Canada

YEAR-END REPORT

1987-1988

ADMSM

Communications
Canada

| Government of Canada
Department of Communications | Gouvernement du Canada
Ministère des Communications | **MEMORANDUM** | **NOTE DE SERVICE** |

TO
À
Alain Gourd
Deputy Minister

FROM
DE
Robert A. Gordon
ADMSM

SECURITY – CLASSIFICATION – DE SÉCURITÉ
OUR FILE / NOTRE RÉFÉRENCE
YOUR FILE / VOTRE RÉFÉRENCE
DATE   April 30, 1988

SUBJECT
OBJET

1987-1988 Year-end Report

I am pleased to submit the 1987-1988 year-end review for the Spectrum Management and Regional Operations Sector. I would like to take this opportunity to draw your attention to some of the sector's major achievements over the course of the year.

Over the past year, the reorganization of regional Communications and Culture units was launched, in our continuing effort to strengthen the capability of Regional and District Offices to deliver the full range of departmental policies and programs. New directors were appointed in the Quebec and Central Region Offices. The staffing of all five regional Public Affairs positions was also completed over the course of the year.

Regional Offices have augmented their role in taking on responsibilities for initiatives such as the Economic and Regional Development Sub Agreements and establishing direct liaison with the Atlantic Canada Opportunities Agency, the Western Diversification Office, FEDNOR and the Montreal Development Committee.

The development of public information sessions and consultation workshops for the Information Technology discussion paper, and the development of communications applications projects with the provinces and industry were also areas where regional staff took the lead role. The results of these efforts will be realized in 1988-1989.

On the cultural front and particularly in the Sound Recording Development Program, recording artists supported by the program were awarded platinum and gold records.

Regional GTA efforts to modernize and expand Local Shared Services met with noticeable success, including the consolidation in Edmonton and Sherbrooke. The Intercity Voice Network continued to evolve and expand, gaining from the use of new technologies and services. Network access has been extended to smaller locations in the Central and Pacific Regions. The Quebec and Atlantic regions also improved their network services. Regional GTA units were active in providing specialized services and systems to a number of federal departments, such as the installation of services for the Hugh John Flemming Forestry Centre located in Fredericton, N.B.

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In a period of increasing spectrum demand, the sector has automated many of its processes and operational systems in order to improve the efficiency of our operations, while maintaining the quality of service to the public. Innovations such as system licensing are enabling the Sector to operate more efficiently. System licensing of cellular stations was initiated on April 1 and a streamlined licence application form was introduced in several other services. Delegation of examinations for radio operator certificates also contributed to a reduction of the administrative burden.

During 1987-88 the Sector issued 226,352 new and amended radio station licenses and processed a total of 723,211 renewals.

In addition, some 15,700 interference complaints were investigated and resolved. Of these, 5,354 were cases of interference to radiocommunications systems such as those used by police, fire, ambulance, air navigation and commercial dispatchers.
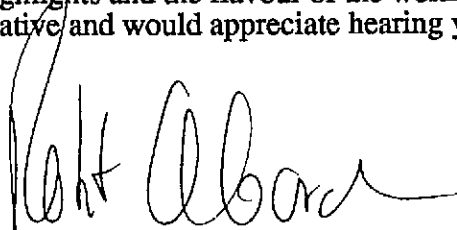
On the revenue front, the final figure of Sector receipts from all sources is expected to exceed $70,000,000. In addition to our direct costs, this will cover $16,000,000 of departmental overhead expenditures.

Regulatory policy and planning is a sector priority, with significant progress achieved in the revision of the Radio Act and the development of a policy paper on antenna structures.

. The Spectrum 20/20 symposium, held in Montreal in May 1987, was jointly sponsored by the Radio Advisory Board of Canada and Communications Canada. Spectrum users, service providers and equipment manufacturers had a unique opportunity to discuss future spectrum usage.

Two special events called on the resources and ingenuity of our spectrum managers. The Central Region proved highly capable of ensuring special communications services and facilities were in place to support both the Pope's visit to Fort Simpson in the N.W.T. and the 1988 Calgary Winter Olympics.

This year-end report which contains additional detail on the topics mentioned above as well as others, is intended to convey the highlights and the flavour of the work of the sector over the past year. I trust you will find it informative and would appreciate hearing your comments.

Robert A. Gordon

Att.

RESOURCE MANAGEMENT AND OPERATIONAL PERFORMANCE

Human Resources

Human resources, our most important asset, have been a major focus of our operational challenge this past year. The challenges included:

- increasing the participation of under-represented groups in our workforce;

- coping with our downsizing objectives; and,

- adjusting the composition of our workforce to meet increased spectrum demand while providing additional resources to our regional representation role.

Further, this sector has absorbed important PY reductions over the past few years. Our base has gone from 974 in 1985-86 to 943 in 1987-88. A further decrease to 924 in 1988-89 will be absorbed.

