canada).
Can. Datasyst. (Canada), vol 14, no.3, p 84, 86 (March 1982).
Analyzing information services planning can be done as a three-part process. It is a methodology that makes best use of available technology, yet meets user requirements without restricting growth This methodology is discussed. (no refs.)

34940 Voice recognition: a word about its future. R A Foster
Computerworld (USA), vol.16, no 11a, p 39-40 (17 March 1982)
Most computer terminals in the next two years will offer, in addition to the keyboard, voice recognition for data entry, at least as an option Significant evidence of this trend can already be seen in the industry.. (no refs.)

34941 Speech recognition. V Zue
Trends & Perrpect Signal Process (USA), vol 1, no 4, p.1-4 (Oct. 1981).
The current status in speech recognition techniques is discussed in terms of its application to commercial equipment The discussion covers isolated-word, connected-word and continuous-speech recognition (no refs.)

34887 The boom in business computer graphics. S Kolodziej.
Can. Datasyst. (Canada), vol 14, no.3, p.46, 48, 52 (March 1982).
A massive proliferation of computer graphics devices is presenting users with new choices. The author looks at changes in the market and at the capabilities of some of the products being offered. (no refs.)

34888 Prestel terminals. G.P Hudson.
Br Telecommun Eng. (GB), vol.1, pt.1, p 35-41 (April 1982).
This article outlines the technical requirements of a Prestel terminal. It goes on to describe the operation of a terminal together with some of the proprietary methods adopted to achieve this operation. (8 refs.)

32241 The automated office: can we get there from here?. D J Parker (Telecommunications & Office Systems, Macys California, San Francisco, CA, USA).
Office (USA), vol.95, no.1, p.120 (Jan. 1982).
There is no one technology nor only one way to provide automated office concepts. It is an integration of several kinds of technology and equipment. With such a wide selection of equipment and computer programs, how do we get from here to there? Very carefully. The cost to organize, implement and equip ourselves to utilize the technology is significant. The benefits are great. (no refs.)

34706 Local-area nets. B Hoard.
Computerworld (USA), vol.16, no.13A, p 67-9 (31 March 1982).
Large and small companies alike are seeking local-area communications. The advent of office automation (OA) has created the need for communication among various word processors, personal computers, CRT terminals, electronic typewriters, facsimile machines and other office equipment This communication most frequently occurs within the same building or a series of buildings located within a few miles of each other. Almost every vendor has the best technological solution (no refs.)

32235 Colloquium on 'Human Factors in Word Processing'.
London, England: IEE (1982), 14 pp.
Conference held at London, England. Date 4 May 1982. The following topics were dealt with: psychological and organisational problems of office automation; man-machine interaction; the social impact of office automation and its political implications. four papers were presented, of which 3 are published in full in the present proceedings in digest form only. Abstracts of individual papers can be found under the relevant classification codes in this or other issues.

34943 Man-machine communication Conversation partner computer. H Mangold K D Schenkel
Chip (Germany), no 5, p 174-7 (May 1982) In German
Man-machine interfaces are improving The office of the future and principles of digital speech processing are discussed including synthetic speech and semisynthetic speech. Full speech synthesis is suggested to be the speech issue of the future Automatic speech recognition systems are coming more and more into existence (no refs.) A.N.A

32293 Office design-with vision.
Bus. Syst. & Equip. (GB), p.38-9 (March 1982).
The new European headquarters of CAD/CAM specialists Computervision had to provide administrative, development, training and demonstration facilities for an international clientele. Office planning specialists handled the project from start to finish, meeting timetable, budget and quality standards. (no refs.)

35352 A whole new set of rules for word processing. A.D.Wohl (Advanced Office Concepts Corp., Bala Cynwyd, PA, USA).
Office (USA), vol.95, no.1, p.97, 182 (Jan. 1982).
Word processing takes on a different flavor as one looks harder at office automation. Instead of the only technology it becomes one of the more important functions in a whole bundle of office-automation activities. (no refs.)

32139 **The big 3: IBM, Wang, Xerox.** A.Dooley.
Computerworld (USA), vol.16, no.13A, p.27-34 (31 March 1982).
IBM, Wang and Xerox are currently jockeying for position as the No.1 office automation vendor; each presents itself as the company on the leading edge of technology in the burgeoning office automation (OA) industry. Intent on the same goal, the three vendors have chosen to approach the market from different directions. Not surprisingly, IBM is employing a hierarchical system architecture, mainframe-based approach, while Wang and Xerox have adopted a bus network approach. Xerox, with its Ethernet, is betting on the success of a narrow bandwidth baseband structure, assuming that many office functions will use their own dedicated communications media; Wang is trading on a broadband, CATV-like cable with sufficient capacity for a total integrated system. The vendors themselves are feeling their way in this new marketplace. (no refs.)

32140 **Technology: what's on the horizon?.**
Computerworld (USA), vol.16, no.13A, p.44-9 (31 March 1982).
By 1970, most of the major concepts pertaining to the electronic office environment—such as word processing, electronic mail and local networks—had been formulated. But these and other technologies are still undergoing substantial change. Gnostic Concepts, Inc. has looked ahead through the next several years and highlighted some of the major changes in office technology which will have an impact on users of the automated office. The article looks at some of those major trends (no refs.)

35330 **Auspicious office techniques.** A.Turrini.
Antenna (Italy), vol.53, no.12, p.471-2 (Dec 1981). In Italian.
Impressions of the 'CeBit' gallery exhibiting modern office equipment are presented. It is argued, that in spite of many regulations the need for standardisation is still pressing. The Grundig range of dictating systems is briefly described including the 'Tele-Dikstat' and the centralised telephone dictating system. Future trends are exemplified by the range of Sony equipment incorporating a miniature 'typcorder' adapted to fit in any document case. The electronic office is briefly discussed. (no refs.) *T.H.*

35418 **Models for office automation.** G.D.Antoni (Istituto di Cibernetica, Univ. degli Studi di Milano, Milano, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl, p.89-97 (Jan. 1982). In Italian. [received: July 1982]
The present paper discusses at high level of abstraction the modelling problems of office activity taking into account communication problems, the subject matter handled in office work, the role of the operator and relational problems among the participants in office activity. It is strongly suggested that the modelling tools ideally suited for office work are Petri nets. Petri Nets are reviewed with some emphasis to the applications to office analysis and with some attention to the work done by the Milano University Group. Having shown the relevance of Petri Nets to office procedures the case is discussed where these are defined by law. The consequent office automation needs are discussed in terms of the law life cycle. Finally more structure is added to the Petri Nets proposing a uniform model (universal office model) that seem to be suitable for modelling various realities. (25 refs.)

35381 **Higher-level protocols enhance Ethernet.** J.White, Y.Dalal (Xerox Corp., Office Products Div., Palo Alto, CA, USA).
Electron. Des (USA), vol.30, no.8, p.SS33-41 (15 April 1982).
The Ethernet specification of 1980 only covers the lowest level hardware and software building blocks necessary for an expandable distributed computer network which can serve large office environments. Additional levels of protocol are needed to allow communication between networks and communication between processes within different pieces of equipment from different manufacturers. Xerox's Network Systems Internet Transport Protocols enable system elements on multiple Ethernets to communicate with one another. Courier, the Remote Procedure Call Protocol, specifies the manner in which a work station invokes operations provided by a server. These are described. (4 refs.)

35370 **The electronic evolution in offices, integration of data processing and telecommunications.** R.-D.Leister.
Umschau (Germany), vol.82, no.8, p.254-6 (16 April 1982). In German.
Relatively little that is new has been added to office equipment over the past century. The capital value of the technical outfitting of office work places remains much lower than the investments in other fields. The result has been that the productivity of office work remained much less than that of other, highly mechanized types of work. New microelectronic technology, but above all the integratiun of automatic data processing and communications engineering, now offer the possibility of a new era of information processing. This will not only enable existing information to be utilized better, but also make new organizational structures necessary. The best and most flexible communications structure will in the future be a decisive productivity factor in business. (no refs.)

35341 **Electronic mail: the next step in office automation.** E.F.Coudal.
Small Syst. World (USA), vol.10, no.2, p.14-18 (Feb. 1982).
Electronic mail, executive computer workstations, and the freeing of data processing personnel from routine tasks are major future implications of office automation, according to key industry executives and researchers. (no refs.)

34836 **SUMURU: a network configuration for the future.** E.Stefferud (Network Management Associates Inc., Huntinton Beach, CA, USA), D Farber, R Dement.
Mini-Micro Syst. (USA), vol.15, no.5, p.311-12 (May 1982).
Three roles can be readily identified for computers in future network environment architectures: single-user, multi-user and remote-utility systems. Single-user (SU) systems based on powerful pcs will provide local computation and narrative text-editing capabilities. They will also provide terminal interface facilities for access to other computers, and they will be used by all manner of office workers. Multiple-user (MU) systems based on powerful minicomputers will serve groups of 20 to 30 local users in offices, laboratories and production facilities. They will also support SU systems with software program libraries, central office files and communications among SU, MU and other computer systems. Remote-utility (RU) systems, which for many years have provided for institutional data banks and heavy-duty computation, will continue to be based on mainframes. High-capacity central services will still be needed, and should be available via network connections from MU and SU systems. The authors consider the merging of these three components. (no refs.)

32237 **Man-machine interaction in the office.** M.J.Underwood (Office Systems Res. Unit, ICL, Stevenage, England).
Colloquium on 'Human Factors in Word Processing', London, England, 4 May 1982 (London, England: IEE 1982), p.2/1-2
Functionality and ease of use are the primary concerns of man-machine interaction. The term covers a wide range of activities, which are considered under three headings: physical, psychological and social. (no refs.)

32238 **Future trends: the impact of office automation on society.** R.D Parslow (Man-Computer Studies Group at Brunel Univ., Uxbridge, England).
Colloquium on 'Human Factors in Word Processing', London, England, 4 May 1982 (London, England: IEE 1982), p.4/1-4
Shows that office automation will cause a radical change in the structure of work with revolutionary impact on society even without the predicted decentralisation of offices. (no refs.)

35411 **A methodology for analyses of office work.** M.Santoni, A Zecchini.
Manage. & Inf (Italy), vol.19, no.12, p.875-881 (Dec 1981) In Italian. [received: June 1982]
This article, on the means of automating office work, discusses certain obstacles to automation such as the unstratified (non-hierarchical) nature of office work, the need for decisions and the difficulties managers find in mastering these new technologies, shows how these obstacles have been overcome by a methodology of analysis and project structuring (MAPS) which has the advantage of an organisational approach, involves 'user orientated' equipment and techniques, employs concepts relevant and applicable to the system concerned and can analyse and evaluate the processes involved in a system. Before discussing the suitability of MAPS and an application of it, the article evaluates the typical features in information systems for the automation of office work and discusses the applications of Petri nets and graphical methods, adopted for structural systems analysis, to MAPS methods. (13 refs.) *G.B.*

35372 **Teletex—a remote communication service for office communications.** V.Frantzen, G.-D Osterburg (Seimens AG, Munchen, Germany).
Data Rep. (Germany), vol.17, no.1, p.28-32 (Feb. 1982). In German
Efficient data networks, like the Integrated Text- and Datanetwork (IDN) of the German Post Office, transmit information in digital form. With the introduction of the Teletex service a comprehensive standard in the practice is changed, the preparation for worldwide telecommunication on the basis of corresponding CCITT commands. The Teletex technique is an 'open system' one for free traffic relations between all participants of the new international service. It is expected that the Teletex standards, by the continuing work on normalisation panel, will also be found at the input in remote data processing. (17 refs.) *A.N.K.*

35334 **Voice-recognition word processing—near reality?.** J.Markoff.
InfoWorld (USA), vol.4, no.1, p.21 (11 Jan. 1982).
Voice recognition technology has advanced enough to make it realistic to begin to consider possible applications both in the factory and the office. Applications must still be chosen with care, however. (no refs.)

35335 **Word III word-processing program for Apple III.** R.Hart.
InfoWorld (USA), vol.4, no.5, p.24-5, 33 (8 Feb. 1982).
Word IIIs cursor can operate on only one line at a time, the one indicated by a right caret. The display is inverted—black characters on a white background—and, unlike some programs that center text or show margins only when you print out the text, Word III works immediately on the screen. The program supports underscoring, boldfacing, pagination, line replication and micro-justification (inserting fractions of spaces instead of whole spaces between words). (no refs.)

34818 **Ethernet: condemnations and half truths.**
Elektronik (Germany), vol.31, no.8, p.79-80 (23 April 1982). In German.
Discusses how numerous misunderstandings give a crooked picture. The Xerox marketing manager gives important declarations from one of the most interesting statements of the arrangement. (no refs.) *A.N.K.*

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35344 **The user interface [office automation].** T.Billadeau (Automated Office Systems, Boston, MA, USA).
Computerworld (USA), vol.16, no.13A, p.11-14 (31 March 1982).
The user interface is that part of the computer or word processor (also a computer) which facilitates communication between human and machine. There are a number of parts that make up the user interface: the video display screen; the keyboard; any cursor-moving or option-selection device such as a mouse, cat, joystick or touch screen; and the software. Much research has been done on user interfaces in an attempt to determine how best to get a select group of individuals to use a computer even if they do not like it. While some people simply do not want to use a computer, others who are willing to accept new technology are intimidated by a system that is difficult to operate. Far too many systems tell the user he has made a mistake, but offer no solution—a very frustrating situation. It seems clear that if vendors are to penetrate this market of potential users, systems must be made easier to operate. (no refs.)

35345 **Strategic planning [office automation].** D.J.O'Connell (Internat. Management Services Inc., Framingham, MA, USA).
Computerworld (USA), vol.16, no.13A, p.21-3 (31 March 1982).
Project planning for office automation (OA) is the process of deciding on the objectives of the organization, evaluating the role of office automation, determining the resources needed and developing the procedures for acquiring and using these resources. The pattern or work in an OA project follows a repetitive pattern characterized by good times and bad times. The first step in office automation planning is to break the project into discrete steps or phases that serve as control instruments as well as checkpoints for review. They also provide the framework for problem definition, objectives, estimation of resources (time, people and equipment) and scheduling. As each phase is completed, prior phases should be reviewed to ensure conformity and to gain a better understanding of the problems. (no refs.)

35346 **A question of compatibility [office automation].** M.Johnson (Kidder, Peabody & Co., New York, NY, USA).
Computerworld (USA), vol.16, no.13A, p.35-7 (31 March 1982).
The lack of standards and network compatibility in the developing office automation (OA) market all too often leaves the OA user in a quandary over selecting a system. The author surveyed users, vendors and consultants to determine how they were handling the issues, what shortcuts they had evolved and what they thought were the best ways to approach the problems of a particular installation. Three primary areas emerged as needing standardization: facsimile, word processing equipment and data processing equipment. (no refs.)

35347 **Getting personal [micros enter the office].** T.H.Willmott (Internat. Data Corp., Framingham, MA, USA).
Computerworld (USA), vol.16, no.13A, p.51-3 (31 March 1982).
Although the personal computer is a much publicized and popular solution to the office automation (OA) needs of corporate professionals, three important questions often remain unanswered, even after a hardware commitment has been made: Who is likely to profit from owning a personal computer? What can a personal computer actually do? Does the functional power of a personal computer justify its cost? The answer to the third question varies dramatically with the user's job description, applications requirements and salary level. Answers to the first two questions are more easily managed. (no refs.)

35415 **Office automation: research and application.** G.Bracchi, M.Dallera, M.Palazzi (Istituto di Elettrotecnica ed Elettronica Politecnico di Milano, Milano, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl, p.5-57 (Jan. 1982). In Italian. [received: July 1982]
Emphasis is given in today's office to costs reduction and productivity increase: office automation and office information systems, whose feasibility is ensured by the recent advances in computer technology, can be considered as a possible solution to many of the information handling problems of the office. Although the technology and the market exist, much research and development into office automation is still required. The system must integrate several different techniques at the user, software and hardware levels. This implies different approaches and several challanges that need to be met before the automated solutions can be applied effectively. This paper discusses the motivations and the features of office information systems. Problems related to office-communications, form management, information storage and retrieval, man-machine interface and hardware and software architectures are treated. Models and techniques for representing and analyzing information flow in the office are illustrated, and the impact on people and organisations of office automation is discussed. (71 refs.)

35416 **Specific aspects of hardware and software for office automation.** G.Sommi.
Riv. Inf. (Italy), vol.11, no 4, suppl, p.59-74 (Jan. 1982). In Italian. [received: July 1982]
Devices and techniques that characterize office automation, in its present state as well as in its foreseen developments, both proposed and under experimentation, are examined. Functions required to cope with office automation tasks are considered first. Hardware and software features that have allowed or will allow automation of such functions are then described. Final considerations are made on the contribution that the growing office automation application area may bring to the future of data processing. (8 refs.)

35420 **Information systems and office automation.** P.Dell'orco (Centro Scientifico IBM, Roma, Italy).
Riv. Inf. (Italy), vol.11, no.4, suppl, p.113-27 (Jan. 1982). In Italian. [received: July 1982]
Office information systems are constituted by processes related to the creation, collection, storage, processing and communication of information. They differ from traditional information systems as their target is constituted by non-repetitive and unstructured processes. Users are neither potential nor actual data processing experts, often involved in several different activities. The usability of such systems depends critically upon the degree of 'intelligence' they exhibit in the management of the so-called 'enterprise memory', in understanding and modelling office procedures and in user interfaces (both software and hardware). The concept of data base and related concepts (integrity, consistency, distribution of data and user interface) may be used in these systems is a unifying model. (13 refs.)

35421 **Office automation.** R.J.Spinrad (Xerox Palo Alto Res. Center, Palo Alto, CA, USA).
Science (USA), vol.215, no.4534, p.308-13 (12 Feb. 1982).
The automated office has the potential to change significantly the ways we handle the substance of our working lives. Advances in electronics and computer systems enable us to do much more than just upgrade individual office functions. We can now restructure our basic information handling modes to allow an immediacy of interaction not previously available. The tedium of paperwork is sharply reduced and it becomes much easier to work collaboratively with others. The electronic desk becomes the professional's link to a widely distributed array of information sources and services. (10 refs.)

34016 **A microprocessor controller for a personal typewriter for visually handicapped users.** T.J Brown, R.E Aitchison (School of Math. & Phys., Macquarie Univ., North Ryde, Australia)
IEEE Trans. Biomed. Eng. (USA), vol.BME-29, no.7, p.551-5 (July 1982).
The design of a microprocessor controller for a personal typewriter for the visually handicapped is outlined. The controller is interfaced to an electronic or electronic-mechanical typewriter with a golf-ball or daisy-wheel print head, and uses the correcting feature to produce a personal typewriter for the visually handicapped; this enables, at minimal cost, the production by the visually handicapped user of typewritten text which is error-free and of good layout without the intervention of sighted help. Speech synthesis of the keyboard characters and functions is combined with sensing and command switches by an 8-bit microprocessor. Flow diagrams of the software and modifications for various models of typewriter and speech synthesizer are briefly discussed. (5 refs.)

34017 **Integrated office communication via electronic mail.** G.Arndt, K.Nemeth (Siemens AG, Munich, Germany).
International Switching Symposium - ISS '81 CIC, Montreal, Que., Canada, 21-25 Sept. 1981 (Verdun, Que., Canada: Internat. Switching Symposium 1981), p.33C6/1-6 vol.3
Electronic mail is to be considered as a vehicle towards rational integrated office communication. This means integration of information processing and communication, 'any-to-any' communication between all terminals within a common message system, integrated text/image editing and communication. It is shown to what extent integrated office communication has been realized in these three aspects and what future developments are expected. (1 refs.)

34812 **Keywords in communications technology [and office automation].** S.Schindler (Tech. Univ. Berlin, Berlin, Germany).
Comput. Commun. (GB), vol.5, no.3, p.140-7 (June 1982).
Terms are discussed with respect to the ISO reference model for open systems interconnection and their relative positions within this structure. Transmission, switching, internetworking, network integration, local area networks and integrated service digital networks are covered in detail. Keywords relating to applications such as office automation and text processing are more clearly interrelated, and future end systems are proposed. (14 refs.)

34813 **Protocol converters: the answer to compatibility problems?.** P.Robinson.
Comput. Commun. (GB), vol.5, no.3, p.148-51 (June 1982).
One of the major data communications problems over the past few years has been how to make different vendors' hardware and software communicate. Standards proposed by various bodies have been set up to solve problems, rather than prevent them. The paper discusses the use of protocol converters to provide compatibility between devices. The implementation of protocol converters within systems is described, along with suitable applications and environments. A cost comparison of configurations with and without protocol converters is provided. (no refs.)

34814 **Burroughs embraces token passing [protocols].** H.J.Hindin.
Electronics (USA), vol.55, no 10, p.115-16 (19 May 1982).
The work of Burroughs Corp on token passing protocols for local networks is described, and contrasted with that of IBM. The two schemes have similar objectives, but different implementations. Both are adaptable to either a physical ring network or its logical and electrical equivalent and both companies are concerned with accommodating both voice and data on their networks, and make provisions for different service classes. (no refs.)

34960 **Trends in Information Processing Systems. 3rd Conference of the European Cooperation in Informatics.**
Berlin, Germany: Springer-Verlag (1981), xi+348 pp. [3 540 10885 8]
Conference held at: Munich, Germany. Date 20-22 Oct. 1981. The following topics were dealt with: office automation; software engineering; programming languages; data communications; database systems; concurrency; architectures; and performance analysis.

34935 **Inside the box: what's a floppy disk?.** P.Jackson.
Micro Decis. (GB), no.7, p.145-6 (May 1982).
Without the floppy disk to store data permanently, low cost computing would not be possible. The author explains what it is, how it was developed, and why you need it. If you don't know what type of disk you're using you could find yourself in big trouble. (no refs.)

34805 **How is 'Ethernet'?.** O.Oetterli.
Sysdata (Switzerland), vol.13, no.5, p.15 (3 May 1982) In German.
Briefly answers questions and presents points of view relating to connection costs, data throughput rate, bandwidth, terminal equipment intelligence, error detection, transmission, configuration, and application aspects of the Ethernet local data network system (no refs.) *H.V.H.*

39586 **DP professionals face major challenge in automated office.** D.Tapscott.
Comput. Data (Canada), vol.7, no.2, p.22-32 (Feb 1982).
A new generation of integrated office systems which differ from traditional data processing systems is arising. Across North America those in the systems profession are trying to grapple with the vastly increased significance of these systems. (no refs.)

39587 **Framework needed to define what integrated systems really are: vendors cash in on office automation boom.** D.Macfarlane.
Comput. Data (Canada), vol.7, no.2, p.36-9 (Feb. 1982).
Bell Canada funded the office information communications systems group at Bell-Northern Research to develop a framework that would encompass all the elements required to describe and evaluate an integrated office system (IOS). In this way, Bell Canada could describe each system in its own consistent structure, and not have to be limited by each vendor's particular presentation. The framework developed has grown to over 250 separate elements, resulting in an extremely comprehensive description of each IOS for which an analysis is maintained. (no refs.)

39588 **The office of the future: a complete misnomer.** D.Spennewyn.
Computing (GB), vol.10, no.27, p.22-3 (8 July 1982).
Reports on the state-of-the-art of office systems and the need for integration of the four technologies—data processing, word processing, audio processing and image processing. The office of the future is here now. (no refs.)

39589 **Office of the future.** E.S Larsen.
Data Tid (Norway), vol.4, no.5, p.9-12 (June 1982). In Norwegian.
Reviews word processing and other electronic data processing equipment for administrative purposes, with special reference to equipment supplied by the Prime Co. for general office work, accounts, statistics and data control, also digital voice telephone exchanges and image transfer systems (for documents) made by Wang. (no refs.) *J.S.*

39590 **Word processing: facilitator or frustrator?.** B.Medina (Northeast Regional Inst. for Information Policy & Res., Silver Spring, MD, USA).
Inf. Age (GB), vol.4, no.3, p.131-4 (July 1982).
Word processing systems implemented by many organizations have often not lived up to the claims of the manufacturer or vendor. Problems with personnel, record accuracy and security seem to be a result of the designer not taking into account the proper role of the operators, the limitations of the equipment and the effect of the system on the structure of the organization. The paper discusses how an organization can be analysed as a system and how potential problem areas can be identified before implementation. A set of rules is proposed for the successful implementation of a system, governing structure, information flow and feedback. (7 refs.)

39591 **Graphics for managers: the distributed approach.** D.Friend.
Datamation (USA), vol.28, no.7, p.76-7, 80, 84, 91-2, 94, 96 (July 1982).
The author considers that the key to a successful management graphics system is providing managers with an instant look at the core 20% of the data. From this premise he discusses the setting up of computer graphics based systems. (no refs.)

39592 **Electronic storage slashes office paperwork.** I.Albert (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.17, no.3, p.8-13 (June 1982). In German.
As an instrument for streamlining office work, machine support is needed more than ever for document generation and information exchange. To store documents between these processes, storage systems must not only be compatible with preceding and subsequent processing or communication procedures, but also fit in with established office routines. The article goes into the question of how electronic storage systems can replace filing cabinets and mail boxes. (3 refs.)

39623 **Office automation? No and perhaps.** J.Driscoll, S.M.Abraham.
Strut. d Autom. (Italy), vol.28, no.222, p.25-30 (Jan. 1982). In Italian. [received: May 1982]
The author Driscoll deals with what he considers to be strategic errors in the introduction and development of office automation, asserting that on the basis of the present situation it will have led to excessive costs and resulted in more harm than good to a society seeking higher productivity, greater innovation and a better life for its citizens. The principal reason for this is its tendency to exacerbate the division between brainwork and manual work, creating two classes; the intellectual chiefs and a proletariat of computer-minders and rubbish clearers. He outlines an alternative and in his view more enlightened policy. The author Abraham, while pointing out tactical errors in past and current developments, gives a cautious welcome to office automation, mainly on the grounds that even a small improvement in facilities for communication could have a large effect upon overall efficiency, but only if adequate attention is given to the human factors in the situation. (no refs.) *C.J.O.G.*

36440 **The introduction of video-display working.** G.Scheloske.
Off. Manage (Germany), vol.30, no.5, p.540-1 (May 1982). In German.
Deals with the need adequately to prepare staff for the introduction of video work-stations, both from the psychological and humanising aspects and the technicalities involved in the operation of an interactive video-display work station. A complete schedule of graduated steps to be taken for the successful realization of the new mode of working covering a period of six months is given. (no refs.) *L.M.W.*

39595 **The office of the future—interaction necessary between forms of communication.** R.Dag Blekeli.
Data (Denmark), vol.12, no.4, p.30-1 (April 1982).
The author writes that data processing technology and telecommunications are re-shaping the office. He says that the term 'office automation' is a somewhat loose description of these changes. Looking ten years into the future the new will principally lie in the connecting of systems that have hitherto existed separately, as well as radical changes in the possibilities for communication. (7 refs.) *H.J.P.*

39596 **Office automation—the name of the system reflects development.** A.Delang.
Data (Denmark), vol 12, no.4, p.41-2 (April 1982).
The author suggests that naming has always been an important part of life, and that great weight is given to choosing a name that says as much as possible about the person or object being named. He thinks that this not only applies to the naming of people of places, but that the same aspiration applies in the technical field. The author then analyzes the different rules that are applied, either consciously or subconsciously and which seem to apply when a supplier gives a name to his office automation system, or parts of such a system. He then asserts that the developments that have taken place of what office automation appears to be are reflected by the name chosen. (no refs.) *H.J.P.*

39597 **How to make the boss more efficient: using the voice.** L.B.Axelsson.
Data (Denmark), vol.12, no.5, p.44-6 (May 1982). In Swedish
Shows how the voice can be integrated in the computer/word processor set-up of the modern office, by greater use of telephones with voice messages service (VMS), voice answering service (VAS) and similar arrangements. Numerous statistics relating to telephones are presented. (no refs.) *J.S.*

39821 **Technology and the information professional: will it make a difference?.** C.Oppenheim.
Inf. Serv. & Use (Netherlands), vol.1, no.3, p.161-7 (Nov. 1981).
The paper examines the likely impact of new technology on librarians and information scientists, and on database producers, over the next ten years. Database producers will increasingly rely on home-based abstractors who receive, create and send all their material by electronic means. The advantages of such procedures for the database producers are outlined. Increasing use of videodiscs for information storage and retrieval is envisaged. The impact of new technology on librarians and information scientists is then examined. Use of videodiscs will mean a decline in the use of online information retrieval. Use of intelligent terminals will lead to greater use of these systems by end-users. The intelligent terminals could be used to translate software languages, to refine search strategies, to store and edit output from searches and to advice users on the best databases and best search strategy to use. All these developments will be integrated into those leading to the 'office of the future'. The author concludes that there will be a dramatic shakeout in librarianship, but that information scientists face a great opportunity to develop their skills by grasping the opportunities afforded by the new technology. It is recommended that schools of information science teach their students typing skills. Finally, some remarks about the advisability to offering sophisticated information retrieval systems to less developed countries (LDC's) are made. (5 refs.)

