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RESEARCH AND SPECTRUM ^{2/}(ADMRS)

BUDGET YEAR OPERATIONAL PLAN (BYOP) 1992-1993



Canada

TABLE OF CONTENTS

MANAGEMENT OF THE ADMRS SECTOR - 1992/93 PRIORITIES	I
ADMRS 1992-93 RESOURCES	V
ORGANIZATION CHART	VI
ENGINEERING PROGRAMS (DGEP)	1
WARC '92	1
Spectrum 20/20 '92 Symposium	2
LAN/WAN	2
Deputy Director General, Engineering (DDGEP)	2, 5
Spectrum Management Information system (SMIS)	5
LAN/WAN	5
Clyde Avenue Certification and Engineering Bureau (DEB)	6
REGIONAL OPERATIONS (DGRO)	9
Regional Programs	9
MANAGEMENT AND PLANS (DMG)	14
Service to clients	14
Single Operating Budget	14
Antibureaucracy initiatives	15
Improving Management Practices	15
CRC	15
International Travel and Conferences	15
Training Information System	15
Office Automation	16
Employment Equity	16
Staffing	16
Classification	16
COMMUNICATIONS DEVELOPMENT AND PLANNING (DGCP)	17
Disabled Strategy	20
Sector strategic planning	21
INFORMATICS MANAGEMENT / SENIOR EXECUTIVE NETWORK (DGIM/SEN) ...	25
Essential Services	25
Financial Management Information System	26
Human Resources Information System	26
The migration of CP-6 Applications	26
Senior Executive Network	27
RADIO REGULATORY (DGRR)	28
Emergency Planning	28
Regulatory Policy initiatives	28
WARC-92	28
The Environmental Assessment and Review Process (EARP)	29

SYSTEMS INTERCONNECTION RESEARCH (DSI)	30
Standards Program Office (SPO)	30, 31
DND Technology Base Program	31
Regional Seminars on Information Technology and Telecommunications	
Standards	31
DND Technology Base Program	31
 BROADCASTING REGULATION (DGBR)	 33
Digital Audio Broadcasting (DAB)	33
High Definition Television (HDTV)	33
CITEL	34
CCIR	34
AM, FM, TV and Cable Certification	34
Region Liaison	34

MANAGEMENT OF THE ADMRS SECTOR - 1992/93 PRIORITIES

"The 1992/93 priorities represent both our views and the thinking of the sector's senior management."

Some of the key themes the sector has agreed to pursue include the proactive encouragement of technological innovation and network modernization, greater use of DOC as a pilot and demonstration site for advanced applications, and a more client or user driven orientation to our activities.

These initiatives and the program and policy goals for the 1992/93 fiscal year are described in more detail below.

ADDRESSING THE R&D CHALLENGE

Our major competitors have launched massive industry/government collaborative R&D programs aimed at modernizing national communications infrastructure and positioning their domestic industries to compete in the global markets. Our studies have indicated that Canadian telecommunications carriers must increase the rate of service innovation if they are to remain competitive and must offer world-class network and services.

The DOC addresses the R&D Challenge by proposing three major initiatives:

- **Vision 2000**

Vision 2000 was set up to respond to these trends, through industry-led R&D consortia organized around the theme of personal communications. R&D consortia will be encouraged to develop seven areas in research, for example the development of a national electronic messaging and document exchange network.

- **Higher industry R&D expenditures**

We will continue to encourage other common carriers to make a similar commitment, and to work closely with ADMCP in order to accomplish this.

- **Reorganization of intramural research**

Formal contractual arrangements between the department and the CRC Institute will be implemented and updated the ADMRS/CWARC MOU.

The sector will define a long term R&D direction for the department based on technological trends, market opportunities and the nature of the R&D work being undertaken in universities, the private sector, and other research laboratories, both in Canada and abroad.

DEVELOPING ADVANCED COMMUNICATIONS SYSTEMS AND SERVICES

Fostering the continued development of the Canadian communications infrastructure and the early introduction of advanced applications and services, for the benefit of individuals, business and government, is a high departmental priority. The following are some of our major initiatives in this area.

- **Introduction of Personal Communications**

The sector will see the decision as to the appropriate cordless technology, the evaluation of detailed submissions and the finalization of technical standards.

- **Government Telecommunications Agency (GTA)**

Major initiatives are expected from GTA, for example:

- development of specifications and plans for the interconnection of dissimilar departmental networks;
- establish a viable and long term approach to the financing of the Architect Program in collaboration with the Treasury Board;
- the pursuing of the technical and operational collaboration related to the development of the ISTC high speed research network (CANARIE).

- **MSAT**

Over the next few months, we will be determining a plan for a smooth and successful transfer of the MSAT program to the GTA.

- **Senior Executive Network (SEN)**

We will be preparing a business case for longer term funding (and full cost recovery), identifying specific actions to encourage greater use of SEN by senior officials, and proposing steps for the future technological evolution of SEN (in particular, the integration of SEN with internal mail systems and maintenance of easy gateway access to and from other senior providers).

MANAGING THE SPECTRUM

- **International issues**

In 1992/93, we will be negotiating Canada/U.S. agreements for high definition television allotment plans, FM/NAVCOM coordination, implementation of DAB in Canada, and spectrum sharing and system operating arrangements for multi-point and air-to-ground communications.

We will also be co-hosting a two day seminar with Radio Advisory Board of Canada (Spectrum 20/20) to explore, inter alia, the WARC decisions and their implications for Canadian industry.

- Simplification of regulations

We plan to simplify regulations to permit quicker response to technological advances.

- Program reform

We intend to use the results of the client surveys to develop national service standards and we will be monitoring their implementation across the country.

SUPPORT TO INDUSTRY AND USER GROUPS

- Support of the satellite communications industry

This year, the main objective of the Space Industry Development (SID) Program, will be to support the definition phase of the next generation of communication satellites - the Ka Band advanced business and personal communications satellite.

- Applications development

This year will be the first complete year of DOC's participation in the Secretary of State's National Strategy for the Integration of Persons with Disabilities. Our portion of this strategy has been named "Communications for Persons with Disabilities".

- Social impacts

This next year, we will be focusing on the implications of moving to a personal numbering plan, the experience in other jurisdictions with telecommuting and with the protection of personal privacy, and issues raised by the manipulation of electronic documents and records.

- Standards

During 1992/93, we will be holding a series of regional seminars across Canada, in close cooperation with regional offices and the private sector. These will provide a Canada-wide view of strategic issues and concerns, as well as a strong regional perspective.

MANAGEMENT CHALLENGES

- **Human resources management**

The sector will be preparing an employment equity plan in 1992/93 which will address some of the special challenges faced by groups within our sector - for example, the shortage of women in engineering and scientific professions. Action is being taken to improve representation from the disabled community, Francophones, aboriginal and visible minorities.

- **Regional operations/decentralization**

Over this next year, they will be improvement of the systems and procedures which support regional/sector partnerships, and the continued representation of front line program delivery needs at the centre, as well as provincial priorities and positions.

- **Information technology**

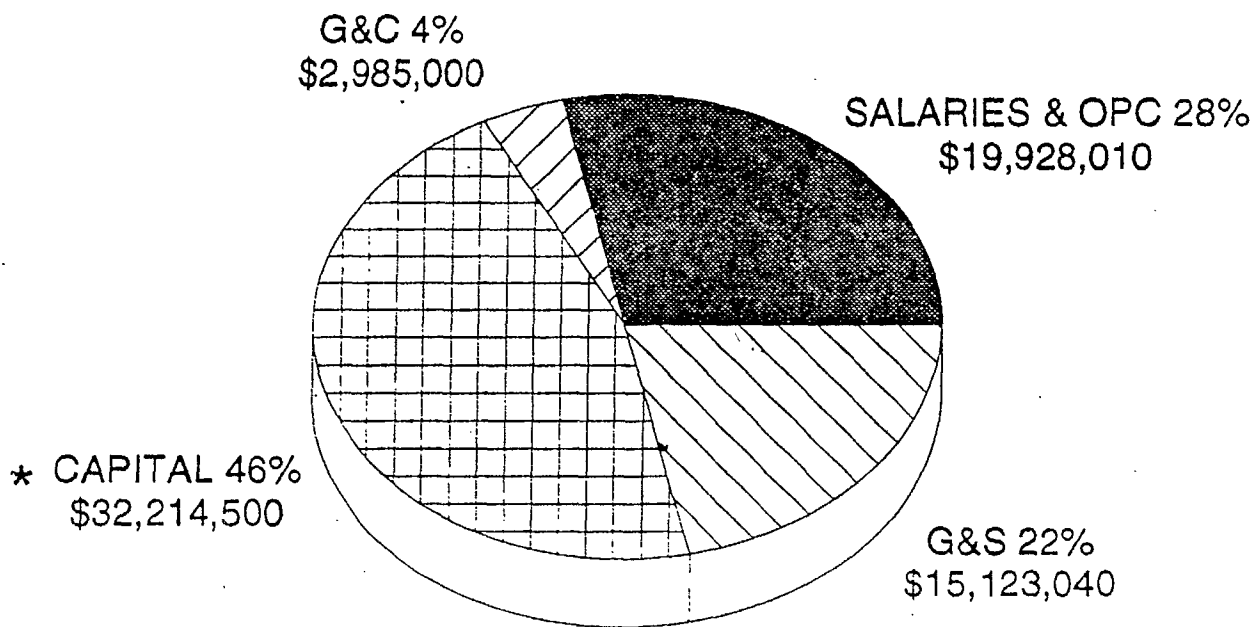
This next year you can expect the results of the review of the department's communications infrastructure, a strategic plan for investment in information technology.

