

THE GLENERIN REPORT

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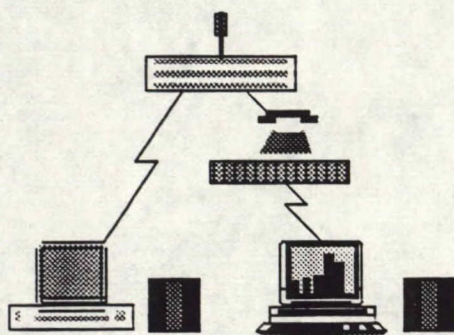
*Barry Lesser
and
Louis Vagianos*

**Information Society Studies
Working Paper Series**

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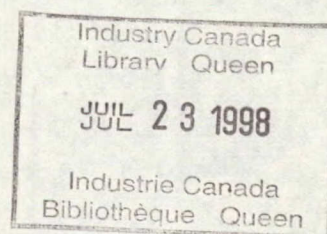
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THE GLENERIN REPORT

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**ACCESS: INFORMATION
DISTRIBUTION, EFFICIENCY
and PROTECTION** ...



**A Report on a
Conference held at
The Glennerin Inn
Mississauga, Ontario
May 13-15, 1987**

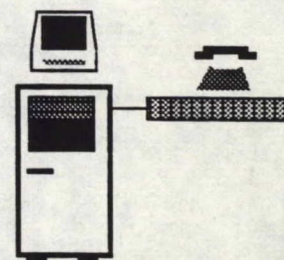
by
Barry Lesser and Louis Vagianos

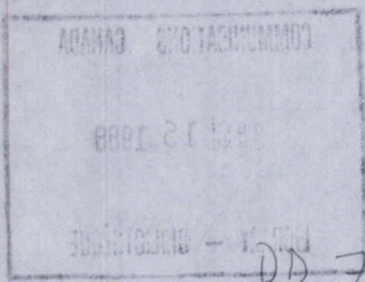


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Foreword: By Way of Explanation

The conference *Access: Information Distribution, Efficiency and Protection* was held May 13 - 15, 1987 at the Glenerin Inn in Mississauga, Ontario. The conference was the third in a series of tri-national meetings convened by the Institute for Research on Public Policy (Canada), the British Library (U.K.) and the National Commission on Libraries and Information Science (U.S.) for the purposes of:

- fostering an improved understanding of the role of information in the economy and society; and
- developing an agenda of public policy issues and initiatives aimed at maximizing the benefits to society of the changing role and character of information and the information industry.

The conference was also supported by the Department of Communications, the Canada Institute of Scientific and Technical Information, and the National Library of Canada.

This Report on the conference builds on a statement, *The Glenerin Declaration*, which emanated from the conference, with the endorsement of the participants from the three countries represented. It does not, therefore, follow the usual format of a conference report in discussing in detail the proceedings of the conference directly. Rather, the focus of the Report is on explaining and amplifying the detail of the Declaration and on putting the Declaration in context. The Declaration, while a direct output of the conference of May 1987, reflects, also, the experience of the first two meetings of the group held in the U.S. in May 1986 and the U.K. in October/November 1987, respectively.

Details on the conference agenda and participants for the May 1987 meeting are provided in Annex A. Annex B provides the agenda and participant list for the May 1986 conference and Annex C for the October 1986 conference. Annex D provides a list of papers presented at all three conferences in the series. Copies of certain of these are available through the Institute for Research on Public Policy on request at a nominal charge to cover printing, handling and postage.

Introduction: The Context of the Conference

The advanced economies of the world, including Canada, the U.K. and the U.S., are moving from an industrial to an information age. This transformation is being driven primarily by technological change in the fields of computers and communications. This technological change has eliminated time and place as constraints on the exchange of information. In the process, several changes in the role of information in the economy have resulted:

- the information services sector has emerged as a major growth sector in the economy;
- information workers have become one of the fastest growing segments of the labour force;
- information has increased in importance as a strategic economic resource;
- the production, distribution and use of information, in addition to being of greater strategic economic importance, has become of major social, cultural and political importance;
- information has become a force promoting convergence in economic activity;
- information has become a force promoting the globalization of the economic marketplace and greater interdependence among nations;
- the management of information has become a force promoting institutional/organizational change and adaptation.

In the midst of these very profound changes, however, there is as yet a very incomplete understanding of both the extent of the change underway and the short and long term consequences of that change. Partly, this lack of understanding results from a lack of attention, historically, to the traditional role of information in the economy and society. Partly, it reflects the lack of adequate quantitative and qualitative indicators by which to measure or assess the role of information. And partly, it reflects the dynamic of rapid technological change in which the only constant is change itself.

Yet the need to understand is greater than ever before. Without understanding, the course of events will be determined by INDEPENDENT forces: (imperfect) economic markets, institutional and political forces and, most importantly, the driving force of technology. The latter represents the phenomenon of technological determinism, the abdication of the responsibility of society to control

its own destiny by allowing that destiny to be shaped or determined by the forces of technological change, *without societal guidance or control*.

This is the background against which the Institute for Research on Public Policy (Canada), the British Library (U.K.) and the National Commission on Libraries and Information Science (U.S.) launched a project aimed at bringing together a group of leading experts from the three countries to:

- foster an improved understanding of the role of information in the economy and society; and
- to develop and agenda of public policy issues and initiatives aimed at maximizing the benefits to society of the changing role and character of information and the information industry.