39570 **Communications using word processing systems.** J.B Whitehead (Nexos Office Systems Ltd., Bristol, England)
Inf. Serv. & Use (Netherlands), vol.1, no 3, p.109-38 (Nov. 1981).
Communication between word processor equipment is reviewed extensively. A survey is given of communication protocols and networks. Several possibilities to link word processors are described, leading into a discussion of electronic mail and teleconferencing. The paper contains a glossary of communication terms. (17 refs.)

39571 **Man and automation in the office.** W.Grunsteidl (Concern Strategic Planning, Philips Industries, Eindhoven, Netherlands).
Inf. Serv. & Use (Netherlands), vol.1, no.5, p.263-70 (March 1982).
The human aspects of office automation are reviewed. A plea is made for an approach in which the three elements of office automation—man, organization and the technological system—are integrated on an equal basis. There should be more emphasis on the effectiveness of information systems, rather than on their efficiency. The real challenge for office automation is not the introduction of new technology, but information management. (no refs.)

36401 **Office workers—are they a vanishing breed?.** A.Cowie (Philips Business Systems, England).
Conference on Communications Equipment and Systems, Birmingham, England, 20-22 April 1982 (London, England: IEE 1982), p.182-5
Discusses the genuine concern that the onset of office automation will dramatically reduce the number of employment opportunities in the office environment. It would be unreasonable to accept that there will not be changes in office practice and routines and in the tasks and skills required of office workers. (no refs.)

39603 **Office technology: everything remains to be done . . .** P.Lefebvre.
Inf. & Gestion (France), no.132, p.9 (April 1982). In French.
Introduces the topics of information management, office technology, and the office of the future. Various other notions are touched upon extremely briefly. (no refs.) *L.A.F.*

39604 **The office situation of today.** M.Legorgev.
Inf. & Gestion (France), no.132, p.29-32 (April 1982). In French.
Discusses the oft-used phrase the 'office of the future' in the context of today's actual typical office and likely future developments. Problems of choosing the correct information-processing equipment are discussed. *L.A.F.*

39605 **The office situation and the human factor.** C.Bert.
Inf. & Gestion (France), no.132, p.32-7 (April 1982). In French.
Discusses psychological, personal and ergonomic factors associated with the introduction of computerised office technology. The views of two secretaries are given. (no refs.) *L.A.F.*

39582 **Office technology supergroup emerges.** J.Hewer.
Can Electron. Eng. (Canada), vol.26, no.6, p.25-6 (June 1982).
The common thread between a number of new 'office of the future' companies is venture capital originating at the heart of Canada's technological renaissance. (no refs.)

39583 **How the home help became something in the city.** J.Lamb.
Comput. Manage. (GB), p.18-21 (April 1982).
Originally intended for domestic use, viewdata has undergone an early metamorphosis. Far from being an electronic rival to publishers of the printed word, it is now being regarded more as a cheap data processing service aimed at business efficiency. The author examines the service's changing role. (no refs.)

31324 **Japanese communicating word processor with image processing functions.** S Horiguchi, H Ikezawa, Y Tsuru.
Electr Commun Lab Tech J (Japan), vol.30, no.11, p.2699-708 (1981). In Japanese
Recently, word processors have appeared for office work rationalization. Many sorts of word processors, which process Japanese language documents, were announced for introduction in office activities. In this situation, a Japanese word processor was developed which has many functions for preparing documents, that is editing texts and image patterns, communicating and storing them. The authors describe the design of this facility, the details of techniques adopted for processing documents and protocol for transmitting text. The estimating results, gained during practical tests on processing documents, are also mentioned. (7 refs.)

31325 **Image processing techniques on the Japanese communicating word processer.** H Nakano, S Otsuda, K.Fujita, Y Kanada, S.Horiguchi
Electr Commun Lab. Tech J (Japan), vol 30, no.11, p.2709-19 (1981). In Japanese
It is desirable to implement image processing functions in a word processing terminal, because documents are often accompanied with tables, graphs etc. A word processing terminal with such functions has been developed at Yokosuka Electrical Communication Laboratory. The authors describe image processing techniques used on the word processing terminal. The terminal utilizes a facsimile transmitter as a scanning input device and a signal control tablet for function keys to specify lines and circles. Documents in various formats accompanied with figures are produced very easily and speedily by these techniques. (7 refs.)

31278 **From WP screen to TV screen at Blackrod.**
Bus. Syst. & Equip. (GB), p.56, 59 (Feb. 1982)
Through all the uncertainty and controversy about the structure and policy of Nexos as a company, competitors and users alike have agreed that the Nexos 2200 is a first-class word processor. Its future marketing has been assured, in the hands of ICL and its developers, Logica. This case study of a topical, technologically-oriented user company illustrates its potential. (no refs.)

31279 **Word processing study makes a contribution to profits.** R.J.Jones (Ball Corp., Muncie, IN, USA)
Office (U.S.A), vol 95, no.2, p.79-80 (Feb 19821.
In November 1973, a management consulting firm completed a study of the utilization of secretarial and clerical personnel at Ball Corporate headquarters. The primary objectives were to (1) develop an effective utilization of administrative personnel, (2) determine a realistic and workable table of organization to provide career-path opportunities for administrative personnel and (3) provide the professional staff with the required secretarial support to meet day-to-day needs. As a result of the findings, recommendations were made to organize and staff an administrative zone on each operating floor in the building. Each administrative zone would have a word-processing center designed to handle typing requirements of the departments on its floor and provide backup for word-processing centers on other floors. (no refs.)

31303 **New developments in office automation computer communication in natural language—possibilities and unsolved problems.** P.Schrupp.
Onl Manage (Germany), vol.30, no.3, p.232-4 (March 1982) In German.
Although it is not everyone's ideal, there is a continuing demand for natural-language, aural interaction with computers. Full realisation is in the distant future, but there has been progress with some aspects of the problem. Artificial speech production has been possible for some decades. On the input side, it is much easier to recognise different voices than to distinguish spoken words, and this is being turned to account as an alternative to the use of passwords in identifying users. Interpretation of spoken input is immensely difficult, but a limited form of understanding of single words and short phrases can be achieved. Digital recording and reproduction of speech can also be used, and could supplement the current use of keyboard and screen for input and output. (no refs.) *G.F.F.*

31270 **Keys to successful office automation: company strategies and user needs.** A G Rockhold.
Interactions (USA), vol.29, no.3, pt.1, p.66-72 (March 1982).
There is a new breed of users. Users who are ready and willing to use computer technology in the office environment if it meets their needs. The successful office automation process will begin not with the technology but with a corporate commitment to identify these needs and a clearly defined strategy for solving communications problems. (no refs.)

31321 **Office automation.** L Yencharis.
Electron. Des (USA), vol 30, no.1, p.237-58 (7 Jan. 1982).
Guidelines for the efficient running of the automatic electronic office of the future are given. The paper also reviews equipment from Data General, Digital Equipment, Hewlett-Packard, IBM, Harris and Prime. (no refs.)

31272 **Intelligent copiers to play vital role in tomorrow's office.**
OEP Off. Equip & Prod (Japan) vol 11, no 1, p.37, 40, 88 (1982).
Discusses various trends in intelligent copiers. The author looks at their integration in office automation systems. The intelligent copier is defined as a nonimpact printer capable of word and image output. (no refs.)

31273 **The emergence of combination machines offers new directions for OA [office automation].**
OEP Off. Equip & Prod (Japan) vol 11, no 1; p.41-2, 82 (1982)
Considers various combined office function machines. In particular the author considers the NEFAX-701 facsimile/copier which aims to promote office automation. (no refs.)

31274 **Office communication, what is desirable and feasible?.** R.Heister.
Online (Germany), no 1, p.42-5 (Jan.-Feb. 1982) In German
Describes the development of office equipment and communication as well as the increase in office personnel, due to the needs of information. Implications of information requirements and the information impact on overall efficiency create the tendency for an 'information society', which necessitates further office automation and consequent adjustment of working places. Optimal office conditions are outlined, involving multifunction-terminals at the working place. The value recognition of information will lead to the establishment of information controllers at management level. In the future company productivity will depend on communication and information performance coupled with imagination and intelligence. (no refs.) *A.A.A.*

31341 **Office systems in distributed processing environment.** M.Hattori, Y.Nagai.
Syst. & Control (Japan), vol.25, no.11, p.685-92 (Nov. 1981). In Japanese. (10 refs.)

31342 **Office automation approach 'integrated system'—Olivetti OA development objectives.** S.Ogata.
Syst. & Control (Japan), vol.25, no.11, p.693-700 (Nov. 1981). In Japanese. (9 refs.)

31343 **Consideration of office automation.** S.Watanabe.
Syst. & Control (Japan), vol.25, no.11, p.701-8 (Nov. 1981). In Japanese. (no refs.)

31344 **Objectives for information systems.** V.Bita.
Stud. & Cercet. Calc. Econ. & Cibern. Econ. (Rumania), vol.15, no.3, p.15-23 (1981). In Rumanian.
Discusses criteria for increasing the effectiveness of information systems and for defining certain clear and precise objectives towards this goal. Some possible objectives are presented for a given information system, being classified in two groups: final and intermediary, together with the means of determining the objectives. Especially stressed is the role of the firm's management in defining the objectives for its information system. (4 refs.) *C.J.R.*

31335 **World trends in information and manufacturing technology.** J.H.Heward.
Manage Serv. (GB), vol.26, no.1, p.6-10 (Jan. 1982)
Based on a tour of American and Jananese industry in 1981, the author discusses trends in office technology in the USA and manufacturing productivity in Japan. (no refs.)

31336 **Online messages, files, text and publishing.** R.Bezilla (Gallup Organization Inc., Princeton, NJ, USA).
Online (USA), vol.6, no 2, p.51-5 (March 1982).
Discusses the advent and potentials of online electronic information exchange. (no refs.)

31337 **Present status and future of office automation.** T.Miyano.
Syst. & Control (Japan), vol.25, no.11, p.655-60 (Nov. 1981). In Japanese. (no refs.)

31352 **Technological advances in office output devices.** L.Cannon, F.Shah
NTC '81. IEEE 1981 National Telecommunications Conference Innovative Telecommunications - Key to the Future, New Orleans, LA, USA, 29 Nov.-3 Dec. 1981 (New York, USA: IEEE 1981), p.E4.1/1-4 vol.3
Discusses developments in word processors and their impact on office functions. Particular attention is paid to print quality and printer reliability an cost. (no refs.)

31293 **Word-processing software directory.**
Pop Comput (USA), vol.1, no.4, p.22-4, 26, 28, 30 (Feb. 1982).
Presents tables which summarize the many features of popular word-processing programs for CP/M-based computers, TRS-80s, Apples, and Ataris. (no refs.)

31473 **Approaches to strategic planning for information resource management (IRM) in multinational corporations.** G.J.Selig.
Manage Inf Syst Q (USA), vol.6, no.2, p.33-45 (June 1982)
Multinational corporations (MNC's) face increasingly higher rewards and risks when choosing amongst alternative investments for their computer and communications based information systems. The multi-layered management and technical issues and decisions confronting multinational corporations are seemingly endless and require new insights. A rapidly growing number of MNCs are utilizing computer based information systems, office automation and administrative support systems, telecommunication systems, factory information systems, and home information systems as critical tools in managing and monitoring their global businesses. As the resources, scope, and criticality of the 'information commodity' grow, more senior managers are being forced to concentrate on better ways of planning for rapid changes to capitalize on new opportunities and reduce their risks. (no refs.)

31313 **Changing technologies in office correspondence.** H.-D Grosser (Siemens AG, Bereich Kommunikations-Endgerate Munchen, Germany).
Data Rep (Germany), vol.17, no.2, p.14-16 (April 1982) In German
For management and O&M specialists there is only one realistic approach to finding optimum solutions to office communication problems: the suitability of the products, systems and telecommunication services available on the market for these applications must be thoroughly examined and dead-end technologies avoided. This article points out to newcomers to office organization, whether executives or staff specially entrusted with this subject, the potential and the limits of office communication technologies in realistic terms and emphasizes the need for frank discussion by all concerned. (12 refs.)

28713 **How secure is the security of your automated office?.** W.A.J.Bound (Dept. of Defense Computer Inst., US Navy, Washington, DC, USA).
Office (USA), vol.95, no.2, p.118-20 (Feb. 1982).
Computer security is concerned with the protection of automated information system (AIS) resources, including (1) data, the information to be protected; (2) hardware, the equipment that performs the processing; (3) software, the programs, operating system and utilities; (4) remote-site equipment, the dial-up terminals; (5) office equipment, word processors, typewriters, copying machines and micrographics equipment; (6) personnel, the users or EDP staff. (no refs.)

31295 **The office computers robotron A 5120 and robotron A 5130.**
Neue Tech. Buero (Germany), vol.25, no.6, p.177-82 (Nov.-Dec. 1981).
The office computers robotron A 5120 and A 5130 are modern 'intelligent' machines for posting, invoicing, accounting and data collecting routines, for simple word processing duties, and for computer communication in the form of intelligent computer terminals for dialoging operation, remote batch processing of larger volumes of data, and for direct user access to data banks of EDP installations in on-line operation. The office computers robotron A 5120 and A 5130 use the simultaneous operating system SIOS 1526. (1 refs.)

31339 **Office systems and architectures.** H.Kawabe.
Syst. & Control (Japan), vol.25, no.11, p.668-74 (Nov. 1981). In Japanese. (5 refs.)

31281 **Information technology in the 1990s: a long range planning scenario.** R.I.Benjamin.
Manage Inf Syst Q (USA), vol.6, no.2, p.11-31 (June 1982)
Describes a reasonable scenario for information technology, and its use within a major organization in the year 1990. The scenario is based upon a model used at Xerox to portray the use of information systems (IS) internally within the corporation in the year 1990. Assumptions are made about the technology and economics, and by coupling these with observed trend lines from historical data, predictions about the 1990 IS organization, technology, investment requirements, and support structure are drawn. Estimates are developed for the extent of distributed processing at four levels of the organizational hierarchy. Finally, a number of conclusions which deal with the changing nature of the IS technology and role of IS management are described. (6 refs.)

31305 **Updating an inverted index—a performance comparison of two techniques.** J.S.Johnson, D.B.Webster (Dept. of Industrial Engng., Auburn Univ., Auburn, AL, USA)
Comput. J (GB), vol.25, no.2, p.169-75 (May 1982).
On-line maintenance for an inverted index file of a volatile database is one of many performance questions to be considered when designing an information system. An alternate method of file maintenance for an inverted index file is proposed that can reduce the amount of execution time and the number of input/output operations as compared with the traditional technique. Both techniques were implemented and their performance compared on a dedicated computer. The results indicate what levels of update activity are needed to realize improved performance using the proposed technique. (12 refs.)

31318 **Automated office hinges on user acceptance.** D.J.Massaro.
Electron. Des (USA), vol.30, no.1, p.180-1 (7 Jan. 1982).
Looks at the development of the automatic office and gives guidelines for choosing the most efficient and cost effective one. (no refs.)

31319 **Office of the future must be designed with the user in mind.** F.A.Wang.
Electron. Des. (USA), vol.30, no.1, p.190-1 (7 Jan. 1982).
Guidelines for the design of the automatic office, taking into account the users and their capabilities instead of technology, are discussed. (1 refs.)

31311 **Videotext: narrowing the gap in office disciplines.** K Townsend
Computing (GB), vol.10, no.13, p.24 (1 April 1982).
Business users are Prestel's biggest, and the office of the future is now very near. These two facts add up to a need to converge viewdata, in the form of Prestel, and word processing to bring office technology the multi-function work station it needs. (no refs.)

31350 **WordStar: packaged versatility from a market leader.**
Which Word Process (GB), vol.3, no.1, p.30-2, 34-5 (Jan. 1982).
Reviews the microcomputer WP package WordStar was developed by MicroPro to be an application word processing package. (no refs.)

27715 **The AGORA message system architecture.** G.Frantz, A.Karmouch, N.Naffah (Inria, Le Chesnay, France)
Networks from the User's Point of View. Proceedings of the IFIP TC-6 Working Conference COMNET '81, Budapest, Hungary, 11-15 May 1981 (Amsterdam, Netherlands: North-Holland 1981), p.575-89
Presents the Message System Architecture as it is defined in the KAYAK project. The system, called AGORA, is based on distributed architecture. Its main components are name servers, message servers, and access points. A name server manages and supervises the use of the message system by subscribers. It also provides the means to find the physical address of each subscriber's mailbox. A message server is composed of mailboxes. It can be centralized on a site or distributed on different sites. The access points are materialized by terminals with different capabilities (teletypes and office workstations). The authors describe the general purpose of the message system, then they introduce the functions of the name server and the message server. The end-to-end message protocol is briefly described. (19 refs.)

27716 **Advanced text communication with Teletex.** H.G.Gabler (Data Communication Dept., Fernmeldetech. Zentralamt, Darmstadt, Germany).
Networks from the User's Point of View. Proceedings of the IFIP TC-6 Working Conference COMNET '81, Budapest, Hungary, 11-15 May 1981 (Amsterdam, Netherlands: North-Holland 1981), p.591-601
At present, the Deutsche Bundespost is making the necessary preparations for the introduction of the new CCITT recommended Teletex service in the Federal Republic of Germany early in 1981. Taking into account the existing possibilities of text communication in the Federal Republic of Germany, the author describes the important reasons which lead to offering this service. In this respect, the economy of the new service compared with that of other telecommunication media plays an important role. The objectives of the new text communication facility resulted in several important CCITT draft recommendations. (9 refs.)

27717 **Automated office system design: problems and principles.** J.H.Bair (Bell Northern Res., Mountain View, CA, USA).
NTC '81. IEEE 1981 National Telecommunications Conference. Innovative Telecommunications - Key to the Future, New Orleans, LA, USA, 29 Nov.-3 Dec. 1981 (New York, USA: IEEE 1981), p.G5.1/1-8 vol.4
Current interfaces to office automation systems tend to decrease knowledge worker efficiency because the interface design is a carry-over from data processing applications. The 'new' functions of office systems result in a different set of end-users and design problems. The office system will be used much more heavily by persons who are non-specialists in computer operation, and represent every role in the organization. Thus, the computer interface will have to be more flexible, natural, and convivial. Principles of interface design are offered which will increase the likelihood that an office system will improve productivity. These principles focus on a natural command language and syntax, a virtual display map, the 'mouse' cursor control, and a general purpose 'frontend' to distributed services. (15 refs.)

27670 **Investigating the electronic office.** D.Tapscott.
Datamation (USA), vol 28, no.3, p.130-8 (March 1982).
That automated systems improve productivity is widely believed but hard to prove. This article reports on an experiment designed to test that hypothesis. (no refs.)

27671 **Electronic 'office of the future' becoming present-day reality.** D.F.Parkhill.
Eng. J. (Canada), vol.64, no.5, p.20-2 (Fall-Winter 1981).
Describes how Canada's Office Communications Systems Program aims to help Canadian industry and government embrace the new microelectronics technology. (no refs.)

27672 **Practical office automation.**
EDP Anal. (USA), vol.20, no.1, p.1-12 (Jan. 1982).
Many companies have numerous disjoint computerized systems. With some careful planning, creative thinking, continuous searching, and limited development work to link products, they can provide the groundwork for a future integrated office automation system. The companies moving along in office automation appear to be taking advantage of what they already have or can easily obtain. This is reported to be true of some small and large organizations in the US and Europe. (8 refs.)

28135 **The engineering office of the future: a typical day in 1990.** E.H.Smith,Jr., W.R.Lesyna (E.I. Du Pont De Nemours Co. Inc., Aiken, SC, USA)
Proceedings of MICRO-DELCON '82. The Deleware Bay Computer Conference 1982, Newark, DE, USA, 9 March 1982 (New York, USA: IEEE 1982), p.1-5
The engineering office of the future is likely to be somewhat different than today's office. Its focal point may be the tool used by engineering personnel to routinely do their jobs: the engineering work station. The work station would be used to accomplish a myriad of jobs, many of which today are done manually. Features of such a work station might include electronic mail, three-dimensional color graphics, voice input and output, compact memory, input tablet, built-in printer for text and graphics, and several others. The cumulative effects of currently developing technologies, and those soon to come, are demonstrated by following a project engineer through a typical work day in 1990, focusing on his use of the work station. (no refs.)

27219 **Future developments in office technology.** A.Knight (Logica Ltd., London, England).
Commun. Int. (GB), vol.8, no.12, p.45, 49 (Dec. 1981).
Reviews developments in the design of integrated workstation equipment in the light of advances in office technology and its applications. (no refs.)

27649 **Is there a future for the 'social office'?.** J.Sterne.
Ir. Comput. (Ireland), vol.5, no.10, p.27-8 (Jan. 1982).
Discusses the implications of word processors and office automation for personnel status and relationships. (no refs.)

27650 **The role of facsimile in the electronic office.** B.Heron.
Ir. Comput. (Ireland), vol.5, no.10, p.31-2, 34 (Jan. 1982).
Standards of compatibility, resolution, speed, paper size, and cost are discussed and future developments foreshadowed. (no refs.)

27651 **The electronic office: one giant leap or gradual exploration?.** H.Hennecke.
Systems (S. Africa), vol.11, no.10, p.13, 15-21, 23-5 (Oct. 1981).
The managing director of Olympia SA reviews the progress of office automation and finds that the advent of the fully integrated electronic office in South African businesses will be governed largely by the availability of skilled workers to operate, market, install and service the equipment. (no refs.)

27652 **What's ahead in office automation technology.** R.A.Russel.
Can. Datasyst. (Canada), vol.14, no.2, p.58-9 (Feb. 1982).
Technology is the driving force in office automation. The author looks at the innovations that are changing the move to automation, along with an assessment of their impact. (no refs.)

27653 **Bright prospects for laformatics industry in Canada.** F.Fox.
Can. Datasyst (Canada), vol.14, no.2, p.64 (Feb. 1982).
The author assesses the prospects for Canada's computer communications industry in this review and forecast. (no refs.)

27711 **Local network design for office automation.** C.Mercier-Laurent (Projet Kayak, Inria, Le Chesnay, France).
Networks from the User's Point of View. Proceedings of the IFIP TC-6 Working Conference COMNET '81, Budapest, Hungary, 11-15 May 1981 (Amsterdam, Netherlands: North-Holland 1981), p.49-55
In the Kayak project, a local network has been built, called DANUBE, for an experimental distributed office system. The characteristics are: bus network based on the carrier sense multiple access with collision detection (CSMA/CD) principle; 1 Km. of distance coverage; 255 station ports; 1 M bits/sec of data rate. This network permits the interconnection of office workstations and the access to major applications (e.g. messaging, teleconferencing, archival...). The author describes the design concepts and the configuration which presently exists. (4 refs.)

27712 **A distributed office system based on the Cambridge Ring.** M.S.Cole, W.M.Newman, D.C.Sweetman (Logica VTS Ltd., London, England).
Networks from the User's Point of View. Proceedings of the IFIP TC-6 Working Conference COMNET '81, Budapest, Hungary, 11-15 May 1981 (Amsterdam, Netherlands: North-Holland 1981), p.73-82
Describes a project to develop a distributed office system incorporating word processing and shared filing facilities, based on the Cambridge Ring. The work capitalised on the existence of a working stand-alone word processor (the VTS-100) and a proven set of Ring components. Chief areas of further development were Ring interface design, file server design, protocols and user-level extensions. The authors summarize some of the considerable experience gained from the development work. (6 refs.)

27696 **Office and information system automation.** G.Occhini (Honeywell Information Systems Italia, Milano, Italy).
Sist. & Autom. (Italy), vol.28, no.223, p.109-13 (Feb. 1982). In Italian.
The paper tries to determine when it is preferable to introduce an automation system. A section then deals with productivity involved with an automation process. This is split into economic and ergonomic productivity. Assumptions to be made for the automation of an office are given. This is followed by office automation as a synthesis of diverse technologies. The paper brings into focus certain aspects of the relationship between information systems and office automation in view of the vast amount of available information systems. It brings to light some differences in objectives and strategies of putting to work and timing, particularly when the value of a traditional information project varies from that of office automation. (no refs.) *G.V.D.*

27877 **Survey on present status of teleconferencing in overseas countries [outside Japan].** S.Watanabe (Data Communications Dept., Kokusai Denshin Denwa Co. Ltd., Tokyo, Japan).
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol.64, no.5, p.463-5 (May 1981). In Japanese.
The needs of participants at conferences in terms of information required, information provision, problem solving, idea exchange and policy decisions are analysed, and the efficiency of audio, image and data transmission systems in achieving these aims by teleconference are examined. Teleconferencing services being developed are introduced including those of ATT, Satellite Business Systems, Xerox, the French PTT, the West German DBT, the British Post Office and Bell Canada's TMS. Computer teleconference services are the FORUM/PLANET, General Conference System, On Line System (NLS) and CONCLAVE. (11 refs.)

27691 **Office automation: making systems from pieces.** R.T.Dann.
Mach. Des. (USA), vol.54, no.3, p.54-63 (11 Feb. 1982).
Word processing, data processing, micrographics, telecommunications, and speech synthesis are starting to come together in coordinated systems. If the integration is successful, such agonies as missed phone connections, mailing delays, and cumbersome files may depart the office scene. If not, office automation may prove a burden instead of a benefit. (no refs.)

27692 **Will Ethernet fail?.**
Microprocess. Work (Switzerland), vol.3, no.3, p.5-7 (Jan. 1982).
Discusses the disadvantages of Ethernet for office automation applications, in particular, Xerox's office automation system. The article considers the features required of a network for integrated communications. (no refs.)

27117 **The architecture of the Eden system.** E.D.Lazowska, H.M.Levy, G.T.Almes, M.J.Fischer, R.J.Fowler, S.C.Vestal (Dept. of Computer Sci., Univ. of Washington, Seattle, WA, USA).
Oper. Syst. Rev. (USA), vol.15, no.5, p.148-59 (Dec. 1981). (Proceedings of the Eighth Symposium on Operating Systems Principles, Pacific Grove, CA, USA, 14-16 Dec. 1981)
The University of Washington's Eden project is a five-year research effort to design, build and use an integrated distributed computing environment. The underlying philosophy of Eden involves a fresh approach to the tension between these two adjectives. In briefest form, Eden attempts to support both good personal computing and good multi-user integration by combining a node machine/local network hardware base with a software environment that encourages a high degree of sharing and cooperation among its users. The hardware architecture of Eden involves an Ethernet local area network interconnecting a number of node machines with bit-map displays, based upon the Intel iAPX 432 processor. The software architecture is object-based, allowing each user access to the information and resources of the entire system through a simple interface. This paper states the philosophy and goals of Eden, describes the programming methodology that has been chosen to support, and discusses the hardware and kernel architecture of the system. (28 refs.)

27719 **Office automation and productivity.** M.L.Cunningham (Nat. Archives & Records Service, Washington, DC, USA).
Proceedings of the Computer Performance Evaluation Users Group (CPEUG) 17th Meeting (NBS-SP-500-83), San Antonio, TX, USA, 16-19 Nov. 1981 (Washington, DC, USA: NBS 1981), p.305-7
The planned introduction and efficient use of information technology products notably word processors, is discussed in the context of US Federal Government offices. Potential uses of the technology are indicated. The need for careful management is emphasised, citing as an example of the consequences of its absence the almost random construction of telegraph systems in the 1840s. The results of a survey of office automation in Federal agencies are summarised. (no refs.)