- **Internal communications**

The sector will be developing a five year sector strategic plan.

Source: Extracted from the Memorandum dated May 28, 1992 - from ADMRS to DM "Management of the ADMRS Sector - 1991/92 Accomplishments and 1992/93 Priorities".

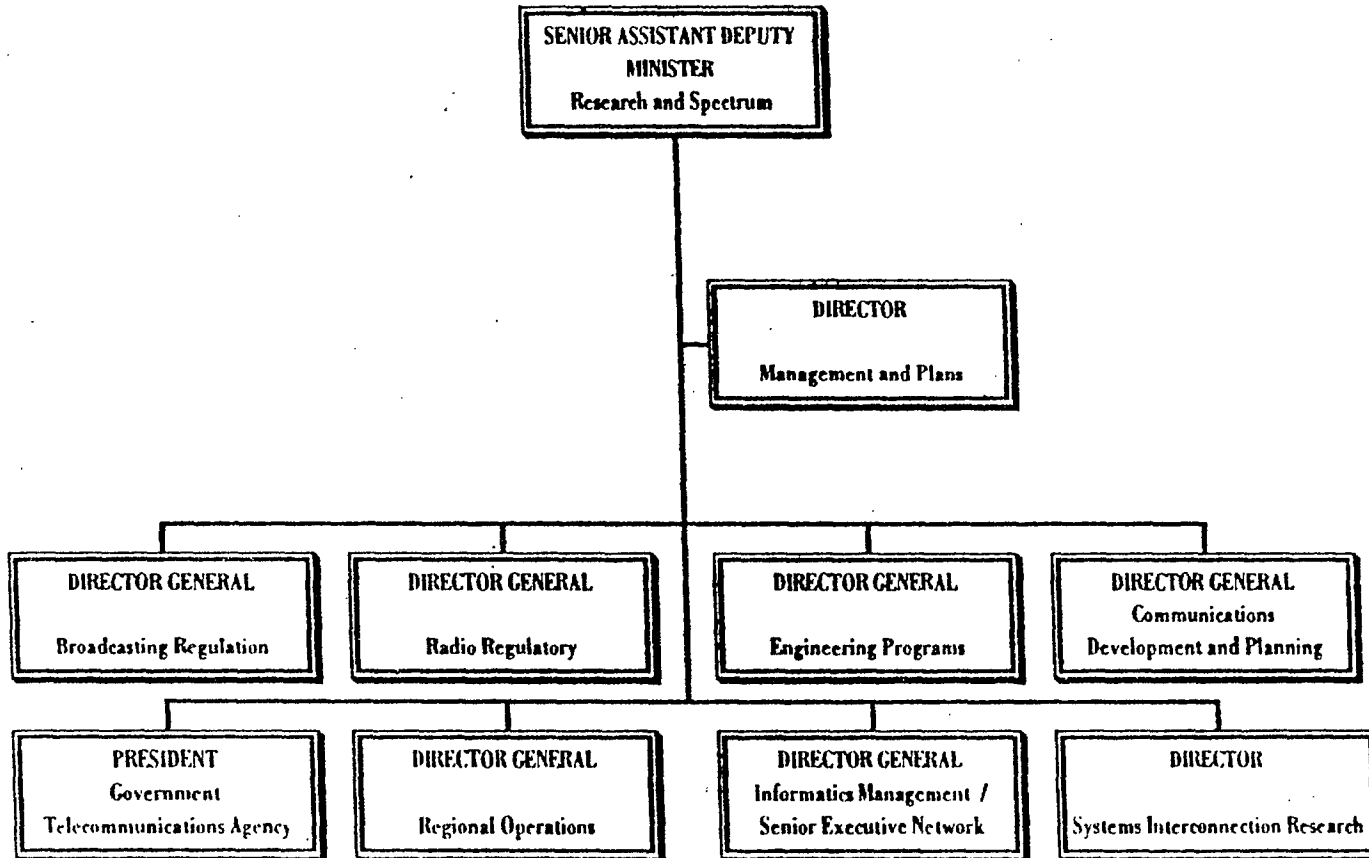
ADMRS 1992-93 RESOURCES



* Includes MSAT (\$ 24,000,000), excludes GTA.

Source: 1992-93 Reference Levels at April 1, 1992.

DEPARTMENT OF COMMUNICATIONS
SADMRS



ENGINEERING PROGRAMS (DGEP)

EXECUTIVE SUMMARY (BYOP 92/93)

Introduction

1992-93 will be a year of challenge as well as opportunity for the Branch. The challenge will be to manage the step increase of essential work in a timely fashion within budgetary and travel restrictions. The opportunity will be in the context of the Department-wide pilot SOB, especially by convincing the Treasury Board via well supported submissions to adjust the "A" base for spectrum management. In both these areas our operational plans are structured to be pro-active and responsive as the situation evolves.

In the area of human resources, continuing diligence at all levels of management and staff will be maintained on free flow of communications, staff rotation, secondments, career planning, setting of clear objectives and fair appraisals. Special emphasis will be placed on training; and we will meet the minimum 3-day objective and likely exceed it. The practice of delivery of new technology seminars in each of the five Regions to DOC technical staff by Branch senior personnel will be continued.

The process of planning the implementation of **WARC '92** and the controlled, technically sound, transition of displaced services will absorb significant effort in conjunction with DGTP. Our operational plans are coordinated. The associated activity, entrusted by WARC '92 to CCIR, to establish the technical coordination and co-existence criteria covers all major WARC decisions. The Branch will have to participate extensively in this set of activities to reap the benefits of our success at WARC. This would have normally resulted in an increase in international travel. In view of the restrictions, we will maintain last year's levels. We will continue active participation in the Strategic Planning Committee of the CCIR to ensure a smooth transition to the proposed new structure of ITU without undue disruption, and the preparation/participation in the ITU plenipotentiary.

Two cross-border spectrum sharing agreements will be concluded, and discussions on the sharing of the recently reallocated bands by WARC '92 will be initiated. It is expected that standards-related harmonization efforts with U.S. would yield some significant results this year in both the radio standards and terminal equipment standards areas.

The allocation of spectrum related research funds will be placed on a structured basis and an annex to the CRC/DOC MOU will be developed by September identifying the process, collaborative monitoring mechanisms etc. to establish a firm client/supplier relationship.

In the area of cordless telephony, technology recommendations to enable the call of tenders will be made, standards developed and promulgated and the necessary mechanisms for type-approval put in place. In the field of personal communications, studies on the coordination of LEOS (Low Earth Orbit Satellites - Iridium), and the integration of personal numbering schemes into the signalling on wireless links, and micro cellular based systems will be conducted.

The Spectrum 20/20 '92 Symposium jointly sponsored by DOC and RABC will be held in September under Branch leadership.

Technology transfer to industry of the recent advances in SMS systems and technical support to International Marketing will continue and are expected to yield significant sales to Canadian industry this year.

As part of the Departmental review of regulations initiative, regulations to include technical documents "by reference" will be prepared and the ICE (Interference Causing Equipment) regulations gazetted in cooperation with DGRR.

The Integrated Informatics Framework studies undertaken by DGEP in cooperation with DGIM, DGRO and the Regions will continue and a common client/server architecture to serve the corporate systems SMIS and support for SMS in 93/94 will be implemented in all Regions as will be the conversion of SMIS. The Integrated Spectrum Observation Centre (ISOC) pilot program will be completed. Funding for subsequent implementation will be sought from the Treasury Board. The Spectrum Control Operations and Management System (SCOMS) will have reached the 75% milestone. Funding arrangements for 93/94 will be worked out with DMG and Finance.

A disaster recovery plan for the LAN/WAN will be evaluated, procedures developed, implemented and tested to the extent practical. Studies into the possible application of Artificial Intelligence (AI) techniques in the field of spectrum management will continue with significant funding from ISTC's IA Fund.

The planning of the move of the Clyde Avenue Bureau to Haanel Drive will have been completed; and an associated ground breaking ceremony for the new building will be arranged. The revenue targets for the terminal attachment and radio certification for 92/93 are \$2.1M and we fully expect to achieve these.