The third of the meetings held by this group had as its theme, *access*, where access was considered to have three dimensions:

- distribution - who are the winners and who are the losers, as between individuals, industries, institutions, worker groups, regions, and countries in the information society?
- efficiency - what are the optimal conditions for maximizing the efficient use of information and information technology in terms of markets, prices, infrastructure requirements and productivity gains?
- protection - what are the individual and collective rights in society which are threatened by the transformation to an information economy and which require government intervention to safeguard?

All of these are access questions as all have to do in some way with the conditions under which individuals, groups and nations may participate in (gain access to) the new information society, whether or not these conditions are acceptable, and whether and how governments must act to guarantee the access rights of individuals, groups or the nation as a whole.

No final answers to these questions were reached by the conference. But a beginning was made with the formulation of what is now being called *The Glenelg Declaration*.

The Glenérin Declaration

Preamble

We have moved from an industrial to an information age, where the efficient exploitation of information as an economic resource and a sector of production has become crucial to the achievement of economic growth. In the countries of Canada, the United Kingdom, and the United States the production, distribution and use of information have become matters of strategic economic, social and political importance. To ensure that the benefits of the information age are fully realized, it is necessary to create and maintain an environment which provides for the open and unrestricted exchange of information. Such open access, though, must be consistent with the protection of individual rights, appropriate economic incentives, and the sovereignty concerns of nation-states as determined by their unique circumstances.

For individual citizens and society at large to profit equitably from this development:

- *we must increase our understanding of the transformation now taking place;*
- *we must foster partnerships amongst all segments of the information sector — workers, information creators, processors, distributors, government and users;*
- *we must seek mechanisms for the orderly sharing of information among our three nations and eventually any others who may wish to participate;*
- *we must work towards a coordinated policy response among our three countries to ensure that all constituencies are appropriately represented in the decision-making process which will determine the character of the information society.*

Guidelines and Recommendations

Consistent with these principles the following guidelines and recommendations are proposed as initial areas to be endorsed and acted upon:

- In so far as present methods of measurement and assessment of information resources are inadequate, new, standardized methods are required for the evaluation of information as an economic resource to be managed and for a proper understanding of information as a productive sector of the economy; these standard measures are essential tools for economic decision-making and

negotiations, both national and international; and the needs of all constituencies comprising the information sector must be taken into account,

it is recommended that,

1. *a tri-national program be established urgently with the task of developing standardized measures of the impact of information resources on the economy.*
2. *the current round of GATT negotiations, which includes trade in services, be recognized as one important avenue for developing such standardized measures; that the tri-national program work in concert with the GATT round; and that the views of all segments of the information sector (creators, processors and users) be taken into account by the GATT negotiating teams of the three countries.*

- In so far as a number of barriers presently exist to the open and unrestricted flow of information which are not consistent with the objectives of individual rights or societal needs, and a tri-national review of all such barriers which impede information transfer is required so that those which cannot be justified can be removed,

it is recommended that,

3. *telecommunications providers be encouraged to create the facilities for enhanced information exchange among households, academic and research groups, libraries, business and government; that an effort be made to require the adoption of common communications standards for on-line information systems; and that the development of open network systems, including the possibility of common carrier gateway services, be encouraged so long as these do not in any way restrict the network access rights of other parties.*
4. *the application of intellectual property law be reexamined with a view to removing unreasonable impediments to openness; a major area for consideration is that of secondary or derivative information (abstracts, indexes, etc.), especially in the area of scientific, technical and medical information.*

- In so far as the application of technology to information systems and services creates new dynamics in the workplace which must be understood and addressed by both public and private sector decision-makers; the ability of individuals to acquire and apply appropriate information skills and resources

has become an indispensable requirement of functional literacy; and new initiatives must be implemented to maintain currency in skills, to provide retraining where displacement occurs, and to ensure avenues of entry to, and mobility within, the workforce,

it is recommended that,

5. *educational policy be reviewed in the three countries both to develop and define the changing educational requirements of the workforce and of society, particularly with respect to the need for re-organizing the existing institutional structure of continuing education or life-long learning in both the public and private sectors.*

6. *increased public awareness of the role of information and the skills and resources required for its effective utilization be fostered through inclusion of the teaching of such skills as a core component of the curriculum at the primary and secondary school levels and through the appropriate enhancement of the educational role of the library system in the three countries.*

- In so far as the aims of a democratic society are best achieved in a climate of open information and participation in the decision-making process by all parties involved; and the government has an essential and inescapable social and economic role as a key partner in the information society, it must serve as a broker, facilitator, information producer, information provider, educator, and arbiter for the disadvantaged and as guardian of the public good,

it is recommended that,

7. *the national government in each of the three countries acknowledge its responsibility to provide a coherent framework for the development of information policy which takes due account of the international character of the issues and the need for all segments of the information sector to be represented and heard in the process.*

8. *the government explicitly recognize its responsibility to maintain public support for the creation and provision of certain information, through such means as the library system in each country, recognizing that there is a minimum level of information which must be available to, and accessible by, all citizens regardless of means.*

Principles: Basic Premises of the Declaration

The principles of The Glenierin Declaration rest on three fundamental premises:

- the changing role of information in society, in particular the emergence of information as a strategic economic resource and sector of production crucial to the achievement of economic growth;
- the essential need to create/maintain an environment which provides for the open and unrestricted exchange of information consistent with the protection of individual rights, economic incentives and the sovereignty concerns of nation-states; and
- the requirement of distributional equity in promoting an understanding of the information society, in formulating appropriate public policy responses that will shape the economic, social and political environment of the information age and in promoting the sharing of information resources, this distributional equity to involve individuals, economic and social groups, governments, and countries.