27724 **Business graphics: an effective means of improving managerial productivity.** C.Kocher (Hewlett-Packard Co., Cupertino, CA, USA)
Digest of Papers Spring COMPCON 82. High Technology in the Information Industry, San Francisco, CA, USA, 22-25 Feb. 1982 (New York, USA: IEEE 1982), p.375-7
Office automation is rapidly improving the productivity of secretaries and administrative support personnel in many organizations. To date, however, most of these tools have not proved to be valuable to managers and business professionals in performing their daily activities. Today, business graphics that were previously offered only on mainframe computers are becoming available in the office environment. These capabilities can aid managers in retrieving information rapidly, analyzing it, and communicating their decisions in a more concise and informative fashion. This paper explores the information needs of managers, their daily activities and the methods by which graphics can assist them in the decision making process. (no refs.)

27883 **The Prestel viewdata system.** G.H.L.Childs (British Telecom Res. Labs., Martlesham Heath, England).
Networks from the User's Point of View. Proceedings of the IFIP TC-6 Working Conference COMNET '81, Budapest, Hungary, 11-15 May 1981 (Amsterdam, Netherlands: North-Holland 1981), p.603-15
The Prestel viewdata service, the first commercial service of its type in the world, is now available to over 61% of the telephone population of the United Kingdom. The author summarises the current business, and discusses some possible developments on the display technology and system architecture in the years to come, and how these developments will fit with the changing public telephone system. (6 refs.)

27665 **Communicating word processors in the automated office.** D.Tombs (Data Processing Div., Philips Business Systems, Colchester, England).
Comput. Commun. (GB), vol.5, no.2, p.62-4 (April 1982).
The introduction of intercommunicating word processors is considered. The paper briefly traces the development of office equipment and describes how the integration of data processing and text processing has led to the concept of electronic mail. It then describes the international Teletex service offered by the PTTs, and suggests that the PTTs will ultimately join with the common carriers to provide a world-wide Teletex service. The Philips Teletex system is discussed in detail, including its configuration, software and peripherals. (no refs.)

27667 **Honeywell: a solid second [office automation].** J.Bird.
Computing (GB), vol.10, no.16, p.21-22 April 1982).
While other manufacturers fight about whose office automation system is best Honeywell has been concentrating quietly on calculating its own approach. The author reports on its aims, strategy and what it has achieved so far. (no refs.)

27119 **Grapevine: an exercise in distributed computing.** A.D.Birrell, R.Levin, R.M.Needham, M.D.Schroeder (Xerox Palo Alto Res. Center, Palo Alto, CA, USA).
Oper. Syst. Rev. (USA), vol.15, no.5, p.178-9 (Dec. 1981) (Proceedings of the Eighth Symposium on Operating Systems Principles, Pacific Grove, CA, USA, 14-16 Dec. 1981)
Summary form only given. Discusses Grapevine a distributed, replicated system running on a large internet within the Xerox research and development community. The internet extends from coast to coast in the USA, to Canada and to Europe, and contains more than 50 Ethernet local networks linked by leased telephone lines. Over 1500 computers are attached to the internet. Most computers are used as personal workstations, but some are used as servers providing access to shared facilities such as printers, large-scale secondary storage, or data bases. Computers on the internet are uniformly addressable using the PUP family of protocols. (no refs.)

27113 **A local network based on the UNIX operating system.** L.A.Rowe, K.P.Birman (Dept. of Electrical Engng. & Computer Sci., Univ. of California, Berkeley, CA, USA).
IEEE Trans. Software Eng. (USA), vol.SE-8, no.2, p.137-46 (March 1982).
The design and implementation of a local network operating system based on the UNIX operating system is described. UNIX has been extended to allow existing programs to access remote resources with no source program changes. Programs may access remote files, have a remote working directory, execute remote programs, and communicate with remote processes using the standard UNIX interprocess communication mechanism (pipe's). An efficient message-oriented interprocess communication mechanism and asynchronous I/O were added to the system to support the development of distributed applications and to make it easier to connect the local network to packet-switched networks. (29 refs.)

27223 **Has Telidon arrived?** J.C.Madden.
Eng. J. (Canada), vol.64, no.5, p.15-19 (Fall-Winter 1981).
Describes the Canadian-developed Telidon graphics information terminal which can produce data and diagrams in colour. (no refs.)

27645 **Computer-aided analysis of office systems.** B.R.Konsynski (Univ. of Arizona, Tucson, AZ, USA), L.C.Bracker.
Manage. Inf. Syst. Q. (USA), vol.6, no.1, p.1-17 (March 1982).
Computer-aided support in the analysis and design of office information systems is discussed. The support system described includes a language for description of office practice, analysis and database maintenance systems, and analysis report generatinn software. The system components are consistent with a general model of office interactions. The objects and relations unique to the office environment are supported in the terminology for description of both manual and automated office activities. Analysis support providing consistency and completeness evaluations and alternative views of the system serve the analysis activity. A case study is briefly overviewed and conclusions are drawn concerning the utility of the tools. The major utility of the tools was perceived by management and analysts to be the application as a dynamic and structured documentation with consistency evaluation. (19 refs.)

27927 **Design of an interactive data retrieval system for casual users.** T.Radhakrishnan, C.Grossner, M.Renoliet (Computer Sci. Dept., Concordia Univ., Montreal, Canada).
Inf. Process. & Manage. (GB), vol.18, no.1, p.23-32 (1982).
Among the important criteria in the design and implementation of an interactive data retrieval system for casual users are: a friendly user interface, aids to train beginners on the system, versatility in output media, and error recovery techniques in an interactive session. These factors are considered in the design of an interactive data retrieval system which is used for the study of commodity market data. Although the concepts and considerations discussed are discipline specific, the methodologies adopted are general in nature. The proposed system has been implemented and tested using an experimental data based on gold and silver futures. (14 refs.)

27106 **Many makers unloose a flood of local nets.** K.J.Thurber, H.A.Freeman (Architecture Technol. Corp., Minneapolis, MN, USA).
Electronics (USA), vol.55, no.2, p.90-5 (27 Jan. 1982).
Discusses the design and features of local networks and their application to the modern office. They have their bus connected to a variety of office equipment. The PBX, communications server and Telex convertor are reviewed. (4 refs.)

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18442 Task- and system-integration of text- and data-processing at the work place. P M Assam, W W P Franz (Siemens AG, Munchen, Germany)
Buerotechnik (Germany), vol.29, no.1, p.37-9 (Jan. 1981). In German.
Discusses the possibilities of integrating the numerous office tasks which already are carried out with the help of a large variety of more or less sophisticated office machines, computer terminals, etc., and describes steps towards the integration that are accomplished by the Siemens '580' text system. The authors give examples of the use of text transmission and outline possible future developments in the whole field of combined text and data processing. (no refs.) *C.J.O.G.*

18443 Electronic communication in the office: what will be the course of development?. A.Musiol
Buerotechnik (Germany), vol.29, no.1, p.46-8 (Jan. 1981). In German.
Discusses the explosive development of office work (it occupies more people than production) and the prospects for reducing its cost by fully integrated electronic communication (using inter alia the available public systems) and data- and text-processing, describing a number of developments likely to come to fruition in the near future, and culminating in a standardised multi-function terminal, cheap enough for general use at all work-places more or less independently of the nature of the individual task to be undertaken. (no refs.) *C.J.O.G.*

20388 Digest of Papers of Spring COMPCON 81. VLSI in the Laboratory, the Office, the Factory, the Home.
New York, USA: IEEE (1981), xvi+481 pp.
Conference held at San Francisco, CA, USA. Date: 23-26 Feb. 1981. Sponsors: IEEE. The topics covered in this conference reflect the continuing impact and significant change caused by VLSI circuitry on systems and equipment in the data processing industry. No longer is the term VLSI merely a buzzword or something to be considered in the future. Its impact is pervasive and being felt now in a wide variety of applications throughout the computer industry. Some of the key issues addressed relate to architecture, technology, applications and software as follows: emerging local networks and standards; entry of 32-bit microcomputers; VLSI components in memories, gate arrays, speech processors, and multi-valued logic; testing and packaging of VLSI circuits; applications in displays, phototypesetting, instrumentation, and speech processing; and software issues from micros to macros. Abstracts of individual papers can be found under the relevant classification codes in this or future issues.

21230 Why do we need office automation?. N.Yamamoto.
AEU (Japan), p.157-60, 162 (Jan. 1981).
The most important problem facing the Japanese business community today is how to increase the productivity of office work. A recent government survey predicts an economic growth rate of 6.2% during the ten years from 1980-1990. This rate is necessary to achieve full employment. On the other hand, the annual rate of work force increase in Japan will be 0.7% during the same decade. Some 54 million people are working in the office, representing 41.6% of all workers. The productivity rate must be increased by 5.5% in order to bridge the gap between the economic growth rate (6.2%) and the work force growth rate (0.7%). Thus the need for office automation. (no refs.)

21251 Office correspondence retrieval system temporary keyword processor. W.S.Rosenbaum (IBM Corp., Armonk, NY, USA).
IBM Tech. Disclosure Bull. (USA), vol.23, no.8, p.3519 (Jan. 1981).
Discloses a technique for designating temporary keywords in an office correspondence retrieval system (OCRS). This is in contrast to the prior art wherein only conventional nouns and adjectives are recognized as keywords. (no refs.)

21233 Preparing for the office of the future. J.Haigh.
Syst. Inf. Manage. (S. Africa), vol.10, no.12, p.28-9 (Dec. 1980).
Discusses the needs of the office planner in relation to the advance of technology. (no refs.)

21234 The little red hen and the automated office. A.M.Kneitel.
Infosystems (USA), vol.28, no.2, p.108 (Feb. 1981).
Describes how a Du Pont Corporate Office System Liaison Committee was created that would draw on middle management user personnel who could contribute guidance and policies for the decisions affecting the operation of an automated office. (no refs.)

21247 Automating offices from top to bottom. T.Manuel ('Electronics', New York, NY, USA).
Electronics (USA), vol.54, no.5, p.157-65 (10 March 1981).
Discusses various aspects of office automation including computer systems for office automation, software packages, and distributed processing systems. (no refs.)

21258 The office: a new frontier or a different approach?. A.Gargani.
Manage. & Inf. (Italy), vol.19, no.1, p.29-33 (Jan. 1981). In Italian.
In Europe alone some fifty million workers are occupied mainly in the production, recording or filing of documents and/or the preparation and distribution of copies. It is obvious that the introduction of modern technology will have a dramatic and 'cascading' effect in the staffing, grading and organisation of such work. The author discusses some possible methods, the timing and monitoring of results necessary to ensure the smoothest possible changeover. (no refs.) *F.N.S.*

21257 Office automation: its aims, means of attainment and future trends. L.Spini.
Manage. & Inf. (Italy), vol.19, no.1, p.25-8 (Jan. 1981). In Italian.
The familiar furniture of every office—the typewriter, mechanical bookkeeping machine and filing cabinet are now outdated. The word processor, magnetic tape record and facsimile reproducer are rapidly taking their place. It is clear that this raises psychological as well as technical problems: what is the future role of the shorthand-typist or filing clerk? The author advocates a progressive changeover, with re-grading and re-motivation of staff, illustrating his point with pictures of some antiquated office machines. (no refs.) *F.N.S.*

21256 Automation: the future prospect.
Manage. & Inf. (Italy), vol.19, no.1, p.23 (Jan. 1981). In Italian.
This article outlines briefly the present situation in office procedures. Within the span of a human lifetime these have advanced from the 'counting house and quill pen' to the present stage of efficiency due to three inventions: the typewriter, the telephone and the duplicator. It may well be asked if it is really worth while taking the further leap into full automation, integrating the computer network, the telecommunication system and the word processor—at present separate developments—into the familiar system. (no refs.) *F.N.S.*

21438 An experience report [Prestel]. R.Winsbury (Fintel Ltd., London, England).
Bildschirmtext Kongress 1980 (Teletext Congress 1980), Dusseldorf, Germany, 1-2 Dec. 1980 (Frankfurt, Germany: Diebold Deutschland GmbH 1980), p.113-16
The strategy of the British Post Office, as system operator of the UK Prestel viewdata service, and the strategy of leading Information Providers, have been undergoing radical and at times painful changes. The net effect is to transfer attention almost entirely to the business market: to concentrate on specific named sectors and applications: and to offer to these business sectors targeted information of commercial relevance that is often changing (such as market prices) rather than voluminous (as in the traditional database concept). Thus the trend is to smaller numbers of pages (rather than the infinite capacity for information storage that is often claimed as a virtue of viewdata): to more active use of those fewer pages, in terms of user accesses: and to use of the communications capability of viewdata rather than its storage capability. All this has taken place under the impact of one harsh discipline—the move of Prestel out of the market trial period and into the realities of commercial competitive existence, where real costs have to be charged and real revenues assessed. The elements of this fundamental reassessment are set out. (no refs.)

21259 The integration of technology and office automation. M.Genovesi.
Manage. & Inf. (Italy), vol.19, no.1, p.35-8 (Jan. 1981). In Italian.
The office of the future will see the present separate functions—the computer networks, the telecommunication and word processing systems—merged into a single unified system. What advantages will this bring and, equally important, what will be the situation during the transition period? At present thousands of kilometres of paper are written, distributed and stored every day; these will be replaced by the keyboard, word processor, visual display and magnetic tape. The author makes an analysis of the stages of transition, emphasising his point with illustrations of some primitive office machinery. (no refs.) *F.N.S.*

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27164 **What's new in word/text processing.** I..Fistell (Canadian Data Systems, Toronto, Canada).
Can. Datasyst. (Canada), vol.12, no.4, p.32-5 (April 1980).
As word and text processing increasingly merge with data processing there's renewed interest in improving productivity in the office. A review of some of the most recent offerings is given. (no refs.)

27165 **Word/text processing...a look at some recently introduced systems.**
Can. Datasyst. (Canada), vol.12, no.4, p 37, 39, 41, 43, 45, 47 (April 1980).
The information supplied for this special report represents a cross-section of the industry and consists of a table of characteristics of various systems. (no refs.)

27166 **RAYNET processors aid in building corporate data communications networks.** V.W.Maxted (Raytheon Data Systems, Lexington, MA, USA).
Electron. Prog. (USA), vol.21, no.4, p.22-7 (Winter 1979). [received: May 1980]
Describes experiences gained by Raytheon Data Systems in building corporate data communication networks. The concept of the RAYNET family of network processors designed to meet the needs of data communication networks in the 1980s is described. A typical RAYNET system installation is shown. (no refs.)

27177 **New ways to tie management in [word processing].** D.A.Rivers.
Word Process. Syst. (USA), vol.7, no.4, p.12-13, 57 (April 1980).
Multi-functional text-editing machines that can handle standard correspondence as well as management records are capable of providing a variety of information useful to management. Rather than have pore over reams of handcarried hard copy reports and files, many organizations are looking for ways to hook management into the integrated office system so that they can access documents, files company contracts, personnel records, and telephone directories directly and exchange information with executives. (no refs.)

27267 **Videotex in Canada.** J.C.Madden (Microtel Pacific Res., Burnaby, British Columbia, Canada).
Comput. Commun. (GB), vol.3, no.2, p.58-64 (April 1980).
The paper is intended to provide a background to the major issues facing videotex in Canada, with particular emphasis on Telidon, the videotex system developed at the Canadian Communications Research Centre. A number of different aspects of the subject are covered, including a review of policy issues, a brief history of Telidon development and discussion of the future of videotex in Canada. (11 refs.)

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27265 **Planning the videotex network.** J.M.Costa, A.M.Chitnis (Bell-Northern Res., Ottawa, Ontario, Canada).
Can. Electron. Eng. (Canada), vol.24, no.4, p.27-8, 30-3, 50 (April 1980).
The authors examine the network needs with examples of possible configurations using a switched data network. (8 refs.)

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15008 **Technology and the office of the future.** B.W.Manley (Philips Business Systems, Malmesbury, England).
Electron. & Power (GB), vol.27, no.1, p.59-61 (Jan. 1981).
There is considerable scope for improving the productivity in offices. The major technological advances which will have an impact on this sector are the low-cost VDU, mass data storage, the digital network and voice command. The author looks at the impact which these technologies will be having. (no refs.)

15009 **New horizons in office automation.** W.H.Potenberg,Jr. (GTE Automatic Electric Inc., Northlake, IL, USA).
GTE Autom. Electr. World-Wide Commun. J. (USA), vol.18, no.6, p.222-5 (Nov. 1980)
The drive to automate the office environment through implementation of integrated office information systems is discussed. Effective automation in the office arena requires integration of the various business equipment offerings which serve to process and communicate information to the immediate individual users. Digital PABX supercontrollers, multiprocessor computer mainframes, shared processor text preparation systems, and integrated workstations are considered regarding their role. (2 refs.)

14996 **'New technology' faces acceptance problems as in word processing.** R.Bierhuls (Fraunhofer-Inst. fur Systemtech. und Innovationsforschung, Karlsruhe, Germany).
Buerotechnik (Germany), vol.28, no.12, p.1239-41 (Dec. 1980). In German.
The introduction of new methods can easily lead to short-sighted resistance aimed at saving jobs, causing loss of competitiveness and an overall loss of jobs. There has indeed been (in Germany) a rise in unemployment among junior office staff and some de-skilling, causing hostility to new methods. In fact the costs of introduction are often underplayed; they can be up to 300% of the equipment cost. Nevertheless the signs are of a much greater market penetration by word processing in the next few years. (5 refs.) *G.F.F.*

15006 **Word processing equipment - a designer's viewpoint.** C.G.Kaselli.
Data (Denmark), vol.10, no.11, p.47-8 (Nov. 1980). In Swedish.
The development in the field of word processing is fast and sometimes ideas from only a year ago seem old and passe. The author has designed one of the systems available today. The views may help to show the aim and means of word processing. (no refs.)

15003 **Automated office functions—not offices.** B.Hidell.
Data (Denmark), vol.10, no.11, p.25-7 (Nov. 1980). In Swedish.
The office of the future is not a science-fiction model, but an office where new tools have automated some of the old functions. (no refs.)

15004 **The way to the office of the future.** B.Rosenberg.
Data (Denmark), vol.10, no.11, p.28-30 (Nov. 1980). In Swedish.
The way to the future office will be fairly predictable and surrounded by pitfalls to avoid and opportunities to explore. (no refs.)

13061 **The activity station—focus of office integration.** R.M.Landau (Sci. Information Assoc., Kensington, MD, USA).
Proceedings of the Computer Networking Symposium, Gaithersburg, MD, USA, 10 Dec. 1980 (New York, USA: IEEE 1980), p.13-18
Recent studies indicate that major improvements can be achieved by providing information workers better work facilities and environments. This paper describes such studies relating to work station reconfigurations leading to improved productivity and quality of life. Human factors, standards and integration problems and potentials are discussed. Categories of relationships between technologies, users and functions are explored. Several measurements of productivity and economic trade-offs are considered. Various configuration scenarios and future trends are provided. (no refs.)

15129 **Distributed processing and its control.** N.Brown (EDP Audit Controls, Washington, DC, USA).
In book: *Computer audit and control—state of the art report*, p.1-22. Maidenhead, Berks, England: Infotech (1980), vi+570 pp.
An ever increasing number of companies of all sizes are entering into distributed processing. This challenge poses enormous problems for the auditor in providing audit trails, ensuring systems security and the sheer auditing workload. But many existing auditing concepts were developed in and for large centralised DP operations. New needs and approaches for the distributed processing environment are examined. Management controls, standards, policy organisation controls and physical security controls are discussed. (8 refs.)

13060 **The degree of office automation and its impacts on office procedures and employment.** H.G.Morgenbrod, H.G.Schwaertzel.
Proceedings of the Computer Networking Symposium, Gaithersburg, MD, USA, 10 Dec. 1980 (New York, USA: IEEE 1980), p.3-11
A team of organization specialists and systems analysts of Siemens AG, West Germany, has assumed the task of analysing the actual-state of jobs and work procedures that are representative of major industries, small, medium and large enterprises, self-employed people, and the civil service. (8 refs.)

15053 **Computer audit and control - state of the art report.**
Maidenhead, Berks, England: Infotech (1980), vi+570 pp.
The main analysis section deals with the following topics: the role and objectives of the computer auditor; the auditor and the system design process; general purpose auditing software; special purpose auditing software; the auditor and advanced data processing systems; computer security; and requirements for the future. In addition to the annotated bibliography the report includes papers from a number of contributors.

14994 **Development of future work-place information systems.** F.Steimer (Kienzle Apparate GmbH, Villingen, Germany).
Buerotechnik (Germany), vol.28, no.12, p.1231-3 (Dec. 1980). In German.
Discusses some of the technological trends which will influence the availability and usage of new devices in administration and office work generally. Includes the convergence of data communication and data processing, the need for personnel suitably aware of the possibilities, and the advance of software in areas such as speech recognition, even easier programming and security. (no refs.) *G.F.F.*

13062 **Office automation—a model for design.** L.C.Bracker, B.R.Konsynski (Management Information Systems, Univ. of Arizona, Tucson, AZ, USA).
Proceedings of the Computer Networking Symposium, Gaithersburg, MD, USA, 10 Dec 1980 (New York, USA: IEEE 1980), p.173-7
The present position of the office manager in the technically rich office environment is examined. An overview of a model of office procedures is discussed and the characteristics of the OFFIS system are overviewed. The OFFIS system consists of a language, database and analyzer that produces reports analyzing office procedures. (no refs.)

13132 **Policy implications of transborder data flow.**
High Level Conference on Information, Computer and Communications Policies for the 1980s, Paris, France, 6-8 Oct. 1980 (Paris, France: OECD 1980), 7pp.
Outlines a variety of questions raised by trends in transborder data flow, and emphasizes the need for a clearer understanding of basic concepts to deal more effectively with these questions. It is recommended that the OECD give urgent attention to developing appropriate cooperative mechanisms with which to address the issue. (12 refs.)

13481 **Sources of productivity gains in office automation.** J.I.Elkind (Xerox Corp., Palo Alto, CA, USA).
Proceedings of the Human Factors Society 24th Annual Meeting, Los Angeles, CA, USA, Oct. 1980 (Santa Monica, CA, USA: Human Factors Soc. 1980), p.39
Abstract substantially given as follows: The cost and availability of office information workers are becoming increasingly important problems at the professional-managerial as well as at the secretarial-clerical level. Electronics and computer technologies are rapidly approaching the point at which cost effective systems for improving office worker productivity are becoming feasible for wide scale use. These systems make possible, and in fact, encourage, simplification of the work flow processes within the office, and this simplification is a major source of productivity gains. Results from studies with advanced office systems in a professional environment will be discussed in this paper from the point of view of the process changes that they cause and the productivity gains that resulted. (no refs.)

15015 **Strategic planning of information systems at the corporate level.** R.H.Kay (IBM Res. Lab., San Jose, CA, USA), N.Szyperski, K.Horing, G.Bartz.
Inf. & Manage. (Netherlands), vol.3, no.5, p.175-86 (Nov. 1980).
Strategic issues related to information systems are subject to conflicting trends. One is the more rapid change in environmental factors; the other is the growing complexity of requests that reduce the rate of response. The authors examine the basis for concern about current issues. The factors are reviewed in the light of recently published material. Three organizational structures for information system planning are compared in terms of their ability to meet different organizational requirements. Techniques which have been used successfully in the definition of strategic issues and analysis of environmental factors are presented. The object is to aid the integration of information system strategies into the overall strategy of an enterprise. (14 refs.)

15030 **Online communications by computer conferencing and electronic mail.** E.M.Housman (GTE Labs. Inc., Waltham, MA, USA).
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.129-35
Presents an analysis of online computer conferencing as a deliberative medium, based on experiments using GTEs PANALOG software and other US systems. It contrasts computer conferencing with electronic mail services, describing how various systems handle such things as personal online correspondence files, composition aids, privacy, security, message acknowledgement, and controls over message flow. It also reports on how experiments with groups of teenagers, deaf persons, executives, college students, scientists and librarians have shaped the personality of PANALOG as it has evolved over the past three years. Short case studies describe how PANALOG has been used for philosophical discourse, corporate planning, interlibrary communications, interoffice correspondence, and communication among the deaf. The TELEMAIL service, operated by GTE in the United States, is briefly described. (6 refs.)

15131 A report from experience [mail order with Viewdata]. H.Babor (Neckermann Versand AG, Frankfurt, Germany).
Bildschirmtext Kongress 1980 (Teletext Congress 1980), Dusseldorf, Germany, 1-2 Dec 1980 (Frankfurt, Germany: Diebold Deutschland GmbH 1980), p.189-91 In German
Describes in general terms the hardware configuration and software support facilities used by the author's organisation (a mail-order house), in conjunction with the data processing services offered in its Viewdata system by the German Post Office. The users have IBM equipment (or equivalent) and the system is described in that context. (no refs.) *G.F.F*

15132 Teletext for distribution. S.Regenberg (G Schickedanz KG, Nurnberg, Germany)
Bildschirmtext Kongress 1980 (Teletext Congress 1980), Dusseldorf, Germany, 1-2 Dec 1980 (Frankfurt, Germany: Diebold Deutschland GmbH 1980), p.91-102 In German
Describes how big and important the author's mail-order firm is, how it has participated from the start in the preparatory work on the German Viewdata service, and how the connection to the firm's data processing system permits orders to be placed and accepted quickly and economically (no refs.) *G.F.F.*

15199 Videotex and the French telematique programme. R.D.Bright.
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.63-6
For many years the pundits have been forecasting the 'imminent' advent of 'telecommuting, armchair shopping and the chequeless (as well as cashless) society', but it is only in the past two years that such assertions have begun to appear commercially viable in the foreseeable future. The catalyst for this renewed optimism is the emergence of Videotex in a variety of guises in different parts of the world. In France, a significantly broader approach than that of simply offering large scale information retrieval facilities has been taken. Under the generic title of the 'Telematique' programme, a family of developments with carefully related objectives is now appearing. This paper provides a broad perspective of this programme. The main focus is on Telctel, the French Videotex service and on the Electronic Directory, a specific derivation of Videotex. Two other projects will also be referred to: home facsimile, a consumer market facsimile service and telewriter, an interactive graphics service. (no refs.)

15200 The graphic capability of CAPTAIN—a Japanese videotex system. H.Ito, S.Harashima (Nippon Telegraph & Telephone Public Corp., Tokyo, Japan).
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.67-77
CAPTAIN is a Japanese videotex system, the trial service of which was launched in Tokyo in December 1979 with a scale of 1000 terminals. CAPTAIN, in comparison with Prestel and other systems, has various characteristics. The greatest feature is that it has succeeded in clearly displaying more than 3000 Kanji characters together with mosaic patterns, to say nothing of alphanumeric and Kana characters. In order to make the above features feasible it has been necessary to develop and apply many new Japanese original techniques. With respect to graphic capability, most videotex systems are, at present, confined to alphamosaic display. It seems quite certain that extending this capability will become a very important enhancement for videotex systems in the future. Thus they will be able to occupy a key role in the on-line information business. In this paper, the outline of the CAPTAIN system is given and then the details of its graphic capability and implementation are examined. (3 refs.)

15203 Markets for Prestel. P.Bury (British Telecommunications, London, England)
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.97-103
Sector Marketing of Prestel is being successful and points the way to the correct means of selling any viewdata system. The most important element in successful marketing is the ability to show a page or pages of the database which, by themselves, are sufficiently valuable to justify acquisition: this is as true in the residential as in the business field. (no refs.)

15202 Human factors in videotex. T.Stewart.
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.87-95
Discusses user acceptance of videotex stating the importance of TV familiarity. Problems with ease of use and cost are examined. (5 refs.)

15201 Teletext and Prestel—user reactions. S.Connell.
4th International Online Information Meeting, London, England, 9-11 Dec. 1980 (Oxford, England: Learned Inf. 1980), p.85-6
Discusses the need for market and customer research in the design and development of new communications services and presents preliminary findings from a survey of teletext and Prestel users. Indications as to the identity of customers, their reasons for acquisition, pattern of use and levels of satisfaction are presented. (no refs.)

15180 Videotext data bank with Mickey Mouse image. K.Rosenthal.
Online-ADV.-Nachr. (Germany), no.11, p.905-6 (Nov. 1980) In German
The slow rate of adoption of teletext systems is discussed. Hope is now for usage by commercial and industrial customers such as in sales organisations, professional fields, mail order stores, travel, banks and insurance. User costs, dedicated teletext computers and market features are briefly considered. (no refs.) *H.V.H*

15018 The automated office: an introduction. W.Saffady
J. Microgr. (USA), vol.13, no.8, p.20-4, 27-31 (Nov.-Dec. 1980).
Discusses several aspects of office automation. The author considers advances in several areas and how these have presented new approaches to the goal of improved cost effectiveness. He looks at the office as an information system; word processing; micrographics; computer applications in offices; reprographics and electronic communications. (no refs.)