The summary statements and objectives for DDGEP (R. McCaughern's operation), DASM (T. Racine's operation) and DEB (K. Holt's operation) follow.

Deputy Director General, Engineering (DDGEP)

Spectrum management issues will continue to escalate the demand for concise technical evaluation of new radio technology and services. The rapid advent of personal communications via high density mobile technology complemented by low-orbiting mobile satellite technology is only one complex spectrum engineering problem which will have to be addressed in 1992/93. The pressure to introduce new services in the UHF bands as a result of WARC-92 will require numerous sharing studies to ensure the maximum usage of this spectrum. Studies of novel approaches to the management of the spectrum may provide new fundamental directions to address congestion problems. The following highlights indicate the key activities anticipated in fiscal year 1992-93.

- **Implementation of WARC-92:** technical studies to implement allocation and regulatory amendments; technical evaluation of national allocation proposals and options for displaced services; prepare and participate in bilateral and multilateral meetings for new service sharing. This will concentrate on the 1-3 Ghz range.
- **Participation in the CCIR Study Groups:** to ensure Canadian interests are represented at key meetings; the new working party/task group structure of the CCIR will involve additional travel.
- **CCITT:** review the alignment of Canadian network protection standards with that of the international community, e.g. hearing aid compatibility.
- **IEC/CISPR:** to continue in our role of providing leadership in safeguarding Canadian interests in the preparation of international standards for immunity and interference.
- **FCC/DOC Cross Border Sharing Arrangements:** specifically the completion of the agreements for the 900 MHz band (MCS and A/G systems). Initiate discussions on 200 Mhz band and spin-offs from WARC-92.
- **Public Cordless Telephone, CTX:** ascertain spectrum and compatibility issues, develop solutions and prepare standards.
- **Personal Communications:** continue, through domestic and international fora to promote Canadian interests in the development of personal communications. Support Vision 2000 initiatives through participation in spectrum allocation and associated regulatory standardization activities.
- **Mobile Satellite:** continue technical studies for first generation mobile satellite services and studies on technical sharing criteria for future generations including LEOS (Iridium type systems) and licensing procedures.
- **Digital Cellular Radio:** development of technical standards for digital cellular and monitor activities with regard to CDMA.
- **New Technology Seminars:** delivery of 2-day seminars to Department's regional and headquarters staff covering new radio technology and services, new spectrum management techniques and international spectrum management developments. Support will be provided to the regions, as required, for unique or unusual applications.
- **Regulations:** preparation of regulations for the inclusion by reference of Radio Standards Specifications in the regulatory reforms resulting from the Radiocommunication Act and the development of means for regulating the immunity of Radio Susceptible Equipment; amendment of the Privy Council Order pertaining to fees for telecommunications apparatus certification.

- **Immunity:** criteria for the determination of fault in immunity cases will be published.
- **On-going Activities:** The routine activities will continue this year and are as follows:
 - * in the area of immunity, testing of consumer products will continue using the test facility at the Engineering Bureau and
 - * in the area of technical regulations, the ICE regulation will be gazetted and updates to the ICE standards will be gazetted after consultation with industry.
 - * technology transfer of SMS technology will concentrate upon on-going advice and assistance to Spectrocan in its contracts in Asia and South America, primarily in the form of training in spectrum management technology.
 - * in spectrum engineering support will be provided for several new policy initiatives, five RSP's, four RSS's and seven SRSP's will be revised or developed.
 - * **Terminal Attachment Program:** continuing harmonization of FCC and DOC certification standards; preparation and negotiation of standards for CTX and ISDN as part of the Department's continuing leadership role in TAPAC.
 - * continuing review of new technology and service trends (e.g. digital systems and universal mobile systems), channel loading criteria and advanced spectrum management techniques for long range planning purposes.
 - * continuing support to External Affairs for the GATT Multilateral Trade Negotiations and the North American Free Trade Agreement
 - * continued provision of frequency supportability analysis to the Canadian and allied military organizations - e.g. spread spectrum combat net radios
- **Human Resources:** management of the fiscal and personnel resources of the division to ensure the effective fulfilment of its objectives, while encouraging teamwork in the employees' provision of services and fostering group and personal fulfilment, communication, career development and achievement of individual goals.

Automated Spectrum Management Systems (DASM)

DASM embarks on a year which will have a critical impact on the future performance of the spectrum management program of the Department. Decisions concerning the client/server architecture and the selection of a replacement data base management system will have been made and the conversion of the **Spectrum Management Information System (SMIS)** to this environment and its extension into an Integrated Informatics Framework (IIF) as expressed in the concept paper will provide a major challenge to our staff. The unknowns of whether DASM's and DGIM's architecture directions will match, how much of the CP-6 off-load funding will be available for the SMIS conversion, how it will be allocated and managed render the task of planning for the new budget year extremely difficult. These difficulties are being addressed and will continue to be addressed by the IIF steering committee. This conversion will require a heavy investment in training our staff in the effective and efficient use of these new products. As much as five weeks training may be required for certain individuals. The lessons to be learned through the SMIS conversion will be critical for the successful conversion of the SMS system in the following year. Indeed, 1992-93 will see a number of contract studies completed to explore the options for data base administration, security administration, server administration and communications management in a client/server environment. Further estimates of the difficulties in converting the edit/update sub-system and the microwave sub-system will be made. This will be a time of change and a time of challenge particularly for our data processing staff.

The work on the Integrated Spectrum Observation Centre/Direction Finding (ISOC/DF) pilots will be brought to a conclusion in 92/93. The regions and districts look forward to positive results and a continuing investment program to improve our monitoring and direction finding capabilities has been included as part of the new revenue retention TB submission. The portable units being shipped from office to office have certainly proven their worth and similar results are expected from the fixed systems to be tested in early 92/93.

Three major sub-systems will move to production status in 92/93 as part of the Spectrum Control Operations and Management System (SCOMS). Initial enhancements, user support and training will occupy a large percentage of time early in the fiscal year. The additional reporting sub-system requirements will be translated to functional specifications under a contract most likely administered by the Pacific region using the same model as past SCOMS modules.

Expansion of the LAN/WAN and of the communications infrastructure are key components of the client/sever architecture which will be used to replace our current mainframe technologies. Work started on developing a disaster recovery plan for these systems will be concluded with a plan in place and tested to the extent practicable. Other investigations into these and other complementary technologies such as imaging, document processing, multi-media will be necessary to maintain our edge in applying automated systems to the improvement in efficiency and effectiveness of spectrum management operations.

In a similar vein, we will continue our investigations into graphics tools although their integration into the mainstream of the Spectrum Management System (SMS) will not occur until the programs of this system have been converted to the client/server environment. The research thrust into Case-Based Reasoning for use in an Interference Advisor expert system will continue with help from the ISTC Artificial Intelligence Fund.

Clyde Avenue Certification and Engineering Bureau (DEB)

The Clyde Avenue Certification and Engineering Bureau (DEB) provides a telecommunications equipment testing, audit, certification and certification label service to industry. The Bureau also provides engineering support to Headquarters and Regions for testing methodology development, procedures standards and specifications development and revision, as well as investigation of interference problems and non-conformance complaints. It also provides an electrical standards reference centre, an equipment repair and calibration service and spectrum surveillance measurement support for the regions. As well, it administers and supports the operation of the Department's ionosonde stations.

The following highlights indicate the activities of the Bureau for the fiscal year 1992/93.

The Bureau will provide a timely and effective certification service under the TAP and Radio Certification Programs to manufacturers, importers and distributors to departmental Standards and Procedures. Certification is based on testing by the departmental laboratory or by private engineering testing facilities. Radio equipment is required to be certified for licence and licence-exempt use.

The Bureau will also provide a testing service of radio equipment to departmental Standards & Procedures for clients desiring type approval.

A total of 783 certificates for Radio and 1500 certificates for Terminal Equipment are projected to be issued for Certification.

The projected revenue are for 1992/93 as follows:

PROJECTED REVENUE FOR FISCAL YEAR 92-93	
TAP	1800K
RADIO	300K
TOTAL	2100K

As part of the **immunity program**, the Bureau will continue to provide engineering support for the development of test methods, immunity standards and testing of radio sensitive equipment (RSE) to determine the immunity characteristics to radiated and conducted disturbances.

As resources permits, the Bureau will provide **engineering support** to Headquarters for the development of testing methods, Broadcasting projects (eg. Digital Audio Broadcasting), interference investigations and the development of radio and terminal equipment standards and specifications.

The Bureau will administer and support the operation of the three Canadian ionosonde stations under the **Ionosphere Program**.

It will provide ionospheric information, to the Department of National Defence per memorandum of understanding (MOU) between DND and DOC and other agencies (ex: World Data Center in Boulder) as per international agreements, by managing the operation of the ionospheric sounding stations at Churchill, Resolute Bay, Ashton and DEB's data reduction centre.

