Annual Report 1987 1988

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Communications Canada

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Canada

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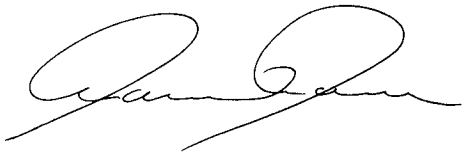
To:
Her Excellency the Right
Honourable Jeanne Sauvé, P.C., C.C.,
C.M.M., C.D., Governor General and
Commander-in-Chief of Canada

Your Excellency:

I have the honour to present the
Annual Report of the Department of
Communications for the fiscal year
ending March 31, 1988.

I remain,
Your Excellency's obedient servant,



Marcel Masse
Minister of Communications

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HIGHLIGHTS

- Maiden flight of SHARP
- Participation in major international events (Francophone Summit, Commonwealth Heads of Government Meeting and Olympic Winter Games).
- Extensive drafting and consultations associated with revising the *Telecommunications Act, Broadcasting Act, Copyright Act, Radio Act* and *National Archives Act.*
- National Programs component transferred from National Museums of Canada to the Department of Communications.
- New departmental mission statement drafted featuring six operating principles for all employees.
- Twenty-fifth anniversary of Canada's first space launch.
- Commonwealth and Francophone Centres for Distance Learning announced.
- *Film Products Importation Act* drafted.
- High Tech Strategy initiated — *Communications for the Twenty-first Century* released.
- *Vital Links* — background paper on cultural industries released.
- Status report by the Canadian Advisory Committee on the Status of the Artist released.
- Department of Communications receives EMMY Television Award.
- Preparations underway for TV 5 broadcasting in Eastern Canada.
- Total Parliamentary appropriations of $459.9 million with 2,412 authorized person-years for the Department in 1987-1988.
- High definition television demonstrated.

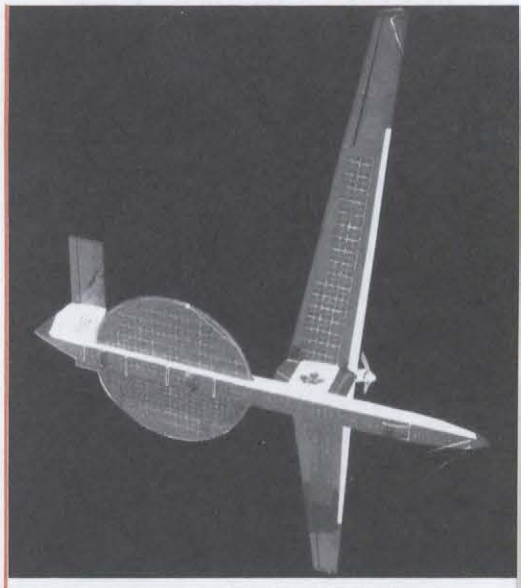
One project funded under the Canada-Ontario Subsidiary Agreement for Cultural Development was a $10 million extension to the Royal Ontario Museum (ROM) in Toronto. Peter Buerschaper, Manager of Art Services at the ROM makes final adjustments to the new Bat Gallery; a "surroundorama" experience featuring a realistic reconstruction of parts of Jamaica's St. Clair Cave. (Photo courtesy of the ROM)

INTRODUCTION

The Department's mandate reflects its central role within the federal government in strengthening the nation through communications and culture 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
- 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 which links Canadians from all regions through a variety of conventional and new technologies such as television, telephone, satellite, mobile radio and fibre optics. The Canadian communications system has been marked by a long-standing preoccupation with content as well as carriage in key areas such as broadcasting. It has also been influenced historically by sovereignty concerns such as Canadian control of telecommunications and broadcasting undertakings.



The Stationary High Altitude Relay Platform (SHARP), designed and tested at the Communications Research Centre, is the world's first microwave-powered aircraft capable of uninterrupted flight.

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 arts and the cultural industries, including those whose creations were not being distributed on the communications system.

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 with resultant new information services and cultural products for consumers.

The activities undertaken by the Department during the year under review reflect a commitment to service. Canada hosted major international events such as the Francophone Summit, the Commonwealth Heads of Government Meeting and the Olympic Winter Games, bringing international recognition of our achievements and expertise in communications technology and culture. The Department also made major cultural advances in public policy concerning broadcasting, copyright, sound recording, book publishing and film and video.

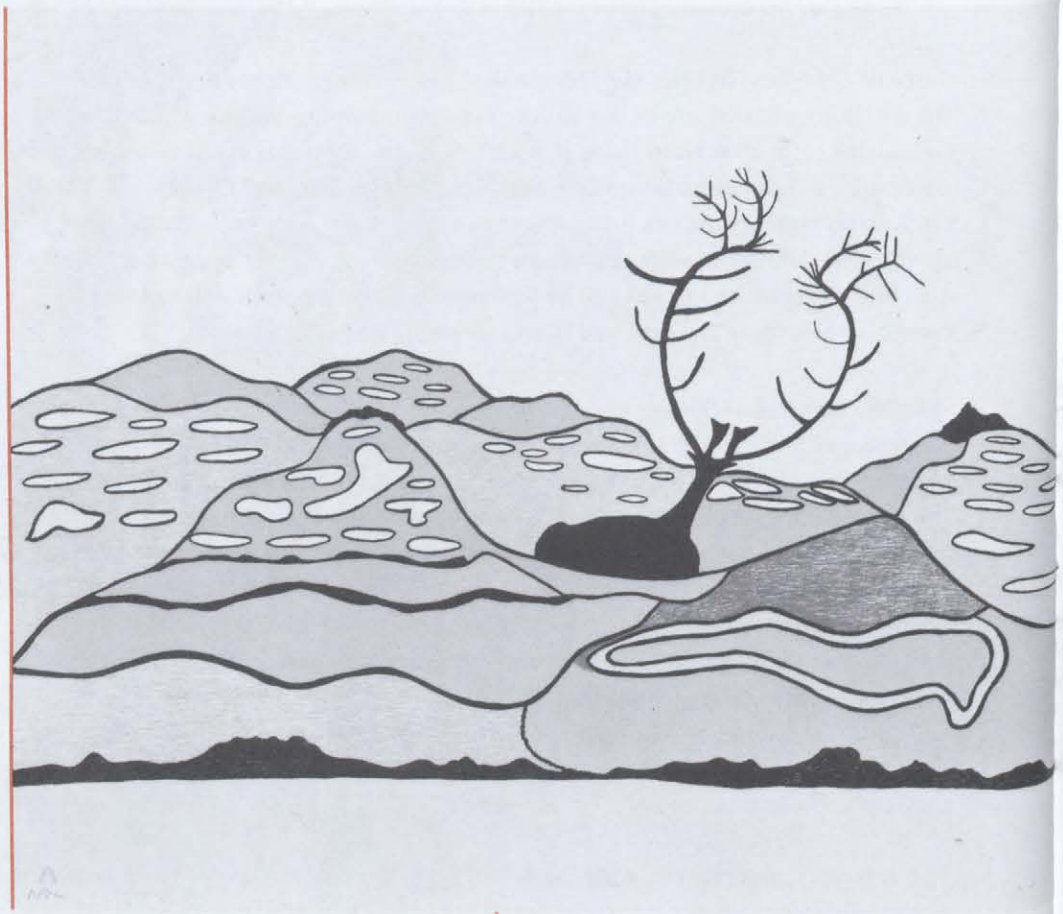
The Department of Communications and its public

During 1987-1988 the Department took pride in fulfilling its central responsibility: the creation of conditions which enabled Canadians from all regions and all walks of life to express themselves socially, culturally and economically through the communication of information and the sharing of cultural values. The past year was abundant in creative achievements in science, heritage and the arts, ranging from the deeply traditional in concept and presentation to those using the most modern forms of technology.

The mission of the Department

The Department undertook the development of a formal mission statement during the 1987-1988 fiscal year. The intent of the exercise was to describe a vision of the Department for the coming years based on respect for the traditions and lessons of the past, Canada's strengths in communications and culture, and the building of a stronger Canadian nation for the future.

Some 60 employees representing all sectors and levels of the Department were initially involved in a series of working groups that developed the elements of the mission as well as a set of operating principles. Their contribution was then reviewed by senior management, who added the strategic perspective along with a number of refinements. The results of this work were subsequently validated by more than 1,800 employees in a series of one-day, country-wide briefing sessions which led to a number of revisions and improvements.



Pudlat, Pudlo (Canadian — Inuit, born 1916). *Landscape with Caribou*, 1977. Lithograph on paper, 44/50, 56.7 × 65.5 cm. Donated to the Winnipeg Art Gallery by Dr. and Mrs. Melville Swartz under the terms of the Cultural Property Export and Import Act. (Photo courtesy of the Winnipeg Art Gallery)

The focus of the mission is twofold:

- the communications systems that link Canadians by carrying information and values, and
- the availability of Canadian cultural products and information services.

Together, these constitute the central nervous system of Canadian society, bringing Canadians together for work, learning, entertainment and service to the public. They enable us to express our collective reality as a nation, making possible the contact among people which nourishes and magnifies the creativity and innovation essential to our social, cultural and economic integrity. The mission slogan is NATION BUILDING/BÂTIR LE PAYS: helping Canadians share their ideas, information and dreams.

The operating principles that accompany the mission are a formal statement of the organizational values guiding the Department in the daily management and conduct of its activities. In exercising its corporate mission of NATION BUILDING/BÂTIR LE PAYS as the key to creativity and growth in Canadian society, the Department follows an operating philosophy sensitive to human needs. It is based on six principles: 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 the enabling legislation for a number of Crown corporations, 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 (formerly the Canadian Film Development Corporation)
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

In addition, the portfolio benefits from 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 has responsibilities to Parliament for the following statutes or sections thereof:

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 Export and Import 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 Copyright Act

The Department of Communications' program approach

The Department's program is made up of five broad categories, each representing a sector of the Department's organization.

Telecommunications and Technology:

- formulates policies for the development of the national communications system, including radio, wire, cable and satellite-based systems; conducts research and disseminates information on new technologies and services; and promotes the use of new telecommunications and informatics technology by the private and public sectors. This sector is also responsible for the Government Telecommunications Agency.

Cultural Affairs and Broadcasting:

- fosters an environment in which Canada's heritage is preserved and made accessible, artistic

A Rock Demers film, *La grenouille et la baleine (The Tadpole and the Whale)*, was produced through Telefilm Canada's Feature Film Fund. (Photo courtesy of Telefilm Canada)

expression can flourish, cultural markets can develop and Canadian audiences have increased access to cultural products and services.

Spectrum Management and Regional Operations:

- manages both the use and development of the radio spectrum nationally and, through international agreements and regulations, protects Canada's rights regarding the use of the spectrum. It also manages departmental operations in all regions of Canada.

Corporate Policy:

- includes the planning, international relations, federal-provincial relations, information services, program evaluation and audit elements of the Department.

Corporate Management:

- provides support and advice to the Minister and to all employees to ensure they carry out the Department's mission through proper management and control.

The National Museums

In response to recommendations from the House of Commons Standing Committee on Communications and Culture, the Government announced in May 1987 its intention to phase out the National Museums of Canada (NMC) and to establish the four national museums as autonomous Crown corporations. As a result, the responsibilities, authority and accountability of the directors of the National Gallery of Canada, the National Museum of Science and Technology, the Canadian Museum of Civilization and the National Museum of Natural Sciences will be greatly broadened.

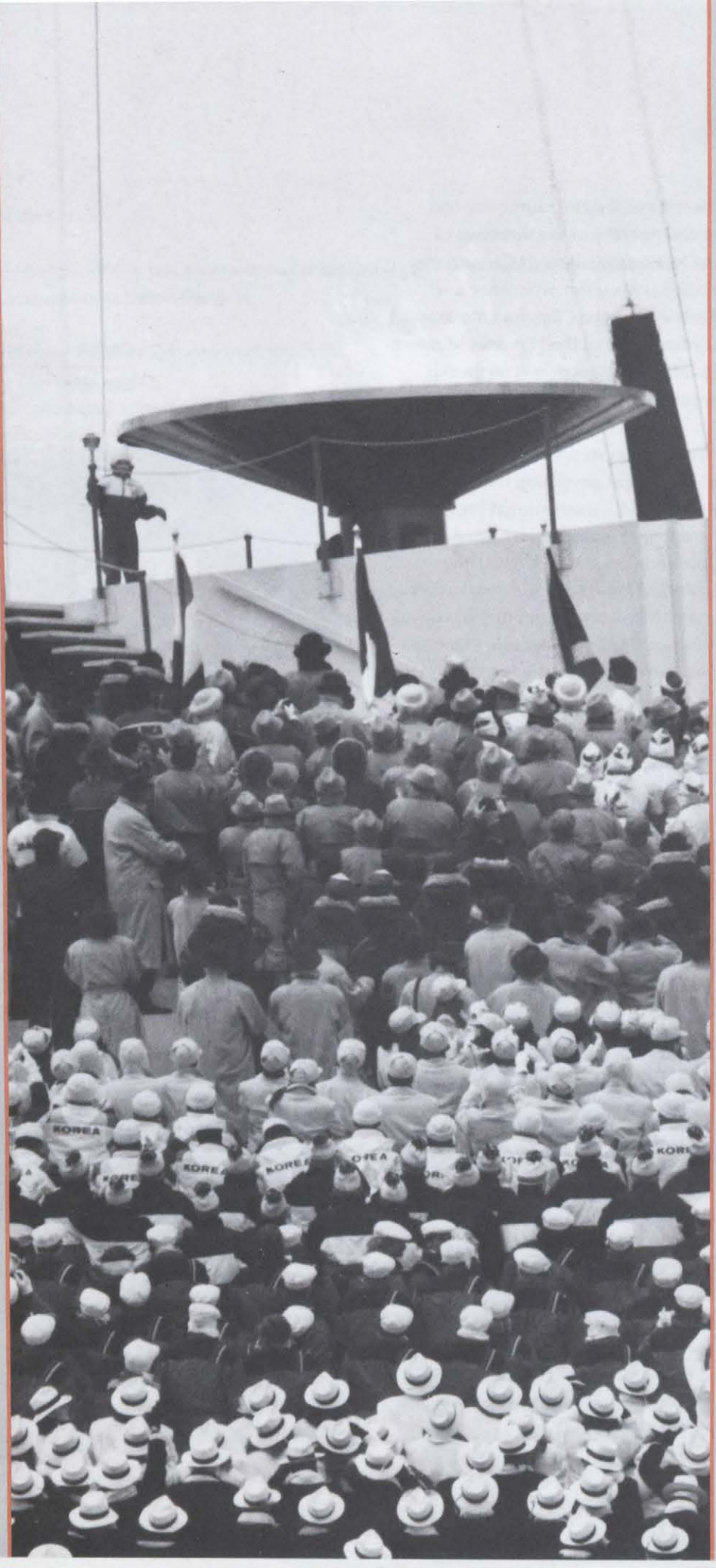
As an interim step, pending the drafting of legislation governing the dismantling of NMC, the National Programs component, namely the Canadian Conservation Institute (CCI), the Canadian Heritage Information Network (CHIN), the Museum Assistance Program (MAP), the Mobile Exhibits Program (MEP) and the International Program (IP), were transferred to the Department of Communications in September 1987. This transfer involved 190 employees responsible for the delivery of these programs.

