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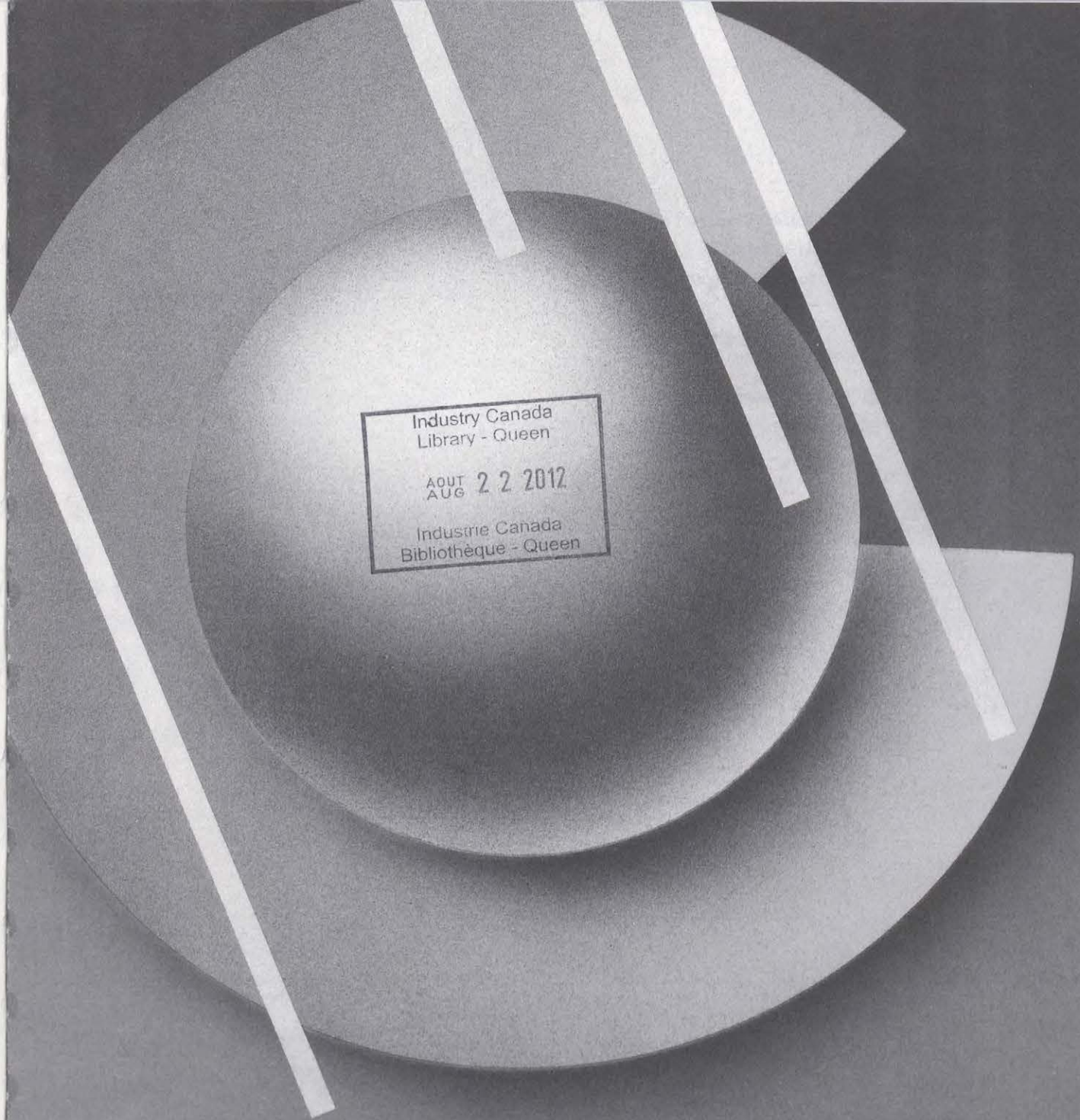
ANNUAL REPORT

1988-1989

Communications Canada



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To:
His Excellency the Right Honourable Ramon John Hnatyshyn,
P.C., C.C., C.M.M., C.D., Q.C., Governor General and
Commander-in-Chief of Canada

Your Excellency:

I have the honour to present the Annual Report of the Department of Communications for the fiscal year ending March 31, 1989.

I remain,
Your Excellency's obedient servant,

Marcel Masse
Minister of Communications

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- Museum policy discussion paper, *Challenges and Choices*, released.
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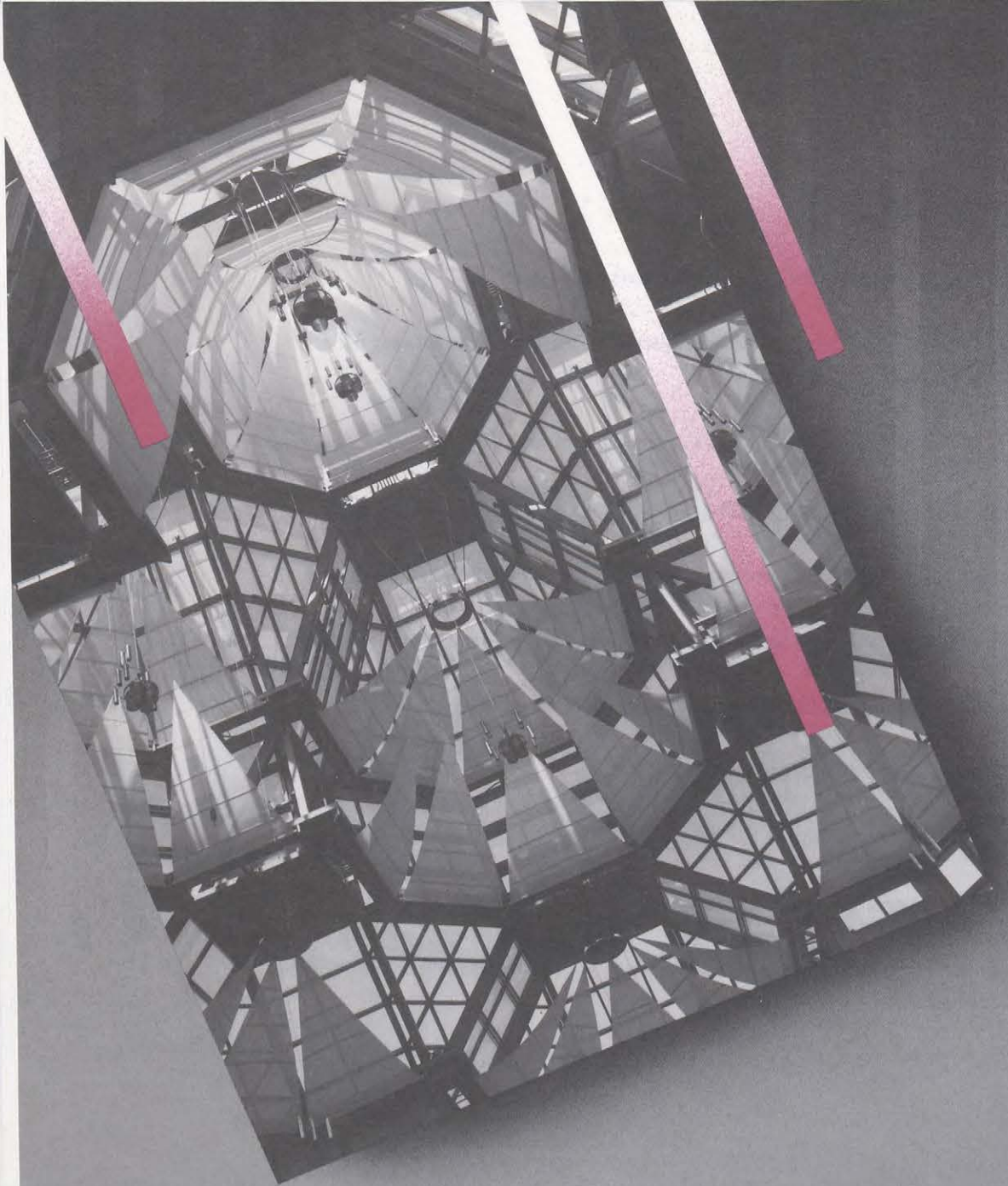
- The Advisory Committee on the Implementation of Integrated Services Digital Network (ISDN) releases its report.



INTRODUCTION

The Department's mission reflects its central role within the federal government in strengthening the nation through communications and culture.

The Department of Communications carries out this role by ensuring:

- that Canada's communications systems evolve in an orderly fashion at the forefront of global developments while continuing to meet the needs of all Canadians at affordable costs, and

- that Canadians have the freedom to choose a wide selection of Canadian cultural products and information services among the broad international choices being carried on our communications systems.

Since its inception in 1969, the Department of Communications has promoted the development and use of the national communications system that links Canadians from all regions through a variety of conventional and newer technologies such as television, telephone, satellite, electronic media, radio and fibre optics. The increasing power and flexibility of the communications infrastructure during the past 20 years, the result of the computerization of communications devices and networks, has made it the very nervous system of the information society. Consequently, policies for its development and use have a crucial bearing on the achievement of national social and economic goals.

With the transfer of the arts and culture program from the Department of the Secretary of State to the Communications Portfolio in 1980, the Department's mandate broadened to include greater emphasis on Canadian cultural products, the preservation of Canadian heritage and support for Canadian creators in the cultural industries.

The integration of communications and culture within a single Department provides a base for utilizing the full potential of emerging communications and computer technologies. These are powerful new tools for the production and dissemination of content by Canadian creators, giving rise to a host of culturally and economically important information services and cultural products for consumers.

The Honourable Marcel Masse, Minister of Communications, during a tour of the Communications Research Centre, Shirleys Bay.

◁(Photo opposite page.) The new National Gallery of Canada officially opened May 1988. This is a spectacular view of the ceiling of the Gallery's Great Hall. (Photo by Fiona Spalding-Smith, courtesy of the National Gallery of Canada.)

TWENTY YEARS OF SERVICE, INNOVATION AND CREATIVITY

At the end of the fiscal year under review, the Department of Communications reached the age of twenty years. Employees have been making preparations to mark the anniversary year, April 1, 1989 to March 31, 1990. During the year,

Deputy Minister, Alain Gourd, receives the United Way Flag from George Anderson, President of Canada Mortgage and Housing Corporation (CMHC) at a ceremony in December 1988. CMHC hosted the 1988 Federal Service Division campaign.

the Department will be casting a glance backwards over its history, reflecting on the evolution of its role in Canadian life and celebrating its accomplishments. Anniversary plans include everything from the Department's role as official co-ordinator of the 1989 Public Service United Way campaign, to the production of publications to be distributed to the Department's client groups. New awards have been established to recognize individual and group achievements both inside and outside the Department. As well, special efforts will be made over the coming year to heighten public awareness and understanding of the Department's important work — for example, the public and our industry partners will be invited to open houses at the Department's world-renowned research facilities.

THE DEPARTMENT'S MISSION

The Department of Communications' mission is expressed in one short phrase — "NATION BUILDING: helping Canadians share their ideas, information and dreams." It reflects the dynamic link between the two central areas of the Department's work — the communications systems that join Canadians, and the arts and culture Canadians share.

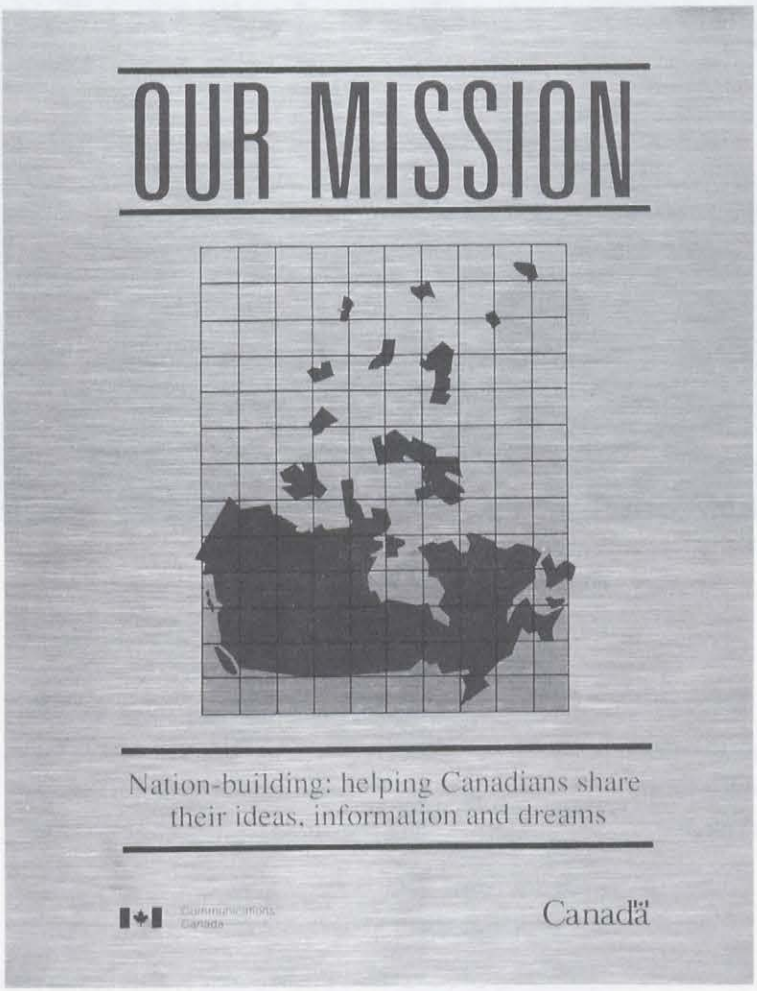
The operating principles that guide this mission have also been expressed in simple terms — service as our highest goal; caring about individuals; good management; effective communications; recognition of achievement; and teamwork and shared values.

COMMUNICATIONS AND CULTURE PORTFOLIO RESPONSIBILITIES

The Minister of Communications is responsible to Parliament for enabling legislation for certain Crown and departmental corporations, regulatory agencies and branches of government. The Minister's portfolio includes:

The Canadian Radio-television and Telecommunications Commission
The Canadian Broadcasting Corporation
Telefilm Canada
The National Arts Centre
The National Film Board of Canada
The National Museum of Science and Technology (including the National Aviation Museum)
The National Museum of Natural Sciences
The Canadian Museum of Civilization (including the Canadian War Museum)

The National Archives of Canada
The National Library of Canada
The National Gallery of Canada (including the Canadian Museum of Contemporary Photography)
The Canadian Cultural Property Export Review Board
The Canada Council

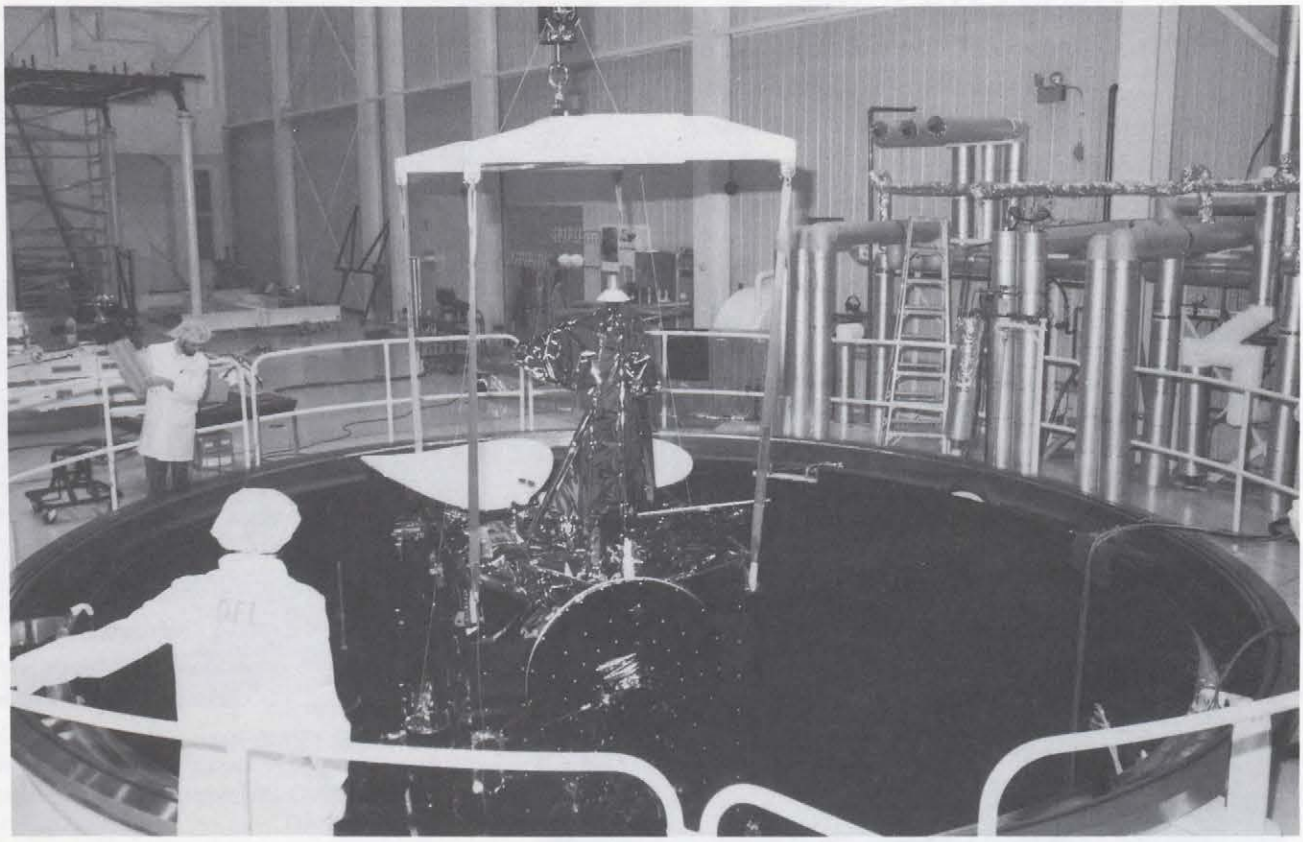


The portfolio receives advice from the National Library Advisory Board, the National Advisory Committee on Culture Statistics (which also reports to Statistics Canada), and Consultative Committees on Communications with the provinces.

STATUTES

The Minister of Communications is responsible to Parliament for all or part of the following statutes:

The Department of Communications Act
The Telegraphs Act
The Canadian Radio-television and Telecommunications Commission Act
The National Telecommunications Powers and Procedures Act
The Telesat Canada Act
The Radio Act
The Railway Act
The Broadcasting Act
The Canada Council Act
The Canadian Film Development Corporation Act
The Cultural Property Import and Export Act
The National Arts Centre Act
The National Film Act
The National Library Act
The National Museums Act
The National Archives of Canada Act



The Olympus *flight model being lowered into the vacuum chamber at the David Florida Laboratory.*

THE PROGRAM APPROACH

The Department of Communications is organized in six sectors, each responsible for a different segment of the Department's program.

Technology, Research and Telecommunications

- formulates policies related to the development of the national communications network, including radio, wire, cable and satellite systems. The sector also conducts research and disseminates information on new technologies and services, and works to promote the use of new telecommunications and informatics technologies by government, industry and the public. The Government Telecommunications Agency operates within this sector.

Cultural Affairs and Broadcasting

- fosters an environment in which Canada's heritage is preserved and made accessible, artistic expression can flourish, cultural markets can develop and Canadian audiences have increased access to cultural products and services.

Spectrum Management and Regional Operations

- manages the use and development of the radio frequency spectrum in Canada, and protects Canadian interests by representing Canada in the negotiation of international agreements on the use of the spectrum and the geostationary satellite orbit. It also manages the Department's operations throughout Canada.

Corporate Policy

- comprises responsibilities for strategic planning, federal-provincial relations, international-relations, legal services, information services, program evaluation, and internal audit.

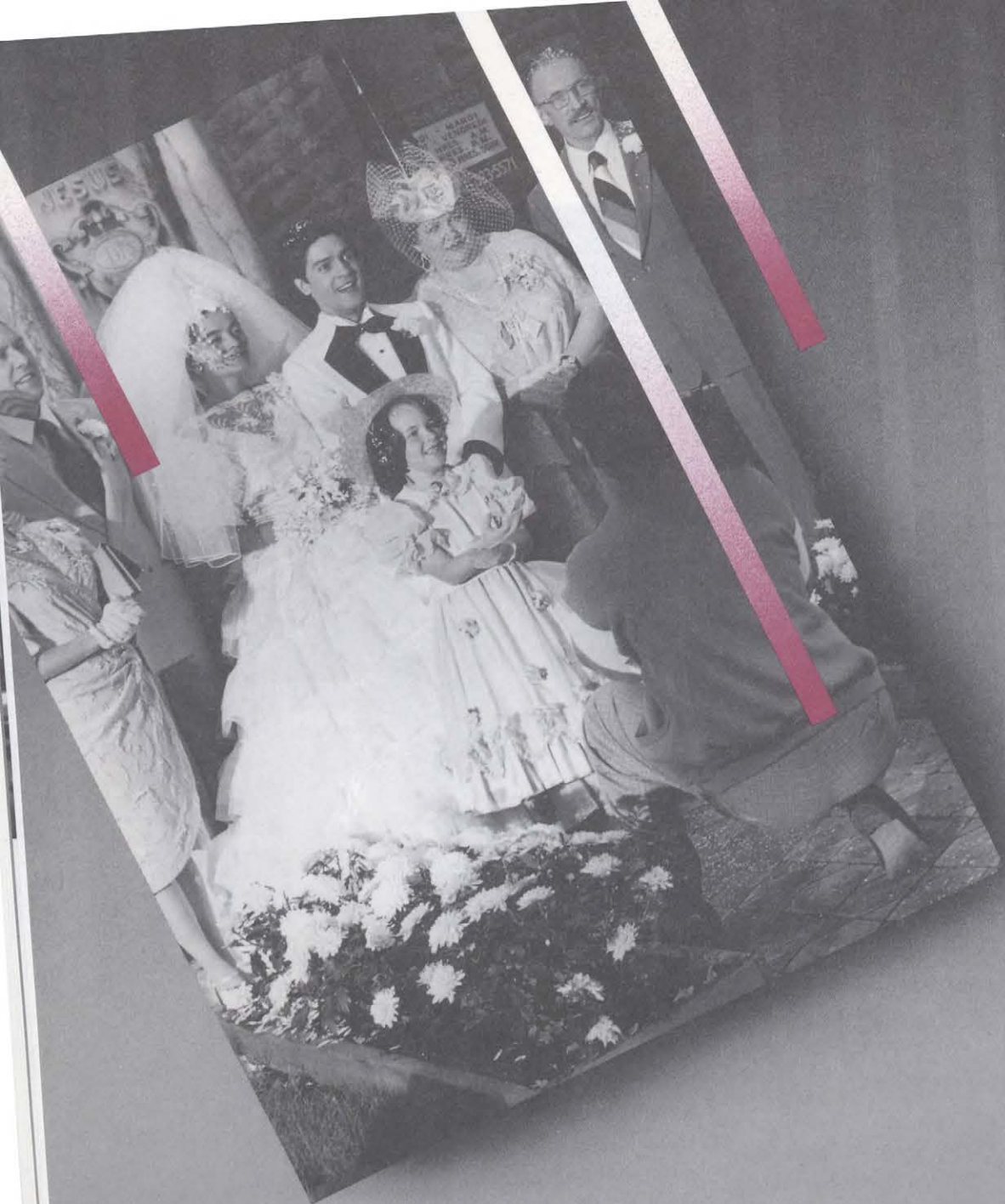
Corporate Management

- supports and advises the Minister and departmental officials, assisting them in exercising effective management and control as they carry out the Department's mission.