The following table demonstrates the significant impact PY reductions have had on the Sector and particularly on Spectrum Management.

	85/86	86/87	87/88	88/89	89/ 90	90/91
Spectrum Management	914	872	864	830	811	806
Terminal Attachment	16	18	12	12	12	12
Emergency Planning	10	16	11	15	14	14
Regional Representation	34	44	56	67	70	71
Total	* 974	950	943	924	907	903

* *Person years with Sector Overhead distributed*

EQUITABLE REPRESENTATION AND OFFICIAL LANGUAGES

The 1987-88 fiscal year witnessed significant improvements in all our target areas of equitable employment and official languages.

The problem areas of the Central Region with under-representation of francophones and the Quebec Region with under-representation of anglophones have been tackled aggressively and the results have been impressive. In the Quebec Region, 3 anglophones accepted offers of permanent employment. The situation in the Central Region has improved dramatically with francophone representation overall increasing to 8.18% compared to 3.3% for the general population. Further, the 8 positions identified bilingual for service to the public are all staffed by linguistically competent people.

On the equitable representation front, we have also made good progress. With the support of PSC and departmental resources as well as the commitment on the part of sector managers, our representation increased in all categories. For example, in the Ontario Region we hired 3 female telecommunications officers; 1 female visible minority PM-04; and 1 female francophone EL-01. In the Quebec Region, we hired 1 female EL. The Pacific and the Atlantic Regions have hired people from the disabled and the indigenous and visible minority communities.

The story at HQ has also been very encouraging with all equitable representation categories improving.

Communications and Culture

In 1987-88, a reorganization of communications and culture units in the Regions was initiated to enable regional staff to assume a more prominent and active role in the delivery of departmental services. The reorganized structure in each region will eventually be headed by an SM with responsibility for an enhanced communications and culture unit. The unit will be directly responsible for regional development activities, including ERDA management and administration activities. Two of the five SM positions were staffed during the year.

In addition, the staffing of all five regional public affairs positions was completed over the course of the year.

At the district level, a number of managers were able to pursue new avenues of development. They became active participants in liaison with the regional development agencies (ACOA, FEDNOR and WDO) as well as with provincial governments, universities and industry.

Productivity

The productivity gains achieved by the people of the sector are notable. Our efforts have led to the introduction of computer automation in virtually all fields of endeavour. Applications range from those of expert systems for ship inspections to staff training where we are using CAI (computer assisted instruction).

It is important to underscore that these gains are being made in the context of shortages of both financial and human resources.

The graph below shows just how impressive these gains have been over the past 17 years.

Relative Growth in PYs, Cost & Licences

Fiscal Years

□ PY's   + Station Population   ◊ Deflated Cost
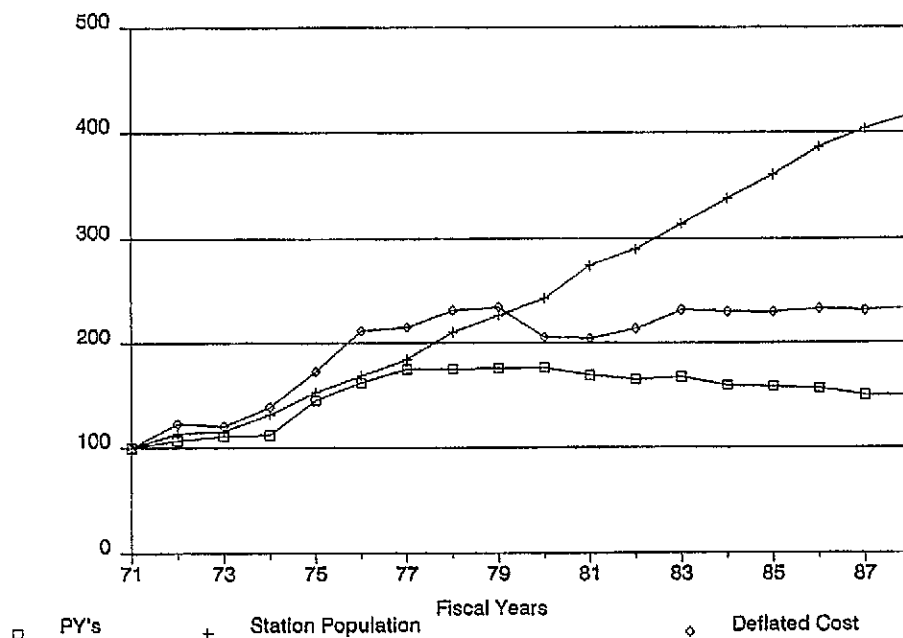
Financial Resources

Sector expenditures amounted to some $46,854,000. This represents a small increase of 3.9% or $1,782,000 over 1986-87. Our 1987-88 expenditures include $298,000 in G&S and $40,000 in capital allocated at year end as a result of departmental reviews. These additional funds enabled the sector to meet priorities which the base budget would have left unaddressed. This Sector was able to accelerate planned 1988-89 purchases of electronic equipment by absorbing a $127,000 capital under-utilization in other sectors of the department with a commitment to transfer back to the originating Sector in 1988-89.