15369 Practical application of microcomputers to aid the handicapped. G.C.Vanderheiden (Trace Res. & Dev. Center, Univ. of Wisconsin, Madison, WI, USA).
Computer (USA), vol.14, no.1, p.54-61 (Jan. 1981).
Microcomputers are providing rehabilitation engineers with powerful tools for designing cost-effective assistive devices. Potentials, approaches, and current shortcomings are discussed. (no refs.)

15367 The impact of microcomputers on devices to aid the handicapped. J.H.Aylor, B.W.Johnson, R.L.Ramey (Univ. of Virginia, Charlottesville, VA, USA).
Computer (USA), vol.14, no.1, p.35-40 (Jan. 1981).
Proven prototypes too often do not go into production because of economic factors. The authors are using microcomputers to make devices less expensive, more flexible, and more producible. (11 refs.)

23[illegible] **An analysis of organizational productivity and the use of electronic office systems.** J.H Bair (Bell-Northern Res. Inc., Palo Alto, CA, USA).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.4-9
During the past several years some pioneering research results have shown changes in the productivity of users of electronic office systems (EOS), more commonly known as office automation. In particular, the author has measured increases in productivity under specific conditions in exemplary office situations. These preliminary findings have generated great interest from businesses and governments and have raised questions about organizational productivity. (12 refs.)

23825 **Office automation: an overview.** I. Atello (Istituto di Elaborazione dell'Informazione-Consiglio Nazionale delle Ricerche, Pisa, Italy). G.Prini.
Riv. Inf. (Italy), vol.10, no.4, p.387-403 (Oct.-Dec. 1980). In Italian. [received: May 1981]
Office automation is attracting much interest both in industries and in academic research centers. It presents problems that are new with respect to those tackled in more traditional fields of computer and information sciences. The authors discuss the state of the art of the research in this field as well as the problems and perspectives. (45 refs.)

23848 **Managing communication networks in organizations.** E.M.Rogers (Inst. for Communication Res., Stanford Univ., Stanford, CA, USA).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct. 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.3
Describes communication networks, discusses network analysis, the identification of the communication structure, who is linked to whom and the introduction of electronic office equipment. (2 refs.)

23851 **Information system design: putting human factors to work.** R.M.Mason (Metrics Res. Corp., Atlanta, GA, USA).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct. 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.24-7
An understanding of individual and group behavior, particularly the improved understanding possible through results of research over the past two decades, provides prescriptions for information service planning, problem-solving, and service organization design. This paper reviews these behavioral concepts and summarizes their application to planning and system design. (20 refs.)

23852 **Computer based messaging in a research organization.** R.G.Rittenhouse (Dept. of Information & Computer Sci., Univ. of California, Irvine, CA, USA).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct. 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.38-40
Although transmission of messages by electronic means began over a century ago it is only recently that electronics, in the form of the computer, has been more than tangentially involved in message preparation and disposition. The use of a computer based message package by computer science research groups in one organization has changed the mail handling process and the work of those involved. (4 refs.)

23843 **A proposed classification scheme and stage hypothesis of word processing.** C.E.Paddock (Univ. of Houston, Houston, TX, USA).
AIDS 1980 Proceedings. 12th Annual Meeting of the American Institute for Decision Sciences, Las Vegas, NV, USA, 5-7 Nov. 1980 (Atlanta, GA, USA: American Inst. Decision Sci. 1980), p.192-4 vol.1
The MIS/DP/DSS literature contains a number of models that provide a knowledge and communication base for theorizing the growth and impact of data processing (DP) and MIS upon the organization and decision-making. There is no such body of literature or research that provides a similar basis for understanding word processing (WP)—a technology which is beginning to have as large an impact upon the organization as DP did in its infancy. Without this foundation, there is no reference point from which to discuss in an organized and structured manner the merger of WP and DP. The paper briefly examines the lack of WP research and describes a classification scheme and stage hypothesis for WP. (5 refs.)

23850 **Human factors in information work.** C.K.Mick (Appl. Communication Res./Decision Information Services, Palo Alto, CA, USA).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct. 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.21-3
Provides an introduction to human factors issues as they relate to information behavior. Three groups of factors are described: cognitive, individual (experiential) and environmental/situational. A brief description of key factors within each group is provided, together with some indication of how they affect information behavior. (17 refs.)

23840 **Word processing: major European markets.** I.Schencke.
Data Processing and Information, Paris, France, 15-19 Sept. 1980 (Paris, France: Convention Inf. 1980), p.473-6
Focuses on the major Western European word processing markets—West Germany, France, Sweden, and the United Kingdom. The author provides market size indicators including installed word processors by market segment, company market shares, sales, and growth rates, as well as a discussion of future trends. Discussed by country are the history of word processing; how companies organize office work; word processing applications; the influence of unions; sales requirements for products, distribution channels, and sales support; and the possible monopolization of the word processing market by the teletex networks of government-owned telecommunications systems. (no refs.)

23881 **The design and implementation of a computerised voice response system in the banking field.** J.P Cardinael, A.Straetmans.
Data Processing and Information, Paris, France, 15-19 Sept. 1980 (Paris, France: Convention Inf. 1980), p.541-6 In French.
Discusses a computerised voice response system that has been set up jointly by CGER (Caisse Generale d'Epargne et de Retraite), STERIABEL and IBM. Started in May 1979, it is at present operational in over 200 branches of CGER. It is now possible to consult customer accounts with the aid of the branch telephone, connected to an in-line keyboard. The data are introduced with the keyboard and the reply is furnished in vocal form by the telephone. The essential characteristics of this system are simplicity, reliability and a low outlay. (no refs.)

23853 **Electronic mail - its use in a corporate information centre network.** G.Birks (Bell-Northern Res. Ltd., Ottawa, Canada).
Communicating Information. Proceedings of the 43rd ASIS Annual Meeting. Vol.17, 1980, Anaheim, CA, USA, 5-10 Oct. 1980 (White Plains, NY, USA: Knowledge Ind. Publications Inc. 1981), p.41-3
Bell-Northern Research Ltd (BNR) has developed COCOS (Corporate Communication System), a general information handling system which includes electronic mail capabilities. The technical information centres (TICs) of BNR and its subsidiaries are located in four cities (Ottawa, Montreal, Toronto and Palo Alto) and have been experimenting with the use of COCOS to send requests for materials and in a management role. Early findings indicate that for transmitting requests, COCOS can be beneficial over long distances but is less useful when the branches of the TIC are located in the same city. From a managerial viewpoint, COCOS has been extremely useful in aiding communication within the TIC network itself and also in facilitating communications between the TIC and other departments within the company. (1 refs.)

23816 **On the road toward the integrated office.** G.Lenhard (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.16, no.2, p.4-7 (April 1981). In German.
Up-to-date information and efficient information processing in the office is becoming an increasingly important factor in economic efficiency and competitiveness. Above all, decisions and handling procedures must be streamlined by introducing fast and effective possibilities for processing, evaluating and transmitting information and for better data access. Information is becoming the decisive factor determining the success of a company. (5 refs.)

23817 **Making words work with data [word processing].** D.Casey.
Data Processing (GB), vol.23, no.1, p.32, 34-5 (Dec. 1980 - Jan. 1981).
Word processing is being used increasingly with data processing. The author looks at some of the ways in which the two can be put together. (no refs.)

23814 **Speak the speech...and find your letters directly typed [voice processing].** I.Berkovitch.
Word Process. Now (GB), p.26, 28 (Jan. 1981).
Reports on a study, The Impact of Speech Input and Recognition systems on the Communication Industries, which examines the various speech recognition systems in existence and which charts the likely progress. (no refs.)

23836 **Directory of WP bureaux.**
Which Word Process. (GB), vol.2, no.2, p.25-6, 39-45, 51-4, 57-8 (March 1981).
This is a listing of word processing bureaux in the UK. (no refs.)

23819 **Crisis in automated information processing.** K.Stetka.
Mech. Autom. Adm. (Czechoslovakia), vol.21, no.1, p.12-3 (1981). In Czech.
Discusses the effectiveness of computers in solving MIS problems printing out some of the conflicts which arise between the designers of the MIS systems and their users. Methods improving man-machine communications by using advanced terminals with improved dialogue facilities and user-oriented application software are discussed. (no refs.) *E.D.*

23838 **CAFS--a user viewpoint.** J.W.S.Carmichael.
Data Processing and Information, Paris, France, 15-19 Sept. 1980 (Paris, France: Convention Inf. 1980), p.413-16
The important benefits of content addressing techniques, using the unique CAFS combination of special hardware and dedicated software, are illustrated with examples drawn from studies and preliminary experience within ICL's own Corporate Information Systems General arguments are presented on the relevance of these techniques for data processing and management information systems. It is concluded that the overall effect will be to augment online working and to diminish batch working, necessitating major re-thinking of corporate information processing strategies. (1 refs.)

23875 **Post office terminals.** J.Camio.
Data Processing and Information, Paris, France, 15-19 Sept. 1980 (Paris, France: Convention Inf. 1980), p.185-8 In French.
The French Post Office has decided to install a teleprocessing network for postal checks and the Caisse Nationale d'Epargne (Post Office Savings Bank). The financial divisions of the Post Office occupy a strong position in the French banking network: 18000 post offices, 7,400,000 checking accounts, 15 million savings accounts. In order to modernise this considerable activity, and to accelerate and improve the services offered to its clientele, the setting up of terminals in 6500 post offices with real time access to the card indexes managed by the computer centres, it is necessary to design functional workstations and a network architecture, as well as to devote much time and effort on vocational training. The main topics discussed are the objectives pursued, the types of terminal selected, the future development of the network and the contemplated equipment programme. (no refs.)

21912 **Waiting for the electronic postman.** P Lack
Word Process Now (GB), p.20-1, 23 (Jan. 1981)
Presents a survey of recent and current developments in the field of electronic mail. The focal aspect considered is that of electronic mail as a logical extension of word processing (no refs.)

21947 **THOMSON-CSF INFORMATIQUE.**
Telonde (France), no.2, p.4-6 (1980) [received Feb 1981]
Discusses the THOMSON-CSF INFORMATIQUE company functions, products and services. THOMSON-CSF INFORMATIQUE has focused on a new kind of electronic data processing which is fully integrated into the dynamics of information handling, dissemination and storage. This new approach to EDP is coupled with state of the-art electronics and with telecommunications and telephone systems to spawn news applications like office information processing and telematics. (no refs.)

21921 **Computers and data processing.** P Spanner
Chief Executive (GB), p.39-43 (April 1981)
The chief executive trying to work out how to use computers to better his business in the eighties no longer has to take technological constraints into account. Within reason, he is safe in assuming that what he wants to do can now be done - probably at a price he can afford. This calls for a major change in attitude towards an area of activity that has been intriguing, bewildering and frustrating businessmen for more than 20 years. Contributors to the special report examine the state of the art, at this exciting stage of development, in fields as diverse as software services, DP and personnel recruitment and chart the course of progress in the rapidly diversifying information technology industry. (no refs.)

21949 **Principles and techniques in concrete achievements of office automation services.** N.Naffah.
Data Processing and Information, Paris, France, 15-19 Sept 1980 (Paris, France: Convention Inf. 1980), p.477-81 In French
Office automation has today reached a phase where users, constructors and research workers are wondering about the extension to be achieved with heterogeneous machines with incompatible communication procedures. This results from the arrival on the market of a number of individual tools which have impressed users by their rapidity in the production of written information and which have even become essential production tools for some customers. Analysis of the reasons for which this acceptance has been immediate suggests a need for the user to save typing, correction and redrafting time, and the fairly low cost of text processing machines. After a few months' operation, the user comes up against the problems of storage (limited diskette capacity), and the absence of an indexation and filing system (practically non existent for present text processing machines), or even saturation, since as soon as two people wish to produce information, a system of reservation of machine time has to be created, with corresponding queues. In order to avoid these problems, and to make an overall approach to Office Automation, the author decided to carry out research on the building of a model of Integrated Services and Work Stations. (no refs.)

21944 **The NBS data encryption standard: products and principles.** H.Bryce (Motorola Inc., Austin, TX, USA).
Mini-Micro Syst (USA), vol.14, no.3, p.111-16 (March 1981)
Valuable information of any kind needs protection from unauthorized access and/or alteration. In the case of computer data, this means more than placing a padlock on a door. Protection requires sophisticated cryptographic techniques, such as those provided by the National Bureau of Standards Data Encryption Algorithm (DES). Cryptographic techniques used for this type of data protection scramble, or encrypt, the data before they are sent downline. The data are encrypted by the DES with a variable 56-bit key known only by the sender and intended recipient. The author looks at the NBS DES, and equipment available to implement it. (no refs.)

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24 **Offices for the future [layout].**
Bus. Syst. & Equip. (GB), p.54-5 (Sept. 1980).
The Westinghouse Open Office System has enabled Philips Industries to make efficient and flexible use of space. (no refs.)

25 **Data processing systems for software houses.** W.Lonneker.
Buerotechnik (Germany), vol.28, no.9, p.774-6, 778, 780-1 In German.
The data processing systems offered by 21 firms, mainly German but including Sperry Univac, Philips and IBM are outlined. (no refs.) *J.S.*

26 **Office setting – writing / composing [III].** E.Fritz.
Buerotechnik (Germany), vol.28, no.9, p.806, 808-10, 813 In German.
The processes of computer typesetting are outlined, including the recording of data cassettes and floppy discs and its transmission over telephone lines. The

33 **Managers become more demanding [office systems].** P.Gaffney
Computing (GB), vol.8, no.41, p.26 (9 Oct. 1980).
Management claims to be an innocent entering the new technology fray of strange buzzwords and false gods which can block executive aims. To avoid letting the tail wag the dog, the author advocates a greater control by managers over office systems and a determination not to have costly products foisted on them by suppliers. (no refs.)

84 **What to watch for when choosing a system [word processing].**
Which Word Process. (GB), vol.1, no.2, p.11-12 (May 1980). [received: Sept. 1980]
Discusses points to consider when thinking of buying a word processor system. Buyers should not be over price-conscious nor should they be too restrictive in the applications envisaged for WP. Fast service from the vendor if the machine breaks down is important, and the vendor should offer on-site training (no refs.)

85 **Guide to suppliers [word processing equipment].**
Which Word Process. (GB), vol.1, no.2, p.19, 21, 29-32, 34-8, 40-3 (May 1980). [received: Sept. 1980]
Lists vendors of word processors and the packages which they offer. Types of word processor (e.g. electronic typewriters, stand-alone word processors, multi-station text processors, software packages which can be run on an inhouse minicomputer, turnkey systems) and service bureaux are discussed. (no refs.)

119 **Chipping away? [Si chip technology].** Z.P.Zeman (Inst. for Res. on Public Policy, Montreal, Canada)
Eng. J. (Canada), vol.63, no.4, p.14-16 (Aug. 1980).
Summarises the current debates on potential unemployment resulting from the technology of the silicon chip. (5 refs.)

115 **The secretary: A vanishing breed? [word processing].** E.Hawthorne.
Comput. Age (GB), no.1, p.68-70 (Dec. 1979). [received: Sept. 1980]
Has 'wordprocessing' sounded the death knell for the two million or so secretaries and typists working in Britain? It is too early to be precise about their future but wordprocessing technology has some fundamental features whose implications for the secretarial community can already be clearly discerned. (no refs.)

121 **Are we ignoring the social consequences of information processing technology?.** J.Roberts (British Columbia Res., Vancouver, BC, Canada).
INFOR (Canada), vol.18, no.3, p.282-4 (Aug. 1980).
If one is engaged in the design or production of hardware or software for information systems or industrial microprocessors is there scope within one's task definitions or work organization that would permit one to discuss and perhaps take action towards either preventing or minimizing possible adverse impacts of one's work on society? The author should like to think that a significant number of responses to this question would be positive, since if they are not, one must conclude that some are already prisoners in various corners of a system which is outside their control. However, the author is not optimistic on this point. (3 refs.)

2102 **Packet switching is found to cut costs.** M.Edwards.
Comput. Wkly. (GB), vol.29, no.728, p.23 (16 Oct. 1980).
Packet switching appears the most cost-effective technique for integrating voice and data applications in a common communications system. Packet switching offers operational advantages over the other technologies. For instance, it can readily accommodate a variety of priority schemes without dedicating transmission resources, unlike circuit switching. Further, packet switching is inherently more suitable for communications using various media, technologies and systems, a facility known as interoperability. With packet switching, interoperability is accomplished via gateways which interface the different networks. Interoperability could be a significant problem during the evolution of integrated voice and data networks, so this feature of packet switching could be most useful. (no refs.)

2512 **Office information systems: challenge for the 80's.** D.C.Tsichritzis, F.H.Lochovsky (Computer Systems Res. Group, Univ. of Toronto, Toronto, Canada).
Proc. IEEE (USA), vol.68, no.9, p.1054-9 (Sept. 1980).
Office automation and office information systems are proposed as a possible solution to many of the information handling problems of the office. The technology is available and the market place is ready for automation. However, several challenges need to be met before the proposed remedy can be applied effectively. Automated solutions to the different aspects of the office information handling problem need to be integrated. Models and techniques need to be developed to represent and analyze information flow in an office. Interfaces need to be developed that are easy to use and integrate many different capabilities. Finally, one must examine the impact on people of office automation and produce solutions that are acceptable to the end users. To attack these problems, human factors, software and hardware engineering techniques have to be brought to bear. (18 refs.)

2548 **Law firms must plan ahead for office automation.** F.M.Greguras, L.L.Carlile.
Aust. Comput. Bull. (Australia), vol.4, no.4, p.17-18 (May 1980). [received: Oct. 1980]
Discusses the uses of DP by law firms and describes the various systems available (no refs.)

2517 **An electronic office fit for people to work in.** E.Berkovitch.
Word Process. Now (GB), p.15-16 (Oct. 1980).
Staff resistance to new technology is based on real fears, not only about the loss of existing jobs, but of their transformation into routine machine-minding from which the requirement for exercising human skill and judgement has been 'designed out'. The author examines recent research studies into the effect of office automation on the quality of working life, and the factors that must be taken into account if the changeover is to be a harmonious one. (no refs.)

2518 **Five-screen Wang System 30 handles massive documentation tasks for constructors.**
Word Process. Now (GB), p.18 (Oct. 1980)
Cunstructors John Brown, one of the UK's biggest contracting companies with world-wide interests, are using Wang wp systems to handle an increasing amount of script preparation work at their Eastbourne Terrace, London headquarters and at their Portsmouth offices. The London-based Wang System 30 with five screens is being used extensively on the development and production of complex technical documents and proposals for major contracts around the world, as well as for a variety of other operations including offshore studies, engineering and systems standards and specifications, corporate procedures and company policy statements. (no refs.)

2519 **The office in 1990.** A.D.Little.
Word Process. Now (GB), p.26-7 (Oct. 1980).
Gives a practical, reasoned forecast of the changes expected during the next ten years. (no refs.)

2616 **Place on special order on real estate.** G.A.Stotts.
Interface Age (USA), vol.5, no.10, p.62,128-9 (Oct. 1980).
The Multiple Listing Service System is designed to aid the real estate agent in matching real estate listings to buyer requirements. The agent can enter the number of bedrooms desired, the price ranges, and the location desired, and the system will list all real estate listings that match those requirements. Designed for the Apple microcomputer with one to three disk drives, and an optional printer, the MLS System features multiple volume files, linked lists and a free storage list.

2620 **Brain behind the hotel scene.** F.Jones (British Relay Electronics Ltd., London, England).
Mini-Micro Software (GB), vol.5, no.3, p.7-9 (1980). [received: Sept. 1980]
Provides interesting review of the ways in which microprocessors are being applied in the hotel industry. The two chief reasons for the slow reaction to the potential of the computer in hotels have been costs and the lack of tailor-made systems. Invariably, in the latter respect the systems were adapted from other commercial uses to hotel applications; the computer houses must be held responsible for failing to see the vast potential of the hotel market. More recently the hotel industry has seen package systems being specifically developed to meet its particular needs. (no refs.)

2492 **Office of the future.** H.Peters.
Comput. Age (GB), no.1, p.61-2 (Dec. 1979). [received: Sept. 1980]
Examines the four primary groups of work functions that are central to the organisation, and relates the effect of both current and future technological innovation within these categories. The four are: accounting, financial and administration; information collection, storage and retrieval; correspondence and mailing, and telecommunications. (no refs.)

2494 **Video screen work in the office.** M.Kolb, U.Althauser, E.Gaugler (Univ. of Mannheim, Mannheim, Germany).
Data Rep. (Germany), vol.15, no.4, p.4-8 (Aug. 1980). In German.
The introduction within the last few years of the display screen and keyboard, coupled with a centralised computer system as a replacement for the conventional office desk, while greatly extending the scope, working speed and efficiency of the business unit has, at the same time, produced a number of human problems. The authors have produced a detailed analysis of three case studies on the various aspects of these changes and the inevitable staff reactions. (1 refs.) *F.N.S.*

2502 **Integrating micrographics: ...the word processing connection.** A.N.Spence,III.
J. Microgr. (USA), vol.13, no.7, p.13-17 (Sept.-Oct. 1980).
Office automation is far behind all other forms of automation in industrialized society. Most white-collar employees have more automated equipment at home than at the office. Word processing is one of the fastest-growing techniques available today for improving office productivity. It has substantially increased the speed and lowered the costs of information generation. Next to the advent of the computer, nothing else has allowed so few to create so much, so fast. While not totally attributable to word processing, that information generation is now estimated at 4000 pages per employee per year. But, as fast as one solution arrives, so does another problem. What does one do with all that paper? The solution to this paper problem is micrographics. Word processing is a solution to the information creation problem and micrographics is the solution to the paper creation problem. (no refs.)

2503 **Office automation impacts productivity.** J.B.LeBoutillier
J. Microgr. (USA), vol.13, no.7, p.18, 20-1 (Sept.-Oct. 1980).
This article addresses from a practical standpoint word processing, document distribution, telephone communication systems and information management techniques and how they affect productivity. Work simplification, work measurement, production standards/controls and systems analysis/design/implementation is explained on a 'how-to' basis. (no refs.)

2504 **The future of the automated office.** M.W.Schuster.
J. Microgr. (USA), vol.13, no.7, p.22, 24-5 (Sept.-Oct. 1980).
The 1980s will produce more totally automated information records management systems to industry and government alike, and they will be less complex, require less sophisticated operational skill and offer more compatible individual components. (no refs.)

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5257 An office form flow model. I.Ladd, D.C.Tsichritzis (Univ. of Toronto, Toronto, Ontario, Canada)
AFIPS Conference Proceedings 1980 National Computer Conference, Anaheim, CA, USA, 19-22 May 1980 (Arlington, VA, USA: AFIPS 1980), p.533-9
The effectiveness of automated offices depends largely on the success of formally describing and analyzing the well defined portions of traditional offices. The need for formal descriptive and analytic tools gives rise to the study of formal models of offices. The diverse aspects of offices lead to different modeling approaches. The form flow model focuses on the description and analysis of the office structure and components. (9 refs.)

5258 Design principles of an office specification language. M.Hammer, J.S.Kunin (MIT, Cambridge, MA, USA).
AFIPS Conference Proceedings 1980 National Computer Conference, Anaheim, CA, USA: 19-22 May 1980 (Arlington, VA, USA: AFIPS 1980), p.541-7
Office automation, interpreted most generally, is the utilization of technology to improve the productivity and quality of office work. This concept encompasses a wide range of devices, technologies, tools, and systems. One of its most powerful instances is the notion of an automated office information system. An office specification language is used to describe in a natural yet precise fashion the operation of an office system; its use can improve the process of constructing the system in a number of ways. This paper sets forth an approach to the design of office specification languages and presents an overview of the major concepts in OSL, one such language. (13 refs.)

5750 Telidon and the human factors of Videotex data bases. D.A.Phillips.
Very Large Data Bases. Proceedings of the Sixth International Conference, Montreal, Canada, 1-3 Oct. 1980 (New York, USA: IEEE 1980), p.310-1
Telidon is a Videotex System which has the potential to make many types of data bases available to consumers in their homes and offices. A Telidon terminal in every home or office will mean a computer terminal available to the user with which he could access any electronic data base via any telecommunication line and receive information in text and colour graphics. (3 refs.)

5572 Research and practice in office automation. H.L.Morgan (Wharton School, Univ. of Pennsylvania, Philadelphia, PA, USA).
Information Processing 80. Proceedings of the IFIP Congress 80, Tokyo, Japan, 6-9 Oct. 1980 (Amsterdam, Netherlands: North-Holland 1980), p.783-9
While the rapid introduction of office automation has begun in many countries, the gap between research and practice is growing, rather than shrinking. This paper examines the directions of important research, describing how they build on existing information systems methods. It then discusses the problems in the human aspects of office automation which are slowing the inclusion of the latest research findings into practical systems. (21 refs.)

5538 Four roads to office automation. R.W.Ketron.
Datamation (USA), vol.26, no.11, p.138, 140 (Nov. 1980).
Technological short-range solutions are popping up in various offices throughout the corporation, office managers are locking themselves into ad hoc solutions, and major opportunities to steer the corporation into effective systems are slipping away. To avoid this, corporations must plan. The primary reason to plan at the corporate level is to increase profits by maximizing return on investments in office systems. Where corporate level planning does not exist, equipment decisions are made at lower levels. Though each of these decisions may be marginally profitable, the sum of such acquisitions across an entire organization results in a total return to the company far smaller than that which could have been achieved with a broader and more comprehensive plan. (no refs.)

5570 Office automatic concepts and applications. M.Zloof (IBM Thomas J. Watson Res. Centre, Yorktown Heights, NY, USA).
Atti del Congresso Annuale AICA '80 (Annual Conference AICA '80), Pt.I, Bologna, Italy, 29-31 Oct. 1980 (Bologna, Italy: Tecnoprint 1980), p.1 (no refs.)

5629 The computer in the doctor's office. P.R.Pocklington (Dept. of Biometrics & Medical Informatics, Medical School Hannover, Hannover, Germany)
Med. Inf. (GB), vol.5, no.3, p.237-41 (July-Sept. 1980).
In the week of the Hannover Trade Fair, 25-29 April 1980, the International Medical Informatics Association held a working conference having as its theme The Computer in the Doctor's Office. The conference was attended by around 100 delegates, who heard invited presentations from 27 internationally distinguished workers in this field, and was divided into six sessions covering the following areas: (*a*) Systems analysis of ambulatory care with regard to EDP support. (*b*) Ambulatory-care information needs. (*c*) Examples of computer applications. (*d*) Examples of administrative functions. (*e*) Evaluation of computer applications. (*f*) New technology. (no refs.)

5568 Implementing electronic mail in a telephone system: more than just talk. G.Tomanek (ROLM Corp., Santa Clara, CA, USA).
AFIPS Conference Proceedings. 1980 National Computer Conference, Anaheim, CA, USA, 19-22 May 1980 (Arlington, VA, USA: AFIPS 1980), p.527-31
Describes the development of a digital telephone system into an integrated voice and text information system. A specific type of electronic mail can be provided from the telephone system to give the office workers a more complete information system, aimed at increasing their productivity. It also illustrates the potential future role of the digital telephone system as the brain and central nervous system of the office of the future. And it brings forward some of the organizational impact that will accompany the move into the future. (no refs.)

5566 OFS: an integrated form management system. D.Tsichritzis (Computer Systems Res. Group, Univ. of Toronto, Toronto, Ontario, Canada)
Very Large Data Bases. Proceedings of the Sixth International Conference, Montreal, Canada, 1-3 Oct. 1980 (New York, USA: IEEE 1980), p.161-6
The integrated form management system outlined is being implemented in an LSI-11, PDP-11 environment of computers running different versions of UNIX. Each LSI-11 has at least 64k bytes memory and floppies or a disk for secondary storage. The computers are connected together through a PDP-11/45. The author is also implementing a local network connecting the LSI-11's directly. The form processing facility OFS is completely implemented and is being used. The data management facility MRS is completely implemented and has been used extensively. The author plans to extend it into a distributed system by routing transactions appropriately. The office procedure facilities are under development. (15 refs.)