Summits and Development

- develops and co-ordinates the Department's activities in support of Commonwealth and Francophonie initiatives, as well as activities related to economic development in the Province of Quebec in the fields of communications and culture, including the management of Economic and Regional Development Agreements.

Stacie Mistyshyn, Rebecca Haines and Sara Ballingall shown in a scene from the episode "Stage Fright" of the television drama Degrassi Junior High. (Photo courtesy of Telefilm Canada.)



POLICY ISSUES

CONVERGENCE

An increasingly important influence on the Department's approach to strategic policy development is the concept of convergence.

This concept has two aspects: the convergence of telecommunications and computer technologies, a consequence of the progressive digitization of communications networks and services; and, a more recent global phenomenon, the gradual erosion of traditional boundaries between the media for communications – the physical infrastructure – and the message content – the products of the cultural and information services industries.

Technological convergence has been a salient feature of the development of the telecommunications infrastructure during the past two decades. Twenty years ago, the telephone had scant bearing on radio or television. Whereas the telephone transmitted conversations over copper wire, radio and television sets received signals broadcast by transmitters. Today, television and radio signals, telephone conversations, and data transfers between computers are increasingly being integrated, in digital form, on common facilities such as coaxial cable, fibre optics, and microwave, including satellite systems. Moreover, conventional switching technologies have been replaced by powerful computerized digital switching systems. As a result, distinctions among types of telecommunications carriers based on the kinds of technologies employed by each are blurring.

Responding to the challenge of developing a regulatory environment that reflects these profound changes has influenced policy development in its many aspects: the need to foster Canadian technological innovation; enhancing Canadian competitiveness in the global marketplace; and maintaining affordable access by all Canadians to essential telecommunications services.

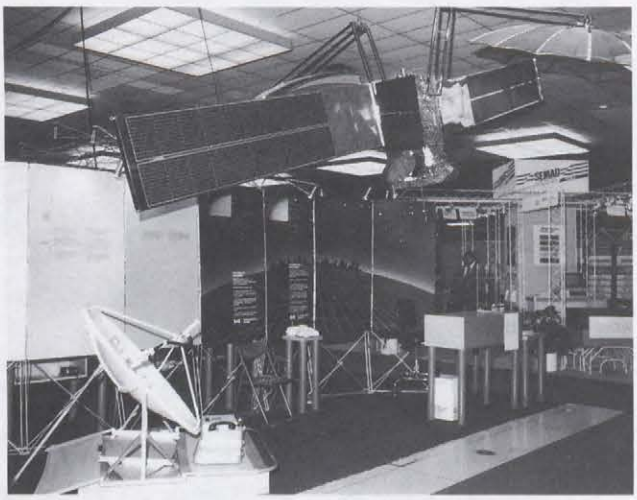
CBC coverage of the Yukon Election, February 20, 1989. CBC North broadcasts on more than 100 northern transmitters, using two satellite channels across four time zones. (Photo courtesy of CBC.)

◁ *(Photo opposite page.) Les Beaux Dimanches presentation of Le Grand Jour was a popular CBC French television production. (Photo courtesy of CBC.)*

The convergence of information storage and communications networks, on the one hand, and cultural content, on the other, poses equally complex policy challenges that go to the heart of the Department's mission.

Illustrative of the possibilities are laser disks or compact disks (CDs), an information storage technology conceived originally for the recording of video and audio signals. Because CDs are digitally based, they are an infinitely flexible medium for computer manipulation of any kind of data, audio or visual. Another example

is the evolution of electronic text-editing into desk-top publishing, a relatively inexpensive technology that gives individuals and smaller organizations the capacity to publish, by means of either conventional "hard copy" or electronic distribution.



The Department of Communications' display of communications technologies was a highlight of the Canadian High Technology Show held in Ottawa in May 1988.

As the local distribution networks provided by the telephone and cable television industries acquire broadband service capabilities, an expanding array of new tools for the production and dissemination of content are becoming available to creators, resulting in new information and cultural products for consumers. Canadian content will become not only a more saleable commodity but also a more central element of the national economy.

Today's rapid technological advances multiply the power and reach of communications and information systems, leading to a growing interdependence between carriage and content, between media and culture and in the relationship between communications and the economy as a whole. Convergence implies an imperative: that to thrive in the global information economy, Canadians must have both the means to create content and the means to communicate it to others.

TELECOMMUNICATIONS

The development and exploitation of a national telecommunications system — from the transcontinental telegraph in 1885 to the establishment in the early 1970s of the world's first commercial geostationary satellite for domestic communications — has been one of the foundations of Canada's nationhood, serving at once social, economic and cultural goals. Moreover, since the Second World War the country's home-bred expertise in the research, development and commercialization of telecommunications technology has been a crucial asset in keeping Canada on the leading edge of the strategically important digital and electronics-based high-technologies industries.

However, fresh challenges lie ahead. Throughout the industrialized world, governments, recognizing the centrality of information distribution within advanced, modern economies, are reforming their regulatory structures, seeking to maintain, indeed enhance, the vitality of their domestic telecommunications-manufacturing and telecommunications-operating firms. Canada is not an exception and, in fact, has much at stake in a sector, which, having developed as an engine of growth in the domestic economy, is now expected to play a vital role in sustaining Canada's competitiveness in the global economy. It is from this perspective that the Department of Communications is entering the final phase of its telecommunications policy review, which will lead to a new Telecommunications Act.

ISDN Advisory Committee

A compelling example of convergence is the Integrated Services Digital Network (ISDN), a new universal telecommunications architecture, based on international standards, that provides users with voice, data and image services, all on a single copper access line. ISDN will have a profound effect on the supply of telecommunications services and the evolution of the Canadian telecommunications systems. To take full advantage of this promising technology, the Minister of Communications appointed an Industry Advisory Committee in October 1988 to make recommendations on the implementation of ISDN services in Canada. Its major recommendations support the competitive introduction of ISDN services into the marketplace, with provision for customer ownership of equipment, efficient network interconnections, and a uniform approach to service implementation across the country. This requires that Canadian standards and a national policy provide the framework for the commercial introduction of ISDN, expected in late 1990.

The Department of Communications is co-ordinating the development of Canadian ISDN Access Interface Standards. As well, the Department of National Defence and the Department of Industry, Science and Technology are active participants in the ISDN-based equipment and services field trials under way in Canada since 1987.

30-896 MHz spectrum policy review

In October 1988, the Department of Communications initiated a major policy review of the radio spectrum in the 30-896 MHz frequency bands, the portion of the spectrum most heavily used in Canada. Proposals for approximately half the bands were published for public comment; those for the remaining bands will be published in early 1990.

The proposed changes will, for example, ease congestion problems associated with cellular phones and provide space for advanced digital cellular services now under development, as well as air-to-ground telephone service for airline passengers.

Privatization

Consistent with its economic reform strategy and the policy objective of promoting a greater measure of competition among facilities-based telecommunications carriers, the Government privatized Terra Nova Tel, NorthwesTel and its holdings in CNCP Telecommunications. The Department's Telecommunications Policy Branch assisted in the process, advising on the formulation of terms and conditions designed to ensure that the privatization initiatives were consistent with the Government's telecommunications policy framework.

RADIOCOMMUNICATION BILL

Legislation governing radio in Canada will be substantially updated with the Radiocommunication Bill, tabled on August 17, 1988, the first major revision to the *Radio Act* since its passage in 1938. The Bill to update the Act reflects the enormous advances made in radio communications and related technologies during the past 50 years. Its main purpose is to promote the orderly use and efficient development of radiocommunications in Canada.

Reflecting the proliferation of electronic devices that can affect or be affected by the use of the radio spectrum, the Bill provides for greater control of substandard equipment. It gives the Department authority to regulate radio-sensitive equipment that could malfunction because of radio interference and pose a hazard to the public. The Minister of Communications would also have power, under the Bill, to seek court injunctions against harmful or dangerous interference to safety-related radio communications such as fire or police communications.

At a gala ceremony in May 1988, four distinguished Canadians were presented with information technology awards for their outstanding achievements in the use of information technology. Jim Spilsbury of Whonnock, British Columbia, receives his award from Communications Minister, Flora MacDonald.

On the other hand, the Bill will permit a relaxation of licensing requirements for various types of equipment, such as locator bracelets for hospital patients and home entertainment equipment with wireless components, where licensing is not necessary for spectrum management purposes.

Although the Bill expired on the order paper with the dissolution of the 33rd Parliament, the Government was, at year's end, ready for an early reintroduction of the legislation in the 34th Parliament.

RADIO ANTENNA SITING

In January 1988, the Department released a legal study that responded to widely expressed concerns about land use policies with respect to the siting of radio antennas and their support structures. Carried out by the University of New Brunswick, the study defined the legal issues related to jurisdiction over such siting. Since its release, departmental representatives have been meeting with municipalities, municipal associations, regulatory authorities, radio communications service providers and others to seek ways to take the concerns of local authorities into account during the processing of radio licence applications.

INFORMATION TECHNOLOGY STRATEGY

In April 1987, the Minister of Communications announced a new strategy for communications and information technology, setting the stage for a wide range of activities and developments meant to keep Canada in the forefront of information technology for years to come. The main thrusts of the strategy include: developing

a national telecommunications policy; strengthening the infrastructure for new information industries; encouraging the application of information technologies in such areas as social services, government operations and regional development; revitalizing the federal government's communications research program; and raising public awareness of the challenges ahead.

A discussion paper released in late 1987, *Communications for the Twenty-First Century*, was widely distributed, both in printed form and electronically on floppy disk and through the Key Government Documents Database operated by InfoGlobe. Since the paper's release, the Department has held regional and national consultations across the country.

Several major issues are now being examined, including regional economic disparity; the acute lack of software and databases with Canadian content (90 percent of the software used in Canada's schools is of American origin); the development of French-language software, which is an economic and cultural priority; and the wider dissemination of federal government databases. Discussions are also addressing the question of how Canadian producers can be more competitive in world markets.

SEARCH 20 FORUM

Canadian university, government and communications-industry leaders met in March 1989 at St-Sauveur, Quebec, to address the strategic role of communications technology in advancing Canada's economic and social goals. The Search 20 Forum, sponsored by the Department, addressed two vital questions: what the focus of Canada's communications research and development effort should be; and what programs and mechanisms are needed to achieve the best results possible from both public and private-sector initiatives.

Vision 2000 is one major result of the conference. A national project to improve the competitiveness of Canadian industry worldwide, its mission is to establish, by the end of the century, affordable, internationally competitive, electronic communications systems linking all Canadians with one another, and Canada with the rest of the world.

A steering committee and working groups representing a wide range of industries are now developing key elements of the project. Their reports were to be presented at the second Search 20 Forum, to be held in Alberta in November 1989.

CABINET COMMITTEE ON CULTURAL AFFAIRS AND NATIONAL IDENTITY

On January 30, 1989, the Prime Minister announced significant changes to the role and structure of Cabinet Committees, in order better to reflect the Government's priorities. Among the four new policy committees established was the Cabinet Committee on Cultural Affairs and National Identity.

The Committee comprises nine members and is chaired by the Minister of Communications. It has been charged with ensuring a sharp focus for the Government's role in assisting Canadians in fostering their sense of nationhood.

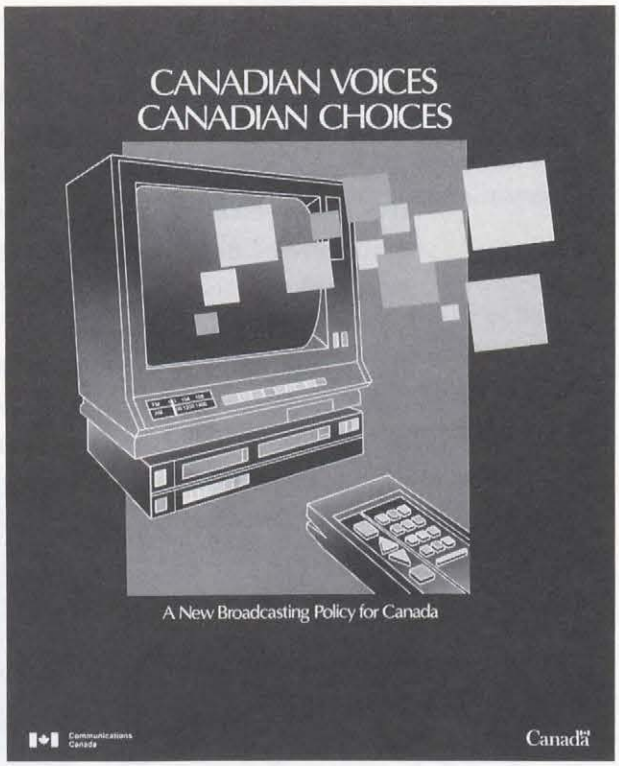
BROADCASTING POLICY

In June 1988, culminating an extensive three-year review of broadcasting policy, the Government tabled new broadcasting policy and legislation in Parliament. The policy, legislation and the Government's response to three reports of the House of Commons Standing Committee on Communications and Culture reflect the immense social, economic and technical changes that have affected broadcasting in the 20 years since the *Broadcasting Act* was enacted in 1968. Together, they constitute a blueprint to carry the Canadian broadcasting system into the twenty-first century.

The new policy, set out in the document *Canadian Voices, Canadian Choices*, committed $250 million in new funds to strengthen the production and distribution of Canadian programs. The funds are intended to increase the level of Canadian content on the Canadian Broadcasting Corporation (CBC), improve English- and French-language programming of both public and private broadcasters, improve distribution of programs to small and remote communities, develop a satellite distribution service for Native broadcasters in the North, and establish a new national radio-reading service for the blind. Additional funds are committed to help establish a national Alternative Programming Service. The extent of the Government's contribution is to be determined following public discussions with interested parties, including public and private broadcasters and non-profit organizations.

Broadcasting Bill

The Broadcasting Bill (C-136) tabled along with the new policy contains major revisions to the 1968 *Broadcasting Act*, including changes to the Canadian Radio-television and Telecommunications Commission (CRTC), anti-piracy provisions, and measures to encourage private investment in Canadian programming. Other provisions are intended to strengthen the central role of the CBC, improving its management structure, increasing financial accountability to Parliament and guaranteeing journalistic freedoms and artistic independence.



The Broadcasting Bill was passed by the House of Commons in September 1988 but died on the Senate order paper when the 33rd Parliament was dissolved. After the November 1988 general election, however, the Government announced that it intended to proceed with broadcasting legislation in the 34th Parliament.

FILM POLICY

Foreign film distribution companies dominate the Canadian market to the extent that Canadian audiences see very few Canadian films and Canadian filmmakers have little hope of having their films shown in their own country. On May 5, 1988, the Minister of Communications announced a new film policy that reflects Canada's determination to correct long-standing inequities in the way the domestic film distribution market operates. Film-industry representatives and independent producers in Canada, Australia, Europe and the United States were consulted during the policy development process.

The new policy, while not discriminating against current rights-holders and independent foreign producers, will require that rights to the Canadian market be acquired separately, with Canadian distributors given the opportunity to obtain these rights. Thus Canadian audiences will continue to enjoy full access to foreign films, although in many cases the distribution rights for these films will have been obtained by Canadian distributors in a more competitive, distinct Canadian distribution market.

The new film policy outlines a series of initiatives, including legislation, a $200 million support program, and a new Investment Canada policy governing foreign investment in the domestic distribution market. Another objective is the establishment of a Film Products Importation Office to regulate the importation of films and videos.

THE FILM PRODUCTS IMPORTATION BILL (C-134)

The Film Products Importation Bill, tabled in Parliament on June 8, 1988, is designed to regulate the importation of film products and to establish Canada as a separate and distinct film distribution market for the first time. The Bill included measures to deal with film importers who exercise a vested interest in the exhibition of certain films through control of large numbers of movie screens. An Advisory Committee chaired by the Director of Investigation and Research of the Bureau of Competition Policy would advise and report on industry compliance.

The Bill died on the order paper when the 33rd Parliament was dissolved in September 1988. The Government announced during the opening of the 34th parliamentary session that it would proceed with legislative measures to address film distribution in the Canadian market.

POLICY ON FOREIGN INVESTMENT IN THE BOOK PUBLISHING INDUSTRY

The Government's policy on foreign investment in the book publishing industry is designed to ensure the normal development of Canada's book publishing industry in a climate of increasing globalization of the publishing business. The policy supports increased Canadian ownership of Canadian publishing companies in order to improve Canadian control in the domestic market. It also encourages joint ventures in which Canadian publishers hold the majority interest, thereby helping increase Canada's share of international markets.

Since the policy was implemented in 1985, Canadian publishers have increased their share of the domestic market from 26 to 34 percent.

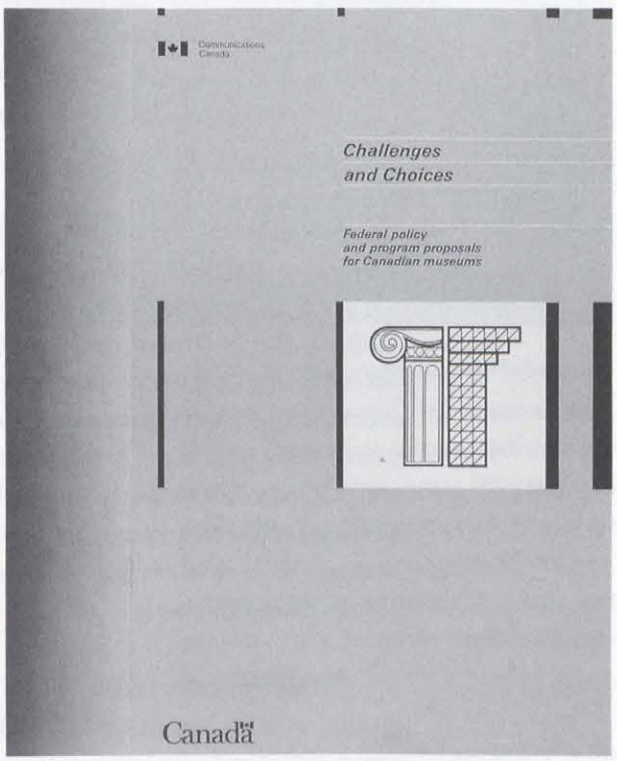
STATUS OF THE ARTIST

In January 1988, the Canadian Advisory Committee on the Status of the Artist entered the second year of its three-year mandate to advise the Government on ways and means to improve the socio-economic status of Canadian artists. The Standing Committee on Communications and Culture also turned its attention to the economic status of artists, issuing its report *Taxation of Artists and Arts*. In its response to the report, the Government stressed its commitment to ensuring fair and equitable treatment in the taxation of Canadian artists, along with a recognition of their unique status and special problems. In particular, the Government committed itself to extending registered tax status to national arts service organizations.

AMENDMENTS TO THE COPYRIGHT ACT (BILL C-60)

The long-awaited amendments to the *Copyright Act* received royal assent on June 8, 1988. The first stage of a two-phase revision, the amendments update antiquated legislation: the original Act was passed in 1924, long before the advent of such pervasive technologies as television, photocopiers, audio and videotape recorders, satellites and personal computers.

The new Act better protects the rights of creators, including those working in the arts and the computer industry, while giving users faster, easier access to copyright materials. Among the amendments are the abolition of compulsory licensing of sound recordings, explicit protection for computer programs and choreographic works, and new exhibition rights for visual artists. The Act clarifies the distinction between industrial design protection and copyright, and provides better remedies for commercial piracy.



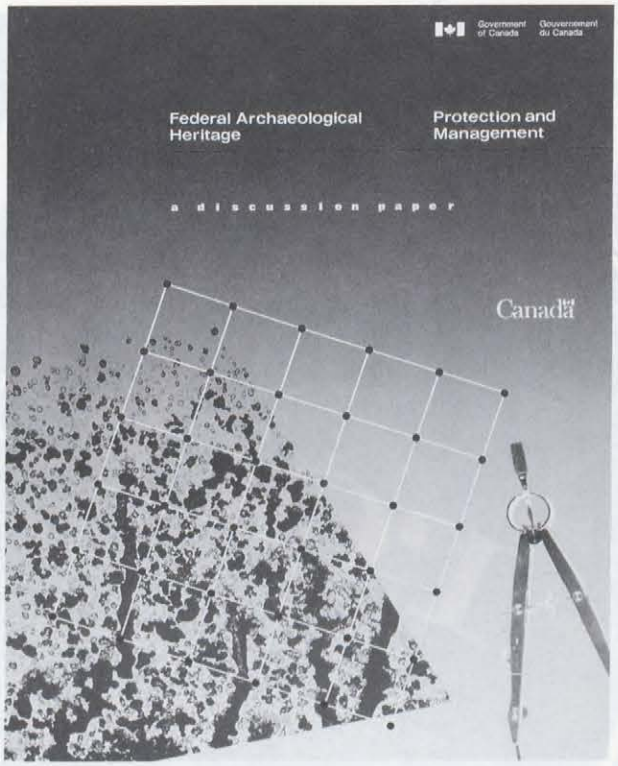
The administration of copyright through creators' collectives is encouraged. The Act establishes a Copyright Board to ensure that royalty rates set by such collectives are reasonable.

Further revisions are planned. Committees of creators and users (including librarians and teachers) are meeting frequently to discuss the issues to be dealt with in the second round of amendments, and these consultations will help shape the legislation now being drafted.