	1987-88			1986-87	
	Budget	Actual	Var.	Actual	Change
Person Years	943.0	942.5	0.5	941	1.5
($000)					
Salaries	37,171	36,510	661	35,200	1,310
G&S	8,266	8,266	0	8,063	203
Capital	2,043	2,043	0	1,784	259
Grants	35	35	0	25	10
Total	47,515	46,854	661	45,072	1,782

The G&S expenditures consist mainly of non-discretionary operating costs such as travel and communications costs for the four HQ branches, five regional offices and 47 district and sub-offices.

Capital expenditures cover replacement costs of vehicles, electronic equipment, EDP, furniture, and minor construction.

Through careful management of all resources, the Sector was able to meet the higher level priorities. Even though total additional funds of $338,000 were acquired late in the year, a number of contracts relating to spectrum management studies and training programs had to be delayed until 1988-89 and beyond.

REVENUES

In line with our cost recovery policy, the Sector revenue from all sources amounted to over $70,000,000. This amount is sufficient to cover all sector expenditures plus some $16,000,000 of departmental overhead expenditures.

Material Management

The Sector holds an inventory of some $27,000,000 consisting mainly of electronic equipment, laboratory and test instruments, vehicles, EDP equipment, and furniture. Five monitoring station buildings located on Crown land in Montague, St. Remi, Acton, Fort Smith and Langley, have also been maintained and operated. Although these sites are government owned, their value does not appear in the inventory figure.

The approximately $2,000,000 allocated to the Sector capital budget is the subject of a rigorous justification and rationalization exercise as is the allocation of all Sector resources. This exercise enables the Sector to meet its priorities while dealing with internal requests for capital funds in the order of $6,000,000.

Operational performance

REGIONAL COMMUNICATIONS AND CULTURE

Overview

It was a very active and productive year for regional and district offices in all areas of departmental activity, with the major focus on the development of Canada's communications industries and cultural sector. The heightened emphasis on enhanced regional development and delivery of policies and programs continued. The early part of the year saw Communications and Culture groups develop more clearly defined roles and responsibilities in the regions (consultation, discussion, recommendations and management) and a direct responsibility for the preparation of analyses, status/progress reports, briefing notes, etc.

The creation of the new regional development agencies (ACOA, WDO, and FEDNOR) as well as the plan for the economic development of Montreal conferred on COM's regional offices a more dynamic role in both communications and culture development. Good working relationships were established with the new agencies and with headquarters specialists. This expanded role also highlighted the need to train district office personnel more fully in Communications and Culture activities in order to better serve the Canadian public.

The high level of Quebec, Ontario and Central Region involvement in ERDA administration and management increased further over the course of the year consuming a significant proportion of regional work time. In addition, the first full year of operation of the Sound Recording Development Program in the Quebec Regional Office was successfully completed.

Noteworthy achievements also occurred in connection with the Francophone and Commonwealth Conferences, and the Calgary Olympic Games.

Telecommunications and Technology

The department's Regional Offices took a lead role in the development of public information sessions and consultation workshops for the Information Technology discussion paper and in the development of communications technology projects with the provinces and industry.

A 3-day seminar on technology transfer held at CRC in February achieved its goal of preparing regional and district staff to provide assistance to industry and to CRC staff.

Regional Offices demonstrated considerable skill and awareness of industry needs in drafting proposals for communications applications centres.

These efforts and others have resulted in a strengthened working relationship with ADMTT.

Cultural Affairs

On the cultural front, Regional Offices made a significant contribution to the development of the discussion paper on museums policy and became familiar with the programs and specialists transferred to the department from the National Museums Corporation. In addition, regional analysis of proposals submitted under the Cultural Initiatives Program was strengthened. Regions also provided assistance to Cultural Affairs personnel in organizing and attending meetings related to festivals policy and to broadcasting policy, and in recommending proposed delegates to the National Conference on Tourism, Multiculturalism and Culture. A cultural profile database was developed for headquarters use and proposals for cultural initiatives to be considered by the new regional development agencies was drafted.

Corporate Policy

The Corporate Policy sector regularly relied on the Regional Offices for reports on hearings held by Parliamentary Committees (Communications and Culture, External Affairs and International Trade, and Finance and Economics).

With the arrival of a full complement of regional managers of Public Affairs, Regional Offices acquired a more prominent role in preparing information tools such as press releases and ministerial speeches. Several Regional Offices also organized and delivered media relations training to regional and district managers.