The growing economic importance of information as a resource and a sector of production cannot be over-emphasized. Information workers now represent almost, and in some countries more than, fifty percent of the employed labour force. Information work has become the dominant source of new job growth not only in the service sector but in the primary and secondary (manufacturing) sectors as well. The character of work as well as the composition of the workforce is being fundamentally changed by information technology. The service sector, including information services, has greatly increased its share of the national output of advanced economies. Significant productivity gains are resulting from the automation of the workplace, in mines and on the farm and in factories, as well as in the office. Information-based services and activities can be predicted confidently to be the major source of new economic growth in the future.

Within this environment of the growing importance of information-based activity, both distributional equity and efficiency concerns call for as unrestricted and open a flow of information as possible. The classical economic paradigm of the free market system or perfect competition assumes perfect information. As such, unrestricted and open information flows are a prerequisite to effective competition

and the resulting benefits that such competition can offer to society. In the past, when information was a less strategic resource than at present, the failure to meet this condition, while important, was not a major barrier to realizing relatively effective competition in most markets. As the role of information changes, however, this is becoming less true. The open and unrestricted flow of information, therefore, has become more important than ever before to realizing the efficiency gains of effective competition.

In terms of distributional equity, the primary concern is equality of opportunity – the right of all individuals, groups, and countries to compete without artificially imposed barriers to entry. The traditional economic market paradigm also assumes free entry by producers and consumers to markets. This condition, also, traditionally, has not been met. This is why governments have enacted anti-trust and anti-combines laws and restrictive trade practices legislation. But these measures are not adequate by themselves to ensure the condition of free entry in an information economy.

We must also recognize, however, that some constraints on open and unrestricted access may still be in order. Individual concerns of privacy, for example, require some form of control on the exchange of personal information without an individual's consent. The political sovereignty of nations may require some control over offshore storage of data deemed essential to the national security or dissemination of such data abroad. The cultural sovereignty of nations may require some control over importation of foreign-produced information products, including, particularly, broadcast programming and educational data bases. Finally, free entry and information flows which enhance effective competition must be recognized to be concerned with non-market barriers. Market barriers in the form of economic prices must be maintained at a level which provides adequate incentive to economic agents to join the market. Otherwise, information-based activities cannot become a source of economic growth. Thus, we must recognize that open and unrestricted information flows do not mean "free" information. Incentives for private economic agents must be maintained through an appropriate price mechanism and such policy devices as copyrights and patents for the protection of intellectual property.

Two qualifications, however, must be added to the economic incentives argument:

- "appropriate" economic incentives do not imply the free rein of unfettered market forces; appropriate must be seen in terms of just and reasonable incentives; and
- when the maintenance of appropriate economic incentives creates inequities in distributional terms which society deems unacceptable, alternative and complementary mechanisms for addressing these distributional concerns may be required. Government sponsored distribution of information resources through a public library system, for example, falls into this category.

The far-reaching implications of the changing role of information in the economy and society also raise a different kind of distributional concern — one relating to participation by all relevant constituencies in the decision-making process which will determine the character of the information society. This is called for at the basic level of fostering increased understanding of the change underway but also because there are trade-offs to be made. Where there will be both winners and losers, all must be heard if the principles of a democratic society are to be maintained.

Measures of Information Resources

To be able to better promote the contribution that information and information technology can make to economic and social well-being, as well as to be able to minimize the costs of the transition to an information society, we need to foster improved understanding. Improved understanding, in turn, depends to a significant degree on developing appropriate measures to evaluate the role of information as a resource and as a productive sector of the economy.

Present methods of measuring economic activity do not capture the role of information particularly well. Because so much of the use of information in economic production is as an intermediate input and is, moreover, often self-provided, internally, by the firm or institution, it is difficult to measure the gross output of the information sector and to capture this in standard indicators such as Gross National Product. More significantly, the value of information may differ

substantially from the cost of information. The value of information is a function not only of availability, but also of time and place. The value of information, moreover, varies with the characteristics of the user and of the use to which it is put. For example, the value of information on commodity futures is different for a commodities trader than for the average person on the street. The same information differs in value for the trader depending on whether he/she is dealing in the spot market or the forward market. Information on today's prices are more valuable today than next week and must be available to the trader at his/her own work location. All of these considerations, however, may be unrelated to the cost of obtaining the information or, at least, disproportionate to the cost. Indeed, technological change has made it possible for the trader to know virtually instantly what is happening in the market in any major trading centre in the world. Thus technology is enhancing the value of the information while, at the same time, it is reducing the cost of obtaining it; monitoring the Tokyo exchange from New York or London or Toronto via a data communications link costs far less than alternative means of obtaining the same information in the same time frame and at the same location. Finally, information is an intangible. Its role in production and marketing cannot be evaluated by breaking down the constituent parts of final output.

Given these problems in trying to measure the role of information by present methods, the conclusion emerges that new measures are needed. Such new measures may be quantitative or qualitative; the characteristics of information may be unsuited to quantitative measurement in all cases.

Further, we not only need appropriate measures but these measures must:

- be sufficiently diverse to serve the needs of the different constituencies having an interest in the information sector;
- recognize that the information sector is a horizontal sector not a vertical one i.e., it is not sufficient to measure only the formal information services sector representing information services produced by independent agents for sale in the market;
- be standardized across countries as much as possible in order to permit cross-country comparisons and analysis;
- recognize the social utility of information as well as its economic utility;

- recognize that, for special reasons, much information is supplied through governments, libraries, etc. at small or zero cost which is independent of its social utility.