An evaluation of the program activities in the Ionosphere section is under way in order to rationalise the established operating practices in light of today's resource limitations. The Bureau will also investigate alternative means of data delivery to our clients such as BBS technology.

In support of Technology Transfer (DTT), the Bureau will provide, if possible, technical support to Canadian companies (eg. Spectrocan Engineering) which participate in the exportation of our technology. Seminars are provided to visitors, on a routine basis, at the request of the Director, Technology and Support.

Maintain secondary Electrical Standards in traceable calibration state and upgrade as necessary to meet, Radio Standard Specifications (RSS), testing accuracy requirements.

Calibrate and maintain the Bureau's specialized electronic test equipment, computer assisted test systems and devices.

A Health and Safety Committee meets regularly at the Clyde Avenue Certification and Engineering Bureau (DEB). The committee is composed of two employees representatives and two management representatives. The standards and procedures of security are followed-up so that the DEB meets all of the prescribed standards.

WHMIS/SIMDUT: The Bureau will continue to successfully implement and train all staff on the "Workplace Hazardous Materials Information System" in both official languages. Current information centers are maintained for all potentially hazardous products used by the Bureau.

The relocation of DEB facilities has now been rescheduled for the fall of 1993. Construction is expected to start in the spring of 1992. The Bureau will prepare the plan for the move.

Emphasis will continue to be placed on both lateral and vertical communications at all levels.

- DGEP's visits to DEB;
- DGEP and DEB open door policy for employees;
- ADMRS information session for all employees;
- distribution via LAN of internal and external management meeting minutes to Division staff;
- training staff in alternate positions to meet career aspirations and maintain levels of service during employee absences.

Management of the fiscal and personnel resources of the Bureau to ensure the effective fulfilment of its objectives, while encouraging communication, career development and achievement of individual goals.

The employees will be provided with training opportunities as identified by them in the annual training plan or, alternatively, which may arise throughout the year, and ensure that the sector objective of a minimum of 3 days training per person is observed when the employee wish to get training.

REGIONAL OPERATIONS (DGRO)

EXECUTIVE SUMMARY (BYOP 92/93)

Following a year of efforts focused on increased regionalization and decentralization of services, DGRO is looking to the coming year and its many challenges with great optimism. On the strength of the experience acquired over the past year, the branch is planning to apply itself to stabilizing the level of services it provides to the regions.

On the basis of the three values described in the documents entitled "Partnership," "Our Employees - Our Strength" and "Effective Communication" - DGRO has adopted the following strategic orientation: **"through partnership, accentuating and promoting DGRO's role as liaison between the regions and the sectors.**~ With this in mind, and taking into account the PS 2000 environment and the policies encouraging increased decentralization and regionalization, the following priorities have been identified:

1. **single point of service and cohabitation;**
2. **intellectual property;**
3. **service standards;**
4. **federal-provincial relations;**
5. **Single Operating Budget (SOB);**
6. **Integrated Information Framework (IIF);**
7. **training**
8. **regionalization;**
9. **equitable representation; and**
10. **management process.**

The following is a look at the main activities for the 1992-1993 fiscal year.

With respect to regional programs under the direction of Manon Pelletier, the Directorate, Regional Programs' (DGRP) main objective over the past year was to establish systems and procedures to support regionalization of programs, particularly the Cultural Initiatives Program (CIP), the Museum Assistance Program (MAP) and the Public Affairs Program. Now that this has been done, DRGP will, in 1992-1993, be aiming not only to improve the mechanisms established, but also, and above all, to establish partnerships with both the regions and the sectors to maximize the participation of DRGP and the regions in development of the Department's programs and policies. In addition, with respect to federal-provincial relations, it will focus its efforts, in co-operation with the regions, on presenting an overall view of the positions of the various provinces respecting the priorities of the Department or the Government of Canada.

Specifically, DGRP will:

- continue to co-ordinate regionalization of the Department's programs and, in this context, establish service standards for these programs and set up a management information system accessible to all the regions and to headquarters;
- continue to represent the interests of the branch and the regions at headquarters and to support the regions, mainly with respect to the negotiation of co-operation agreements in the area of culture with Newfoundland and Nova Scotia and in the area of communications with British Columbia;
- organize information sessions with the sectors to increase knowledge of the Department's priority activities and make the sectors more aware of the region's concerns and vice versa;
- plan and organize the federal-provincial meeting of deputy ministers responsible for culture scheduled for June 9 and that of the ministers, which may take place in November. It is not very likely that such a meeting with the ministers responsible for communications will take place, as long as the telecommunications bill has not been adopted. In addition, we will continue to co-ordinate the Department's participation in the various federal-provincial consultative committees on communications and culture, in order to bring our policies into harmony and examine issues of common interest; and
- continue to manage the regional secretariat, in order to ensure that the quality of and follow-up on documentation forwarded to DRGP is controlled. In addition, we will update the index of federal-provincial programs, as well as that of the Department's programs. With respect to the latter, we will explore the possibility of using a computerized information system such as the Network "CHAT".

In order that it might better achieve its objectives, DRGP will be reorganized into four functional units - namely, Communications, Cultural Affairs, Public Affairs and the Regional Secretariat. In addition, in order that DRGP might establish a partnership with the regions, we have assigned one person to the Central Region and to the Quebec Sector (ADMQ) as a pilot project. This project will be evaluated after six months.

The mandate of the Regional Policies and Management Programs division (DRM), which is headed by Dave Thomas, focuses on human resources, the DRM has a mandate which focuses on - human resources management and development, and resource planning and accountability. In 1992/93 (DRM) will continue to coordinate and develop input required for Central Agency and departmental human resource programs, and planning and accountability exercises.

Effective human resource management and development is a key element in the successful realization of departmental priorities by the regional community. To this end, the division will be supporting the regional community with the development of individual Action Plans to realize the Government's new employment equity targets. These action plans will clearly demonstrate what initiatives will be taken by the regional community in order to increase the awareness of its staff and of surrounding communities concerning the objectives of the

employment equity program. These being the recruitment, promotion and retention of women, the disabled, aboriginals and visible minorities.

The division will ensure that the Deputy Ministers commitment to a continuous learning culture is uniformly applied throughout the regional community. Implicit in ensuring this endeavour is the division's responsibility to ensure that the necessary resources are obtained and made available to the regions. DRM will review regional training expenditures by employee group to determine if a three day training entitlement is being achieved. In addition, it will monitor the regional employee performance review and appraisal report exercise to ensure that appraisals are completed in a timely and consistent fashion throughout the regional community.

The division will continue to maintain the quality of the Radio Inspector Recruit Training Program. This program is delivered in a decentralized manner within the regional community according to established standards. A major initiative will be to complete, early in the fiscal year, the revision of the current guidelines applicable to the program. Also, DRM will continue to play an active role in ensuring that the technological base and expertise of regional field staff are maintained. A DRM initiative to support this will be the development and regional delivery of New Technology Seminars targeted at regional field staff.

Planning and accountability is another key element in realizing departmental priorities. On the planning side, DRM will prepare the Regional Operations Strategic Plan. The plan will describe the environmental factors that will have an impact upon the regional community. And it will include strategies to be employed to ensure satisfactory program delivery and development. The division will also prepare the Regional Operations input to the 1993-98 departmental MYOP and will coordinate the preparation of Treasury Board submissions seeking additional resources or authority for the regional community in order to maintain a central point of contact with ADMCM and to ensure historical consistency with previous submissions.

On the accountability side, DRM will prepare the Spectrum Management and Regional Operations input to the Department's Annual Management Report (AMR). In addition, it will participate in the revision of the Department's Operational Planning Framework (OPF) in order to ensure that the resulting activity structure is effective and the associated performance requirements are meaningful to the spectrum and regional operations programs.

The division will prepare the Regional Operations and spectrum branches input to the departmental expenditure plan - Part III of the Main Estimates 1993-98. DRMs involvement will ensure an historical consistency in the accounting of past, present and future years resource expenditures vs results achieved for the Spectrum Management and Regional Operations planning element.

It will also prepare the first edition of a Regional Operations Management Manual in order to consolidate government priorities, program accountability, regional policy and practices, and service standards into one reference document.

In addition to the above, DRM will review and participate in the revision of existing spectrum management service standards and the development of new standards, and will coordinate the review of existing office hours in the regional community in order to determine the requirement

and impact of extending hours of business to include evenings and Saturday.

The Planning and Informatics Directorate (DPI), which is managed by Simon Landry, will be involved in the following major projects, among others:

Single Operating Budget (SOB) - within the framework of decentralization of budgetary responsibilities connected with the Single Operating Budget (SOB), DGRO will ensure effective transposition of operations by holding the training and information sessions needed by the managers and secretaries responsible for budgetary control in the branch and each of the divisions, and will ensure follow-up thereon.

