TELECOMMISSION

Study 3(a)

International Implications of Telecommunications: the Role of Canada in Intelsat and other Relevant International Organizations

The Department of Communications

TELECOMMISSION STUDY

3 (a)

INTERNATIONAL IMPLICATIONS OF TELECOMMUNICATIONS

The Role of Canada in Intelsat and Other Relevant International Organizations

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Ottawa, 1971

INTRODUCTION

Telecommission Project Team 3(a) was established to study the international implications of telecommunications and the role of Canada in international organizations. The terms of reference under which it operated were the following:

a) Examine existing Canadian participation in international organizations which have major telecommunications implications.

b) Similarly, review international agreements and other arrangements concerning telecommunications affecting Canada.

c) Consider what changes, if any, would improve the efficiency or effectiveness of Canadian participation in organizations or such agreements and arrangements.

d) Study the broad implications for international telecommunications of the work of other project teams and maintain contact with the development of these items in their studies.

e) What are Canada's international legal obligations concerning communications by virtue of treaties and agreements?

f) Generally consider in broad outline any other international implications of telecommunications affecting Canadian interests.

It became quickly obvious that the fullest response to these terms of reference would represent a task which would greatly exceed, in scope and magnitude, that which had originally been intended by the Telecommission, and the time allotted for its completion. This same conclusion was independently reached by the Telecommission Secretariat and pursuant to its recommendations, limits were imposed on the depth to which the study of details would be carried. Such being the case, but to maximize the future usefulness of the study, it was considered most important to make specific recommendations as to the direction in which consequential and subsequent investigations might be pursued.

Hence, the Project Team strived at completeness in its response to terms of reference a), b), c), e) and f). The compilation of such basic data on existing Treaties and international organizations should be of great value to further studies and was, in any event, essential for the work which the Project Team had undertaken and which it was capable of accomplishing in the allotted time. Response to item d) was not possible due to the late availability of the required information.

A gratifying number of Government Departments, Industrial Organizations and individuals responded to the invitation to actively participate in the work of the Project Team. These included the following in alphabetical order (alternates are designated in brackets):

J.C. Delorme (Ann Booth)	Telesat Canada
E. Eliasen (D. Doran-Veevers)	Canadian Overseas Telecommunication Corporation (COTC) (Teleglobe)
D. Fulford	Department of External Affairs
H. Lawford	Faculty of Law, Queen's University
J.R. Marchand (V.C. MacDonald)	Department of Communications (D.O.C.)
E.B. Powell (C. Stewart)	Ministry of Transport (M.O.T.)
E.A. Saunders (C. Blakely)	Trans-Canada Telephone System (T.C.T.S.) and Telephone Association of Canada (T.A.C.)
J. Sharpe	Department of External Affairs
J.L. Wilson	Trans-Canada Telephone System (T.C.T.S.) and Telephone Association of Canada (T.A.C.)

In addition, the following indicated their desire to follow the progress of the studies and their willingness to comment on the results:

A. Curran	Northern Electric Company
C. Dalfen	Department of Communications
J.J. Dube	Canadian National Telecommunications
S. Moore	Canadian Broadcasting Corporation
A. Martin	Canadian Radio-Television Commission.

INTERNATIONAL ORGANIZATIONS

A study was made of the following governmental, non-governmental and professional and industrial international organizations, and in some cases their sub-organizations:

Governmental

The International Telecommunications Union (I.T.U.)

- The General Secretariat of the I.T.U.
- The International Frequency Registration Board (I.F.R.B.)
- The International Radio Consultative Committee (C.C.I.R.)
- The International Telephone and Telegraph Consultative Committee (C.C.I.T.T.)

The International Telecommunications Satellite Consortium (INTELSAT)

The Commonwealth Telecommunications Organization (C.T.O.)

The International Civil Aviation Organization (I.C.A.O.)

The Intergovernmental Maritime Consultative Organization (I.M.C.O.)

The United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.)

The United Nations Committee on the Peaceful Uses of Outer Space

Non-Governmental

The European Broadcasting Union

La Communauté des télévisions francophones

La Communauté radiophonique des programmes de langue française

The Commonwealth Broadcasting Union

The Asian Broadcasting Union

Professional and Industrial

The Committee on Space Research (C.O.S.P.A.R.)

The International Union on Science and Research (U.R.S.I.)

The Institute of Electrical and Electronics Engineers (I.E.E.E.)

The American Institute of Aeronautics and Astronautics (A.I.A.A.)

The study consisted in describing the basic purpose and role of the organization and the nature of Canada's interest and participation, in assessing the observed effectiveness both of the organization itself and of Canadian participation, and in making suggestions for improvement in any aspect where it was considered desirable.

A large number of the organizations studied are members of the United Nations family. As a charter member of the United Nations and one of the larger contributors to the program of the United Nations and the Specialized Agencies, and as a member of the governing bodies of all the Specialized Agencies with interests in the field of telecommunications, Canada is expected to contribute towards the achievement of the objectives of these organizations. Conversely, Canada like any other member, expects to derive certain benefits from its participation. While the benefits to be derived are of primary interest to government departments other than External Affairs, or to Government Agencies, or to non-government entities which have responsibilities in the relevant field, the Department of External Affairs has an overall interest in seeing that Canadian participation is of a high standard;that the ends pursued are consistent with national objectives; that the participation is efficient and effective and that, in particular, the interests of developing countries are taken account of.

Pursuant to the Government's foreign policy review, a set of booklets entitled "Foreign Policy for Canadians" has been issued. The following extracts from the "United Nations" booklet would seem pertinent to this report:

> "It should be a basic aim of Canadian policy to strengthen machinery for co-ordinating and rationalizing the activities of the United Nations family of organizations in order to eliminate wasteful duplication and to facilitate effective programme planning so that the resources of the United Nations system as a whole will be spent to greatest advantage."

In respect of international cooperation in the peaceful uses of satellite systems, it is proposed that:

> "a) Canada encourage the ITU to participate actively in the orderly development of international coordination and of standards and associated regulatory needs, including allocation of frequencies for present and future satellite communications systems and the establishment of conditions to safeguard 'in orbit' positions, particularly over the equator;

b) Encourage the Specialized Agencies such as UNESCO, WMO and ICAO to take account of the need for the best use of satellite systems in their own fields of jurisdiction and at the same time encourage greater coordination within the United Nations;

c) join in the study of supplementary international arrangements to foster international cooperation and regulation of aspects of space communications not adequately covered by existing organizations; and

d) actively develop legal principles which might govern the activities of states in the exploration and use of outer space and, in particular, to promote the conclusion of an appropriate agreement on liability for damage caused by the launching of objects into outer space."

The same principle, developed with respect to satellite communications, could be generally applied to efforts in the broader field of telecommunications.

In considering proposals for changes in existing arrangements and for improved effectiveness in the activities of international organizations, the interests of the technical departments and agencies and of the industry will be of primary importance particularly when such proposals relate to technological or operational aspects. Such proposals should, however, be viewed in the broader policy context of Canada's commercial and political interests. Proposals relating to a particular organization or project should be examined to ensure that they are consistent with overall national objectives and with positions taken in other bodies. A fuller consultation should be achieved prior to the negotiations undertaken at meetings of the United Nations, its specialized agencies and other international organizations where matters of concern to the industry are considered; particularly where the industry will be charged with the practical implementation of the decisions taken.

Since most of the studies are rather extensive, they all appear as annexes to this report. This section therefore confines itself to general comments on each organization and will direct the more avid reader to the relevant Annex. Contributions by individual members have been reflected to the maximum extent possible in the report and have, therefore, not been included as such.

THE INTERNATIONAL TELECOMMUNICATIONS UNION (ITU):

The I.T.U. is not only the oldest of the United Nations family of specialized agencies, but may well be considered as the most important international organization in the field of inter-

national telecommunications. In fact, its activities in fostering the rational development and utilization of international telecommunications services, and in promoting the orderly and efficient use of the radio-frequency spectrum, underscores its fundamental role, particularly in respect of the practical aspects of international telecommunications services and facilities. Moreover, its membership of 138 attests to the interest, importance and reliance which it enjoys within the world community of nations. Canada is presently on the 29-member Administrative Council of the I.T.U. More detail on the I.T.U. is presented in Annex A to this report.

The Minister of Communications has on several occasions expressed his views on the need to study the present role, structure and modus operandi of the I.T.U. in order to strengthen its role and enable it to function more effectively, particularly in view of the rapid advances in technology, the increased usage of existing services, the introduction of new services, and the increasing competition for the use of the limited radio-frequency spectrum. While certain improvements can be effected at Administrative Conferences such as the one on Space Communications which will take place in 1971, the first opportunity to promote changes of a fundamental and structural nature will be at the Plenipotentiary Conference which has been scheduled for 1973. To this end, the Department of Communications has set up a working group which will review the present I.T.U. Convention in depth and elaborate proposals for improving the I.T.U.'s ability to meet its objectives and discharge its responsibilities more effectively.

There is a feeling in the industry that it should be more fully consulted in respect of I.T.U. matters, particularly those resolved at Administrative Conference which are of special interest to them. Regular consultation mechanisms should be envisaged to accomplish this, well in advance of the Conferences concerned. A case in point is the World Administrative Radio Conference on Space Telecommunications which is scheduled for June 1971; the Department of Communications has prepared draft proposals which were sent to industry for comment in September 1970, before finalizing the Canadian submission to the I.T.U. Secretariat.

Canada has participated regularly in the Conferences of the I.T.U. Canadian representation appears to have been effective and influential. Smaller countries of the world have looked to Canada for guidance and leadership as is evidenced by Canada being elected to serve on the Administrative Council since its beginning in 1947. Representatives from Canada have often been requested to serve as committee chairmen and as chairmen of the Conferences themselves. This has permitted Canadian views and aims in radio spectrum management and other areas of telecommunications, to influence the decisions and recommendations of conferences, thereby setting the climate where spectrum space, so necessary for the

development of communications in Canada, was readily available and the Canadian telecommunications industry was not penalized by restrictive or demanding regulations which are not in the best interests of Canada.

In respect of the Telephone Regulations, which has not yet been signed by Canada, it should be noted that the International Telegraph and Telephone Committee of the I.T.U. has approved, for submission to the next World Administrative Telegraph and Telephone Conference, a draft text of revised Telephone Regulations. This draft has eliminated the details contained in the present Regulations and it is anticipated that the telephone industry in Canada will recommend that Canada accept them as new Regulations at that Conference.

If Canada's influence and growth in the field of international and national communications is to continue and, communications are vital to the growth and prosperity of any country, then our participation in all phase of the I.T.U. endeavour must continue. Only in this way can we continue to play a leading role in the development of international telecommunications.

The various activities of the I.T.U. are carried forward through four permanent organs. These are the following:

a) General Secretariat: This is basically an administrative body assisting the Secretary General in his role as the top elected official of the Union. The activities of the General Secretariat are detailed in Annex B.

b) International Frequency Registration Board (I.F.R.B.): The purpose of the I.F.R.B. is to register the frequency assignments made by the countries Members of the I.T.U. and to advise Members on questions relating to the best use of the radio-frequency spectrum and to the minimizing of interference between radio systems. Further details will be found in Annex C.

   As part of the general review of the I.T.U. alluded to in the preceding section on the I.T.U., the role and activities of the I.F.R.B. will have to receive particular attention since it is called upon to give effect to certain provisions of the Convention and Radio Regulations and promote adherence by all Members to the principles evoked therein.

c) The International Radio Consultative Committee (C.C.I.R.): The CCIR was established to study technical questions relating to radiocommunications of all kinds, and to issue recommendations in response thereto. It now is

also concerned with questions relating to television transmission, in cooperation with the CCITT. The CCIR operates basically through 11 international study groups to each of which has been assigned a specific area of interest. Further details are available in annex D.

Canada started to participate, initially mainly as an observer, at Warsaw, 1956 (2 delegates) and Los Angeles, 1959 (3 delegates). Our role then started to increase considerably when we became aware of the need to protect our interests. This became very apparent at the 1962 Interim Study Group IV (Space Communications) meeting in Washington and even more so at the Xth Plenary Assembly in Geneva, 1963. The wide range of subjects required a total attendance of 19 engineers and technical officers from government departments, crown corporations, manufacturers and common carriers. The attendance at Oslo, 1966 was 27. Attachment 4 gives a list of the names and affiliations of the Canadian delegates at the Final meetings of the Study Groups in Geneva, 1969. The value of the CCIR has been well recognized by other organizations outside the Government and over the years many of them have been asked to participate in its work, e.g. the Telephone Association of Canada, the Railway Association of Canada, Canadian Overseas Telecommunication Corporation, National Research Council, Canadian Broadcasting Corporation, Northern Electric Co., Electronic Industries Association, RCA Limited, Lenkurt Electric, Telesat Canada, etc.

Through extensive pre-Conference meetings, either in full body or in small Working Parties, a good understanding is developed by all delegates of the Canadian objectives and our best approach in achieving them.

At the international meetings, the Canadian delegation has shown excellent teamwork, and has been able to speak with a single voice presenting coordinated viewpoints in the different engineering committees. The extensive preparatory work greatly enhances the effectiveness of our participation.

The principles on which our participation is based include the following:

a) generate a climate of understanding and cooperation; and

b) present competently well thought-out proposals and solutions.

The former is intended to predispose others in our favour while the latter creates confidence in Canadian technical talent, technology and products.

It is well noted that new and developing countries are seeking advice from those Administrations who exhibit leadership and engineering competence at CCIR Conferences. As an example of our demonstrated competence in the field of satellite communications the I.T.U. Secretary General invited Canada (amongst only a few nations) for a meeting 14-16 January, 1970 at I.T.U. Headquarters, to assist in the analysis and preparation of a report on the comparative economic aspects of various satellite broadcasting systems. As another example, our presentation at the CCIR and discussions with other delegates have led to enquiries with Canadian industries as possible suppliers for the satellite T.V. broadcasting plan embarked upon by the Indian Government.

Evidence of Canadian leadership and competence at C.C.I.R. Conferences is given in Attachment 5 which lists the chairmanships and secretary positions held by Canadian delegates at the Final meetings of the Study Groups in Geneva, 1969. In assessing the relative importance of these chairmanships, it should be noted that:

- a working group is a subdivision of a study group;

- a sub group is a subdivision of a working group;

- a sub sub group is a subdivision of a sub group.

Attachment 6 gives a list of the terms of reference of these various groups. In addition, the XIIth Plenary Assembly (New Delhi, 1970) appointed Mr. J.R. Marchand (DOC) as Chairman of the C.C.I.R. Special Joint Study Group Meeting (Geneva, February 1971) established in preparation for the Space Conference.

The main benefits to Canada which accrue from participation in the C.C.I.R. are:

- a direct voice in the elaboration of spectrum utilization principles within assigned communication bands as well as an indirect voice in influencing changes to Radio Regulations pertaining to radio spectrum usage through the advisory role played by the C.C.I.R. at Radio Conferences;

- a direct voice in the development of preferred technical characteristics for radio systems to be used in fixed and mobile applications, broadcasting, monitoring, navigational aids, radio paging, communications satellites, radio relays, etc.;

- interference protection for our exceptionally large national telecommunications investments;

- the development of technical standards which will enhance the marketability of Canadian equipment;

- the demonstration of Canada's competence and leadership in the field of radiocommunications, which will assist Canadian industries in their drive to increase their exports to other countries.

We should continue to be involved in C.C.I.R. activities giving particular emphasis to those areas where benefits to Canada might accrue. At the moment, the most urgent problems to be studied are:

- examination of the effect of an increased power flux curve for satellite systems on our terrestrial microwave systems;

- thin-route communication satellite systems;

- system parameters for earth exploration satellites;

- feasibility of frequency sharing by satellite broadcasting systems and present terrestrial services in the 800 MHz and 2500 MHz bands;

- coordination angle between satellites in the geo-stationary orbit (IWP 4/1) and minimum earth antenna requirements;

- propagation data at 12 and 20 GHz;

- scintillation data at UHF frequencies:

  a) for the Canadian thin-route satellite systems;

  b) for UHF mobile satellite systems;

- finalization of chapter 5 of the I.T.U. Monitoring Handbook (Receivers);

- data on wide-band terrestrial PCM systems, frequency sharing considerations, spectrum requirements;

- assessment criteria for television picture quality;

- establishment of radio-relay antenna patterns for interference calculations.

The study of the above Questions will require continued participation by DOC, CBC, NRC, Telesat, COTC, TAC, RAC, EIA, RCA Ltd and N.E. Co.

The Project Team is reasonably satisfied with the results achieved by the C.C.I.R. generally, and of the benefits which Canada has derived from its participation in particular. The level of activity within the C.C.I.R. is not expected to decrease, particularly in view of the rapid technological advances taking place and the introduction of new services such as those provided by satellites. In view of Canada's own involvement in these new advances, Canadian participation cannot be relaxed, but should be strengthened where possible and relevant.

While the CCIR has recently adopted a new and slightly simplified Study Group structure, and made a few improvements in its methods of operation, it is felt that further improvements should be sought in view of the foreseeable increase in the C.C.I.R.'s workload on the one hand, and taking into account improved working methods on the other hand.

d) The International Telephone and Telegraph Consultative Committee (C.C.I.T.T.): The C.C.I.T.T. was established to study technical, operating and tariff questions relating to telegraphy and telephony, and to issue recommendations in response thereto. It is now also concerned with questions related to television and data transmission. The C.C.I.T.T. operates basically through 16 Study Groups, although it has also instituted a number of special Study Groups, some in cooperation with other international organizations, for the pursuit of specific studies. Further details are presented in Annex E.