MUSEUMS POLICY AND LEGISLATION

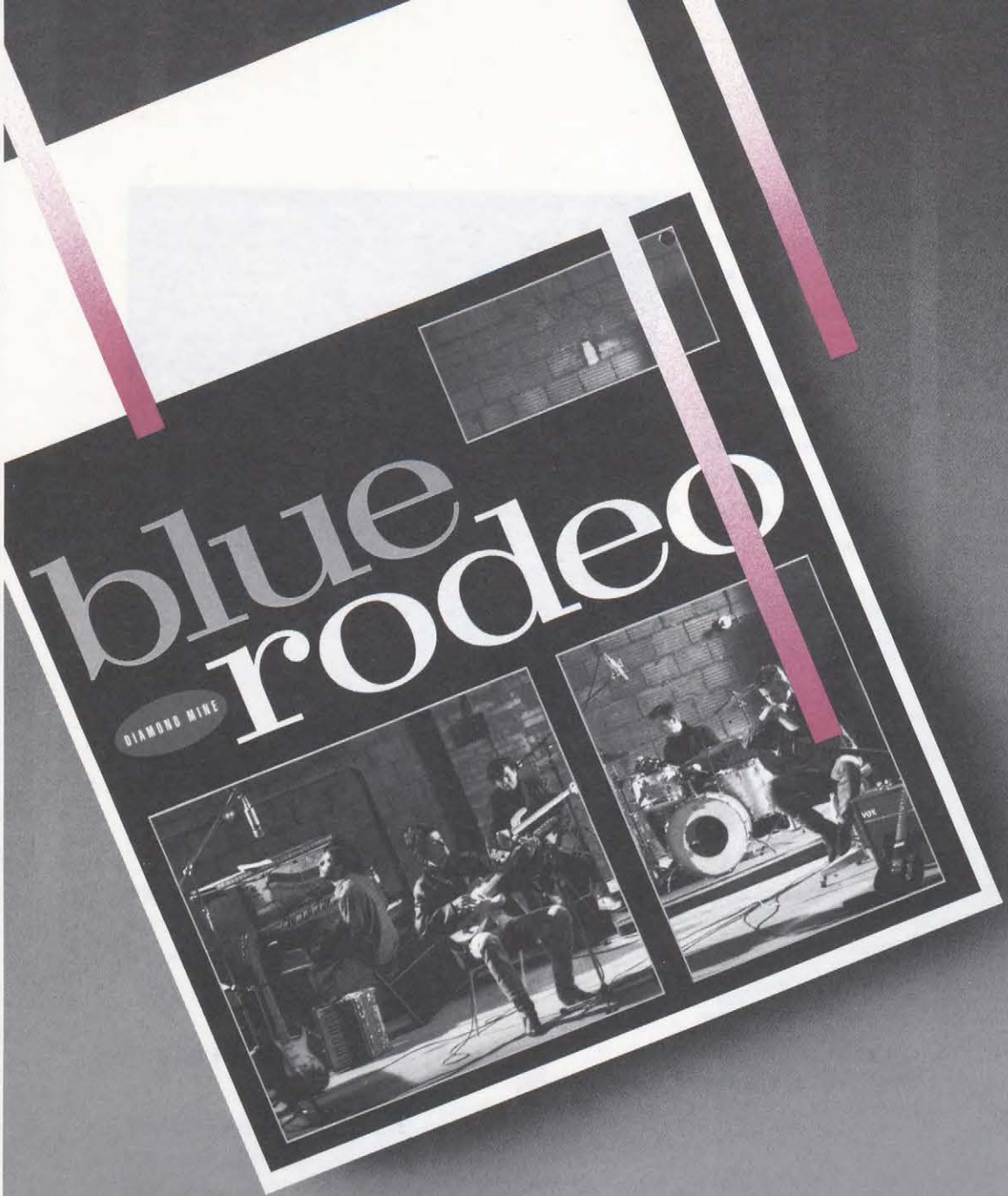
As part of an ongoing review of policy and programs for Canada's museums, the discussion paper *Challenges and Choices* was released by the Department of Communications in May 1988. Intended to stimulate a dialogue among Canadians on the future of our museums, the paper dealt with such issues as the role of museums within society, conservation of collections, competition for audience development, and evolving technologies. The paper was the basis for subsequent consultations with the museum community and the provincial and territorial governments.

During the year, the Department also prepared legislative proposals that would give formal effect to the Government's intention to dismantle the National Museums Corporation and establish as autonomous institutions the four national museums: the National Gallery of Canada (including the Canadian Museum of Contemporary Photography); the Canadian Museum of Civilization (including the Canadian War Museum); the National Museum of Natural Sciences; and the National Museum of Science and Technology (including the National Aviation Museum). The National Museums Corporation's national programs, including the Museum Assistance Program, had already been transferred to the Department of Communications in September 1987.



ARCHAEOLOGY POLICY

The discussion paper, *Federal Archaeological Heritage Protection and Management*, was released by the Minister of Communications in May 1988. Prepared jointly by the Canadian Museum of Civilization and the departments of Communications, Environment, and Indian Affairs and Northern Development, it called on Canadians to participate in a national review of the Government's archaeology policy. The paper invited suggestions on how best to protect and manage archaeological resources and asked for creative and innovative solutions to a number of technical issues.



CROSS CANADA

SUPERVISION AND

REGIONAL DEVELOPMENT AND PROGRAM DELIVERY

The Department of Communications continues to strengthen the participation of the regional and district offices in all its activities.

The objectives are to strengthen the Department's visibility and presence throughout the country, foster partnerships with the private and academic sectors, distribute discretionary contract funds more equitably among the regions and ensure that regional perspectives are brought fully to bear on national policy formulation and program delivery.

In keeping with these principles, during 1988-1989 responsibility for the delivery of the Sound Recording Development Program was transferred to the regional offices; and the Cultural Initiatives Program introduced a system of co-operative administration with the regional offices. The mandate for national policy co-ordination, however, still resides with headquarters.

White Hyacinths, *circa 1940, by Edwin Healey Holgate (Canadian, 1893-1977). Oil on canvas, 53.3 x 45.7 cm. Donated by the estate of Dr. Max Stern to the Montreal Museum of Fine Arts under the terms of the* Cultural Property Export and Import Act. *(Photo courtesy of the Montreal Museum of Fine Arts.)*

◁ *(Photo opposite page.) With funding assistance from the Sound Recording Development Program, Blue Rodeo's "Diamond Mine" (FACTOR) reached platinum status (sales of at least 100,000) in 1988-1989.*

SPECTRUM MANAGEMENT

Automation of operations

The emphasis on the automation of spectrum management continued in 1988-1989, and substantial progress was made in rationalizing systems and services to achieve more efficiency and cost-effectiveness. Key to this progress were the approval to proceed with Phase II of the regional microcomputer network and the establishment of an interconnected network of microcomputer workstations.

Licensing and control

The successful implementation in 1987 of system licensing for cellular radio users significantly reduced the regulatory burden during this fiscal year; without system licensing, the Department would have had to issue an additional 200,000 cellular mobile radio licences. The change was welcomed by the cellular radio users, and was achieved without impairing management of the radio spectrum.

Licences are issued and renewed quickly through the Department's automated services.

With the exception of mobile cellular radios, there was an overall increase of 14 percent in the total number of radio licences issued by the Department during the fiscal year, reflecting the significance of the increased demand on the radio frequency spectrum. New and amended radio licences numbered 145,080, and another 871,110 radio station licences were renewed. Revenues from radio licence fees were approximately $58 million. Other fees, including those charged in relation to the Terminal Attachment Program and radio-type approval, generated a further $1.5 million.

Spectrum quality indicator

A "spectrum quality indicator" recently developed by the Department will help spectrum managers measure the efficiency of radio frequency spectrum usage in different localities. It will also be a powerful tool for assessing the spectrum efficiency of new technologies and systems.

This new concept is now being considered by the International Radio Consultative Committee (CCIR), and could have a major effect on spectrum management internationally.

Remote spectrum-monitoring project

Growing demand for spectrum, in conjunction with budgetary constraint, makes it necessary to search constantly for innovative ways to conserve human and financial resources while maintaining or even improving the level of service to the public. In an innovative approach to this challenge, the Department has developed control hardware and software programs that will enable the operation of a spectrum-monitoring station from a distant location. The system is now being tested at the Fort Smith Monitoring Station in northern Alberta.

The regional offices of the Department of Communications receive thousands of radio and televison interference complaints each year.

Marine radio safety

During the year, the Canadian Coast Guard reported a potentially dangerous situation in the coastal waters of the Pacific Region; they had received a rash of complaints about the improper use of the marine radio channels. The problem was traced to Vietnamese-speaking fishermen who were not familiar with marine radio use. After consulting the community, the Department published and distributed Vietnamese-language pamphlets on radio procedure and certification requirements. Combining this initiative with other, standard measures, the Department was able to help the fishermen improve their ability to communicate at sea, greatly reducing the risks to themselves and others.

Delegation of radio operator examinations

With the help of the Canadian Power and Sail Squadrons, the number of marine radio operators examined and qualified by volunteer examiners continues to rise appreciably, particularly in the Ontario, Quebec and Pacific regions. As a result of this program, the Coast Guard reports a substantial decrease in incidents reported by their Radio Station Managers, attributing this success to the increased number of qualified marine operators.

The success of the marine program has inspired a similar program in amateur radio certification. In co-operation with the Radio-amateur du Québec inc., the Quebec Region has carried out a successful pilot project. The next step is to develop criteria for full delegation of the administration of amateur radio examinations to amateur clubs and teaching institutions.

EMERGENCY COMMUNICATIONS

St-Basile-le-Grand

On August 23, 1988, a major fire in a warehouse storing toxic PCBs forced the evacuation of over 5,000 residents in the St-Basile-le-Grand area of Quebec. The Department, in co-operation with Bell Canada, Bell Cellular and CNCP

Telecommunications, was able to put together an extensive emergency communications network in a matter of hours. This network consisted of new phone lines, cellular phones, pagers and fax systems. To supplement the telecommunications network, the team arranged radio links, complete with VHF facilities and trained radio operators. The network remained in operation for over three weeks, until residents were able to return to their homes.

Earthquake planning

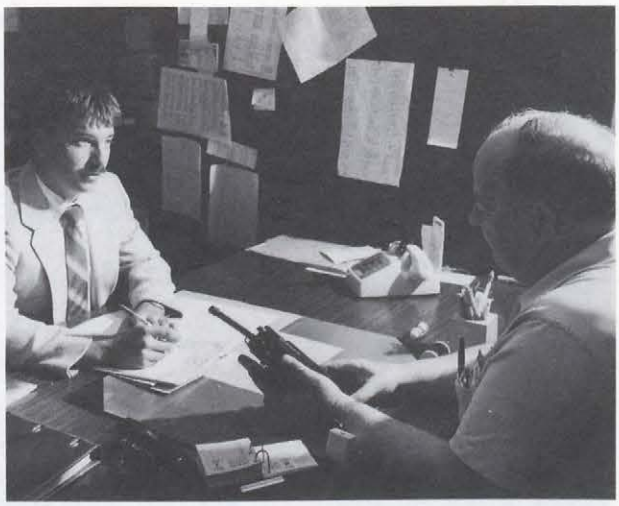
In September 1988, Emergency Preparedness Canada, at the request of the Government of British Columbia, began to develop a comprehensive plan for response in the event of a catastrophic earthquake in the province. The Department of Communications is responsible for providing telecommunications services with the planning work being performed by officials of the Pacific Region and National Headquarters.

GOVERNMENT TELECOMMUNICATIONS AGENCY

The networks and services of the Government Telecommunications Agency (GTA), which plans, establishes and manages the telecommunications facilities and systems used by federal government organizations, are in the midst of a major growth period.

Government Telephone Network

The modernization of the Government Telephone Network continues. This year, new consolidated telephone service, using Centrex, was introduced in Sudbury and London, Ontario; direct access to intercity service was inaugurated



Department of Communications' technicians ensure that equipment complies with current telecommunications standards.

for Vernon, Chilliwack, Kamloops and Kelowna, British Columbia, and Prince Albert, Saskatchewan; and service to the Canadian Embassy in Washington, D.C. was improved.

GTA called for and is now reviewing proposals from the telecommunications industry for the installation of a high-speed data service on heavy-traffic sections of the network.

Government Packet Network (GPN)

The GPN links over 100 locations across Canada, providing data communications to federal departments and agencies. Organizations in the network subscribe to a shared, rather than customized, service, resulting in substantial savings in the cost of their data transmissions.

GTA is working closely with departments to implement the service government-wide. By the end of the first full year of operation, GPN had signed on approximately 40 subscribers. Several more departments are reviewing proposals to join the network.

The volume of business over the year was enough for the network to qualify for the maximum discount available. As a result, subscribers saved 20 percent or more on the cost of their data communications.

GTN-2000

The Government Telecommunications Network GTN-2000 is a network modernization program established by GTA to evolve existing government telecommunications networks into a common digital, intelligent network infrastructure for voice, data and image communications. The program is expected to result in lower telecommunications costs, improved quality of service and new communications capabilities that will improve the delivery of government programs.

A Request for Information for intelligent networking for GTN-2000 was issued in December 1988, and all key suppliers responded. Results of the evaluation of responses will be available in the next fiscal year.

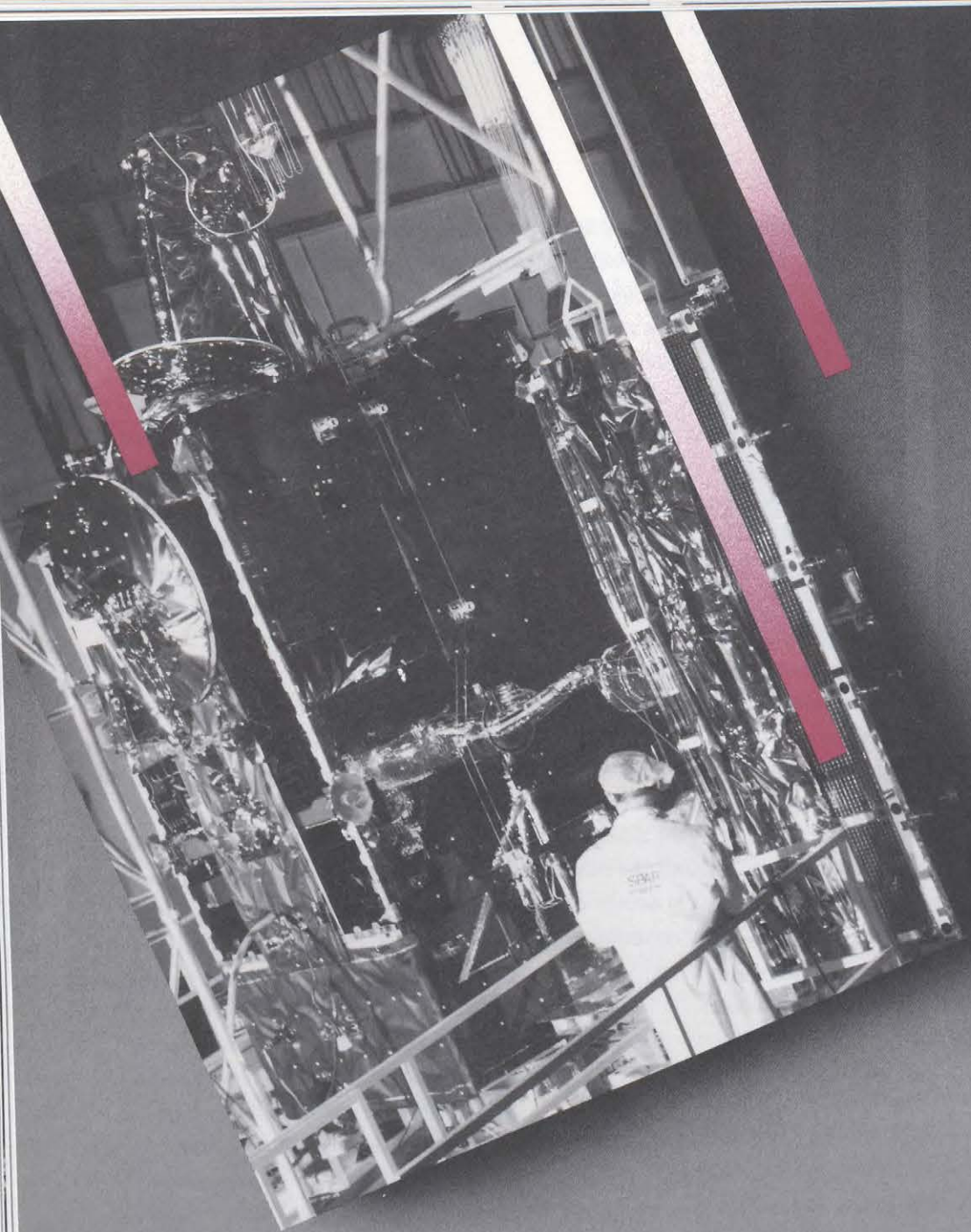
New services

Preparatory work carried out in 1988-1989 will lead to the implementation of several new telecommunications services in the near future.

GTA signed a contract in February 1989 with Telesat Canada to establish the Government Satellite Network (GSN). This network is intended to serve remote and underserved areas of Canada, as well as offer additional savings in some applications currently using terrestrial networks. The first major client is the Department of National Defence, which has already ordered 17 sites over the first three years, at a total cost of approximately $500,000. Other departmental clients are expected to increase GSN revenues to about $7.6 million over the five-year contract.

Evaluation of proposals for the new Government Shared Voice Messaging Service is complete, contract negotiation is under way, and implementation of the service is imminent. GTA has co-ordinated departmental commitments of $1.5 million, for 13,000 electronic mailboxes to serve currently identified needs. Negotiations are also under way to acquire similar services in other parts of the country.

The Government Electronic Messaging and Document Exchange Service (GEMDES), which evolved from the Government Electronic Messaging Service (GEMS), will incorporate the latest available features, including support of accented French characters, binary file transfer, and electronic data interchange. Further enhancements will enable interoperability of different messaging systems by providing gateways to other public and federal government networks; these enhancements will be introduced upon approval by the Canadian Radio-television and Telecommunications Commission. This service has been recommended as a means of access to the Public Service Commission's Automated Notice System, Treasury Board's Communications Centre, and Supply and Services Canada's Automated Printed Forms System. The document conversion component of GEMDES will be implemented later, if funds are available.



RESEARCH ACTIVITIES

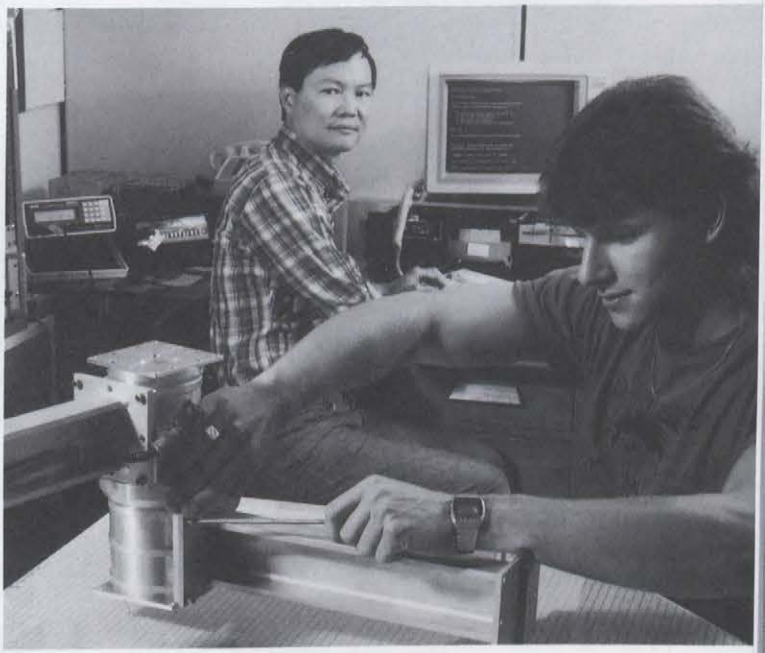
The Department of Communications is home to three major research centres: the Communications Research Centre (CRC) at Shirleys Bay, near Ottawa; the Canadian Conservation Institute (CCI) in Ottawa; and the Canadian Workplace Automation Research Centre (CWARC) in Laval, Quebec.

CRC carries out research and development in the areas of communications technologies such as radio, satellites, microelectronic and optical devices and components; and broadcast and video technologies. CCI works to preserve art objects and artifacts, and provides information and advice on conservation to institutions in Canada and abroad. CWARC specializes in workplace automation and informatics. The work of all three centres is recognized worldwide.

During 1988-1989, the Department established four Regional Applications Centres to assist in promoting research and development partnerships with industry. These centres include the Healthcare Telematics Centre in Winnipeg; the Telemedicine and Tele-Education Resources Agency (TETRA) in St. John's; the Canadian Centre for Marine Communications (CCMC), also in St. John's; and the Champlain Institute in Fredericton.

COMMUNICATIONS RESEARCH CENTRE (CRC)

The Communications Research Centre's mandate is to carry out research and development that supports the Department's roles in the development and implementation of telecommunications policies, regulations and standards. In this capacity, the CRC plays a crucial intermediary role between university-based research and development (R&D), on the one hand, and industry-based R&D, on the other; working through partnerships and co-operative activities with the academic and industrial sectors, it seeks to promote the development, application and commercialization of innovative communications and information technologies.

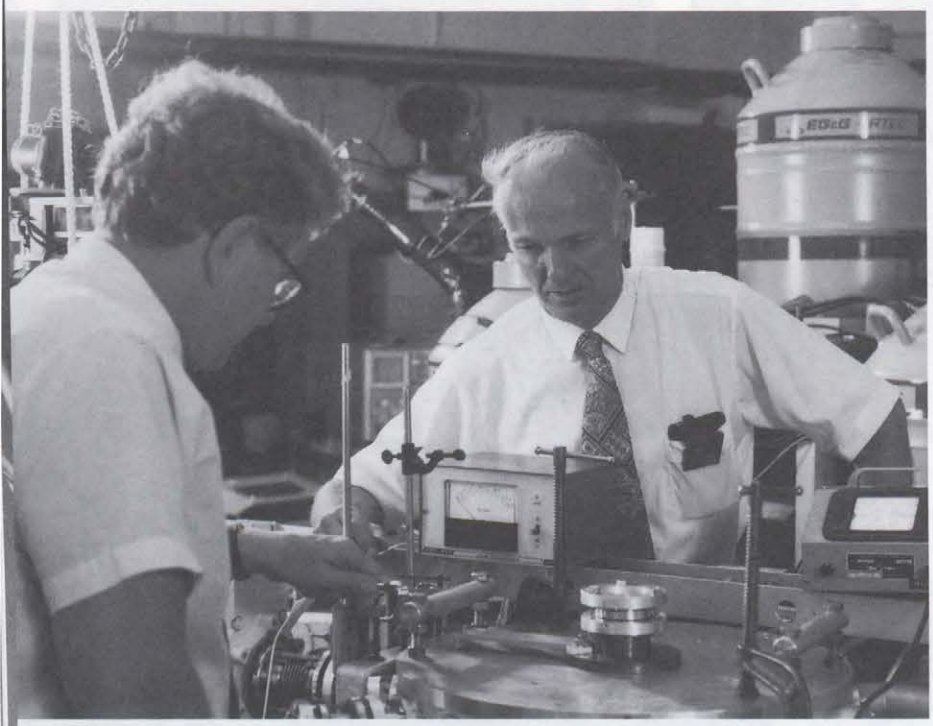


A demonstration of a robot joint and controller used in space systems.

◁*(Photo opposite page.) A view of a partial deployment of the* Olympus *satellite's solar array.*

Research Advisory Boards

During 1988-1989, Research Advisory Boards were established for various groups within CRC, including Radio Communications Technologies, Communications Devices and Components, and Broadcast Technologies. The first plenary meeting of the boards was held in November 1988.



CRC scientists setting up a radiation effects experiment on gallium arsenide circuits at Queen's University.

Gallium arsenide research partnerships

Integrated circuits made with the semiconductor gallium arsenide will have a starring role in the next wave of technical advances in microelectronics: the circuits are high-frequency and high-speed, up to six times faster than those based on silicon. Under certain conditions, gallium arsenide devices will emit light; and therefore can be used to make miniature lasers for use in optical communications systems.

A world leader in gallium arsenide research, the CRC has signed a series of agreements with Canadian high-technology companies to collaborate on further research and the development of applications; more agreements are being negotiated. The research partnerships formalized by these agreements are making substantial progress, particularly in the areas of communications devices and components and microwave aircraft-landing systems.