Integrated Information Framework (IIF) - DGRO will participate intensively in and manage the activities connected with this project.

CIP and MAP system - an information system aimed at managing the CIP and MAP departmental and regional programs will be set up, one which takes into account the Integrated Information Framework to be established.

CP-6 offload system project - DGRO will ensure implementation of the activities flowing from the plan to drop the CP-6.

Communications Infrastructure - project piloted by DGIM. DGRO will ensure the active participation of the regions, transmit relevant information and monitor the necessary follow-up. In addition, it will conduct an exhaustive analysis of the needs connected with the communications infrastructure to be established, and a five-year plan for the purchase of computer and electronic equipment will be prepared.

OTHER MATTERS

Finance, administration and informatics

DPI will provide liaison between the regions and headquarters regarding all other matters relating to finance, administration and informatics. In this connection, it will act as sector coordinator at the Department's bimonthly meetings, participate in the annual meeting that is planned and provide follow-up with reference to the regions.

In addition to the periodic teleconferences involving the members of the Regional Finance and Administration Committee (RFAC), the Steering Committee for Management of Regional Information (SCMRI) and the CS Subcommittee, an annual meeting in Ottawa of the members of all these committees is planned. In addition, DGRO will participate and ensure the participation of the regions in the annual departmental meeting of persons responsible for finance and administration in the regions and at headquarters.

It should be noted that an evaluation of use of the "TEMPEST" equipment in DGRO and the regions will be undertaken, and that the necessary action will be taken. The impact that use

of the "FOREMOST" system as a correspondence records management system in DGRP and the regions will be analysed and recommendations for action will be made.

Last, but not least, DGRO will be involved in the following projects:

Single point of service and cohabitation - intensive participation in development of an action plan by the departmental and interdepartmental working groups will be ensured through determination of a strategy for action that will include selection of activities and sites, as well as a schedule for activities;

Intellectual property - DGRO will ensure active participation by the regions in the activities of the departmental working group and will ensure effective co-ordination of that participation; and

Service standards - DGRO will ensure active participation of the regions in the activities of the working group, which will be developing an action plan in the summer and fall of 1992.

MANAGEMENT AND PLANS (DMG)

EXECUTIVE SUMMARY (BYOP 92/93)

The Management and Plans Branch (DMG) is the Sector Coordination unit for the Research and Spectrum Sector. It is responsible for planning and coordinating financial, administrative and human resources activities for the Sector by providing advice and services to the Assistant Deputy Minister and to Directors General and their staff.

Fiscal year 1992-93 brings various challenges to DMG, given a new operating environment within the Department characterized by a Single Operating Budget, Shared Management Agenda, PS 2000 as well as various antibureaucracy initiatives. DMG staff are enthusiastic about these changes and recognize that their efforts in support of such initiatives affect the sector as a whole.

In addition to the ongoing coordination of various regular exercises (such as the Multi-Year Operational Plan, Budget-Year Operational Plan, Main Estimates, appraisals, awards, etc.) some of DMG's noteworthy projects/activities this fiscal year are:

Service to clients

DMG's mission statement is "Working together to serve and help to promote the ADMRS Sector and the Department as a whole". DMG will continue to hold a one-day meeting twice in the year of all DMG staff to review progress on various management initiatives and to ensure that DMG continues to work effectively as a team to meet the Sector's expectations. All DMG staff will attend a two-day course (to be developed in the Fall) aimed at providing insights on effectively serving clients and diffusing difficult situations. DMG will be examining means of surveying Sector clients to gauge the level of satisfaction with services and address discrepancies. DMG staff are very interested in the Quality Service initiative and will be working closely with DGCP and ADMCM on the issue of developing internal service standards.

Single Operating Budget

DMG will continue to implement the Single Operating Budget pilot project within ADMRS by participating in bi-monthly departmental meetings, providing input/critiquing the development of systems and training programs, and by effectively liaising with Sector Branch Coordinators and ensuring that their concerns are addressed by ADMCM staff. DMG will provide advice to the ADM concerning the implementation of the budget measures announced in February and the reallocation of funds during the course of the year, in particular at the 7th month review.

Antibureaucracy initiatives

DMG will continue to implement recommendations made by the various antibureaucracy committees, many of which resulted from processes already in place within DMG or from suggestions made by DMG staff who participated in these committees. Changes are expected in the areas of training, personnel operations, travel, contracting, security, and correspondence sign-offs.

Improving Management Practices

Once results of the all employee survey have been communicated, DMG will examine initiatives that could be taken to further improve management practices and help develop useful management indicators for the Sector. DMG will continue to coordinate monthly luncheons of the ADM with Sector staff which enable the ADM to hear first hand about activities in branches. In addition, DMG will handle the logistics arrangements for the two-day Fall Sector Conference which provides an important forum for information sharing.

CRC

Although the CRC has been created as an Institute since April 1st, DMG will continue to provide various services to ensure a smooth transition until arrangements are finalized within the Sector Coordination unit of CRC. This includes staffing and classification services as well as coordination of ATIP requests and some other reports. Given the transfer of resources from DMG's Planning and Liaison unit to CRC, responsibility for the preparation of the Main Estimates Science Addendum for 1993-94 will become CRC's with the assistance of DMG.

International Travel and Conferences

Given the ongoing restrictions on travel and conference attendance, DMG will continue to monitor and coordinate international travel and conference attendance within the Sector, submitting monthly reports to the ADM for approval.

Training Information System

DMG will continue to work with the Human Resources Branch to implement the automated Training Information System database which has been developed to provide data on training and employee performance evaluations. In keeping with the Department's implementation of a three-day training entitlement per employee, DMG will liaise with ADMRS branches and the Human Resources Branch with regards to data input, quality control and report requirements, to ensure that data on the coincidence between the training entitlement and actual training is accurate and available.

Office Automation

DMG will continue to provide various sector-wide office automation services such as the installation of the Senior Executive Network and the implementation of the EIS in the Sector. Significant activities in 1992-93 will be in participating in the communications infrastructure and naming protocol projects as well as those dealing with the systems related to the Single Operating Budget. A survey will be undertaken early in FY 1992-93 to determine the current degree of connection to E-Mail systems within the Sector. Efforts will also be made to pursue increased use of automation to streamline and speed up personnel transactions. DMG will examine ways of further automating the travel approval process in order to reduce the flow of paperwork to the ADM's office.

Employment Equity

DMG will prepare a Sector Employment Equity workplan which will encompass individual Branch inputs, and will develop the appropriate means to effectively implement initiatives aimed at providing target group employees with their fair share of opportunities for recruitment and development within the Sector. One particular area that we will focus on is the ENG category.

Staffing

Staffing officers will continue to work diligently to handle the numerous staffing actions received monthly. DGs will be encouraged to review monthly reports and communicate their priorities to the unit manager. Once the personnel antibureaucracy report and DGHR surveys are released, we will be involved in "brainstorming" activities to find means to address problem areas in staffing.

Classification

In addition to providing ongoing classification services for Sector employees, we will work with DPO to effectively implement the new classification system/procedures within the Sector and encourage managers to be trained. We will also create an underfill program for ENG positions to more effectively serve Sector Branches. Results from the DGHR survey pertaining to client satisfaction with classification matters will be examined and appropriate changes implemented.

COMMUNICATIONS DEVELOPMENT AND PLANNING (DGCP)

EXECUTIVE SUMMARY (BYOP 92/93)

Introduction

The establishment of the CRC as a research institute and the rationalization of the department's international activities cut the Communications Development and Planning Branch to half its size (now 35 people) and significantly altered the span of its responsibilities. Budget and other cuts have taken a heavy toll on branch resources. As a result, the branch has been reorganized into two divisions with more sharply defined accountabilities and fewer priorities. On the other hand, a new management regime is proposed for the branch which accords a high priority to a flattened hierarchical structure, generic job descriptions, open communications across the branch, and the creation of ad hoc project teams which may include staff from both divisions.

The key features of the new management regime are described below, as well as our major substantive deliverables for the 1992/93 fiscal year.

Management Objectives

Wide ranging staff consultations over the past year have led to a consensus on the nature of the management regime we wish to see within the branch. Essentially this entails greater focus by managers on people management and leadership and greater sharing of knowledge and responsibilities with staff, thereby enriching our possibilities of working effectively together as a team.

All members of DGCP are committed to work closely as a team to put in place the structures and processes which will enhance the effectiveness of the branch in serving our clients, garner the recognition and respect of others, and foster the personal development and job satisfaction of each and every individual.

A number of steps were defined as necessary for the achievement of this objective. These include the definition of the branch mission and clarification of the branch clients, responsibilities and deliverables. This exercise will involve all staff, to ensure that all clearly understand and share the same goals, values and priorities. This framework will also be used for approving or rejecting new work requests.