The current Uruguay Round of GATT negotiations has included trade in services on its agenda for multilateral trade negotiations. Information services, already a significant part of traded services, can be expected to become even more important in the next several years, as technology continues to erode time and distance as barriers to information flow and the location of information-intensive economic activities. Thus information services will be/are a significant item for GATT negotiators to deal with in their consideration of traded services. To do this properly, they will need to come to grips with the measurement problem. This effort, if it is to be of maximum benefit, must be coordinated with other international/national efforts to develop appropriate measures and must recognize the interest in the form of such measures by all parts of the information sector.

Barriers to Information Flows

Historically, for a number of reasons both deliberate and not deliberate, a number of barriers to the open and unrestricted flow of information have been created. These barriers exist both within countries and between countries.

As noted above, there may be strong reasons to maintain some of these barriers in particular cases: for reasons of protection of individual rights, maintenance of appropriate economic incentives, and societal needs such as concerns respecting national security or cultural sovereignty. *Many of the existing barriers, however, cannot be justified on these grounds and should be removed.* Such barriers may be economic (e.g. imperfect markets), technological (e.g. lack of standards), social (e.g. lack of education/ skills by potential users), cultural (e.g. language), or political (e.g. regulatory restrictions on service providers or carriers).

Some of these may be difficult to deal with. But others are not. The standards question, for example, should be capable of relatively immediate action. Indeed, much is already taking place but could proceed even faster if appropriate encouragement were provided by government. In a similar vein, system

interconnection capabilities have been greatly enhanced by work on open systems architectures and the development of special software protocols. But governments have yet to endorse such initiatives as desirable and to invoke more stringent requirements on manufacturers of equipment and/or service providers to make use of these. Even more fundamental, the telecommunications facilities available in different parts of a country and in different countries may still be inadequate to permit enhanced information exchange. Accessibility for all citizens by ensuring that the infrastructure is available is a matter of considerable urgency.

The specific area of intellectual property law is another area which requires immediate attention. Here there is a balance to be struck between maintaining the economic incentive which intellectual property protection provides for information creators and the interest of society in having as open and unrestricted information flows as possible.

It is possible to argue that society should have greater rights with respect to the availability and use of information traditionally protected by intellectual property law on at least two grounds:

- once information exists, the incremental cost of making it available to additional users may be trivial. Efficient markets are ones which set prices equal to the incremental cost of serving an additional user. In this way, the value of the last unit produced (as given by its price) will be set equal to the value of the resources used to produce it (as given by its incremental cost) and society's welfare will be maximized. Intellectual property protection imposes an artificial barrier to this market equilibrium process by placing legal restrictions on the ability to reproduce information.
- society, through government, may directly contribute to the creation of knowledge or information (through research grants, scholarships, education subsidies, government research labs, government contracts, etc.) and thus it is inappropriate to vest all the property rights of intellectual creativity in private individuals or institutions.

The efficiency argument is, of course, the major source of conflict between openness on the one hand and the maintenance of economic incentives on the other. The efficiency argument cannot be pursued to its logical conclusion if, in the long run, the information sector is to play the economic role which it has the potential to

do. In between the present situation and this other extreme, however, some compromise should be possible. Such compromise needs to be looked at and could take several forms ranging from the time period for which protection is granted, to the terms (mandatory licensing agreements, for example), to the type of information covered. In this latter regard, secondary or derivative information (abstracts, indexes, etc.) in the area of scientific, technical and medical information is one area which suggests itself for immediate consideration.

Education

The workforce is one of the parts of the economy which will be most affected by the transition to an information economy. The job composition of the workforce will change as will the skill levels required and the relative compensation of different jobs. Education will be key to the ability of workers, and hence society, to cope with these changes.

In the information society, the educational requirements of workers will change both in terms of content and in terms of audience and delivery mechanisms. It is estimated, for example, that individuals can now expect three to four distinct career changes in their working life. This means that education will become a life-long exercise rather than a discrete one which precedes entry to the labour force, as at present. It also means that the education audience will shift from a predominately youth population to a predominately adult population. It means a likely shift from full-time studies to part-time studies while still remaining on-the-job. It means that there will be a greater demand to deliver courses to people where they work and live rather than forcing them to come to a centralized location such as a university campus to receive instruction. It means a shift to in-house training or private, specialized educational institutions versus public, general purpose institutions and/or the adaptation of the latter to incorporate the services of the former.

All of this requires serious consideration of the change in educational requirements imposed by the information society and the institutional structure best suited to respond to those requirements, including the issue of public versus private responsibility for the cost of education. In this latter regard, it will be important,

however, to maintain appropriate levels of access to education by all members of society, regardless of their private economic means.

The transition to an information economy will also cause disruption and, potentially, displacement of workers. Whether such displacement is permanent either individually or in the aggregate for the overall economy has yet to be determined. But it will certainly occur, at least individually, on a temporary basis. If the long run consequences of this are to be minimized, workers will require retraining as a means of re-entry to the labour force. This represents a further important role for education.

Finally, in an age where the creation, processing, manipulation, distribution and use of information has become the dominant form of economic activity, distributional equity concerns of society require that all citizens possess the rudimentary skills necessary to participate in such a society. This calls for the inclusion in the basic primary and secondary school curriculum of instruction in the skills and resources required for such participation. It also calls for an enhanced role of the educational function of libraries not only as a re-enforcement of the school curriculum but as a primary mechanism for reaching the post-school age population whose need to acquire such skills is as great as the present youth population.