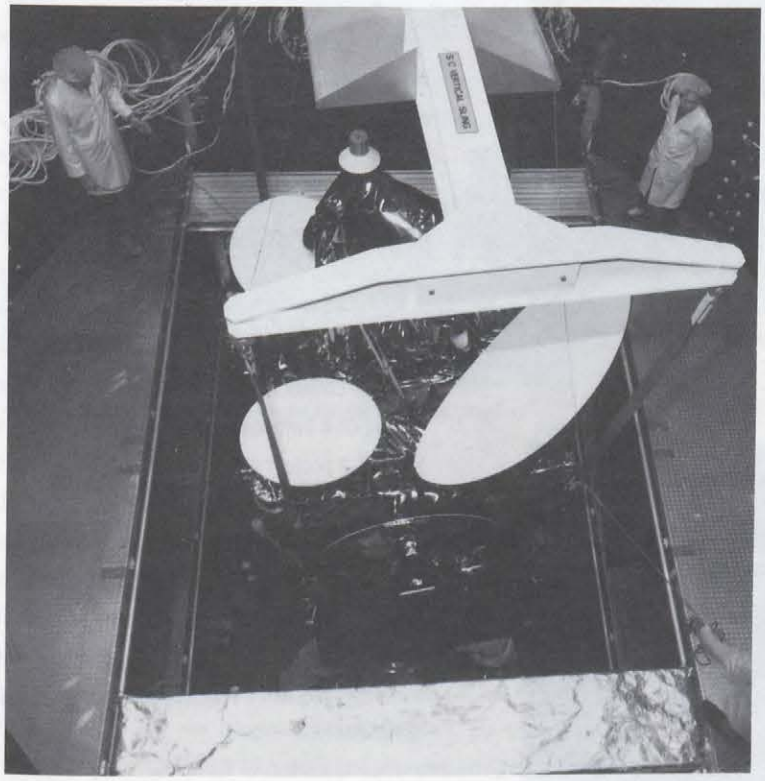
High-definition television (HDTV)

During the past year, the Department published the results of the first survey of viewer response to HDTV carried out anywhere. Although viewers were impressed by the quality of the picture, cost was identified as an important determining factor in consumer decisions on the purchase of HDTV equipment.

Canada continues to play a leadership role in efforts to establish international standards for HDTV studio production and program exchange. The Department has been assessing various proposed studio standards to find common structural elements on which worldwide standards could be based. Canada's proposal for

Processing gallium arsenide wafers in the microelectronics facility.

a common image format approach has been strengthened by the addition of a suggested technique for achieving compatibility between television and computer display formats.



The powerful communications satellite Olympus *is scheduled to be launched in 1990. During 1988-1989 the final tests on the* Olympus *flight model were completed at the David Florida Laboratory.*

Olympus

The *Olympus* spacecraft is a joint project of Canada and seven European countries — Austria, Belgium, Denmark, Italy, the Netherlands, Spain and the United Kingdom. Developed under the auspices of the European Space Agency, *Olympus* is one of the largest and most powerful commercial communications satellites in existence.

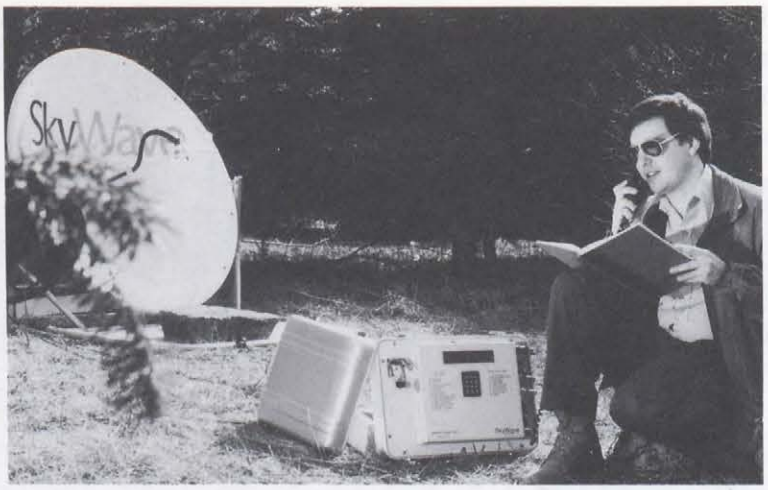
Assembly, integration and testing of the spacecraft was carried out at the Department's David Florida Laboratory (DFL). The year was devoted mainly to environmental testing; the satellite was subjected to a battery of tests designed to assess its ability to withstand the harsh conditions in orbit. By close of the fiscal year *Olympus* had passed these stringent tests and was being readied for launch.

MSAT

The concept for *MSAT* (Mobile SATellite), the world's first mobile-communications satellite, was developed by the Department of Communications to satisfy national needs for improved public and governmental communications in isolated and sparsely populated areas.

MSAT will act as a relay station in space, overcoming problems that plague users of two-way radios and telephones in remote areas — limited range, distortion, interference and noise. Its tremendous power will eliminate the need for large antennas — radios and telephones used in conjunction with *MSAT* need be no larger than a cellular phone.

Market research has demonstrated that there is a great demand for such a service; consequently, Telesat Canada took on the project as a commercial venture. The Department of Communications has signed an agreement to lease capacity for government use on *MSAT*. The agreement covers a ten-year period starting at the time of the satellite's launch, scheduled for 1992. It is expected that the federal government will need only 10 percent of *MSAT*'s capacity for the coast guard, law enforcement, firefighting, disaster relief, medical emergencies, pollution-monitoring and other uses. The great bulk of the satellite's capacity will be available for commercial use by farmers and fishermen; airlines; telecommunications, transport and oil exploration companies; construction projects; and so on.



This prototype of a portable voice/data satellite terminal was developed by SkyWave Electronics Ltd. of Kanata, Ontario for the MSAT *program.*

The tremendous power of MSAT *eliminates the need for large antennas. The radios and telephones used in conjunction with* MSAT *are no larger than a cellular phone.*

SHARP

The 1987 maiden flight of the prototype of the world's first externally powered aircraft, the Department of Communications' Stationary High Altitude Relay Platform (*SHARP*), was a rousing success. Powered from the ground by microwaves beamed to onboard rectennas, the one-eighth-scale prototype performed well beyond expectations. It is hoped that full-sized *SHARP*s will eventually serve as low-cost alternatives to communications satellites for certain uses, for example, relaying radio and television signals and monitoring pollution.

In 1988-1989, the Department invited expressions of interest from industry for the commercial development of *SHARP*. Thirty-four responses were received, indicating enormous interest in the project. All responses recommended further government involvement, until the risks are reduced to the point where the project is commercially feasible. A detailed work plan has now been prepared for government/industry collaboration on the development and testing of a half-scale demonstration model of *SHARP*, a project expected to take three years. Industry groups in Ontario and Atlantic Canada are now working on their own market studies. A decision on the form of any co-operative development of *SHARP* is expected in 1990. In addition, studies have been initiated to determine the frequency requirements for an operational *SHARP*.

Transfer of Space Technologies Branch

A significant organizational change of 1988-1989 was the transfer of the personnel and resources of the Space Technologies Branch to the new Canadian Space Agency. The transfer, authorized by an Order-in-Council effective March 1, 1989, included both the David Florida Laboratory and the Space Mechanics Division. The Department of Communications, however, retains responsibility for the MSAT initiative and other communications-oriented programs that utilize space technology.

A 4.2 metre dish used in experiments for the Olympus *program.*

CANADIAN CONSERVATION INSTITUTE (CCI)

The Department of Communications' Canadian Conservation Institute is a world leader in conservation technology. Its conservators work to restore and preserve an immense range of art objects and other culturally important artifacts. Its scientists study the behavior of materials and artifacts in various museum environments, and develop improved methods of conservation. Totem poles and tiny carvings; objects recovered from ancient shipwrecks and archaeological sites; precious manuscripts and documents; historical garments and fabrics; paintings and sculptures are but a small sample of the objects treated.

CCI also provides consulting services to museums and art galleries throughout Canada. Its conservators regularly visit institutions to lead training seminars and workshops, and they provide intermediate and advanced training in-house to conservators from across Canada and around the world.

The Institute is a co-founder of CIN, the Conservation Information Network, which maintains and offers international access to the largest and most comprehensive conservation-related databases in existence, a notable example of the use of new technology in pursuit of cultural objectives. Through an extensive publication program, it also disseminates information on subjects such as conservation research, techniques and materials, both nationally and internationally.

A major event of the fiscal year was Symposium 88: The Conservation of Historic and Artistic Works on Paper, organized and hosted by CCI at the new National Gallery of Canada in October 1988. Some 300 delegates attended the five-day gathering, representing major institutions all over the world.

The Honourable Marcel Masse and a textile conservator at the CCI discuss the conservation treatment of the Drapeau de Carillon.

A guilding conservator from the Victoria and Albert Museum, London, England and a CCI conservator during a guilding workshop at the Canadian Conservation Institute.

Notable CCI projects under way in 1988-1989 included the restoration of statues on Parliament Hill, conservation studies on the fossil forest site on Axel Heiberg Island in the High Arctic, a survey of totem poles in the Skeena River Valley of British Columbia, and the conservation treatment of the eighteenth century Drapeau du Carillon from Quebec and an udder headdress from the world heritage site at Head-Smashed-in-Buffalo-Jump in Alberta.

CANADIAN WORKPLACE AUTOMATION RESEARCH CENTRE (CWARC)

Reflecting the Government's emphasis on the need for effective intersectoral partnerships in pursuing national R&D priorities, the Canadian Workplace Automation Research Centre works closely with the private sector, universities, and government through negotiated partnership, to promote growth and assist in the development of a viable Canadian industry in the design, testing and implementation of new concepts and technologies associated with office automation and telematics.

Two researchers from the Organizational Research Division of CWARC confer on a current project.

Software Assessment Centre

Two studies have been undertaken to assess the need to establish a centre dedicated to evaluating and promoting Canadian software products. One is examining the software requirements of the federal and other levels of government, and the other is defining criteria and strategies for establishing the proposed centre.

Computer-assisted translation

Until further advances are made in the development of artificial intelligence, machine translation systems will be able to produce high-quality translations only within very restricted sublanguages; so they are a long way from replacing human translators. Within specialized fields, however, machine translation has enormous potential, and CWARC is working on a system that greatly surpasses anything currently available.

CRITTER, the prototype system, specializes in agricultural product reports. It is fully automatic, bidirectional (English to French or French to English), and can produce lexical and structural paraphrases, as well as non-literal translations. An experimental version was developed to provide synthetic voice translations of voice input reports.

The modern teleconferencing facilities of the Canadian Workplace Automation Research Centre.

CWARC has also developed a system that will greatly facilitate the translator's work. The Translator's Workstation uses standard PC hardware and integrated software — word processing, terminology management, file comparison and conversion, telecommunications and various writing tools. Initial demonstrations of the system were promising; the next step is a field trial with the Translation Bureau of the Department of the Secretary of State.

Open Systems Interconnection (OSI)

In the first phase of OSI development, CWARC made significant contributions to the establishment of OSI concepts in terms of basic architecture, protocols and conformance testing approaches. During the second phase, CWARC

is working on the establishment of the infrastructures needed for the orderly introduction, exploitation and harmonization of OSI in Canada. Among its contributions is the development of a plan for a national OSI program centred on testing services. The Canadian Interest Group on Open Systems is using this plan as the prime reference for the preparation of a full-fledged business plan for a Canadian open systems testing program.

CWARC has itself implemented the full seven-layer OSI protocols. In March 1989 it demonstrated its OSI interworking capability in Tokyo, in collaboration with Kokusai Denshin Denwa of Japan and the Electronic and Telecommunications Research Institute of South Korea. CWARC is also working with Canadian industry partners, the National Computing Centre in Britain and British Telecom to develop a conformance-testing capability for office document architecture and interchange format standards.

NightStar

CWARC, in collaboration with the Institut Nazareth et Louis-Braille, a leading rehabilitation centre for the blind and visually impaired, has completed the development of NightStar. This sophisticated computer system scans typewritten material, in French or English, then reads the contents aloud to the user. The material can also be stored in the system for future listening.

Users control the speed at which material is read, whether this is a letter, word, sentence, paragraph or page at a time. Because help messages are vocalized and tones signal the movement and positions of the cursor, NightStar can be used to review and edit any material typed or otherwise entered into the system.

SECSI

SECSI, short for Sexual Education and Counselling by Sound Informatics, is a fully automatic, interactive system that offers information and advice on AIDS over the phone. Users respond to a series of lifestyle questions (their answers are recorded by pressing the appropriate numbers on the telephone), and they can directly obtain a personal risk evaluation based on a comparison of their answers with a clinical database. They can also enter their own questions and call back later to collect personalized messages recorded by counsellors. The system can assess the client's risk of contracting AIDS and offer advice on protective measures, while guaranteeing complete confidentiality.

Organizational research

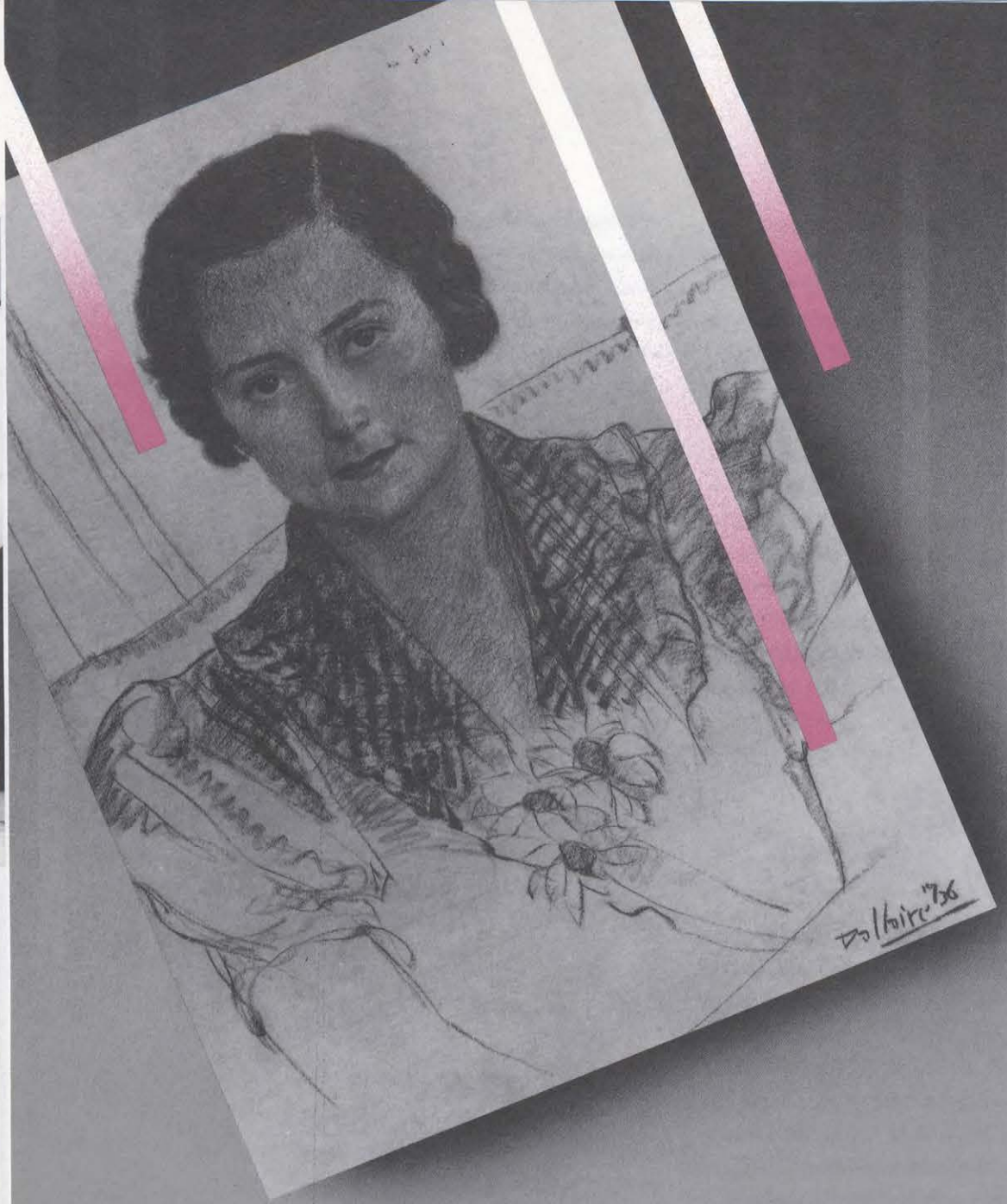
The organizational research projects of CWARC are set up under the conceptual framework of the management of technological change, which covers such applied research topics as evaluation, training and the management of information. Specific projects have involved testing new technologies in the workplace, developing new approaches to impact assessment, and the evaluation of interactive and distance-training systems and technologies. Over 40 reports were published during the year under review, with 2,500 copies being distributed, upon request, to universities, individuals, libraries and other research centres.

REGIONAL APPLICATIONS CENTRES

In line with the Government's emphasis on promoting effective research and development partnerships, four Regional Applications Centres were established in 1988-1989: the Canadian Healthcare Telematics Centre in Winnipeg; the Telemedicine and Tele-Education Resources Agency (TETRA) in St. John's; the Canadian Centre for Marine Communications (CCMC), also in St. John's; and the Champlain Institute in Fredericton, which specializes in geomatics (the science, technology and management of geo-referenced information).

These regional centres research and develop specialized applications for communications technologies; liaise with other groups working in the same field; provide consultation services to industry and user groups in such areas as design and production; and help to promote and market the applications. In short, they provide the nurturing environments needed for dynamic growth in their fields of expertise.

The Regional Applications Centres also perform a vital function in promoting the growth of high-technology industries in regions where the economy traditionally relies heavily on resource-based industry. Newfoundland, for example, is quickly emerging as a world leader in such areas as telemedicine, tele-education and marine communications. TETRA and CCMC will help ensure the province a permanent position as a leader in these fields.



SUPPORT PROGRAMS

The Department of Communications fosters and promotes Canadian cultural expression through a range of programs that provide support to artists, cultural organizations and institutions and that promote the development of Canada's cultural industries, the crucial link between creators and their audiences.

ECONOMIC AND REGIONAL DEVELOPMENT AGREEMENTS

Economic and Regional Development Agreements (ERDAs) were established in 1984 for federal and provincial governments to fund co-operatively, among others, cultural and communications projects whose goals are to:

- stimulate economic development in the cultural and communications sectors,
- establish objectives and rationales to respond to provincial and national economic priorities, and
- identify the cultural and communications sectors as key areas that respond to these priorities.

The Department of Communications administers the following ERDA subagreements:

- Canada-Quebec ERDA Subagreement on Development of Communications Enterprises,
- Canada-Quebec ERDA Subagreement on Cultural Infrastructure,
- Canada-Ontario Subsidiary Agreement for Cultural Development,
- Canada-Manitoba Communications and Cultural Enterprises Subsidiary Agreement.

Karen Kain and Owen Montague in The National Ballet of Canada's production of La Ronde. *During 1988-1989, the National Ballet of Canada received a contribution towards the implementation of a regional development strategy through the Canada-Ontario Subsidiary Agreement for Cultural Development. (Photo by David Street, courtesy of The National Ballet of Canada.)*

◁*(Photo opposite page.)* Portrait of Madame Lévesque, *1936, Jean-Philippe Dallaire (Canadian, 1916-1965). Charcoal on paper, 64 x 48.5 cm. Donated to the McCord Museum of Canadian History by Mr. Arthur Ruddy under the terms of the* Cultural Property Export and Import Act. *(Photo courtesy of the McCord Museum of Canadian History.)*

Quebec

Thirteen ERDA Communications projects received a total of $3.7 million during 1988-1989. These projects included support for TV5, the international French-language television network; a program to combat the pirating of computer software; and CONSORTEL, a trial project providing fibre-optic cable television and telephone services to Quebec homes. It also

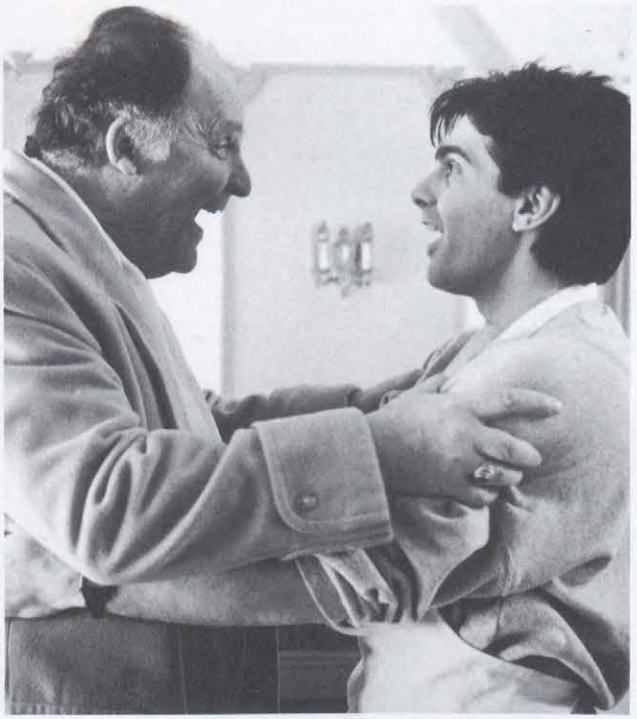
included the financing of facilities for audio-visual production and post-production in the Montreal region; this project received further funding of $0.7 million from the Montreal Initiatives Fund.

The Cultural Infrastructure subagreement contributed to two important projects. The Montreal Museum of Fine Arts expansion project will receive a total of $25 million in federal funds over the duration of the subagreement (the province will provide another $25 million; the private sector, $10 million). Panavision (Canada) Ltd. received $1.6 million to support the establishment of a film production centre in Montreal, the Government of Quebec contributed an equal sum to this project.

Ontario

The $50 million available under the Canada-Ontario Subsidiary Agreement for Cultural Development has now been fully allocated toward a total of 25 projects.

Nineteen projects valued at $12 million were approved during 1988-1989 fiscal year. They included: renovations to the Canadian Centre for Advanced Film Studies; the establishment of the Rideau Canal Museum, the Canadian Clay and Glass Gallery, and the Owl Centre for Children's Film and Television; and database development by the Canadian Independent Record Production Association and the National Ballet of Canada. Two feasibility studies, one for the Great Lakes Science Centre project and the other a long-term planning strategy for Sharon Temple, were also funded.



John Vernon and Angelo Pedari in a scene from Mob Story, *a fast-paced comedy filmed in Winnipeg.*

Also during the year the Tom Thomson Memorial Art Gallery reopened. It was the first of 11 infrastructure development projects to be completed.

Manitoba

The Canada-Manitoba Cultural Industries Development Office (CIDO), a major ERDA project, assists in the production and marketing of Manitoba film, video and sound recordings. In 1988-1989, CIDO supported 217 projects, for a total disbursement of $1.8 million.

The provincial film fund, Film Manitoba, operates under CIDO; it supported an additional 17 film and video projects, for a total of $1.1 million. Two of the projects supported were "Mob Story," an O'Meara production, and "The Last Winter" by John Aaron Productions.

In 1988-1989, a total of $1.5 million was spent in the technology sector for 28 Manitoba ERDA projects in such fields as agriculture, health care, public utilities, educational services and microwave broadcasting.

CANADIAN AUDIO-VISUAL CERTIFICATION OFFICE

The Government of Canada offers tax incentives in the form of Capital Cost Allowances to investors in qualified Canadian film and videotape productions, incentives that have played a pivotal role in financing and developing the industry. The Canadian Audio-Visual Certification Office is responsible for determining which productions are eligible, with certification criteria favoring Canadian participation in and control of all aspects of production. During 1988-1989, the Office certified 146 productions worth a total of $368 million.

With funding from the Sound Recording Development Program, Mitsou's "El Mundo" (MUSICACTION) reached gold status (sales of at least 50,000) in 1988-1989.