Public Affairs units organized regional and district participation at exhibits and shows related to communications and culture and spectrum activities, and were active in coordinating a marine radio awareness campaign.

Atlantic

The Atlantic Region was strongly pro-active in developing a solid working relationship with ACOA offices in all four provinces and with the communications industry while consolidating its understanding of the cultural and artistic community. Regular meetings were held with ACOA provincial offices and the provincial government departments of communications and culture.

Cultural Affairs

The office carried out a pilot project under Component 3 of the CIP to determine the feasibility of greater decentralization of the program. The project, although limited to component 3 - Festivals and special events, was successful and a full report was submitted to the Director of CIP. Regional analyses of CIP projects has grown dramatically as a result, with a concomitant streamlining of the process.

Regional staff also contributed to the work of the intergovernmental committee responsible for organizing New Brunswick's participation in the National Conference on Tourism, Multiculturalism and Culture (Montreal, April 1988) and the preparation of proposed lists of delegates.

The Atlantic office was responsible for providing federal direction to the Steering Committee overseeing the ERDA planning study on the Economic Impact and Development of the Cultural Sector in PEI.

Telecommunications and Technology

The preliminary planning and concept for four technology applications centres was completed in cooperation with industries, universities and research institutions. The focus is on marine communications, computer assisted translation, geomatics and education. In the process, Atlantic Region has strengthened its day-to-day working relationships with CWARC and with CRC.

Quebec

Telecommunications and Technology

Two major economic development activities have dominated: the Communications ERDA and the Montreal Development Initiative. In the fall, the regional office also assumed management responsibility for the SPAR Memorandum of Agreement.

Within the first nine months of 1987-1988, the ERDA Secretariat analyzed 67 project proposals in addition to its on-going administrative and financial services and reports to the Management Committee. Among the ERDA projects, TV-5 and community television funding deserve mention. Financial administration of the agreement was also transferred from CWARC to the regional office. Within the four components of the Canada-Quebec Agreement, some $25,000,000 of the $40,000,000 has been commited and expended. Additional commitments for the TV-5 project, amounting to some $8,200,000, have not yet been formalized but are binding and funds are set aside.

The Coordinating Committee for the Canada-Quebec Agreement on the Development of French Television met several times as did the sub-committee on funding community television which received 32 requests for financial assistance and approved 29 contribution agreements, by the 9-month review.

Cultural Affairs

Groups seeking funding under the CIP regularly receive advice from the unit. Assistance was also provided to the new Montreal cultural agency, la Commission d'initiative et de développement culturels (CIDEC). Coordination activities were undertaken with the Regional Municipality (Communauté urbaine de Montréal) on festival funding.

Sound Recording Development Program

The Program completed its first full year of operation in Montreal. Notable successes include assistance in the creation of the Atlantic Music Producers Association, an agreement between the four major Canadian distributors of specialized music, funding of 11 gold and 2 platinum records and the organization of a major Canadian delegation to the Marché international du disque, de la vidéo et de l'éducation musicale (MIDEM) 88 in Cannes.

The inaugural year of this program saw 151 applications submitted from across Canada with the majority of applications coming from Montreal, Toronto and Vancouver. The overall budget of $3,700,000 was expended on the 89 proposals which were approved.

Program officers also visited various cities across the country to explain the Program.

Public Affairs

The section produced the text for brochures on the St- Rémi monitoring station, pleasure boat radiocommunications and taxi communications. Coordination of ministerial visits was also assured.

Ontario

Cultural Affairs

Management of the Ontario Economic and Regional Development Sub-Agreement on Culture was the primary activity of the Region's Communications and Culture staff, through management committee meetings, client meetings, project analysis and announcements, and general secretariat services. As of March 31, 1988 approximately 50% of the $50,000,000 set aside for ERDA projects had been expended or commited. Considerable effort was directed towards the Elgin Winter Garden and the Royal Ontario Museum. Projects such as the Brantford International Telecommunications Discovery Centre, TVO, and the Tom Thomson Memorial Art Gallery are representative of the 12 projects now approved. A number of other projects are also under consideration. District Office staff provided significant support to project development and analysis activities.

Several hundred enquiries related to CIP proposals were received, as well as several hundred film certification enquiries and numerous enquiries related to the Sound Recording Development Program.

The Ontario Region provided assistance for the coordination and coverage of the Toronto Postal Subsidy hearing, the non-theatrical Task Force hearings held in the Regional Office, the hearing of the Advisory Committee on the Status of the Artist, and the hearings of the Standing Committee on Communications and Culture, as well as the Free Trade and Multiculturalism hearings.

Support was provided to the Minister on a number of visits and media arrangements were made for ERDA announcements for the Tom Thomson Memorial Art Gallery and the Waterloo clay and glass feasibility study.

Telecommunications and Technology

Regional staff collaborated with CRC and two cable television companies in the organization and delivery of a successful HDTV demonstration and survey in Toronto.