The Government also decided to phase out the Mobile Exhibits Program (MEP) and to transfer most of its assets to the Secretary of State's National Exhibitions and Fairs Program. Employees of MEP were offered employment either in the Department of Communications or elsewhere in the federal public service.

Resource allocation

Total gross expenditures for the Department during the 1987-1988 fiscal year were $459.9 million with 2,412 authorized person-years. These figures include the resources of the National Programs component of the National Museums of Canada, which was transferred to the Department on September 1, 1987.

Released in 1987-1988 *A Winter Tan*, starring Jackie Burroughs, was based on a story by Maryse Holder. (Photo courtesy of Telefilm Canada)



The XV Olympic Winter Games held in Calgary February 13-29, 1988, represented a monumental challenge to the Department. Its staff spent almost six years preparing for this event. There were more than 550 hours of live broadcast coverage of 46 events in 10 official sports and three demonstration events from venues up to 100 km apart. Some 5,000 media representatives reported on events in and around Calgary, while over two billion people around the world watched the Games on television.

(Photo courtesy of the Prime Minister's Office)

INTERNATIONAL ACTIVITIES

A series of major events thrust Canada into the international spotlight during 1987-1988. Canadian telecommunications and broadcasting expertise was showcased by the Francophone Summit in Quebec City, the Commonwealth Heads of Government Meeting in Vancouver and the XV Olympic Winter Games in Calgary. These events brought together many of the world's heads of state along with thousands of officials, journalists, artists, performers, athletes and tourists from the four corners of the globe.

Numerous Department of Communications initiatives received worldwide recognition: Francophone and Commonwealth nations paved the way for sending televised education programs and other forms of distance education to all parts of the world; diagnosis and treatment were prescribed for patients eight thousand kilometres away thanks to a satellite hook-up; millions viewed outstanding art, film and drum festivals; and a sophisticated teletext system improved television coverage of the Olympic Winter Games.

These accomplishments are a tribute to the employees from all sectors of the Department, who worked with each other, with other federal government departments and agencies and with clients from the private sector and cultural community not only to foster the development of communications and culture in Canada, but also to make effective co-operation a working reality.

We have chosen to highlight these international activities in the 1987-1988 Annual Report to illustrate the dedication and achievement of our employees.

The second Summit meeting of 41 French-speaking nations took place in Québec City September 2-4, 1987. Discussions focussed on cultural and technical co-operation among the member nations. The Government of Canada pledged $17 million to communications and cultural programs such as the International Francophone Centre for Distance Education, the extension of TV 5 to Canada, Africa and the Middle East, an international video bank, an international radio fund, a journalist-exchange program and a book fund. (Photo courtesy of the Prime Minister's Office)

Canada hosts the world

One major event, perhaps more than any other, focussed world attention on Canadian telecommunications and broadcasting proficiency. For the Olympic Winter Games, dozens of countries converged on Calgary each with specific communications needs ranging from media satellite/microwave feeds to hand-held units for team security.

The Department's spectrum managers were faced with the enormous challenge of accommodating an additional 4,000 transmitters and an associated 800 frequency assignments. In a spectrum environment already congested, they had the task

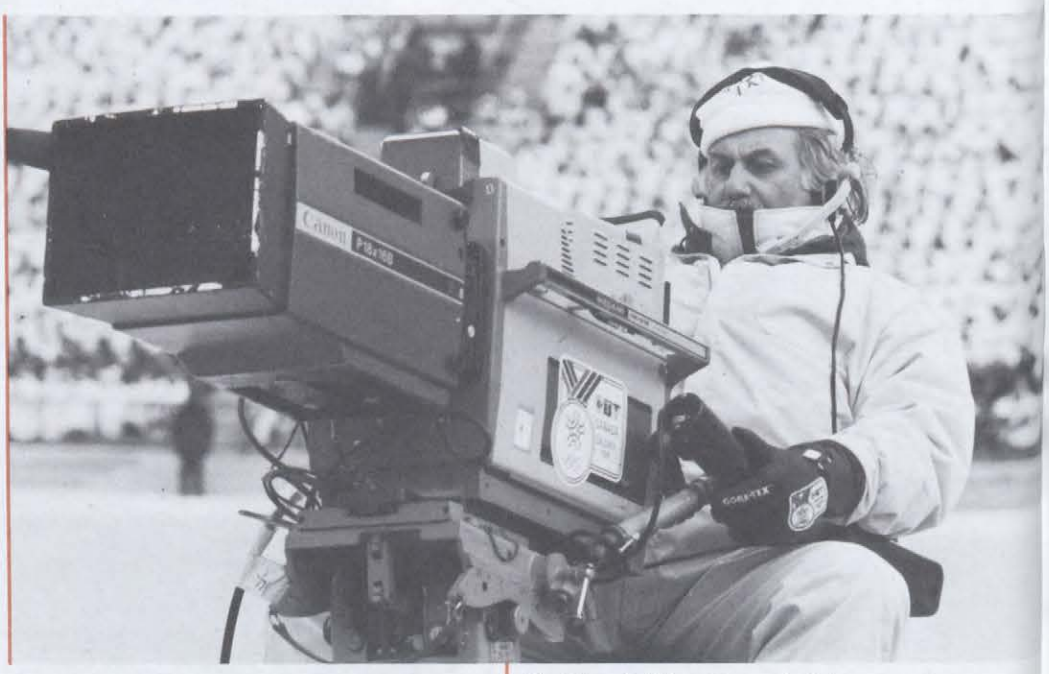
Forty-eight member countries were represented at the biennial Commonwealth Heads of Government Meeting in Vancouver October 15-17, 1987. Agreement in principle was reached to establish the Commonwealth Centre for Distance Learning, which will use the most appropriate technology, including satellites, to link the Vancouver Co-ordinating Centre with regional offices in other Commonwealth nations. (Photo courtesy of the Prime Minister's Office)

of ensuring the day-to-day protection of these systems from interference, not only from one another but from other spectrum users in Calgary.

In addition, the highly sophisticated Canadian-developed teletext system played a major role in communicating Games events to the world: its high profile in Calgary is certain to generate overseas interest in commercial teletext services. The system was used to transmit up-to-date schedules and results from various Olympic sites over a special cable network and over the air "piggy backed" on the broadcast signal of the host broadcaster's affiliate in Calgary. By touching a few buttons on a keypad, broadcasters were able to call up the information on the screen as video pages.

The Department also actively promoted Canadian culture by contributing to the highly successful Olympic Arts Festival. Similarly, for the two international summits, the Department sponsored the Commonwealth Film Festival in Vancouver and the Festival du film de la francophonie in New Brunswick. In all, 72 films produced in Francophone and Commonwealth countries were featured.

During the Francophone Summit, the Department also worked with the Government of Quebec, international broadcasters, the CBC, Telesat Canada and local cable television operators to launch the first Canadian demonstration broadcast of TV 5. This international French-language television network carries programs from France, Belgium, Switzerland and Canada. The Department of Communications will contribute $1.65 million annually for the next two years toward this service and has earmarked $1.8 million for the extension of TV 5 to Africa and the Middle East.



The Olympic Winter Games in Calgary was the largest single spectrum management event ever undertaken by the Department. Regional staff played key roles in ensuring problem-free communications for the Games' essential services, the host broadcaster (CTV), security services, visiting foreign dignitaries, the media and athletes. (Photo courtesy of the Prime Minister's Office)

The Shaw Festival's production of *You Never Can Tell* was one of many productions to showcase Canadian talent at the Olympic Arts Festival. In addition to productions by Canadian dance groups, orchestras and theatrical troupes, the Festival included a writers' festival and book fair, native art displays and a festival of Canadian films. Through the Cultural Initiatives Program, the Department contributed $1.4 million to the Festival. (Photo by David Cooper, courtesy of the Shaw Festival)

Communicating the events

The CBC and Champlain Productions, the respective host broadcasters for the Commonwealth Heads of Government Meeting and the Francophone Summit, demonstrated yet again Canada's world-class capabilities in telecommunications, offering both audio and video feeds to a total of more than 70 radio and television broadcasters from around the world.

CTV provided host broadcasting services for the Olympic Winter Games, with Quebec rights handled by TVA. To ensure that the Games could also be enjoyed by Francophones outside Quebec, the Department provided financial assistance and negotiated special agreements among Radio Canada, TVA, CANCOM, cable companies and the Olympic Games Organizing Committee.

Reaching out

In the months leading up to the Summits, departmental staff worked closely with the Department of the Secretary of State, the Canadian International Development Agency, the Department of External Affairs, provincial and foreign governments and educators to develop proposals for international co-operation in distance education.

At the Francophone Summit, the Department played a catalytic role in the creation of a Francophone distance education centre that will establish a network linking French-language universities and training institutions worldwide, providing course programs in a variety of specialty fields. During the Summit, the Ministers of Communications of Canada and Quebec participated in a live demonstration that linked teachers in Canada by satellite with students in the Ivory Coast and Senegal. The Minister also announced a federal contribution of $3 million toward the establishment of a permanent International Francophone Distance Education Centre in Canada.

In a parallel development, agreement in principle was reached at the Commonwealth Heads of Government Meeting to establish the Commonwealth Centre for Distance Learning. The Centre will co-ordinate the development of distance education materials and techniques ranging

Two Quebec literary works published under the French-language Pocket-book Collection Project were presented by the Minister of Communications to Francophone Summit participants. *L'Amélanchier*, a novel by Jacques Ferron, and *Ces enfants de ma vie*, a collection of short stories by Gabrielle Roy received acclaim.

The Department sponsored two major film festivals during 1987-1988: The Commonwealth Film Festival in Vancouver and le Festival du film de la francophonie in New Brunswick. The opening film at le Festival du film was *Les fous de Bassan* (Canada, 1987), one of 30 films from 12 Francophone countries presented over a seven-day period in Moncton, Fredericton and Caraquet. At the Commonwealth Film Festival, 42 films produced in Canada, Australia, Great Britain, India and New Zealand were shown.

from simple correspondence courses to systems using the most sophisticated technology. The Minister of Communications announced that the Government of Canada and the Province of British Columbia will contribute up to $12 million toward this network over the next five years.

Also during the Commonwealth Heads of Government Meeting, the Department hosted a demonstration of telemedicine and telehealth showing how low-cost telephone technology can be used to exchange medical information. Medical specialists used a communications satellite linking Vancouver, St. John's and Kingston, Jamaica to exchange medical data and discuss diagnoses.

As well as contributing our resources and technology to these projects, the Summits provided an opportunity for us to share our cultural heritage and artistic spirit with other nations. Artists, directors, film critics and fans, as well as many international visitors gathered in New Brunswick and in Vancouver for the screening of a range of films from Francophone and Commonwealth countries. Canadian productions included the internationally acclaimed *Les fous de Bassan* and *I've Heard the Mermaids Singing*. During the Commonwealth Film Festival, the Minister of Communications and the Prime Minister of New Zealand signed a co-production agreement at a special reception for the Vancouver film community. It was one of six new film and video co-production agreements signed with other nations in 1987-1988.

A number of communications and culture ministers from abroad visited Canada during the year to discuss issues of common interest and concern. These visits provided the Department with many opportunities to share its unique expertise.

Other international activities

The People's Republic of China signed a Memorandum of Understanding (MOU) for scientific and technical co-operation in telecommunications, and a successful Canada-Japan Communications Industry Technical Seminar took place in Tokyo in September 1987. Both meetings raised the profile of Canadian telecommunications companies in Asia and have led to the development of successful new business relationships.

September 20, 1987 was the day Pope John Paul II visited Fort Simpson — three years later than originally planned. During the 1984 Papal visit to Canada, the Pope's aircraft was unable to land there because of heavy fog. This time all went well. Working in co-operation with NorthwesTel, the RCMP, Public Works Canada, Health and Welfare Canada and the local Papal authority, the Department of Communications took the lead in providing telecommunications support.

In response to an invitation extended by the Minister of Communications during her February 1987 trip to China, a delegation from the People's Republic of China visited Canada in March 1988 for bilateral discussions. The highlight of the visit was the signing of a Memorandum of Understanding (MOU) for co-operation in the scientific and technical areas of telecommunications. In addition to the Chinese delegation, Canada also received visits by communications ministers from the United Kingdom, Morocco and the Federal Republic of Germany. As well, cultural ministers visited from Algeria, Bulgaria, Cameroon, Greece, the Netherlands, Norway, Senegal and the USSR.

Telecom '87 in Geneva and the Symposium of Francophone Informatics and Software Experts in Montréal provided the Department with further opportunities to reach out and promote Canadian telecommunications and broadcasting capabilities. The Minister of Communications and senior officials of the Department led a contingent of 40 companies to the quadrennial gathering in Geneva. This was the largest Canadian trade delegation ever assembled in the telecommunications sector. The strong presence of Canadian industry resulted in important business contacts and a number of commercial agreements.