SOUND RECORDING DEVELOPMENT PROGRAM

The Sound Recording Development Program (SRDP) supports and strengthens the Canadian recording industry by making funds available to Canadian companies and organizations to help cover the costs of production of audio and video musical products and radio programs, marketing and international touring, and business development. The Program disburses approximately $5 million a year. Forty percent is targeted to the French-language sector of the industry and 60 percent to the English-language sector.

During the year SRDP helped raise the international profile of Canada's recording industry by supporting Canadian participation at two major international events, the Marché international du disque, de la vidéo et de l'éducation (MIDEM) in Cannes, France, and the Ninth Annual New Music Seminar in New York. SRDP also provided funds for innovative projects prepared especially for these two events, including promotional compact disk recordings (CDs) featuring Canadian artists. The CDs were distributed to international recording executives and distributors attending the fairs, to draw attention to Canadian talent.

During 1988-1989, nine recordings funded by the SRDP achieved gold-record status (sales of 50,000); four, platinum status (sales of 100,000); and one, double platinum status (sales of 200,000).

This compact disk was prepared to promote Canadian talent at two international recording events.

POSTAL SUBSIDIES

The purpose of the Postal Subsidy Program is to provide all Canadians, regardless of where they live, with affordable access to books, newspapers and periodicals. The Department of Communications pays Canada Post Corporation about $55 million each year to cover the cost of the Program.

Readers of approximately 600 daily and weekly newspapers and over 4,000 Canadian and foreign periodicals benefit from the subsidy. For several years the level of the subsidy was fixed at $219.5 million. At the close of 1988-1989, the Government was reviewing the level of the subsidy in the context of its budgetary priorities.

BOOK PUBLISHING INDUSTRY DEVELOPMENT PROGRAM (BPIDP)

The BPIDP is designed to support Canadian publishers in their efforts to increase profitability and improve efficiency. During 1988-1989, $2.8 million was directed towards projects in areas such as marketing, promotion, and computerization. Another $3.5 million was disbursed under the Educational Publishing Fund, which is intended to help Canadian publishers increase their share of the domestic educational book market.

Two examples of projects that have received support are the marketing and promotion campaign for *The Illustrated History of Canada*, published by Lester and Orpen Dennys, and the development of a new series on Quebec civil law by Éditions Yvon Blais.

An ongoing priority of the BPIDP has been the technological development of the publishing industry. The Program has made great strides in helping publishers to computerize their information systems and improve production capabilities.

Another component of the Program, Aid to Professional Associations, supports the development and implementation of professional-development seminars geared toward the needs of the publishing industry. A series of studies on a wide range of issues affecting the book publishing industry also received financial support under this component.

Under the Export Marketing Assistance component, publishers receive financial assistance for projects to buy and sell rights abroad and also for projects aimed at exporting Canadian-authored titles. A total of $1.25 million was disbursed under this component during the year.

THE CANADIAN HERITAGE INFORMATION NETWORK (CHIN)

CHIN's wide range of services help museums document, manage and share information about their collections. Over 150 museums in Canada use microcomputers and computer terminals to access CHIN databases, which contain information ranging from conservation techniques to Interpol's comprehensive list of stolen art objects.

CHIN was a partner, along with the Canadian Conservation Institute and the U.S.-based Getty Conservation Institute, in establishing the Conservation Information Network (CIN) in 1985. CIN uses CHIN's mainframe computer to maintain extensive databases on bibliographic references, conservation materials, products and suppliers. Since 1987, CIN has offered access to its databases to conservation centres around the world.

Now CHIN and the Ontario Museums Association are collaborating on the Trillium project, designed to link 150 small and medium-sized Ontario museums to CHIN. Trillium databases will hold descriptions of artifacts and natural science specimens held in museums throughout Ontario and across Canada. In the future, Trillium will also provide information on suppliers of museum materials, lists of exhibits and available exhibit space, and biographies of artists.

New Brunswick one penny token, nineteenth century. Donated to the Royal Ontario Museum by Mr. William J.C. White under the terms of the Cultural Property Export and Import Act. *(Photo courtesy of the Royal Ontario Museum.)*

MOVABLE CULTURAL PROPERTY PROGRAM

The *Cultural Property Export and Import Act* of 1977 protects objects of cultural significance to Canada by regulating their export; the Department's Movable Cultural Property Program administers the Act. The Program also helps Canadian institutions build their collections; it offers tax incentives to individuals who donate or sell cultural objects to designated institutions, and provides grants or loans for the repatriation of important pieces held outside Canada or for purchase of objects in Canada when export permits have been denied.

The Canadian Cultural Property Export Review Board held four meetings during 1988-1989. They considered a total of 535 applications for certification for cultural property valued at approximately $28 million, heard four appeals for cultural property export permits and recommended 46 applications for cultural property grants of $1.2 million.

Of the grants issued to purchase objects or collections from abroad, several were of particular interest. These included a Nootka painted dance screen repatriated by the Royal British Columbia Museum; General James Wolfe's annotated copy of the 1754 edition of Thomas Gray's poem, *An Elegy Written in a Country Church Yard*, purchased by the Thomas Fisher Rare Book Library, University of Toronto; and a Jack Bush painting acquired by the Winnipeg Art Gallery.

INSURANCE PROGRAM FOR TRAVELLING EXHIBITIONS

The Department helps Canadian museums, galleries, archives and libraries host travelling Canadian and international exhibitions by providing funds to subsidize the costs of insuring the exhibitions in transit and on location. The Program applies only to exhibitions containing works valued at $1 million or more. During 1988-1989, 11 exhibitions were insured to a value of more than $266 million.

MUSEUM ASSISTANCE PROGRAM (MAP)

The Museum Assistance Program supports and strengthens the Canadian museum community by providing grants, advice and technical services to Canadian museums, galleries and related institutions. MAP funding and services assist museums in preserving and exhibiting objects of importance to Canada's cultural heritage.

During the 1988-1989 fiscal year, the Program received 218 requests for $12.5 million; a total of $8.5 million was distributed to museums and related organizations across Canada. Among the important projects during the year were $184,400 for the upgrading of equipment at the McMichael Canadian Art Collection in Kleinburg, Ontario; $300,00 for collections-care equipment at the Insectarium de Montréal, Montreal, Quebec; $87,600 for the national travelling exhibition "Africville: A Spirit That Lives On," produced by the Mount Saint Vincent University Art Gallery in co-operation with the Black Cultural Centre for Nova Scotia, the Africville Genealogy Society and the National Film Board

Atlantic Centre in Halifax, Nova Scotia; $93,500 for documentation of the archaeology collection at the Prince of Wales Northern Heritage Centre, Yellowknife, Northwest Territories; and $75,000 to the Canadian Museums Association to administer a national bursary program for museum professionals.

In addition, financial support for fire, safety, security, environmental conservation and technical planning services was provided to over 90 museums and related organizations during the year. The circulation in Canada of over 30 international exhibitions was made possible by the International Exhibition Services in co-operation with various foreign governments and cultural agencies. The Exhibit Transportation Services provided specialized transportation services to assist over 80 museums in the safe movement of museum exhibits and objects valued at $1.3 billion.

Tenor Jerry Hadley and soprano Constance Hauman in the Canadian Opera Company production of the Tales of Hoffmann, *Toronto's O'Keefe Centre, June 15 to 25, 1988. The Company received a contribution of more than $3.8 million from the Cultural Initiatives Program to help fund renovations to the Joey and Toby Tanenbaum Opera Centre in Toronto. (Photo by Robert C. Ragsdale, courtesy of the Canadian Opera Company.)*

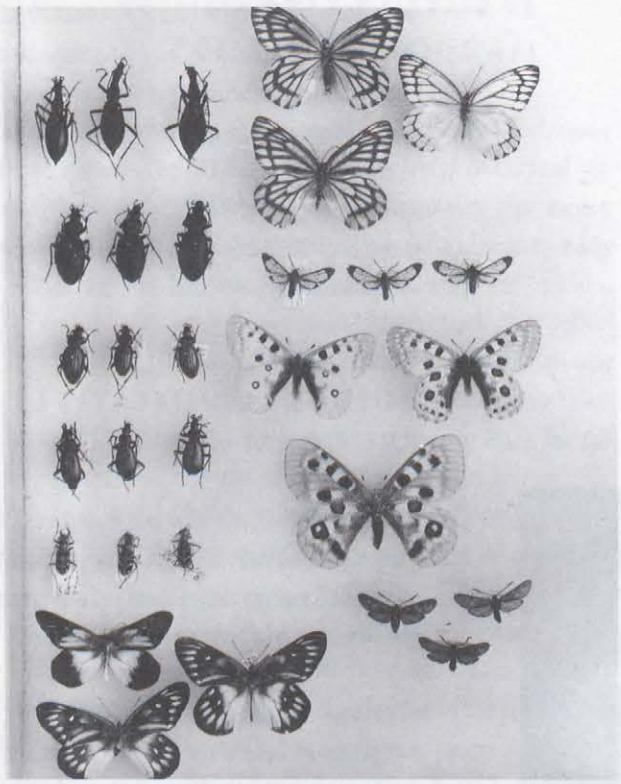
CULTURAL INITIATIVES PROGRAM

Since 1984, the Cultural Initiatives Program has been providing financial support to non-profit Canadian professional cultural groups. The money is intended to help the groups:

- develop management skills,
- develop innovative ways of applying communications technologies in their work,
- bring professional performing and visual artists to audiences throughout Canada,
- develop a Canadian network of museums, heritage collections, and cultural facilities,
- support festivals and special events of national character or significance.

Contributions to construction projects during 1988-1989 included $956,656 for the Nova Scotia Museum of Industry and Transportation; $1,728,000 for the facilities of the Festival d'été de Lanaudière, Joliette, Quebec; $753,581 for the Ballet Opera House in Toronto, Ontario; $605,000 for the music facilities at Brandon University in Manitoba; and $4,000,000 for the completion of the British Columbia Science Centre in Vancouver.

In 1988-1989, the Program supported 273 projects, with contributions totalling $19.7 million.



Specimens from a collection of the order Coleoptera, *family* Carabidae. *Donated to the Royal Ontario Museum by Mr. Guenter Plath under the terms of the* Cultural Property Export and Import Act. *(Photo courtesy of the Royal Ontario Museum.)*

PUBLIC LENDING RIGHTS PROGRAM

Canadian authors, translators, editors and illustrators are now benefitting not only from the sale of their books, but are also compensated for the use of their work through public libraries. This year was the second year of operation for the Public Lending Rights Program. The Public Lending Rights Commission, comprising representatives of Canadian libraries, writers' groups and book publishers' associations, disburses the Program's funds using a formula that estimates the extent to which each author's works are borrowed. This year 5,718 individuals received payments averaging $592 each, for a total of $3.4 million.

SUPPORT TO NATIONAL SERVICE ORGANIZATIONS FOR THE ARTS

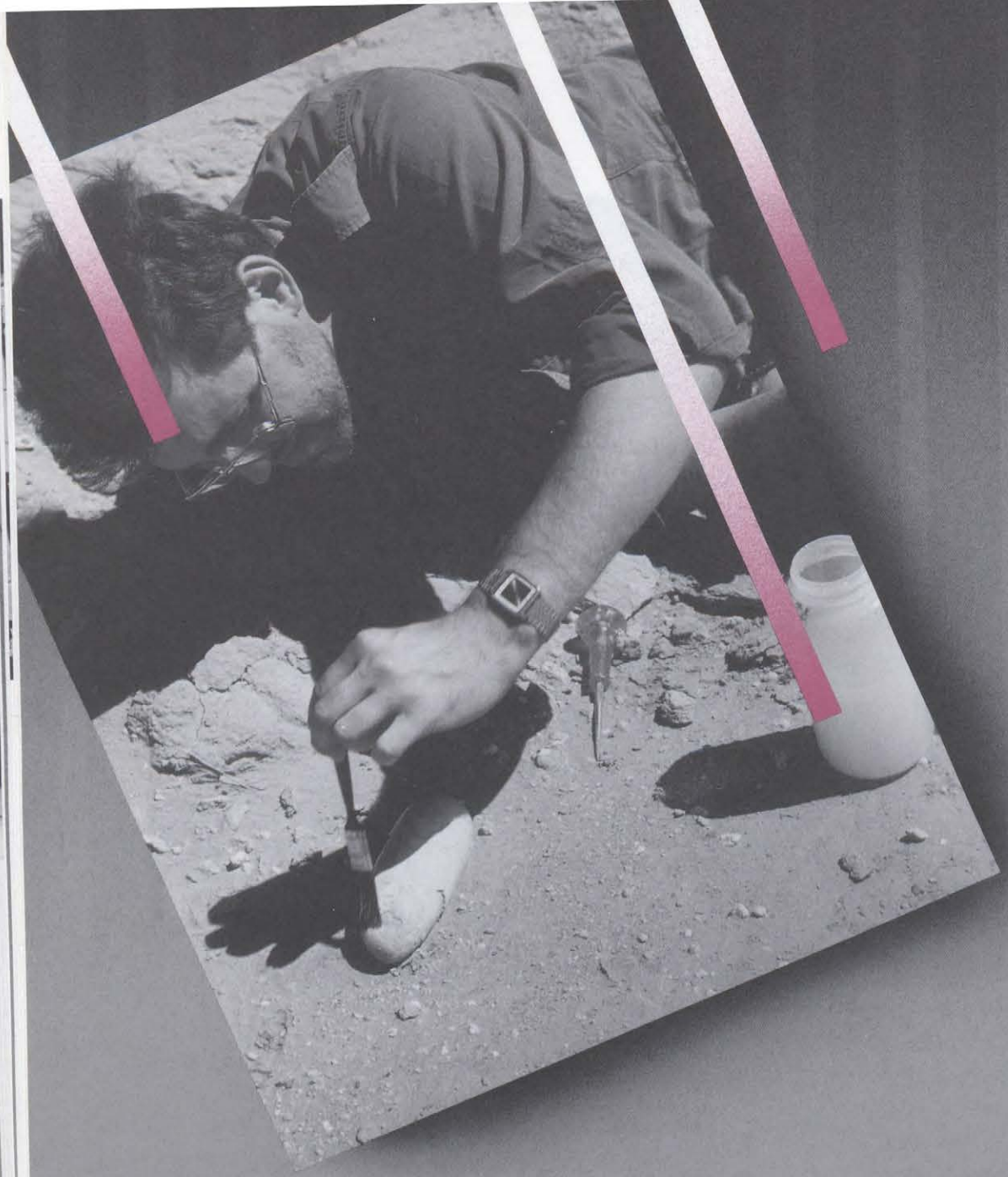
For a number of years, the Department has made contributions to the Canadian Conference of the Arts and the Canadian Crafts Council, to help cover their operating expenses and the costs of various projects. This year $555,000 and $140,000 were granted respectively.

CENTRES OF EXCELLENCE PROGRAM

The Centres of Excellence Development and Promotion Program has two goals: first, to increase the representation of Francophones in the technical, scientific and professional categories; and second, to foster a working environment conducive to the equitable use of French and English. The Program awards research grants to French-language and bilingual universities to develop centres of excellence that work in areas of interest to the Department. This year, a new component was added to the Program; now, contracts can be awarded to bring graduate-level researchers into the Department to work on in-house research projects.

During 1988-1989, the Department awarded 13 contracts under the Program, for a total of $277,800.

L'Or et le Papier, *a television series directed by Jean Beaudin et Nino Monti starring Marina Orsini, Louise Turcot, Marc-André Coallier, Raymond Bouchard, Fanny Lauzier and Lionel Villeneuve. (Photo courtesy of Telefilm Canada.)*



INTERNATIONAL

ACTIVITIES

ESTABLISHMENT OF ADMSD

A sixth sector was formed in the Department of Communications in 1988-1989 with the establishment of ADMSD, the Summits and Development Sector.

This sector develops and co-ordinates the Department's activities in support of Commonwealth and Francophonie initiatives, as well as activities related to economic development agreements with the Province of Quebec in the fields of communications and culture. The sector is also directly responsible for all the projects related to communications and culture approved by the heads of state at the Francophone Summits.

Prime Minister Brian Mulroney and Quebec Prime Minister Robert Bourassa at the inauguration of TV5 Québec-Canada in August 1988. (Photo by Bill McCarthy, PMO Photographer.)

◁ *(Photo opposite page.) A Canadian technician with the Dinosaur Project works on a* Protoceratops *egg found in the Gobi Desert of Inner Mongolia. Together Canada and the People's Republic of China hold the most important deposits of dinosaur remains in the world. (Photo by Brian Noble, courtesy of the Ex Terra Foundation.)*

LA FRANCOPHONIE

Canada is involved in a number of international initiatives agreed to by the heads of state of the Francophonie, including:

Rural radio

This project supports the establishment of rural radio broadcasting networks in developing countries. The Department of Communications, with the assistance of the Department of the Secretary of State, is managing the project and providing expertise to the various communities that have requested assistance through l'Agence de coopération culturelle et technique (ACCT). The experts provide advice, administrative services and equipment in support of various projects.

TV5 Québec-Canada

TV5, the international French-language television service in operation since 1984, shares programs originating from television networks in four member countries — Canada, Belgium, France and Switzerland. Canada has been supplying programs to TV5 Europe since January 1986.

TV5 Québec-Canada, the Canadian arm of TV5, is operated by a consortium comprising four public sector partners (Radio-Canada, Radio-Québec, TVOntario and the National Film Board) and four private-sector partners (Télé-Métropole, Quatre Saisons, COGÉCO and Film Sat). Launched on August 31, 1988, it operates nine hours a day, seven days a week. The signal is available to some 1.5 million cable subscribers, mainly in Quebec.

Extension of TV5 in North America, the Caribbean and Africa

The Department, in collaboration with l'Agence de coopération culturelle et technique (ACCT), carried out a feasibility study on the extension of TV5 to the United States and the Caribbean. The study examined technical, legal, political, cultural and other implications, and recommended an approach to implementing this extension.

The Department also collaborated with the ACCT on a study of the feasibility of extending TV5 service in Africa, for presentation at the 1989 Francophone Summit in Dakar. The study, which recommends the establishment of TV5 Africa, takes into consideration the special needs of broadcasting communities in that part of the world, as well as the experiences acquired in the implementation of TV5 Canada-Québec and TV5 Europe.

Distance learning

CIFFAD, the Consortium international francophone de formation à distance was formed to develop and promote distance learning in the countries of the Francophonie, with special emphasis on the needs of developing countries. The operating procedure of the consortium has been established, and a number of projects initiated.

La Commission internationale du théâtre francophone (CITF)

CITF was founded in Montreal in June 1987 by the governments of Canada, Quebec, France and the French community of Belgium; Senegal has since become a member. CITF promotes contemporary French-language theatre – encouraging exchanges, collaborations and joint productions among the theatrical communities of all the countries of the Francophonie as well as supporting international tours of theatrical works.

Projects presently receiving the support of CITF include: *Le théâtre expérimental des femmes*, a dramatic work written by Francophone writers in Europe, North America, Asia and Africa; *Rencontres d'artistes francophones en théâtre jeunes publics*, a work presented by a Montreal actress; and "Franco-Forum," a project of Théâtre Contact International de Paris that brings theatre companies from several countries together in Ouagadougou, Burkina Faso, to collaborate on the development of a major theatrical production.

THE COMMONWEALTH

The Commonwealth Centre for Distance Learning (CCDL)

Canada is playing a leading role in the implementation of this new major Commonwealth initiative.

Created by Commonwealth heads of state at their meeting in Vancouver in October 1987, the CCDL was to promote the development of distance learning services in Commonwealth countries. With headquarters in Vancouver and regional offices around the world, CCDL is the first Commonwealth organization based outside the United Kingdom.

EUROPE 1992

In 1988-1989, the Department focused its attention on a number of activities intended to ensure Canada's competitiveness in the "single-market" Europe planned by the European Economic Community (EEC) for 1992. As part of the review of EEC activities undertaken by the Department of External Affairs, the Department of Communications chairs an interdepartmental working group exploring the potential impact of Europe 1992 on Canada's telecommunications and information technology sectors. The group examined issues such as technical co-operation with the European Community, as well as EEC policies and practices with respect to government procurement, standards, industrial structure and economics, regulation and trade. The working group's report will be issued in 1989.

The Department also chairs an interdepartmental working group on the potential impact of Europe's unified market on Canada's cultural industries. Its main focus during 1988-1989 was the EEC's proposal for a directive on transborder television.

The Department also represents Canada at meetings of the Committee for Cultural Co-operation of the Council of Europe. Canada has observer status, and is the only non-European nation invited to attend these meetings. In November 1988, the Department, in co-operation with the Government of Quebec, sent a delegation to Brussels to attend an informal meeting at which ministers of culture discussed the cultural dimension of transborder television. The Canadian delegation expressed Canada's strong interest in cultural and audio-visual co-operation and its wish to increase co-production activities with its European partners in the post-1992 environment.

Anchor of the Tasmania, *circa 1871. Removed from the wreck of the* Tasmania *in Lake Erie in 1988 and exported to the United States contrary to the provisions of the* Cultural Property Export and Import Act. *Returned to Canada in February 1989 with the assistance of the marine heritage preservation association Save Ontario Shipwrecks. (Photo courtesy of Save Ontario Shipwrecks.)*

UNESCO

Canada participates actively in UNESCO programs and commissions dealing with culture, communications and informatics. The Canadian Commission for UNESCO has created a National Committee to co-ordinate Canada's participation the World Decade for Cultural Development (1988-1997) and has asked for the Department's active participation in this endeavor. In addition, Canada is a member of the Intergovernmental Committee for Promoting the Return of Cultural Property to its Country of Origin and its Restitution in Case of Illicit Appropriation, having been the first country to adopt legislation to protect cultural heritage.

INTERNATIONAL TELECOMMUNICATION UNION (ITU)

The ITU, a specialized agency of the United Nations, co-ordinates the international regulation of telecommunications in 166 member administrations around the world. Canada is a major presence within the ITU, on the basis of both its technological and diplomatic expertise. The Department of Communications represents Canada within the ITU, and co-ordinates and leads Canadian industry delegations to ITU conferences and meetings.

Regional Administrative Radio Conference (RARC)

The 1988 RARC, held in Rio de Janeiro, agreed to extend the AM band from 1605 to 1705 kHz, providing ten new channels for assignment. The allotment planning method and many of the regulations and criteria adopted by the conference were Canadian proposals. Canada gained full use of five new channels and limited use of another five in border areas. Away from border areas, Canada has full use of all ten channels.

World Administrative Radio Conference (WARC-ORB)

The second session of the WARC on the geostationary satellite orbit was held in Geneva from August 29 to October 6, 1988. The Canadian delegation played an active role, chairing key committees and working groups and collaborating with other delegations to ensure that the results of the conference were satisfactory to both developed and developing countries. All the participating administrations expressed general satisfaction with the new regulations for space systems and the orbit frequency allotment plan developed for the conference.

A well-prepared Canadian delegation was instrumental in ensuring the continued development of Canadian satellite communications. Canada secured three orbital positions in the final allotment plan, coinciding with three of the four positions designated for Canadian use in the August 1988 Canada-Mexico-U.S.A. trilateral agreement.

World Administrative Telegraph and Telephone Conference (WATTC)

Canada's delegation to the December 1988 WATTC, held in Melbourne, Australia, was able to help persuade more than 100 countries to sign a treaty updating international telecommunications regulations. The delegation proposed common ground acceptable to two major factions with opposite points of view – one favoring regulation of everything from basic phone services to electronic mail, the other strongly in favor of wide-ranging deregulation. The Canadian compromise called for the regulation of basic services and minimal control over enhanced services. The new treaty will come into force on July 1, 1990.