A Toronto Office representative visited Northern Ontario to consult with DRIE and Advisory Board Staff for the Northern Ontario Economic Development Program and establish continuing discussions on relevant communications and culture initiatives.

The Region also played an active role in the communications activities related to the Ontario Software Symposium in February, 1988.

Central

Telecommunications and Technology

Central Region continued to focus its efforts on collaboration with the Western Diversification Offices and the management of the Canada-Manitoba ERDA, notably the Telematics and Health care project. The Region has established a good working relationship with WDO on initiatives of interest to the Department. It has also been asked to analyze and comment on WDO funding proposals that fall within the Department's mandate.

In Saskatchewan, regional development proposals were developed for an Intelligent Building, an Incubation Centre and a technology application centre for resource-based industries.

Memoranda of Agreement have been signed with the Alberta Research Council.

In the area of information technology, the Region organized workshops on health care for Winnipeg and Northern Communications for Yellowknife.

The Region continues to be a critical player in native communications and in the development of distance education initiatives.

Under the Communications component of the ERDA, Regional Office staff organized an important meeting with the communication industry to heighten awareness of the program criteria in February 1987, which created an inflow of new projects in 1987-1988. The federal share of ERDA expenditures and commitments currently stands at approximately $12,000,000 from a total federal share of $13,000,000. Of the almost 20 technology projects approved The Ubitrex Corporation project at $1,135,000, the Manitoba Computer Assisted Learning Consortium Project at $720,000, the Canadian Telematics and Health Care Centre at $600,000 are the largest.

Cultural Affairs

Policy activities included covering museums policy sessions in Winnipeg, Yellowknife, Edmonton, Calgary, and Regina, festivals policy consultative meetings, Free Trade hearings in Yellowknife, Edmonton, Regina, Winnipeg and Tri-level Arts committee meetings in several cities.

Created under the cultural components of the Canada-Manitoba ERDA, the Cultural Industries Development Office was launched on March 31, 1987. Full operations began in June 1987. Demand for its services has been high and a number of projects have been funded. Since the inauguration of the office, 160 applications have been received under the 14 different programs and 71 were approved for a total commitment of over $700,000 at January 31, 1988.

The major WD initiatives involving the region are the Ex Terra Foundation's Canada-China Dinosaur Project and the proposed Saskatchewan Film Development project.

In addition to the routine coordination/analysis of CIP proposals, the Region undertook a number of special projects such as a presentation on the Sound Recording Program at the founding of the Saskatchewan Recording Industry Association.

Public Affairs

Central Region delivered a successful media relations training session to regional and district managers.

Pacific

Telecommunications and Technology

Principal activities have centered on proposals for development in conjunction with the Western Diversification Initiative. Major Pacific Region Communications proposals include the Wireless Communications Research Centre, Electronic Data Exchange System, an Integrated Media Laboratory and an Electronic Publishing Centre. Regional staff also analyzed communications proposals at the request of WDO.

The Region continued its regular meetings with the B.C. Consultative Committee on Communications and attended CRTC hearings on telecommunications, and the B.C. Telephone Construction Program Review.

Cultural Affairs

Pacific Region has continued discussions with the province and federal agencies on the question of a B.C. cultural ERDA. Meetings have also been held with representatives of the Cultural Industries Task Force of British Columbia, a vocal supporter of the proposed agreement.

A meeting of the B.C. Consultative Committee on Cultural Affairs was held in Victoria as was a tri-level arts committee in Vancouver and the staff attended the Yukon Arts Council Annual General Meeting.

At the request of the Telecommunications Executive Management Institute of Canada (TEMIC), the region prepared materials for the inaugural course in Vancouver, and worked with TEMIC on the logistical arrangements and provided on-site support.

The Region convened a meeting of B.C.'s festival organizers to consult on COM's festival policy and also consulted officials from the Ministry of Tourism, Recreation and Culture.

A visit with the Association of B.C. Book Publishers was coordinated for a delegation of book publishing officials from the Republic of China.

Regional staff also made arrangements for visits with the cultural industry for officials of External Affairs to identify opportunities in the Asia/Pacific market.

Over the course of the year, the Office dealt with many inquiries including more than 600 related to CIP, and about 150 related to film certification and 150 related to sound recording.

Public Affairs

The appointment of a public affairs manager has enabled the Region to increase its capacity to deliver the departmental message to a broader clientele.

In the area of spectrum management, the emphasis was on the public profile of departmental prosecutions, development of a communications strategy to reach commercial fisherman using synthesized radios, preparation of information on two-way radio use, GRS, radio broadcast antenna, synthesized radio and finally regional and district displays at exhibits, shows and trade fairs.

SPECTRUM OPERATIONS

The following sections review the results achieved in all areas of Spectrum Operations in the Sector.