5561 The impact of automation on office communications and control. J.H.Carlisle.
Sist. & Autom. (Italy), vol.26, no.208, p.697-702 (Oct. 1980). In Italian
The article outlines new conceptions of the application of automation to office work as subsumed under the general title of Management Communication and Control (MC&C) basing itself upon several examples of the new approach in the USA. It discusses factors likely to affect success or otherwise in introducing new methods and the need for improved 'human engineering'. (17 refs.) *C.J.O.G.*

5645 A computerized medical time management system. M.B.McIntosh (Caledonian Medical-Surgical Clinic, Nanaimo, British Columbia, Canada).
Computers in the Doctor's Office, Hannover, Germany, 25-29 April 1980 (Amsterdam, Netherlands: North-Holland 1980), p.187-9
Effective time management in medical practice is essential to achieve maximum productivity and practice income. Medical time management systems are generally based on the use of appointment books of various types subdivided into a page for each day with a line for each fifteen minutes of time. Some of the difficulties a practice encounters in using an appointment book-based system to achieve maximum utilization of provider time with minimal administrative cost is discussed and compared to a computerized system. (no refs.)

5638 Information needs in the physician's office—based on the current state of the art in North America. M.Barrett-Moore (Medco Data Systems Ltd., Toronto, Canada).
Computers in the Doctor's Office, Hannover, Germany, 25-29 April 1980 (Amsterdam, Netherlands: North-Holland 1980), p.101-3
Discusses briefly the issues of confidentiality and security of data. These are practically irrelevant topics in the discussion with physicians as one is dealing with inhouse systems which already are assumed to solve these problems of data confidentiality. There is only one exception; that of automatically transmitting insurance claims from the doctor's office to the insurance carrier computer system. The issue of data security becomes real at that stage; however, it has been argued, with much support, that the data is more secure in electronic form than in handwritten form. One must only guarantee in the computer systems that the content of the form is the only information that is transmitted to the insurance carrier. (no refs.)

5739 Telefacsimile transmission of information in libraries. H.Anand (Nat. Library of Canada, Ottawa, Canada).
Proceedings of the Eighth Annual Canadian Conference on Information Science, Toronto, Ontario, Canada, 6-10 May 1980 (Calgary, Alberta, Canada: Canadian Assoc. Information Sci. 1980), p.23
Defines the term telefacsimile transmission and then goes on to explain what is required for transmission to take place. A range of telefacsimile units in today's market place starting from wholly manual to semi-automatic to completely automatic units are examined. Information on the various cost prices, rental/purchase plans, paper/transmission costs, unattended sending/receiving capabilities, maximum paper size capability, speed of transmission, resolution, editing capabilities, modulation, coupling and compatibility information is given together with the pros and cons of having each type of unit. Some telefacsimile transmission applications in private industry and in the library world are described. The paper then deals with some of the advantages, disadvantages and problems associated with telefacsimile and other modes of transmitting information. The conclusion is about the future of this type of transmission and some of its potentials. (no refs.)

5737 Fiber optics in the communication network—why?. D.W.Glover (Bell Canada, Ottawa, Canada).
Proceedings of the Eighth Annual Canadian Conference on Information Science, Toronto, Ontario, Canada, 6-10 May 1980 (Calgary, Alberta, Canada: Canadian Assoc. Information Sci. 1980), p.20
Addresses the types of communications served by Bell in its role as a common carrier. An overview of the cross section of facility types presently used to carry these services will be given, and a brief glimpse will be taken of some of the problems encountered with their operation and maintenance. This will lead into the reasons why Bell are seriously considering the use of fiber optics in their network. Some of the advantages of the fiber over copper facilities will be discussed, and an indication of how and where fiber can be used will be given. Some bench marks relating to timing of introduction are also discussed. This allows one to take a look into the future and determine where fiber will lead in the ensuing years, and the types of information transfer one may encounter. (no refs.)

5039 Computer conferencing—the exchange of experience. H.E.Bamford (Nat. Sci. Foundation, Washington, DC, USA).
Telecommun. Policy (GB), vol.4, no.3, p.215 (Sept. 1980).
Considers computer conferencing within a larger framework, showing its relationship with other forms of electronic information exchange. The author, recognizing the lack of empirical data available, describes the experience of operational trials of small research communities begun in 1977. The trials allow an assessment of information exchange and promote the existence of a population of experienced users.

5815 **A survey of on-line biblingraphic search service centers in Canada.** G.H.Deschatelets (Laval Univ., Quebec, Canada)
Proceedings of the Eighth Annual Canadian Conference on Information Science, Toronto, Ontario, Canada, 6-10 May 1980 (Calgary, Alberta, Canada: Canadian Assoc. Information Sci. 1980), p.36-7
A survey of on-line bibliographic search service centers in Canada, funded by the Canadian Institute for Scientific and Technical Information (CISTI), was conducted in conjunction with an on-going experimental study entitled: 'Towards an optimal level of participation of the human search intermediary in user-system interface of on-line bibliographic search services' Seventeen hundred (1780) bilingual questionnaires were mailed during a period running from mid-March to the end of April 1979 to all Canadian customers of most commercial on-line vendors: Infomart (the Canadian agent of SDC), BRS, CAN/OLE, QL Systems, Medline, New York Times, and Infomatech France Quebec. Only Lockheed refused to participate in the survey. This paper presents the results of the survey, and interprets some of its major findings. (no refs.)

6184 **The growing use of electronic mail by airlines.** J.C.Goodlett (Texas Internat. Airlines, Houston, TX, USA)
AFIPS Conference Proceedings. 1980 National Computer Conference, Anaheim, CA, USA, 19-22 May 1980 (Arlington, VA, USA: AFIPS 1980), p.503-7
Electronic mail is one of several computer-based applications which is rapidly becoming a fundamental part of business life. Technology has supplied the data processing and communications industries with the necessary tools to enable them to make the transition from the mailman to direct electronic message delivery. This paper describes several uses of electronic mail in the airline industry as an example of the importance and diversification of its employment. Likely hindrances to further advances are discussed along with some projection for the future. (5 refs.)

5175 **Voice data entry experiences slow market acceptance.** D.B.Davis
Minicomput. News (USA), vol.6, no.10, p.16, 18 (23 Oct. 1980)
Discusses the current market in voice data entry equipment. The author briefly considers the current state of the technology, and possible applications. He tries to analyze why the market in this equipment is getting off to such a slow start. (no refs.)

5177 **Automatic speech processing systems.** W.Tscheschner, U.Kordon (Tech. Univ., Dresden, Germany).
Radio Fernsehen Elektron. (Germany), vol.29, no.2, p.83-7 (1980). In German. [received Oct. 1980]
A range of speech storage techniques, both of analogue and of digital form, is reviewed and ideas for speech synthesisers are described. Automatic speech recognition circuits are considered, bandwidth requirements are stated and pattern comparison concepts are compared, with special reference to percentage success in word recognition. The use of various computers in speech recognition is surveyed, and the speech recognition system of EM Threshold Inc. is described. Reference is also made to the 'Speak and Spell' synthesizer. (13 refs.) *G.M.E.*

5260 **Streamlining office procedures—an analysis using the information control net model.** C.L.Cook (Xerox Palo Alto Res. Center, Palo Alto, CA, USA).
AFIPS Conference Proceedings. 1980 National Computer Conference, Anaheim, CA, USA, 19-22 May 1980 (Arlington, VA, USA: AFIPS 1980), p.555-65
The purpose of this paper is to acquaint the reader with a model for office procedures, the Information Control Net model, and a particular type of transformation that can be performed on an Information Control Net (ICN) model, streamlining. The ICN formalism is intended to aid office managers and office analysts in describing and evaluating procedures. Streamlining is a technique for reducing the ICN model of a procedure to a model of the necessary information flow and elementary information-processing of the procedure. Streamlining highlights the origin and destination of information in a procedure and allows the modeler to vary the route the information takes. Streamlining an ICN model of a procedure illuminates information-processing needs, activity by activity, in a way that may be useful for evaluating or changing the original procedure. (7 refs.)

5045 **Some issues in distributed processing.** A.Asthana (Bell Labs., Holmdel, NJ, USA).
Proceedings of the IEEE International Conference on Circuits and Computers ICCC 80, Pt.1, Port Chester, NY, USA, 1-3 Oct. 1980 (New York, USA: IEEE 1980), p.257-63
Significant aspects of distributed processing include models of communications, degree of autonomy of subsystems, coherent interfaces, object representation, protection, naming, transparency, concurrency control, reliability and crash recovery. Although impressive strides have been made in the field of distributed processing during the past decade, efficient solutions to some of these basic issues still remain to be found. This paper discusses these aspects of distributed processing in some depth and explores techniques, compromises, and open questions. (44 refs.)

5052 **Office automation at TI.** L.C.Craig (Texas Instruments Inc., Dallas, TX, USA).
Proceedings of distributed computing. COMPCON 80, Twenty-First IEEE Computer Society International Conference, Washington, DC, USA, 23-25 Sept. 1980 (New York, USA: IEEE 1980), p.69-75
In the presentation today, the author comments briefly on TI the company; TI's Worldwide Computer/Communications Network; and some impact areas of this network - emphasizing office automation. (no refs.)

3276 **Philips sets the pace of change.** B.Manley.
Infomatics (GB), vol.1, no.8, p.12-15 (20 Oct. 1980).
The big problem in office automation is the presence of people. The machine has to do something for someone: it has to do it well, the someone has to be motivated to use it, and the system should be seen to deliver real benefits. Philips Business Systems, see the main problem as largely a sociological one. The future pace of technological change is unknown. The determining factor will not be the nature of the products, but the nature of the market—the acceptance of the new ideas in the office. From the practical point of view, Philips marketing operation needs to be directed at a senior person, maybe board level, who combines something of the roles of a telecomms manager, data processing supremo, and office manager. That job does not really exist yet. It looks as though the pace of implementation and/or the adoption of ill-conceived poorly-designed systems for business automation might turn on a consideration as trivial as that—who is really qualified to assess all the costs and all the benefits in an organisation?. (no refs.)

3275 **A 'LINC' between university library, information and computing services using voice input/output.** J.Hawgood (Univ. of Durham, Durham, England).
IUCC Bull. (GB), vol.2, no.2, p.109-10 (Summer 1980).
As it becomes technologically and economically possible for computers to be used to help with a wider and wider range of university activities, it becomes harder for the unsophisticated user to distinguish between on-line services giving access to different facilities such as the university library circulation record, remote information services, the research computer, the administrative computer, the word-processing service, etcetera. The author argues that it should be possible to provide an integrated service giving a common approach to all on-line service. It is also suggested that voice input/output using the ordinary telephone may well suffice 'for all of the people some of the time and for some of the people all of the time'. (no refs.)

3300 **Marketing a new technology. A guide to making the venture successful [health care systems].** M.Barrett-Moore (Medco Data Systems Ltd., Toronto, Canada).
Computers in the Doctor's Office, Hannover, Germany, 25-29 April 1980 (Amsterdam, Netherlands: North-Holland 1980), p.191-5
Medco Data Systems is a privately owned Canadian Company which has developed, and is implementing micro-based computer systems in private practice medical offices. The company was formed in 1978; during 1979, an average of 3 systems per month were successfully implemented. Late in 1979, Acuity Systems Incorporated, a US based public company specializing in advanced instrumentation and systems for Health Care, expanded their product line to include a Medical office business system. They chose the Medco developed Canadian system software as the basis for the product. In January of 1980, Acuity Systems began their marketing and implementation program in the USA. It is with this background experience in the recent two years that the author will outline the problems in marketing a new technology and the important aspects in making the endeavor a successful one. (no refs.)

5034 **Principles of packet switching. II. State of development.** J.Pitteloud (PTT, Berne, Switzerland).
Output (Switzerland), vol.9, no.10, p.43-51 (14 Oct. 1980). In French.
For pt.I see ibid., vol.9, no.9, p.33 (1980). Discusses current status of packet switching networks with particular emphasis on public networks. Local and satellite packet switching networks are also considered. Star and distributed systems are discussed and the use of packet switching in diffusion networks considered. Heterogeneous and diffusion networks are then examined in practice, e.g. 'Arpanet' in the USA, 'Cyclades' in France, and PSS in Great Britain. (35 refs.) *L.F.*

5749 **Telidon calling: planning the content.** J.Wilson.
Proceedings of the Eighth Annual Canadian Conference on Information Science, Toronto, Ontario, Canada, 6-10 May 1980 (Calgary, Alberta, Canada: Canadian Assoc. Information Sci. 1980), p.43
Telidon represents a new breed of technology—a sophisticated marriage of computers and television to produce a new media service, generally called videotex, when wire-linked, or teletext, when broadcast. With this dual capacity for distribution, and an advanced graphics capability based on an alphageometric systems design, Telidon represents a breakthrough on the world telecommunications front. It is not only a new technology, it is in many ways a new medium of expression. That it is a new media can be appreciated, perhaps, only in a comparison to other, existing forms of media such as film, television, newspapers, magazines, computerized information data banks. In reviewing Telidon attributes, it may be enough to say that it is an efficient means of textual-graphic communication over distance. As such, it involves human, economic and technical issues, which must all be taken into account when planning the content to be communicated. (no refs.)

5765 **Information sharing in the 80s.** G.Sylvestre.
Proceedings of the Eighth Annual Canadian Conference on Information Science, Toronto, Ontario, Canada, 6-10 May 1980 (Calgary, Alberta, Canada: Canadian Assoc. Information Sci. 1980), p.16
Inflation, currency problems, levelling of budgets, information explosion and diversification of Canadian needs require an unprecedented sharing of information resources at the national and international levels. This should be facilitated by new technology as well as by the development of a nation-wide information network providing more general access to general resources as well as to specialized centres of excellence. Agreements between all levels of government and private institutions are essential to ensure such broader sharing based on links between systems as well as the will to share for the benefit of all. (no refs.)

15910 **The automation of office work inside IBM, Italy.** G Baranello
Sist. & Automaz. Italia, vol.27, no 219, p 753-8 (Oct 1981). In Italian
The paper describes the benefits of producing and managing a series of applications carried out at Segrate in the IBM commercial offices This uses an IBM 3730 system managing the affairs generally The use of the 3730 system is explained, chiefly in the field of text processing Simple diagrams accompany these explanations and the distribution split of the different applications Some figures are given to show time consuming activities of secretaries which can be eliminated The first IBM use of the 3730 system was in their Rome premises and from this the Segrate system evolved There is a description of the Italian Communication-European Retrieval Information Facilities (Telco-Enfi) and also of the application of the European Telecommunication System (ETS) Some likely future developments are discussed, and particularly text processing (no refs.) *G.I.D.*

15895 **Office communications perspectives.**
Funkschau (Germany), no.20, p 76, 81-2 (2 Oct. 1981). In German.
The use of electronic equipment in offices is bound to increase greatly in future years. At the moment equipment is mainly limited to the telephone, typewriters teleprinters and copying machines. The change which will revolutionize the office as a work-place started in the sixties with the development of the work-place oriented computer and the invention of the word processor. (no refs.) *J.R.B.*

15931 **Problems and solutions for electronic files in the office.**
R.W.Bremer (Honeywell Information Systems, Phoenix, AZ, USA).
A.I.C.A. Annual Congress, Pavia, Italy, 23-25 Sept. 1981 (Pavia, Italy: Univ. Pavia 1981), p.131-3 vol.1 In Italian.
Many solutions promoted for the expected problems of office automation may be premature or ill-advised, although this is often denied, leaning on the tenet of 'conventional wisdom'. The author examines some alternatives on such topics as file structure, forms mode, full buffer transmission from screens, and scrolling The economic and the human tradeoffs are examined. (2 refs.)

15881 **In stages to the office of the future.** W.Pfeiffer, W.Dohl (Friedrich-Alexander Univ., Erlangen-Nurnberg, Germany).
Buerotechnik (Germany), vol.29, no.10, p.950, 953-4 (Oct. 1981). In German.
Presents conclusions form a joint study undertaken by the University and by the office-machinery manufacturer Triumph-Adler. The discussion is relatively philosophical, and considers methods of overcoming objections to the introduction of new methods arising from traditional ideas on work efficiency (dubbed Taylorism) and from short-term cost considerations. (no refs.) *G.F.F.*

15887 **Wang Office Information Systems (OIS).** W.Saffady.
Comput. Equip. Rev. (USA), vol.3, no.1, p.19-30 (Jan.-June 1981).
Reviews the Wang Office Information System (OIS) series which consists of six systems designed for multi-terminal word processing and integrated word/data processing applications. The various products in the series differ primarily in the number of workstations and related peripherals supported and in the amount of online storage capacity provided. (no refs.)

15914 **The shape of things to come: a look at the electronic office.** B.Manley (Philips Business Systems Ltd., Maidenhead, England).
Telephony (USA), vol.201, no.10, p.23-4, 28-9 (7 Sept. 1981).
The electronic office has both problems and possibilities. In order to fully appreciate the benefits, one first has to understand the nature of the problems. The author discusses these problems. (no refs.)

15883 **Which technology will rule the automated office?.** W.Rauch-Hindin.
Data Commun. (USA), vol.10, no.11, p.66-79 (Nov. 1981).
It is uncertain whether the automated office will be based on timesharing systems or local networks, 8- or 16-bit microprocessors, and driven by customized or off-the-shelf software. The author looks at the advantages and disadvantages of the various possibilities. (no refs.)

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6345 Automation of offices: a view. L.Aiello (IEI, CNR, Pisa, Italy), G.Prini.
Atti del Congresso Annuale AICA '80 (Annual Conference AICA '80), Pt.II, Bologna, Italy, 29-31 Oct. 1980 (Bologna, Italy: Technoprint 1980), p.1136-53 In Italian.
Office automation is attracting much interest, both in industries and academic research centers. It presents problems that are new with respect to those tackled in more tradiational fields of computer and information sciences. The authors discuss the state of the art of the research in this field as well as problems and perspectives. (42 refs.)

6346 Design and specification of office automation systems. R.Barbutti, M.Bellia, C.Simonelli (Istituto di Elaborazione dell'Informazionne, Pisa, Italy).
Atti del Congresso Annuale AICA '80 (Annual Conference AICA '80), Pt.II, Bologna, Italy, 29-31 Oct. 1980 (Bologna, Italy: Technoprint 1980), p.1154-69 In Italian.
Attacks the problem of the support method for the definition and application of automation in offices. Analysis of the methodology shows the importance of adequate modelling of the specification. The authors examine several of the better-known models that have been proposed and present an extension of BDL integrated with a treatment of forms as a particular kind of data. They show how this extension permits the use of the model as an instrument of development. (21 refs.) *C.J.O.G.*

6347 From the office of the future to the office of today. G.Degli Antoni, R.Polillo, M.Pozzi, B.Zonta (Univ. degli Studi, Milano, Italy).
Atti del Congresso Annuale AICA '80 (Annual Conference AICA '80), Pt.II, Bologna, Italy, 29-31 Oct. 1980 (Bologna, Italy: Technoprint 1980), p.1170-82 In Italian.
The object of the article is to describe the present state of the art of the office of the future and to discuss the ways in which the future possibilities in this field can and should influence the choice of systems for introducing automation into contemporary establishments. It does not set out to advocate any particular standards or technologies but merely to encourage discussion and critical analysis of the many alternatives and to indicate how, given adequate analysis of technological evolution, it may be possible, with limited investment, to reduce the gap between current practice and the potentialities of the new technology. (4 refs.) *C.J.O.G.*

8711 COM takes on a new image. K.Jamieson.
Data Processing (GB), vol.22, no.9, p.30-1 (Nov. 1980).
Computer output microfilm can no longer be considered just as an output medium; it too is slowly becoming integrated with other systems and will play an important role in the office of the future. The principles of COM consists of producing information direct from computer magnetic tapes on to microfilm or microfiche. Microfiche has now largely superseded microfilm because it can be more comprehensively indexed, it is also more convenient to use and reduces storage and viewer costs. The benefits of using COM are immediately available to all people who can produce data on magnetic tape (and many floppies), yet without any large capital investment in equipment or staff. (no refs.)

8712 Accurate indexing aids fast retrieval.
Data Processing (GB), vol.22, no.9, p.33 (Nov. 1980).
Computer assisted retrieval (CAR) emerged as a fast way of indexing and retrieving microfilmed source documents which require frequent reference. CAR works alongside the computer and is used in applications where a high volume of transactions need to be filmed for storage and reference and keyed into the computer for data processing. The weak link in CAR systems has been in the indexing of source documentation prior to input to the microfilmer. Kodak has now eliminated operator intervention from the input side with the launch of an expanded image mark capability for its Reliant 750-L microfilmer. This facility puts different sized image marks automatically on to microfilm. The accessories are intelligent controller installed inside the microfilmer, a document sensor, a new image marker capable of producing image marks of three different lengths as instructed by the controller, and a new document sensor/imprinter which combines the functions of the document sensor with the functions of a sequential imprinter. (no refs.)

9297 Prestel report. A.Stokes.
Pers. Comput. World (GB), vol.3, no.6, p.59 (June 1980). [received: Nov. 1980]
Three major enhancements—'Picture Prestel', 'Telesoftware' and 'Dynamically Redefinable Character Sets'—demand the use of radically different Prestel receivers. Nevertheless the facilities announced are quite interesting and well worth a closer look. (no refs.)

9298 Viewdata and the information age. I. Fact and fantasy. A.Stokes.
Pers. Comput. World (GB), vol.3, no.4, p.47-9 (April 1980). [received: Nov. 1980]
Viewdata is the means of bringing into every home remote access to a large information retrieval database with interactive facilities, by way of already existing equipment. This article is a guide on viewdata. It describes viewdata, its history and compares it with Teletext. (no refs.)

9299 Teletext systems: considering the prospective user. W.Ciciora (Zenith Radio Corp., Glenview, IL, USA).
SMPTE J. (USA), vol.89, no.11, p.846-9 (Nov. 1980).
An overview of teletext systems is given, stressing in particular the viewpoint of the potential user. The expected reaction of the North American consumer to teletext is analyzed. Such a forecast is important because a consumer teletext system has not yet been implemented in North America. Although teletext has many potential categories of users and can be implemented in many different ways, this paper concentrates on broadcast teletext as an ancillary service for consumers. The analysis is based on considerations of technical feasibility and the constraints imposed by consumer behavior. The results of this analysis have important implications on system design. (4 refs.)

9284 France launches mini-CRT campaign. S.A.Caswell (Bell Canada, Ottawa, Canada).
Mini-Micro Syst. (USA), vol.13, no.11, p.125-7 (Nov. 1980).
Discusses France's plan to distribute mini-CRTs to every home and business in the country to provide an on-line telephone directory and information service. As well as the PTT directory users will be able to access Teletel, the French viewdata system. (no refs.)

9266 The telephone directory that disappeared. K.Paulsen.
Elektro (Norway), vol.93, no.18, p.6-7 (16 Oct. 1980). In Norwegian.
Discusses the likely replacement of the telephone directory, and small advertisements in news papers, by a compact data terminal. The system is expected to be reality in France during 1981. (no refs.) *J.H.H.*

9241 Problems of compression of images in geographic databases. S.Di Zenzo (IBM Italia, Centro Sci. di Roma, Rome, Italy).
Atti del Congresso Annuale AICA '80 (Annual Conference AICA '80), Pt.II, Bologna, Italy, 29-31 Oct. 1980 (Bologna, Italy: Technoprint 1980), p.1115-22 In Italian.
Lower bounds for the amount of storage needed to accommodate images in a data base without loss of information are calculated. The types of regularity currently encountered within the images to be stored in a geographical data base are assumed. The data compression figures here obtained are theoretical figures which can be used as comparison terms when choosing the actual encoding technique for the images. As an example, the encoding technique known as run length encoding is discussed against the theoretical figures. (9 refs.)

9095 A computerized medical information network for small practices. E.C.Nelson, B.Bise, R.Gagne, J.Ohler, J.Kirk, J.Sarro, C.Scarinza (Dartmouth Medical School, Dept. of Community & Family Medicine, Dartmouth, England).
Proceedings of the Fourth Annual Symposium on Computer Applications in Medical Care, Pt.II, Washington, DC, USA, 2-5 Nov. 1980 (New York, USA: IEEE 1980), p.861-6
This paper reports on the development of a regional data network for small medical practices in Maine, New Hampshire and Vermont. The data network is used to provide the individual practices with clinical and management feedback reports and to conduct inter-practice clinical research, quality assurance studies and continuing medical education programs. Five practices are submitting data to the network through a distributed computer system which completely automates their billing. The evaluation of changes in the cost and effectiveness of billing resulting from the transition from a manual to a computerized billing system is described. (3 refs.)

8993 On-line banking proves challenges can be met. A.Davidson.
CIPS Rev. (Canada), vol.4, no.5, p.12-13 (Sept.-Oct. 1980).
The author describes exciting and eventful progress made through the Bank of Montreal's automation. She cites the growth of the largest system, On-Line Banking, since its introduction at the end of 1975. In 1979, Multi-Branch Banking set a new standard for banking and customer service, connecting all online branches from coast to coast and permitting them to process transactions against accounts in other branches. Direct Line, announced in August, 1980, provides corporations with nation-wide access to all their accounts, with consolidated reporting and account management facilities in real-time via terminals located on their own premises. (no refs.)

8961 Perspectives on office automation. T.Nakamura (Hitachi Ltd., Tokyo, Japan).
J. Soc. Instrum. & Control Eng. (Japan), vol.19, no.8, p.772-9 (Aug. 1980). In Japanese.
Developments in America are analysed and compared with the Japanese situation, and the reasons for and ways of tackling office automation are expounded. New developments in hardware such as bit maps, OCR, touch sensitive panels and strain gauges and the associated software (QBE, OFS, SDMS, MCVD) are described. Their integration at the work station is explained with an example invnlving a word processor and graphics using the Japanese language. The optimisation of PABX on the basis of Petri nets is emphasized with a Japanese example of PPDS. DB schemes are also treated and exemplified. (38 refs.)

8943 Office work and electronic text communications. P.-J.Koch (Siemens AG, Munchen, Germany), I.Lanius.
Data Rep. (Germany), vol.15, no.5, p.10-14 (Oct. 1980). In German.
The statistics of letter correspondence in West Germany for 1978 are discussed: it is reported that out of 42 million letters per day, there were 16 million business/government communications. The authors conclude that 9 million per day could be electronically transmitted, with 6 million text letters and 3 million facsimile letters. The service available are listed as telex, telefax, teletext, text systems, text processors and telephone-linked VDU terminals. The impact of these facilities on office personnel is discussed and special attention is paid to repetitive letter sequences. (10 refs.) *G.M.E.*

8939 **Office automation and invisible files.** R.W.Bemer (Honeywell Information Systems, Phoenix, AZ, USA).
Autom. & Strum. (Italy), vol.28, no.7-8, p.595-606 (July-Aug. 1980). In Italian.
To provide a way to logically access the file content basic criteria are described to gain a detailed visibility of the files. Semantic labels, attached to the file contents, and images of files (co-files) are assumed to be basic tools to allow non professional user gain familiarity with automated office access facility. (4 refs.)

8940 **Office automation at the IBM Italy headquarters.** G.Baranello (IBM, Milan, Italy).
Autom. & Strum. (Italy), vol.28, no.7-8, p.609-10 (July-Aug. 1980). In Italian.
Describes functional and application features of the Information Distribution System IBM 3730. The system is presently installed at the IBM Italy headquarters in Segrate (Milano) and the value of its presence within a large and distributed organization is also outlined. Financial consideration and advantages are described as well as projects for the future development of the installation both on the application and geographical extension sides. (no refs.)

9012 **Hospitals turn to computers as the paperwork piles up.** R.Birenbaum.
Comput. Data (Canada), vol.5, no.10, p.50-7 (Oct. 1980).
Two important concerns that health care administrators handle regularly are the rising costs of care and the quality of service. Some studies estimate almost 30 per cent of each hospital bill is attributable to non-productive paper work. Further estimates claim professional personnel spend about 30 per cent of their time in information handling. As well, errors, of the 'paper and pencil type' account for 10 to 40 per cent of unsatisfactory test reports caused by transcription, arithmetic, miscalculation and inaccurate patient identification. These statistics suggest computerized paper processing may provide means to reduce, or at least stabilize, the costs and improve the quality of health care. Many hospital administrators believe computer technology could be the solution to some of the leading health management dilemmas, particularly in hospital communications. (no refs.)