Radio propagation research

A series of Group "B" Interim meetings of the International Radio Consultative Committee (CCIR) held this year in Geneva resulted in the adoption of a technique for predicting the distribution of multi-path fading on terrestrial UHF, SHF and EHF links worldwide. The technique was developed largely by Canada, Norway and France, under Canadian leadership.

Preparations for ITU Plenipotentiary Conference

During 1988-1989, the Department prepared for its role as co-ordinator and leader of the Canadian delegation to the 1989 ITU Plenipotentiary Conference. The Department worked with representatives of industry and other government departments to develop Canadian positions and proposals, and to ensure a strong presence for Canada at the conference and effective advocacy of Canadian interests.

TRILATERAL ORBIT-SHARING AGREEMENT

Canada, the United States and Mexico signed a trilateral agreement in August 1988 for the shared use of geostationary satellite orbit, which replaced an earlier orbit-sharing arrangement signed by the three administrations in 1982. In the new agreement, Canada has four orbit locations that will accommodate both ANIK E communications satellites and the future generation of such satellites.

INMARSAT/INTELSAT

The Department acts as Canada's representative (Party) on two international satellite operating agencies: the International Telecommunications Satellite Organization (INTELSAT), and the International Maritime Satellite Organization (INMARSAT). Teleglobe Canada Inc., in its capacity as Canada's international telecommunications carrier, participates financially and operationally in both organizations.

Catherine Wilkening, Lothaire Bluteau and Johanne-Marie Tremblay shown in a scene from Jésus de Montréal. *This film by Denys Arcand was a co-production with France. (Photo courtesy of Telefilm Canada.)*

An INTELSAT Assembly of Parties held in October 1988 successfully co-ordinated the use of a dozen international satellite systems that will compete with the INTELSAT network. It also adopted procedures to expedite future consultations concerning "separate" satellite systems.

In January 1989, an INMARSAT Assembly of Parties adopted amendments to the INMARSAT Convention that will enable the organization to provide land and mobile-satellite communications services in the future. These amendments are expected to be ratified by the Canadian Party during the 1989-1990 fiscal year.

EXPOCOMM

The Department of Communications worked in collaboration with the Department of External Affairs to co-ordinate and promote the participation of 19 Canadian companies at EXPOCOMM, a communications exposition held in November 1988 in the People's Republic of China. The Department also supported six technical seminars held during the fair at the Embassy

Trade Annex. Presented by the technical experts of Canadian companies, the seminars covered a broad range of telecommunications technologies and were well received.

Commercially, EXPOCOMM was a success for Canada: participating companies forecast approximately $65 million in new sales over the coming year as a direct result of the fair.

After EXPOCOMM, departmental staff took the opportunity to develop further the market for Canadian telecommunications equipment by making field trips to Shanghai, Nanjing and Wuxi. Several more potential customers were identified, and information provided to potential Canadian suppliers.

FILM AND TELEVISION CO-PRODUCTION AGREEMENTS

In September 1988, Canada signed a film co-production agreement with Argentina, its first with a South American country. The Argentinian film industry is well developed and world renowned, with 173 international awards and prizes to its credit.

Canada has now signed co-production agreements with 16 countries. The benefits of such agreements are extensive: costs and risks are shared; new markets are opened for Canadian productions; international distribution increases; and Canadian films and production crews gain easier access to the partner countries. Pooling resources increases the opportunities for international success, as demonstrated by the success of the film *The Decline of the American Empire*.

TEMIC

TEMIC, the Telecommunications Executive Institute of Canada, is a joint public/private sector initiative launched by the Department of Communications in 1986. It offers comprehensive training to telecommunications executives and senior managers from developing countries. During 1988-1989, 50 senior executives from 35 countries attended three sessions in Canada, two in English and one in French. These sessions gave them an opportunity to become familiar with the development and operation of Canada's telecommunications systems.

CANADA-CHINA DINOSAUR PROJECT

The richest dinosaur fossil beds in the world are located in the Alberta Badlands and China's Gobi Desert. The Dinosaur Project is now assembling some of the best of the ancient natural treasures collected in both countries, in preparation for a major exhibition that will tour the world.

The Canadian and Alberta governments have concluded an agreement whereby they each contribute up to $3.65 million to the EX Terra Foundation, a non-profit organization formed in Edmonton in 1984 to assemble the exhibit. Ex Terra is working in close co-operation with the Chinese Academy of Sciences, the Tyrrell Museum of Paleontology in Drumheller, Alberta, and the National Museum of Natural Sciences in Ottawa.

Morocco's Secretary of State for External Affairs and Co-operation, Mr. Ahmed Cherkaoui and Communications Minister Marcel Masse during the signing of the Canada-Morocco Memorandum of Understanding.

This exhibit will be perhaps the largest travelling exhibit of its kind since the King Tut exhibit began touring in the late '70s. Project organizers forecast a worldwide attendance of 12 million or more, because of the remarkable popular interest in dinosaurs; the Tyrrell Museum itself receives over half a million Canadian and foreign visitors a year. The Ex Terra Foundation expects to repay the Alberta and Canadian governments fully with money earned through admission fees, publication sales and associated products.

CANADA-MOROCCO MEMORANDUM OF UNDERSTANDING

The third session of the Canada-Morocco Bilateral Commission was held in Ottawa in March 1989. After a review of the Commission's progress in communications and associated technologies, the participants agreed to intensify and broaden their technical co-operation. A Memorandum of Understanding formalized that decision, with the Honourable Marcel Masse, Minister of Communications, signing for Canada, and Mr. Ahmed Cherkaoui, Secretary of State for External Affairs and Co-operation signing for the Kingdom of Morocco.

Morocco is implementing the first phase of its ambitious telecommunications development plan and is now the first African country with fully digital telecommunications switching technology. Canada is an active partner in this modernization project, with Bell Canada International contracted to install the first 300,000 new telephone lines. The Moroccan government has informed the Canadian government that it plans the installation of a total of 1.2 million new telephone lines by the year 2000, with the contracts to be awarded to the country best able to ensure technology transfer and integration with existing systems in the shortest possible time.

MANAGING THE DEPARTMENT

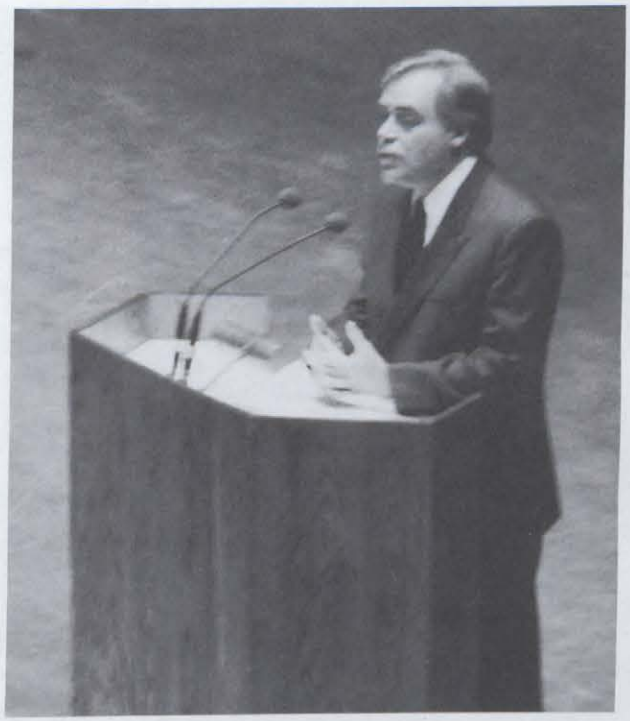
CHALLENGE FOR CHANGE

Like most federal organizations, the Department of Communications has been under pressure to maintain or improve service while reducing expenditures and personnel.

In meeting this challenge, management and staff of the Department have been intensely involved during the past year in a comprehensive examination not only of operations and organization but also of how employees work with one another within that organization.

The goal is to build an environment where each member of the Department has the guidance, support and autonomy needed to do the best job possible. In the information age, people are by far the most important asset of any organization — their motivation and commitment are crucial to the organization's success. As numerous studies and experiences in public and private organizations demonstrate, motivation and commitment are achieved by fostering mutual respect and by instilling a sense of pride and belonging in all employees, at all levels.

The starting point was a comprehensive assessment of the "state of the organization." Through a series of meetings, study sessions, evaluations and a comprehensive survey of all employees, the moods, attitudes and outlook of people at all levels, in all sectors and regions of the Department of Communications were assessed. Employees shared their feelings about corporate and individual goals, aspirations and problems, worked at defining the Department's role in serving Canadians, and developed a vision of how this department should carry out its mission. The result was a formal statement of both the Department's mission and its operating principles.



Effective internal communications are a focus of departmental management. The Honourable Marcel Masse, Minister of Communications speaking to departmental employees.

Now, the Department and its people are changing in many ways, rethinking old attitudes, revising approaches, making improvements. The document *Challenge for Change* has been distributed to all members of the Department of Communications; it is, in effect, an action plan to develop the full potential of the Department's human resources, essential to achieving the Department's mission. The following sections outline what some of those changes will be.

Management

One of the most significant findings of the employee survey was the negative image employees had of management, particularly senior management. Many felt that management had little interest in the day-to-day activities of the Department, and they were not satisfied with the amount of direction and feedback they were receiving from their supervisors and other superiors. The dissatisfaction increased in proportion to the number of levels between the employee and the superior.

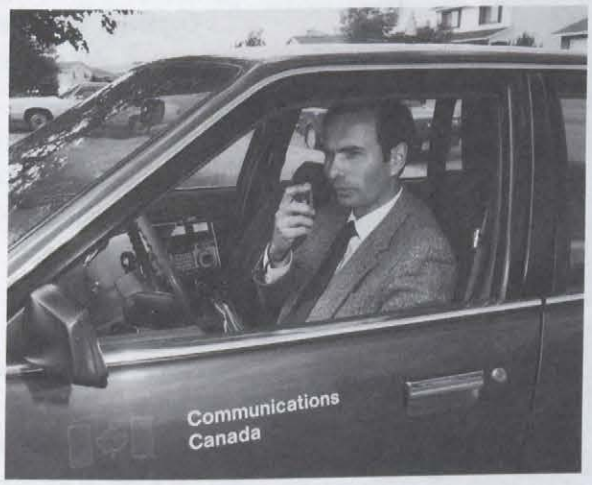
Challenge for Change stresses that managers, especially senior managers, must place more emphasis on managing people, rather than operations. To accomplish this, they need leadership, communication and people-management skills. The action plan requires managers to come out of their offices and boardrooms and get to know the people who work under them — what they do, what they think and how they feel — through regular meetings and day-to-day contact. Employees will also be kept informed of management issues and corporate priorities, and will be given more opportunities to express their views and concerns.

Pride

Fifty-six percent of employees surveyed expressed pride in working for the Department of Communications. This figure could and should be higher — employees with a sense of pride care more about doing their jobs well. The work the Department does is vitally important to Canada and Canadians, and the Department is working at better communicating this to both employees and the public. New achievement awards have been established to recognize employees and groups of employees who have made important contributions. In addition, as many employees as possible will take part in tours of some of the Department's world-renowned facilities; and, on the eve of the Department's twentieth anniversary, plans have been made to publicize its achievements of the past and present.

Welfare of employees

Only 11 percent of employees felt that the Department had a genuine interest in their welfare and their general satisfaction at work. To demonstrate departmental commitment to employee welfare, a number of measures will be implemented, including physical improvements to worksites throughout the Department, providing more person-years to the under-staffed Compensation and Benefits office, offering recognition and financial rewards for outstanding service, and encouraging supervisors to use their discretionary authority to benefit employees.



Communications

In general, employees were not impressed by the state of communications within the Department, either on a personal or a corporate level. They wanted to be better informed about operations of their own and other sectors and regions, as well as throughout the Department as a whole. They also wanted opportunities to express their own views. In response, a wide range of publications and activities are planned to improve internal communications, including regular employee surveys; informal lunchtime seminars; one-day position exchanges between employees in different sectors; and improvements to information bulletins, newsletters and other internal communications instruments.

Support staff

Members of the administrative support category were the least satisfied employees in the Department. Factors cited by support personnel as contributing to their low morale were a heavy workload, lack of guidance and feedback from their supervisors, little autonomy in

carrying out their responsibilities, lack of opportunities for professional development, and a sense of being unappreciated and neglected by the Department.

Efforts are now being made to reduce the heavy workload, in part by involving support staff in the selection of technical aids such as networked computers and telephone-answering machines that will leave them free to perform more challenging tasks. Support staff are also invited to attend employee meetings as full team members. Other measures being explored are the provision of on-site daycare, and the development and presentation of sensitization seminars by support staff for supervisors and others who use support services.

Opportunities for promotion

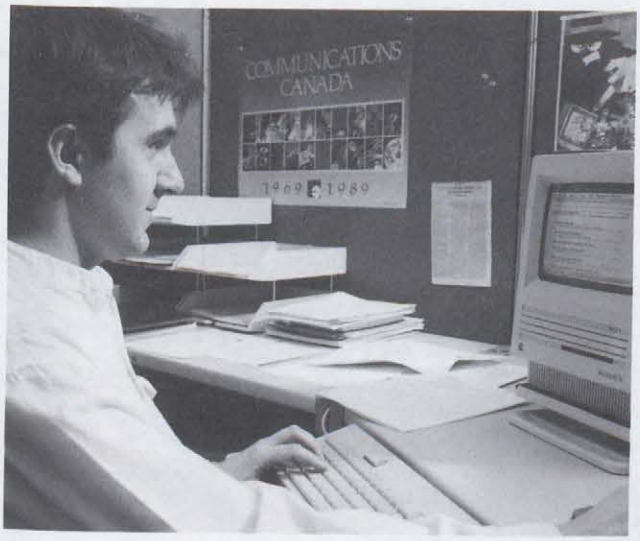
Employees throughout the Department are dissatisfied by the limited promotional opportunities, a situation that, because of government-wide restraint, is likely to persist for some time. Consequently, employees are encouraged to explore alternatives to promotion, such as lateral transfer, retraining and temporary assignments. The Department will also provide support in the form of a new career management information centre at headquarters, which will offer information and guidance to all employees on career development and the counselling services available in the Department.

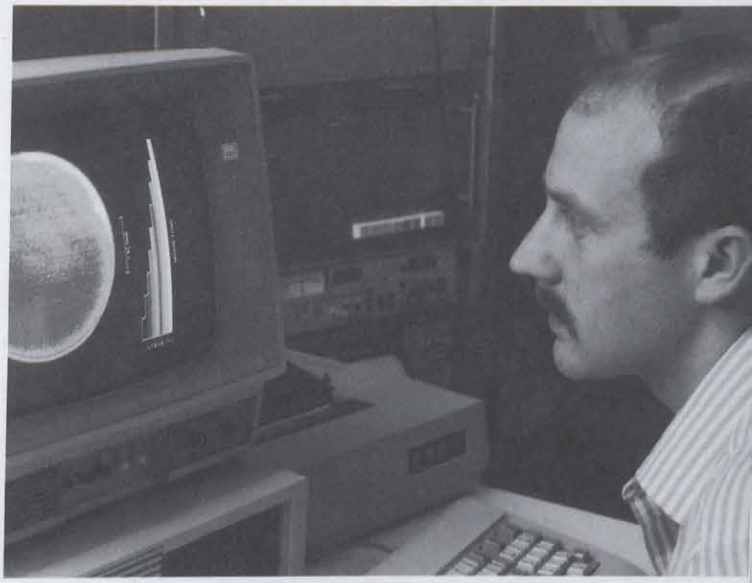
Training

Employees were generally unhappy with the amount, quality and relevance of training available. The Department intends to increase both the number and quality of available courses, and to tailor training more closely to the professional interests of the participants.

Changing attitudes

The initiatives laid out in the *Challenge for Change* document reflect a new management philosophy for the Department of Communications, one based on the premise that to contribute fully, people need a full sense of achievement, a minimum of frustration, and high morale. It fosters a more open management style, one that encourages managers to offer leadership while seeking the views and ideas of employees. It also seeks to build an environment where employees can take greater responsibility for, and draw more satisfaction from, their working lives and their contribution to achieving the Department's mission.





INCREASED MINISTERIAL AUTHORITY AND ACCOUNTABILITY (IMAA)

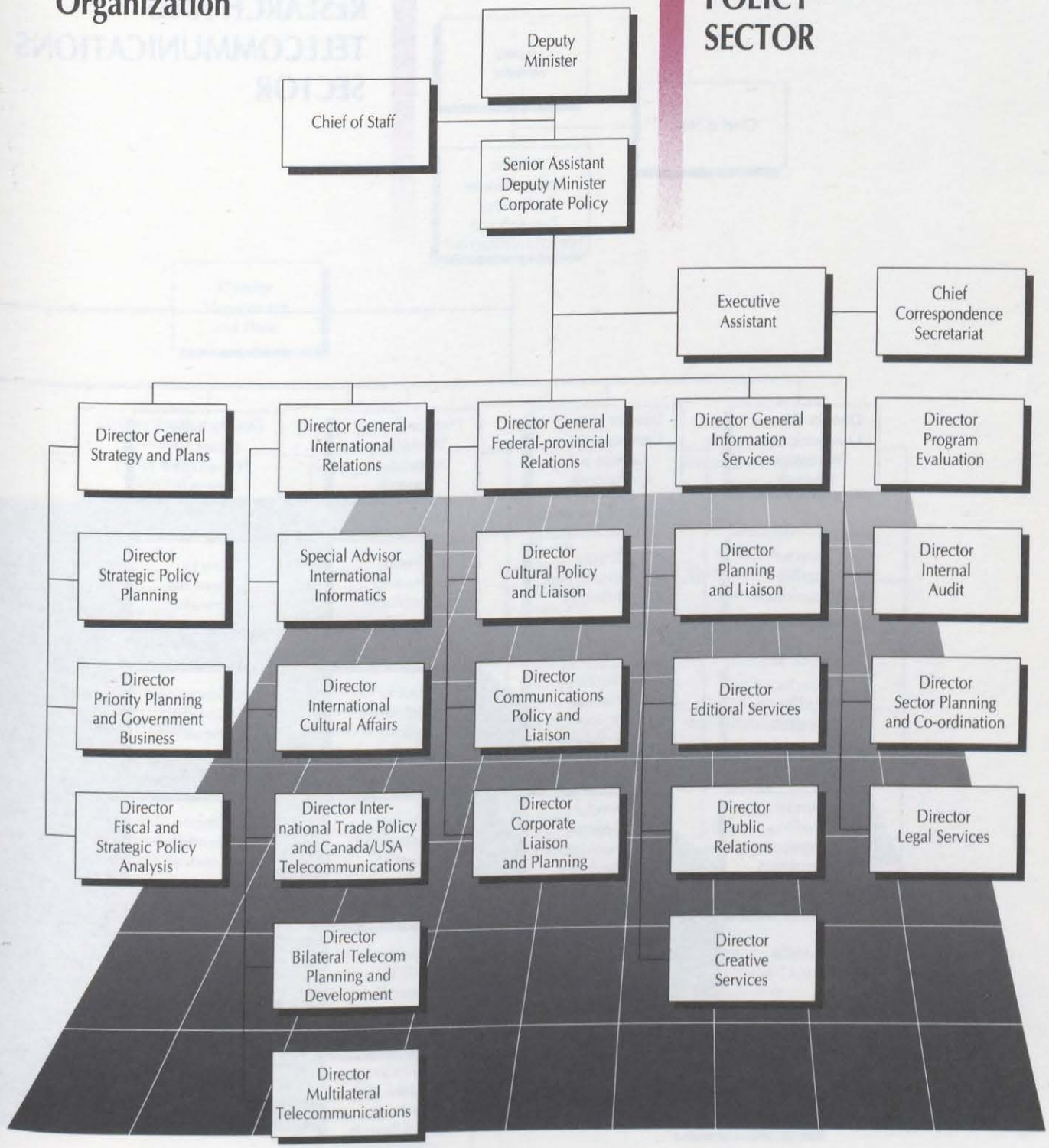
Treasury Board is in the process of delegating greater authority to individual ministers and their departments and agencies, to give them more freedom in carrying out their responsibilities while increasing their accountability to the central agencies.

After analyzing the advantages and disadvantages in the light of its management philosophy, the Department decided in favor of negotiating a new delegation agreement with Treasury Board. The agreement taking shape will delegate new authorities in administration, human-resources management and financial management. At the same time, the accountability framework is being revamped and clarified, to reflect organizational changes and the Department's Mission Statement. The agreement includes a clause that provides for the possibility of adding new authorities in the future. At the close of the fiscal year, the formal Memorandum of Understanding was almost ready for signing.