Continuous improvement in internal communications was also identified as a management priority. All staff meetings will be held, and used as a primary means of dialogue, problem solving and participative decision-making. Information collected or created by branch project teams will be widely shared with other interested parties through seminars, electronic mail and bulletin boards, improved filing, and the reorganization of the branch library. Periodic meetings with branch staff will be held to identify needs for and resolve problems with

electronic mail, computer and other hardware and software.

Managers will be encouraged and held accountable for making optimum use of branch staff resources and their particular skills and capabilities for growth; delegating authority, resources and accountability to staff project teams; incorporating staff involvement in decision-making; and responding to management problems identified by staff.

The new regime also demands close matching of staff capabilities to the workload, the establishment of clear priorities when the workload becomes too great and the possible elimination of low priority or unnecessary work. This is particularly critical for support staff. The advice of support staff and officers will be sought to identify opportunities for increased efficiency.

The effectiveness of the project team approach will also require greater collaboration and teamwork between the two divisions and adequate recognition of the contributions of individuals to the success of activities in which they participate. Morale would also be improved if the visibility of the branch in sector and departmental activities were enhanced.

Branch managers have also committed themselves to reduce classification and staffing delays, and to improve branch-wide career planning and development opportunities. The Director General has agreed to allow a minimum of five days of training or development per employee, to convene quarterly meetings of all branch staff and to promote cohesiveness. Weekly meetings of the directors and project managers will be held to review project progress, resolve issues and make joint decisions on priorities.

In return for these management commitments, staff have agreed to deliver on branch priorities, work well in teams and with support staff, share information with their colleagues, strive for excellence in their work, accept responsibility for the authority delegated to them, articulate their training needs and do their part in seeking solutions, and contribute to resolving the challenges which face their division, branch and sector.

Program and Policy Priorities

The most important outputs which we intend to deliver this year include:

Research Policy

- continued support of Vision 2000 to ensure the successful launch of new project consortia
- finalization of the MOU with the CRC institute, including the completion of the accountability framework and the definition of longer term DOC research priorities
- review of the existing MOU with CWARC, including the identification of client needs, development of DOC research priorities and establishment of a process to manage the DOC-CWARC relationship

- articulation of an R&D policy for telecommunications carriers based on a structured consultation program
- articulation of a department policy on intellectual property
- representing Canadian and departmental interests in national and OECD S&T policy committees, including a Special Session on Information Technology to be held in Paris, France.

Industry support

- playing a brokerage role to facilitate R&D alliances among Canadian firms, research organizations and, where appropriate, government
- encouraging the introduction of new electronic information services (ongoing support to datacasting commercialization projects)
- planning and successful implementation of space industry development projects and of the DOC input to the Long Term Space Plan of the CSA
- implementing a national management framework and selection procedures for regional communications development projects.

Environmental scanning

- initiation of research projects designed to identify the social, organizational and environmental impacts of the introduction of new communications and information technologies
- determination of a five year plan for the scanning of technology, market and industry trends that would address branch-wide needs
- planning and successful conduct of an environmental scan which identifies research directions for the department
- compilation and dissemination of statistics on the communications industry
- reorganization of the branch library so that it meets the needs of branch and other users
- identification of subscriptions required to meet branch needs, and a cost-effective strategy for their purchase.

Strategic and communications planning

- preparation and dissemination of an approved five year sector strategic plan
- preparation of a sector communications plan to meet identified needs and its successful implementation
- survey of readers and potential readers of the sector newsletter to identify any improvements required.

Meeting user needs

- pilot testing a sectoral approach to collaboration between service suppliers and user groups in order to speed the diffusion of advanced technologies
- successful implementation of projects under the **Disabled Strategy** to develop communications services for the disabled
- ongoing support to the development of a standardized native syllabics code.

Strategic Planning Division

The Strategic Planning Division (DPP) contributes to the effective management of the Research and Spectrum Sector through the development of strategic plans and the provision of competent advice to senior managers with respect to immediate and emerging strategic issues.

The main areas of activity and key results for 1991-92 include:

Environmental scanning and needs analysis

DPP identifies the kinds of telecommunications and informatics applications needed for continued Canadian industrial and economic growth and societal development, assesses technological trends, market developments and the health of the Canadian communications industry in global markets, and prepares and disseminates statistics on the Canadian situation and how it compares to our international counterparts. These activities serve both strategic planning and communications needs of the sector.

Major 1992/93 results will include:

- prepare and disseminate a statistical handbook on the communications and information industry (in collaboration with DTP who have responsibility for R&D statistics)
- prepare a discussion paper on trends in the development of telecom networks and network-based services

- plan the use of an annual DGCP fund for environmental scanning in order to meet branch needs
- plan and implement (in conjunction with DTP) environmental scanning studies that will enable the department to articulate research directions for the CRC Institute.

Social impacts analysis

DPP identifies and assesses the political, economic and social implications of the introduction of new communications and information technologies, international action to address public policy issues raised by their introduction, and proposes actions that can be taken by the federal government to better balance the social and economic costs and benefits of the transition to the Information Society.

Major 1992/93 results will include :

- collaboration with the Privacy Commissioner of Canada to produce a statement of privacy principles
- preparation of a background survey paper on digital imaging techniques and authenticity
- collaboration with CWARC on telework, via the preparation of a survey report on the experience with well established telecommuting projects in other jurisdictions
- preparation of a literature review on the effects of information technologies on the structure and nature of work.

Sector strategic planning

DPP identifies strategic issues facing the sector, proposes strategies for tackling these issues, develops and manages the implementation of a sector strategic plan, and organizes strategic planning sessions for the Research and Spectrum sector.

Major 1992/93 results will include:

- development of a five year strategic plan for the ADMRS sector
- in collaboration with DMG, plan and organize the annual sector conference
- coordinate sector input into speeches and presentations, departmental reports and central agency submissions.

Sector communications

DPP coordinates sector input into speeches and presentations by the Minister, Deputy Minister and Assistant Deputy Minister, and sector involvement in the preparation of Cabinet Memoranda and Treasury Board submissions, and plans and coordinates sector information initiatives to ensure that DOC clients and the general public are aware of sector facilities, programs and projects. DPP also develops appropriate office automation and information resource management systems for the branch and prepares and circulates internal communications materials of interest to the sector.

Major 1992/93 results will include:

- design, editing and production of a spectrum management brochure
- preparation and implementation of the 1992/93 sector communications plan
- implementation and maintenance of office automation systems including the local area network (LAN) and continued involvement in an information resource management inventory and planning process
- preparation and distribution of the sector newsletter.

Communications services for special needs groups

The overall objective of this activity is to plan and implement strategically important applications which meet the communications needs of the disadvantaged -- including the disabled, elderly, natives, and geographically isolated.

Informatics applications which foster the introduction of new services, demonstrate and test the feasibility of new concepts, and/or give prominence to Canadian expertise will also be implemented. Over the past few years, the focus has been and continues to be on the development of applications which will foster the growth of the electronic information services industry in Canada.

Major 1992/93 results will include:

- support to the development of a standardized native syllabics code and the identification of applications
- support to the development of the Descriptive Video System which will allow visually impaired people to follow TV shows
- support to the Newspapers for the Blind project which will enable print handicapped people to have daily access to the Globe and Mail newspaper

- support to the development of a remote gateway for a "smart" house for a severely disabled person (the Boden House project)
- identification and implementation of projects approved by the **Advisory Committee on Communications for Persons with Disabilities** (under the National Strategy on the Integration of Persons with Disabilities)
- management of projects pertaining to electronic information services, including completion of datacasting projects now underway and continuing collaboration with the Interdepartmental Working Group on Database Industry Support
- ongoing involvement in telecommuting activities in coordination with other DOC activities in this area but with a special focus on telecommuting for people with disabilities.

Research and Technology Policy Division

The prime focus of the newly re-organized Research and Technology Policy Division (DTP) will be the formulation of a research and development strategy aimed at supporting the department's overall mandate. This strategy will have as its objectives:

- the recognition of the vital role played by communications in Canada's prosperity and national identity (in collaboration with other DOC groups)
- the encouragement of diffusion of new information and communications services for the social, economic and cultural benefit of all Canadians
- the development of a framework in support of DOC's MOU with the CRC and with the CWARC
- a greater commitment to R&D by licensed carriers
- the establishment of an agenda for action regarding our continued cooperation with Vision 2000 and regarding our efforts to promote the formation of strategic alliances
- the development of intellectual property policy to effectively manage, protect and exploit the research developed at DOC for the maximum benefit of Canada
- the effective promotion of the importance of the communications sector, and coordination of policies and programs within the public and private sector (in collaboration with other DOC groups)
- the positioning of DOC in a lead role in terms of intelligence gathering and brokering abilities (in collaboration with other DOC players).