Canadian participation in the C.C.I.T.T. provides the means for ensuring to the greatest extent possible that the recommendations of the C.C.I.T.T. are compatible with the technical characteristics of the Canadian telecommunications network and Canadian operating practices. Incompatibilities in this regard can result in heavy cost penalties to Canadian subscribers and the operating organizations involved.

Canadian participation also makes it possible to submit for international discussion objectives on standards of service in keeping with the expectations of Canadian subscribers. The Canadian program of aid to developing countries is strengthened by such contacts.

By participating in the work of the C.C.I.T.T., specialists of the Canadian government, of Recognized Private Operating Agencies and of Industrial & Scientific Organizations

demonstrate their competence in telecommunications matters. Such demonstrated competence can have a beneficial effect on the efforts of Canadian suppliers of telecommunications equipment to increase sales in foreign markets, as well as reflecting in other forums of discussion, such as INTELSAT, UNESCO meetings concerning communications in media that affect science and education.

In general, Canadian industry feels that there are no major problems with the existing arrangements governing the participation in C.C.I.T.T. Thus, there is no request for the more formal national coordination which is the practice in Canadian C.C.I.R. participation. A form of coordination may be required at times in establishing a strategy to be followed in the face of strong regional pressure being exerted in favour of specific conclusions at some important study questions. At the international level, politics and commercial interests occasionally enter the technical work of the C.C.I.T.T. to an undesirable degree. While this is unfortunate, it is probably unavoidable. With increasing Canadian participation in the work of the C.C.I.T.T., Canadian delegates and representatives are learning to accommodate to this situation. Stronger European coordination through regional study arrangements in advance of critical C.C.I.T.T. meetings has been in evidence recently.

In the case of the Canadian RPOA's which have established and operate the Canadian telecommunications network, major problems or conflicts generally do not occur since their fields of service mainly complement each other. When they do, the representatives of the Department of Communications note the problem and propose alternatives. Existing arrangements encourage and facilitate participation by competent Canadian organizations in work that is of direct concern to them and the Country. At the same time, The Department of Communications, through its control at Plenary Assemblies and through its own participation and monitoring of C.C.I.T.T. Study Group activities, can ensure that Canadian participation is in the national interest.

While the Project Team is not generally dissatisfied with the results obtained by the C.C.I.T.T., and with the effectiveness of Canadian participation, it does appear that the C.C.I.T.T. is impeded in its work by an outdated Study Group structure which was established in 1956 and is not entirely responsive to the variety of problems it must deal with today; evidence of this is provided by the substantial number of questions which must be studied

by more than one study group, the number of Study Group meetings and joint Working Parties required, and the relatively large number of special study groups and autonomous working groups which have had to be established. Its working methods seem to be in need of considerable streamlining in order to expedite the studies undertaken and achieve results on a more timely basis. The C.C.I.T.T., and to some extent the C.C.I.R., has tended to issue its recommendations (which, by many, are considered somewhat as "standards") on the basis of long established practices -- an approach which had lead in some cases to the adoption of a multiplicity of "standards", and which is not always conducive to the most efficient and economic use of facilities providing international telecommunications services. While some improvements have been observed in recent years, there is the risk that the C.C.I.T.T. may become simply overwhelmed by new developments such as those related to data transmission, for example. In short, it must not only be made more effective but also more forward-looking so that it may issue recommendations which will serve to guide future new developments, rather than follow them.

It was with the above considerations in mind that Canada took the lead in instituting, at the fourth Plenary Assembly in late 1968, a special international working group whose general mandate should lead to specific recommendations for improving the structure and working methods of the C.C.I.T.T. Unfortunately, the work of this group has not yet really begun and Canada, through its representatives in the various C.C.I.T.T. activities, should press for more urgent consideration of this matter.

Urgent problems under study in the C.C.I.T.T. include the following:

i) Technical:

- Transmission performance criteria for frequency-multiplexed communications satellites and time-division on cable, microwave and satellite systems are under urgent investigation. Of the thirty-two data transmission questions put to study, twenty-two are designated "urgent". In the near future transmission criteria to be met by domestic satellite systems wishing to be connected to the world network will have to be examined. International agreement on pulse code modulation transmission standards is proving extremely difficult. The differences between ATT and the European standards have proved impossible to close in some important aspects thus far.

- Switching problems now urgent include criteria to be maintained when the world telephone network includes communications satellites offering access on demand, rather than the fixed hierarchical network heretofore planned. Then there are requirements of a new kind, such as very short call set-up times for computer communications. At the same time, technology took a big step with successful experiments in time-division switching.

ii) Operating and Accounting: The advent of customer-to-customer dialling has outdated the simple direct circuit and operator call ticketing procedures, but the automatic system brings other new problems such as accounting for the use of alternate circuit facilities and transit facilities. The introduction of computer switching of public telegrams is proceeding well, but there are still some problems in it.

iii) Telephone and Telegraph Regulations: These are under major review, the significance for Canada being that as a result Canada may be able to sign the Telephone Regulations part of the I.T.U. Convention, from which it has so far abstained.

THE INTERNATIONAL TELECOMMUNICATIONS SATELLITE CONSORTIUM (INTELSAT):

INTELSAT was formed in 1964 when eleven countries, including Canada, entered into Agreements establishing interim arrangements for a global commercial communication satellite system.

Since then, membership has grown to 77 and essentially global coverage has been achieved by the successful placement and operation of a variety of geostationary satellites (fixed, relative to the surface of the Earth) over the Atlantic, Indian and Pacific Oceans.

One of the main features of such a system is its ability to permit more direct telecommunications services (telex, telephony, television and data transmissions) throughout the world. It has not only brought high quality international service to areas previously not served in this respect, but has also expanded the service available to those areas already served by submarine cable and radio-relay systems. One of the unique features is the ability to make available television programs on a real-time and global basis.

Notwithstanding these noteworthy achievements, there is a need to review the existing Agreements. Indeed, such a review was anticipated in the Interim Arrangements and negotiations are presently underway to establish Definitive Arrangements for INTELSAT. While it would certainly be an extensive task, at this time, to fully

explain the present state of these negotiations, and the Canadian position on each and every point raised in the related discussions, it can generally be stated that Canada seeks to clarify the role of the organization and the services which it may provide, improve its structure as an international organization, broaden international participation (including the management) without sacrificing efficiency, and naturally maximize the benefits to Canada and other Members, in accord with Canada's national objectives and policy concerning international affairs. More specifically, the Canadian overall position includes the following:

a) the prime objective of the organization should be the provision of public international telecommunication services (telegraphy, telephony, television program transmission, data);

b) the organization could also provide domestic and regional telecommunication services, and specialized services (aeronautical, broadcasting, etc.), subject to terms and conditions approved by the Assembly (meeting of government representatives), and provided that the ability of INTELSAT to fulfill its prime service objective is not impaired;

c) the Assembly of representatives of the member governments, above and beyond the responsibilities conferred on a full meeting of all signatories (operating entities designated by government) should have a voice in determining the general policy, and approve the long-term program, of the organization;

d) the management function, presently fulfilled by the Communications Satellite Corporation should be transferred gradually within a specified time limit to an internationally-staff management group under the direction of a Director-General.

Further details on the operation of INTELSAT under the Interim Arrangements are given in Annex F.

THE COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION (C.T.O.):

While cooperative arrangements among those countries presently forming the Commonwealth for the establishment of international telecommunications services began in the late 1800's, formal arrangements bringing together the majority of Commonwealth members for the establishment of a common system first came into force in 1949 with the incorporation of the Commonwealth Telecommunications Board. The Canadian Overseas Telecommunication Corporation was also formed at that time as a crown corporation to participate for Canada in the establishment and operation of the Commonwealth system. Since then, these arrangements have been modified with the establishment of

the Commonwealth Telecommunications Organization in 1968. The next Commonwealth Telecommunications Conference is expected to be held in Ottawa in 1971.

Further details on these arrangements are given in Annex G.

Through participation in these arrangements, Canada has been able to develop its external telecommunication services to a degree which would have been difficult to attain working in isolation. While the present arrangements are yielding satisfactory results, one of the major problems associated therewith is that not all services are covered, notably services by long range wideband cable systems and services by satellite. Because of members' diverse interests, this situation can cause conflicts between systems and members. Council is presently attempting to develop a unified accounting system which would embrace all traffic and all media.

THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (I.C.A.O.):

The I.C.A.O. Convention came into force in 1946. It is a specialized agency of the United Nations and Canada has been a member of the Organization and of its Council since its inception.

While I.C.A.O., as implied, is an aviation oriented organization, radiocommunications play an important role in respect of safety and general transportation efficiency. Canada has always been very active in I.C.A.O. and participates in the financing, implementation, maintenance and operation of several aeronautical communications systems providing essential navigation and other services, such as over the Atlantic Ocean, to the aircraft of any country in the world.

By virtue of geography, Canadian airspace is utilized by the busiest intercontinental traffic involving control of the oceanic portion of the routes as well as providing for integration with domestic traffic. In addition, Canadian carriers operate routes to many countries in Europe, the Pacific and the Carribean. There is therefore a vital interest in I.C.A.O. with a continuing need for active participation in all its activities.

The present provisions for establishment of standards and recommended practices on a world-wide basis permits keeping abreast of rapidly changing technology and the system of regional planning provides for timely implementation of services and facilities. There is also adequate provision for future planning normally provided through the establishment of special committees or panels of experts. Coordination with other specialized agencies such as the International Telecommunications Union (I.T.U.) and the Inter-governmental Maritime Consultative Organization (I.M.C.O.) is provided for and representation to and by these organizations is a matter of normal procedure.

Whereas the telecommunications aspects of I.C.A.O. constitute only one of the fifteen annexes to the Convention and for which MOT has full responsibility it is nevertheless a very significant aspect and calls for close cooperation between MOT and DOC.

Further details are presented in Annex H.

THE INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANIZATION (I.M.C.O.):

The I.M.C.O. Convention came into force in 1958. I.M.C.O. is a specialized agency of the United Nations and Canada has been a member of the Organization since its establishment and is presently a member of its Council. This organization is also covered here because of the role of radiocommunications in support of maritime safety and transportation generally.

Canada is an active participant in the various bodies of I.M.C.O. and M.O.T. has established a working group to review the working methods of the organization.

The current budget for the organization is relatively modest when compared with other international organizations and Canada's contribution is assessed at 2% amounting to $17,000 for 1970. Through participation in the organization it is then possible to influence carriers operating under foreign flags in meeting the standards acceptable to Canada when operating in Canadian waters.

The major problem which confronts Canada is the degree of influence which can be achieved where we do not support a foreign going merchant fleet. It is nevertheless of major advantage to continue membership of the organization to ensure protection of our existing national requirements and to plan for the future.

Responsibility for I.M.C.O. matters lies with M.O.T. but major coordination with D.O.C. on telecommunications will be necessary even when I.M.C.O. has developed its own capability to deal with technological changes.

Further details are presented in Annex I.

THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (U.N.E.S.C.O.)

U.N.E.S.C.O. was formed as a specialized agency of the United Nations in 1946; Canada became a member that year and is presently a member of its Executive Board. The organization, as the title implies, has a large range of interests; it studies a wide variety of international and national problems, either with its own headquarters staff or with missions of experts formed to deal with specific studies and is particularly active in the developing countries.

U.N.E.S.C.O.'s interest in telecommunications was greatly enhanced with the advent of space communications, and particularly with the possibilities of satellite broadcasting. The Department of External Affairs, and more recently the Department of Communications, have followed U.N.E.S.C.O.'s activities in this field quite closely and have participated in the meetings of the organization which have been convened to discuss questions related to the free-flow of information and the role of new technology in education and in cultural exchanges.

U.N.E.S.C.O. and its officials have demonstrated great initiative and energy. Canada should continue and possibly increase its participation in U.N.E.S.C.O. in the field of communications to assist it in achieving its aims and to ensure that its activities dovetail effectively with those of other international organizations.

Further details are given in Annex J.

THE UNITED NATIONS COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE:

This committee was established by the United Nations General Assembly in 1959. In 1967, it became particularly interested in the overall implications of direct broadcasting by satellites and in 1968, a working group was established to study the matter in depth. Canada from the outset has been one of the major contributors to this study which is not yet completed.

Further details can be obtained in Annex K to this report.

INTERNATIONAL BROADCASTING ORGANIZATIONS:

A number of international broadcasting organizations, generally regional in character, have been established over the years and in which the Canadian Broadcasting Corporation, either as a full member or as an associate member, participates. These include:

a) European Broadcasting Union;

b) Communauté des télévisions francophones;

c) Communauté radiophonique des programmes de langue française;

d) Commonwealth Broadcasting Conference;

e) Asian Broadcasting Union.

Further details on the C.B.C.'s activities and participation are provided in Annex L.

SCIENTIFIC AND ENGINEERING ORGANIZATIONS:

A number of organizations which are either truly international in their institution, or have become so by their wide international membership, play a valuable if not essential role in the widespread and timely exchange of technical and scientific information in the field of telecommunications and related activities. The foremost include the following:

a) Committee on Space Research;

b) International Union on Science and Research;

c) Institure of Electrical and Electronics Engineers;

d) American Institute of Aeronautics and Astronautics.

While participation in the first organization is mainly at the government level, participation (and membership) in the others has a strong and widespread industry and professional element. A brief discussion of these organizations is given in Annex M.

TREATIES

CANADA TREATY SERIES REVIEW

The Canada Treaty Series was reviewed and those treaties related to telecommunications identified and are listed in Annex N, along with relevant information and an analysis of each treaty.

For ease of reference, an index is provided at the beginning of Annex N which classifies the treaties under the given broad categories. Following the index, a legend is presented which, for standardization and simplification, identifies each entry in the subsequent analyses.

It should be emphasized that the analyses as presented are very preliminary and further consultation would be required with the parties concerned to validate the conclusions reached. However, any comments concerning the analyses should be made known to the Department as this will stimulate consultations to clarify and remedy, if required, any unsatisfactory situation.

A few comments of a general nature can be offered. Some of the agreements included in the Canada Treaty Series were achieved through the simple exchange of notes between the two countries concerned. Such agreements become effective usually on the date the notes exchanged, or on some future date mentioned therein. Rarely is an expiry date mentioned nor are any terminating arrangements clearly outlined; the latter of course can be achieved by subsequent consultations and agreement to that effect. In the case, however, of agreements reached pursuant to the basis of some

broader international Convention or Regulation, the status of such agreements have simply been overcome by events. For example, a number of agreements gave a role to M.O.T. when it was responsible for implementing the provisions of the Radio Act; this responsibility now devolves on D.O.C. Such occurrences in some instances have been overlooked. A periodic review of treaties and other arrangements would be desirable and procedures for the handling of deficiencies and of proposals for amendments or new provisions, are suggested later in this report.

While this section deals mainly with formal treaties, it will be noted that other international arrangements (Conventions, Agreements, Regulations) which are not in the Treaty Series, but which are binding on Canada, have been included.

On the question whether individual arrangements should be continued in force, amended or terminated, it is considered that the most useful advice and guidance in this respect should come from the departments, agencies, or other entities responsible for the implementation of the arrangements. Apart from details concerning legislation specifically enacted to give effect to a treaty, the Treaty Register does not normally contain information concerning their practical implementation.

CONCLUSIONS

GENERAL

It emerges from these studies that Canada is an active participant in all international organizations concerned with telecommunications, that this participation is justified in terms of our national interest, should be reviewed periodically, and improved in accordance with Canada's national policy objectives. It seemed to the Project Team that the following suggestions concerning future action merited examination:

INTERNATIONAL ORGANIZATIONS

a) Consultation with industry, preparatory to the meetings of the United Nations, its agencies and other international organizations might be improved, to increase industry's participation in the formulation of national policy, particularly where it is relevant to industry's role in carrying out the provisions of international arrangements.

b) Through its participation in the relevant international organizations, Canada might ensure a greater coordination between these organizations in certain areas such as satellite communications, and thus improve the overall effectiveness of these organizations in achieving their aims and maximize the benefits to be derived from the sum total of their activities.

c) The structure and procedures of the I.T.U. might be reviewed so as to improve its ability to execute its role in international telecommunications and that proposals to this effect be submitted to the World Administrative Conference on Space Telecommunications in 1971 and to the next Plenipotentiary Conference in 1973.

d) Within the context of the review of the I.T.U., particular attention might be given to the I.F.R.B., whose role in giving effect to certain provisions of the Radio Regulations is expected to become more complex with the increased introduction of new radiocommunications services and competition for use of the radio-frequency spectrum.

e) In view of rapid advances in radiocommunications and Canada's interest and involvement in these advances on the one hand, and the related studies undertaken by the C.C.I.R. on the other hand, Canadian participation in the C.C.I.R. might be strengthened where possible and relevant.

f) In view of the foreseeable increase in C.C.I.R.'s study programs, Canada might seek to further improve its working structure and methods, so that the results will be available on a more timely basis.

g) Canada might press for a more active and expeditious study of the structure and working methods of the C.C.I.T.T. in the context of the special study program instituted to that effect at the IVth Plenary Assembly of the C.C.I.T.T. in November 1968.