Spectrum Planning and Engineering

Regulatory policy and planning in spectrum management have become urgent priorities within the sector over the past 12 months. The government's strategy and commitment to regulatory reform coupled with the downsizing pressures aimed at enhancing the efficiency of spectrum management operations, played a major part in this focus on our regulatory initiatives. A number of areas are cited in the following paragraphs.

Revision of the Radio Act

The legislation that underlies spectrum management, the Radio Act, is fundamental to the effective exploitation of radio spectrum based communications in Canada. The Act has not been substantially revised or updated since 1938 when it was first introduced. We have, this year, sought and received Cabinet approval for a wide variety of amendments that will modernize the Act to improve the ability of the Minister to fulfill her mandate to ensure the orderly development and operation of radio communication in Canada.

Antenna Structure Policy

In response to increasingly frequent complaints and expressions of concern from municipalities across the country regarding the presence of radio antennae in their communities, the department contracted with the Faculty of Law of the University of New Brunswick to study the jurisdictional aspects of the problem. The report, which is to serve as a basis for public discussion, was released to the public January 30, 1988. As a result of public comment and targeted discussion with a wide range of interested parties, we expect to develop, in concert with municipalities, guidelines and procedures that will eliminate much of the current concern in communities across Canada.

AM Stereo Broadcasting

The acceptance by the department of Motorola's C-QUAM stereo system (a move which was strongly supported by the broadcasting industry) has given new impetus to AM broadcasting by stemming the shift of listenership to FM radio. A significant number of AM radio stations have converted to stereo and AM stereo receivers are now widely marketed. To further improve AM audio quality, the sector has drafted standards which will result in the availability of better AM radio receivers on the market.

Additional Cable TV Channels

Following lengthy negotiations with the Department of Transport and comprehensive studies and measurements, the department reached an agreement with Transport Canada whereby 20 MHZ of the Aeronautical Frequency Bands has been made available to the cable TV industry. In view of the potential implications for safety to life, considerable work was carried out prior to the establishment of acceptable standards and regulations governing the use of these bands by the cable industry. Due to the nature of the studies required, a good deal of the work carried out was quite original. For example, in the area of cable leakage measurement, highly accurate measurement methodology and computer simulation software were pioneered to provide correlation of air-based and

ground-based field strength measurements. This work, in addition to providing a potential of four additional television channels to the cable industry, further demonstrates the leadership role played by our spectrum managers. It is fully expected that the knowledge and expertise will be of commercial value and in high demand by the U.S. cable industry and the FCC by 1990 when the Cumulative Leakage Index becomes a mandatory requirement in the U.S.

Establishment of a Canadian Advanced Broadcast Systems Committee

The rapid technological advances that have taken place in broadcasting and the intense marketing efforts of proponents of new systems have the potential to significantly alter the structure of the present broadcasting system. In order to analyze the complex issues involved and to assess the impact of the development and integration of advanced broadcasting systems into the Canadian broadcasting infrastructure, the Department was instrumental in establishing, with the full support of the broadcasting industry, the Canadian Advanced Broadcast Systems Committee (CABSC). This committee is to address the medium and long term technological developments which will affect the Canadian broadcasting systems and related services. The committee will provide advice and guidance in the areas of research, development, regulation, policy and standards to ensure the orderly introduction of services using these new technologies.

Ionosonde Program

The automation of the Ionosonde program has been completed with the installation this year of new sounder equipment at Ashton, Ont., Churchill, Man. and, Resolute Bay, N.W.T. This program, which collects radio propagation data from the ionosphere, is carried out by this Department on behalf of the Department of National Defence. The refurbishment of the system was carried out at a cost of $800,000. made available by National Defence.

Expert Systems

The sector has continued its work in the field of Expert Systems and introduced this past year a program called "Ship Advisor". Expert systems are computer programs which incorporate the rules and judgement which humans use to solve a problem. In this case, the "Ship Advisor" is an expert system which incorporates the regulations regarding the radio and navigational equipment which ships travelling in Canadian waters must carry. By using this program our radio inspectors need not consult a Coast Guard expert or review extensive documents in order to work through unusual cases regarding these regulations. In the past the time devoted to researching information prior to conducting a ship inspection was extensive. Today the time required to prepare for an inspection is minimized, indeed, Coast Guard Canada regard the Ship Advisor as authoritative and regularly consult the program for advice. In addition to the Ship Advisor program, we are currently developing a program which is designed to capture the reasoning process which an experienced radio inspector would use to determine the cause of a radio interference problem. When completed, this expert system will assist inspectors with unusual interference cases and permit routine cases to be handled more expeditiously.