The strategy will be based on:

- extensive consultations with our partners in both the private and public sectors
- a comprehensive review of the strategic initiatives taking place worldwide
- the undertaking of selected "environmental scanning" research projects
- the development of generally agreed upon sectoral and market definitions, statistics and trends.

The R&D strategy will endeavour to position Canada for the next decade and gain the approval and acceptance of those playing a vital role in achieving the goals that will be established as part of the strategy. It should also be noted that the strategy will be market-oriented --- that is, it will be driven by the needs of commercial and individual users, in Canada, for new and competitive products and services.

In support of the above major initiative, DTP will also be involved in various on-going activities. These include:

- support for DOC's involvement in the NABST and Prosperity initiatives and participation in DOC's S&T Management Committee's sub-committees
- representing DOC's views in several ISTC committees, including the Interdepartmental Program Review Committee (for the MSDP and STP programs) and in the IT Technology "Roundtable" discussions (in conjunction with DPP)
- administration of DOC's space communications programs and projects, including the Space Industry Development Program (SID) which has as its major objective in 1992-93 support to the definition and design of the next generation of communications satellite (Advanced Satcom)
- economic development and policy support initiatives (in collaboration with the Canadian Space Agency, Telesat and other space industry representatives), including support to the development of Long Term Space Plan.

Throughout these vital thrusts, management objectives regarding internal communications, team building, empowerment, and the development of people are paramount in any measure of our overall success.

INFORMATICS MANAGEMENT / SENIOR EXECUTIVE NETWORK (DGIM/SEN)

EXECUTIVE SUMMARY (BYOP 92/93)

DGIM

DGIM provides essential information processing services to the Department and maintains a lead role in seven of the fourteen strategic projects highlighted in the 1990 Strategic Information Management Plan (SIMP).

In 1992 - 93 DGIM will continue to maintain essential information processing services and to support core corporate systems. Through strategic partnerships with other Branches, DGIM will take a lead role in several major projects (single operating budget, communications infrastructure and information retrieval). Concrete project milestones for some of these initiatives have not been established as projects will be undertaken only as funds become available. No flexibility remains for new initiatives. A revised Strategic Informatics Management Plan will remain on hold until the next fiscal year, pending availability of funding.

Essential Services

Essential Services are composed of information processing (ARCS, CCS, CP-6), communications network management and production application support (Remote Job Entry). Key indicators in this area are systems availability and network availability. For 1992 - 93, system availability will be maintained at 98% (with the exception of CP-6 at 95%) and the network availability will be measured at 99%.

DGIM Strategies / Projects

The DGIM vision is that every employee in DOC should be able to access the information he or she requires no matter where it is located in the department. The elements of this strategy to achieve this vision and the projects to be undertaken this year are outlined below.

1. *Provision of cost-effective communications services to facilitate the sharing of information with others inside and outside the department.*

The immediate task will be the completion of the communications infrastructure review and the planning of the overall communications architecture. The target for implementation of an integrated E-Mail environment (depending on availability of resources) is March 31, 1993.

2. *To provide a range of management / administrative services which will enable employees to exercise their responsibilities under the single operating budget and PS2000 in the context of this initiative, DGIM will concentrate on two projects:*

- Financial Management Information System

The primary thrusts in this area will be the completion and on-going support of Single Operating Budget applications, the development and full roll-out of the Financial Management Function to RCM's, and the implementation and enhancement of a bilingual Salary Planning and Forecasting System (SPM) to the DG level.

- Human Resources Information System

The main initiatives in this area will be the development and implementation of enhancements to the Pay & Benefits and Classification/Staffing systems. Should funding become available, development will begin on a Comprehensive Position System and on the full integration of the Pay & Benefit System with the Classification/Staffing System.

3. *An information retrieval system which will facilitate the effective and efficient conduct of departmental activities.*

DGIM will take a lead role in two initiatives: The first will be a pilot to address special needs related to briefing and policy notes in DGCP; the second will be an information inventory exercise (in partnership with DGAT and DGCP) in response to MGIH requirements and to produce a report on the management of information within DGCP. Some of the tools being incorporated are e-forms, e-records management and information retrieval tools for searching unstructured data.

4. *The migration of CP-6 Applications.*

Treasury Board has approved \$4.2 million for this project in 1992 - 93. An implementation plan for off-loading CP-6 applications will be developed in consultation with clients. Solutions for specific research applications will be identified and the necessary procurements carried out. The migration of CP-6 applications is expected to begin in the third quarter. CP-6 is targeted for shutdown March 31, 1993.

5. *Enhanced service to employees using Informatics tools.*

In 1992 - 93 emphasis will be placed on developing a higher profile for the client services in the Branch. DGIM will also manage ADMRS "CS" resources on behalf of DMG. In conjunction with clients, DGIM will work towards more cost effective approaches to the maintenance of Informatics working tools.

6. *A Departmental approach to the implementation of Treasury Board and International Standards.*

Participation in the CS sub-committee of RIMSC and other departmental committees, to provide advice and technical expertise in the development of network and working tool standards, will be an ongoing task for DGIM. The goal is to develop consensus which will facilitate the exchange of information throughout the department.

Senior Executive Network

The Senior Executive Network provides interdepartmental communications to facilitate information exchange at senior levels across the government. SEN is a sun-setted project with its current mandate carrying through March 31, 1993.

Primary objectives of the Network for this year are the completion of Phase II (extension of services to the DG level), acceleration of the client-base aspects of Phase III (extension to Directors), integration of SEN with internal E-Mail systems, enhancement of the technology for access to the information services, the planning for Phase III content, the introduction of new services and Treasury Board approval of resources beyond March 31, 1993.

Management Objectives for 1992 - 93

- Transition to project team approach to enhance the Branch's ability to plan and implement major applications
- enhancement of DGIM client services function
- reclassification of SEN Director to reflect new responsibilities
- address staff concerns related to the roles of other centres of information activity in the Department and to the creation of the Research Institute.

Challenge for Change

- All-staff Branch meetings will be convened to share information and concerns and to resolve internal Branch issues
- Weekly staff meetings with direct reports to improve internal communications will be carried out
- The CS-04 and AS-05 staff will continue to be directly involved in the definition of Branch processes.

RADIO REGULATORY (DGRR)
EXECUTIVE SUMMARY (BYOP 92/93)

Work Plan Highlights

The Branch is entering the third year of a program to reform the Canadian radio regulations; it is planned to complete a first draft of the new Radio Regulations this year. The ongoing work of revising the existing regulations will also continue as required. In this regard, the Branch will continue to coordinate the department's input to the 1992 Federal Regulatory Plan (FRP) and complete the initiatives identified for action by DGRR.

Emergency Planning efforts will concentrate on completing the Earthquake Plan with Pacific and Central Regions and ensuring that the regions and headquarters emergency plans are well coordinated and realistic. An exercise of the plans is anticipated.

Regulatory Policy initiatives for this fiscal year include the completion of the study of the possibility of a Special Operating Agency for spectrum management, studying international developments in spectrum management and reviewing their implications in the Canadian context, contributing to the paper on Spectrum Management Issues that were identified by Branches in 1991-92, completing the actions agreed to under the Program Evaluation of the Spectrum Management Program and completing a report on competitive licensing mechanisms.

In the area of space services, major initiatives include the development of up-to-date, simplified documents to cover the submission of licence applications for satellite networks, their coordination and notification; simplification of the licensing process for mobile earth stations and VSAT terminals; expansion of automation in processing domestic and/or international earth station and satellite network coordination requests (75,000 frequency assignments were coordinated in F.Y. 91/92); and continued efforts to successfully complete our international coordination consultations of our domestic satellite networks. Specifically, our L-band coordination consultations have been very laborious primarily because our spectrum requirements are in contention with those of INMARSAT's and Russia's and their attempts to expand and maintain networks with world-wide coverage in the same band, the 1991 Quadrilateral meeting in Ottawa facilitated an exchange of views and the advancement of a structured approach to spectrum sharing problem as proposed by Canada; our C-band and Ku-band coordination consultations although they involve primarily regional interests, require a delicate and balanced approach to consultations in order to protect the Canada/USA/Mexico Trilateral Arrangement and at the same time find satisfactory solutions to new demands on the orbit/spectrum resource as they develop.

Finally, it will be essential to review the WARC-92 decisions and assess their implications on our operational practices with a view to develop implementation schemes, as required, to ensure orderly transition and continuity of interference-free operations for all spectrum users in Canada.

With the assistance of the regions, the radio licence fee structure will continue to be reviewed with the aim of simplifying it and our licensing process. Fleet licensing, dynamic band licensing and one time licensing are the type of initiatives that we will be working on in the new fiscal year. Existing licensing processes in the space and fixed services which are complex and time consuming for our clients and for the Department will also be simplified. The branch will also be investigating other alternatives for processing licence fee payments, such as electronic funds transfer and/or payment of licence fees at chartered banks.