APPENDICES

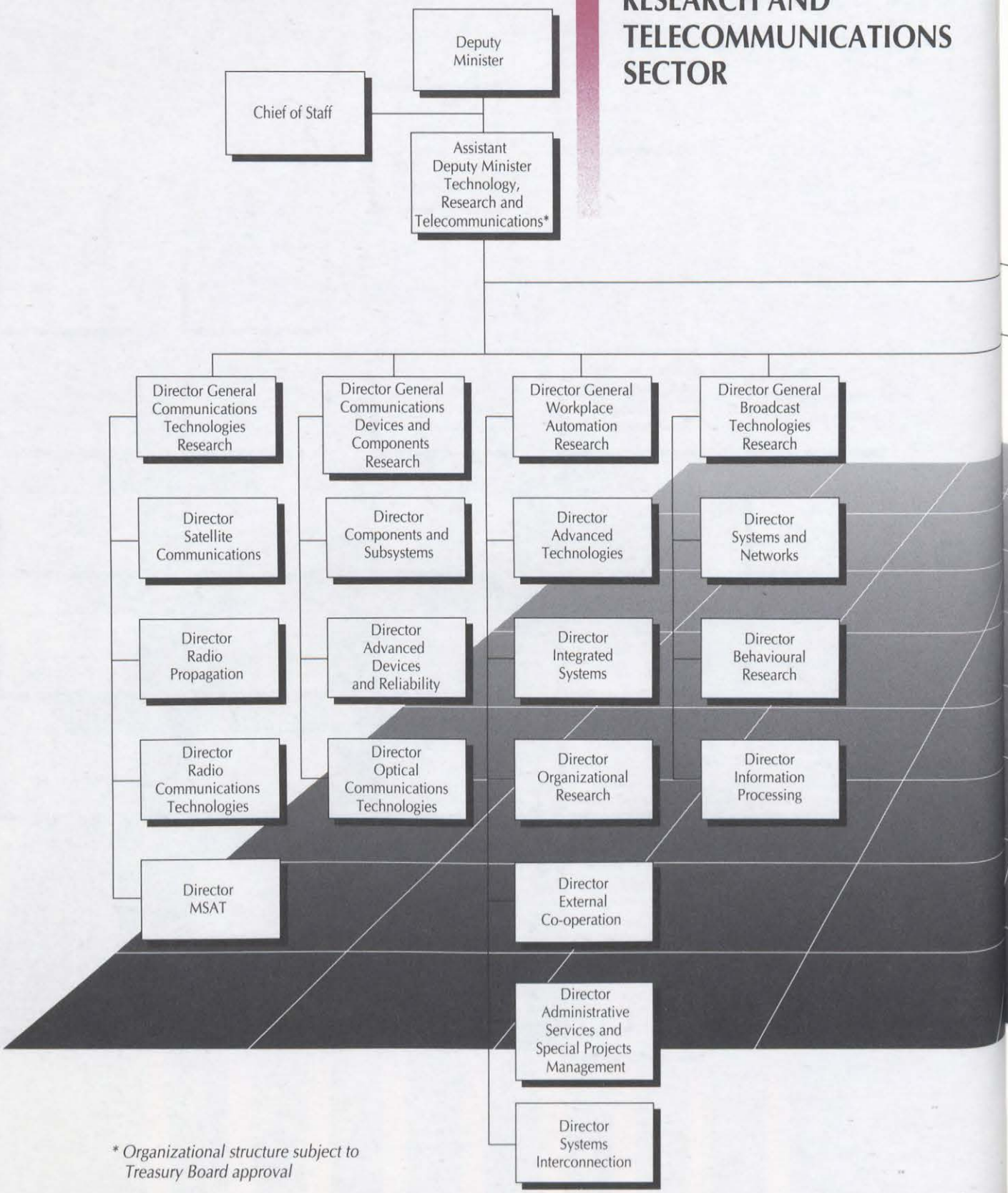
APPENDIX 1
Organization

CORPORATE POLICY SECTOR



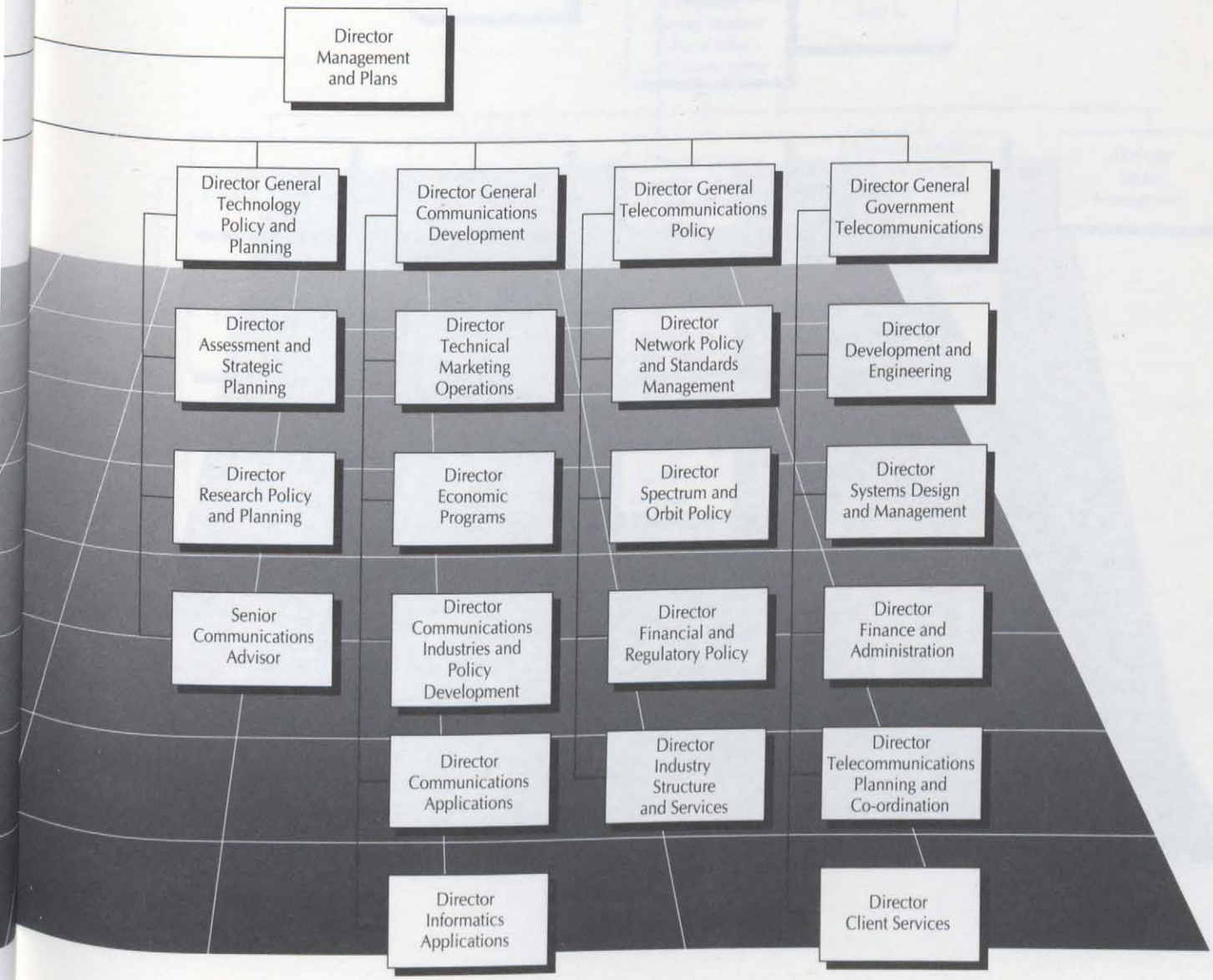
as of March 31, 1989

TECHNOLOGY, RESEARCH AND TELECOMMUNICATIONS SECTOR

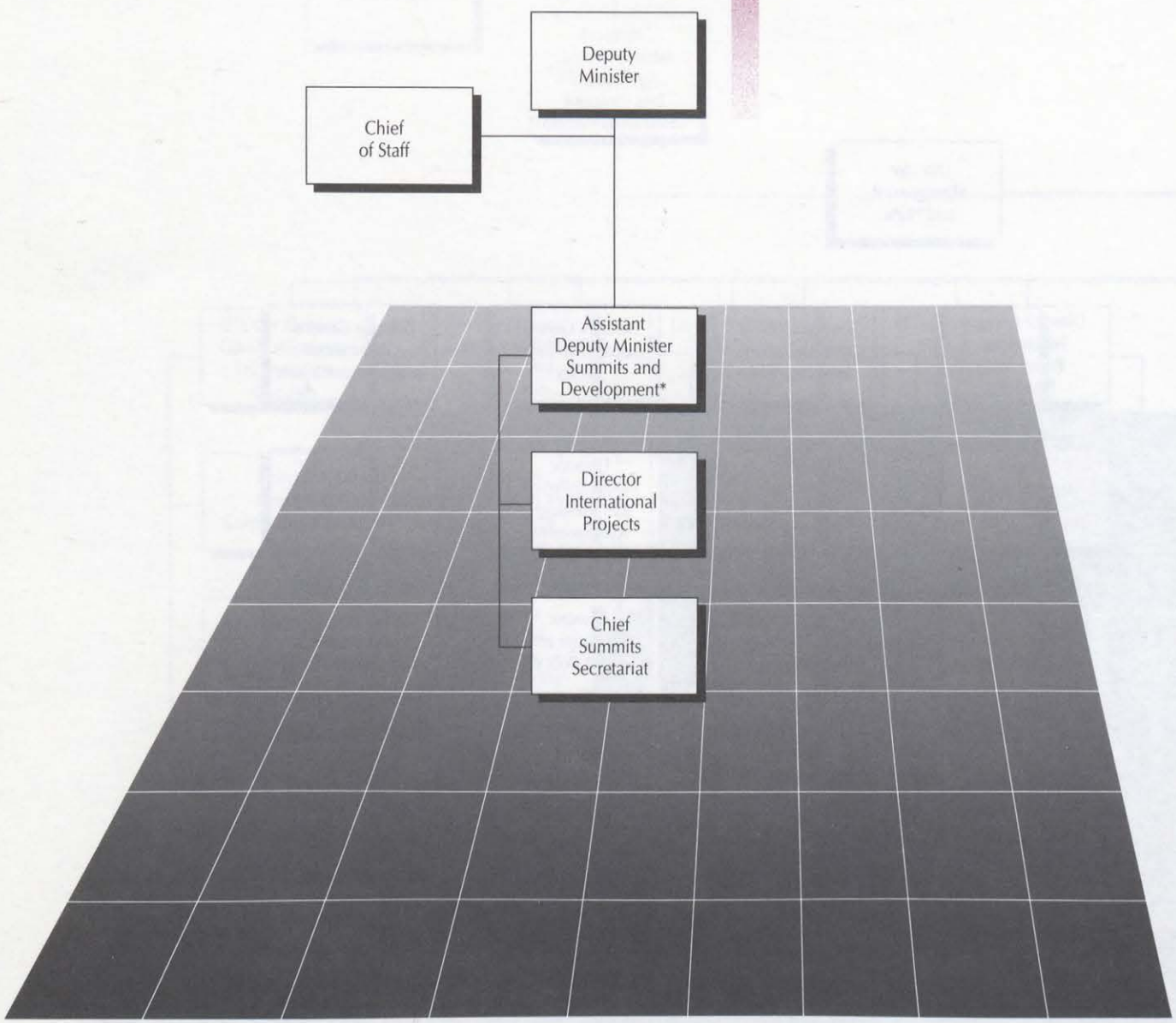


* *Organizational structure subject to Treasury Board approval*

as of March 31, 1989


Director Management and Plans
Director General Technology Policy and Planning
Director General Communications Development
Director General Telecommunications Policy
Director General Government Telecommunications
Director Assessment and Strategic Planning
Director Technical Marketing Operations
Director Network Policy and Standards Management
Director Development and Engineering
Director Research Policy and Planning
Director Economic Programs
Director Spectrum and Orbit Policy
Director Systems Design and Management
Senior Communications Advisor
Director Communications Industries and Policy Development
Director Financial and Regulatory Policy
Director Finance and Administration
Director Communications Applications
Director Industry Structure and Services
Director Telecommunications Planning and Co-ordination
Director Informatics Applications
Director Client Services

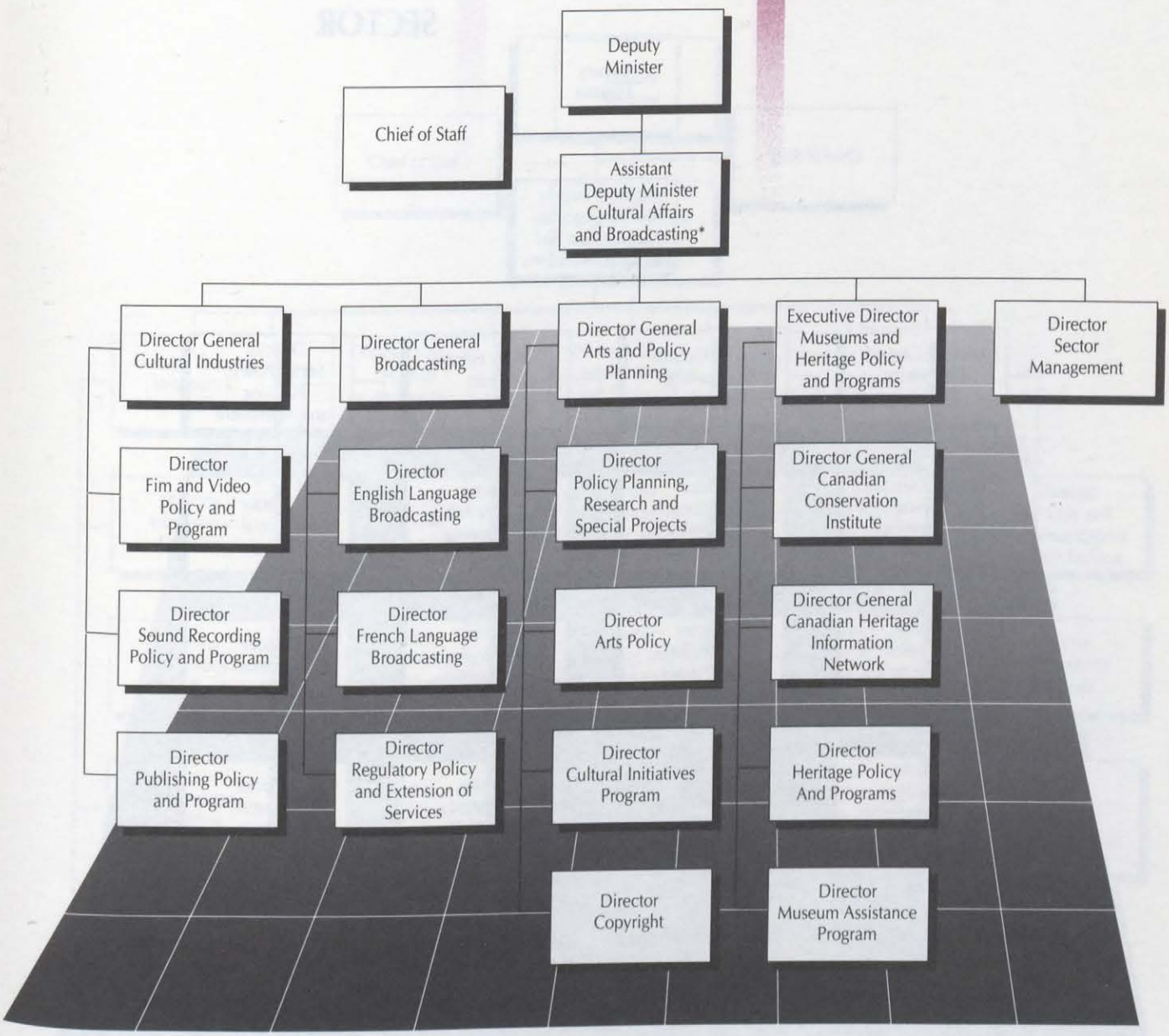
SUMMITS AND DEVELOPMENT SECTOR



** Organizational structure subject to Treasury Board approval.*

as of March 31, 1989

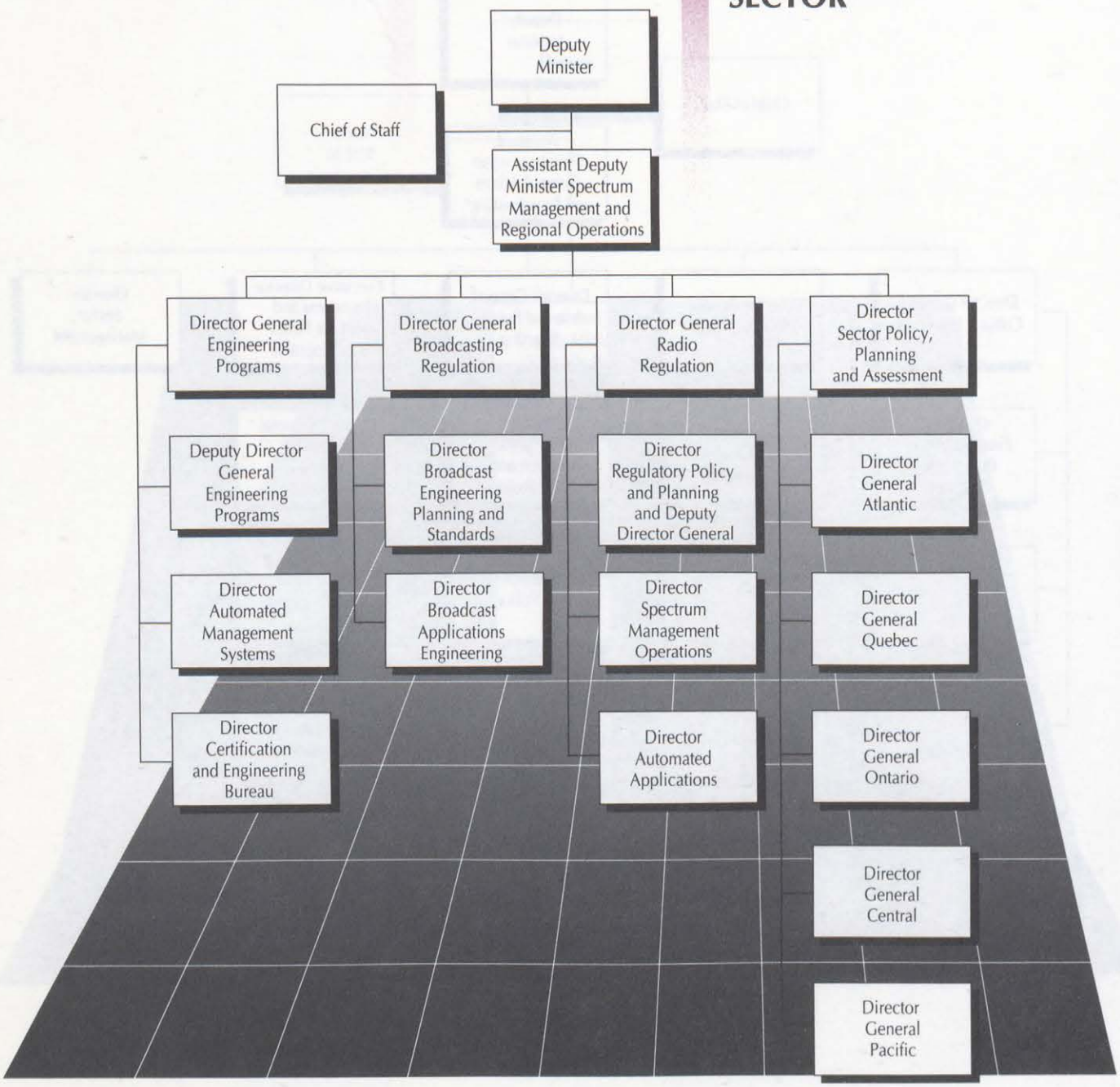
CULTURAL AFFAIRS AND BROADCASTING SECTOR



** Organizational structure subject to Treasury Board approval*

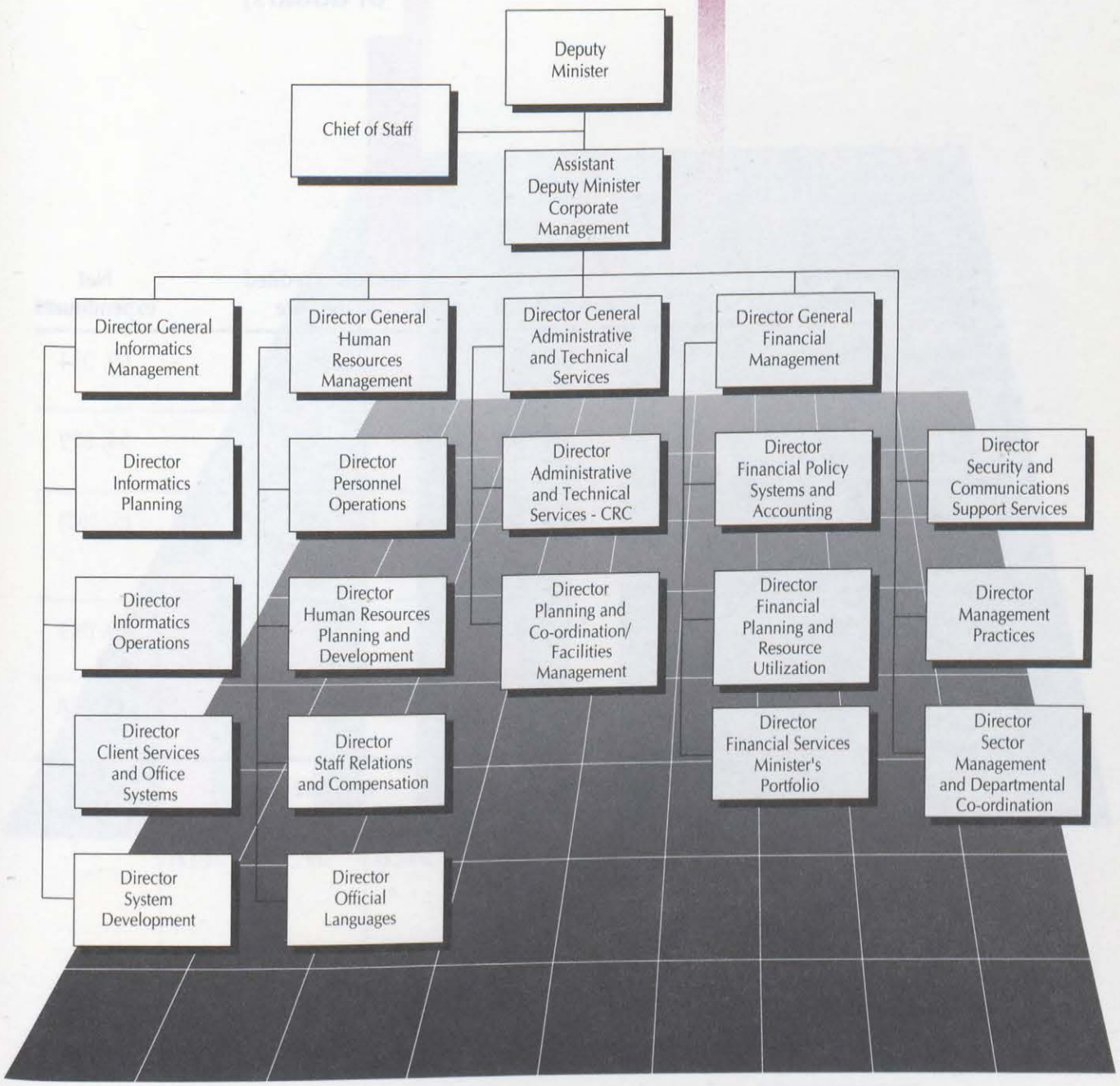
as of March 31, 1989

SPECTRUM MANAGEMENT AND REGIONAL OPERATIONS SECTOR



as of March 31, 1989

CORPORATE MANAGEMENT SECTOR



as of March 31, 1989

APPENDIX 2

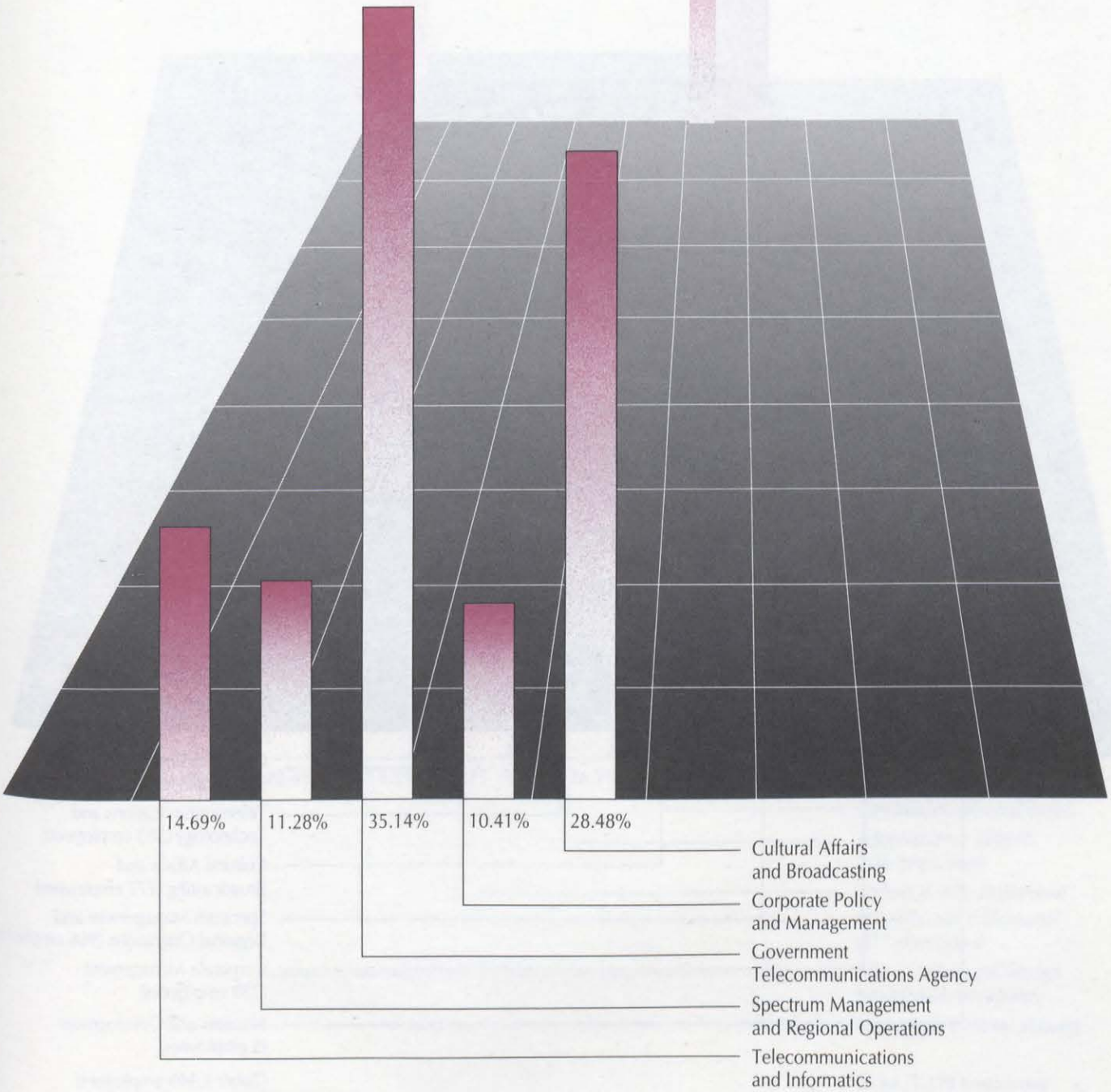
EXPENDITURES BY ACTIVITY 1988-1989 (in thousands of dollars)