TREATIES

a) Departments, agencies and industry might review the list of treaties with a view to making specific proposals regarding the disposition of treaties of interest to them, if such action should in their estimation appear warranted.

b) The following procedures for dealing in the future with proposals, either for amending existing arrangements, or for the development of new bilateral or multilateral treaties or agreements dealing with telecommunications matters, might be instituted:

   i) Inter-departmental/agency consultative arrangements would be agreed upon which would provide for early discussion of proposals - presumably under the aegis

of the Department of Communications - with respect to the technical matters to be dealt with.

ii) The Department of External Affairs would be included in such discussions at an early stage so that the relevant functional and geographical divisions can be consulted. The Legal Division could review texts of proposed treaties and take the steps necessary for the actual conclusion, amendment or termination of the treaty.

iii) The responsible ministers, including the Secretary of State for External Affairs, should concur in any memorandum to Cabinet recommending the conclusion, amendment or termination of a treaty. This will require prior consultation with the departments and agencies concerned.

iv) The draft of any proposed treaty or agreement would be submitted to the Department of External Affairs for review in the Treaty Section of the Legal Division.

v) The signature, ratification, amendment or formal denunciation of a Treaty by Canada requires the authority of an Order in Council. The Submission to Council requesting such authority would in every case be made by the Secretary of State for External Affairs, with the concurrence, where appropriate, of any other minister concerned. The Submission to Council and covering memorandum to the Minister would be prepared in the division of the Department of External Affairs responsible for the subject matter, in consultation with the responsible department or agency. The Submission would be cleared in draft with the Treaty Section of the Department of External Affairs.

INTERNATIONAL TELECOMMUNICATION UNION

(I.T.U.)

INTRODUCTION

The International Telecommunication Union is the oldest of the international organizations having been established at a meeting in Paris in 1865. Canada became a member in 1907. At the time it was the International Telegraph Union and radio communication did not enter the picture until 1903, when a preliminary radio meeting was held in Berlin, followed by the first radio conference also in Berlin in 1906, when the first "Radio Telegraph Convention" was drawn up and the first Radio Regulations established. From these early beginnings the ITU has come to what it is today; a Union of 137 member countries with its permanent Headquarters located at Geneva, Switzerland.

The aims of the Union are to maintain and extend international co-operation for the improvement and rational use of telecommunications of all kinds; to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, so far as possible generally available to the public. To these ends the Union:

a) effects the allocation of the radio frequency spectrum;
b) co-ordinates efforts to eliminate harmful interference;
c) fosters collaboration among its members for the establishment of rates at levels as low as possible;
d) assists in the creation, development and improvement of telecommunication equipment and networks in new and developing countries;
e) promotes the adoption of measures for ensuring the safety of life through the co-operation of telecommunication services;
f) undertakes studies, makes regulations, adopts resolutions, recommendations and opinions, collects and publishes information concerning, telecommunication matters for the benefit of the members.

The Convention:

The basic instrument of the International Telecommunication Union is the Convention completed by the following sets of Administrative Regulations:

Telegraph Regulations
Telephone Regulations
Radio Regulations
Additional Radio Regulations

Plenipotentiary Conference:

The supreme authority of the Union is the Plenipotentiary Conference which is held approximately every five years, its main responsibility being to revise the Convention, determine the general policies for fulfilling the purposes of the Union described above, review budgetary matters concerning the operation of the Union, approve the accounts of the Union, elect the Secretary-Geneval, Deputy Secretary-General, elect the members of the Union who are going to serve on the Administrative Council, revise if necessary agreements between the Union and other international organizations, deal with such other telecommunication questions as may be necessary and set the date and place of the next Plenipotentiary Conference.

Administrative Conferences:

In addition to the Plenipotentiary Conference, Administrative Conferences composed of World Administrative or Regional Administrative Conferences are held to consider specific telecommunication matters, i.e. matters dealing with the space, aeronautical mobile, maritime mobile, fixed, broadcasting, radiodetermination and other terrestrial radio, telegraph and telephone services.

The main function of these Administrative Conferences is to amend the Regulations relative to the subject or subjects being considered by the Conference. The discussions at these conferences are mainly of a technical or administrative nature; however, where new regulations are adopted which involve the implementation of new standards and techniques, the economic impact must also be considered.

Administrative Council:

As mentioned above under the responsibility of the Plenipotentiary Conference an Administrative Council, consisting of 29 members of the Union, is elected to act, on behalf of the Plenipotentiary Council in the interval between such conferences.

The Administrative Council meets at least once a year in Geneva and in brief is responsible for the co-ordination of the work of the Union and supervising the administrative functions of the Union. It reviews and approves the annual budget, arranges for the convening of plenipotentiary and administrative conferences and in general acts for the plenipotentiary conference. The discussions at these meetings are mainly of an administrative and financial nature; however, technical matters are involved especially where the approval of the agendae for Administrative Conferences is concerned.

BACKGROUND

The first measures to govern radio communications having international scope were embodied in the "Radio Telegraphic Convention" drawn up at Berlin in 1906 and which was adhered to by the Dominion Government in 1907. A revised International Radio-telegraph Convention was signed by Canada at London in 1912.

Again with a view to consolidating international control of the various types of communication services the International Telecommunications Convention of Madrid 1932 was drawn up and regulations governing all classes of communications were annexed thereto. It was at this time that the International Telegraph Union founded in Paris in 1865 had its title changed to the present "International Telecommunication Union".

Canada was among the countries that signed the Radio-communications Regulations at the Madrid Convention of 1932. It was not until 1937 that Canada signed the Telegraph Regulations. Canada has not yet signed the Telephone Regulations, since in the opinion of the telephone industry in Canada the regulations are too detailed in nature and too restrictive to be in the best interests of telephone communications in Canada.

In 1947 major changes in the ITU Radio Regulations and a revision to its Convention was effected by a Conference in Atlantic City. Every area of these Regulations was expanded in particular the provisions relating to Frequency allocations. This Conference also created a new International Frequency Registration Board (IFRB) which is responsible for controlling the use of the radio spectrum throughout the World. The Administrative Council of the ITU was also created by the 1947 Conference. It supervises the Administrative functions and co-ordinates the activities of the ITU. Canada has been a member of the Council since its inception. ITU Conferences for the purpose of revising its Convention and the Regulations annexed thereto have been held in 1948-51-52-59-63-64-65-66 and 1967. These Conferences have played a significant role in the improvement of telecommunications throughout the World and in particular for Aeronautical and Maritime purposes, Space Telecommunications and Radio Astronomy.

STRUCTURE

There are four permanent organs within the Union:

a) A General Secretariat carries out the every day operation of the Union under the direction of a Secretary-General who is responsible to the Administrative Council for all the Administrative and Financial aspects of the Union's activities. A Deputy Secretary-General assists the Secretary-General and is responsible to him.

b) The International Frequency Registration Board (IFRB) whose activities include the orderly recording of frequency assignments made by the different countries and to furnish advice to members on the use of the spectrum and on interference problems.

c) The International Radio Consultative Committee (CCIR) is a technical committee established to study technical and operating questions relating specifically to radiocommunications and to issue recommendations on them.

d) The International Telegraph and Telephone Consultative Committee (CCITT) is a technical committee established to study technical, operating and tariff questions relating to telegraphy and telephony and to issue recommendations on them.

PREPARATORY WORK FOR CONFERENCES

Under Section 5 of the Radio Act the responsibility for international negotiations respecting telecommunication matters lies with the Department of Communications. Therefore, in preparing for ITU Conferences and Meetings the International Telecommunications Branch initiates and co-ordinates the efforts of all concerned.

Well in advance of a conference a committee or working group is formed to co-ordinate the Canadian input. Problems are defined, recommendations are drafted, and input to the conference, in the form of working papers containing Canadian proposals, is prepared for approval by the Deputy Minister in keeping with overall Canadian policy.

This preparatory work is extensive and detailed, and requires considerable research and study in depth to ensure the best possible presentation of our requirements by the Canadian delegations to these conferences.

The preparatory work for the CCIR and CCITT is covered in greater depth elsewhere in this brief, because of the extensive Canadian participation in the work of these organs.

THE GENERAL SECRETARIAT OF THE I.T.U.

The General Secretariat is under the direction of a Secretary-General who is assisted by a Deputy Secretary-General, both of whom are normally elected by the Plenipotentiary Conference. The Secretary-General is responsible for all administrative and financial services of the ITU including the staff of the specialized secretariats of the CCI's and IFRB. He is directly responsible to the Plenipotentiary Conference and to the Administrative Council during the interval between conferences. The Secretariat is responsible for carrying out the directions of the Plenipotentiary Conference and of the Administrative Council which include the custody and maintenance of records and archives, collection and publication of statistical and technical publications and in general, provides the machinery for fulfilling the main purpose of the Union which is to maintain and extend international cooperation for the improvement and rational use of telecommunications of all kinds.

In addition the Technical Cooperation Department of the General Secretariat fulfills the responsibility of the Union in the technical cooperation field. The technical cooperation activities of the Union are carried out under the United Nations Development Program (UNDP). The UNDP program has two main components: technical assistance and special fund. The technical assistance component is designed to give expert advice to promote technical development, facilitate the exchange of technical skills and train national technicians. The special fund component provides sustained assistance in the telecommunications field, including centers for technical training, test and development centers, applied research institutes, services and studies. In the past, there have been attempts to establish a regular ITU budget for this activity. However, most members, Canada included, continue to resist this proposal to prevent uncoordinated activities and uneconomical duplications of effort. There is also the funds-in-trust arrangement whereby a government provides funds for a specific project and a U.N. organization is selected as the executing agency. The ITU utilizes the above-mentioned methods of rendering aid and in addition seeks the assistance of the more developed countries in supplementing the UNDP program by arranging to provide additional training by convening seminars and providing lecturers.

THE INTERNATIONAL FREQUENCY REGISTRATION BOARD (IFRB)

The IFRB is composed of five independent members elected by the World Administrative Radio Conference for a period of not less than five years. The Board elects annually a Chairman and Vice-Chairman from among its members. The essential duties of the Board which is associated by a specialized secretariat are, inter alia, to effect an orderly recording of frequency assignments, to facilitate effective management of the radio spectrum, to furnish advice to members on invitation from members to resolve cases of harmful interference, technical planning for revised conferences, participation in an advisory capacity in conferences and meetings dealing with the radio spectrum and the study on a long term basis of the utilization of the radio spectrum.

Recently, the role and effectiveness of the ITU has been questioned and discussed and Canada has been one of the countries which feels that the ITU has filled its role in an effective manner recognizing, however, that improvement is always welcome, particularly in the field of telecommunications which involves rapid changes in technology. It is our desire to both strengthen the role and the effectiveness of the ITU in its continuing role as the U.N. specialized agency responsible for all telecommunication matters. Recognizing that this is the responsibility of the Plenipotentiary Conference to be held in 1973, we intend in our preparations for this conference to thoroughly examine the organization and the role of the IFRB and hopefully to strengthen its functional responsibility in a manner which will in turn strengthen the role of the Union.

INTERNATIONAL RADIO CONSULTATIVE COMMITTEE

(CCIR)

1.0 GENERAL

The International Radio Consultative Committee (CCIR) was established in 1927 at the Washington Radio Conference. It is one of the four permanent organs of the International Telecommunications Union (ITU). Its duties are: to study technical and operating questions relating specifically to radiocommunication and to issue recommendations on them. Attachment I gives definitions of symbols and expressions used in the present brief.

2.0 PARTICIPATION

All member countries of the ITU, recognized private operating agencies and scientific or industrial organizations can participate in the work of the CCIR.

3.0 METHODS OF WORK

The CCIR studies technical telecommunication subjects or "Questions" referred to it by:

- the Plenipotentiary Conference of the ITU;
- Administrative Conferences;
- the Administrative Council;
- the International Telegraph and Telephone Consultative Committee (CCITT);
- the International Frequency Registration Board (IFRB);

in addition to those decided upon by its Plenary Assembly (every three years) or, in the interval between Plenary Assemblies, approved by correspondence by at least twenty Members and Associate Members of the ITU.

The Plenary Assembly normally meets every three years and draws up a list of the above Questions, the study of which would lead to improvements in international radio communications. These Questions are then entrusted to a number of Study Groups, composed of experts from different countries. The Study Groups normally hold an Interim meeting during the period which begins

12 months after the close of the Plenary Assembly and terminates 12 months prior to the opening of the next one. They hold a Final meeting from 5 to 2 months prior to the opening of the next Plenary Assembly. The Study Groups develop and approve Study Programmes derived from existing Questions as well as Reports derived from these Questions and Study Programmes. They also draw up Recommendations which are submitted to the next Plenary for approval. If the Assembly adopts these Recommendations, they are published. The Study Groups may also establish Interim Working Parties to expedite the Study of specialized Questions.

There are presently 11 Study Groups, 24 Interim Working Parties and two CCIR/CCITT Joint Commissions administered by the CCIR. Attachment 2 gives the breakdown of these groups and the nature of the Canadian involvement.

In addition, the CCIR is participating in one Joint CCITT/CCIR Study Group, the World Plan Committee, 4 Regional Plan Committees and 3 Joint Special Autonomous Working Parties, all administered by the CCITT.

The CCIR is presently studying 162 Questions, carrying out 159 Study Programmes and has adopted 325 Reports and 181 Recommendations. A total of approximately 750 documents were prepared for the final meetings of the Study Groups in September-October 1969. The last Plenary Assembly (Delhi, 1970) adopted:

- 27 new Questions;
- 37 new Study Programmes;
- 102 new Reports
- 28 new Recommendations;
- amendments to 59 existing Questions;
- amendments to 59 existing Study Programmes;
- amendments to 160 existing Reports;
- amendments to 86 existing Recommendations;

The discussion at the meetings is mainly technical and the Recommendations have an important influence on the activities of telecommunications engineers and technicians, operating administrations and companies, manufacturers and designers of equipment throughout the world. Particular attention also is paid to the study of questions and the formulation of recommendations directly connected with the establishment, development and

improvement of telecommunications in new or developing countries in both the regional and international fields.

4.0 CANADIAN PARTICIPATION

The Canadian input into the CCIR is provided via the Canadian National Organization for CCIR (CNO/CCIR) which is composed of Study Groups subdivided into Working Parties, using the same model as the CCIR. The Working Parties - which are composed of representatives from government departments, crown corporations, manufacturers and common carriers - prepare the first draft of the Canadian documents. These draft documents are then submitted to the Study Groups concerned. They are then submitted to an Executive Committee of the CNO/CCIR for further approval. Finally, the Canadian documents are submitted to the Senior Committee of the DOC for final approval before furtherance to Geneva.

The Executive Committee of the CNO/CCIR was established in February, 1968 to bring together senior engineering and management representatives from government departments and industry to organize Canadian CCIR activity. These representatives are expected to have the authority necessary to assign people, time and other resources to this work and to approve the results. This Committee is chaired by DOC. A list of present members and their positions is given in Attachment 3.

5.0 COST OF PARTICIPATION

The cost of participation for the Canadian Government is covered by its contribution of 18 units to the regular budget of the ITU.

RPOA's and ISO's contribute separately as follows:

RPOA's:

Organization	No. of units	Approx. $ Can.	Participation began
CAB	1/2	937	Feb. 2/65
CBC	1/2	937	Feb. 26/62
COTC	1	1875	April 1/64
RAC	1/2	937	Jan. 1/63
TAC	3	5625	Jan. 1/62
Telesat	1/2	1875	June 18/70

ISO's:

Organization	No. of units	Approx. $ Can.	Participation began
EIA	1/2	937	Jan. 1/62
N.E. Co.	1/2	937	Jan. 1/66
RCA Ltd.	1/2	937	Mar. 4/63

In addition, Government departments, RPOA's and ISO's must provide for the full cost of participation of their representatives at both national and international meetings.

ABBREVIATIONS AND DEFINITIONS OF ACTIVITIES

DEFINITIONS

CAB	Canadian Association of Broadcasters
CAE	Canadian Aviation Electronics
CBC	Canadian Broadcasting Corporation
CCIR	International Radio Consultative Committee
CCITT	International Telegraph and Telephone Consultative Committee
CMTT	CCIR/CCITT Joint Commission for Television Transmission
CMV	CCIR/CCITT Joint Commission on Vocabulary
COTC	Canadian Overseas Telecommunication Corporation
CNO/CCIR	Canadian National Organization of the International Radio Consultative Committee
CRC	Communications Research Centre
DND	Department of National Defence
DOC	Department of Communications
DTI	International Telecommunications Branch
DTR	Telecommunications Regulations Branch
EIA	Electronic Industries Association
EMR	Department of Energy, Mines and Resources
IFRB	International Frequency Registration Board
ISO	Industrial or Scientific Organization
MOT	Ministry of Transport
N.E. Co.	Northern Electric Company
NRC	National Research Council
RAC	Railway Association of Canada
RCA Ltd.	Radio Corporation of America Ltd.