8664 **Major challenge to CRTs from flat-panel displays.** M.DeJackmo (Internat Resource Dev. Inc., Norwalk, CT, USA).
Mini-Micro Syst. (USA), vol.13, no.11, p.113-14 (Nov. 1980).
Discusses the increasing interest in flat panel displays. These can be either AC plasma, DC plasma, LCD or electroluminescent panels. The author discusses particular displays from Exxon and Sharp. (no refs.)

6348 **Computer sabotage in the Netherlands.** H.de Jong, P.T.M.Laagland (Klynveld Kraaycohof & Co., Amsterdam, Netherlands).
Informatie (Netherlands), vol.22, no.11, p.843-6 (Nov. 1980). In Dutch.
Describes an actual case of computer sabotage in order to illustrate the importance of safety precautions. Instructions to erase certain data had been added to existing programs by an unauthorised person. Sabotage cannot be eliminated completely but the risk can be reduced by calling in security specialists. (no refs.) *J.S.*

8666 **Raster CRT displays begin to dominate graphics market.** D.B.Davis.
Minicomput. News (USA), vol.6, no.9, p.20-5 (18 Sept. 1980).
Discusses various types of graphics displays. The author mainly discusses raster CRT displays, but he also looks briefly at plasma displays, storage tube displays, and stroke writer displays. (no refs.)

8657 **Storage and transmission bandwidth reduction for high resolution color and monochrome displays.** A.S.Murphy (IBM Corp., Armonk, NY, USA).
IBM Tech. Disclosure Bull. (USA), vol.23, no.3, p.1236-7 (Aug. 1980).
In a computer driven CRT graphic display terminal, the picture on the CRT screen is typically composed from a matrix of programmable symbol (PS) cells each consisting of M x N displayable points. If features such as color or bright-up are to be provided, then attributes defining the feature must be associated with the corresponding locations on the screen. An arrangement is shown in which the color attributes are stored in a separate attribute store at a screen density lower than the point-to-point display of picture elements (pel) density but higher than the PS cell density. The screen is sub-divided into a matrix of attribute cells each containing m x n pels. The total number of bits required for a color display is halved by this means in comparison to that required for a full triple plane system. (no refs.)

9480 **Video-conferencing in a trial network.** P.Klein (Siemens AG, Muenchen, Germany).
NTG-Fachber. (Germany), vol.74, p.352-61 (1980). In German. [received: Oct. 1980] (Text- and Picture-Communication, Stuttgart, Germany, 30 Sept. - 3 Oct. 1980).
Discusses the general characteristics of video-conferencing. The author describes a prototype system in which four of the participants sit around a table, each facing a camera, and each can see a composite picture of four participants at a remote site. Users' responses to questionnaires indicate general satisfaction. (no refs.) *G.F.F.*

8650 **Intelligent terminals.** C.Warren.
EDN (USA), vol.25, no.21, p.126-41 (20 Nov. 1980).
Discusses various intelligent terminals, and presents a test which enables the user to determine how intelligent a particular unit is. The author considers several factors which are important when choosing a terminal. (no refs.)

8651 **Display-generator chips implement smart terminals.** P.Bissmire (Motorola Inc., Geneva, Switzerland), J.J.Farrell,III, P.Fletcher.
EDN (USA), vol.25, no.21, p.161-73 (20 Nov. 1980).
First aimed at use in such mass-market display applications as personal computers and video games, video display generators can also serve industrial uses. The authors first describe the circuitry required to operate a VDG with a standard National Television Systems Committee (NTSC) US-market TV. They then tell how to use a VDG to provide video-overlaying capability—one application of which is 'closed captioning', which, among other uses, can provide captions to commercially transmitted programming for use by hearing-impaired persons. Finally, they discuss how to modify the basic VDG operation for use with a standard European-market TV. The VDG employed in these examples is Motorola's MC6847, second sourced by Fairchild (F6847). (no refs.)

8652 **Beware of software mismatches when you install smart terminals.** L.E.Raburn (McDonnell Aircraft Co., St. Louis, MO, USA).
EDN (USA), vol.25, no.21, p.189-91 (20 Nov. 1980).
Discusses the installation of a smart terminal in a system designed for a nonintelligent one. The author discusses some of the problems which may arise, and considers how the terminal can be used to its best advantage. (no refs.)

8632 **A technique for describing high-level data link control (HDLC) procedures.** K.Morino, O.Takahashi (Yokosuka Electrical Communication Lab., Nippon Telegraph & Telephone Public Corp., Yokosuka, Japan).
Information Processing 80. Proceedings of the IFIP Congress 80, Tokyo, Japan, 6-9 Oct. 1980 (Amsterdam, Netherlands: North-Holland 1980), p.575-9
In order to implement HDLC in a program, it is necessary to specify detailed control actions in addition to the descriptions in the ISO standards. The authors propose a new, effective and practical description technique for realization of data link control programs, which reflects the functional characteristics of HDLC. The technique is based on the concept of three kinds of states: logical (for command/response handling), digital (for sequence number handling) and analog (for timer handling), and provides both a state transition table and a processing state transition chart. A data link control program has been written in a high level language based on this technique. It has been demonstrated that the proposed technique is practical and useful for implementation. (13 refs.)

8624 **Interprocess communication in distributed systems: one view.** E.Manning, N.J.Livesey, H.Tokuda (Dept. of Computer Sci., Univ. of Waterloo, Waterloo, Ontario, Canada).
Information Processing 80. Proceedings of the IFIP Congress 80, Tokyo, Japan, 6-9 Oct. 1980 (Amsterdam, Netherlands: North-Holland 1980), p.513-20
Describes the program of experimental research in distributed systems which has been carried out in the Computer Communications Networks Group of the University of Waterloo, over the past six years. The focus is on interprocess communication (IPC) techniques, and the authors therefore provide a comparison of message-switched IPC facilities in several distributed systems developed both at Waterloo and elsewhere. The points of comparison include message management, synchronization modes, and performance. The authors have almost invariably chosen message-switched IPC for the distributed systems, and examine the reasons for these decisions. Finally, they draw a few conclusions. (27 refs.)

8966 **Tomorrow's office.** S.Rostron.
Reprogr. Q. (GB), vol.13, no.4, p.135-8 (Autumn 1980).
The microprocessor revolution has introduced a new wave of office equipment of increased function and power. The author reviews the characteristics of the different facilities now becoming available and sets the scene for consideration of the opportunities these present. (no refs.)

8614 **Architectures for distributed processing.** J.Martin.
Carnforth, England: Savant Res. Studies (1979), xiv+224 pp. [0 906774 06 3]
Presents a description of and insight into four major architectures: IBM's SNA; Univac's DCA; Digital's DECNET; and AT&T's ACS. The principles behind the architectural standards are defined and the meaning of finite state machine descriptions explained in simple terms. Finite state machine descriptions are the most certain way of defining architectures which can be guaranteed bug-proof, but have long been a forbidding mathematical subject. This report provides a comprehensive stage-by-stage guide to the many facets of SNA. In like manner, the succeeding descriptions of DCA and DECNET provide both clarity and interpretation of each manufacturer's jargon into standard terminology. A particularly useful table compared DEC's DDCMP, IBM's SDLC, ISO HDLC and Binary Synchronous in respect of 18 different aspects. The sections on AT&T's ACS provide insight into the amazing new facilities which AT&T will be offering in the USA—Federal regulations permitting—and a path which is technically open to any and every telecommunications authority in the world. In the final chapter, present facilities are made to look quite basic compared with those which may develop, in a survey of the future.

8615 **The Source: big computer power in your home.** K.Skier.
OnComputing (USA), vol.2, no.1, p.60-2, 64-7 (Summer 1980). [received: Oct. 1980]
The Source is a telecomputing network that gives the user 'access to literally thousands of programs and data bases, including the ability to communicate electronically with other...users' interactively and through electronic mail. Users may enter and run programs in BASIC, FORTRAN, and COBOL, or may use programs that have already been written and tested and which are available under any of a number of public program libraries. (no refs.)

9881 Educating executives on new technology.
EDP Anal. (USA), vol.18, no.11, p.1-13 (Nov. 1980).
Some organizations are installing distributed systems, including automated office systems. Computer and communication technologies play a key role in the systems being considered. To properly decide on these systems, the top executives reviewing the organization-wide plans should know something about these promising new technologies. This article discusses how these top people are learning about the new developments, and what companies are doing (or can do) to help their executives stay up-to-date in these fields. (5 refs.)

9892 WP vs. DP, The war is on!.
Systems (S. Africa), vol.10, no.9, p.5-6 (Sept. 1980).
The power struggle in the office is on. Who will win: the DP manager or the WP manager? Several factors are in the WP manager's favour. In most cases he has a better understanding of his company's human resources, how to lead and motivate, an understanding of sectional information requirements and a working knowledge of technology available. Technology is progressing so fast, that even the highly qualified technical staff in the DP department have trouble keeping track of what is available. (no refs.)

9921 Innovations in Canada. D.M.Walker (Ontario Educational Communications Authority, Toronto, Ontario, Canada).
EBI (Educ. Broadcast Int.) (GB), vol.13, no.3, p.115-17 (Sept. 1980).
The Canadian version of teletext—Telidon—is described. Unlike other teletext systems, Telidon uses an alpha-geometric approach, which does not require images to be formed by picking out cordinates on a mosaic grid. Telidon incorporates features which make it an educational medium in its own right. Future developments are discussed. The Programme Evaluation Analysis Computer is also described. It consists of a portable, wireless, microcomputer-based machine, capable of recording moment-to-moment reactions to television programming by large groups of subjects while they view. (no refs.)

9869 IBM instruments and technology form office organisation.
Autom. & Strum. (Italy), vol.28, no.7-8, p.629-32 (July-Aug. 1980). In Italian.
A selection of IBM office equipment recently introduced on the Italian market is described. The selection covers office automation equipment especially those concerning official and technical documentation. The following are detailed: System 6 fast document stamping; 6640 copying machine III electronic and magnetic copier; electric and magnetic support typing machines. Short general machine descriptions for each type are included. (no refs.) *T.H.*

12416 Videotex networks. A.J.S.Ball, G.V.Bochmann, J.Gecsei (Univ. of Montreal, Montreal, Quebec, Canada).
Computer (US.A), vol.13, no.12, p.8-14 (Dec. 1980).
Using the home TV screen, videotex networks can provide easy, inexpensive access to vast amounts of information. The authors consider planned and possible network structures. (15 refs.)

35881 **Towards a methodology for office information communication systems research.** D.Tapscott (B-N Software Res Inc., Toronto, Canada)
Integrated Office Systems – Burotics Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands North-Holland 1980), p 71-91
Presents a contribution towards the development of a comprehensive research methodology to measure the impact of integrated office systems on the effectiveness of knowledge workers and organizations. An overall perspective on office systems is presented. The problem of research design is selected for examination and four design types reviewed: laboratory experiments, true experiments in field settings, quasi-experiments, and non-experimental designs. The author concludes by summarizing some general problems in office systems research. (19 refs.)

35882 **Organisational context of office systmes.** J.C.Newman, T.B.Ward (School of Psychology, Centre for Management Education, Ulster Polytech., Newtownabbey, N.Ireland)
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands: North-Holland 1980), p 93-101
Considerations concerning the organisational context of the office of the future are derived from the perspective of systems theory. The central importance of knowledge-work as a wealth-creating process is demonstrated by analysis of the modes of organisation-environment interaction. It is argued that the central design concept for integrated office systems must be the augmentation of the effectiveness of the knowledge-worker, rather than the displacement of secretarial labour by fragmenting and automating routine communications. (12 refs.)

35610 **Playing with words [word processing].** H.Voyse)
Comput. Manage. (GB), p.14-15, 17, 19-20 (Aug. 1980).
Looks at the current state of word processing through the latest product developed by the British office systems company Nexus. (no refs.)

35884 **The information bus in the automated office.** N.B.Meisner (MITRE Corp., Bedford, MA, USA)
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands North-Holland 1980), p.149-60

34000 **Advanced system planning of the US postal service for the 80s.** R.P.Marcotte (US Postal Service Res. & Dev. Labs, Rockville, MD, USA)
SID International Symposium. Digest of Technical Papers, San Diego, CA, USA, 29 April - 1 May 1980 (Los Angeles, CA, USA: SID 1980), p.16-17
A general dynamics study of EMSS in 1969 established the feasibility of an EMS system. The 1971 President's Domestic Council Study identified electronic message service as a new technological opportunity for improved mail service. Finally a conversion system study by Philco-Ford Corporation in 1973 confirmed the technical feasibility of high-speed input conversion. These USPS studies have indicated potential service benefits, economic viability and technical feasibility of EMSS. (no refs.)

35883 **Conceptual approach to office automation.** E.Andre, G.Bugo (Centre de Recherche CII-HB Antenne, Grenoble, France), J.Hamelon
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands North-Holland 1980), p.127-46
The authors think that office-automation may be presented like a set of services which have many interactions. It is only within the framework of a widely distributed and integrated system that office automation appears particularly interesting. This distribution of the services will require the communication between the systems and oblige to establish precise communications conventions. The authors think that the elaboration of such protocols can take advantage of a conceptual analysis of the global problem. (20 refs.)

33967 **Does distributed processing pay off?.** K.M.Sullivan (McDonnell Douglas Automation, Long Beach, CA, USA)
Datamation (USA), vol.26, no.9, p.192, 194, 196 (Sept. 1980)
Discusses the costs of distributing a company's management information systems. (no refs.)

36274 **Various paths to electronic mail.**
EDP Anal. (USA), vol.18, no.9, p.1-13 (Sept. 1980)
Considers the meaning of electronic mail. Message creation, message distribution, message recipient and variety of environments are identified as relevant functions. Three levels – document distribution systems, computer message systems and computer conferencing systems – are identified, and types of product available in each category are considered. The author also discusses a project studying the Info-Plex electronic mail service offered by Plexus Corporation and a West Coast manufacturer's use of a computer conferencing system on a sensitive marketing project. (7 refs.)

36401 **Videotex and its educational potential.** M.H.Ashin (Advisory Unit for Computer Based Education, Hatfield, England)
Euromicro J. (Netherlands), vol.6, no.4, p.202-4 (July 1980).
In the last two years, micro-computers have flooded into our schools and colleges, giving pupils and teachers alike a new power, the full potential of which has yet to be realized. At the same time, the United Kingdom has seen the public launch of Prestel, the British Post Office viewdata service and the growth of a variety of teletext services, very few of which have found their way into the classroom to date. In this lecture, the author makes some attempts at drawing the threads together and pointing the way to some of the developments which are possible, and it is hoped, desirable, in the education system. (no refs.)

35620 **Audio review of text.** W.K.Foster,Jr., H.R.Grubb, R.F.Karnes, P.D.Mundo, R.G.Stipe, J.G.Tench (IBM Corp., Armonk, NY, USA)
IBM Tech. Disclosure Bull. (USA), vol.23, no.1, p.35-7 (June 1980)
The IBM audio typing unit includes a line buffer for holding data for audio review. The authors describe how an operator manipulates this data in the process of finding and correcting errors. A twelve-button keypad is provided for controlling audio output. (no refs.)

35626 **WP as aid to type-setting.**
Which Word Process (GB), vol.1, no.3, p.49, 51 (Sept. 1980)
The increasing number of word processing systems provide a challenge for the manufacturers of photocomposition equipment: how could the text editing capabilities of an office WP system be harnessed to a type-setter? In the printing industry there are three approaches to this: some manufacturers maintain that there would be no economic advantage in doing this, some supplies can handle word processors as remote input terminals for their equipment, or word processors can be mounted directly on-line to photo-typesetters. (no refs.)

33989 **Turpin on the line [data security].** M.Breeze.
Syst. Int. (GB), vol.8, no.8, p.47-9 (Aug. 1980)
Data networks have dramatically increased in importance over the past few years. Today virtually every commercial organisation makes some use of wire data transfers, perhaps the major users being the banks; in the USA it is thought that as much as $308 billion is moved per day by domestic wire transfers. Yet the communication lines are the weakest point of any network, and certainly they are the most difficult to police, hence the current interest in data communications security. The author discusses current methods and devices to improve data security, and defines some basic terms. (no refs.)

33994 **WP glossary.**
Which Word Process (GB), vol.1, no.3, p.59-60, 63, 65-6 (Sept. 1980)
Provides most of the terms commonly encountered in brochures and sales presentations. Some technical mentions, discussion of the hardware elements of word processing, and descriptions of the functions and facilities which can be expected from WPs are included. (no refs.)

33949 **Disappearance of the office as we know it.** F.Boeuf, D.Reed
Comput. Wkly. (GB), vol.29, no.724, p.18 (18 Sept. 1980)
The practical implications of office automation was the subject of the Institute of Data Processing Management/Langton essay competition for 1980. Presents extracts from the second and third prize-winning essays. The authors foresee the emergence of Luddite trade unions, computer-aided computer fraud and a working population of machines and also a world of cottage workers, who leave their homes only to go on holiday. (no refs.)

33941 **I sent a letter to my love...[electronic mail].** H.Sturridge
Comput. Manage. (GB), p.8-9, 11-12 (Aug. 1980)
Discusses the emerging technology of electronic mail. The problems which arise from it are examined. (no refs.)

33942 **Survival of the fittest [distributed processing].** R.Wenig
Comput. Manage (GB), p.34-7 (Aug. 1980).
Discusses the effects of distributed processing on the operation of computer centres. The effect this will have for EDP managers is examined. (no refs.)

34048 **Technology: industry told of management problems.**
Mod. Off. & Data Manage (Australia) vol.19, no.6, p.28 (July 1980)
The office equipment industry has become, in the eyes of the public, and particularly the unions, the whipping boy for all the upheavals new technology is causing. Through its organisation, the Office Equipment Industry Association of Australia Ltd. (NSW division) the industry is attempting to correct this state of affairs by publishing its own paper on technological change and by holding a seminar for its members. (no refs.)

33936 **Online control of office operations.** H.L.Kendler
Angew. Inf. (Germany), vol.22, no.9, p.357-64 (Sept. 1980) In German
The high degree of work-sharing is characteristic of complex organizations. It reduces the efficiency of the business process while the efforts of control increase. These disadvantages can be eliminated by the online system described. The basic idea is that the system schedules and distributes the operations. The tasks assigned determine to which extent planning, control, monitoring, and recording of the business process can be done automatically. The author shows the facilities for three different types of tasks, which are typical for the aerospace industry. (15 refs.)

33996 **Office models and office systems design.** W.Newman
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands: North-Holland 1980), p 3-10
Summarises recent work on office modelling and discusses the implications of this work on office systems design. The discussion is illustrated with examples of previous approaches to office systems design, and suggests possible approaches to adopt in the future. (9 refs.)

33997 **Integrated office systems protocols.** N Naffah (IRIA, Le Chesnay, France).
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands. North-Holland 1980), p.13-25
A reference model for an integrated office systems is presented. The set of protocols that handle the interworking between the different entities composing the system are given. The model is based on a hierarchy of layers and their related protocols. Applications are at the top layer and correspond to the new services to be offered in the integrated office: message, teleconferencing services, archival service. The author presents an approach toward definining a general model which may be adequate for a variety of applications. The focus of attention will be on message services. (29 refs.)

33998 **Office streamlining.** C Ellis, R.Gibbons, P Morris
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands: North-Holland 1980), p 111-25
Describes a mathematical technique for streamlining the information flow within offices. Although the technique performs a number of useful transformations and optimizations on an office flow diagram, its primary purpose is to use this to derive other forms of the office which are minimal in certain well-defined ways. These minimal forms of the office description show the basic necessary information flows and the invariant information requirements that must be met in any realization of a specific set of office functions. (33 refs.)

35881 **Towards a methodology for office information communication systems research.** D.Tapscott (B-N Software Res. Inc., Toronto, Canada).
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Presents a contribution towards the development of a comprehensive research methodology to measure the impact of integrated office systems on the effectiveness of knowledge workers and organizations. An overall perspective on office systems is presented. The problem of research design is selected for examination and four design types reviewed: laboratory experiments, true experiments in field settings, quasi-experiments, and non-experimental designs. The author concludes by summarizing some general problems in office systems research. (19 refs.)

35882 **Organisational context of office systmes.** J.C.Newman, T.B Ward (School of Psychology, Centre for Management Education, Ulster Polytech., Newtownabbey, N.Ireland).
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35883 **Conceptual approach to office automation.** E.Andre, G Bogu (Centre de Recherche CII-HB Antenne, Grenoble, France), J Hameon
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35884 **The information bus in the automated office.** N.B.Meisner (MITRE Corp., Bedford, MA, USA)
Integrated Office Systems – Burotics. Proceedings of the IFIP TC-6 International workshop, Versailles, France, 6-9 Nov. 1979 (Amsterdam, Netherlands: North-Holland 1980), p 149-60
It is difficult to predict the mix of voice, video, and data traffic which will compose the future office environment. The maturation of automated office systems from the word processor supported typing pools, which greatly enhance support staff productivity with only an ancillary effect on professional productivity, to sophisticated distribution of intelligence devices focused primarily on the professional, demands a flexible, adaptable communications network to support the multi-mode, multi-access, multi-destination communications system. The information bus implemented via a CATV-like coaxial cable plant offers the flexibility to provide a single highly adaptable local communications medium which will meet these needs as they are implemented without costly reconfiguration of the communications network. The investment in plant required for this cable system must be viewed with respect to the multi-mode communications it provides. This may be among the more cost effective investments in the automated office. (18 refs.)

23414 **The writer's workbench: computer aids for text analysis.** N.H.Macdonald, L.T.Frase, P.S.Gingrich, S.A.Keenan (Bell Labs., Piscataway, NJ, USA).
IEEE Trans. Commun. (USA), vol.30, no.1, pt.1, p.105-10 (Jan. 1982).
This paper describes the Writer's Workbench programs, which analyze English prose and suggest improvements. Some limited data on the use of the Writer's Workbench and its acceptance are also presented. The Writer's Workbench incorporates the style and diction programs, described in a previous paper of this Transactions, into a more extensive system to help writers improve their writing. The system runs under the UNIX™ operating system, and includes programs to: (1) proofread, (2) comment on stylistic features of text, and (3) provide reference information about the English language. Among other writing faults the programs detect split infinitives, errors in spelling and punctuation, overly long sentences, wordy phrases, and passive sentences. (16 refs.)

23415 **The potential of forms in office automation.** N.H.Gehani (Bell Labs., Murray Hill, NJ, USA).
IEEE Trans. Commun. (USA), vol.30, no.1, pt.1, p.120-25 (Jan. 1982).
Forms have been used in the design of at least three office automation systems (OfficeTalk, Odyssey, and OFS). Forms help ease the transition from a manual office system based on paper forms to a computer office system based on electronic forms. Forms also exhibit other advantages, not exploited presently, that make them very desirable for inclusion in office automation systems of the future. Potential capabilities of electronic forms are explored by focusing on three important aspects—fields, abstraction, and access rights. Electronic forms can have a large variety of fields; constraints and rules can be associated with these fields and automatically enforced. Moreover, forms are similar to abstract data types. Treating forms as abstract data types allows their being used as an abstraction tool and facilitates many kinds of automatic error checking. Finally, access rights can be associated with forms to ensure that forms are accessed and/or modified by appropriate users only. To illustrate the ideas presented, an exemplary form definition is presented and some implementation details discussed. (10 refs.)

23437 **Prospects for the optical disc in the office of the future.** R.Barrett (School of Engng., Hatfield Polytech., Hatfield, England).
Reprogr. Q. (GB), vol.14, no.4, p.140-3 (Autumn 1981).
The author describes in detail the development of optical videodiscs—both read-only and direct-read-after-write sytems—and looks at their potential applications in modern information management systems, e.g. for providing real-time access to source document archives. He concludes that, provided problems with resolution and archival quality are resolved, optical disc technology will have a major impact on the information storage and retrieval field and that digital optical recording systems using thin film discs will be viable by 1985/86 and presenting major competition to COM and magnetic tape storage systems by 1990. (3 refs.)

23462 **The inherent organization of the paper office: implications for electronic document management systems.** G.W.Irving, J.Van Praag, D.Gilfoil (Exxon Office Systems Co., Princeton, NJ, USA).
Proceedings of the Human Factors Society 25th Annual Meeting, Rochester, NY, USA, 12-16 Oct. 1981 (Santa Monica, CA, USA: Human Factors Soc. 1981), p.368
Summary form only given, substantially as follows. An exploratory investigation analyzed a small number of existing paper offices, modeled their physical organizations, and studied the behaviors of their owners in document filing and retrieval tasks. Multidimensional scaling techniques were used to discover the inherent dimensionality of the mental models the users had created of their paper offices. Protocol analysis was employed to infer cues used for aiding retrieval based on incomplete information. This set of cues was evaluated for candidate dimensions in the mental model of the upper office. The results of the exploratory investigation were evaluated for user interface requirements of electronic document management systems. Classical DBMS query languages and data models were evaluated against the user interface requirements. (no refs.)

23395 **The CEO goes on-line.** J.F.Rockart, M.E.Treacy.
Harvard Bus. Rev. (USA), vol.60, no.1, p.82-8 (Jan.-Feb. 1982).
Improved computer technology, coupled with a heightened analytic orientation among top managers, is beginning to change the pattern by which a company funnels information to the apex of its organizational pyramid. In some companies the responsibility for using such data-based support has moved into the executive office itself and the top managers have become active participants in the process, and not just final consumers of its output. (no refs.)

23386 **The electronic office and organizational behavior—measuring office activities.** D.W.Conrath, C.A.Higgins, C.S.Thachenkary, W.M.Wright (Centre for the Evaluation of Communication-Information Technol., Univ. of Waterloo, Waterloo, Ontario, Canada).
Comput. Networks (Netherlands), vol.5, no.6, p.401-10 (Dec. 1981).
Electronic office systems have traditionally been designed by technical experts with little input from user need assessments conducted by behavioural scientists. A set of taxonomies designed to express the needs of white collar users in terms meaningful to both the above is presented. (8 refs.)

23390 **UK firms lag in hunt for office market.** M.Coffey.
Computing (GB), vol.10, no.2, p.16 (14 Jan. 1982).
Discusses factors causing the British market for office automation systems to lag behind that of the United States. (no refs.)

23440 **Office automation needs. Studying managerial work.** R.R.Panko (Coll. of Business Administration, Univ. of Hawaii, Honolulu, HI, USA).
Telecommun. Policy (GB), vol.5, no.4, p.265-72 (Dec. 1981).
Managerial work stations are expected to proliferate in the near future. But managers have diverse needs. To serve managers well, one must have ways of studying managers, so that we can adapt systems to their individual needs. The author discusses three roads to the study of managers: use-of-time analysis, the analysis of procedures, and the critical success factors approach. The author also raises the issue of how much individualization one can afford and how much users really want. (23 refs.)

23441 **Office automation: from barriers to gateways.** S.L.Baldwin, G.P.Rouleau (Dept. of Communications, Ottawa, Ontario, Canada).
Telecommun. Policy (GB), vol.5, no.4, p.323-5 (Dec. 1981).
Office automation is a concept with which the majority of executives and senior managers profess to agree but to which few have made a serious commmitment. The authors examine the barriers to office automation which may be responsible for the reluctance of many executives to proceed with automating the office. In addition, they offer suggestions for removing the real and perceived obstacles to office automation. (no refs.)

23442 **Much more to come in office.**
Which Comput. (GB), p.59-70 (Oct. 1981).
The electronic office has become a marketing and sales concept designed to entice commercial users into a world of terminals, communications and user-friendly software products. The reality, however, may be somewhat different as companies struggle to understand the technology and the products on the market. This article looks at some facts and figures and finds the reason why the level of market penetration is not particularly high. (no refs.)