The Role of Government

Through all of the preceding discussion, one inescapable conclusion emerges — that government has an essential role to play, as an agent of both economic change and social change, in partnership with other constituencies of the information society, to ensure that the benefits of the information society are maximized overall and that the rights of individuals and of society at large are protected.

The particular form and content of government action will differ from one country to another depending on the form of government and the unique characteristics of the society. In general, however, we can describe seven roles which, in some fashion, government has a role to play. These are:

- broker
- facilitator

- information producer
- information provider
- educator
- arbiter for the disadvantaged
- guardian of the public good.

It is to be emphasized that this is not a recommendation for a high degree of government intervention in the economy or of the displacement of markets by a centralized, planned economy. It is a recommendation for government to play a lead role in ensuring that a coherent framework for the development of an appropriate information policy is in place, a framework which takes account of the need to include effective representation by all constituencies and which recognizes the international character of many of the issues raised by the information society.

One particular responsibility of government, which has traditionally been accepted but has now become more important than ever, is to maintain support for the creation and provision of a minimum level of information available to, and accessible by, all citizens regardless of means. This relates not only to the publication and the distribution of the government's own information but to the public availability of many other kinds of information. In this, government support for the public library system has played an essential part. The continuation of such support as a means of providing a general level of public availability and accessibility must be maintained.

Conclusion

The Glenerin Declaration is only a beginning to a consideration of the economic, social, cultural, technological, and political dimensions of the changing role of information in the economy and society. The areas it singles out for attention are ones which are important building blocks in fostering greater understanding of the transformation to an information society, in coping with the changes underway and in developing appropriate public policies to ensure that the benefits of the change are maximized in an environment which recognizes the legitimate concerns of all constituencies, the rights of individuals, and the needs of society.

The basic principle of open and unrestricted information flows, within nations and amongst nations, is fundamental to such an environment. While there are legitimate qualifications to this principle depending on the unique circumstances of individual citizens and countries, in a democratic society, open information is, ultimately, the best guarantee of the rights of all.

Annex A

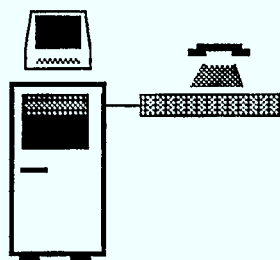
**Agenda and List of Participants
for
Conference on ACCESS:
Information Distribution, Efficiency and Protection**

**Glenerin Inn
Mississauga, Ontario**

May 13-15, 1987

AGENDA

May 13, 1987



9:00 - 9:10 Introduction to Agenda and Logistics of Meeting: Barry Lesser (Canada)

9:10 - 9:40 **Setting the Agenda:** Introductory statements by Leaders of National Delegations

Royston Brown (U.K.)

Lee Edwards (U.S.)

A.R. Dobell (Canada)

9:40 - 12:30 **Distribution Issues**

Chair: Marianne Scott (Canada)

Distribution, as used here, is concerned principally with the identification of potential barriers to access to information and/or information markets by information suppliers (providers, distributors etc.) and consumers (users). The result of these barriers is that there are winners and losers both directly in terms of the supply of information and the use of information and indirectly in terms of income distribution and social well-being. The emphasis will be on factors inherent in the changing role of information in the economy which will cause deviation from present circumstances. Specific issues include:

- identification of potential barriers (economic, geographic, technological, cultural, physical and political);
- the implications for the universality of producer/consumer access – across borders, regions and individuals;
- the distribution implications of alternative market structures, price structures and price levels in information markets;
- the trade-off between equity and efficiency in the supply and use of information;
- the need for measures of distributional impact and consequences.
- the policies/mechanisms required to achieve specified distributional goals for information.

9:40 - 10:15 **Keynote Address:** *An Overview of Distribution Issues* – John Martyn (U.K.)

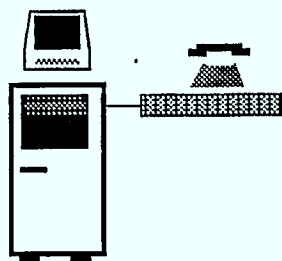
10:15 - 10:30 Coffee

10:30 - 12:30 Discussion

12:30 - 2:30 Lunch

AGENDA

May 13, 1987
(Continued)



2:30 - 5:00

Efficiency Issues

Chair: Royston Brown (U.K.)

Efficiency, as used here, is concerned principally with the efficient allocation and the effective use of resources. This involves the way in which information is produced, distributed and used. The nature of information, including particularly timeliness, relative to value and use is a central issue around which the discussion should revolve. The nature and extent of competition in information markets will be a crucial factor influencing efficiency. Emphasis should be on factors inherent in the information economy which will cause deviation from present circumstances. Specific issues include:

- measurements of the information economy (Canada, U.K., U.S.);
- the implications of the trend to the increasing commoditization of information (versus the treatment of information as a basic resource);
- the means for maintaining the incentives for creation of information/knowledge;
- the significance of the distinction between basic information/research etc. and value-added services;
- the infrastructure requirements for efficient information markets;
- the efficiency argument for government (sponsored) production of information; government (sponsored) distribution of information;
- the education/training needs of an information-intensive society;
- the policies/mechanisms required to realize efficiency in the production, distribution and use of information and in the operation of information markets.

2:30 - 3:00

Keynote Address: *An Overview of Efficiency Issues* – Chris Burns (U.S.)