DEFINITIONS

RPOA	Recognized Private Operating Agency
TAC	Telephone Association of Canada
UTC	Coordinated Universal Time
Monitoring	This activity involves: - attendance at conferences as an observer; - examination of the documents received from other Administrations or the Secretariat of the International Radio Consultative Committee; - assessment of the above documents, in consultation with the Canadian entities concerned, to find out whether any of these Draft proposals, Study Programmes, Questions and, especially, Draft Recommendations affect Canadian interests and require action.
Active	This activity involves: - preparation of Canadian documents and related studies; - attendance at conferences as active participants; - monitoring, as defined in the present Annex.
MHz	Megahertz: one million cycles per second
kHz	Kilohertz: one thousand cycles per second
GHz	–

CCIR ORGANIZATION'S OPERATION

A. STUDY GROUPS

Study Group		Canadian Involvement*	
No.	Name	Unit	Comments
1	Spectrum utilization Monitoring	DOC/DTI	Active
		DOC/DTR	Active
		COTC	Active
		TAC	Active
2	Space research and radioastronomy services	DOC/DTI	Active
		DOC/CRC	Active
		NRC	Active
		MOT	Active
3	Fixed services below about 30 MHz	DOC/DTI	Active
		DOC/DTR	Active
		TAC	Active
4	Fixed services using satellites	DOC/DTI	Active
		DOC/DTR	Active
		DOC/CRC	Active
		DND	Active
		NRC	Monitoring only
		CBC	Monitoring only
		TAC	Active
		RAC	Active
		RCA Ltd.	Active
		N.E. Co.	Active
		EIA	Active
		Telesat	Active
5	Propagation in non-ionized media	DOC/DTI	Monitoring only
		DOC/DTR	Active
		DOC/CRC	Active
6	Ionospheric propagation	DOC/DTI	Monitoring only
		DOC/DTR	Active
		DOC/CRC	Active
		CBC	Active

* See Attachment 1 for list of abbreviations and explanation of comments.

Study Group		Canadian Involvement*	
No.	Name	Unit	Comments
7	Standard frequency and time-signal services	DOC/DTI	Monitoring only
		NRC	Active
		CAE Ltd.	Active
		EMR	Active
8	Mobile services	DOC/DTI	Active
		DOC/DTR	Active
		DOC/CRC	Active
		MOT	Active
		DND	Active
		TAC	Active
		EIA	Active
		RAC	Active
9	Fixed services using radio-relay systems	DOC/DTI	Active
		DOC/DTR	Active
		CBC	Monitoring only
		RCA Ltd.	Active
		N.E. Co.	Active
		TAC	Active
		EIA	Active
		RAC	Active
10	Sound broadcasting services	DOC/DTI	Active
		CBC	Active
		RCA Ltd.	Active
		CAB	Active
11	Television broadcasting service	DOC/DTI	Active
		CBC	Active
		CAB	Active
		TAC	Active
		RCA Ltd.	Active
CAV	CCIR/CCITT Joint Commission on Vocabulary	DOC/DTI	Monitoring only
CMTT	CCIR/CCITT Joint Commission for television and sound transmissions	DOC/DTI	Active
		DOC/DTR	Active
		CBC	Active
		TAC	Active
		RAC	Active
		CAB	Active
		N.E. Co.	Active

* See Attachment 1 for list of abbreviations and explanation of comments.

B. INTERIM WORKING PARTIES

Working Party		Canadian Involvement*	
No.	Name	Unit	Comments
1/1	Classification and designation of emissions	DOC/DTI	Monitoring only
1/2	Radio interference	DOC/DTI	Monitoring only
1/3	Typical receivers	DOC/DTI	Monitoring only
4/1	Technical factors affecting the efficient use of the geo-stationary satellite orbit	DOC/DTI RCA Ltd.	Active Active
5/1	Tropospheric propagation data for broadcasting, space and point-to-point communications	DOC/DTI	Monitoring only
5/2	Influence of the non-ionized regions of the atmosphere on wave propagation	DOC/DTI	Monitoring only
5/3	Prediction of phase and amplitude of ground waves	DOC/DTI	Monitoring only
6/1	Sky-wave field strength and transmission loss at frequencies between the approximate limits of 1.5 and 40 MHz	DOC/DTI	Monitoring only
6/2	Revision of atmospheric radio noise data	DOC/DTI	Monitoring only

* See Attachment 1 for list of abbreviations and explanation of comments.

Working Party		Canadian Involvement*	
No.	Name	Unit	Comments
6/3	Basic long-term ionospheric predictions	DOC/DTI DOC/CRC	Monitoring only Active
6/4	Sky-wave propagation at frequencies between approximately 150 and 1500 kHz	DOC/DTI	Monitoring only
6/5	Sky-wave propagation at frequencies below 150 kHz	DOC/DTI DOC/CRC	Monitoring only Active
6/6	Fading of signals propagated by the ionosphere	DOC/DTI	Monitoring only
6/7	Short-term predictions of operational parameters for ionospheric radio communications	DOC/DTI DOC/CRC	Monitoring only Active
6/8	VHF Propagation by Sporadic E	DOC/DTI	Monitoring only
7/1	UTC system	DOC/DTI NRC	Monitoring only Active
7/2	Forms of expression of all kinds and the conditions of their use in the standard frequency and time signal service	DOC/DTI NRC	Monitoring only Active
9/1	Hourly mean noise objective	DOC/DTI TAC	Monitoring only Active
10/1	Determination of the subjective loudness of a broadcasting programme	DOC/DTI	Monitoring only

* See Attachment 1 for list of abbreviations and explanation of comments.

Working Party		Canadian Involvement*	
No.	Name	Unit	Comments
11/1	Assessment of the quality of pictures in television systems	DOC/DTI CBC	Monitoring only Active
CIV/1	Terms and definitions	DOC/DTI	Monitoring only
CIV/2	Terms relative to reliability	DOC/DTI	Monitoring only
CIV/3	Terms and definitions relating to sound and video recording	DOC/DTI	Monitoring only
PLEN/2	Possible broadcasting satellite systems and their relative acceptability	DOC/DTI	Active

* See Attachment 1 for list of abbreviations and explanation of comments.

CNO/CCIR Executive Committee Representatives

Organizations	Representatives	Addresses
Canadian Association of Broadcasters (CAB)	Mr. W.A. Caton	Technical Consultant, C.A.B., 85 Sparks St., Box 627, Stn. B., Ottawa, Ontario
Canadian Broadcasting Corporation (CBC)	Mr. R.D. Cahoon	Vice-President, Engineering, C.B.C., P.O. Box 478, Terminal "A", Ottawa 2, Ontario
Canadian Overseas Telecommunications Corporation (COTC)	Mr. D.V. Doran-Veevers	Executive Assistant to Vice-President, Engineering and Operations, C.O.T.C., 625 Belmont Street, Montreal 101, P.Q.
Department of National Defence (DND)	Mr. J.R. Eaton	Director of Communications Systems Engineering, Canadian Forces Headquarters, D.N.D. Ottawa 4, Ontario Attn: J.R. Eaton (DCSE 2-2)
Electronic Industries Association of Canada (EIA)	Mr. D.V. Carroll	President, TMC Canada Ltd., R.R. #5, Ottawa, Ontario
Northern Electric Company Limited (N.E. Co.)	Mr. A. Curran	Manager, Systems Studies, N.E. Co. Ltd., P.O. Box 3511, Stn. C, Ottawa, Ontario

Organizations	Representatives	Addresses
Railway Association of Canada (RAC)	Mr. G.R. Groome	Senior Radio Engineer, Telecommunications Dept., Canadian Pacific Railway Company, Place du Canada, Montreal 3, P.Q.
Radio Corporation of America Ltd. (RCA Ltd.)	Mr. J.G. Leahy	Manager, Communications Systems, RCA Limited, 1001 Lenoir Street, Montreal 30, P.Q.
The Telephone Association of Canada (TAC)	Mr. J.L. Wilson	Chairman, Technical Committees, T.A.C., 1060 University, Montreal, P.Q.
Department of Communications (DOC)	Mr. W.J. Wilson	Director, Telecommunications Regulations Branch, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario
Department of Communications (DOC)	Mr. J.R. Marchand (Chairman)	Director, International Telecommunications Branch, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario
Department of Communications (DOC)	Mr. F.G. Perrin (Secretary)	Chief, International Arrangements Division, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario

Name and Affiliations of the Canadian Delegates at the Final Meeting of the CCIR Study Groups in Geneva, 1969

Head of delegation

A.G.W. Timmers	Department of Communications, International Telecommunications Branch, Berger Building, 100 Metcalfe Street Ottawa 4, Ontario

Deputy head of delegation

W.A.C. Schultz	Department of Communications, International Telecommunications Branch, Berger Building, 100 Metcalfe Street Ottawa 4, Ontario

Delegates

E.R. Allan	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
F. Banks	Northern Electric Laboratories, Department 8332, P.O. Box 3511, Station C, Ottawa, Ontario.
Dr. B.C. Blevis	Department of Communications, Communications Research Centre, Shirley Bay, Ottawa, Ontario.

G.C. Brooks	Department of Communications, Telecommunications Regulations Branch, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario.
J.J. Brownlee	Canadian Overseas Telecommunications Corporation 625 Belmont Street, Montreal, P.Q.
G. Courtemanche	Department of Communications, International Telecommunications Branch, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario.
A. Curran	Northern Electric Co. Ltd., P.O. Box 3511, Station C, Ottawa, Ontario.
B. Duke	Canadian Broadcasting Corporation, 7925 Cote Saint Luc Road, Montreal 29, P.Q.
R.C. Eldridge	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
I. Godier	Northern Electric Co. Ltd., P.O. Box 3511, Station C, Ottawa, Ontario.
L.C. Goodyy	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.

H.F. Hannay	Northern Electric Co. Ltd., P.O. Box 3511, Station c, Ottawa, Ontario
Dr. J.T. Henderson	National Research Council, Applied Physics Division, Ottawa 7, Ontario
P. Hervieux	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
J.A. Jarvis	Northern Electric Co. Ltd., P.O. Box 3511, Station C, Ottawa, Ontario
D. Jung	RCA Victor Ltd., Space Systems Division, 1001 Lenoir Street West, Montreal, P.Q.
C. Lemieux	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
B.W. Cosman	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
J. Myles	Department of Transport, Telecommunications and Electronics Branch, Ottawa 4, Ontario
L. Petrie	Department of Communications, Communications Research Centre, Shirley Bay, Ottawa 2, Ontario
A. Piechota	The Railway Association of Canada, 151 Front Street W., Toronto, Ontario
E.B. Powell	Department of Transport, Telecommunications and Electronics Branch, Ottawa 4, Ontario

C.A. Siocos	Canadian Broadcasting Corporation, 7925 Cote Saint Luc Road, Montreal 29, P.Q.
J.C. Tremblay	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
G. Tutt	Department of Communications, Telecommunications Regulations Branch, Berger Building, 100 Metcalfe Street, Ottawa 4, Ontario
H. Van Allen	The Telephone Association of Canada, 1050 Beaver Hall Hill, Montreal, P.Q.
J.L. Wilson	The Telephone Association of Canada, 1060 University, Montreal, P.Q.

Chairmanships held by Canadian delegates

Affiliation	Name		Working Group	Sub Group	Sub sub group
	Chairman	Secretary			
Department of Communications	A.G.W. Timmers	G.C. Brooks	IX-D		
	W.A.C. Schultz	J. Myles	IV-D		
	G. Courtemanche		XIII-E		IV-A-1-c
	G.C. Brooks			IX-D-5	
	G. Tutt			XIII-A--(1)**	
	B.C. Blevis			IV-A-2	
	L. Petrie		VI-E		
Department of Transport	E.B. Powell				IV-D-4--(1)**
	J. Myles			IV-D-3	
Telephone Association of Canada	R.C. Eldridge			XIII-C-4 and XIII-C-5	
	L.C. Gooddy			CMTT-A-2	
	C. Lemieux			XIII-B-3	
Canadian Broadcasting Corporation	C.A. Siocos			XI-E-2	
R.C.A. Ltd.	D. Jung				IV-A-4-a
Northern Electric Co.	F.M. Banks	A. Piechota***		IV-B-1	
	I. Godier			IX-A-2	
	A. Curran	H.F. Hannay	CMTT-A		

* See Attachment 6 for the terms of reference of the various groups.

** No specific symbol was assigned to these groups.

*** Affiliated with the Railway Association of Canada.

ANNEX D
Attachment 5

Terms of reference of various groups

Symbol	Terms of reference
IV-A-1-c	To correct Tables in draft Report L.3.a(IV) on the feasibility of sound and television broadcasting from satellites.
IV-A-2	Choice of frequencies, orbits and systems.
IV-A-4-a	To amend draft Report L.2m(IV) on the use of pre-emphasis in frequency - modulation systems.
IV-B-1	Coordination procedures and mechanics of interference characteristics.
IV-D	Communication and radiodetermination satellite services for aircraft and ships.
IV-D-3	Communication satellite systems for aircraft and ships.
IV-D-4--(1)	To study the human-machine interface problem of a radiocommunication satellite service for aircraft and ships.
VI-E	Basic observations and long-term predictions for ionospheric mapping.
IX-A-2	Radio-relay systems for the transmission of pulse-code modulation and other types of digital signals.
IX-D	Radio-relay system characteristics.
IX-D-5	To amend draft Report E.5.d(IX) on preferred characteristics for the simultaneous transmission of television and a maximum of four sound channels.
XI-E-2	Recommended characteristics for collective and individual antenna systems for domestic reception of signals from terrestrial transmitters.
XIII-A--(1)	To expand an existing Question and draft a new Report on the preferred technical characteristics of single-sideband equipment.

Symbol	Terms of reference
XIII-B-3	To draft a new Report on radio-paging systems.
XIII-C-4	To draft a new Recommendation for the preferred characteristics of systems using linked compressor and expandor techniques.
XIII-C-5	To draft a new Study Programme to study in more detail the actual performance of a "lincompex" system.
XIII-E	Operational requirements for maritime and aeronautical services using satellite techniques
CMTT-A	Television transmission standards.
CMTT-A-2	To revise Parts 1 and 5 of draft Report E.5.t (CMTT) on the transmission characteristics of television circuits intended for use in international connections.

INTERNATIONAL TELEGRAPH AND TELEPHONE CONSULTATIVE COMMITTEE

(C.C.I.T.T.)

1. GENERAL

One of the two Consultative Committees of the International Telecommunications Union which according to its charter has as its other permanent organs a General Secretariat and the International Frequency Registration Board (I.F.R.). Article 3 of the Convention states that the seat of the Union shall be at Geneva. In the headquarters buildings at Number 2 rue Varembe which was built for the I.T.U., the Director of the C.C.I.T.T. and his small specialized secretariat can be found.

The C.C.I.T.T. was formed at the end of 1956 as a result of the merger of two older Consultative Committees of the I.T.U. These were the International Telephone Consultative Committee (C.C.I.F.) and the International Telegraph Consultative Committee (C.C.I.T.).

2. MEMBERSHIP

Any country or group of territories which ratifies the I.T.U. Convention is entitled to participate in all conferences of the Union and shall be eligible for election to any of its organs. Thus the C.C.I.T.T. has as members

a) "of right, the administrations of all Members and Associate Members of the Union";

b) "any recognized private operating agency which, with the approval of the Member ... recognizing it

applies to participate in the work of the Committee. Any scientific or industrial organization engaged in the study of Telecommunications problems or the design or manufacture of equipment for Telecommunications services may be admitted to participate in an advisory capacity, with the approval of the administration of the country concerned. The approved request from a recognized private operating agency is addressed to the Secretary General of the I.T.U. whereas the request from a scientific or industrial organization is addressed to the Director of the C.C.I.T.T. The International Organizations carry on work related to telecommunications may be admitted to participate in the C.C.I.T.T. in an advisory capacity providing that a majority of the Members of the Union agree to the requests of such an International Organization.

The Government of Canada, formerly through the Department of Transport and currently through the Department of Communications, has participated in the work of the C.C.I.T.T. since its formation at the end of 1956. The Government of Canada also participated in the work of the C.C.I.F. and C.C.I.T. prior to the merger of these bodies into the C.C.I.T.T.

A number of Canadian organizations hold membership in the C.C.I.T.T. as Recognized Private Operating Agencies or participate as Scientific or Industrial Organizations. These are indicated below together with the dates on which their association with the C.C.I.T.T. began.

Recognized Private Operating Agencies (RPOA's):

Telephone Association of Canada (TAC)	1 Jan 1957
Canadian Overseas Telecommunication Corporation (COTC)	19 Aug 1963
Railway Association of Canada (RAC)	1 Jan 1964
Telesat Canada	1 Jul 1970

Scientific or Industrial Organizations (ISO's):

Northern Electric Company Ltd (N.E. Co.)	1 Jan 1962

Prior to their membership in the C.C.I.T.T., the TAC was also a member of the C.C.I.F. since 1954. In the case of COTC and RAC, these organizations which preceded it through representation on Canadian Government Delegations. Montreal Engineering Company Limited participated as a Scientific or Industrial Organization from 1 September 1964 to 31 July 1969.