At the Montréal Symposium, more than 80 delegates from 18 countries met to study such key issues as the creation of a data bank of French-language software, software co-production arrangements and trade agreements.

During 1987-1988, the Department participated in regular meetings of the International Telecommunication Union (ITU), the International Telecommunications Satellite Organization (Intelsat), the International Maritime Satellite Organization (Inmarsat) and the Inter-American Telecommunications Conference (CITEL).

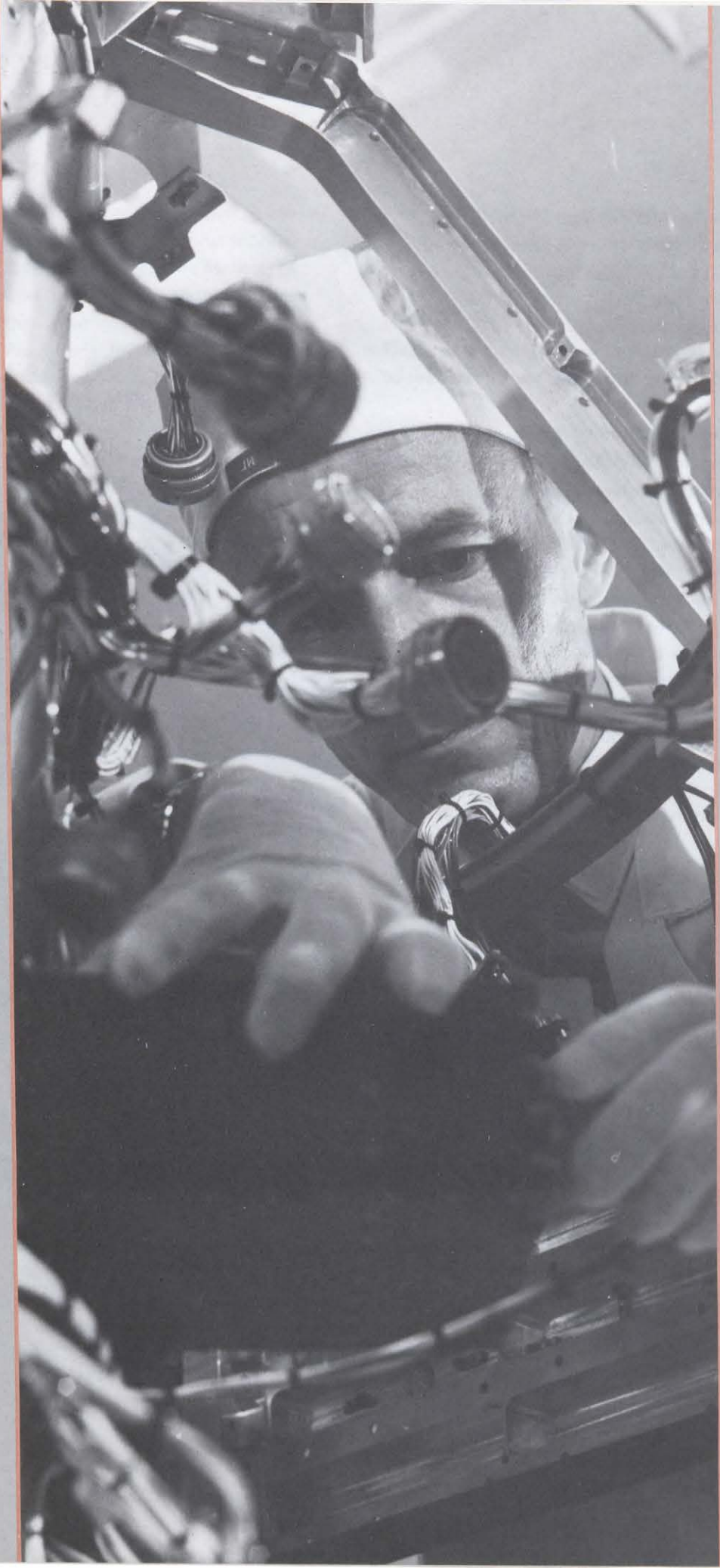
In a new international initiative, the Telecommunications Executive Management Institute of Canada (TEMIC) program was initiated in 1987 to provide comprehensive telecommunications training to executives and senior managers from developing countries. Representatives from 15 English-speaking and 19 French-speaking nations attended their respective inaugural sessions.

Working together

During 1987-1988, Canadian telecommunications and broadcasting skills were extensively promoted on many fronts, both abroad and at home. At the same time, Department of Communications officials helped develop Canada's positions on telecommunications and cultural issues within the framework of the Canada-United States free trade negotiations. As a result, the agreement exempts Canadian film, publishing, broadcasting and cable television and sound-recording industries, while complementing and supporting our policies on competition and regulation in the telecommunications sector.

All these initiatives depended on the close co-operation of many government departments and are the result of a staff of committed individuals co-operating to enhance and promote our cultural heritage and our telecommunications proficiency. The men and women of the Department can take well-merited pride in the substantial achievements of the past year.

Commonwealth nations shared aspects of one another's culture at the Commonwealth Drum Festival in Vancouver. Sponsored by the Department during the Commonwealth Heads of Government Meeting, The Drum Festival featured 75 master drummers and percussionists from nine countries. (Photo courtesy of the Vancouver East Cultural Centre)



The *ISIS* satellites were launched in 1969 and 1971 to continue studies of the Earth's upper atmosphere. This picture is of the *ISIS I* flight model assembly during integration testing.

RESEARCH INITIATIVES

The Department's three major research centres are the Communications Research Centre (CRC) at Shirleys Bay, west of Ottawa, the Canadian Conservation Institute (CCI) in Ottawa, and the Canadian Workplace Automation Research Centre (CWARC) in Laval, Quebec. The Government's research programs at CRC and CWARC comprise five major divisions:

- communications technologies, dealing with radio and satellite communications, including MSAT,
- communications devices and components, focussing on micro-electronics and optical communications,
- workplace automation,
- broadcast and video technologies, and
- space technologies research, including the David Florida Laboratory.

September 29, 1987 marked the twenty-fifth anniversary of Canada's first venture into space. *Alouette 1*, launched in 1962, made Canada the third country with its own satellite in space. Since then, Canada has recorded a number of firsts in space:

1969 Telesat Canada became the world's first domestic satellite communications company,

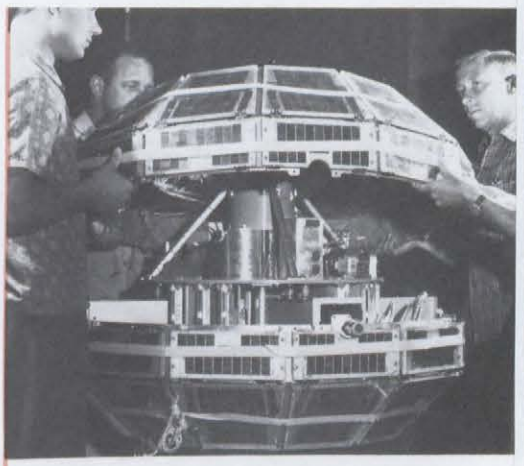
1972 *Anik A1* was the world's first domestic geostationary communications satellite,

1976 *Hermes* became the world's first satellite to test the super-high-frequency 14/12 GHz bands, *Hermes* was also used in the world's first demonstration of direct broadcasting by satellite to earth stations small enough to be situated on or near individual houses,

1978 *Anik B* became the world's first commercial dual-band communications satellite (6/4 GHz and 14/12 GHz), and

1981 Canadarm, tested aboard the second flight of the Space Shuttle *Columbia*, became the world's first remote manipulator system for space.

Three notable firsts took place in 1987-1988. On September 17, 1987, SHARP, the Stationary High Altitude Relay Platform, made aviation history by becoming the first microwave-powered plane ever to fly. High definition television had its first public demonstration and evaluation in North America in October, and the Department won an Emmy from the National Academy of Television Arts and Sciences for engineering excellence for the development of Ku-band satellite technology. All in all during 1987-1988 the Department maintained its reputation as a pioneer in communications technology.



Scientists at the CRC are shown removing the side cover of the *Alouette I* satellite. Launched in September 1962. *Alouette I* was designed to provide information about the upper atmosphere in order to improve radio transmission on Earth.

Maiden flight of SHARP

Aviation history was made at CRC September 17, 1987 when the world's first externally-powered plane flew for 20 minutes. The Stationary High Altitude Relay Platform (SHARP) prototype, radio-controlled with a 4.6 m wingspan, was hand-launched. It soared higher than a three-storey building for twice as long as expected.

Carrying no fuel and receiving microwave power from a transmitting antenna, the plane converts microwaves into direct current that powers an electric motor and propeller. For the inaugural flight, a dish-shaped ground antenna beamed 10,000 watts of microwave energy toward rectennas on the underside of the aircraft. The rectennas then converted that energy into 150 watts of direct current.

The rectennas were developed by the Department's engineers, who have specialized in the microwave communications and radar for several decades. Scientists from Canada, the United States and Japan who were on hand to watch a second flight on October 6, 1987 were as enthusiastic about this technology as they were about the flight itself.

The prototype is about one eighth the size of the version researchers eventually hope to build. Their goal is a full-sized, unmanned plane that could stay aloft for months at a time, providing a variety of commercial services such as relaying radio and television transmissions or monitoring pollution.

Such a plane would fly in a tight circle about 20 km above a microwave source on the ground. Because it would not have to return to ground for refueling, it could operate more economically than the aircraft and satellites that currently perform some of the functions for which SHARP is slated.

The Stationary High Altitude Relay Platform (SHARP) gets a send-off during its September 1987 maiden flight. (Photo courtesy of the Ottawa Citizen)

HDTV advances

A new program of research activity in advanced broadcast technologies was initiated in 1987 with major emphasis on improved television imagery. The present television standard has endured for almost 40 years, but advances are now being made in high definition television (HDTV) technologies in Japan, the United States and Europe.

The benefits of HDTV include a wider screen, multi-channel sound and a picture with the clarity and detail of 35 mm film. The amount of information in a picture is thus increased five-fold with:

- image detail (resolution) enhanced by increasing the number of scanning lines in a picture,
- color clarity improved by increasing color signal band widths,
- wider picture, gained by increasing the width of the horizontal scan to match the human field of vision more closely, and
- sound quality of compact discs.

HDTV research conducted in 1987-1988 by CRC complemented that being carried out around the world. CRC research concentrated on subjective assessment and evaluation, off-air and cable distribution channel characterization, spectrum utilization and allotment, signal processing and displays, and overall systems characteristics, including the important matter of compatibility with existing services.

The version tested by the Department of Communications was developed in Japan and produces 1,125 scanning lines displayed 30 times per second (conventional television in North America shows 525 lines displayed 30 times per second).

During the year the Department was active in the formation of the Canadian Advanced Broadcasting Systems Committee (CABSC), a national forum for all interested Canadian organizations to discuss and develop a national consensus on many of the technical and strategic issues involved with HDTV.

Canadians in the National Capital Region, Toronto and Montreal had an opportunity to view HDTV in October 1987 and to compare it with the current television system when the Department, in collaboration with the CBC, Telesat Canada and the Canadian cable-television industry, sponsored and organized a number of public demonstrations. The project also included sponsors and viewers at two sites in the United States.

CRC reviewed 7,000 survey responses from people who saw the demonstrations. The results, to be published by the sponsors in two reports, will be available through the CBC. The summary report will be published in April 1988 and the final report should be available later that year.

HDTV '87 Colloquium

In October 1987, almost 400 people from around the world attended the third HDTV Colloquium in Ottawa to discuss technical, economic and policy issues posed by advanced television technologies and to view HDTV signals transmitted by satellite, cable and optical fibre.

The Department of Communications sponsored the HDTV '87 Colloquium in collaboration with the CBC, the National Film Board and Telesat Canada.

Olympus flight model arrives

The highlight of the year for the David Florida Laboratory was the arrival for final integration and testing of the flight model of the European Space Agency's *Olympus* experimental communications satellite. These tests will take more than a year to complete. The satellite is scheduled to be launched in 1989.

The purpose of the Olympus Program is to develop, launch and operate a high-powered communications satellite, one of the largest and most powerful being built today. The Program is being managed by the European Space Agency on behalf of eight participating countries: Austria, Belgium, Canada, Denmark, Italy, the Netherlands, Spain and the United Kingdom. Canada's contribution includes solar array design and development, and environmental testing of the complete spacecraft.

Gallium arsenide research

Research and development activities involving the semiconductor gallium arsenide have been ongoing at CRC since 1981. Micro-electronic components fabricated using this material offer several attractive features for future communications systems, including high frequencies of operation, very fast switching speeds and special optical properties, such as the ability to emit and receive light.

The University of Ottawa initiated a Centre of Excellence program to study the optical properties of multiple quantum well structures. Under this program, graduate students carry out most of their experimental thesis work in the CRC laboratories.

Gallium arsenide research was particularly productive during 1987-1988. The CRC laboratories not only carried out a strong research program in this area but also managed projects on behalf of other federal government departments and agencies. In addition, the Department undertook a number of joint development projects with industry, universities and other organizations across Canada.

During 1987-1988, the David Florida Laboratory (DFL) began testing the *Olympus* flight model. The *Olympus* satellite is shown being removed from the radio frequency test facility at the DFL.

The Foundry Access Program continued in 1987-1988. Through this Program, which is funded by the Department of National Defence, the CRC offers its facilities and staff to teach engineers from Canadian firms how to design and test generic monolithic microwave integrated circuits (MMIC), which are of great potential value to their companies.

A joint project to develop opto-electronic devices and integrated circuits for high-speed broad band switching commenced in 1987 with the Alberta Telecommunications Research Centre (ATRC). The CRC is responsible for the process development and fabrication of the opto-electronic components, while the ATRC tests them. Both organizations are involved in design and application activities.

There were personnel exchanges between the CRC and France's Centre national d'étude des télécommunications to initiate a four-year project to develop miniature hybrid microwave integrated circuits. These circuits, incorporating the most advanced gallium arsenide devices available, will be used in very-high-frequency communications systems.