3:00 - 3:15

Coffee

3:15 - 5:00

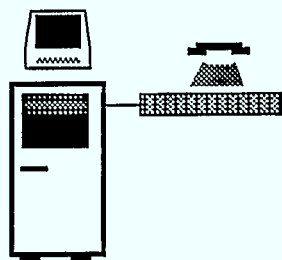
Discussion

Evening

Dinner and Informal Discussion

AGENDA

May 14, 1987



9:00 - 12:00

Protection Issues

Chair: Lee Edwards (U.S.)

Protection, as used here, is concerned principally with the attenuation of access for economic, cultural and political reasons. It will draw on the efficiency and distribution sessions as a means of identifying both some of the areas where attenuation of access rights may be called for and in analyzing potential trade-offs with either distribution or efficiency goals. Emphasis will be placed on identifying both the costs and benefits of protective measures as well as the problem of enforceability. Discussion should revolve around the factors inherent in the changing role of information in the economy which will cause deviation from present circumstances. Specific issues include:

- protection of intellectual property rights versus protection of the public interest in intellectual property;
- privacy concerns;
- the need for product liability laws;
- computer security;
- the accuracy of computer files;
- preservation of the cultural record;
- cultural sovereignty;
- the enforceability of protection measures, given the trends in technology (e.g. the increasing globalization of the telecommunications network);
- the policies/mechanisms called for to provide protection where required.

9:00 - 9:30

Keynote Address: *An Overview of Protection Issues* – Barry Lesser (Canada)

9:30 - 10:00

Discussion

10:00 - 10:15

Coffee

10:15 - 12:00

Discussion

12:00 - 12:30

Formation of Working Groups

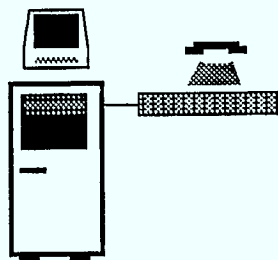
12:30 - 2:00

Lunch

AGENDA

May 14, 1987
(Continued)

- 2:00 - 5:00 Working group discussions re recommendations for policy agenda.
1. *Economic Issues and Policy Recommendations*
Chair: Don MacLean (Canada)
Rapporteur: Jack Meadows (U.K.)
 2. *Political Issues and Policy Recommendations*
Chair: Toni Carbo-Bearman (U.S.)
Rapporteur: Maureen Grieves (U.K.)
 3. *Socio-cultural Issues and Policy Recommendations*
Chair: E. Smith (Canada)
Rapporteur: Vivian Arterbery (U.S.)
 4. *Technological Issues and Policy Recommendations*
Chair: Brian Perry (U.K.)
Rapporteur: Dan Carter (U.S.)
- 6:00 - 7:30 Dinner
- 8:00 - 10:00 Continuation of Working Group Sessions



AGENDA

May 15, 1987

9:00 - 12:30 ***Policy Recommendations***

Chair: A.R. Dobell (Canada)

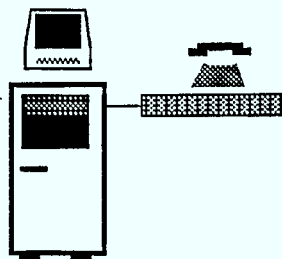
9:00 - 10:15 Reports of Working Groups

10:15 - 10:30 Coffee

10:30 - 12:00 Discussion, including reconciliation of working group recommendations and setting priorities.

12:00 - 12:30 Conclusion/Adjournment

12:30 - 2:00 Informal Luncheon



Access: Information Distribution, Efficiency and Protection

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The British Library

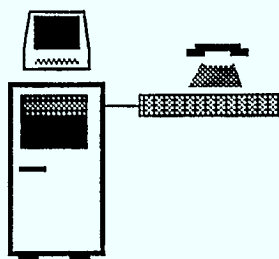
The U.S. National
Commission on Libraries
and Information Science

in association with

Department of Communi-
cations (Government of
Canada), the Canada
Institute of Scientific and
Technical Information and
the National Library of
Canada

Glenerin Inn
Mississauga, Ontario

May 13-15, 1987



List of Participants

Canada

Arthur Cordell
Science Council of Canada

A.R. Dobell
President
Institute for Research on Public Policy

Barry Lesser
Institute for Research on Public Policy

Judith McAnanma
Hamilton Public Library

Marianne Scott
National Library of Canada

Elmer Smith
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Louis Vagianos
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U.K.

Royston Brown
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Maureen Grieves
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John Martyn
The Information Research Group
Polytechnic of Central London

Neil McLean
Library Services
Polytechnic of Central London

Jack Meadows
Department of Library and Information Studies
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Brian Perry
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Peter Rothwell
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U.S.

Lee Edwards
Institute on Political Journalism
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Vivian J. Arterbery
U.S. National Commission on Libraries & Information Science

Toni Carbo Bearman
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Christopher Burns
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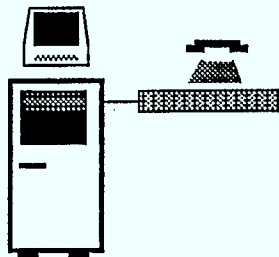
Robert M. Hayes
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Forest Woody Horton, Jr.
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Donald King
King Research, Inc.