3. PURPOSES OF THE C.C.I.T.T.

It is the function of the C.C.I.T.T. to formulate recommendations for the development and improvement of telecommunications on a worldwide basis. This entails studying the design, operation and maintenance of networks and facilities which participate in the provision of international telecommunications. National networks and international facilities are therefore involved. Its duties are set by the I.T.U. Convention as follows:

> "The duties of the International Telegraph and Telephone Consultative Committee (C.C.I.T.T.) shall be to study technical, operating and tariff questions relating to telegraphy and telephony and to issue recommendations on them."
>
> "In the performance of its duties, each Consultative Committee shall pay due attention to the study of questions and to the formulation of recommendations directly connected with the establishment, development and improvement of telecommunication in new or developing countries in both the regional and international fields."
>
> "At the request of the countries concerned, each Consultative Committee may also study and offer advice concerning their national telecommunication problems. The study of such problems should be in accordance with the following:

The questions to be studied by the C.C.I.T.T., on which it shall issue recommendations, shall be those referred to it by the Plenipotentiary Conference, by an Administrative Conference, by the Administrative Council or by the C.C.I.R., in addition to those decided upon by the Plenary Assembly of the C.C.I.T.T."

Specifically, the C.C.I.T.T. issue recommendations concerning the international telephone and telegraph services. These recommendations deal with matters such as transmission objectives, traffic routing, numbering plans, signaling arrangements, maintenance, operation, tariff principles and the settlement of accounts. The recommendations also deal with the technical and operating aspects of other services such as data, facsimile, visual telephone, audio program and television.

Transmission systems are also studied by the C.C.I.T.T. In the case of communication satellite systems, for example, recommendations are issued regarding their use and integration into the world telecommunications network.

The C.C.I.T.T. also maintains a small test laboratory in Geneva, Switzerland.

The Plenary Assembly of the C.C.I.T.T. is authorized to submit to the administrative telegraph and telephone conference proposals arising directly from C.C.I.T.T. recommendations or from findings on questions under study. The C.C.I.T.T.also developed through the World Plan Committee and associated regional plan committees a General Plan for the international telecommunication network to help in planning international telecommunications services. The Plan Committee shall receive questions the study of which is of particular interest to new or developing countries and refers them to the C.C.I.T.T., and to the C.C.I.R. which is associated in the World Plan Committee.

4. RIGHTS AND OBLIGATIONS

The Government of Canada (Department of Communications) as a signatory to the I.T.U. Convention exercises Canada's vote in the C.C.I.T.T. When the issue concerns the study program or the Recommendations, Canada's vote reflects a concensus of industry and government telecommunications policy. In general, formal voting occurs at plenary sessions and not at study group meetings. When a question related to Canadian foreign policy arises advice is sought from the Department of External Affairs according to circumstances. The last occasion of this kind was at the Plenary Assembly in 1962 when the question of telephone numbers for Eastern Germany arose. As the allocation of such a number might imply diplomatic recognition it could not be settled purely on technical grounds. It is the custom of the C.C.I.T.T. to restrict formal voting to administrative matters such as the election of the director.

RPOA's and ISO's do not have voting rights but RPOA's can be authorized by their Governments to vote on the latter's behalf. The authorization of the Minister of Communications would be required for each meeting at which this was to be done and the representatives of the Canadian RPOA's as a whole and regardless of their number could exercise Canada's vote.

Participants of all categories in the C.C.I.T.T. have the right to contribute documents to the study of questions set in the authorized program of the C.C.I.T.T. and to receive the documents of the study groups in which they register. List of the study groups and plan committees is attached. As a condition for participation of national recognized agencies, all countries expect some coordination at the national level.

In the matter of obligations, Canada, as a country with one of the most highly developed and advanced networks in the world, has a moral obligation to participate in the work of the C.C.I.T.T. It is, therefore, incumbent on the Department of Communications and the Canadian organizations which have established and operate the Canadian telecommunications network, to maintain an active participation in the C.C.I.T.T.

5. METHOD OF PARTICIPATION

The C.C.I.T.T. organizes its work in the form of questions which are assigned to study groups. The questions are studied during study periods which last from 3-4 years. At the end of a study period, a Plenary Assembly is held which reviews the work carried out, approves the recommendations issued, sets down the questions to be studied in the succeeding study period, establishes the study groups necessary for the study of the questions and appoints the Director of the C.C.I.T.T., the Study Group Chairmen and Vice-Chairmen.

Governments, RPOA's or ISO's contribute to the study of questions that are of particular importance to them. This is done through the preparation of documents containing their views and submitting these documents to the C.C.I.T.T. which in turn distributes copies to the membership. The amount of co-ordination of such documents at the national level is a national responsibility.

At appropriate intervals during a study period, study group meetings are held to discuss the documents contributed, develop replies to questions and draft recommendations where indicated. In general, from one to three meetings are held by most study groups within a study period. The meetings are mainly held in Geneva but occasionally some are held in member countries; e.g., meetings in Canada (Montreal) in 1962 and 1970.

At the end of each study period, the recommendations and opinions of the C.C.I.T.T. are published by the I.T.U. These publications are in the form of books and manuals.

Within the current study period which extends from 1968 to 1972, some 300 questions are to be dealt with. These are distributed among 36 study groups and working parties. In addition, there are 5 Plan Committees which are concerned with the planning of international facilities in different regions of the world.

Three positions of Study Group Chairmen and Vice-Chairmen are currently filled by Canadians, two from the Department of Communications and one from the Ministry of Transport. A representative of TAC was nominated by the Canadian Delegation at Mar del Plata in 1968 but failed to be elected.

In the work of the study groups, the Canadian participants in the C.C.I.T.T., i.e., Government RPOA's and ISO's usually document their views, in their own name, on those C.C.I.T.T. questions which are relevant and important to their activities. As there is not formal review of these contributions in Canada before they are sent to Geneva the participating agencies are expected to review with other recognized agencies in Canada any item in which there is common interest. Copies are sent to the Department of Communications and other affected agencies. This is done in time for review and if the contribution is felt by other interested agencies to be controversial in respect to an area of common interest between two Canadian RPOA's it is the prerogative of the Department of Communications to cause the contribution to be withdrawn.

In the debates at study group meetings, the Canadian participating organizations also express their views in their own names. Naturally there are occasions when other countries ask to know what is Canada's position as a country and Canadian participants have to have some answer to that question. If a representative of the Department of Communications is present, the question is expected to be answered by him. At Plenary Assemblies, all Canadian participants form part of the Government Delegation which is headed by a member of the Department of Communications. Representatives of Canadian RPOA's and ISO's, when invited to be on the Canadian Delegation, act in the capacity of advisers to the Head of the Delegation and assist in the capacity of advisers to the Head of the Delegation and assist him in arriving at the Canadian opinion should voting be required. When the Department of Communications is unable to send a qualified participant to a study group meeting, Canadian participants are sometimes asked by the Department of Communications to report on vital issues as they observe them in the study group meeting.

6. COST OF PARTICIPATION

Canadian RPOA's and ISO's make direct contributions to the C.C.I.T.T., the amount per unit-class being settled at the Administrative Council each year. A Department of Communications representative attends. The annual contributions currently made are indicated below and are in keeping with those made by comparable participants in other

countries, the number of units being selected on a voluntary basis. In the same way each country is free to elect the size of its national contribution made by its government to the I.T.U. The Canadian Government is presently contributing approximately $250,000 per year which is a contribution made to the total budget of the I.T.U.

Recognized Private Operating Agencies	Unit-Class	Amount (approx)
Telephone Association of Canada	3	$6000
Canadian Overseas Telecommunication Corporation	3	$6000
Railway Association of Canada	1	$2000
Telesat	½	$1000

Scientific or Industrial Organizations	Unit-Class	Amount (approx)
Northern Electric Company Ltd	½	$1000

Canadian participants in the C.C.I.T.T. also incur additional expenses in connection with the preparation of documents, studies and travel. The amounts involved vary depending on the activity of the participant. For example, in the case of The Telephone Association of Canada which is an active participant and a major contributor of documents, current annual expenditures over and above the direct contribution to the C.C.I.T.T. amount to about $80,000 - $90,000.

Expenditures are also incurred by Canadian participants in connection with such matters as hosting C.C.I.T.T. meetings in Canada. In June and July 1970, for example, a number of C.C.I.T.T. study groups met in Montreal. The cost involved was of the order of $75,000 - $100,000 and borne by the Canadian RPOA's.

C.C.I.T.T. LIST OF STUDY GROUPS AND PLAN COMMITTEES

Abbreviated Designation		Title	Interested Canadian Private Organizations
COM I	Study Group I	Telegraph operation and tariffs (including telex)	RAC; COTC
COM II	Study Group II	Telephone operation and tariffs	TAC; COTC
COM III	Study Group III	General tariff principles; lease of telecommunications circuits	RAC; TAC; COTC; Telesat
COM IV	Study Group IV	Transmission maintenance of international lines, circuits and chains of circuits	COTC; TAC
COM V	Study Group V	Protection against dangers and disturbances of electromagnetic origin	TAC; N.E. Co; RAC
COM VI	Study Group VI	Protection and specifications of cable sheaths and posts	TAC; N.E. Co; RAC
COM VII	Study Group VII	Definitions and symbols	(will be combined CCIR symbols group)
COM VIII	Study Group VIII	Telegraph equipment and local connecting lines	COTC; RAC
COM IX	Study Group IX	Telegraph transmission quality; specification of equipment and rules for the maintenance of telegraph channels	COTC; RAC
COM X	Study Group X	Telegraph switching	COTC; RAC
COM XI	Study Group XI	Telephone switching and signalling	COTC; TAC; N.E. Co.
COM XII	Study Group XII	Telephone transmission performance and local telephone networks	COTC; TAC; N.E. Co.
COM XIII	Study Group XIII	Automatic and semi-automatic telephone networks	COTC; TAC; N.E. Co.

Abbreviated Designation		Title	Interested Canadian Private Organizations
COM XIV	Study Group XIV	Facsimile telegraph transmission equipment	Telesat; COTC
COM XV	Study Group XV	Transmission systems	COTC; TAC; Telesat; N.E. Co.
COM XVI	Study Group XVI	Telephone circuits	COTC; TAC; Telesat; N.E. Co.
COM SP. A	Study Group Special A	Data transmission	Telesat; COTC; RAC TAC; N.E. Co.
COM SP. C	Study Group Special C	Noise (joint CCIR/CCITT Study Group administered by the CCITT)	COTC; Telesat; RAC; N.E. Co. TAC
COM SP. D	Study Group Special D	Pulse code modulation	Telesat; COTC; RAC; TAC; N.E. Co.
C.M.T.T.	Joint Study Group on Television Transmission	Television transmission (Joint CCITT/CCIR Study Group administered by the CCIR)	RAC; TAC; N.E. Co.
WORLD PLAN	World Plan Committee	World-wide telecommunication plan (Joint CCITT/CCIR Study Group, administered by the CCITT)	Telesat; COTC; TAC; N.E. Co.
PLAN AFRICA	Africa Plan Committee	Telecommunication Plan for Africa (Joint CCITT/CCIR Study Group, administered by the CCITT)	COTC
PLAN ASIA	Plan Committee for Asia, Oceania, Australia	Telecommunication Plan for Asia, Oceania, Australia (Joint CCITT/CCIR Study Group, administered by the CCITT)	COTC
PLAN LATIN AMERICA	Latin America Plan Committee	Telecommunication plan for Latin America (Joint CCITT/CCIR Study Group, administered by the CCITT)	COTC; TAC; N.E. Co.
PLAN EUROPE	Plan Committee for Europe and the Mediterranean Basin	Telecommunication plan for Europe and the Mediterranean Basin (Joint CCITT/CCIR Study Group, administered by the CCITT)	COTC

JOINT WORKING PARTIES

Abbreviated Designation	Title	Study Groups Concerned	Interested Canadian Private Organization
GM TAF	Tariffs (Africa)	I, II, III	
GM TAL	Tariffs (Latin America)	I, II, III	
GM TAS	Tariffs (Asia)	I, II, III	
GM TEUR	Tariffs (Europe)	I, II, III	
GM ALP	Use of alphabet no. 5	I, VIII, X, Sp.A	RAC; N.E. Co.
GM TGX	Worldwide telex and gentex routing plan	I, IX, X	COTC; RAC
GM LTG	Use of telephone-type lines for purposes other than telephony	IX, XIV, XV, Sp. A, Sp. C	TAC; N.E. Co; RAC
GM MAT	Automatic telegraph maintenance	IX, VIII, X	RAC
GM FT 6	Field trials of system no. 6	XI, XIII	COTC; TAC; N.E. Co.
GM PFP	Protection of power-feeding systems	V, XV	RAC; N.E. Co.
GM PAR	Protective devices	V, VI (+ CIGRE)	RAC; N.E. Co.
GM CDF	Protection against lighting	V, VI	RAC; N.E. Co.
GM TER	Earthing systems	IV, V, VI, XI, XV	RAC; N.E. Co.
GM NRD	New networks for data transmission	I, IX, X Sp. A	RAC; TAC; N.E. Co.

AUTONOMOUS SPECIALIZED WORKING PARTIES

FOR BACKGROUND STUDIES OF INTEREST TO THE DEVELOPING COUNTRIES

Abbreviated Designation	Title	Interested Canadian Private Organization
GAS 3	Economic and technical comparison of transmission systems	TAC; RAC; Telesat; N.E. Co.
GAS 4	Primary power sources	TAC; RAC; N.E. Co.
GAS 5	Economic conditions and telecommunications development	Telesat; COTC; TAC

INTERNATIONAL TELECOMMUNICATIONS SATELLITE CONSORTIUM

1.0 GENERAL

The International Telecommunications Satellite Consortium, (INTELSAT) was formed in 1964 when the representatives of eleven countries, (including Canada) entered into an Agreement establishing interim arrangements for a global commercial communication satellite system.

One of the features of this inter-governmental agreement is the establishment by a Special Agreement of the Interim Communications Satellite Committee, (ICSC) as the governing body of INTELSAT to exercise the function and utilize the powers set forth in Article I of the Agreement. The ICSC makes all policy and other important decisions and is assisted in its work by three Advisory Subcommittees on Finance, (ICSC/F), Technical Matters, (ICSC/T), and Contracting Procedures, (ICSC/C).

Article VIII of the Agreement also provides that the Communications Satellite Corporation, (COMSAT) shall act as Manager for INTELSAT subject to the general policies of the ICSC and in accordance with the specific determinations it makes from time to time.

2.0 MEMBERSHIP

Under Article XII of the Agreement, membership in INTELSAT is open to the government of any state which is a member of the International Telecommunication Union. The Agreement establishing the principles and organization structure of INTELSAT was signed for Canada by the Minister of External Affairs as one of the eleven original signatories at a formal ceremony in Washington on August 20, 1964. At the date of writing, the membership had grown to 76. A list of member countries is given in Attachment I.

The Special Agreement establishing the ICSC to cover the commercial, technical, financial and operating aspects of the global satellite system was signed at the same place and date by Canadian Overseas Telecommunication Corporation. Both Agreements entered into force that same day.

A supplementary agreement on arbitration for the settlement of legal disputes was signed by Canada in Washington June 4, 1965, and entered into force November 21, 1966. All three Agreements remain in effect until the entry into force of the Definitive Arrangements which are presently being discussed at government level.

3.0 PURPOSES

The principles which underline the formation of INTELSAT are given in the preamble to the inter-governmental Agreement and

include the establishment of a single global commercial satellite system as part of an improved global communication network providing expanded services to all areas of the world, and which will contribute to world peace and understanding.

3.1 The Interim Communications Satellite Committee, (ICSC) was formed to give effect to these provisions and assume policy control and direction for the design, development, establishment, maintenance and operation of the space segment of the global commercial communications satellite system. Present members of the ICSC are given in Attachment 2.

3.2 The Advisory Sub-committees advise and assist the Interim Committee at its request in the performance of its functions under the inter-governmental and Special Agreements.

The Sub-committees report periodically to the Committee in accordance with the rules of procedure, and as may be directed by the Chairman of the Committee.

3.2.1 The Advisory Sub-committee on Finance, (ICSC/F) performs the following number of continuing tasks:-

a) Reviews periodically all direct and indirect costs incurred by the Manager, performs a continuing analysis of the form and contents of budgets, and prepares statements of the financial condition.

b) Reviews depreciation and other accounting policies followed in INTELSAT accounts.

c) To study and advise on the financial aspects of the global satellite systems.

Canada presently provides the Chairman for the ICSC/F.

3.2.2 The Advisory Sub-committee on Technical Matters, (ICSC/T) performs a large number of continuing essential tasks:-

a) It studies and advises the Committee on the technical aspects of the satellite system with a view towards an improved global telecommunications network.

b) It makes recommendations on the transmission characteristics and parameters on satellites and earth stations.

c) It reports on the technical and operational matters under consideration by the consultative bodies of the I.T.U.

d) It advises on matters of co-ordination with other satellite systems.

Both Canadian Overseas Telecommunication Corporation and the Department of Communications provide participating members on the technical Sub-committee.

3.2.3 The Advisory Sub-committee on Contracting Procedures, (ICSC/C) performs the following continuing tasks:-

a) Reviews semi-annually contracting procedures and principles in the light of actual contracting experience.

b) Reviews and makes quantitative assessment of the division of work performed by the Manager himself and that performed by outside contractors.

c) Reviews the division of work performed internally in research and development and other contracts.

d) Reviews INTELSAT patent policy.

On behalf of Canada, Canadian Overseas Telecommunication Corporation provides a representative on the ICSC/C.

3.3 The Communications Satellite Corporation, (COMSAT) was established in the United States following the passing of the Satellite Communications Act by Congress in 1962 and has an unusual status since it acts in two different capacities:-

a) As Manager for INTELSAT;

b) As the U.S.A. member on the ICSC.