As a result of visits to various regions of Canada by departmental scientists during 1987-1988, several organizations have shown considerable interest in developing research partnerships with the Department. As of March 31, 1988, seven Memoranda of Understanding to undertake long-term research and development activities in this key area of micro-electronics had been signed or were under negotiation.

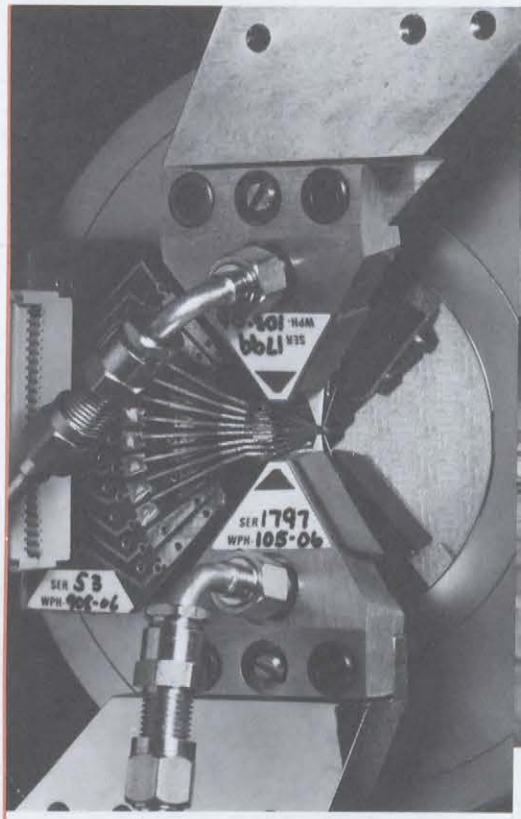
Technology transfer

The Industrial Research Assistance Program (IRAP) of the National Research Council (NRC) is managed by an interdepartmental committee of which the Department of Communications is a member. The Program promotes the transfer of technology from federal government and university laboratories to private industry through financial contributions and licensing agreements. The Department's laboratories work closely with the NRC under this program, being among the most active government laboratories in the transfer of technology to Canadian companies.

During the 1987-1988 fiscal year, the Department managed IRAP-supported technology transfer projects with 19 companies. The funding totalled $9.5 million. This was almost double the previous year's total of $5.6 million. The technology transferred for these projects included the Department's Common Visual Space Network (CVSNET), CRC's HF maxi and mini data terminal technology, doppler beam sharpening technology, spectrum management and a host of techniques and methodologies in microwave, networks, fault-tolerance, propagation and micro-electronics.

The Bliss symbols project

A four-year, $737,000 contract was signed March 23, 1988 by the Department of Communications, the Department of Supply and Services and IDON Corporation of Ottawa for further development and testing of a system based on Bliss symbols that will allow speech-impaired people to communicate with one another electronically. Apart from a large number of users in Canada, Bliss is employed in many languages in more than 25 countries.



Testing a gallium arsenide chip used in the fabrication of micro-electronic components.

An EMMY for the Department of Communications

The Department of Communications won an Emmy Award in September 1987 for pioneering the use of a high-frequency band in satellite communications. Communications Minister Flora MacDonald accepted the award from the National Academy of Television Arts and Sciences on behalf of the Department.

The Award recognized the joint role Canada played with the United States in developing Ku-Band satellite technology through the Hermes program. Designed, built and operated in Canada, *Hermes*, the Communications Technology Satellite, was tested and launched in 1976 by the National Aeronautics and Space Administration in the United States.

For almost four years Canada used *Hermes* to conduct more than 30 experiments, many of them ground-breaking. These opened the way for the direct broadcasting of television programs, medical data and educational programs to the most remote parts of the world through the use of a super-high-frequency band.

The EMMY is on display at the National Museum of Science and Technology in Ottawa.

Communications Minister, Flora MacDonald accepts Canada's Emmy Award from John Cowan, President of the National Academy of Television Arts and Sciences, joined by Diana Lady Dugan, the U.S. State Department's Ambassador for International Telecommunications Policy. (Photo courtesy of Camera 1, New York)

Canadian Conservation Institute

The Canadian Conservation Institute (CCI), with a staff of 70 specialists who treat some 500 items annually, is responsible for conserving art objects and artifacts and for providing consultative services aimed at the preventive care of collections in museums and galleries throughout the country.

In co-operation with provincial museum associations and provincial conservation committees, CCI's conservators and scientists visit museums and art galleries throughout Canada, teaching and advising on conservation techniques in seminars and workshops. They also provide intermediate and advanced training for conservators in CCI's well-equipped laboratories.

The Institute represents Canada at national and international conservation conferences. The results of its conservation treatment and scientific research are disseminated to the world's museum and conservation community through a comprehensive publications and information program. As well as housing one of the most comprehensive conservation resource libraries in the world, the CCI also conducts advanced conservation research which benefits museums across Canada and around the world.

In co-operation with the National Research Council and Hymarc Engineering Limited, CCI is also involved in the development of sophisticated laser scanning techniques for recording three-dimensional details of the surfaces of artifacts. This data can be used to produce replicas by means of computer-driven milling machines or to register artifacts electronically.

Pictured here is Lucy Maude Montgomery's wedding dress, conserved by the CCI in 1987. Montgomery, the author of *Anne of Green Gables* was married in 1911.

Restoring priceless paintings is one of the many services the Canadian Conservation Institute provides to Canadian museums. Here a CCI painting conservator examines the painting *The British Marching into Position Before the Battle of Waterloo*.

Canadian Workplace Automation Research Centre

Located in Laval, Quebec, CWARC has been carrying out research and development into all aspects of workplace automation since it opened in 1985. Unique in the focus and scope of its mission, it is making important contributions to the growth of the billion-dollar-a-year office-automation sector. The lab has a broad range of interests in advanced technology, including:

- artificial intelligence (expert systems and computer-assisted translation),
- voice technologies,
- graphics applications,
- open systems interconnection,
- interface ergonomics,
- implementation management,

- strategic forecasting,
- information exchange and distribution.

Focussing its efforts on the technological, socio-economic, behaviorial and organizational aspects of workplace automation, the Centre works closely with universities, government and the private sector. Recently it has also developed useful contacts with other countries and various international organizations.

CWARC initiatives

During the past fiscal year, CWARC's initiatives in the high-technology sector have been particularly productive. Among its achievements are the development of an expert system that will help Economic and Regional Development Program analysts to evaluate applications; the testing of an electronic filing system; the development of an intelligent interface for text editing; and the production of the prototype of an intelligent electronic forms management system.

In the field of computer-assisted translation, technical studies were completed on the design of a workstation for translators. The next step will be to develop an advanced prototype in co-operation with the Department of the Secretary of State. Development of software to ease the task of translating technical reports into French or English is already well advanced.

Progress in integrated systems research far exceeded expectations; joint research offers poured in from other countries and the Canadian private sector, a clear indication of the Centre's reputation in Canada and abroad. A voice technology project to develop an 8-line, PC-based (MS-DOS) voice messaging system and to design software for multiple users was highly successful. Not only was the software developed, but it proved effective on a 16-line system.

The compact disc revolutionized the sound recording industry and now promises to do the same for computers. The new technology, named CD-ROM (Read Only Memory), gives standard personal computers an elephant-sized memory that stores up to 250,000 pages of text and graphics, more than many encyclopedias. Developed by the Department's Canadian Workplace Automation Research Centre (CWARC), the disc shown here contains several databases on hazardous materials and chemicals. CWARC is already looking beyond CD-ROM. Work is now underway on CD-M3, a prototype disc that would combine multilingual text, multi-media display and multi-form compatibility.

Various projects were completed in co-operation with the private sector, including the development of technical modules to be integrated into workstations for the visually-impaired. A Multi-C licence (multi-user PC applications) was issued to an American company.

In the field of open systems interconnection, a tester was developed for the international standard governing office document architecture (ODA). Accomplished in collaboration with several Canadian companies and the United Kingdom's National Computing Centre, this helped to consolidate the Centre's international reputation and prompted the European Commission and the United States Corporation for Open Systems to take a close interest in the centre's work. At the same time, CWARC drafted a detailed proposal for a centre where manufacturers could test their products for conformance with open systems interconnection (OSI) standards.

Research to further the development of an Integrated System for Information Resources continued. The main thrusts of this work were establishment of an information network, exploration of the latest developments in electronic information management, identification of sources, transferring of data (CD-ROMS) and creation of a thesaurus.

Organizational research activities centred on interface ergonomics, strategic forecasts and implementation management. Major projects involved constructing a system of economic and social indicators to model the effects of new technologies; developing a thematic bibliography on employment, work and advanced technologies; ergonomics in the workplace; planning a competition for the design of a workstation; designing expert systems to assist in drafting architectural plans for hospitals; and, professional consulting in office automation and productivity. Several of these projects resulted in publications that are available on request.

The international stature CWARC enjoys and the fact that it has been able to establish its management methods and objectives in such a short time are largely due to the support provided by the public and private sectors and by the universities. Also crucial to its auspicious start-up was the invaluable contribution of the dedicated and knowledgeable members of its distinguished Advisory Board.

Twins (Dead Ringers), directed by David Cronenberg and starring Geneviève Bujold and Jeremy Irons, provided thrills and chills for moviegoers in 1987-1988. (Photo courtesy of Telefilm Canada)

POLICY ISSUES

Extensive drafting and consultations to update various pieces of legislation made the 1987-1988 fiscal year a notable one for policy development. The most notable revisions undertaken were to:

- the 64-year-old *Copyright Act*,
- the 48-year-old *Radio Act*, and
- the 20-year-old *Broadcasting Act*.

In addition, the proposed legislation for a Film Products Importation Act was developed, a telecommunications policy was announced and plans for a far-reaching information technology strategy were put forward by the Minister of Communications. The CRTC decisions on specialty television services also came under considerable public scrutiny.

Telecommunications in Canada

On July 22, 1987, Communications Minister Flora MacDonald announced a new policy for telecommunications in Canada. The policy has three central objectives:

- to ensure universal access to basic telephone service at affordable prices,
- to maintain an efficient telecommunications network infrastructure, and
- to promote a viable competitive marketplace in the supply of telecommunications services and equipment in all regions.

In order to simplify the regulatory environment and to promote competition, the policy distinguishes between two classes of telecommunications carriers, Type I and Type II. Type I carriers own interprovincial and international transmission facilities (the essential telecommunications infrastructure) and provide basic services to the public. Type II carriers

Federal, provincial and territorial ministers responsible for communications met at a two-day conference in Edmonton, Alberta, April 2-3, 1987.

rent capacity from Type I carriers and provide value-added services to the public. The policy promotes full competition among Type II carriers and effective competition among Type I carriers. It also details Canadian ownership guidelines for Type I carriers.

As part of the new policy initiative, the Government announced its intention to support measures leading to the effective interconnection of Type I carrier networks. This would ensure that Type II carriers will be able to obtain access to Type I facilities, thereby promoting fair and equitable competition in the provision of telecommunications services.

In extensive consultations preceding the announcement of the federal government's policy, federal, provincial and territorial ministers responsible for communications made significant progress in resolving issues of common concern at a two-day conference in Edmonton, April 2-3, 1987.

The ministers adopted six principles to guide policy development and signed a Memorandum of Understanding supporting the consensus reached on interconnection policy and on sharing governmental responsibilities in telecommunications.

As well, the ministers initiated a joint study on the issue of competition in the provision of basic long-distance service. The study, chaired by the CRTC, began in the summer of 1987 and will conclude in the fall of 1988. Long-distance competition is one of the major telecommunications issues before governments at this time, and the joint study is expected to make a valuable contribution to the policy-making process.

Bell Canada reorganization

The *Bell Canada Act* was passed by the House of Commons and received Royal Assent in June 1987. This was necessitated by the reorganization of Bell under a new parent company, BCE, in 1983. The Act clarifies the powers of the CRTC to regulate Bell Canada and to ensure that the reorganization does not adversely affect the interests of Bell's telephone subscribers.

The *Radio Act*

The legislative basis for spectrum management, the *Radio Act*, is fundamental to the effective use of radio-spectrum-based communications in Canada. The Act has not been substantially revised or updated since 1938. During 1987-1988, the Cabinet authorized the drafting of legislative proposals to update the Act in order to enhance the ability of the Minister of Communications to ensure the orderly development and operation of radio communication in Canada.

Information Technology Strategy

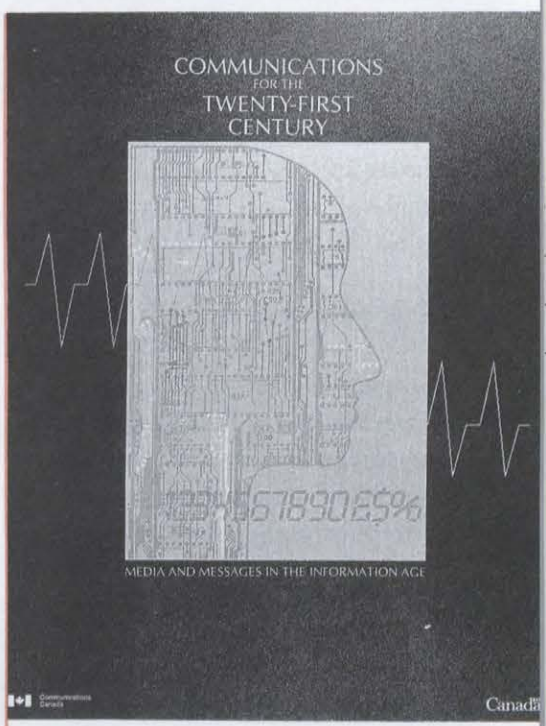
A new approach to communications and information technology was outlined by the Minister on April 27, 1987. The six major themes of this Info Tech Strategy are:

- strengthening the telecommunications infrastructure through a national telecommunications policy,
- supporting new information industries in the fields of databases, software and value-added networks,
- encouraging the application of communications and information technology, particularly in social services and government operations,
- applying technology to support regional development,
- revitalizing the federal communications research program through partnerships with industry, universities and the provinces, and
- raising public awareness of the challenges facing Canadian industry.