23453 **The European word processing environment.**
In book: *International word processing equipment and software guide 1982*, p.13-15. Lightwater, Surrey, England: Network Communications (1982), 164 pp.
The database on installation of these machines throughout Europe shows very clearly how, having defined the term, Germany adapted very quickly to the use of the equipment although in general they have done so in a rather different way to the rest of the world. Studies in Germany have suggested that at least 70% of the text which is typed is in fact a repeat of work that has been produced previously. Elsewhere in the continent commerce and industry could not adapt to this technique so easily and therefore the installation of word processing equipment lagged way behind until the middle 1970s when the development of screen based word processors introduced the ability to revise text much more easily during a long multi-page document and also compose these texts and in particular tabular matter in a much more sophisticated and easy manner. (no refs.)

23454 **Developing a 5 year strategy for office automation.**
In book: *International word processing equipment and software guide 1982*, p.25-31. Lightwater, Surrey, England: Network Communications (1982), 164 pp.
What can we expect of technology in the immediate future? First, the suppliers will continue to make their technologies available to ever smaller organisations until the 'micro' is used by everyone who uses a keyboard. Second, the technology will subsequently be made available to the professionals and decision makers. Third, the increasing number of office machines will intercommunicate much more than at present. (no refs.)

23420 **The impact of distributed information on the office.** D.N.Chorafas.
Int. Bus. Equip. (Belgium), vol.18, no.3, p.1-3, 6, 8-10, 12 (Oct. 1981). In English, German, French.
The office of the future will have a central nervous system fed by a number of information transmission, switching and storage services. It will be directly linked and interactive with all other offices in the organization through a network of multifunction computer work stations, called a Distributed Information System. Executives will use video displays tied to microprocessors that control routine office work. (no refs.)

23465 **From office automation to personal automation: an AI perspective.** C.Rieger (Computer Sci. Dept., Univ. of Maryland, College Park, MD, USA).
Proceedings of the International Conference on Cybernetics and Society, Atlanta, GA, USA, 26-28 Oct. 1981 (New York, USA: IEEE 1981), p.449-55
Office automation is part of a larger trend toward personal automation, and, eventually, artificially intelligent computer systems that help individuals manage their professional activities. The paper considers three eras of this ongoing information processing evolution (the office automation, personal automation, and artificial intelligence eras), illustrates the first two with case studies in running systems developed by the author and his colleagues, and speculates about the third as it might exist within five years. (no refs.)

23383 **'Voice mail' is getting ready for a big splash.** W.A.Saxton, M.Edwards.
Can. Datasyst. (Canada), vol.13, no.10, p.136, 140 (Oct. 1981).
Looks at the development of voice mail systems which store messages in digital form for delivery at a later time. Systems such as Speechfile from IBM, Wang's DVX (Digital Voice Exchange), Digital's PBX, AT&T's PBX and TI's VMS (Voice Message System) are reviewed. (no refs.)

23384 **Wang aims Alliance at office automation.**
Can. Datasyst. (Canada), vol.13, no.12, p.63 (Dec. 1981).
A summary of recent office products introduced by Wang is presented. The series of major product announcements spanning several technologies is the firm's bid for an office automation position. (no refs.)

23411 **Database alerting techniques for office activities management.** Jo-mei Chang (Bell Labs., Murray Hill, NJ, USA), Shi-kuo Chang.
IEEE Trans. Commun. (USA), vol.30, no.1, pt.1, p.74-81 (Jan. 1982)
In this paper the authors approach the problem of office activities management from the database viewpoint. Database alerting techniques are developed to serve the purpose of office activities management. A conceptual framework for office information system design is presented. Simple database alerters and implementation techniques, existential alerters and time alerters are discussed. An example of journal editing is described in detail. Finally, alerter system stability is discussed. (15 refs.)

23412 **Development of a spelling list.** M.D.McIlroy (Bell Labs., Murray Hill, NJ, USA).
IEEE Trans. Commun. (USA), vol.30, no.1, pt.1, p.91-9 (Jan. 1982).
The word list used by the UNIX spelling checker, SPELL, was developed from many sources over several years. As the spelling checker may be used on minicomputers, it is important to make the list as compact as possible. Stripping prefixes and suffixes reduces the list below one third of its original size, hashing discards 60 percent of the bits that remain, and data compression halves it once again. This paper tells how the spelling checker works, how the words were chosen, how the spelling checker was used to improve itself, and how the (reduced) list of 30000 English words was squeezed into 26000 16-bit machine words. (17 refs.)

23369 **Planning for integration in office automation.** N.D.Meyer.
Syst., Objectives, Solutions (Netherlands), vol.1, no.4, p.217-23 (Nov. 1981).
Integration of the various information tools in the office will more comprehensively support managerial and professional work. An empirical study compares a stand-alone with an integrated computer-based message system, and demonstrates synergy among office information tools. To build an integrated office information environment requires careful planning. However, to plan top-down for integration may neglect unique local user needs and the importance of user involvement in a process of evolutionary change. Having explored the meaning and importance of integration in office system, this paper suggests a strategy for evolving integration, a balance between top-down planning and bottom-up implementation. (20 refs.)

23381 **Electronic mail: making strides towards a promising objective.** A.Tausz.
Can. Datasyst. (Canada), vol.13, no.10, p.72-5 (Oct. 1981).
Looks at the latest developments and applications of electronic mail. Two systems are discussed. COMET (COMputer MEssage Transmission) allows the executive to communicate without always being in the office. MERLIN (Multifunction Electronic Mail Report Retrieval Linked Information Network) can link approximately 1000 terminals throughout the systems. (no refs.)

23357 Records managers face a challenge. J.M.Lusa.
Infosystems (USA), vol.28, no.10, p.84, 86 (Oct. 1981).
With the continuing development of on-line computers and word processing, records managers must develop new techniques to protect the information lifeblood of a business or governmental operation. (no refs.)

23367 **Planning for office automation: a round table discussion.**
Computerworld (USA), vol.15, no.49, p.1D/4-14 (7 Dec. 1981).
The discussion explores emerging issues in office automation beginning with strategic and organisational planning. (no refs.)

23368 **The rocky road to office automation. On course?.** A.Dooley.
Computerworld (USA), vol.15, no.52 - vol.16, no.1, p.97-9 (28 Dec. 1981 - 4 Jan. 1982).
Navigating through the seas of office automation (OA) during 1981 was essentially a matter of trial and error for both prospective users and OA vendors. The OA onslaught has been a subject of discussion for several years. But it was not until 1981 that OA became a reality for these prospective users and a major factor in the marketing strategies of OA vendors. The author discusses the problems that exist as with any young industry. (no refs.)

23373 **The Automated Desk.** L.Yedwab, C.F.Herot, R.L.Rosenberg (Computer Corp. of America, Cambridge, MA, USA), C.Gross.
SIGSMALL Newsl. (USA), vol.7, no.2, p.102-8 (Oct. 1981). (Joint Proceedings of the SIGSMALL Symposium on Small Systems and the SIGMOD Workshop on Small Database Systems, Orlando, FL, USA, 13-15 Oct. 1981).
The automated desk is an online, spatial interface to a time-shared computer utility. It supports a user in organising, locating, and handling computerised information and tools. The user sees his 'desk top' through an intelligent display terminal which is connected to a host computer. The desk top is a large flat surface about 100 times the size of a ordinary desk top. On it, the user can place objects in groupings which are meaningful to him. Processes can be associated with these objects to perform any online information handling function. (4 refs.)

23378 **The interface at the desk edge [office automation].** U.Herrmann-storfer.
Off. Manage. (Germany), vol.30, no.1, p.44-6 (Jan. 1982). In German.
Presents thoughts and reflections on the social and human implications on the electronic automation in the office, the man-machine interface, the new division of labour introduced by new communication technology, the transition from a 'technical' to a 'social' organization. A few decades ago office equipment consisted of a typewriter and telephone, to which later accounting machines, copiers were added. Introduction of integrated, computerized fully automated office system brings along a series of problems on human level which should not be overlooked. (no refs.) *L.G.S.*

20023 **Office automation: watching the human factor.** M.Cofley.
Computing (GB), vol.10, no.5, p.20 (4 Feb. 1982).
Examines three firms which have built systems with the human factor in mind in the design of their equipment. These companies are OTL, Xerox and Wang. (no refs.)

36131 **The office of the future and information science.** E.Mottensen
National Online Meeting. Proceedings of the Second National Online Meeting, New York, USA 24-26 March 1981 (Medford, NJ, USA: Learned Information Inc 1981), p.375-85
Deals with the following broad but highly complex issues related to office automation and information science: (1) summary 'state-of-the-art' of the office of the future and expected developments; (2) current trends towards systems integration and multifunctions of equipment; (3) needs for and problems associated with organizational change at all levels of the organization; (4) computer-based information searching and the office of the future, with particular emphasis on activities by the ASIS Special Interest Group on the automated office of the future; (5) survey of approximately two dozen bibliographic data bases, containing information on office automation and a discussion of problems related to vocabulary control for multi-file searching; (6) needs for cost-effective and comprehensive 'immediate access' to highly targeted information for managers of the office of the future; (7) needs for improved communication between professional interest groups associated with the office of the future and information science; and (8) needs for a general systems approach and the development of appropriate educational/training programs at graduate and professional levels (14 refs.)

36104 **Record of the workshop on research in office semantics.**
G.R.Barber (Chatham Bars Inn, Chatham, Cape Cod, MA, USA)
SIGMOD Rec. (USA), vol.11, no.1, p.10-25 (April 1981)
Discusses ideas and issues presented at the Chatham Bars Workshop on Office Semantics. The intent of the workshop was to examine the state of the art in office systems and to elucidate the issues system designers were concerned with in developing next generation office systems. (16 refs.)

36101 **The automated office, implementing office automation.**
Syst. Inf. Manage. (S. Africa), vol.11, no.2, p.8-9 (Feb 1981)
The electronic office as a total integrated information system is very much a concept of the future but evolution towards it is clearly evident. The concept is capturing the imagination of many people and is attracting business and general interest. This subject is examined. (no refs.)

36110 **Successful office automation.** J.Martin
Comput. Decis. (USA), vol.13, no.6, p.56-62, 66, 70, 200-4 (June 1981)
Office automation frees workers at all levels from their most boring and least productive tasks; its cost-effectiveness makes it an economic bargain, too. Why would anyone resist it? (no refs.)

36116 **Office automation services.** N.Naffah (Inst. Nat. de Recherche en Informatique et en Automatique [INRIA], Rocquencourt, France)
Documentaliste (France), vol.18, no.3, p.95-101 (May-June 1981). In French.
'Bureautique' or office automation services are classified into individual, cooperative and shared services. Examples are given in each category. The present state of some implementations of computer-based message systems, teleconferencing, document production is given. Future trends in the design of all these services are proposed. The concept of integration of voice, image and text is a basic form of the 'message of information' communicated is introduced. The use of new storage media (optical disk) and new communication media (satellite and fiber optics) to support such communication and storage requirements is expected. (no refs.)

36109 **Does Teletex change office work?.** H.Schmacke
Buerotechnik (Germany), vol.29, no.6, p.64-1-2, 64a-9 (June 1981). In German
The author claims that electronic communication creates assumptions about rationalization and humanization. Whereas, through over-centralization, postal services have deteriorated since the time of our grandfathers, and early electronic letter-handling has been slow and expensive, Teletex with its decentralized operation has both simplified and speeded up the transmission of written information. It has also raised the standard and interest of office work, the conditions and methods being discussed in detail. (no refs.) *J.C.F.*

36112 **Manufacturers face user rebellion [word processing.** R.Mann.
Comput. Data (Canada), vol.6, no.5, p.26-7 (May 1981)
A user rebellion is beating up against the gates of manufacturers of standalone word and data processors. The result is the increasingly rapid emergence of the integrated information system. But makers say that machines with multi-functional capabilities, which users are demanding, are just another product and deny that there is any immediate prospect of single-function word and data processors disappearing. Nevertheless, manufacturers across the board are working feverishly to come up with the new hardware and software products users want. (no refs.)

36103 **Word processing: the automated office.**
Syst. Inf. Manage. (S. Africa), vol.11, no.2, p.19 (Feb 1981).
Presents a list of key arrears in which the commitment to office automation will inverse. Word processing heads the list. (no refs.)

1921 **They've got to be accepted too [office systems].** R.Helmreich (Siemens AG, Munchen, Germany).
Data Rep (Germany), vol 16, no.4, p.5-8 (Aug 1981). In German.
The technological possibilities of the office of the future are impressive: computer power will be available at each workplace, new communication systems will be equipped for worldwide text, image and speech communication. But will all these facilities really be wanted? And if so, what should such office systems be like to be accepted? To answer this question, Siemens launched a research program three years ago, whose task it is not only to probe into the possibilities and benefits of this technology, but also to work toward a humane design of these workstations, thus ensuring acceptance by the future user. (4 refs.)

2102 **Microprocessor peripheral for viewdata.** R.E.F.Bugg
Electron Technol (GB) vol 15, no.7, p.125-8 (July-Aug 1981).
Describes a dedicated LSI viewdata chip called LIJCY which contains 12000 active devices and reduces the IC package count for basic viewdata acquisition to four including the chip itself and the microprocessor on which it is based. The device is the result of £700000 and 3 years of research and should help considerably to reduce the discouragingly high cost of viewdata systems. (1 refs.)

1912 **Microfilm in the electronic office.**
Bus Syst & Equip (GB), p.33, 36, 39-40, 43-4, 48 (June 1981).
Discusses the use of microfilm in the electronics oriented office of the future. The views of the microfilm industry are put. (no refs.)

2090 **Prestel — not quite cricket.** M May.
Computerworld UK (GB), vol.2, p.10 (8 July 1981).
International gambits to secure Prestel as a world leader in videotex continue with the rushed announcement that the Prestel international service now has a new format. The current national Prestel service, being made available to those in the far flung corners of the earth. It will include closed user group facilities which in the international trial over the past year were found to be the most popular. It enables organisations to have exclusive use of certain parts of the information bank to meet intra-company needs. (no refs.)

2091 **The Jonah syndrome [information industry].** A.Armstrong
Bull Am Soc. Inf Sci (USA), vol 7, no 2, p 20-1 (Dec 1980).
Corporate giants know what the information industry is doing and they are buying it as fast as they can. This has become the age of acquisitions. (no refs.)

1913 **Charting the progress of graphics in business.** I.Church
Comput Manage (GB), p.8-9 (May 1981).
There are a number of important applications for computer graphics outside the CAD and computer assisted manufacture field. One such area of applications is in business. Graphic presentation assists the fast and easy assimilation of data. (no refs.)

4647 **Computerized command and control systems: centers of police security work.** H.Evers (Siemens Corp., Munich, Germany).
Proceedings of the Third International Conference: Security Through Science and Engineering, Lexington, KY, USA, 23-26 Sept. 1980 (Lexington, KY, USA Univ. Kentucky 1980), p.103-11
The paper will comprise a survey of implemented computer support in command and control centers, and point the way to possible developments in the future (14 refs.)

4611 **How to organise indexing for computer filing.** J.L.Linton
Mod Off & Data Manage (Australia) vol.20, no.4, p.13-4 (May 1981)
Discusses how to apply modern records management principles by classifying individual records, both incoming and outgoing, into well defined information areas, within these areas creating file titles in accordance with a modern filing system, sorting the records into files containing both incoming and outgoing letters and documents, giving these files a reference, then finally entering every file title created within the organisation into a comprehensive index or indexes maintained within a computer (no refs.)

4612 **Computerised graphics become a popular tool for the office.** J.Bostelman.
Mod Off & Data Manage (Australia), vol.20, no.4, p.47, 49-51 (May 1981)
Managers are discovering the ease with which the graphics capability of a computer can make figures easy to read in the form of graphs and bar charts (no refs.)

4644 **Network controls and speeds highway patrol data.**
Infosystems (USA), vol.28, no.9, p.149 (Sept. 1981).
With a ring network connecting division offices, a central data base, and diagnostic and control system, officers in this large traffic law enforcement agency have quick access to accurate and relevant data. (no refs.)

2863 **L.M. Ericsson: telephone giant on the way to becoming a computer giant.** F.Mansson
Data (Denmark), vol.11, no.4, p.31-3 (April 1981) In Swedish.
A Swedish company L.M.Ericsson traditionally a telephone company has taken the step into the computer age. The purchase of Datasaab, is not the only step showing the company's growing interest in the computer field especially in 'the office of the future' (no refs.)

2864 **Office automation: the seven deadly sins.** A.Haraldsen.
Data (Denmark), vol.11, no.6, p.34-6 (June 1981). In Norwegian.
Management has not understood the purpose behind office automation, how to introduce it, the consequences for communication structure and how the organization must be in order to use the concept in the best possible way. (no refs.)

4584 **Making the old mistakes again.**
Computerworld UK (GB), vol.2, no.18, p.10 (22 July 1981)
Computer people who ought to know better are making the same mistake about office automation as they once made about databases. They tend to think of office work as a little symbol manipulation in between a lot of input and output. The real scale of the computational and software engineering task facing office automation does not seem to have been properly appreciated as yet. With rings and fast data busses the problem is transferred to the failure of the ring or bus. Hence the use by Xionics of a replicated ring. The author discusses these problems. (no refs.)

2803 **Transborder data flow: barriers to the free flow of information.** V.Block
Infosystems (USA), vol.28, no.9, p.108, 110, 112, 114 (Sept. 1981).
Protection of data, loss of jobs in the US DP industry and inflated costs for data transmission are among the concerns facing companies that have affiliates outside the US. (no refs.)

4618 **The home office – videotex and personal computers for office automation.** R.R.Aranda (Savoir Inst., Carnforth, England).
Telecommunications (USA), vol.15, no.9, p.43-4, 46, 48, 50, 62 (Sept. 1981)
Discusses the use of technological advances for enabling management staff to work at home. Covered in this article are the need for improving office staff productivity, the remote office, videotex applications, personal computers as multi-function work-stations and personal computers with videotex (13 refs.)

4592 **Integration in office automation: are we putting the cart ahead of the horse?.** R.R.Panko (Univ. of Hawaii, Manoa, HI, USA).
Computerworld (USA), vol.15, no.37, p.ID 15-24 (14 Sept. 1981).
The author takes a look at the history of office integration and calls for a deeper understanding of the diversity of office work. (no refs.)

4594 **Megadoc [electronic filing system].**
Elektronica (Netherlands), vol.29, no.12, p.49, 51 (24 June 1981). In Dutch
Describes Megadoc, a quick-access electronic filing system of very large capacity presented by Philips. Typed or handwritten documents are automatically recorded by laser on a DOR (digital optical record) plate within 1 second. The information is stored in 'juke box' cabinets of 64 DOR plates each, with a capacity of $1^1/_2$ million A4 sheets per 'juke box'. Each DOR plate contains 10000 million bits (=2500 sheets size A4). The peripherals include a document reader, transfer memory, 2400-line screen, connections to data and telephone networks, word processor, text compressor/decompressor. (no refs.) *J.S.*

4610 **Realities of the wired office: what the market has to offer.**
Mod Off & Data Manage. (Australia), vol.20, no.4, p.16-24 (May 1981).
Gives an overview of the many paths to complete office automation. (no refs.)

2868 **Computing to work.** B.C.Cole.
Interface Age (USA), vol.6, no.8, p.94-6 (Aug. 1981).
Discusses the prospects of corporation employees working at home with remote terminals on telephone or microwave links, the possible benefits and pitfalls and reasons for resistance to such innovation. (no refs.)

4583 **Optical disc document retrieval system – a new approach to office automation. II.** S.Nakamura
AEU (Japan), p.144-7 (July 1981)
For pt.I see ibid., no.65, p.139-43 (1981) This part states that document processing is the most important area in office automation, and the difficulty of keyboard operation of Kanji characters gives rise to the necessity for the image file approach. The newly emerging image file, the optical disc, which will contribute very much to this goal is described.

4590 **The office of the future is now: merging DP and WP.** A.G.Rockhold.
Infosystems (USA), vol.28, no.9, p.92-4, 96, 98 (Sept. 1981).
Word processing and data processing, along with other information technologies, are moving toward a common ground that will finally make the 'office of the future' a reality. (no refs.)

2805 **The rocky road to office automation.** R.B.Forest
Infosystems (USA), vol.28, no.9, p.140 (Sept. 1981)
Line managers ought to insist on careful, long-term, broad-gauge economic evaluations of office automation projects. Office automation staffs ought to undertake a massive review of their current strategy (no refs.)

7544 Faster the local area network. D Kennett.
Word Process. Now (GB), p 7-10 (Sept 1981).
Local networks are designed to link computers and other digital devices in the same building or group of buildings and they have become fairly topical in the last year or so. The future seems likely to bring the proliferation of information services needing quick and cheap connections to their users, while the users also want digital communication channels to the growing community of other users. (no refs.)

7545 Intel Local Network Architecture. R Ryan (Intel Corp., Santa Clara, CA, USA), G D Marshall, R Beach, S R Kerman.
IEEE Micro (USA), vol.1, no 4, p 26-41 (Nov 1981)
The emergence of economical local network technology has made feasible the design of interconnected multiple computer systems that provide high performance at low cost. Local networks can provide significant benefits in resource sharing, distributed computing, and communication multiplexing. Given the correct approach, local network technology will allow designers to construct a wide range of distributed systems while meeting different cost, performance, and reliability requirements. The authors look at local networks, and in particular at Intel's Local Network Architecture, iLNA. (14 refs.)

7546 Vulnerabilities of network control protocols: an example. E C.Rosen (Bolt Beranek & Newman Inc., Cambridge, MA, USA).
Comput Commun Rev (USA), vol 11, no.3, p 10-16 (July 1981)
Discusses vulnerabilities of network protocols. The author considers how unique circumstances can bring out these vulnerabilities in network control protocols. An example is given of a malfunction on ARPANET caused by a freak hardware error. (2 refs.)

7547 An introduction to the Ethernet specification. J.F.Shoch (Xerox Palo Alto Res Center, Palo Alto, CA, USA)
Comput Commun Rev (USA), vol 11, no.3, p 17-19 (July 1981)
Discusses Ethernet local network. The author considers various general aspects of the Ethernet approach. (8 refs.)

7561 Analytical models for an Ethernet-like local area network link. M Marathe, S Kumar (Digital Equipment Corp., Maynard, MA, USA)
Performance Eval Rev (USA), vol 10, no.3, p 205-15 (Fall 1981) (ACM/SIGMETRICS Conference on Measurement and Modeling of Computer Systems, Las Vegas, NV, USA, 14-16 Sept 1981)
Ethernet-like local area network links have been studied by a number of researchers. Most of these studies have involved extensive simulation models operating at the level of individual packets. However, as one begins building models of systems built around such links, detailed simulation models are neither necessary, nor cost-effective. Instead, a simple analytical model of the medium should be adequate as a component of the higher level system models. The authors discuss a number of analytical models and identifies a last in first-out M/G/1 model with slightly increased service time as one which adequately captures both the mean and the coefficient of variation of the response time. Given any offered load, this model can be used to predict the mean waiting time and its coefficient of variation. These two can be used to construct a suitable 2 stage hyperexponential distribution. Random numbers can then be drawn from this distribution for use as waiting times of individual packets. (8 refs.)

8026 The relationship of Telidon and computer graphics standards. H Newman (Communications Res. Centre, Ottawa, Ontario, Canada)
Proceedings of the 7th Canadian Man-Computer Communications Conference, Waterloo, Ont., Canada, 10-12 June 1981 (Toronto, Ont., Canada, Canadian Man-Computer Comm. Soc. 1981), p 245-9
Metafiles are files used for storing or transporting graphical data in a device independent form. By developing a standard for graphics metafiles, picture transfer between computer graphic devices and computer graphic installations is facilitated. Telidon, a Canadian alpha-geometric videotex system, is concerned with the transmission of pictorial information. The picture description instructions (PDI) used in Telidon are drawing primitives. PDI have impact on the graphics metafile standards. Computer graphics and alpha-geometric videotex are converging and compatibility between the two can exist by developing a metafile standard which satisfies the requirements of both. PDI could serve as a basis for such a general graphics metafile standard. (3 refs.)

8046 Strategic planning for office automation. L.A.Wiseman (Willis Faber & Dumas, London, England)
BCS'81 Information Technology for the Eighties. Proceedings of the Conference, London, England, 1-3 July 1981 (London, England: Heyden 1981), p 66-80
The purpose of office automation is to provide more effective support for business operations. Strategic planning for office automation is an integral part of business strategic planning. It requires a thorough knowledge of the business, an understanding of the organisation, its development and philosophy; and an appreciation of the capability of emergent technology. Traditionally, computers have been used in highly structured, logical environments; but a different approach is needed in offices because each one is unique, only partially structured and highly political. Carefully planned management of change is necessary to achieve complex transitions in office systems. Office automation is a challenge to Systems and Data Processing people which requires adaptability from conventional methodology. (8 refs.)

7561 Distributing viewdata and teletext services in a user community. G K Wood, J Farmouth (Computing Centre, Univ. of Salford, Salford, England)
Software-Pract. & Exper (GB), vol 11, no 10, p 1009-17 (Oct 1981)
The normal method of access to Viewdata and teletext services is via special TV sets, however it is possible to make these services available to terminal users of a computer system. This paper describes how the British Viewdata and teletext services were adapted to run at Salford University and also discusses some of the problems that were encountered in the implementation. In order to do this, certain relevant features of the Prestel and the broadcast systems are described and discussed in detail. (no refs.)

7549 Power where it's needed [distributed data processing]. J.Horsley.
Data Processing (GB), vol 23, no.8, p 33-4 (Sept. 1981).
There are benefits in using distributed data processing but there are many systems available including, local area networks; national networks; and international networks also there are protocols. The article gives guidelines for selecting the right equipment. (no refs.)

8043 Proceedings of the 7th Canadian Man-Computer Communications Conference.
Toronto, Ont., Canada: Canadian Man-Computer Comm. Soc. (1981), var.p 384 pp
Conference held at Waterloo, Ont., Canada, Date 10-12 June 1981. The following topics were dealt with: videotex; image processing; office of the future; psychology of vision; interaction; graphics applications; data structures; speech generation and recognition; standards; animation; and hardware.

8044 Rational office automation. C E Malpas-Sands.
BCS'81 Information Technology for the Eighties. Proceedings of the Conference, London, England, 1-3 July 1981 (London, England: Heyden 1981), p 46-51
From a background outside the mainstream of equipment manufacturers, systems houses and users this paper is aimed at reflecting on some of the realities behind Office Automation. It aims to propose a more fundamental approach in posing not merely the questions what? and how? but also why? and when? Furthermore, it aims to relate the approach to that of value for money, not from the point of view of the equipment, but from the point of view of improved management and administrative effectiveness. (no refs.)

8045 OFFICEMAN: a design approach to the electronic office. C V D Forrington
BCS'81 Information Technology for the Eighties. Proceedings of the Conference, London, England, 1-3 July 1981 (London, England: Heyden 1981), p 52-65
OFFICEMAN embraces a software product and a design approach to the electronic office. It is based on an evolutionary process involving feasibility study, pilot systems and design experimentation, leading to a full functional and technical specification of a proposed operational system, without prior commitment to a longer-term hardware and software strategy. Experience in the early usage of the OFFICEMAN approach indicates the effectiveness of user participation in the design process and forms the basis for the continuing development of the software product. (no refs.)

8015 Silicon Office [software review]. M.McDonald.
Pract Comput (GB), vol 4, no.11, p 61, 63-4 (Nov 1981).
A general-purpose package from Bristol Software Factory. Silicon Office will turn the 8096 Pet into a secretarial work station capable of emulating any application package the user cares to think of. The Silicon Office package comprises three integrated elements, a sophisticated word processor, a flexible database-management system, and a communications option for use over the dial-up public switched telephone network, PSTN. The description 'database-management system' really does apply, as Silicon Office permits up to six independent files to be in use and linked during operation. (no refs.)

8025 A system for the automated office environment. P C Gardner,Jr (IBM Data Systems Div. Lab., Poughkeepsie, NY, USA).
IBM Syst J (USA), vol 20, no 3, p 321-45 (1981)
A review of the history of an office system application is presented, highlighting the learning process that took place during its evolutionary development. This office system has served as the basis for a PRPQ (customized program) recently announced by IBM and known as the Professional Office System (PROFS). The general application architecture is discussed, with a specific focus on the use of virtual machines. Functional details of the various components are described, and the key distinction between office systems and office automation is addressed. The author also discusses usage of the system and points up some of the benefits being realized by current users of a prototype system in IBM. The application function review details the electronic document distribution capabilities of the system. (13 refs.)