3.4 The Canadian Overseas Telecommunication Corporation, established by an Act of Parliament in 1949, actually began active work in the field of satellite communications in

1961 by participation in a Commonwealth Satellite Communication Team to study the technical and economic feasibility of a Commonwealth Satellite System.

4.0 RIGHTS AND OBLIGATIONS

As a signatory to the Agreements, Canada obtains the right to invest in and utilize the global system. The level of investment is proportional to the anticipated usage of the system. It also allows the Canadian Overseas Telecommunication Corporation to enter directly into appropriate traffic arrangements and rate and tariff agreements with respect to the use of channels of communication provided by the system established under this agreement.

5.0 METHOD OF PARTICIPATION

In accordance with Article IV of the agreement, the Interim Communications Satellite Committee (ICSC) is composed of one representative from each of the signatories to the Special Agreement whose initial investment quota is not less than 1.5 per cent, and one representative from any two or more signatories to the Special Agreement whose combined quotas total not less than 1.5 per cent and which have agreed to be so represented.

The Canadian Overseas Telecommunication Corporation is the entity designated to participate for Canada through representation on the ICSC. The original Canadian Overseas Telecommunication Corporation investment quota amounted to a 3.75 per cent share and since the interest of each participant is reduced pro-rata to accommodate new parties to the agreement, this is now approximately 3.25 per cent, but is still the fifth largest among the participants and provides a significant indication of Canada's major role in world-wide communications. Pursuant to Article V of the Agreement, each signatory or group of Signatories to the Special Agreement represented on the Committee shall have a number of votes equal to its investment quota, or to their combined quotas as the case may be.

Most dicisions taken by the Committee have been by consensus rather than by formal voting. When unanimity cannot be achieved, the Committee takes decisions on important matters, (those listed in Article V of the Agreement) by the concurrence of representatives whose total votes exceed the vote of the representative with the largest vote by not less than 12.5 per cent.

6.0 COST OF PARTICIPATION

The expenditures and committments to date towards the cost of the design, development, constructions and establishment of the space segment amount to an estimated U.S. $200,000,000 for all Signatories to the special agreement. The Canadian Overseas Telecommunication Corporation share amounts to U.S. $7,500,000.

7.0 BENEFITS DERIVED

Canada benefits greatly from the communication facilities made available through the global satellite system, as much of our overseas traffic growth is now handled via satellite.

In representing Canada at the meetings of the ICSC, C.O.T.C., in consultation with the D.O.C. and other government departments, plays an active part in influencing and determining the important policy making decisions.

Membership in the Consortium gives Canada, as a technologically developed country, a strong voice in the international effort to create a more permanent international satellite system. It is implicit in the principles and acknowledged by the Signatories that the 1964 Agreements are of an interim nature. Article IX of the inter-governmental Agreement specifically states that the Committee shall render a report not later than January 1, 1969 containing recommendations concerning the Definitive Arrangements for an international global system which will supersede the interim arrangements. The changes and recommendations associated with these Agreements is now under active consideration at government level and negotiations are presently underway.

ANNEX F

Attachment 1

MEMBERS OF INTELSAT

Algeria
Argentina
Australia
Austria
Belgium
Brazil
Cameroon
Canada
Ceylon
Chile
China
Columbia
Congo, Democratic Republic of
Denmark
Dominican Republic
Ecuator
Ethiopia
France
Germany
Greece
Guatemala
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Ivory Coast
Jamaica
Japan
Jordon
Kenya
Korea
Kuwait
Lebanon
Libya
Liechtenstein
Luxembourg
Malaysia
Mexico
Monaco
Morocco
Netherlands, The
New Zealand
Nicaraqua
Nigeria
Norway
Pakistan
Panama
Peru
Phillippines
Portugal
Saudi Arabia
Senegal
Singapore
South Africa
Spain
Sudan
Sweden
Switzerland
Syria
Tanzania
Thailand
Trinidad & Tobago
Tunisia
Turkey
Uganda
United Arab Republic
United Kingdom
United States
Vatican City
Venezuela
Viet Nam
Yemen
Yugoslavia
Zambia

ANNEX F

Attachment 2

MEMBERS OF THE ICSC

Arab Group (1)
Argentina
Asia/Pacific Group (2)
Australia
Belgium & Netherlands (3)
Brazil
Canada
Chile & Colombia & Venezuela
Denmark & Norway & Sweden
France (Monaco) (4)
Germany
Italy (Vatican City)
Japan
Mexico
Spain (Portugal)
Switzerland (Austria, Liechtenstein)
United Kingdom (Ireland)
United States

(1) Arab Group: Algeria, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Republic, Yemen.

(2) Asia/Pacific Group: Ceylon, India, Indonesia, Malaysia, New Zealand, Phillippines, Singapore, Thailand

(3) "&" between countries indicates joint representation, usually on a rotational basis.

(4) Countries and brackets are represented by the first country.

COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION

COUNCIL AND BUREAU

INTRODUCTION - PURPOSE

To promote the efficient exploitation and development of the Commonwealth external telecommunications system; to encourage and participate in consultation between Commonwealth countries in all aspects of the foregoing; to provide machinery for such consultation, for the administration of collaborative financial arrangements, and for the dissemenation of advice and information.

BACKGROUND

The structure of the Organization, which includes periodic Conferences at Government level, a Council and a Bureau (Secretariat), is constituted according to recommendations made in the Report to Governments by the 1966 Commonwealth Telecommunications Conference. These recommendations were accepted by all Commonwealth Governments. The Bureau was required to have the legal capacity of a body corporate and is so covered by the Commonwealth Telecommunications Act 1968 Elizabeth II 1968 Chapter 24 (Britain).

Currently, Council comprises Representatives of 24 participating Commonwealth Governments, aided by a varying number of advisors, in some cases up to as many as four. Advisors can be designated to speak on behalf of, or in the absence of, the Representative.

Council has at present a sub-structure embracing a Permanent Committee of Representatives (Planning Committee) consisting of nine members including Canada, to deal with Network and Financial Arrangements.

This committee has a "Group of Deputies" which surveys and filters data collected and arranged for computer studies by a Working Party No. 1. A computer specialist liaison officer is under a yearly contract. These groups meet and function between Council meetings. Various ad-hoc Working Parites are established during Council meetings to deal with specific tasks.

Currently, the main items under study are Network Planning and Financial Arrangements; all have as an objective the unification of accounting, management and exploitation of the entire Commonwealth assets instead of the separate arrangements of the so-called First Wayleave Scheme (Telegraph service), and the Second Wayleave Scheme (Telephone etc. service) and taking into account services via satellite (which are presently excluded).

Conferences at Government level are normally held at 3-year intervals for the establishment or up-dating of policy and practices to be implemented through Council activity.

Council usually plans to meet once per year but oftener as required such as during the present formative stages.

The Bureau is located in London. Headed by a General Secretary, a staff of specialists in Operations, Finance and Administration operate year-round as the focal point for the consultative processes and the collection, evaluation and dissemenation of information; all under the overall supervision of the current Chairman of Council (appointed annually) who may be resident in a country other than Britain.

Canadian participation is by way of a representative on Council. At present this is Mr. D.F. Bowie of COTC who is currently also Vice-Chairman of Council.

Initially, Canada's Representative on Council in 1967 was Mr. H.J. Williamson of D.O.T. with Mr. Bowie as Vice-Representative. For subsequent meetings Council was notified that Mr. Bowie would be Canada's representative until and when otherwise advised. Government participation in Council affairs is by way of an Advisor to the designated Representative.

Conferences at Government level, of course, anticipate representation at senior level. The first Conference since establishment of the new Organization is tentatively scheduled to be held in Ottawa in early 1971, prior to which Council plans to meet at least once, in September this year. Council's Working Party and Group of Deputies will hold various meetings on dates yet to be selected.

The collaborative discussions at Council meetings (and at Conferences) in respect of commercial, economic and financial considerations are largely influenced by a British majority investment of around 65%. Detailed network planning by the Group of Deputies under supervision of the Main Planning Committee takes account of technical aspects. While there is no direct discussion along political or social lines, the very nature and purpose of the Organization makes it necessary to keep in mind collaborative aspects which are of special concern to the developing countries. Canada is always regarded by the developing countries as a reliable and stable middle-power source of advice and example.

COMMENTS AND OBSERVATIONS

Canada's involvement

In 1879 it was considered that British territories west of the Pacific Ocean should be connected by submarine telegraph cable with Canada to enable them to have direct communication with Great

Britain without passing through foreign territories.

Canada took a leading part in the development of a suitable Pacific Cable project by virtue of negotiations and action by Sir Sanford Fleming, Chief Engineer of Canadian Pacific Railway and by Mr. F.N. Gisborne, first Superintendent of the Government Telegraph and Telephone Service which was established in 1879. Conferences in 1887 and 1894 discussed this matter and the Pacific Ocean Cable Project was authorized by Act of Parliament (UK) in 1901. It provided for the necessary capital and set up the constitution and finance of the Pacific Cable Board with headquarters in London and consisting of eight representatives namely, UK 3; Canada 2; Australia 2; and New Zealand 1. Subsequently in 1927 various direct radio-telegraph circuits were opened between certain Commonwealth countries including ones between Canada and the UK.

Several Commonwealth countries headed by Great Britain and including Canada, called an Imperial Wireless and Cable Conference in 1928 "to examine the situation which has arisen as a result of the competition of radio with cable services and report thereon and to make recommendations with a view to a common policy being adopted by the various Governments concerned." This Conference recommended and Governments endorsed the creation in 1929 of an Imperial Communications Advisory Committee (ICAC). Canada was among those represented on this Committee.

A Commonwealth Telegraph Conference, convened in 1942 to consider problems arising from changes in the general position and special problems brought on by the War and to make recommendations for their solution, recommended the establishment of a Commonwealth Communications Council to replace the Imperial Communications Advisory Committee of 1929. Canada was again a participant in this Council.

In 1945, a Commonwealth Telecommunications Conference called by Governments to deal with the expanding Commonwealth system of telecommunications, recommended that a central body, namely the Commonwealth Telecommunications Board (CTB), be established in place of the Commonwealth Communications Council. Accordingly, the CTB was incorporated in the United Kingdom on March 31, 1949 by the Commonwealth Telegraphs Act 1949. This Board was constituted with representatives of Partner Governments resident in London. (Canada nominated a member from D.O.T.)

Until April 1st, 1969, the business of the so-called First Wayleave Commonwealth Telecommunications essentially covering cable telegraph service, was handled through the C.T.B. in accordance with the Commonwealth Telegraphs Agreements of 1948 and 1963. Minuted records of proceedings, proposals and related documents flowed directly through this Government Department to and from its appointed resident Member of the Board thus enabling a good knowledge of all activity of the Board.

The National Body (COTC) did not have direct access to the Board or Board Member.

The Commonwealth Telecommunications Conference of 1966 recommended that the Board be replaced by a new Commonwealth Telecommunications Organization embracing a Council and a Bureau. It also recommended the replacement of the Commonwealth Telegraphs Agreements of 1948 and 1963 by a new Financial Agreement 1969 which has been signed by 23 Commonwealth Governments.

The Board was dissolved effective March 31, 1969 co-incident with the coming into force of the new Organization.

The present Council (and its Bureau) is the only machinery through which policies agreed at Commonwealth Government level can be implemented to ensure maximum day-to-day co-ordination and consultation in the exploitation of their respective investments.

Canada's investment in the Commonwealth Telecommunications System currently amounts to about $55 million.

The new Organization (Council and Bureau) envisages only direct contact with the Government's representative on Council which in Canada's case, is the President and General Manager of C.O.T.C. with headquarters in Montreal.

Canadian influence and benefits

By early action in the Pacific Cable Project and continual participation in all bodies dealing with Commonwealth telecommunications, Canada has played a prominent role in this field for some 90 years.

The official record of this 90-year period of development clearly shows that Canada's dynamic optimism and courage greatly influenced the undertaking of many successful projects from the 1879 Pacific Telegraph Cable project to more recent ones such as the high-capacity submarine telephone cables across the Atlantic (TAT-1, CANTAT, ICECAN); in South East Asia (SEACOM) and currently to Bermuda, (CANBER). The establishment and opening of the Canadian East Coast satellite earth station has enhanced Canada's place as one of the leaders in the field of external telecommunications.

Benefits to Canada as a result of this activity is reflected, not only in substantial prestige in the world of telecommunications but also in healthy financial gains. The net profit shown by Canada's external carrier, C.O.T.C., is over 5.3 million dollars in the current year.

ADDITIONAL COMMONWEALTH COMMITTEE

To have an overall picture, it is necessary to include reference to the Commonwealth Cable Management Committee as a group still functioning outside the new Commonwealth Telecommunications Organization although endeavours are now being made to establish liaison that may lead to amalgamation.

Installation and operation of the Commonwealth high-capacity submarine telephone cables began with participation in the first one placed across the Atlantic in 1956 (TAT-1). Subsequently the Commonwealth System was expanded basically by CANTAT, COMPAC, SEACOM and CANBER. It was agreed by Partner Governments that these new facilities should be covered by financial arrangements separate from those relating to facilities embraced in the First Wayleave Scheme. Accordingly, a Second Wayleave Scheme was set up to suit Partners making investments in the new facilities. These Partners are Britain, Australia, Canada, New Zealand, Malaysia and Singapore.

As the Second Wayleave Scheme was not handled through the C.T.B. and is still outside the recently established Commonwealth Telecommunications Organization (Council and Bureau) a Commonwealth Cable Management Committee (CCMC) through which the business (financial, plannign, construction, operation, etc.) could be handled was established in 1965 in accordance with recommendations made to and accepted by Governments. The new Committee (CCMC) enabled the amalgamation of two previous committees set up to respectively handle the construction and operation of the COMPAC cable (Pacific Cable Management Committee) and the SEACOM cable (Seacom Cable Management Committee).
See attachment 1.

Canada's investment and interest in this Second Wayleave Scheme is exclusively represented on the Cable Committee (CCMC) by Mr. Bowie, President and General Manager of COTC. Government has no participation either directly or by Advisory or Observer status.

The Committee (CCMC) has a variety of Sub-Committees or Preparatory Groups that deal with detailed network planning, financial arrangements, etc. relative to these Second Wayleave assets.

NOTE: Recent discussions in the newly established Council have taken into account the need for Commonwealth Network Planning and Financial Arrangements (Unified Accounting) to be under a single Committee.

Accordingly, the terms of reference of Council's rejuvenated Planning Committee are such as to provide for liaison with the CCMC (Second Wayleave Scheme) both with respect to its Network Planning and its Financial Arrangements.

COMMONWEALTH CABLE MANAGEMENT COMMITTEE (EXISTING)

This Committee was formed as a result of recommendations made at a meeting in Honolulu in October 1963 by representatives of Governments participating in the Pacific and South East Asia Commonwealth cables, to the effect that the two separate and then existing Committees dealing respectively with the COMPAC and SEACOM projects should be amalgamated.

The Departments of Finance and of External Affairs agreed with the Department of Transport suggestion that the single committee concept be adopted.

Deputy Minister Baldwin (D.O.T.) advised External Affairs May 27, 1965 and Mr. Bowie (May 19, 1964) that the Corporation should continue to provide Canadian membership on the new single Committee and that Government "would provide an advisor to the COTC representative depending on the nature of policy to be discussed at a particular meeting."

Canadian Government officers have not, to date, been invited to attend any of the Committee meetings or meetings of its Working Parties on Planning or Financial arrangements or others.

The inaugural meeting of the new Committee was held in Sydney, Australia in November, 1965.

Backgrounds of these Committees are as follows:

Pacific Cable Project (Telephone) - COMPAC - 1959

This project was the second leg of the Commonwealth Round-the-World System first envisaged in a CTB study and later recommended to Governments by the 1958 Commonwealth Telecommunications Conference at which Canada took a leading part. (CANTAT between Canada and the UK was the first fully Commonwealth project.)

Based on the above Conference recommendation it was agreed, in principle, through Canada's leadership at a Commonwealth Trade and Economic Conference in Montreal in 1958, to construct a Round-the-World system linking up all segments of the Commonwealth.

The importance of telecommunications between countries of the Commonwealth had been given prominence at the meeting of Commonwealth Finance Ministers held in Mount Tremblant in Septmeber, 1957.

An initial meeting of Commonwealth telecommunications officers was convened in Sydney, Australia in October 1959 to discuss the Pacific Cable project and reach agreed Recommendations to participating Governments (UK, Canada, Australia and New Zealand).

The Canadian delegation consisted of:

Mr. D.F. Bowie	COTC, Head of Delegation*
Mr. R.G. Griffith	COTC
Mr. W.E. Connelly MBE	D.O.T.
Mr. D.S. Robertson	D.O.T.

* Designated as Head of delegation per letter to External Affairs September 2, 1959 from Deputy Minister Baldwin.

In the likely event that the project would be approved, the Conference recommended that for management of construction, operation, maintenance and exploitation of the COMPAC project it was essential to establish a Pacific Cable Management Committee - (PCMC) comprising a senior representative of each of the four participating Governments.

Deputy Minister Baldwin advised External Affairs (May 4, 1960) that Mr. Bowie would be the Canadian representative on this Committee but reserved "the right to subsequently name a second official who would act jointly with Mr. Bowie as the Canadian member." A copy of this advice was sent to Mr. Bowie.