As a first step toward implementing the strategy, a meeting was held between federal, provincial and territorial ministers of communications to develop a Canadian telecommunications policy. At this meeting during the two-day conference in Edmonton April 2-3, 1987, the ministers reached agreement on the need for an interconnection policy and resolved jurisdictional issues so that Canadian businesses can operate more efficiently on a national scale and compete more effectively internationally.

To meet new challenges posed by advances in communications and information technology, the federal government's communications research programs were restructured. The Canadian Workplace Automation Research Centre (CWARC) in Laval, Quebec, and the Communications Research Centre (CRC) at Shirleys Bay, Ontario, were reorganized to focus on the necessary technical research.

As part of its efforts to raise public awareness of the social and economic implications of information technology and to foster informed public debate, the Department published a discussion paper entitled *Communications for the Twenty-first Century*.



The discussion paper, *Communications for the Twenty-first Century* was released in November 1987.

In addition to seeking comments on the discussion paper, the Department will hold a series of conferences and workshops in 1988-1989 to discuss the challenges and opportunities presented by communications and information technologies.

The completed study provides specific guidance on the various aspects of radio antennas that local governments may influence through by-laws. The study, which will serve as a basis for public discussion, was released on January 30, 1988.

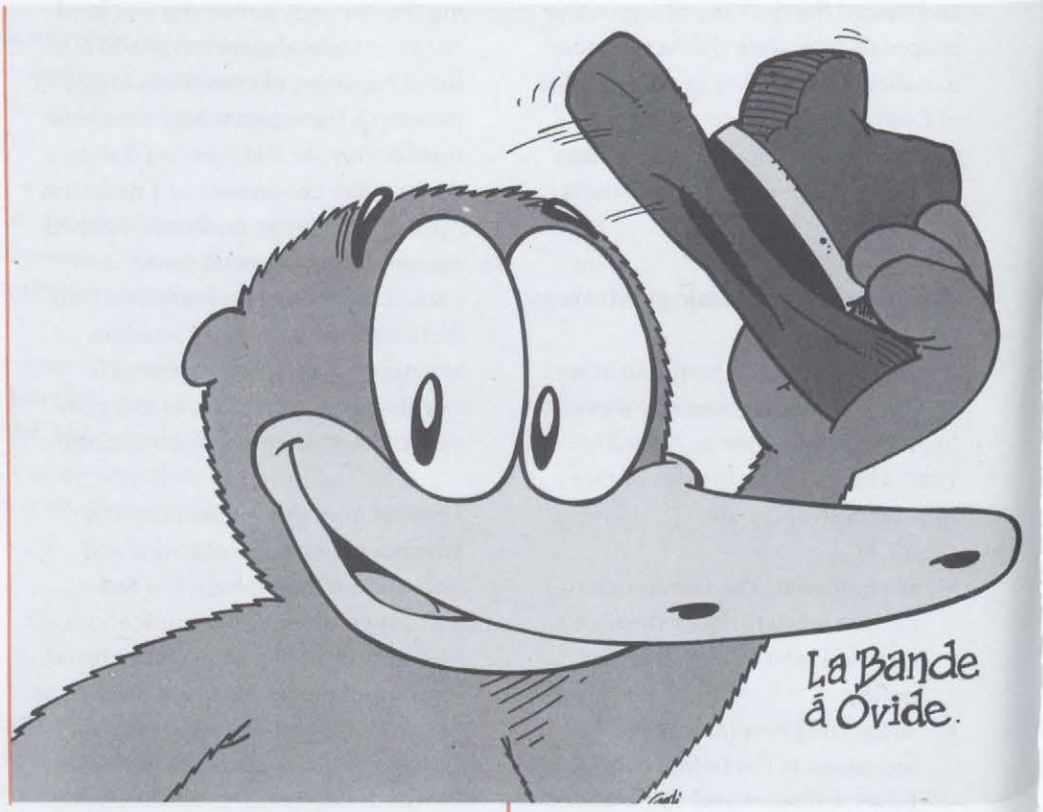
Software 88

Software 88, a Symposium co-sponsored by the Department and the Ontario Ministry of Culture and Communications, was held February 3-4, 1988 in Toronto. The Symposium, led by Ontario software industry leaders, examined business opportunities, the importance of marketing and the financial and personal challenges of creating and managing a software company.

Study on antenna structures

In response to complaints by municipalities that the federal government's approval process for radio antennas did not take adequate account of local concerns, the Department completed an extensive review of the issue in 1987-1988.

The municipalities asked the Department to provide guidance on what lawfully may be included in a local by-law in relation to radio antennas and their supporting structures. The Department contracted with the Faculty of Law at the University of New Brunswick to carry out this project.



The CBC produced two new French television programs for children: "L'intrigue," a game of improvisation and "La Bande à Ovide," Canada's major animated series in French. (Photo courtesy of the CBC)

Broadcasting

The present *Broadcasting Act* came into effect in 1968. Since then, new technology, the spread of cable and pay-TV, satellite-to-cable transmission, videocassette recorders, new programming services and evolving audience demands have clearly made significant parts of the Act outdated.

Accordingly, the Government launched a fundamental review of the *Broadcasting Act* in 1985. In the first step of this review, the Caplan-Sauvageau task force was established in May 1985 to recommend an industrial and cultural strategy for the Canadian broadcasting system. Their report was submitted in September 1986 to the Minister of Communications and referred for further study in 1987 to the House of Commons Standing Committee on Communications and Culture.

During 1987-1988, legislative proposals for a new Broadcasting Act were drafted in light of the recommendations of the Caplan-Sauvageau task force, the recommendations of the Standing Committee, and bilateral discussions between the Minister and the Department, the provinces, broadcasters, public-interest groups and institutions.

The new legislation, which is to be introduced during the 1988-1989 fiscal year, would not only position Canada's broadcasting system to respond to the challenges of the twenty-first century but would also define the roles of the CRTC, the CBC, private broadcasters and other elements of the broadcasting system in achieving the Government's goal of more and better Canadian programming.

CBC accountability

Following recommendations of the House of Commons Standing Committee on Communications and Culture, amendments to the *Broadcasting Act* were drafted during the fiscal year to improve the Corporation's financial accountability to Parliament. These amendments would also position the Corporation better to discharge its increased responsibilities for programming and services. Amendments to the Act would also establish separate positions for the Chairman of the Board and the Chief Executive Officer; the terms and conditions of their appointments will be specified. These amendments were to be included in the new Broadcasting Act to be tabled during the 1988-1989 fiscal year.

During the fiscal year under review, the CBC received an increase in resources of 8 percent and announced its plans to reach 95 percent Canadian content in the prime-time programming of its English-television service by 1990-1991. In 1988-1989 the CBC is expected to spend almost $1.3 billion of the estimated $2.3 billion to be spent by the federal government on culture.

Appeals of CRTC specialty services decisions

On January 27, 1988, Communications Minister Flora MacDonald announced the Government's position on the appeals of 11 CRTC decisions regarding specialty television services. The CRTC decisions on The Sports Network (TSN), MuchMusic and TV 5 were upheld. The Minister stated that although the Government had no

reservations regarding seven of the eight decisions, it had some concerns about the decision on the CBC proposal for a News and Information Service. A 60-day review period on the remaining eight CRTC decisions commences September 1, 1988.

Vital Links

A background paper on the cultural industries, *Vital Links: Canadian Cultural Industries*, was released April 29, 1987 by the Minister. Within the context of global trends affecting cultural industries, the paper analyses the Canadian book and periodical publishing, film, sound recording and broadcasting industries. As well, it describes structural and economic challenges facing the industries and the cultural support initiatives employed by the Government to meet their special needs.

Film policy

Legislative proposals were developed during 1987-1988 to assist the Canadian film distribution industry. The proposed legislation for a Film Products Importation Act would ensure that Canada operates as a separate distribution market for the first time. Canadian film producers and distributors had advocated the strengthening of the Canadian film industry for a number of years.

Consultation between the Department and industry representatives indicated that a new Act should regulate the importation of film and video productions in Canada to ensure a national distribution market within this country. This would not only allow the development of a healthier domestic film industry but also provide a greater choice of Canadian film products to Canadians.

The Tchaikovsky Pas de deux featuring Elizabeth Olds and Stephen White of the Royal Winnipeg Ballet. (Photo courtesy of the Royal Winnipeg Ballet)

The needs and demands of the film industry were heightened when the Capital Cost Allowance rate for investments in film productions was decreased from 100 percent to 30 percent. As a result, the Minister of Finance, in collaboration with the Minister of Communications, initiated additional proposals to complement the proposed Film Products Importation Act. The assistance proposed for independent producers and distributors, including policies with respect to foreign ownership, constitutes a package that would promote a dynamic and viable Canadian film industry.

Amendments to the *Copyright Act*

On May 27, 1987, the federal government introduced a Bill to amend the 1924 *Copyright Act*. Bill C-60 was passed by the House of Commons and was before the Senate at the end of the fiscal year. These revisions to the 64-year-old *Copyright Act* would provide greater protection for 500,000 Canadians ranging from authors to the creators of computer programs.

In tabling the Bill, the Minister stated that changes to the Act will increase the rights of creators in the arts and computer industry, expand the protection of their work and make it easier for the public to have access to copyright material.

This, the first comprehensive revision of the *Copyright Act*, took into account many technological developments since 1924: radio, television, photocopiers, audio and videotape recorders, computers, satellites and a host of information storage and retrieval devices have become common instruments for the use and exploitation of intellectual property.

Artists, authors, producers of computer software and other creators would benefit from these amendments designed to provide increased protection and certainty. The revised Act would also remove obstacles to growth in industries that already contribute $10 billion a year to Canada's economy.

The Government has adopted a two-phase approach to the introduction of its copyright revisions. The first phase, comprising the amendments in Bill C-60, includes amendments that will protect computer programs, increase anti-piracy remedies, abolish compulsory licences for sound recordings, establish new exhibition rights, protect choreographic works, expand the role of the Copyright Board and the collective administration of copyright, expand moral rights and clarify the copyright industrial design interface. The second phase, which will include amendments on those issues not included in phase one, is being drafted.

Les Portes tournantes, (the Revolving Doors), a co-production with France, was directed by Francis Mankiewicz and filmed in Montréal and Stanstead, Quebec and Almonte, Ontario. (Photo courtesy of Telefilm Canada)

Federal archaeology discussion paper developed

A paper entitled *Federal Archaeological Heritage Protection and Management: A Discussion Paper* was developed by the Department of Communications, in collaboration with the departments of the Environment, Indian Affairs and Northern Development, Transport, and the Canadian Museum of Civilization during the 1987-1988 fiscal year.

Scheduled for publication early in the next fiscal year, the paper raises a number of questions on how best to improve the protection and management of archaeological heritage under federal jurisdiction, how the federal approach can best complement provincial and territorial policies and programs, and calls for Canadians to participate in this national review.

Museum policy discussion paper drafted

A paper designed to stimulate broad discussion on the policy and programs for Canada's museums reached the final draft stage during 1987-1988. Entitled *Challenges and Choices*, it followed the Government's response to the *Federal Policy Concerning Museums*, the report of the House of Commons Standing Committee on Communications and Culture.

The discussion paper, scheduled to be released in May 1988, poses questions related to the place of museums in Canada's changing society and suggests certain changes to the 1972 Federal Museums Policy and proposes options for changes in support programs and services.

National Archives of Canada Act proclaimed

Bill C-7, the *National Archives of Canada Act*, was proclaimed June 1987. It reflects the National Archives' activity in new technologies

The CBC production "Chasing Rainbows," starring Michael Riley, Paul Gross, and Julie A. Stewart, was the first TV mini-series in the world to be produced in high definition television. (Photo by David Street, courtesy of the CBC)

and in new types of archival media such as computer tapes and television. It also takes into account the public use of collections and the *Access to Information Act* and the *Privacy Act*. The new Act also changed the name of the Public Archives of Canada to the National Archives of Canada.

Under the new legislation, the National Archives would have the mandate to adopt a leadership role in the archival community with respect to professional, technical and financial assistance.

Canadian Advisory Committee on the Status of the Artist

The Siren-Gélinas task force report, presented to the Minister of Communications in August 1986, addressed issues such as taxation, copyright, working conditions and artists' incomes. In January 1987, the Minister announced the formation of the Canadian Advisory Committee on the Status of the Artist with a three-year mandate to advise the Government on ways and means to improve the socio-economic status of Canadian artists.

A report submitted during 1987-1988 set out priorities and a legislative agenda related to improving the status of the artist. Consultations were initiated with other federal government departments and agencies affected by the group's recommendations.

Tax concessions

In response to a report by the House of Commons Standing Committee on Communications and Culture, the departments of Communications, Finance and National Revenue continued to review taxation issues of concern to the arts community. A major recommendation approved in 1987-1988 was that serigraphs and limited-edition prints be exempt from sales tax.

Funding of festivals

A review of festival funding was begun during the 1987-1988 fiscal year with a series of consultations with the festival community, provincial governments, cultural agencies and arts organizations. As well, departmental staff assembled a database on professional arts festivals across Canada to determine the economic dimensions of this industry and its growth potential. The review and database will be available in the 1988-1989 fiscal year and will reflect both the mandate of festivals to present cultural products and their accessibility to the Canadian public.

National touring strategy

Work commenced in 1987-1988 on the development of a national policy of access to the arts and to cultural industries products, a major policy goal being a strong, domestic market. The need for a balance between funding to assist creators and producers of artistic works and funding to assist presenters and exhibitors, while improving public access to creative works, was defined at a series of meetings held with representatives from the arts community. These meetings, as well as consultations with provincial and municipal funding agencies, were held in collaboration with the Canada Council Touring Office.