David Penniman
Libraries and Information Systems
Centre
AT&T Bell Laboratories

Richard Rowe
Faxon Company



Annex B

**Agenda and List of Participants
for
Conference on the Role of Information in the Economy**

**Endicott House,
Dedham, Massachusetts**

May 26-28, 1986

AGENDA

May 26-27, 1987

Monday, May 26

8:00 - 10:00 pm Informal Reception

Tuesday, May 27

7:30 - 8:15 Buffet Breakfast

8:30 - 8:45 Introductions and Welcome

Moderator: Toni Carbo Bearman

8:45 - 9:30 **Session I: Issues Overview**

Moderator: Daniel Carter

"An Introduction to the Issues"

John Martyn

Richard Rowe

9:30 - 10:15 **Session II: The Structure of Information**

Moderator: Margaret Graham

"The Structure of Information:

A Taxonomy"

Donald King

10:15 - 10:30 Coffee break

10:30 - 11:15 "The Knowledge Industry in the U.S.,
1960-1980 — A Profile of the
Information Economy"
Michael Rubin

11:15 - 12:00 "Value / Cost of Information"
Joseph Duncan

12:15 - 1:45 Buffet Lunch

2:00 - 3:15 **Session III: Responses to
Sessions I and II**

Moderator: Stephen Graubard

Christopher Burns

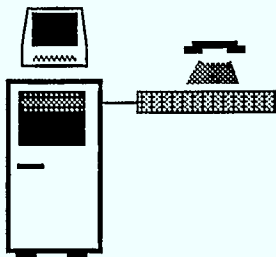
Arthur Cordell

3:15 - 3:30 Coffee break

3:30 - 5:00 Continued discussion

6:00 - 7:00 Reception

7:00 - 8:00 Dinner



AGENDA

May 28, 1987

- | | |
|---------------|--|
| 7:30 - 8:15 | Buffet breakfast |
| 8:30 - 9:15 | Session IV: Information Ownership

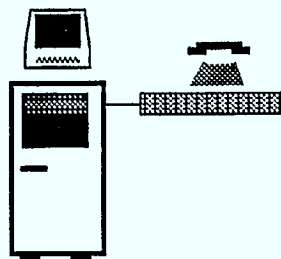
Moderator: Kenneth Cooper
"Information Ownership:
Intellectual Property, Creativity,
and Societal Issues"
Rod Dobell |
| 9:15 - 10:30 | Session V: Further Responses and
Discussion of Policy Issues

Moderator: Barry Lesser

Harry East
Marianne Scott |
| 10:30 - 10:45 | Coffee break |
| 10:45 - 11:30 | Continued discussion |
| 11:30 - 12:00 | Session VI: Summary, Recommend-
ations, and Next Steps

Summary—William Paisley, Rapporteur

Discussion—Richard Rowe and
Toni Carbo Bearman |
| 12:30 - | Buffet lunch |



Role of Information in the Economy

List of Participants

Truett Airhart
President
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Yale Braunstein
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University of California at Berkeley

Royston Brown
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Rowland Brown
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Christopher Burns
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Christopher Burns, Inc.

Daniel H. Carter
Consultant
Strategic Business Services and Management

Robert Chartrand
Senior Specialist in Information Sciences
Congressional Research Service

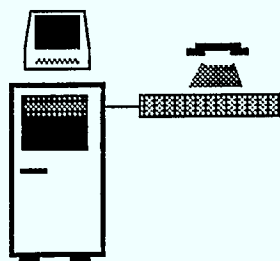
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American Federation of Information Processing Societies

Kenneth Cooper
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Arthur Cordell
Science Council of Canada

A.R. Dobell
President
Institute for Research on Public Policy

Kenneth Dowlin
Director
Pikes Peak Library District



Joseph Duncan
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Harry East
Senior Research Fellow
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Thomas J. Galvin
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Margaret H. Graham
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Exxon Research and Engineering Company

Stephen Graubard
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Daedalus

Ted Grusec
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Department of Communications, Canada

Catherine Harris
Department Editor
Business Week

Elinor M. Hashim
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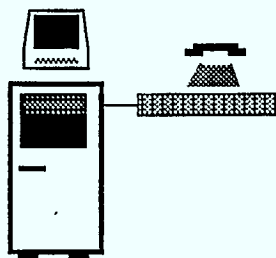
Forest Woody Horton, Jr.
Consultant

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Barry Lesser
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William Paisley
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David Penniman
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AT&T Bell Laboratories

David Roux
Chief Executive Officer
Datex Corporation

Richard Rowe
President
Faxon Company

Michael Rubin
Attorney Advisor
General Council's Office
U.S. Department of Commerce

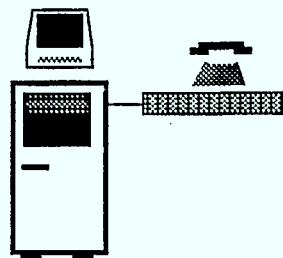
Marianne Scott
National Librarian
National Library of Canada

Elmer Smith
Director
Canada Institute for Scientific and Technical Information

Gary Strong
State Librarian
California State Library

Richard Stursberg
Assistant Deputy Minister
Department of Communications, Canada

Paul G. Zurkowski
President
Information Industry Association



Annex C

Agenda and List of Participants
for
Conference on the National Information
Infrastructure: The Role of the Public Sector

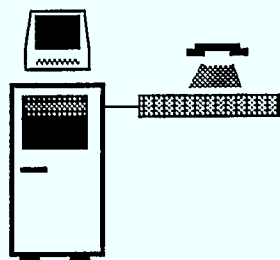
Selsdon Park Hotel
South Croydon, U.K.