Communications and Culture Program	Gross expenditures	Revenue credited to the vote	Net expenditures
Telecomunications and Informatics	72, 022	2, 988	69, 034
Spectrum Management and Regional Operations	55, 309	610	54, 699
Government Telecommunications Agency (Revolving Fund)	172, 272	177, 637	(5, 365)
Corporate Policy and Management	51, 026	1, 977	49, 049
Cultural Affairs and Broadcasting	139, 634	870	138, 764
Total	**490, 263**	**184, 082**	**306, 181**

Source: Public Accounts of Canada, 1988-1989

APPENDIX 3

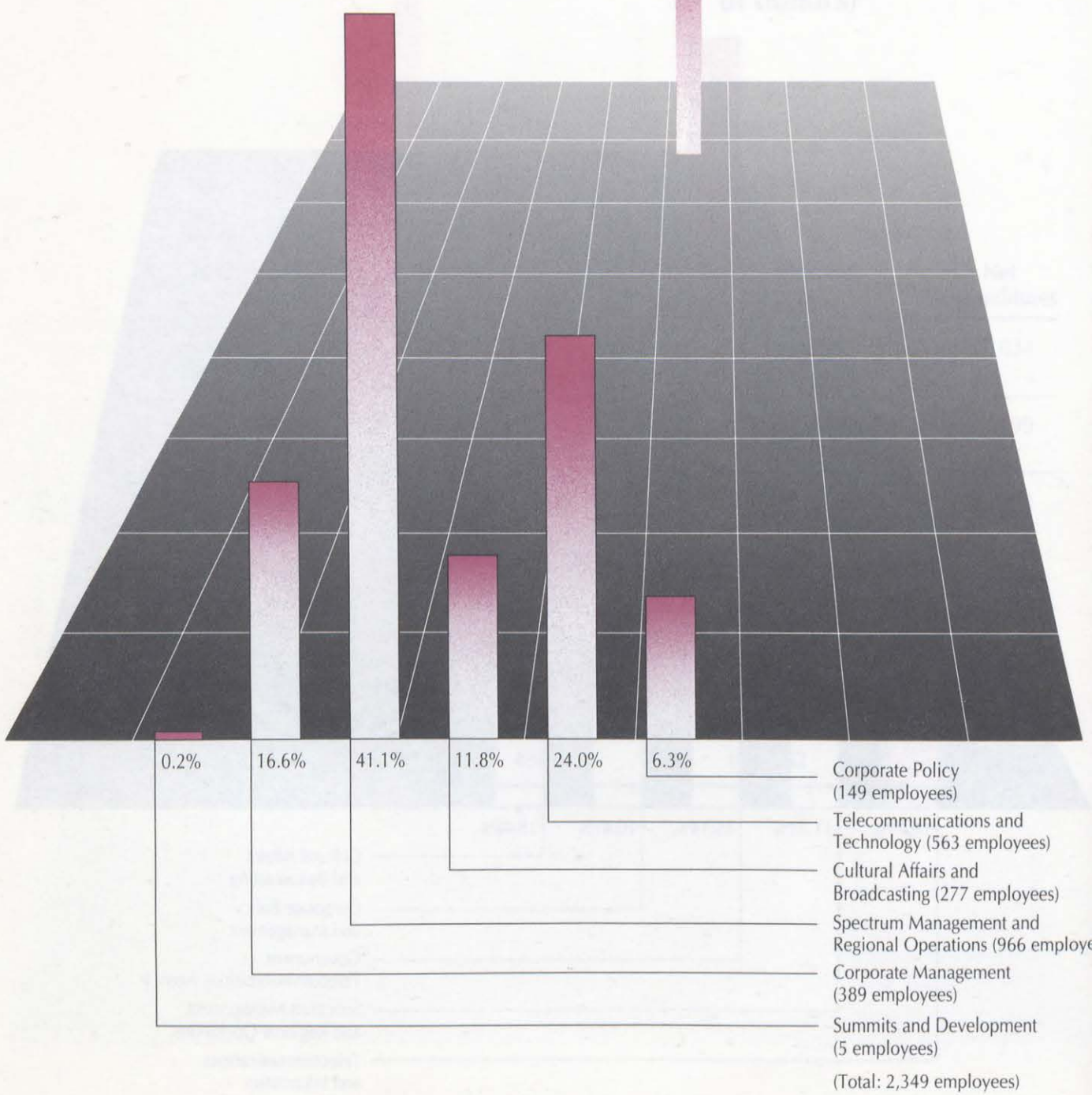
GROSS EXPENDITURES BY ACTIVITY 1988-1989



Source: Department of Communications

APPENDIX 4

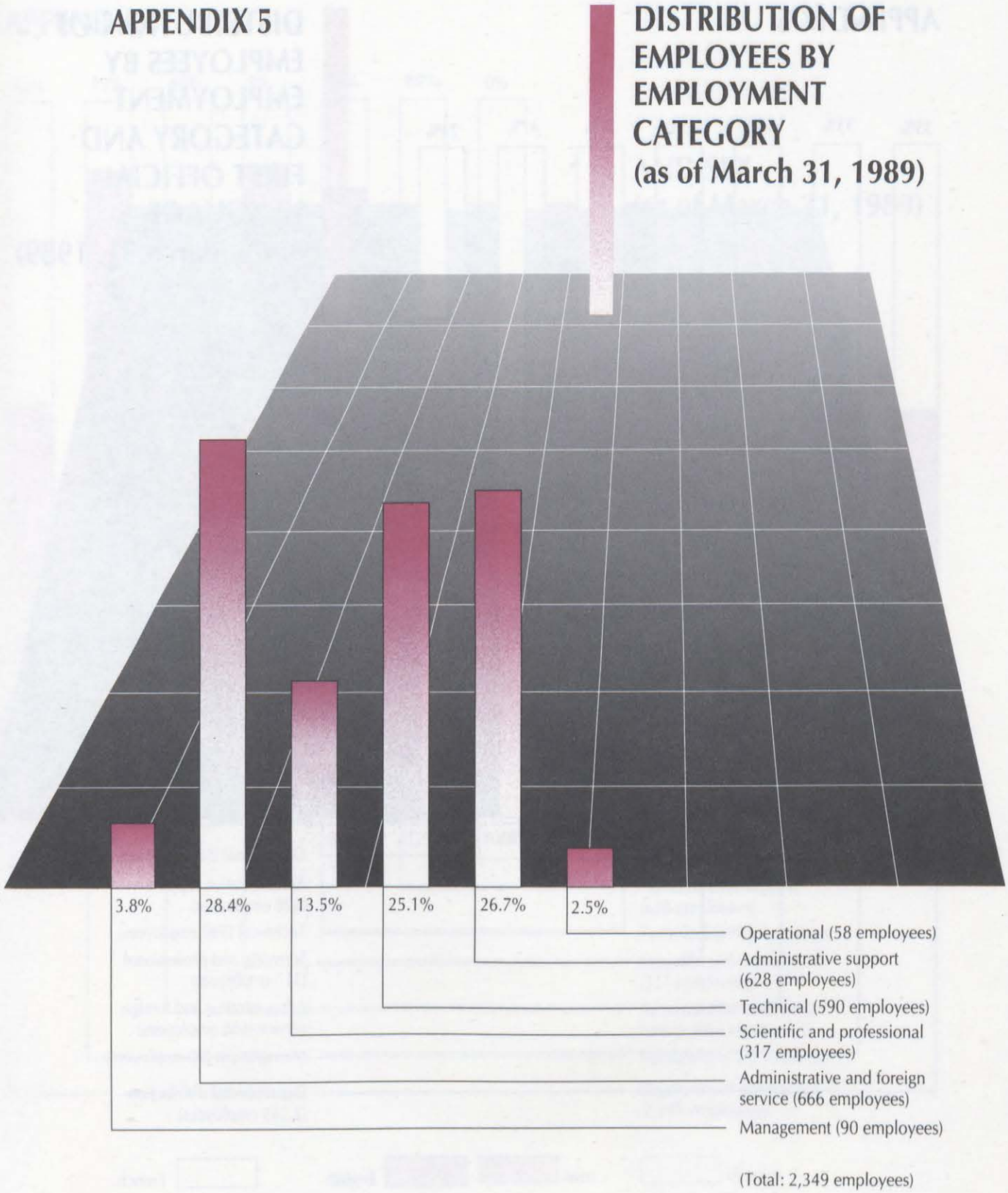
DISTRIBUTION OF EMPLOYEES BY ACTIVITY (as of March 31, 1989)



Source: Department of Communications

APPENDIX 5

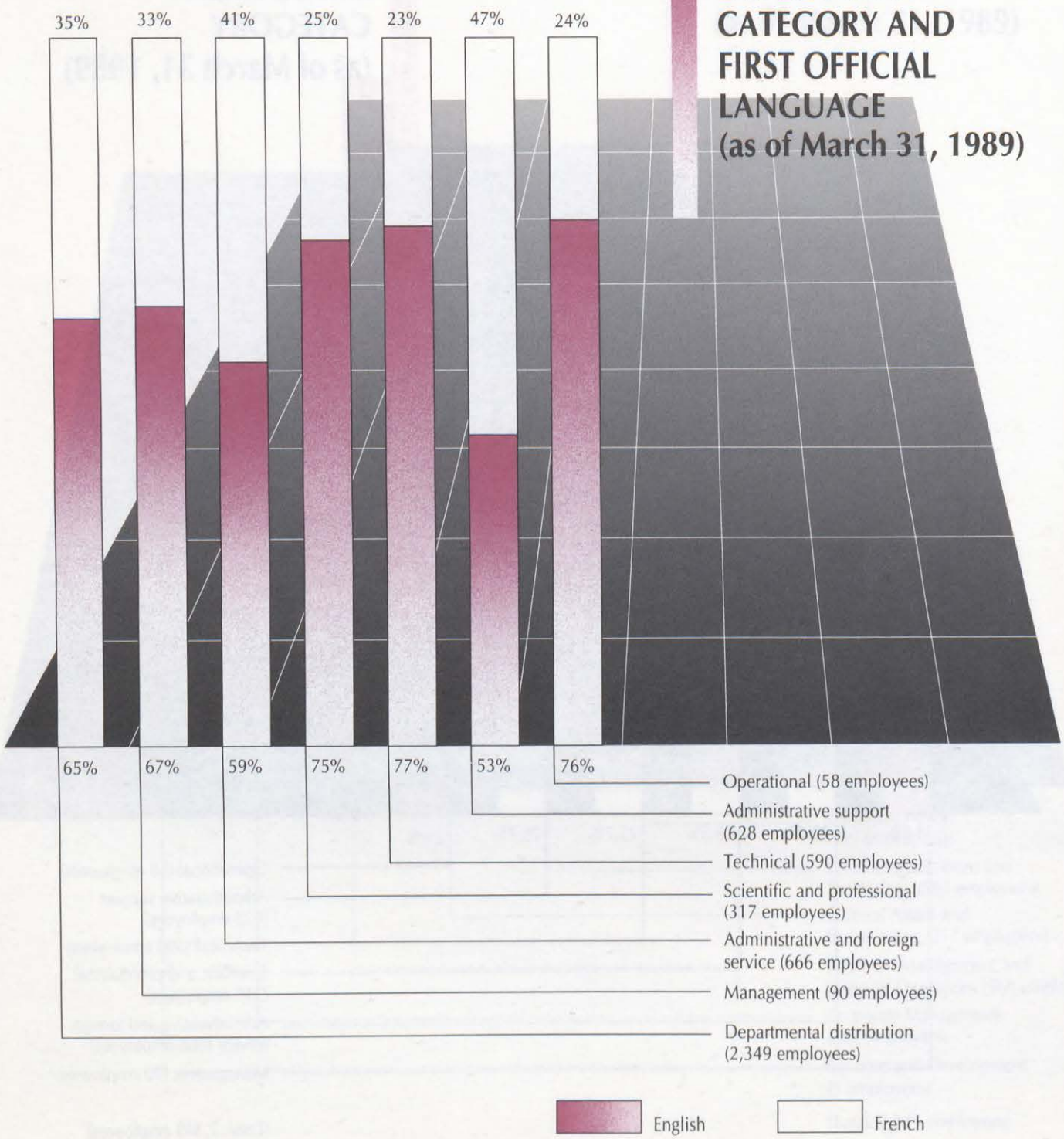
DISTRIBUTION OF EMPLOYEES BY EMPLOYMENT CATEGORY (as of March 31, 1989)



Source: Department of Communications

APPENDIX 6

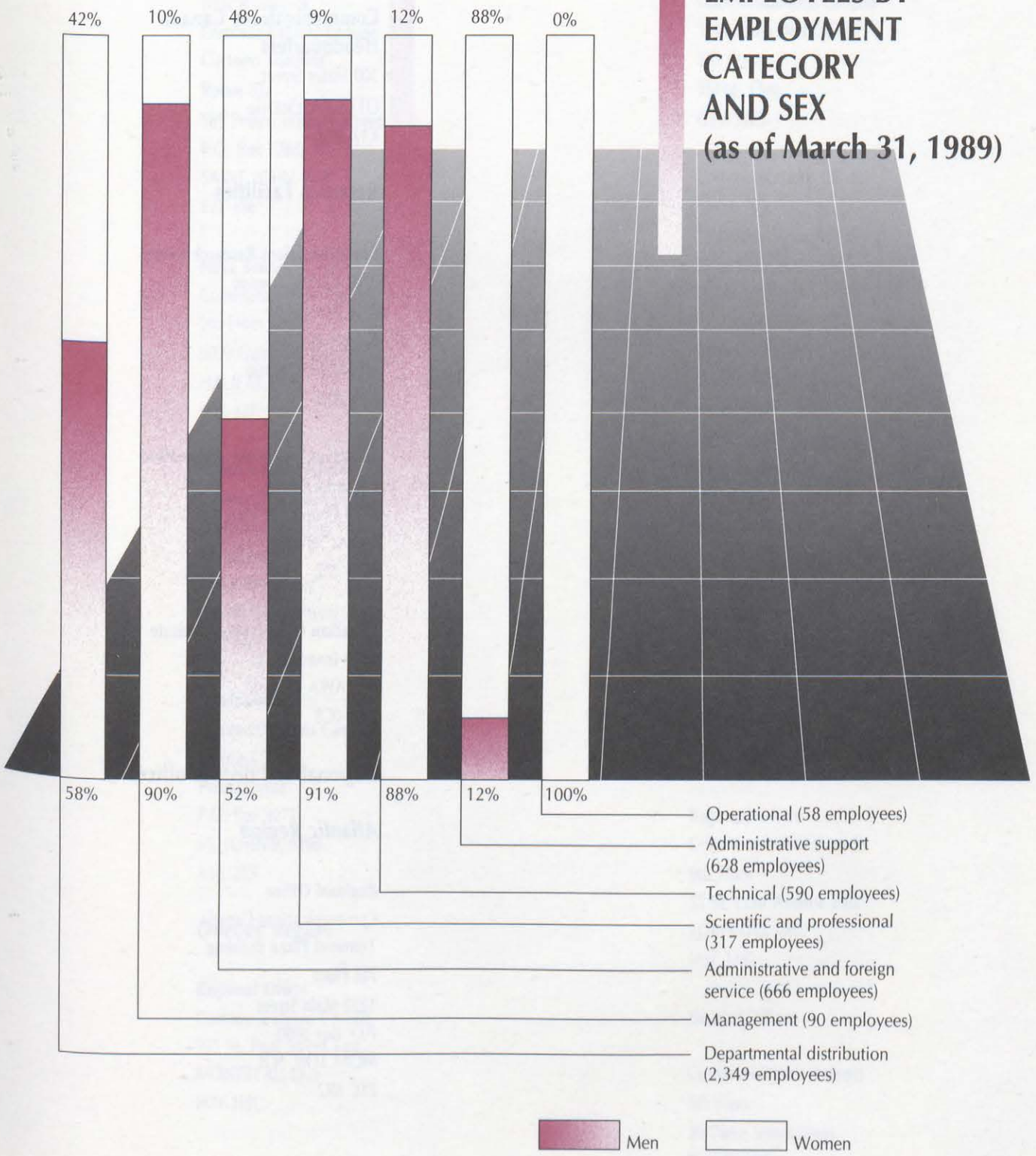
DISTRIBUTION OF EMPLOYEES BY EMPLOYMENT CATEGORY AND FIRST OFFICIAL LANGUAGE (as of March 31, 1989)



Source: Department of Communications

APPENDIX 7

DISTRIBUTION OF EMPLOYEES BY EMPLOYMENT CATEGORY AND SEX (as of March 31, 1989)



Source: Department of Communications

APPENDIX 8

ADDRESSES

Communications Canada Headquarters

300 Slater Street
OTTAWA, Ontario
K1A 0C8

Research Facilities

Communications Research Centre
3701 Carling Avenue
P.O. Box 11490
Station H
OTTAWA, Ontario
K1N 8T5

Canadian Workplace Automation Research Centre
1575 Chomedey Blvd.
LAVAL, Quebec
H7V 2X2

Canadian Conservation Institute
1030 Innes Road
OTTAWA, Ontario
K1A 0C8

Regional and district offices

Atlantic Region

Regional Office
Communications Canada
Terminal Plaza Building
7th Floor
1222 Main Street
P.O. Box 5090
MONCTON, N.B.
E1C 8R2

District Offices

New Brunswick
Communications Canada
Customs Building
Room 337
189 Prince William Street
P.O. Box 7285, Stn. A
SAINT JOHN, N.B.
E2L 4S6

Nova Scotia
Communications Canada
9th Floor
6009 Quinpool Road
HALIFAX, N.S.
B3K 5J7

Prince Edward Island
Communications Canada
Dominion Building
3rd Floor
97 Queen Street
CHARLOTTETOWN, P.E.I.
C1A 4A9

Newfoundland
Communications Canada
Building 302
Pleasantville
P.O. Box 9277
ST. JOHN'S, Nfld.
A1A 2X9

Quebec Region

Regional Office
Communications Canada
295 St. Paul Street East
MONTREAL, Que.
H2Y 1H1

District Offices

Communications Canada
1141 route de l'Église
5th floor
St-Foy, Que.
G1V 3W5

Communications Canada
Room 401
1650 King Street West
SHERBROOKE, Que.
J1J 2C3

Communications Canada
Guy Favreau Complex
Room 1214
200 René Lévesque Boulevard
East Tower
MONTREAL, Que.
H2Z 1X4

Communications Canada
2nd Floor
942 Chabanel Street
CHICOUTIMI, Que.
G7H 5W2

Ontario Region

Regional Office
Communications Canada
9th Floor
55 St. Clair Avenue East
TORONTO, Ont.
M4T 1M2

District Offices

Communications Canada
5th Floor
30 Duke Street West
KITCHENER, Ont.
N2H 3W5

Communications Canada
9th Floor
55 St. Clair Avenue East
TORONTO, Ont.
M4T 1M2

Communications Canada
Trebla Building
Room 100B
473 Albert Street
OTTAWA, Ont.
K1R 5B4

Communications Canada
Room 210
135 James Street South
HAMILTON, Ont.
L8P 2Z6

Communications Canada
Room 1112
451 Talbot Street
LONDON, Ont.
N6A 5C9

Communications Canada
3rd Floor, Suite 2
280 Pinnacle Street
P.O. Box 380
BELLEVILLE, Ont.
K8N 5A5

Communications Canada
Station Tower
2nd Floor
421 Bay Street
P.O. Box 727
SAULT STE. MARIE, Ont.
P6A 5N3

Central Region

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Communications Canada
Room 200
386 Broadway Avenue
WINNIPEG, Man.
R3C 3Y9

District Offices

Manitoba
Communications Canada
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386 Broadway Avenue
WINNIPEG, Man.
R3C 3Y9

Saskatchewan
Communications Canada
Room 1220
606 Spadina Crescent East
SASKATOON, Sask.
S7K 3H1

Communications Canada
1020-2002 Victoria Avenue
REGINA, Sask.
S4P 0R7

Alberta
Communications Canada
16th Floor
9700 Jasper Avenue
EDMONTON, Alta.
T5J 4C3

Communications Canada
Room 820
220 4th Avenue S.E.
P.O. Box 2905, Station M
CALGARY, Alta.
T2P 2M7

Communications Canada
8th Floor
9909 102nd Street
GRANDE PRAIRIE, Alta.
T8V 2V4

Northwest Territories
Communications Canada
Precambrian Building
10th Floor
P.O. Box 2700
YELLOWKNIFE, N.W.T.
X1A 2R1

Pacific Region

Regional Office
Communications Canada
Suite 1700
800 Burrard Street
VANCOUVER, B.C.
V6Z 2J7

District Offices

British Columbia
Communications Canada
Room 224
816 Government Street
VICTORIA, B.C.
V8W 1W9

Communications Canada
Federal Building
Room 304
471 Queensway Avenue
KELOWNA, B.C.
V1Y 6S5

Communications Canada
Room 583
309 2nd Avenue West
PRINCE RUPERT, B.C.
V8J 3T1

Communications Canada
Suite 1700
800 Burrard Street
VANCOUVER, B.C.
V6Z 2J7

Communications Canada
707 - 299 Victoria Street
PRINCE GEORGE, B.C.
V2L 5B8

Communications Canada
Room 203
101 10th Avenue South
CRANBROOK, B.C.
V1C 2N1

Yukon Territory
Communications Canada
Polaris Building
Room 201
4133 4th Avenue
WHITEHORSE, Y.T.
Y1A 1H8