Audience and Donor Development Symposium

The Task Force on Funding of the Arts (the Bovey Commission) submitted its report to the ministers of Finance and Communications in June 1986. Many of its recommendations dealt with the issues related to marketing, promoting and funding of the performing arts. The Department organized an Audience and Donor Development Symposium, which was held at St. Jovite, Quebec, April 30 to May 3, 1987. The Department developed the Symposium in consultation with a steering committee composed of representatives of the Canada Council Touring Office, senior managers from several performing arts organizations in Canada and the Cultural Policy Institute of Baltimore.

The Symposium was attended by 23 major performing arts organizations represented by over 50 delegates, as well as staff from the Banff Centre, the École des Hautes Études commerciales, the Canada Council and the Department of Communications.

Participants discussed developing community pride and support, subscription versus single-ticket promotion, marketing techniques in regional and larger urban markets, the development of ancillary profit centres, access to corporate marketing budgets, and endowment funds. Guest speakers from Canada and the United States shared their expertise with Canadian performing-arts management representatives.

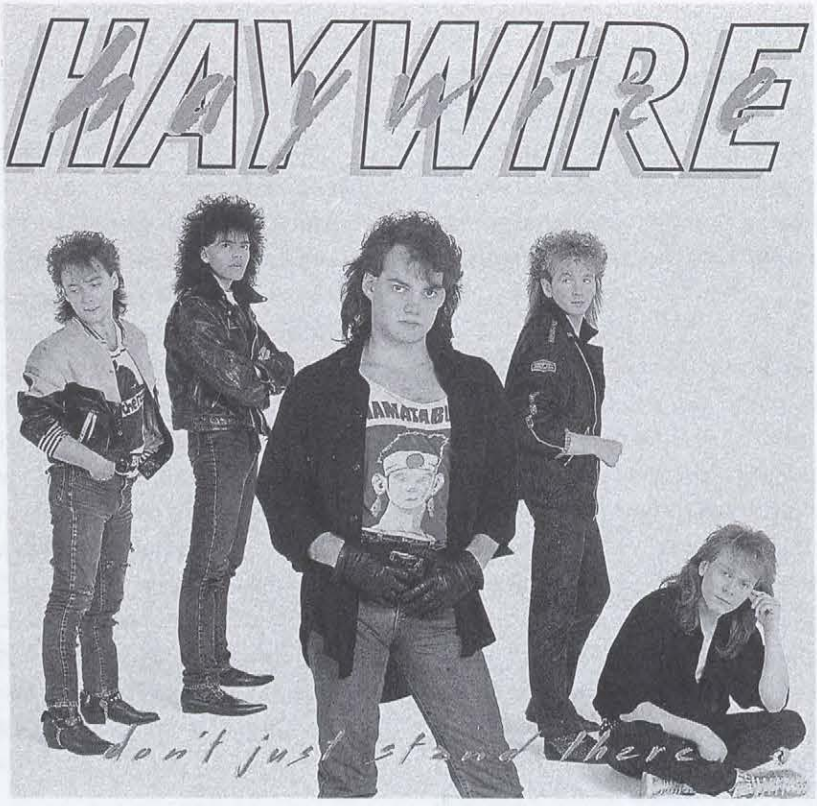
A major national conference on Tourism, Culture and Multi-culturalism will be held in April 1988 to explore these themes fully.

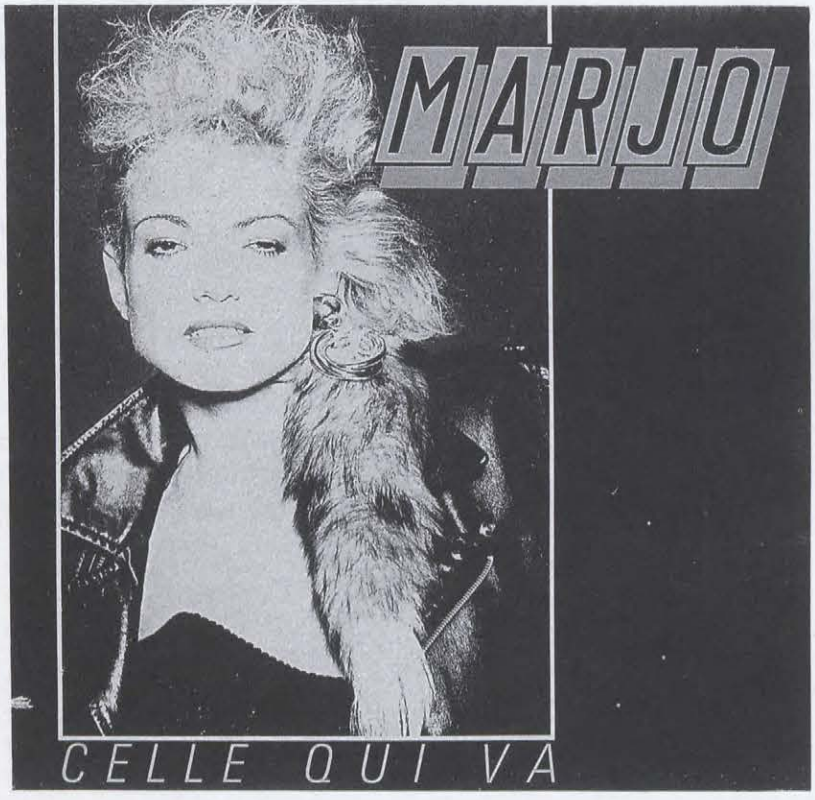
Special funding

The Department made special funds available during 1987-1988 to assist Canadian artists and the development of Canadian works of art. The Canada Council received a supplementary contribution of $8 million for performing arts and training, while special funding was made available to two major national training institutions — the National Ballet School and the National Theatre School. Another $8 million was provided for a major construction project at the Art Gallery of Ontario. Additional funding was also provided to the Public Lending Right Program, now administered by the Canada Council.

Culture statistics

The Department of Communications and Statistics Canada initiated an examination of cultural policy research requirements in order to determine how these are met through the jointly administered Culture Statistics Program.





With support from the Sound Recording Development Fund, Haywire's Don't Just Stand There (FACTOR CTL) and Marjo's Celle qui va (MUSICACTION) both reached platinum status (sales of at least 100,000) in 1987-1988.

SUPPORT PROGRAMS

The Department of Communications provides support to the cultural community through a variety of programs. The following program descriptions show the positive role the Department plays in encouraging the arts in Canada.

Canadian Audio-Visual Certification Office

This Office determines whether Canadian film and videotape productions are eligible for the Capital Cost Allowance, a tax measure which encourages private investment and has played a pivotal role in the industry by financing films and videotapes.

Certification criteria are intended to promote Canadian participation in and control of all aspects of production. During the year under review the Office certified over 200 productions with a value of $350 million. The Office also facilitated consultations with the Department of Finance on the industry's concerns about the effects of tax-reform proposals.

Support to film and video service organizations

The Department provides contributions to several film and video organizations each year to support film and video communities across the country. Annual contributions amount to approximately $250,000.

Sound Recording Development Program

The Government established the Sound Recording Development Program (SRDP) to strengthen the Canadian sound recording industry. The Department has allocated $25 million for the Program over five years. Forty percent of the $5 million allocated annually is targeted for the French-language sector of the Canadian sound recording industry, with the remaining funds going to the English-language sector.

This is the first time that the federal government has provided assistance for the production and marketing of Canadian musical products. Companies and organizations operating in

Edith Butler, ecstatic that her album, Party pour danser, reached gold status (sales of at least 50,000). (Photo courtesy of Les Paparazzi)

the field can now apply for financial assistance to produce a variety of projects ranging from sound recordings and music videos to international marketing and business development.

During 1987-1988, SRDP provided assistance for Canadian participation in Le Marché international du disque, de l'édition musicale et de la vidéo musique (MIDEM), a music-industry fair held annually in France. SRDP funding also went to the production and distribution of two compact discs promoting Canadian talent, to setting up booths at the fair and to assisting Canadian companies to attend.

La Semaine de la chanson française d'ici, a week-long Quebec-wide campaign to promote Québécois music, also received assistance from SRDP in 1987-1988. The contribution was used to organize and promote the event. Further funding from the Department was granted under the Quebec-Canada Communications ERDA subagreement.

Since the Program's inception, over 1,000 projects in the Canadian music industry have received financial assistance. As well, during the 1987-1988 fiscal year, four records funded by the Program achieved gold-record status (sales of at least 50,000) and six reached platinum status (sales of at least 100,000).

Postal subsidies

The Department carried out a review of the Postal Subsidy Program during the year under review. It is expected that new postal rates for books and periodicals, to be announced in 1988-1989, will maintain affordable accessibility by all Canadians to books, periodicals and newspapers that are distributed by mail.

About 600 daily and weekly newspapers and more than 4,000 Canadian and foreign periodicals now qualify for subsidized postal rates. The Department at present pays Canada Post over $55 million annually to support cultural mail through the Postal Subsidy Program.

Book publishing

The Book Publishing Industry Development Program launched in June 1986, disbursed $10.6 million in contributions during the 1987-1988 fiscal year. The Program was designed to increase the earning power and self-financing capabilities of Canadian publishers by funding publishing initiatives on a project basis. Two firms receiving research and development assistance during 1987-1988 were Québec-Amérique for Work on *Dictionnaire visuel* and *Lester* and Orpen Dennys for *The Illustrated History of Canada*. Both received contributions of more than $100,000.

During 1987-1988, the Government increased by $600,000 its support for Canadian textbook publications through the Educational Publishing Fund. The additional funds were drawn from the Program's $10.6 million budget, raising the Education Publishing Fund's budget to $3.5 million.

The Canadian Heritage Information Network

The Canadian Heritage Information Network (CHIN) is one of the five national museums programs transferred to the Department of Communications during the past fiscal year. CHIN provides a wide range of services that assist museums in managing and making accessible information on the major humanities and natural sciences collections in Canadian museums.

Approximately 150 participating museums with microcomputers and computer terminals have access to this internationally renowned service. Special databases have been developed and maintained, including the compilation of a comprehensive record of stolen art objects compiled by the Interpol Branch of the RCMP.

In 1985, CHIN, the Canadian Conservation Institute (CCI), and the U.S.-based Getty Conservation Institute, launched the Conservation Information Network (CIN), using CHIN's mainframe computer. CIN contains databases on bibliographic references, conservation materials, and conservation products and suppliers. In 1987, access to CIN was offered to conservation centres around the world.

CHIN and the Ontario Museum Association recently embarked on a joint project to link 100 museums within the province by means of a network called Trillium. Ontario museums will now be able to develop, store and share databases as well as communicate among themselves, with other members of CHIN and with CIN via electronic mail.

Sea Bird Mask, carved wood with applied paint and detachable wood and feather appendages. Yupik Eskimo, Hooper Bay, Alaska, 77.5 × 56.8 × 23 cm. Donated to the Glenbow Museum by the Bumper Development Corporation Limited under the terms of the Cultural Property Export and Import Act. (Photo courtesy of the Glenbow Museum)

Movable Cultural Property

The Cultural Property Export and Import Act of 1977 was designed to ensure the preservation in Canada of significant examples of Canadian heritage in movable cultural property. Three methods are used:

- a system of export controls,
- tax incentives for individuals who donate or sell cultural objects to designated public institutions, and
- grants under certain circumstances to assist institutions in purchasing cultural objects.

The Act is administered by the Movable Cultural Property Secretariat, which is located within the Department. The 1987-1988 fiscal year was the Secretariat's tenth year of operation.

Insurance program for major travelling exhibitions

The Department established this insurance program to provide coverage for travelling exhibitions valued at more than $1 million. The Program pays all or part of the insurance cost, both in transit and on location, for exhibitions organized or hosted by Canadian museums, art galleries, libraries or archives. Exhibitions originating with Canadian institutions must be displayed in at least one other institution to be eligible for this program. Major international exhibits are also eligible.

Museum Assistance Program

The Museum Assistance Program (MAP) was transferred from NMC to the Department of Communications on September 1, 1987.

The Program provides financial and technical assistance in preserving and making accessible to the public objects and collections that reflect Canada's cultural heritage. Canadian museums, galleries and related institutions received grants totalling $8.4 million during 1987-1988. As well, the Program's technical advisors assisted the museum community by providing advice related to facilities, design and presentation of collections.

Further to recommendations by the House of Commons Standing Committee on Communications and Culture and by the Canadian Museums Association, the Minister announced the formation of a seven-member advisory council of museum and heritage experts who will provide independent advice on applications for funding submitted under the Program's various components.

Examples of financial assistance provided during the past fiscal year under MAP include: the Glenbow-Alberta Institute, Calgary, $103,400 for registration of the military history and cultural history collections; Tom Thomson Memorial Art Gallery, Owen Sound, Ontario, $104,000 for equipment; Musée de la Gaspésie, Gaspé, Quebec, $70,000 to produce and circulate their exhibition, "Gaspésie, une histoire de mer"; the Plains Historical Museum Society, Regina, a $20,000 planning grant to develop a new museum; and the Prince of Wales Northern Heritage Centre, Yellowknife, Northwest Territories, $56,400 to produce and extensively tour their "Trapline Lifeline" exhibit.

Cultural Initiatives Program

Established in 1980, the Cultural Initiatives Program provides financial assistance to non-profit Canadian professional cultural organizations for:

- development of managerial ability and innovative application of new communications technologies in the activities of cultural organizations,
- provision for greater public access to professional performing and visual arts, museums and heritage collections through the development of a national network of facilities,
- support of festivals and special cultural activities of national character or significance.

The Department received more than 600 requests for assistance in 1987-1988. Of these, 250 were accepted, resulting in a total disbursement of $17.9 million. Two notable examples were $2 million to construct new facilities for the Royal Winnipeg Ballet and $1.4 million to cultural groups participating in the Olympic Arts Festival.

Public Lending Right Program

After its first full year of operation, the Public Lending Right Program was acclaimed a major success. The Program recompenses Canadian authors, translators, editors and illustrators for the use of their books held in public libraries. With the first payments to authors made in March 1987, the Program had distributed a total of $2,712,000 to 4,377 authors by the end of the fiscal year.