October 31 to November 2, 1986

AGENDA

Oct 31, 1986

12:30	Sherry reception
1:00	Lunch
3:00	Introduction by leaders of delegations: Kenneth Cooper, United Kingdom Barry Lesser, Canada Lee Edwards, United States
4:00	Tea
4:30	Infrastructure and agencies: John Martyn, United Kingdom Chris Burns, United States Elmer Smith, Canada Discussion
6:15	Close of Session
7:30	Dinner



AGENDA

Nov. 1, 1986

9:00

Library and information planning:

Marianne Scott, Canada

David Penniman, United States

Royston Brown, United Kingdom

Discussion

10:45

Coffee

11:15

Monitoring the information infrastructure:

Woody Horton, United States

Bill Melody, United Kingdom

Arthur Cordell, Canada

Discussion

1:00

Lunch

2:30

The market for knowledge sector workers: a trlnational research project:

Chaired by Barry Lesser

Lars Osberg, Canada

Ed Wolff, United States

4:00

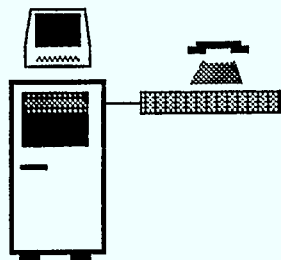
Tea

4:30

Discussion and brief contributions from other participants

7:30

Dinner



AGENDA

Nov. 2, 1987

9:00

The public/private debate:

Rod Dobell, Canada

Bob Hayes, United States

Maureen Grieves, United Kingdom

Discussion

10:45

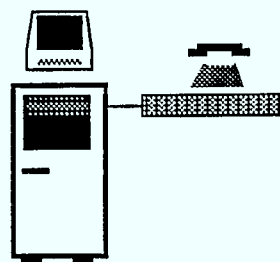
Coffee

11:15

**Conclusion and agreement on
further work**

12:30

Lunch and disperse



National Information Infrastructure: The Role of the Public Sector

List of Participants

Canada

A. Cordell
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E. Smith
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L. Vagianos
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United States

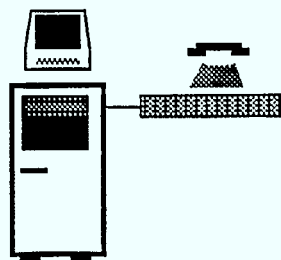
C. Burns
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R. Hayes
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L. Edwards
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J. Griffiths
Vice President
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E. Hashim
NCLIS - Immediate Past Chair
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F.W. Horton
Consultant

D. Penniman
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R. Rowe
President
Faxon Company

United Kingdom

R. Brown
Chairman-LISC
Cambridgeshire County Council

K. Cooper
Chief Executive
British Library

P. Gibbons
Director
Archetype

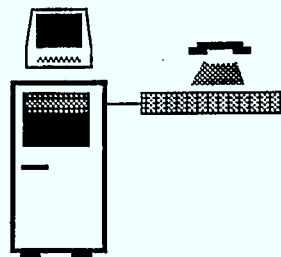
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J. Martyn
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Aslib

A.J. Meadows
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University of Loughborough



W.H. Melody
Programme on Information & Communication Technologies
Economic and Social Research Council

N. Morley
The Publishers Association
University College & Professional Publishers Council

B.J. Perry
Director
Research and Development Department
British Library

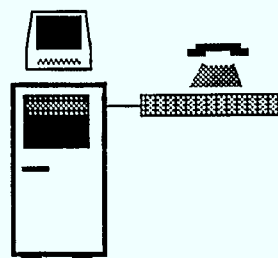
P. Rothwell
Information Technology Division
Department of Trade & Industry

C. Smith
Information Enterprises

The Market for Knowledge Sector Workers: Project Team

L. Osberg
Dalhousie University
Halifax, Canada

E. Wolff
New York University
United States



Annex D

List of Papers Presented in the series of Tri-National Conferences on The Role of Information in the Economy

Note: Selections marked with an asterisk (*) indicate papers available from the Institute for Research on Public Policy (P.O. Box 3670 South, Halifax, N.S., B3J 3K6) at a charge of \$5.00 (Can.) each. These papers are as originally presented and have not been revised or edited.

List of Papers

- * Toni Carbo Bearman, "Selected Information Policy Issues."
- * Royston Brown, "The Role of the Public Sector in the National Library and Information Infrastructure."
- * Christopher Burns, "The Efficiency of Our Information Economy."
- * Arthur Cordell, "Monitoring the Information Infrastructure."
- * A.R. Dobell, "Information Ownership: Intellectual Property, Creativity, Societal Issues."
A.R. Dobell, "The Private/Public Sector Debate."
- * Joseph Duncan, "The Worth and Value of Information."
- * Forest Woody Horton, Jr., "A Business Format for the National Information Infrastructure."
- * Forest Woody Horton, Jr., "Monitoring the Information Infrastructure."
- * Donald King and J. Griffiths, "The Structure of Information: A Taxonomy."
(Cost of this paper is \$10 Can.)
- * Barry Lesser, "An Overview of Information Protection Issues."
- * Barry Lesser and Louis Vagianos, "A Mapping of the Information Sector."
- * British Library, "Conference Report," Conference on The National Information Infrastructure: The Role of the Public Sector, Selsdon Park Hotel, England, October 31 - November 1, 1986.
- * John Martyn, "An Introduction to the Issues."
- * John Martyn, "An Overview of Information Distribution Issues."
- * Neil McLean, "Alternative Strategies for Libraries: Methodological Analysis."
Lars Osberg and Ed Wolff, "The Market for Knowledge-Sector Workers: A Trinational Research Project."
- * William Paisley, "Rapporteur's Summary," Conference on The Role of Information in the Economy, MIT Endicott House, May 26-28, 1986.
- * David Penniman, "Preparing Libraries for a Competitive Environment."

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