Spectrum 20/20

The sector played a key role in the Spectrum 20/20 symposium, held in Montreal in May 1987. The theme of this symposium, jointly sponsored by the Radio Advisory Board of Canada (RABC) and Communications Canada was "Spectrum Usage - Future Directions in Canada". From a Canadian

perspective this symposium was unique. It brought together all the competing interests for spectrum in a forum with representatives of associated international and national trustee organizations. Service providers, users and equipment manufacturers for all major categories of radio services, each of which traditionally meet separately, had the opportunity to share their plans for spectrum usage.

Marketing of Spectrum Management Technology

The Department and this sector in particular continues to be recognized as a world leader in the field of spectrum management. Training in spectrum management technology, specifically in the areas of Spectrum Planning and Engineering, Authorization and Spectrum Control, with emphasis on our automated licensing system and monitoring vehicles was provided to Thailand, Indonesia, Ghana, Algeria and Bangladesh during the year. This in turn has opened up potential markets for spectrum management related products for a number of Canadian companies including DGB Consultants Inc., Spectrocan Engineering Inc., Leigh Navigation Systems Inc., Datacap Ltd. and, Miller Communications Systems Ltd.

Client Interface

Contact with our clientele continues to be the key to our overall success in maintaining an acceptable level of adherence to the radio regulations. This year we have expanded this level of contact through the development of a ten minute video tape which communicates the importance of radio in the marine environment. It focusses on the need to share frequencies, the need to obtain radio licenses and operator certificates and, most importantly, the proper use of marine channels. This video tape has been very well received by the Fisherman's Associations, the Power Squadrons and the Yachting Clubs across the country and is used extensively in their internal training programs. Coast Guard Canada has incorporated the tape in their communications package and have distributed it to all of their marine offices.

Authorization

General Operations

In spite of the reduction in the radio station population caused by the de-licensing of cellular, the overall non-GRS radio station population continues to increase. At March 31, 1985 the figure stood at 684,000. It had swelled to 791,000 at the end of the 1987-88 fiscal year. This represents an increase of over 35,000 stations per year over the last three years.

This past year alone the Sector issued 226,352 new and amended licenses and processed a total of 723,211 radio station licence renewals.

System Licensing

Having to respond to an increasingly complex and congested spectrum environment in the face of continually diminishing resources has accelerated the pace at which we develop and implement innovative policies and procedures that serve to increase operational efficiency for both our clients and ourselves. System Licensing is one such innovation. System Licensing of cellular stations was initiated on April 1, 1987 and a streamlined licence application form was introduced in a number of services. With the advent of System Licensing, subscribers to cellular radio services need no longer apply for a radio licence. Rather, it is the service provider who holds a radio licence for his system.

This innovative approach to licensing has allowed us to significantly reduce the administrative burden to both the Department and the user client while maintaining the standards and control necessary for interference-free spectrum. The planning for extension of system licensing to other public commercial systems as well as RCC systems is progressing well and the ongoing consultations with key industry groups indicates a favorable response to our initiatives in this area.

Delegation of Examination

They themselves are first examined and declared qualified by this Department to conduct examinations of this nature on our behalf. This practice was extended this year include a good portion of the maritime mobile community. A recent change in the regulations governing the fitting of radio on vessels (particularly small fishing vessels) has brought on a significant increase in the number of voluntarily fitted vessels and a corresponding increase in the need for radio operator certificates. In order to meet this requirement in a time of resource constraint while encouraging user conformity to the radio regulations, district office staff approached local power squadrons and fishing associations to promote their participation. To assist in the process the sector produced new and revised training aids in the form of study guides, video tapes, examination booklets and revised application forms. The program has proven very successful and will serve to limit and reduce the cost of managing the certification process and at the same time improve service to the public.

Spectrum Control

General Operations

In addition to the activity detailed below, our inspectors resolved some 10,407 interference complaints from the general public which most often dealt with interference to broadcast receiving devices, and 5,354 cases of interference to radiocommunications systems such as those used by police, fire, ambulance, air navigation, and commercial dispatchers.

Hydro Interference

Time and resources invested over the past two years in the area of hydro related radio interference has this year paid off and the results will meet or exceed our expectations. Almost without exception, the hydro companies across the country have taken on the responsibility of investigating and resolving complaints of interference to broadcast reception caused by hydro. This follows two years of extensive training and public relations work by our regional staff to train hydro employees to recognize and resolve hydro related interference cases. As a result of this initiative we have reduced by some 5000, the number of interference cases worked on by departmental staff. We estimate this has yielded a saving of some 11 PYs in 1987/88.

Project Interact

For the past number of years we have seen a major increase in the misuse of the maritime mobile band on the Atlantic and Pacific coasts by both fishermen and pleasure boaters alike. In an effort to combat this serious problem a system known as Interact was developed in the Atlantic region, whereby we are able to monitor and evaluate the band and provide on-air instruction on the proper use of radio and radio procedures through telephone lines to remotely cited transceivers. This saves both PY resources and travel costs. The program has been so successful in reducing the level of radio abuse that Coast Guard Canada has incorporated a similar system into their Maritime operations. We are also able to apply these same concepts in other of our problem areas where frequency congestion coupled with misuse of radio has resulted in high volumes of complaints by user clients.