Mr. Stoner (then External Affairs) advised Earnscliffe along these lines and noted that UK were going to have two persons act jointly as UK member on the Committee i.e. a Senior officer of Government and a Director of Cable & Wireless Ltd. (N.B.: This UK two-person representation is still carried on.)

Of the fourteen (14) main meetings held, a Departmental officer (Mr. F.G. Nixon) was able on one occasion, i.e. the Ninth meeting held in Honolulu in October, 1963, to attend and then only for certain sessions that discussed the possible amalgamation of the two management committees referred to in the opening paragraph above and the consequent future management and control of the Commonwealth Telephone Cable System.

Meeting Minute 215.1 reads:

"Welcome by the Convenor to additional representatives whose counsel and assistance would be of great value in this difficult problem. This was the first time that the P.C.M.C. has been so expanded. "

South East Asia Cable Project - SEACOM - 1961

As in the case of the COMPAC Project an initial meeting of Commonwealth telecommunications officers was convened in Kuala Lumpur in June 1961 to discuss and reach agreed Recommendations to participating Governments (UK, Canada, Australia, New Zealand and Malaysia) for the extension of the COMPAC cable to serve Southeast Asia namely Hong Kong, Malaysia and Singapore.

The Canadian delegation consisted of:

D.F. Bowie, COTC	Head of delegation*
W.E. Connelly, MBE, DOT	
I.L. Head, (Advisor)	Third Secretary Canadian Mission in Kuala Lumpur

* Designated as Head of delegation per Deputy Minister Baldwin's letter to External Affairs May 3, 1961.

Also as in the case of COMPAC, it was decided that for management of construction, operation, maintenance and exploitation of the South East Asia Cable Project (SEACOM), to establish a SEACOM Cable Management Committee (SCMC) comprising a senior representative of each of the Partners participating in financing the project.

In response to Mr. Bowie's request, (May 7/62) to be appointed Canadian representative on this Committee, Deputy Minister Baldwin advised External Affairs June 12/62 accordingly. Provision for Departmental participation was omitted although a first draft memorandum did envisage the same condition as in the case of representation on the COMPAC Management Committee.

No Government officer attended any of the eight SEACOM Management Committee meetings or meetings of its sub-committees.

DESCRIPTION OF WAYLEAVE SCHEMES

The basic concept of the Wayleave Scheme is that the respective National Bodies are "common-users" of the Commonwealth external cable and wireless system in that they make such use as they desire of the system without accounting in respect of individual messages. Instead of National Bodies making payments which would normally be due on balance as between one operating body and another for transmission of each other's traffic, the expenses incurred by each National Body in operating and maintaining its part of the common-user system, and the net revenue derived by each National Body from its own public and foreign sources, are calculated annually in an agreed manner. The total expenses are then allocated among National Bodies in the proportions which the net revenue of each bears to the total net revenue of all. The resultant debits are set against the expenses of the common-user system initially incurred by each National Body, the differences constituting net wayleave payments or receipts as the case may be.

FIRST WAYLEAVE SCHEME

Following an exhaustive review of the then existing accounting arrangements, Partner Governments adopted the principle of Wayleave Accounting (see above) as from April 1st, 1950.

The financial clearing arrangements provided by this Wayleave Scheme operated successfully from the date of its introduction until the accounting year of 1956-57 which was the first year during which the first Trans-Atlantic cable (TAT-1) was in operation.

SECOND WAYLEAVE SCHEME

Partner Governments, however, after considerable deliberation, could not agree to the inclusion of TAT-1 into the First Wayleave Scheme. It was felt that the correlation of each country's share of the annual charges with its total revenue would throw an undue burden for the costs of the new telephone cable system on those countries which derived large telegraph net revenues from the existing system, particularly the United Kingdom; and that it would require additional payments by such countries as India, which for some time might not be connected to the new system.

Accordingly, and having in mind Commonwealth plans to proceed with a "round-the-World" telephone cable system, the Commonwealth Telecommunications Conference of 1958 recommended the establishment of a separate Second Wayleave Account for large capacity cables (and for auxiliary radio services associated therewith), forming part of the "Round-the-World" system; this new Wayleave Account to be based on the same principles as the First Wayleave Scheme. The United Kingdom and Canada, in respect of their interests in TAT-1 were the first parties to the new Wayleave Account.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

(I.C.A.O.)

1. GENERAL

In November 1944, fifty-two nations sent representatives to Chicago to consider the international requirements of Civil Aviation. The outcome of this conference was agreement at the Convention on International Civil Aviation calling for establishment of the International Civil Aviation Organization as a specialized agency of the United Nations.

Because the Convention on International Civil Aviation required ratification by twenty-six states before I.C.A.O. could come into being, the conference provided for a provisional organization (PICAO) with advisory powers only and this organization operated for twenty months until on April 4, 1946, I.C.A.O. officially came into existence.

2. MEMBERSHIP

Canada had become a member on the 13th February 1946 and has participated in the organization since its inception and has had representatives on the Council of I.C.A.O. continuously since then.

3. WORKING ARRANGEMENTS

The structure of I.C.A.O. consists of the following bodies:

a) The Assembly is the sovereign body consisting of approximately 120 contracting states each having one vote. The Assembly normally meets every three years to review in detail the work of the organization and to give guidance to the other bodies of I.C.A.O. for their future work.

b) The Council is a permanent body responsible to the Assembly and is composed of twenty-seven contracting states elected by the Assembly for a three-year term. The Council with its subsidiary bodies, the Air Navigation Commission, the Air Transport Committee, the Committee on Joint Support of Air Navigation Services, the Legal Committee and the Finance Committee, provides the continuing direction of the work of the Organization. One of the major duties of the Council is to adopt international Standards and recommended practices and to incorporate these as Annexes to the Convention on International Civil Aviation. The Council may also act as an arbiter between contracting states on matters concerning aviation and implementation of the convention.

c) The I.C.A.O. Secretariat under the Secretary-General is a group of international civil servants which supplies the technical and administrative aid to the governmental representatives who make up the I.C.A.O. Council and Committees. This secretariat is made up of bureaus corresponding to the committees which form the subsidiary bodies of the I.C.A.O. Council as mentioned under b) above.

4. BACKGROUND

International standardization is essential in all services required to support air operations, such as telecommunications, navigational aids, air traffic control, search and rescue, etc. To this end I.C.A.O. establishes international standards, recommended practices and procedures for the safety, regularity and efficiency of air navigation.

Although the Council has the responsibility for final adoption of these standards, recommended practices and procedures, the body chiefly concerned with their development is the Air Navigation Commission. This Commission is composed of twelve persons appointed by Council after nomination by contracting states and it reports to the Council. The Commission is responsible for the planning, co-ordination and examination of all I.C.A.O.'s work in the navigation field. They are assisted in this work by the technical secretariat of the Air Navigation Bureau. Each contracting state may participate in the development work of the Air Navigation Commission by attending the various divisional type meetings held by I.C.A.O.; for example, communication divisional meetings are held approximately every five years, or more often if necessary, to review or draft new communication standards, recommended practices and procedures.

Not all aviation problems can be dealt with on a world-wide scale and many subjects are considered on a regional basis. I.C.A.O. has therefore set up eight geographical regions and Regional Air Navigation meetings are held to facilitate detailed planning of needed facilities including both fixed and mobile communication networks.

In providing for regional communication networks and world-wide communication standards close co-operation is required between I.C.A.O. and the I.T.U. A recent example of the co-operation between these two international organizations was the I.T.U. Extraordinary Administrative Radio Conference for the preparation of a revised frequency allotment plan for the Aeronautical Mobile Service held in Geneva in 1966. In preparation for this conference preparatory meetings were held by both I.C.A.O. and the I.T.U. During the final conference the Canadian delegation prepared the basic frequency allotment plan which, with only a few minor changes, were adopted for implementation.

I.C.A.O. also undertakes the co-ordination of joint support programmes to provide facilities in areas of the world where otherwise such facilities would not exist. An example of such co-operation is the system of Ocean Station vessels which span the ocean areas of the world. They fill gaps in the complex weather reporting networks, provide radio navigation aids to aircraft and serve as floating search and rescue bases for both ships and aircraft. Canada is one of several countries which have accepted the responsibility of providing ships to man these stations while other countries contribute to the financial costs involved.

A system of Joint Support also exists for the provision of facilities and services required to serve the North Atlantic air routes. There are two such international agreements for providing meteorological and telecommunication facilities in Greenland and the Faroe Islands and in Iceland. The cost to Canada for these services is based on the number of Atlantic crossings by Canadian registered aircraft per annum as a percentage of the total number of crossings. For 1970 the assessment for Canada amounts to $235,000 for Greenland and the Faroes and $81,000 for Iceland which represents 7.09% of the total.

Canada provides a grant towards the headquarters building of the organization in Montreal and is also assessed a percentage of the overall budget of the organization. For 1970 the total budget is approximately $8,000,000 of which Canada is assessed at 3.69% i.e. $274,000.

In addition to its activities in standardization and in regional planning to meet current operational requirements, I.C.A.O. also provides the machinery for long range planning to meet future demands of air transport and to co-ordinate and exploit the development of new techniques for civil aviation. This is done by the establishment of special committees or panels to study specific subjects and to make relevant recommendations. An example of such a study being made in the field of telecommunications is the I.C.A.O. ASTRA (Applications of Space Techniques Relating to Aviation) Panel. This Panel was established by the Air Navigation Commission on March 26, 1968, following several preliminary discussions between representatives of Canada, France, United Kingdom and the United States. The first meeting of the Panel was held in Montreal in November 1968. Representation is provided by both MOT and DOC.

INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANIZATION

I.M.C.O.

1.0 GENERAL

The Convention which established I.M.C.O. was drafted by the United Nations Maritime Conference held in Geneva in 1948. Canada signed on 15 October, 1948. This Convention, however, required acceptance by twenty-one States, including seven with at least one million gross tons of shipping each. This requirement was met on March 17, 1958 and the first I.M.C.O. Assembly was held in London in January, 1959.

2.0 MEMBERSHIP

The Organization is governed by an Assembly consisting of representatives of all I.M.C.O. Member States which establishes the work program, the budget to which all Member States contribute on an agreed scale of assessment, approves financial regulations, elects the Council and approves appointment of the Secretary-General.

The Council consists of representatives of 18 Member States as elected by the Assembly and is the executive body on I.M.C.O. affairs between Assembly sessions. Canada has retained membership on Council since its original formation.

The Maritime Safety Committee consists of representatives of sixteen Member States elected by the Assembly for a term of four years (Canada is a member). This Committee deals with technical problems such as aids to navigation, construction and equipment of ships, dangerous cargoes, search and rescue, maritime safety procedures and any other matters connected with maritime safety. One of its sub-committees deals with radiocommunications.

3.0 WORKING ARRANGEMENTS

In continuing support of the organization, the Secretariat of I.M.C.O. has its headquarters in London, England; it is composed of the Secretary-General, the Deputy Secretary-General, the Secretary of the Maritime Safety Committee, and a number of international civil servants who carry out the every day work of the organization.

The broad objective of I.M.C.O. is to provide the means by which the governments of Member States may collaborate to the best effect on a continuing basis in formulating those standards for the governance and improvement of shipping which require international action for their effective implementation, having regard for the pace of technological change, and which concern:

1. the safety of ships and vessels and other equipment operating in the marine environment, including their crews, passengers and others from time to time on board.

2. the effects of the behavior of ships and vessels and other equipment operating in the marine environment upon other interests.

3. the relations within the shipping industry and of shipping generally with other activities.

4. consideration of public and private international maritime law issues associated with any matter falling within the competence of I.M.C.O.

5. the encouragement of proficiency within the shipping industry throughout the world, by the execution of programmes of technical assistance.

UNESCO

The United Nations Educational, Scientific and Cultural Organization was established in 1946, and Canada became a member that same year. In the telecommunications field, UNESCO aims are to maintain, develop and propagate knowledge by means of mass communications, by ensuring the expansion of newspaper, radio and film services; to study restrictions to freedom of information and to make recommendations for the removal of these restrictions. UNESCO has presently 126 members.

Formal Canadian rights and commitments regarding the UNESCO communications program are the same as in every other field of activity of the Organization, i.e., Canada has to pay a percentage of the total budget and to join in the formation of the Organization policy through our delegations at the General Conferences and our permanent Delegation to UNESCO. Furthermore, since 1968 when a Canadian was elected on the Executive Council, and until 1974, Canada will join in all discussions of the Council which supervises the implementation of the program and makes recommendations thereon to the General Conference and to the Director General. The Canadian Council member will also be able to recommend to the Director General appointments to Secretariat positions in the information field as well as other fields. Canada can also put forward Canadian nominations in information positions (including telecommunications), at the Paris headquarters and to off-headquarter UNESCO projects in this field.

Canada's contribution to UNESCO is determined in conjunction with its contribution to the UN budget, i.e. according to the member State ability to pay. Canada's share in the budget is 2.84 per cent or $2,032,000, every two years.

Canada has enjoyed a high reputation in UNESCO in the telecommunications field, due to our participation in specialized meetings and because of the Canadians employed as experts at headquarters and off-headquarters. Canada is thus very often invited to join expert meetings on telecommunications, and Canadians are frequently called upon to serve as session presidents (recently, Mr. Eric Kierans in Paris, and earlier Mr. Alphonse Ouimet in Paris and Montreal) and Canada is often chosen as host country (Montreal meetings in 1967 and 1968). Our present participation ensures Canada an important and continuous contact with experts from all over the world and favours a cooperation which can extend outside UNESCO.

For a number of years now, UNESCO has shown great interest in satellite broadcasting, as a means of improving information and cultural exchange and promoting education, mainly in developing countries.

THE UN COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

In a General Assembly resolution dated December 13, 1958, the United Nations instituted an ad hoc Committee on the peaceful uses of outer space (resolution 1348(XIII)). The Committee was to submit its first report at the next meeting of the Assembly. The need for international cooperation was emphasized in this new field but it was felt that the two super powers were more concerned with military uses.

A standing Committee was instituted the next year by resolution 1472(XIV) of the General Assembly dated December 12, 1959. The Committee established two sub-committees, one for legal matters and the other for the technical and scientific aspects of the problems due to the development of this new science. The sub-committees held their first session in May-June 1962. The legal sub-committee has since concentrated on the drafting of the basic principles of peaceful use of outer space (1967 Treaty), on the registration of objects launched into space and on the drafting of a Convention relating to the damages due to these objects. This sub-Committee was only marginally concerned with telecommunications matters to date, since these were chiefly studied by the scientific and technical sub-committee.

Since the first session of this sub-committee, Russians and Americans were exchanging ideas about a possible cooperation aiming at the establishment of a World Meteorological Satellite System and were studying the expansion of satellite telecommunications as a means of improving communication services.

Despite the activities of these two sub-committees, many problems remain, the solution of which is still far from reached because of the diverging views of the Committee members.

Following a General Assembly recommendation, the Committee on the Peaceful Uses of Outer Space began to study in 1967, "the technical feasibility of direct broadcast satellite communications". First, the matter was briefly discussed at a Legal sub-committee meeting, then sent over to the Scientific and Technical sub-committee for examination of the practical aspects.

Sweden which had shown great interest in the project, had in mind the preparation of a working document that the Committee could use in order to study direct broadcast satellites. After consultation between the Canadian and Swedish Governments, it was decided that they would both cooperate in the drafting of this working document.

When the question was given a closer look, it was felt that despite the existence of the two sub-committees of the Committee on

the Peaceful Uses of Outer Space, none would accept the responsibility for such a complex study. Sweden hoped that a working group would be instituted to study direct-broadcast satellite communications. Such a Group came into existence on December 20, 1968, by resolution 2453(XXIII).

Since that time, Canada and Sweden jointly prepared three working documents discussing various alternatives of international arrangements including political, technical, economical, organizational, cultural and legal aspects as well as information and aid problems. In support of these proposals, Canada calls for international co-operation as a basic and essential element in any rational and equitable use of this new technique the development of which is forecast for the near future.

Meetings were held in January and May, 1969 and in March, 1970, to discuss these documents and others submitted by other countries. Representatives of the Departments of Communications and External Affairs attended the meetings, as well as some CBC experts, as observers and advisors. The reports of the three meetings are under study and future action is now being developed.

In view of the responsibilities and expertise of Telesat Canada in the space field, it would be desirable to consult this organization on all matters discussed by the Committee.

LEVELS OF CBC/INTERNATIONAL BROADCASTING CONTACTS

CBC contacts with international broadcasters have been building for 25 to 30 years and CBC people now have personal contacts at many organizational levels with professional broadcasters in all of the major and most of the minor broadcasting organizations in the world.

The External Services Division, comprising the International Service, Overseas and Foreign Relations, Export Sales, and the CBC's foreign offices, works full-time in the area of international contacts, dealing with the administration, production and distribution people of broadcasting organizations throughout the world.

The CBC is a founding member of the Communauté des télévisions francophones, the Communauté radiophonique des programmes de langue française and of the Commonwealth Broadcasting Conference, and it is an associate member of the European Broadcasting Union and the Asian Broadcasting Union.

Within the Communautés, there are daily contacts at the working level, either through the CBC's Paris office, or from the French Television and Radio networks. At the general and program meetings of the Communautés, (some of which are held in Canada each year) there are contacts with Director-Generals of the participating organizations, with their programming heads, and/or with some of the production staffs.