Through the Cultural Initiatives Program, the Department contributed $2 million to the construction of new facilities for the Royal Winnipeg Ballet. (Photo courtesy of the Royal Winnipeg Ballet)

The number of authors wishing to register for the Program was much larger than expected. As a result, there was more demand than expected on program funds. Additional funding of $813,000 was approved by Cabinet, increasing the 1987-1988 budget to $3.8 million.

Composed of representatives from national writers' associations, national libraries, national book publishers' associations, the Canada Council and the Department of Communications, the Public Lending Right Commission provided an average of $625 to each author up to a maximum of $4,000.

Support to Charlottetown's Confederation Centre

The Department makes a contribution to the Fathers of Confederation Building Trust each year as the federal government's share of support for this cultural centre. The Centre, established by the provinces and the federal government, consists of a theatre, art gallery, museum, library and memorial hall. The federal government's support amounts to approximately $1.5 million annually.

Support to national service organizations for the arts

Each year the Department contributes $555,000 to the Canadian Conference of the Arts and $140,000 to the Canadian Crafts Council to be applied toward their projects and operating costs.

Centres of Excellence Program

The French-language Centres of Excellence Development and Promotion Program was established in 1978 as a result of studies done by both the Office of the Commissioner of Official Languages, in 1976, and the Department of Communications, the following year. Both studies acknowledged that special efforts had to be made to increase the Francophone representation in the technical, scientific and professional employment categories, and to make the working environment conducive to the equitable use of English and French in the workplace.

Under the Program, research contracts are awarded to French-language and bilingual universities to develop centres of excellence in areas of interest to the Department. In 1987-1988, the Department of Communications awarded 12 such research contracts valued at a total of $275,000.

Unsolicited proposals

Administered by the Department of Supply and Services, this program supports industrial research and development through contracts for industry-proposed projects. Forty-four unsolicited proposals were received and evaluated by the Department of Communications during the 1987-1988 fiscal year. Nine were approved, 28 rejected and seven still under evaluation as of March 31, 1988.

During the same period, several proposals from other government departments were reviewed. These included 45 Industrial Research Assistance Program (IRAP) proposals from the National Research Council, 50 Technology Inflow Program (TIP) proposals from the Department of External Affairs and a number from the Department of Regional and Industrial Expansion (the Industrial Research Development Program and the Defence Industry Productivity Program) and the Western Diversification Office.

One of the contracts awarded went to Varian Canada Ltd. for the delivery of three 100-watt high-power amplifiers needed for 30/20 GHz Olympus earth stations used for Olympus applications trials.

Economic and Regional Development Agreements

Economic and Regional Development Agreements (ERDAs) were established in 1984 for federal and provincial governments to co-operatively fund, 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 which respond to these priorities.

The Department of Communications has the following ERDA subagreements:

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

Quebec

Ten ERDA-Communications projects received a total of $1.9 million during the year under review. Of the 38 proposals received, 10 were approved, 19 rejected, three withdrawn and six were pending as of March 31, 1987. In addition, 25 ongoing projects were monitored. The Cultural Infrastructure subagreement includes two important projects: the Musée des beaux-arts de Montréal expansion project and a proposal for a film production centre in Montréal.

Ontario

A number of projects were approved during the year including the Royal Ontario Museum extension ($10 million), the Elgin and Winter Garden Theatre complex renovation ($5 million federal and $6 million provincial), the Brantford International Discovery Centre ($1 million), TVOntario's "La chaîne française" ($1.5 million), the Tom Thompson Gallery in Owen Sound ($840,000 federal-provincial), and the City of Sarnia feasibility study ($67,000 federal-provincial). An application concerning TVO funding was referred to Cabinet for action during the 1988-1989 fiscal year.

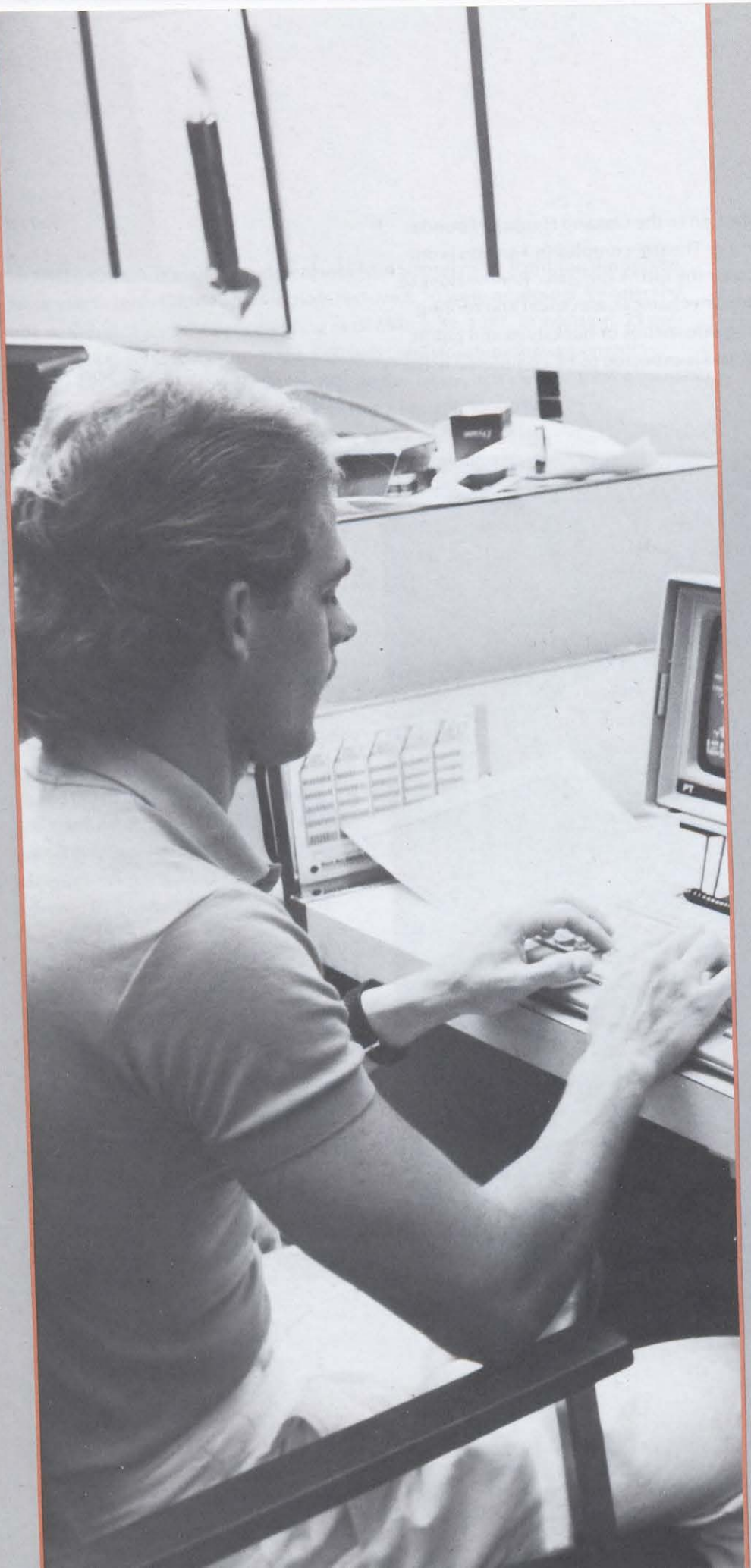
The federal government contributed $5 million to the renovations of the Elgin and Winter Garden Theatre complex. Shown here is restoration consultant, David Hannivan, applying false marble to lobby column. (Photo courtesy of the Elgin and Winter Garden Project)

The $11 million federal-provincial contribution to the Ontario Heritage Foundation to renovate the Elgin and Winter Garden Theatre complex in Toronto is one of the largest projects ever undertaken under the ERDA program. Renovations to the 74-year-old building will include all new mechanical, electrical and roofing systems and the addition of six thousand square metres of backstage and public facilities. Work commenced in April 1987 and is expected to be completed in the fall of 1989.

Manitoba

Over 40 proposals were received and analyzed during the year. Thirty were rejected while 10 involving health care, agriculture, public utilities, telephone/computer interfacing systems, financial services, microwave broadcasting, business software and educational services, were approved.

A major ERDA project in Manitoba is the Cultural Industries Development Office (CIDO) which opened in Winnipeg in June of 1987. CIDO is responsible for administering film production, audio and video facilities and capabilities, and development of and support for the Manitoba film industry. Total project cost was $9.5 million ($6 million federal, $3.5 million provincial).



A technician monitors data communications information to evaluate the performance of electronic messaging systems.

SPECTRUM MANAGEMENT AND REGIONAL OPERATIONS

Program delivery

Regional and district offices focussed on the development of Canada's communications industries and cultural sector during the 1987-1988 fiscal year. A reorganization of the communications and culture units in the regions enabled regional staff to assume a more prominent and active role. These units will be directly responsible for regional development activities, including ERDA management and administration activities.

The creation of new regional development agencies such as the Atlantic Canada Opportunities Agency and the Western Diversification Office, as well as the plan for the economic development of Montréal, increased the role of the regional offices in both communications and culture development.

In the regions, the efforts of the Government Telecommunications Agency (GTA) to modernize and expand Local Shared Services (LSS) were successful, as was the Government-shared Intercity Network, which benefitted from the use of new technologies and services. Regional GTA units were active in providing specialized services and systems to a number of federal government departments and agencies, such as the installation of services for the Hugh John Flemming Forestry Centre in Fredericton, New Brunswick.

Through its regional and district offices the Department of Communications provides a variety of services to communities across Canada.

Spectrum management

Spectrum management is responsible for managing the airwaves to ensure the effective functioning of Canada's telecommunications and broadcasting systems. In a period of increasing spectrum demand where the uses of radio spectrum are diverse and rapidly expanding, the Spectrum Management and Regional Operations Sector has automated many of its processes and operational systems to improve efficiency.

page
forty-eight

System licensing of cellular stations came into force on April 1, 1987, and a streamlined licence application form was introduced in several other services. This approach to licensing has allowed the Sector to reduce significantly the administrative burden on both the Department and the user client while maintaining the standards and control necessary for interference-free spectrum use by all Canadians.

Effective management of the radio spectrum ensures that all Canadians wishing to benefit from the power of radio communications can do so with a maximum of ease and minimum of interference. In addition, it ensures that reliable broadcasting services are available to the public with good readability and that new services are introduced in a spectrum efficient manner. The acceptance by the Department of Motorola's C-QUAM stereo system for AM broadcasting should give new impetus to this industry and a significant number of AM radio stations have already converted to stereo. To further improve the reliability and quality of AM audio, the Department has drafted standards which should result in the availability of better AM radio receivers on the market.

Effective management also means that there must be compatibility between services to avoid interference which, in some cases, could jeopardize lives. The control of cable system radiation and FM station transmissions to protect aeronautical navigation and communication are two such examples, the latter having international implications. Extensive field measurements have been taken and criteria are being developed to ensure proper compatibility.

The rapid technological advances that have taken place in broadcasting and the intense marketing efforts by proponents of new systems for high definition television (HDTV) have added new pressure for more effective and efficient use of the spectrum. Through established government and industry working groups of the Canadian Advanced Broadcast Systems Committee, the UHF-TV spectrum is being examined to determine if it would be possible to accommodate each existing TV station with spectrum for HDTV capability.

Day-to-day activities of spectrum management include certification of both radio equipment and operators to ensure acceptable standards are maintained, licensing of stations, issuing technical construction and operating certificates for broadcasting stations, enforcement of regulations and investigation of interference occurrences. During 1987-1988 the Sector issued 226,352 new and amended radio licences and processed 723,211 renewals. In addition, some 15,700 interference complaints were investigated and resolved. Of these, 5,354 were cases of interference to radio-communications systems such as those used by police, fire, ambulance, air navigation and commercial dispatchers.

The Sector also issued 4,127 new, renewed or amended technical construction and operating certificates and processed 1,554 applications for broadcasting stations. As well, it examined 4,068 notifications for AM, FM and television broadcasting stations from foreign countries to ensure that the use of the spectrum in Canada is not compromised by outside interference.

Two special events challenged the resources and ingenuity of spectrum managers during 1987-1988: the provision of special communications services and facilities to support both the Pope's visit to Fort Simpson in the Northwest Territories and the Olympic Winter Games in Calgary.

New spectrum allocation

The Department played a major role in negotiations at the World Administrative Radio Conference (WARC) on Mobile Services held in Geneva in the fall of 1987. WARC resulted in the allocation of new spectrum for land mobile satellite services, removing a major obstacle facing the MSAT (mobile satellite) program, which is scheduled for operation in the early 1990s. This means that for the first time, spectrum has been set aside globally to be used specifically for land mobile satellite services.

In addition to the two 4-MHz bands allocated exclusively to land mobile satellite services, two 3-MHz bands are now allocated to maritime mobile satellite service and land mobile satellite service (formerly maritime only). Two other allocations in the 1500-1600 MHz range will also be useful for other facets of MSAT service, such as aeronautical and maritime services.

MSAT will bring two-way mobile radio and telephone service to Canadians across the country using satellites as a relay station in space. Although it will be used primarily in land vehicles, MSAT will also be effective in planes and boats. MSAT voice and data transmission services will benefit fire fighters, ambulance services, shipping and construction companies, forestry, oil and gas industries, governments and those who live in remote areas.

Ontario Air Ambulance Program

During 1987-1988, CRC scientists developed an antenna which could be mounted in the jets and helicopters used by Ontario's paramedics as air ambulances. Paramedics must often speak with doctors and medical advisors in the course of treatment but may be beyond the range of normal radio communications

Using the system developed at CRC, airborne paramedics can now reach a doctor from the plane. The signal goes from the plane to a satellite located off the Atlantic coast of Africa and back down to the CRC. It is then transmitted through phone lines to a dispatch centre in Toronto and to a doctor who answers the call. As a result, life-saving treatment is available without having to fly a doctor to remote locations.

The CRC initiative is Canada's first commercial application of mobile aeronautical satellite communications. Thanks to CRC technology, Ontario is the first province to have an air ambulance service and has the first general aviation aircraft in the world equipped for satellite communication.