Special Events

This past year the Department, through our Central region, was once again called upon to provide special communications services and facilities in support of major national and international events. Of particular interest was our involvement in the visit of His Holiness The Pope to Fort Simpson in the N.W.T. and of course the 1988 Winter Olympics held in Calgary.

Pope's Visit

Drawing on our experiences from the 1985 visit of The Pope, this years brief visit was without incident. Winnipeg regional office staff along with support from the Edmonton, Yellowknife and Ottawa district offices ensured the necessary communications facilities were in place and fully operational to meet any communications contingencies.

1988 Winter Olympics

Perhaps the largest single spectrum management special event ever embarked on was that of ensuring reliable and continuous telecommunications facilities for the 1988 Winter Olympics. For a period of sixteen days in February, the city of Calgary and surrounding area was inundated with an onslaught of transmitting devices, all in support of the operation of the Olympics. In a spectrum environment already congested, our spectrum managers were faced with the challenge of accommodating an additional 4,000 transmitters and an associated 800 frequency assignments. Countries from around the world converged on Calgary with their own specific communications needs, ranging from media satellite/microwave feed to hand-held units for team security. In addition, we were also faced with the task of ensuring the day to day protection of these devices from interference, not only from each other but also from the existing spectrum users in Calgary. This phase of our operations took on special significance because, unlike our normal day to day operations, we did not have the luxury of time to locate and resolve interference problems. We were dealing in terms of hours and minutes, where reliable communication was critical and had to be maintained at all costs. I am pleased to report that virtually all spectrum requirements were met and that from a telecommunications point of view the 1988 Calgary Winter Olympics was a resounding success.

REGIONAL GTA OPERATIONS

Consolidation Management

Regional efforts to modernize and expand our Local Shared Services (LSS) continue to meet with success. Consolidation modernization has been implemented in Edmonton and Sherbrooke this year. New consolidations have been installed at Prince Rupert, Brandon, Bathurst, Gander and Malton. Planning activities have been completed for London, Belleville and Sudbury with service implementation expected early in the new fiscal year.

The continued growth of the LSS volumes over the past years attests to the planning and marketing efforts put into this service and our clients' acceptance of the service as a cost-effective alternative. For 1987-88 the LSS volume was estimated to be 189,859, an increase of 28.6% over the 1986-87 volumes. This increase reflects the results of the modernization and expansion efforts and the adoption of the single line concept.

Intercity Network Services

The Intercity Voice Network continues to expand and change to satisfy the needs of our clients and to take advantage of new technologies and service offerings from the carriers. In addition to the network nodes reported above, new methods of extending network access to smaller locations have been successful in the Central and Pacific regions. In the Quebec region network changes and additions at several locations have improved client access and reduced costs. The Atlantic region has added new WATS facilities and converted two major customized services to network access.

All regions have been monitoring and adjusting the network configurations to counter the effects of serious cost increases introduced by the carriers this year.

Other Client Related Activities

General Operations

In addition to savings generated by the regional activities in the Local Shared Services, Intercity Services and other GTA Services, the provision of expert assistance and advice to the client departments on their telecommunications projects, have produced savings or cost avoidances estimated at $ 1,500,000.

Pacific

In conjunction with B.C. TEL. a centralized complaint centre was introduced. In addition, a trial of the Northern Telecom DV-1 Office System, using Transport Canada - Air facilities, was coordinated by the regional GTA organization.

Central

The Central region developed a survey call and accounting system for Statistics Canada. This system will be introduced in other regions. Also, GTA provided assistance to CEIC in the introduction of an Automated Call Distribution system which they will introduce at several other offices across Canada. At Health and Welfare Canada GTA coordinated the installation of a data distribution system.

Ontario

To make the process of preparing service orders more efficient the Region designed a computer software package to assist clients in performing that administrative function. This package will also be offered to other regions. This Region was also instrumental in coordinating the provision of telecommunications services for the First Ministers' Conference.

Quebec

GTA in the Region assisted Revenue Canada, Customs and Excise in the implementation of a project the purpose of which was to integrate voice, data and image transmission for their complex at Rigaud. In addition, the Quebec Region participated in an Environment Canada feasibility study on the implementation of a voice, data and office services system.

Atlantic

With the cooperation of Supply and Services Canada, Public Works Canada and Transport Canada Coast Guard and Integrated Voice Messaging system trial was conducted. Other highlights saw the implementation of Phase 2 of the Consolidated Management System in Moncton, the negotiation of a consulting project to coordinate the competitive procurement of a new PABX system for the Defence Research Establishment Atlantic and the coordination of the installation of federal telecommunications service requirements for the Hugh John Flemming Forestry Centre.