8032 Implementing automated office systems. J.C Wetherbe, C.K.Davis, C.A Dykman.
J Syst Manage (USA), vol 32, no 8, p.6-12 (Aug 1981)
Increased capability, availability, and applicability of computing technology have resulted from reduction in the costs and improvement in the efficiency of modern computers. Accordingly, many traditional organizational activities have become candidates for cost-effective support with computing technology. This article is about the 'automated office'. The changing economics of computers have created new applications of automation in office settings. Automating offices will be a great challenge for MIS professionals and organizations in the 1980s. (30 refs.)

8006 Is centralised beautiful? [IBM office products]. J Hosier
Computerworld UK (GB), vol 2, no.21, p 20 (2 Sept 1981)
IBM is making a major push of the distributed office system based on mainframes accessed via 3100s. (no refs.)

8007 Managing the transition training [word processing].
Word Process. Now (GB), p 5-6 (June 1981).
This investigation shows a wide variation in both the approach to, and the implementation of, the installation of WP in an office. (no refs.)

8008 How to specify the word processing system you need. K Bruley (Univ. of Surrey, Guildford, England)
Word Process. Now (GB), p 12-15 (June 1981).
The author offers practical guidance on the basis of her own experience of preparing a detailed specification, testing equipment and dealing with the organisation of the work after delivery. As an indispensable condition of success both at the time of selection and in dealing with on-going problems

8012 Plug-in productivity? [potential of office automation].
Bus. Matters (GB), vol.3, no.9, p 34-5, 37-8 (Sept. 1981)
Discusses the capabilities of integrated automated office information and communication technology, the progress so far achieved by its manufacturers, and its relevance to smaller companies with limited capital for investment. For descriptions of representative actual systems and networks see ibid., no.10, p 43-4 (Oct. 1981). (no refs.)

18920 **Information technology – the key growth sector.** K.Baker.
Aust. Electron. Bull. (Australia), p.16-17 (Aug. 1981)
Discusses information technology which is revolutionising methods of information handling and processing. The world market in information technology products, which already totals about 50 thousand million a year, is expanding at something like 10% per annum in real terms. States that industry and commerce cannot function properly without facilities for rapid access to accurate and up-to-date information, and an increasing proportion of the workforce is nowadays involved in information handling. (no refs.)

18921 **Executive sounds three themes on the 'office' of the 1990's.**
Syst. Inf. Manage. (S. Africa), vol.11, no.7, p.3 (July 1981).
Summarises the keynote speech by R.W. Johnson (Burroughs Corp.) at the Dataquest Electronic Printer Industry Conference in Orlando, FL, USA. The themes are: serious user participation in development of new office equipment; vastly improved 'knowledge worker' productivity with friendly equipment whose advanced technology is 'invisible' to the user; and an open attitude to unanticipated change. (no refs.)

18922 **Investigating the office of the future.** D.Tapscott.
Middle East Electron. (GB), p.45-7 (Nov.-Dec. 1981).
In 1979 a Bell-Northern Research team embarked on a project to develop techniques for measuring and collecting data that could easily be used to assess the effect of electronic office systems on their users. In a pilot study, 19 knowledgeable workers were given electronic work stations on an integrated office system that provided electronic mail, information retrieval, word processing, administrative support, and data processing. The activities of these workers (the test group) – such as their attitudes, time use, commands and applications used, and communications patterns – were compared with a control group. (no refs.)

18923 **Executive Secretary, a word processor from Sofsys.** T.Hogan.
InfoWorld (USA), vol.3, no.25, p.26-7 (9 Nov. 1981).
A word-processing program for the Apple II computer adds the ability to mix information from an 'electronic card file' into documents and to send electronic mail via a Hayes micromodem. The program also produces conditional printouts of sections and offers a user-definable abbreviation-expansion facility. (no refs.)

18957 **Control of the social issues of data processing and office automation.** P.Sebire.
Convention Informatique 1981. The Means of Computerisation, Paris, France, 21-25 Sept. 1981 (Paris, France: Convention Informatique 1981), p.169-73 vol.B
Discusses productivity problems arising from badly introduced DP. (22 refs.)

18958 **Voice processing in the office.** C.W.H.Ellis.
Convention Informatique 1981. The Means of Computerisation, Paris, France, 21-25 Sept. 1981 (Paris, France: Convention Informatique 1981), p.307-8 vol.B
Discusses the role of telephony in the electronic office and how computerisation can assist in the efficiency of telephoning. (no refs.)

18959 **Office automation for executives, the tools of the next five years.** L.Nauges.
Convention Informatique 1981. The Means of Computerisation, Paris, France, 21-25 Sept. 1981 (Paris, France: Convention Informatique 1981), p.309-10 vol.B In French.
Available information tools are powerful enough to allow an organisation to establish the first level of the 'office of the future'. During the next five years, almost all managers will be equipped with an information work station consisting of an advanced telephone terminal and a VDU terminal. (no refs.)

18941 **Research group probes office technology problems.**
Mod. Off. & Data Manage. (Australia), vol.20, no.7, p.14-16 (Aug. 1981).
Explains how user panels based in Britain are providing vital information which will assist Australian companies in choosing automated equipment (no refs.)

18942 **Is our knowledge adequate for the introduction of office automation?.** K.Nygaard.
NordDATA 81, Copenhagen, Denmark, 16-18 June 1981 (Copenhagen, Denmark: Dansk Databehandlingsforening 1981), p.96 vol.1 In Norwegian.
Shows that there are problems in carrying out large programming projects and that a considerable part of the available resources is used for the maintenance and modification of existing programs. There are also problems in devising suitable organisational structures while there is a lack of knowledge about the interaction between people and computer equipment and the effects of this interaction on the organisation. (no refs.) *J.S.*

18943 **The office of the 80s: a question of organisation.** B.Ericson (T. Tagel & Co., Danderyd, Sweden).
NordDATA 81, Copenhagen, Denmark, 16-18 June 1981 (Copenhagen, Denmark: Dansk Databehandlingsforening 1981), p.97-102 vol.1 In Swedish.
Shows that factors limiting the development of automated offices are (a) resistance of personnel to changes, (b) difficulties of integrating different techniques, (c) lack of relevant experience. Key factors in the development of automation of office work are: motivation, cooperation, planning, training, work systems. (no refs.) *J.S.*

17002 **Advice for 'integrated office workers'.** H.-J.Mey (Inst. fur Angewandte Math., Univ. Bern, Bern, Switzerland).
Sysdata (Switzerland), vol.12, no.11, p.9-10 (28 Sept. 1981). In German.
Stresses two attitudes which should govern policy for the introduction of information systems, namely that human values, including such things as tempo of work, should be paramount rather than machine-oriented factors, and also that staff should be more thoroughly trained. (no refs.) *G.F.F.*

18945 **Text and data communication systems for office automation.** N.Lagerstrom (Oy Nokia, Helsinki, Finland).
NordDATA 81, Copenhagen, Denmark, 16-18 June 1981 (Copenhagen, Denmark: Dansk Databehandlingsforening 1981), p.207-12 vol.1 In Swedish.
Discusses dominant trends in office automation, the general properties expected of an office automation service in the future, and the effect of large-scale investment in existing services on future development. (no refs.) *J.S.*

18946 **Automatic typing – the beginning or the end of office automation.** G.Sandgren.
NordDATA 81, Copenhagen, Denmark, 16-18 June 1981 (Copenhagen, Denmark: Dansk Databehandlingsforening 1981), p.1-2 vol.2 In Swedish.
Office automation is considered in terms of technique, economy, human aspects and the job to be done. The article concludes that we must work ourselves out of the present trend of capital and labour intensive office procedures. (no refs.) *J.H.*

18947 **Will investment in word processing equipment pay or be a technical failure?.** B.Loven, L.-G.Jardevall.
NordDATA 81, Copenhagen, Denmark, 16-18 June 1981 (Copenhagen, Denmark: Dansk Databehandlingsforening 1981), p.3-8 vol.2 In Swedish.
A study was made of the introduction of word processing in 18 Swedish companies. Based on this study the article seeks to establish what extent and what level of technology has been achieved, what effect word processing has had on the company and what caused the introduction of word processing. Several conclusions are drawn, one of which is that more time should be devoted to study the effect of word processing on the company as a whole. (no refs.) *J.H*

19105 **Office automation and data processing: the Schlumberger approach.** C.Baudoin.
Convention Informatique 1981. The Means of Computerisation, Paris, France, 21-25 Sept. 1981 (Paris, France: Convention Informatique 1981), p.316-20 vol.B In French.
At EPS, the Engineering and Manufacturing Center of Schlumberger in Clamart (near Paris), office automation in general and word processing in particular are considered a help among others towards the improvement of global productivity. Realizing the strong convergence between 'classical' data processing and office automation led to a profitable integration of what some considered to be two separate or even opposed disciplines. (no refs.)

19106 **Five years of office automation in the Victoire group (or convivial data processing as a support for office automation).** J.C.Drogoul.
Convention Informatique 1981. The Means of Computerisation, Paris, France, 21-25 Sept. 1981 (Paris, France: Convention Informatique 1981), p.337-42 vol.B In French.
The author sets out the aims, expectations and achievements of the Victoire group in its process of office automation. (no refs.)

18926 **Office technology: tinker toy or tool?.** H.Zassenhaus (Stone & Webster Engng Corp., Boston, MA, USA).
Computerworld (USA), vol.15, no.41, p.ID/17-22 (12 Oct. 1981).
More often than not, technological masterpieces are introduced after direct (short-range) cost/benefit analyses. In general, these assign low priorities to the effects on 'people factors' and on long-term changes to the way in which a firm does its business. This article explores a few of these long-range implications. (no refs.)

18927 **From here to there [fast document delivery].** C.Cohen.
Bus. Syst. & Equip (GB), p.55-63 (Nov. 1981).
When the ordinary post isn't quick enough, how better can you send a specific document, or its exact replica, from A to B? The author looks at the various combinations of speed, cost and safety over various distances offered by the Post Office special delivery services, private couriers and facsimile transmission. (no refs.)

18928 **The start with 'Ethernet'.** H.-J.Bullinger, K.P.Fahnrich, M.Katcher.
Buerotechnik (Germany), vol.29, no.11, p.1083-4, 1086, 1088, 1090, 1092-4 (Nov. 1981). In German
The Xerox-Palo-Alto Research Center data network Ethernet and STAR information system concepts, hardware and facilities for in-house data transmission, management information, word processing, graphic representation, and other office requirements, and some software packages are described. (no refs.) *H.V.H.*

18930 **The best way to satisfy our desire to hoard data.** I.Carr.
Computing (GB), vol.9, no.49, p.22-3 (3 Dec. 1981).
Examines the state of the art of database systems in the light of increasing demands for business data storage and wider multiple access. (no refs.)

18931 **Technological influences on future office communications.** K.Pfeffermann, H.Reimann (Siemens AG, Munchen, Germany).
Data Rep. (Germany), vol.16, no.6, p.8-9 (Dec. 1981). In German.
The future uses of integrated service digital networks up to 64 kilobits for speech, data and facsimile are reviewed, the importance of standardisation via the CCITT organisation is stressed and it is predicted that broadband links for moving-image transmission will become necessary. (no refs.) *G.M.E.*

18576 **VDTs can cause stress and other health hazards in the office.** J.Markoff, P.Freiberger.
InfoWorld (USA), vol.3, no.23, p.21-26 Oct. 1981).
The video display terminal has come to represent how microelectronics will transform both the work place and the home during the rest of this century However, VDT users complain of eye-strain, blurred vision, headaches, nausea, fatigue and sore necks, backs and legs. Even more serious are unresolved questions about potential radiation exposure

11643 **Facsimile counts other technologies.** F.W.Miller.
Infosystems (USA), vol.28, no.4, p.62, 64, 66 (Aug. 1981).
The sending of microfiche or roll film images over telephone lines via facsimile machines had not generated enough market demand to make it a viable product. Small manual systems, very large automated machines and hybrids between the two are available. Some microfacsimile products are described. Facsimile modes will be necessary to handle graphics such as signatures, drawings and forms. Encryption is possible for security. (no refs.)

11644 **Voice mail comes of age.** W.A.Saxton, M.Edwards
Infosystems (USA), vol.28, no.8, p.72 (Aug. 1981)
In voice mail, or voice store and-forward, systems, telephone messages are stored in digital form for later delivery. Users call their mail-box from any touch-tone telephone and can immediately dictate a reply. The same message can be sent to a number of people with a single call. A system is available to handle compound messages – part speech, part facsimile and part ASCII text. (no refs.)

11708 **Creating an adaptive computerized conferencing system on UNIX.** M.M.L.Pearson, J.E.Kulp (Internat. Inst. for Appl. Systems Analysis, Laxenburg, Austria)
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.129-43
Telecenter, a computerized conferencing system, was implemented with approximately one man week's programming effort by exploiting tools available on the institute's computer time-sharing system. Telecenter's adaptive design philosophy was shaped by user needs, and its rapid implementation was facilitated by a UNIX-based computing environment permitting flexible, modular design. Appendices contain a sample session using Telecenter and details of UNIX system features underlying its design. (13 refs.)

11710 **Service definitions in a computer based mail environment.** P.Schicker (Zellweger Uster AG, Hombrechtikon, Switzerland)
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.159-73
Lists of services to be provided by computer based mail and message systems are often compiled by editing lists of existing communication services (e.g. post, telephone, telex, etc.). Unfortunately, these lists seldom specify how the service shall be adapted to the new environment and misunderstandings and ambiguities are the natural consequence of the imprecision. On the example of a very small class of such services it is shown how verbal and (semi-)formal definitions of all the different aspects of a service can lead to a common understanding. This understanding is the basis from which user committees, system designers and standardization bodies can select services for the computer based mail and message systems. (8 refs.)

11716 **TELETEX and its protocols.** G.A.Routhorn, P.A.Carruthers (British Telecom Marketing Executive Product Development Unit, London, England).
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.259-83
Describes the functions offered by the TELETEX service and examines the high level protocols necessary for its implementation. It discusses the use of the TELETEX high level protocols for more advanced text communication applications and the benefits this brings in terms of upward compatible terminals. (9 refs.)

9812 **Research on the impact of office information communication systems.** D.Tapscott (Bell-Northern Res. Ltd., Ottawa, Ontario, Canada).
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.395-409
Describes research conducted at Bell-Northern Research Ltd., Custom Systems Division, in Toronto where 19 knowledge workers were given electronic work stations to help them with various aspects of their jobs, including text editing, electronic mail, information retrieval, and numerous administrative functions. Some pretest and system monitoring findings are presented and a method/logic for 'user-driven design' or customization of an electronic office system in a given office is discussed. (5 refs.)

12523 **Computerized conferencing: an eye-opening experience with EIES.** G.Tracz (Ontario Inst. for Studies in Education, Toronto, Canada).
Can. J. Inf. Sci. (Canada), vol.5, p.11-20 (May 1980).
Developments in communications technology are reinforcing the continuing transformation of the Industrial Society into the Information Society. The author focuses on computerized conferencing, one mode of exchange of information among researchers and scholars, and describes his personal experience with the Electronic Information Exchange System. Particular attention is paid to the psychological aspects of computerized conferencing and to the tensions between the smothering sensation of information overload on one hand, and the liberating lift of collective intelligence on the other. The paper concludes with a plea for general fluency with the new literacy of the 1980s – communications and computer technology. (7 refs.)

12305 **Organized communication in the office.** L.Lanius, B.Schwieder (Siemens AG, München, Germany).
Data Rep. (Germany), vol.16, no.5, p.8-11 (Oct. 1981). In German.
Discusses the rationalization of speech, text and data communication and the procedure to be adopted in attaining this aim in the office. Examples are given of modular design of analytical instruments as aids in procuring integrated systems of communication and data processing, and as an example of such a design the EMX1010 text-communication system is described. (11 refs.) *L.M.W.*

11712 **Design of a message format standard.** D.Deutsch (Bolt Beranek & Newman Inc., Cambridge, MA, USA).
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.199-220
A draft standard for the format of messages produced by computer based message systems (CBMSs) has recently been developed. The draft standard is discussed in terms of its relationship to other standardization efforts and its design rationale. An overview of the draft standard is provided. Important design issues are singled out and areas for possible future standardization are suggested. (14 refs.)

12345 **Six trends in the future of the office.** P.S.Licker (Information Systems Dept., Virginia Commonwealth Univ., Richmond, VA, USA).
Proceedings of the Eighteenth Annual Computer Personnel Research Conference, Washington, DC, USA, 3-5 June 1981 (New York, USA: ACM 1981), p.163-83
This paper examines six trends which the author feels complicate the 'Let There Be' attitude of market researchers. (11 refs.)

11703 **User experience and evolving design in a local electronic mail system.** J.Bruder, M.Moy, A.Mueller (Hewlett-Packard Co., Palo Alto, CA, USA), R.Danielson.
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands: North-Holland 1981), p.69-78
A local computer mail system, if use is not forced by corporate management, runs the risk of lying idle unless it is well-matched to its operational environment. This paper describes such a system, which was developed for internal use at Hewlett-Packard Company, in response to a specific request from a small organization within the company. (8 refs.)

12321 **North Star data manager.** L.K.Benedict (School of Pharmacy, Creighton Univ., Omaha, NE, USA).
Kilobaud Microcomput. (USA), vol.5, no.10, p.118-29 (Oct. 1981).
Database programs make it possible for office personnel with no knowledge of programming to create and maintain their own database. DATAKEEP can be used to create the database, make alterations and display the entire database on the CRT or print a hard copy of it. The DATASORT program is used to sort the records and to search for a specific entry. Sorted records or records found as a result of a search can be written onto a separate disk file. DATAMAIL is used to print mailing labels when the appropriate information has been placed in a file. (no refs.)

11647 **Data communication protocols: data link controls.** R.S.Reid (Kuring-gai Coll. of Advanced Education, Kuring-gai, Australia)
LASIE (Australia), vol.11, no.1, p.12-20 (July-Aug. 1981).
To meet demands for improvements in operating flexibility and in the level of service offered, a succession of protocols has been developed by various companies and organizations. Generally, communications systems and the protocols developed by commercial organizations were designed only to meet a limited range of applications, based on the hardware systems and practices of the developing organization. The diversity of equipment systems and technologies that sprang up has led to the development of many incompatible signalling codes, network structures and techniques. (no refs.)

12331 **Investigating the office of the future.** D.Tapscott (Bell Northern Res. & Dev. Labs., Ottawa, Canada).
Telesis (Canada), vol.8, no.1, p.2-6 (1981)
Until recently little work has been done to measure how new technologies can improve the effectiveness of work performed in offices. Without valid measures and data that quantify what these systems can achieve, producers have difficulty planning, designing, or marketing them. As a result many systems have been inappropriate and have failed. In 1979, Bell Canada began funding a project at Bell-Northern Research to develop techniques for measuring and collecting data that could be used to assess the effects of electronic office systems on their users. The research is being conducted by a multidisciplinary team in the custom systems division with help from behavioural scientists at Bell-Northern Research and BNR Inc. In a pilot study, 19 knowledge workers were given electronic work stations on an integrated office system that provided electronic mail, information retrieval, word processing, administrative support, and data processing. (5 refs.)

12315 **Future progress in office automation.** K Tamura (Electrotech Lab., Ibaraki, Japan)
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol 64, no 2, p 165-9 (Feb 1981). In Japanese.
Optimal levels of office automation are defined and the development of office automation is analysed into four steps (1) definition of needs, (2) introduction of machinery which will reduce work and improve productivity, (3) support equipment for each special area or specialist, and (4) data storage. Problems remain in the areas of man-machine interface like the use of Japanese, vocal input, machine translation and in the software area with knowledge-based systems. (13 refs.)

12316 **Current status and problems of office automation.** H Hatta (Nippon Electric Co. Ltd., Fuchu-shi, Japan)
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol 64, no.2, p 159-65 (Feb. 1981). In Japanese
Current office practice in Japan is described where office costs are rising in real terms whereas hardware costs are falling. Service industry is on the increase, and slow economic growth rates and bad office conditions like lack of space, too many phones, slow decision making and time wasted in conferences are problems. Office work is analysed and the Japanese and American cases compared. Potential improvements using office automation are numerically presented. Usage rates for typical office equipment are shown and three American examples of office automation are described. Factors limiting the application of office automation in Japan are lack of study of Japanese office practice, the consensus style of management and slow development of Japanese language processing equipment. (7 refs.)

12317 **Office automation technology – transmission and networking of information.** K Arai, T Kamae (NTT, Yokosuka-shi, Japan)
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol 64 no.2, p 150-9 (Feb 1981). In Japanese.
The limitations of conventional telephones for data transmission are listed and the new digital service with personal ID, data memory, vocal reply capability and network-independent service is introduced. The technical and economic problems of digitalization of the telephone network are discussed. Data transmission is discussed in relation to network architecture (e.g. DCNA) and public data networks. Private networks and exchanges and available hardware are described. Text and image transmission are discussed including code and pattern, telex, videotext, facsimile transmission, data conversion and CCITT standards. (22 refs.)

12318 **Office automation technology – editing and processing of information.** Y.Kanda (Fujitsu Ltd., Kawasaki-shi, Japan)
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol 64, no 2, p 135-42 (Feb. 1981). In Japanese.
Information input by key in felkey format using doublet, multishift or Japanese typewriters, thought association code format and kana letters transformation format and the keyboard requirements for kana letters are discussed. The OASYS 100 keyboard is shown. Input by handwriting and the online written character identification and OCR, vocal diagrammatic and pictorial inputs are described. Organisation is discussed as exemplified by the SDMS media room. Japanese language processing is discussed in relation to sentence structure, proof reading and schedule preparation applications. (22 refs.)

12319 **Trends in office automation.** H.Aiso (Keio Univ., Yokohama-shi, Japan).
J. Inst. Electron. & Commun. Eng. Jpn. (Japan), vol.64, no.2, p.131-5 (Feb. 1981). In Japanese.
Applications demand is seen in increasingly efficient office processing and transmission equipment, office manpower saving, office function differentiation leading to new applications and in the development of the service sector. Technical advances in LSI circuits, computer hardware and software, the spread of data transmission networks (DCNA, KDD International net and Ethernet) and the development and applications of office machines are outlined. Expected developments include the compilation of text from voice, picture, diagram and text, improvements in text storage, transmission and copying, information exchange and secrecy, information retrieval and machine translation, stores control and office robots. Technical problems in the realisation of these objectives are discussed. A step by step development programme is outlined. (8 refs.)

11718 **Addressing and directory systems for large computer mail systems.** J.J.Garcia-Luna, F.F.Kuo (Dept. of Electrical Engng., Univ. of Hawaii at Manoa, Honolulu, HI, USA).
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands, North-Holland 1981), p 297-311.
Presents a general description of the addressing schemes necessary to provide efficient identification and delivery services in large, distributed computer mail systems and interconnected systems. The structure of the required directory system is described in detail under the assumption of the existence of a protocol to communicate the delivery processes. A naming standard and an addressing standard are introduced, and for the purposes of completeness the basic structure of the system components of our architecture is introduced at the beginning of this work. (12 refs.)

11719 **Interconnection of electronic mail systems: a proposal on naming, addressing and routing.** I.H.Kerr (Bell-Northern Res., Ottawa, Ontario, Canada).
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April 1981 (Amsterdam, Netherlands, North-Holland 1981), p 315-26.
Proposes some conventions for identifying individuals, and routing them within a set of interconnected electronic mail systems. The objective is to define sufficient standards to make the interconnection simple while as much as possible preserving flexibility in the way people are identified and freedom for designers of individual mail systems. (5 refs.)

12293 **Microfilm – at the end or a new beginning?.** H Schmincke
Buerotechnik (Germany), vol 29, no 9, p 834-7, 840 (Sept 1981). In German
Advantages of microfilm in the office for work simplification, speeding up information, and communication have long been recognised but the rate of adoption has been slow. Introduction of Computer Output Microfilm which combines electronic data processing and microfiche techniques has produced a change. Trends are discussed, including computer aided information access, microfilm readers used with external computers, associated magnetic disk file memories, and new microfiche methods such as the A B Dick 'Scott System 200' based on electrophotographic principles, and the Bell and Howell 'Micros' microfiche system using a thermal method. The optical disc memory provides a potential alternative for high volume data storage. Its place in relation to microfilm is discussed. (no refs.) *H.H.H*

12294 **Microfilm, a communicative medium in office information systems of today and tomorrow.** K Harbig
Buerotechnik (Germany), vol 29, no 9, p 842-4 (Sept 1981). In German
Microfilm systems for office information handling are used with and without computer support. Various film forms as well as computer output of data on microfilm are available. Information storage density is very high, the medium is very portable, and its information content is easily reproduced and distributed. Data retrieval is improved by computer aid. Long term storage of data on microfilm gives great space savings. Rapid technological progress is being made in the field of office information systems. Future developments will include digitising microfilm data. (no refs.) *H.H.H*

12295 **The electronic office: intelligent choices.**
Bus. Matters (GB), vol 5, no 10, p 45-8 (Oct 1981).
For a general survey of developments in office automation see also *ibid*, p 34-5 and 37-8 (Sept 1981). This article describes in more detail some of the systems on the market which are suitable for the small or medium-sized company in terms of their cost, flexibility and capacity for expansion. It also looks at networks and at some of the latest products. (no refs.)

12296 **Word processing.** R.Gerster (Verax AG, Reinach, Switzerland)
Comput. J. (Switzerland) no.4, p 8-12 (July 1981). In German
Word processing is defined, its history in Germany is reviewed and configurations involving shorthand typists, audio systems and standard text blocks and typing pools are briefly described. Text corrections are discussed. (no refs.)
G.M.E.

11723 **An international message service for corporate use.** [illegible]
(Corporate Communications Dept., N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands)
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April [illegible] (Amsterdam, Netherlands, North-Holland 1981), p 363-7.
The amount of message traffic within the Philips corporation [illegible] twelve years ago the introduction of a private store and forward message service. However, the growing needs and the new requirements [illegible] expansion of the network and the introduction of better services [illegible] and requirements can be met by the concept of distributed message [illegible] the installation of more powerful and technically up to date systems [illegible] fruitful integration of the private message network and the [illegible] (X.25) network. (2 refs.)

11724 **The design and service impact of COCOS an electronic office system.** N.W.Dawes, S.J.Harris, M.I.Magyar, S.I.Mackey [illegible]
(Bell Northern Res., Ottawa, Ontario, Canada)
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April [illegible] (Amsterdam, Netherlands, North-Holland 1981), p 353-64.
Describes the electronic office system COCOS (the Corporate Communications System) developed at Bell Northern Research from 1978 to 1981. The design and impact of introducing this system into the company is discussed. (4 refs.)

11725 **The role of computer mail in office automation.** J.Sykes, [illegible]
work Management Assoc. Inc., Huntington Beach, CA, USA), [illegible]
Computer Message Systems. Proceedings of the IFIP TC-6 International Symposium on Computer Message Systems, Ottawa, Canada, 6-8 April [illegible] (Amsterdam, Netherlands, North-Holland 1981), p 387-94.
Based on a review of general office requirements and the means of satisfaction, the authors develop an activity and matrix to provide a framework relating computer based message systems to office needs. Consideration is given to the analogy between regular Postal Services and Computer [illegible] (4 refs.)

12609 **Office automation technology – storage and retrieval of information.** T Kurachi (Toshiba Corp., Ome-shi, Japan)
J. Inst. Electron. & Commun. Eng. Jpn. (Japan) vol 64, no 2, p 143-9 (Feb 1981). In Japanese.
The file compositions ordered using link and direct using a page map and B tree type retrieval order are described. Layered type data models as in IBM's IMS, and the MRI System 2000, network type data models as in GE's IDS and Cincom Systems' TOTAL, relational type data model as in IBM's System R and Software AG's ADABAS and distributed type data base are also described. The types of retrieval and their call words are discussed and exemplified. Floppy disc, magnetic drum, magnetic disk, large capacity memory devices and backend systems and database machines are discussed. Micrographics and graphic information files are briefly discussed. (13 refs.)

12307 **Developing a strategy for office technology.** J.Horsley
Data Processing (GB), vol 23, no 9, p 26-7 (Oct 1981).
Lack of standards and strategies have combined with limited software and conservative management attitudes to inhibit the implementation of electronic office systems. But the suppliers may force the pace. (no refs.)