Project Interact

Designed and developed by the Department's Atlantic Region staff, "Project Interact" is a computerized system which monitors radio frequency use. The system allows radio inspectors to monitor marine radio from a remote location such as the district or regional office, record the message traffic and even communicate directly with those offenders found to be using marine radio improperly.

Using a system developed at the CRC, paramedics on Ontario Air Ambulance flights can now communicate by phone with the doctor.

Atlantic Region staff developed the new system in response to an increasing sense of urgency about safety in marine radio. Over the years, reports of channel misuse have run the gamut from false distress calls to music played over the emergency channels.

The Expert Ship Advisor

All safety-related radio-communications equipment carried on all ocean-going ships must, by law, be inspected for correct operation. A microcomputer-based expert system developed and introduced during the year under review improves such inspections. This system makes full use of the experience gained by ship inspectors and Department of Transport officials.

'87 Spectrum 20/20 Symposium

Co-sponsored by the Department of Communications and the Radio Advisory Board of Canada, the Spectrum 20/20 Symposium focussed on Canada's use of the radio spectrum as it moves into the twenty-first century. The Symposium discussed the effects on a busy radio spectrum of introducing new technology in applications such as cordless and cellular telephones, mobile radio, paging devices, satellite communications, high definition television and radio-controlled equipment.

At this two-day event, held May 12-13, 1987, the Minister of Communications announced a review of the *Radio Act*.

Ionosonde Program

Administered by the Department of Communications on behalf of the Department of National Defence (DND), the Ionosonde Program involves collecting radio propagation data from the ionosphere. This data enables DND to select the radio frequencies required for its national security and communications needs.

During the year under review, automation of the Ionosonde Program was completed with the installation of new sounder equipment at ionosonde stations in Ashton, Ontario, Churchill, Manitoba, and Resolute Bay, Northwest Territories. DND reimbursed the Department of Communications for the $800,000 system refurbishment.

Government Telecommunications Agency

The Government Telecommunications Agency (GTA) is responsible for planning, establishing and managing the telecommunications facilities and services of federal government departments and agencies on an economical basis. The Agency made significant advances in a number of areas during 1987-1988.

Intercity network

The modernization of the Government-shared Intercity Network continued with the conversion of switching systems in Edmonton, London, Sherbrooke and Sudbury. In addition, two consolidations were added in Prince George and Prince Rupert, British Columbia.

Government Packet Network (GPN)

Introduced in September 1987, GPN provides data communications to more than 100 locations across the country. The service is based on the CNCP Infoswitch II service and allows GTA to offer data communications services on a shared basis rather than on a customized basis. With rates providing savings of 20 percent or more, the volume of business increased rapidly through the year.

Government Telecommunications Agency staff keeping in touch with multiple teleconferencing.

Government Electronic Message Services (GEMS)

These expanded during the year at an aggregate rate of 32 percent. By March 31, 1988 there were over 4,000 federal government users on GEMS, an increase of more than 1,000 over the previous year. Future plans call for the existing data transmission services to be phased over to a new service called the Government Electronic Messaging and Document Exchange Service. A Request For Proposal (RFP) was issued to the industry in September 1987.

Government satellite network

An RFP was issued to private industry during 1987-1988 for a new satellite-based network to provide communications to remote and under-served areas of Canada. The network will enable government departments to use VSAT (very small aperture terminals) technology to reduce their data network costs and improve communications with remote locations.

Voice messaging system

Following an extensive evaluation of a voice messaging system last fiscal year, GTA prepared a specification and RFP for a similar government service. Initially this service will be offered in the National Capital Region, Toronto, Montréal and Vancouver. An interim service is at present available in the Halifax area.

Integrated Services Digital Network (ISDN)

As a result of recent developments in network technology and the introduction of new digital transmission facilities, the Agency has initiated a program to design and install a new digital network for the Government. The network will be based on the Integrated Services Digital Network and is expected to meet the demands of the Government well into the next century. The initial phase of the project, a year-long trial in Ottawa, began in November 1987. By the end of the fiscal year, 106 users from three federal government departments (Communications, National Defence and Regional Economic Expansion) had been incorporated into the network.

A technician monitors equipment in the gallium arsenide test facility at the CRC.

MANAGING THE DEPARTMENT

The Department of Communications is responsible for national policies encompassing both communications and culture. Its communications policies foster an environment that encourages an increased exchange of information and better access for all Canadians to communications services and technology. Cultural policies enhance the capacity of Canada's artists and creators to communicate their work to fellow citizens and to the world at large.

The mission of the Department demonstrates how the joining of communications and culture serves to build a stronger Canada. That is why we are involved in spectrum management as well as ballet. Many events, particularly the increasingly international nature of communications, are rapidly changing the environment in which the Department works. In fact, the convergence of technologies and content over the past decade have resulted in the distinctions between the various areas of our communications and culture mandate becoming more blurred. This has fostered an environment that encourages a closer working relationship between the two arms of the Department.

A recent example of this relationship is the agreement reached between Telesat Canada and the National Arts Centre (NAC) on electronic touring for the arts. Working toward a common objective, these two groups have recorded tapes of NAC productions that will be shown across Canada in place of company tours.

Department of Communications employees make use of new technologies, such as the Visual Ear, to provide better service to the public.

Doing more with less

The need to do more with less money and fewer person-years is a reality of today's work environment. Getting the job done and maintaining the standards of work and service which the Department has delivered in the past will continue to be a hallmark of the Department. The six operating principles which accompany the new mission statement serve as guidelines for responding to this environment of fewer financial and human resources.

Management philosophy

The Department's management philosophy is that its success in both day-to-day operations and program delivery is dependent upon the following fundamental qualities:

- a clear mission,
- clear lines of responsibility, accountability and authority,
- internal communications (managers will be held accountable for this function in the same way they are responsible for financial management),
- delegation to managers (a process of deregulation and work simplification has been in operation within the Department for several years),

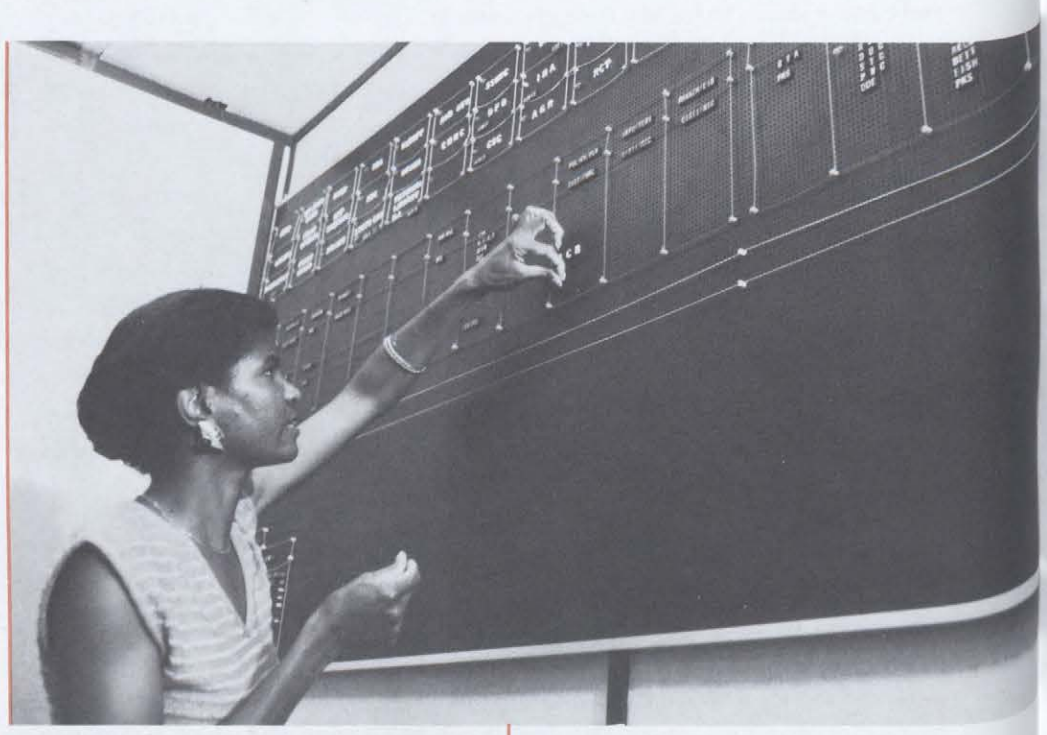
- monitoring and reporting (a streamlined monitoring and reporting system has resulted from an extensive review of the Department's management process),
- strength through the Department's employees, and
- a strong management team.

Human resources management

Productivity, employee competence and job satisfaction are the main elements of the Department's human resources planning activities. Specifically, these activities focus on human resources planning, employment equity, training, work force adjustment, staffing and classification, and internal communication. To emphasize this commitment, departmental employees took a total of 2,103 training courses during 1987-1988.

The Department's share of the federal government's work force reduction policy amounts to a 208 person-year decrease between the 1986/87 and 1990/91 fiscal years. Twenty-three employees were declared "surplus" in 1987-1988 but in keeping with the Department's "no lay-off" policy, positions were found within the Department for all affected employees.

Internal communications are a top priority within the Department. Improving departmental efficiency, job satisfaction and fostering the feeling of belonging were the aims of a "strategy of awareness" initiated during the past year. Specific activities included a number of information and planning sessions on the function and operation of the Department, a review of the Department's human resources management functions and regular editions of the departmental newsletter, *Communications Express*.



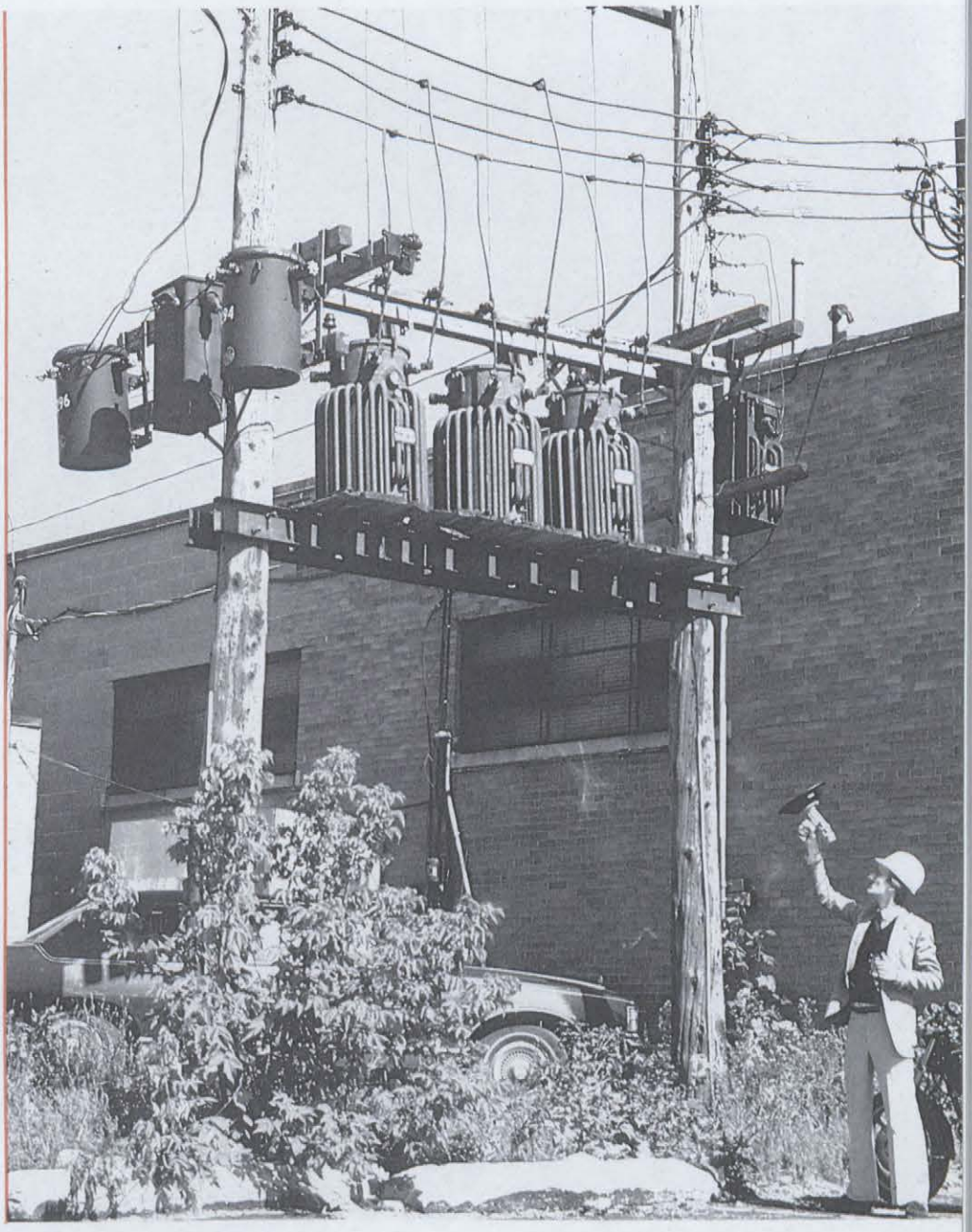
A Department of Communications employee adjusts a project board, an integral part of the planning process.

A textile conservator at the Canadian Conservation Institute examines an eighteenth century silk brocade gown. This gown was taken to Bermuda by the Tucker family who were among the island's first settlers.

Increased Ministerial Authority and Accountability (IMAA)

The thrust of the IMAA initiative is to transfer specific authority from Treasury Board to individual ministers and their departments and agencies. Control will be maintained through Memoranda of Understanding on management policies and standards, monitoring, performance reviews and the use of program evaluation and internal audit. An MOU will provide a department with significantly greater management flexibility.

The Department of Communications is at present negotiating an MOU with Treasury Board. The Department believes that IMAA would provide it with a reduced administrative burden, more flexibility in financial and human resources management, simplified reporting structures and clearer accountability.



In 1987-1988, Department of Communications inspectors investigated 15,700 interference complaints.

For financial and administrative information on the Department of Communications consult the *Organization and statistics* publication included with this Annual Report.