With the advent of the Contraventions Act and the Ministerial Delegation initiative, operational procedures that clearly outline the scope within which our inspectors will be authorized to operate in order to fulfil their spectrum management responsibilities will be put in place. As well, Crown liability potential with regard to our licensing, enforcement and inspection activities will be examined and the appropriate operational policy and procedures documents will be published.

The Environmental Assessment and Review Process (EARP) for spectrum management activities will continue to be implemented in accordance with the enabling legislation. Internal and public documents, containing policy and procedural information will be produced in order that the Canadian public, along with our departmental personnel fully understand the extent and manner of the environmental processes.

The implementation of a fully electronic authoring, retrieval and document distribution system for spectrum management publications will be carried out in order that our clients will have immediate access to spectrum management publications. A related initiative deals with a user pay service that will be instituted for certain treaty publications that have hitherto not been available to the public.

In recognition of the fact that our people are the strength of the branch, efforts will continue to develop challenges for our staff and to recognize their accomplishments.

SYSTEMS INTERCONNECTION RESEARCH (DSI)

EXECUTIVE SUMMARY (BYOP 92/93)

Overview

During FY 92/93, DSI's program of work will fall into 4 main areas: the operation of the Standards Program Office (SPO), advanced research in Open Systems Interconnection and Open Systems Applications, participation in the international standardization process and research under the DND Technology Base Program. The SPO will continue to provide a focal point, information source and expertise in standards for the Department. In June 1992, in collaboration with the provincial governments and private sector the SPO will conduct a series of Regional Seminars on IT&T Standards. This will result in formulation of an action plan for Canada on strategic issues in IT&T standards.

DSI participation in the standardization process will be supported by the in-house laboratory facilities and contracted work.

Technical work will include progression of multimedia, hypermedia, ISDN and EDI standards for Canadian applications, development of new conformance test methods and tools for use by Canadian test laboratories and implementation and testing of OSI security features to meet DND requirements. DSI will assist the Canadian Interest Group on Open Systems and the Standards Council of Canada to develop laboratory accreditation criteria and to negotiate mutual recognition of test results with the US and Europe.

Program Objectives

During FY 92/93, the DSI program of work will be focused on 4 main program objectives. These are as follows:

- (1) **The Standards Program Office (SPO)** to carry out analysis, coordination and recommendations for DOC standards activities, information dissemination on standards and support on government, national and international standards.
- (2) **Open Systems Interconnection** to carry out standardization and research in protocols for communications, conformance testing methodology and tools, formal description techniques and tools, and protocol implementations.
- (3) **Open Systems Applications** to carry out work in Office Document Architecture and Interchange, Electronic (Trade) Data Interchange, ISDN multimedia & hypermedia standards development.

- (4) **DND Technology Base Program** to study military requirements in OSI architecture, implement security features in OSI, carry out conformance testing of secure protocols and implement special protocol requirements such as mobile host and multi-homed host protocols.

Expected Principal Results

The following specific achievement for FY 92/93 are expected:

- (1) **Regional Seminars on Information Technology and Telecommunications Standards** will be conducted. Seminar participants, consisting of senior executives from the Canadian public and private sectors, will be expected to contribute to the development of Canadian national strategies for IT&T standards.
- (2) Based on the conclusions reached at the IT&T Standards Seminar, SPO will develop follow up action plans for submission to the Telecommunications Standards Council of Canada (TSACC).
- (3) SPO will strive to achieve increased integration of DSI work with the standards activities within and outside the Department through SPO Focus Groups covering Electronic Data Interchange (EDI), Telecommunications Standards Advisory Council of Canada (TSACC), Office Systems, Laboratory Accreditation, Certification and Testing, and Numbering.
- (4) DSI will assist CIGOS and SCC in progressing Canadian laboratory accreditation criteria for the IT&T field with the purpose of achieving mutual recognition of Canadian test centres with Europe and the US. Harmonized laboratory accreditation criteria will play a central role in achieving international recognition of test results produced by the Canadian test centre being established by Hewlett-Packard/IDACOM in Montreal for operation in the second quarter of 1992.
- (5) DSI will carry out a program of technical work supported by in-house laboratory facilities to develop a number of complementary software tools, based on advanced graphics techniques for semi-automatic, formal specification and testing of communications protocols. A more efficient and more accurate testing methodology would contribute to the competitiveness of Canadian test centres such as the HP/IDACOM test centre in Montreal.
- (6) In support of the **DND Technology Base Program**, an investigation into suitability of the OSI model and its supporting standards to address tactical military requirement will be completed and OSI implementations to support selected military features will be tested in the DSI laboratory.

(7) DSI staff will continue to hold chairmanships in the following national and international standards committees:

- CCITT National Study Group VII
- CCITT National Study Group X
- CAC ISO/IEC JTC1/SC18
- CAC Joint Working Group on Conformance
- CAC Working Group on Formal Description Techniques
- CSA Technical Committee on ISDN terminal to network interfaces

DSI also continues to hold voting memberships on behalf of the Department in:

- CSA Committee on Bibliographic Data
- CSA Steering Committee on Telecommunications
- CSA Committee on Text and Office Systems
- CSA Committee on Open Systems
- CSA Steering Committee on Telecommunications and Information Systems
- CSA Committee on character sets and information coding.
- CSA Committee on multi media & hypermedia standards

Expected Problems

The basic DSI problem is the shortage of human resources (PYs). Even though some of the tasks are being contracted out, the process is time consuming, inefficient and does not provide for continuity at the project level. The additional requirement is for 4 PYs to cover the DSI shortfall of 2 PYs plus 2 on-site staff to carry on the SPO work program.

BROADCASTING REGULATIO (DGBR)

EXECUTIVE SUMMARY (BYOP 92/93)

Overview

In FY 1992/93 the Branch will begin the transition from moulding and influencing awareness and conceptual preparation of the domestic and international broadcasting communities concerning the rapid development of new technologies, such as **Digital Audio Broadcasting (DAB)** and **High Definition Television (HDTV)**, to nuts and bolts implementation planning for these dramatic and exciting new medias.

A high level of international activity will be required to promote worldwide technical commonality of the new broadcast systems and standards, as well as to respond to additional travel imperatives associated with changed **CCIR** operating methods.

At the same time, of course, we will continue the technical regulation of current AM, FM, TV and cable television broadcasting.

New Technology

After the outstanding achievement of obtaining an international allocation for DAB in L Band at WARC '92, due to the negotiating astuteness of the broadcast delegation contingent led by DBC-E (R. Zeitoun), the Branch will now move, in concert with the Canadian broadcasting community, to facilitate the rapid implementation of this superb quality sound broadcasting technology. Domestically, in cooperation with industry, further field testing will be carried out and at least one pilot station is expected to be put on the air. Allotment planning to facilitate the graceful migration of AM and FM broadcasting to DAB will be carried out by the Branch. Internationally, we will work with other L Band DAB committed countries to assist and influence European countries and the Americas toward worldwide expansion of L Band use.

Allotment planning for the implementation of HDTV, overlaid with existing television in the UHF band, will also be carried out by the Branch with consultation with the FCC where Canada/U.S.A. border areas are involved.

International Activity

International activity will be intense this year. As mentioned above, astute liaison on negotiations with other countries will be needed to foster the international implementation of DAB.

Negotiations with the United States will be carried out leading to formal Agreements on HDTV cross-border allotment plans and spectrum sharing, and FM/NAVCOM coordination to insure

aeronautical navigation safety. Discussions to facilitate Canadian implementation of DAB while protecting U.S. interests are also expected.

Increased activity in CITELE, as it attempts to restructure and revitalize itself will be needed. As chairman of CITELE PTC II (Broadcasting), which is responsible for promoting the welfare of broadcasting in the Americas, DGBR will need to play a pivotal personal role.

ITU/CCIR activity will continue to be mandatory and more hectic and demanding under the new CCIR operating procedures.

Informatics

Certification analysis functions carried out now on the CP-6 computer at CRC will be migrated to a Branch in-house facility this year due to termination of the CP-6 service. In addition, upgrades to current in-house facilities will be made to use complex software developed to carry out the planning and analysis functions associated with DAB, HDTV and FM/NAVCOM.

Informatics is the cornerstone of the Branch and resources for the hardware, software and maintenance of this critical element is of great concern.

AM, FM, TV and Cable Certification

Certification operations will remain steady and increasingly complex in the face of spectrum congestion. It is expected that containment and elimination of illegal broadcasting will remain a significant operational concern throughout the year.

Region Liaison

Following the universally applauded completion and approval of the Regionalization of Broadcast Activities report, increased liaison, training activities and documentation of new operational procedures will be carried out to promote national consistency of broadcast operations.

Conclusion

DGBR is fortunate in being able to look forward to a year of fast moving, very challenging and interesting activity. We are playing a pivotal role in the revolutionary change of broadcasting to new technologies. We expect to continue our track record of success based on capability and credibility.