The Commonwealth Broadcasting Conference held every two years, brings together the heads of Public Broadcasting of the Commonwealth (Presidents, Director-Generals or Directors of Broadcasting) as well as the heads of Engineering, and the heads of programming, etc. The host broadcasting organization arranges for contacts to be made with all levels of the personnel in the organization. CBC last hosted the Conference in 1963.

The European Broadcasting Union has several levels of meetings: General Assembly (usually attended by heads of broadcasting organizations); Committee meetings: Program, Technical, and Legal; and sub-Committee meetings: educational variety, music, sports, etc. etc. CBC is represented at these meetings either by the relevant network or Head Office personnel or by the CBC representatives in Paris or London.

Although the Asian Broadcasting Union does not have the same numbers of meetings as the EBU, there is a yearly meeting where heads of broadcasting, (Director-Generals, etc.) and their Engineering and Programming experts hold committee sessions and a general assembly. CBC attends regularly to strengthen its close ties with Japan Broadcasting, ABC (Australia), and NZBC, etc.

This year the Director-General, External Broadcasting, will attend the meetings in Australia and New Zealand. At the meetings in Singapore in 1967, heads of the United Nations Agencies (FAO, UNICEF, UNESCO, etc.) held joint meetings with the ABU.

CBC is an active member of an informal consortium of broadcasters meeting to discuss and solve questions of administration, copyright, costs and operations involved in the broadcast use of international satellites.

The Engineering Department of the CBC is involved in international liaison and cooperation on technical matters affecting broadcasting, such as frequency allocation, colour standards, etc. and, on behalf of Canada, is an active participant in CCIR, the International Radio Consultative Committee of I.T.U. (A CBC Engineer is Chairman of the Committee on Direct Broadcasting from Satellites).

Visits from foreign broadcasters are arranged by the CBC, foreign crews are assisted, and foreign broadcasting trainees are placed in on-the-job training within the Corporation. Contacts with CBC personnel relate to the interests of the visiting person or group. Personal contacts with foreign broadcasters at all levels was highest during 1967, when broadcasters (Directors-General, crews, program heads, etc.,) from 50 countries were assisted in their arrangements by the CBC.

At the request of the Canadian International Development Agency, or UNESCO, CBC has sent personnel to aid foreign broadcasting organizations in a variety of different broadcast areas. For example, CBC gave major assistance in the setting up of television in Malaysia and Ghana, and has provided assistance in the past year in Nigeria and Sierra Leone, etc., resulting in close relationships being built with these organizations.

With co-production agreements, distribution agreements, and contracts as a part of the CBC's operations internationally, closer relations are established with each broadcasting organization concerned e.g. agreement with Soviet Broadcasting, arrangements with BBC, ties with the American networks, Olympics arrangements with Mexico, Japan, Germany, etc. broadcasting organizations.

Apart from the official level of CBC international contacts, CBC programmers, producers and technical personnel have been meeting their international colleagues over the years at international program sales markets, at screenings, seminars, assemblies and festivals, and crews filming abroad are encouraged to continue CBC contacts with international colleagues.

MIP/VIDCOM

THE INTERNATIONAL UNION OF RADIO SCIENCE

(URSI)

The International Union of Radio Science, (l'Union Radio-Scientifique Internationale, abbreviated URSI), until 1968 the International Scientific Radio Union, had its origin in the "Commission Internationale de Télégraphie Sans Fil Scientifique" (TSFS), which was founded in 1913 with the intention of encouraging international research on the propagation of radio waves and related problems. When the International Research Council, now the International Council of Scientific Unions (ICSU), was formed in 1919, URSI was one of the four founder members under the name, "Union Internationale de Radiotélégraphie Scientifique". URSI is now one of the 16 member unions of ICSU and its main aims are: (i) to promote scientific studies relating to radiocommunications; (ii) to aid and organize radio research requiring international cooperation and to encourage the discussion and publication of the results; (iii) to facilitate agreement on common methods of measurement and the standardization of measuring instruments.

The administration of the Union and the organization of the work are entrusted to an elected Board of Officers which acts in accordance with the broad directives of the Executive Committee. This Committee is composed of members appointed by the National Committees of the 37 member countries which adhere to the Union. The actual scientific and technical work is done mainly under the auspices of the National Committees. So as to assist in the coordination of this work on an international scale, URSI has established eight Commissions, each of which is charged with the study of a specific subject. Several Commissions are concerned with different aspects of solar-terrestrial physics, and these interests are centralized in the URSI-STP Committee. The activities of the Union as a whole are coordinated in the permanent Secretariat which has offices in Brussels, Belgium.

Canada, in view of its internationally well established reputation in the field of ionospheric research holds the chairmanship of committee III(ionosphere): Prof. C.O. Hines of University of Toronto.

Every three years the Union holds a General Assembly of the official and ordinary delegates nominated by the member countries. The aim of the Assembly is to review recent progress in radio science and to plan the work for the ensuing triennium, including proposals for the organization of international symposia on topics of current interest to one or more of the Commissions.

The recent XVIth General Assembly meeting was held in Canada in 1969 and attended by approximately 550 delegates which together with other invited guests led to a total of 850 participants.

Perhaps more than in any other field of scientific work, radio research has special requirements for large-scale international programmes. Many of the phenomena that must be studied are world-wide in extent and, yet, they are subject to a certain degree of control by the experimenters. The new activity in the exploration of space, with the necessary extension of our scientific observations to the space environment, depends on radio for its communication link and, at the same time, expands the scope of radio research. Radio astronomical studies are concerned with the whole universe and, in fact, have extended its known boundaries.

As a result of the URSI announcement about the Alouette and ISIS programmes last year, nine additional countries approached Canada to investigate the possibility of using the Alouette satellites. This was in addition to the 8 foreign countries already using Alouette.

URSI has a distinct field of usefulness in furnishing a common meeting ground for the numerous workers in the manifold aspects of radio research; its meetings and the activities of the Commissions facilitate the exchange of ideas and furnish a valuable means for promoting research.

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

(IEEE)

The Institute of Electrical and Electronics Engineers, Incorporated, commonly referred to as the IEEE is the world's largest technical association and is divided into 10 regions, as follows:

Regions 1 to 6	-	United States
Region 7	-	Canada
Region 8	-	Europe
Region 9	-	South America
Region 10	-	Australia, New Zealand and the Far East

Indirectly, Canada as a whole and directly Canadian companies and Canadian engineers derive many advantages from participating in the organization.

Attendance by members from many nations at international meetings enables Canadian engineers to keep abreast of the latest developments in the state of the art.

A number of IEEE sections in Canada hold periodic symposiums and exhibitions. These are attended by engineers from many foreign countries. Canadians are able to establish and maintain Canada as a leader by presenting technical papers and exhibiting Canadian electronics products.

The IEEE periodical technical publications provide Canadians with a source of up to date information in the electronics field.

The IEEE is subdivided into a number of technical committees. These committees have been influencial in establishing world accepted standards. Canadian membership enables Canadian engineers to influence these standards taking into account the Canadian environment. It also provides useful information to the various standards associations in Canada.

The meetings of the local IEEE sections provide a means for engineers in the Government, industry and in the academic world of arranging for the presentation of talks on subjects of mutual interest and permits joint discussions of common problems.

THE AMERICAN INSTITUTE FOR AERONAUTICS AND ASTRONAUTICS

(AIAA)

The AIAA is a fairly large and highly technical space oriented organization. The Institute has been in existence for 38 years and counts 32,740 members of which 241 are Canadian. Although the name does not imply involvement in telecommunications, they play nevertheless an important role. Their conferences on satellite communications, held every 2 years, set milestones in the development of communications technology.

These conferences are usually attended by the leading experts in the field. At the recent Los Angeles Conference 10 nations had sent observers. One session was entirely devoted to the Canadian domestic Satellite Communications System with such speakers as Dr. J.H. Chapman and engineers from CRC, Telesat, the CBC and Northern Electric Co. There were also panel discussions on satellite broadcasting systems for new and developing nations, spectrum utilization in the U.S.A. and Canada, satellite technology aspects, etc.

Apart from the formal sessions, the informal exchange of ideas and advance information of development trends in other countries is invaluable. Canadian industry is usually well represented.

THE INTERNATIONAL COMMITTEE ON SPACE RESEARCH (COSPAR)

The International Committee on Space Research (COSPAR) was formed in 1958 at the end of the International Geophysical Year to continue the international cooperation in all sciences that are engaged in fundamental research problems involving rockets and satellites. (The Committee will however normally not concern itself with technological problems such as propulsion, construction of rockets, guidance and control). The objectives will be achieved through national committees of scientists working through the International Council of the Scientific Union (Headquarters, Rome, Italy).

In Canada the space activities cover a broad range of scientific disciplines in the fields of basic and applied research and in the applications of space technology. Within the Federal Government, these activities are coordinated by an Interdepartmental Committee on Space, established in 1969. Scientific activities are coordinated by the Canadian National Committee on Space Research, an associate committee of the National Research Council of Canada, chaired by Dr. I.B. McDiarmid of NRC, and with university, industrial and government scientists as members. This committee forms a scientific consultative group on

scientific problems related to space and, through its Scientific Evaluation Panel, screens, coordinates and programs rocket experiments as part of the overall upper atmosphere research program. The membership of the Canadian Committee on Space Research involves all leading scientists in government organizations, crown corporations, universities and industry.

Canada's recent report to COSPAR April 1970, prepared by the Space Research Facilities Branch of NRC goes in extensive detail on our Scientific Satellite Programme, our High Altitude Sounding Rocket Programme, our participation in the experiments with the TOS series satellites, the Nimbus III spacecraft, and the Advanced Technology Satellites ATS 1 and 3. In addition Canada has reported on its ground based studies in the following areas: Noctilucent Cloud studies, Airglow studies, meteoritic research, auroral research, radio astronomy, geomagnetic measurements and the solar patrol telescope project.

As can be seen the field of activities is quite extensive, and involves the participation of many organizations. In the federal government it includes the National Research Council, the Departments of Communications, Energy Mines and Resources, Transport, the Defence Research Board, the Dominion Observatory. In industry participation is by many Canadian Companies such as Bristol Aerospace, RCA Limited, Northern Electric Company, Spar Aerospace, Computing Devices.

In addition to this list universities in most provinces participate.

Canada's participation in Cospar is of the greatest assistance to our research scientists. It establishes us as one of the major active contributers, it creates contacts with other scientists in the same field throughout the world, it gives us access to research in other countries and most important it enables us to do experiments in conjunction with other nations on a much larger scale than ever before.

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TREATIES AND OTHER ARRANGEMENTS RELATED TO TELECOMMUNICATIONS

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TREATIES AND OTHER ARRANGEMENTS RELATED TO TELECOMMUNICATIONS

PRELIMINARY ANALYSIS

TREATIES DEALING WITH TELECOMMUNICATIONS

Legend applicable to attached treaty analyses

1. Title of Treaty.

   Canada Treaty series number. (C.T.S.)

2. Date of Signature

   Person signing.

   Expiry date.

   Still in force.

3. Purpose of Treaty.

4. Rights and obligations of Signatory.

5. Method of participation/operation.

6. Cost of participation. Financial commitments.

7. Benefits to Canada.

8. Particular problems?

9. Should arrangement be maintained?

10. Recommended changes?

1. RADIO COMMUNICATIONS, BETWEEN PRIVATE EXPERIMENTAL STATIONS
   C.T.S. Series No. 2, 1929.
2. Exchange of Notes October 2 and December 29, 1928, January 12, 1929,
   Signed by Vincent Massey, Canadian Minister at Washington.
   Effective January 1, 1929.
   No expiry date specified; however, See Treaty Series No. 5, 1934. which continues this treaty.
3. As title indicates.
4. Allowed Canadian Amateur stations to exchange communications with Amateur Station in the United States.
5. Mutual co-operation.
6. Costs were nil.
7. Canadian Amateurs benefited by the right to communicate with United States Amateurs.
8. Problems were nil.
9. The arrangement is no longer necessary as existing ITU Radio Regs permit this type of communication.
10. See Treaty Series No. 5, 1934.

1. RADIO COMMUNICATIONS BETWEEN PRIVATE EXPERIMENTAL STATIONS - (CANADA AND SOUTH AFRICA).
   C.T.S. No. 3, 1929.
2. Signed: 19-12-28 by O.D. Skelton, Secretary of State for External Affairs.
   Treaty is no longer in effect nor is it required.
3. As title indicates.
4. Allowed Canadian Amateur Stations to exchange communications with Amateur Stations in South Africa.
5. Mutual co-operation.
6. Costs were nil.
7. Canadian Amateurs benefited by the right to communicate with South African Amateurs.
8. Problems were nil.
9. The arrangement is no longer necessary as existing ITU Radio Regs permit this type of communication.
10. See C.T.S. No. 5, 1934.

1. RADIO COMMUNICATIONS BETWEEN PRIVATE EXPERIMENTAL STATIONS - (CANADA AND IRISH FREE STATE)
   C.T.S No. 4, 1929.
2. Signed by: O.D. Skelton, Secretary of State for External Affairs, 1-1-29.
   Treaty is no longer in effect, nor is it required.
3. As title indicates.
4. Allowed Canadian Amateur Stations to exchange communications with amateur stations in the Irish Free State.
5. Mutual co-operation.
6. Costs were nil.
7. Canadian Amateurs benefited by the right to communicate with Irish Free State Amateurs.
8. Problems were nil.
9. The arrangement is no longer necessary as existing ITU Radio Regs permit this type of communication.
10. See C.T.S. No. 5, 1934.

1. AGREEMENT BETWEEN CANADA, THE UNITED STATES, CUBA AND NEWFOUNDLAND RELATIVE TO THE ASSIGNMENT OF HIGH FREQUENCIES TO RADIO STATIONS ON THE NORTH AMERICAN CONTINENT.
   C.T.S. No. 6, 1929.
2. Exchange of Notes, February 26 and 28, 1929 - Signed by: O.D. Skelton, Secretary of State for External Affairs. Agreement to remain in force until January 1, 1932 and thereafter for an indeterminate period and until one year from the day on which a denunciation thereof shall have been made by any one of the contracting parties. United Stated FCC still list this agreement as being in force; however, it is indicated that Cuba ceased to be a party to it effective Oct. 5, 1933 by virtue of notice to the Canadian Government.
   (This could be interpreted to mean the agreement is no longer valid for the remaining parties also).
3. As the title indicates.
4. To expect and to give cooperation in the use of Radio high frequencies.
5. -------
6. Nil.
7. Nil. The agreement is too old and out of date.
8. Nil. It is doubtful if it gives any consideration.
9. No.
10. Arrangement should be made with the United States to denounce the agreement.

1. AGREEMENT BETWEEN CANADA AND THE UNITED STATES RELATING TO AIR NAVIGATION

   C.T.S. No. 8, 1938.

2. Exchange of Notes, July 28, 1938.

   Signed by: H.M. Marler, Canadian Minister at Washington.

   Comment: This would appear to be a DOT responsibility. The only reference to Radio is in Article XI which is still valid.

1. INTER-AMERICAN RADIOCOMMUNICATIONS CONVENTION
   C.T.S. No. 18, 1938
2. Signed at Havana, December 13, 1937 by Laurent Beaudry and C.P. Edwards.
   Expiry date not specified.
   Part II of the Convention (inter-American Radio Office) terminated for all parties Dec. 20, 1958 (Canada Treaty Series No. 32, 1958)
   Remainder of Convention still in force.
   Canada ratified Convention, December 22, 1938.
3. To resolve by common understanding such problems as may arise in the field of radiocommunications in the American continent.
4. The right to receive and obligation to give cooperation and to coordinate frequency assignments and to alleviate interference.
5. By meeting periodically in conference and by coordinating on regular basis the frequency assignments in all participating countries.
6. Canada's share in defraying cost of operation of the coordination office is $6000.00 annually. However, this amount has not been billed or paid since 1963.
7. Canada participates in the exchange of information regarding frequency assignments. Main benefit is the resulting coordination between Canada and the United States. This at the moment, is being accomplished as the result of a bi-lateral arrangement with the U.S.A. as operation of the office in Cuba is not satisfactory. The matter is in the hands of External Affairs but little progress is being made to improve matters.
8. Details of the difficulties are available in Classified file on the OIR.

9 and 10. The problem is being dealt with by External Affairs.

1. THE USE OF RADIO FOR CIVIL AERONAUTICAL SERVICES BETWEEN CANADA AND THE UNITED STATES OF AMERICA
C.T.S. No. 5, 1939
In force, February 20, 1939.
Signed by H.M. Marler, Canadian Minister at Washington.
Expiry date 60 days after notification by one of the two parties involved. There is no indication that it has been cancelled by either Canada or the United States. However, it is so out of date that it can hardly be considered as being valid. Also most of its provisions have been superseded by other agreements. Its difficult to be specific; however, the commitments made under the ICAO have certainly invalidated most of the agreement.

9. The arrangement should not be maintained.

10. Action should be taken to officially cancel the agreement.

This Arrangement is listed by the United States F.C.C. as still being in force.
1939 Citation 53 Stat. 2157
EAS 143

1. INTER-AMERICAN AGREEMENT ON RADIO COMMUNICATIONS
   C.T.S. No. 5, 1943.
2. Signed at Santiago-de-Chile, January 26, 1940
   Countries must give one year notice before withdrawing
   Still in force.
   Notification of Adherance by Canada, May 8, 1943.
3. The purpose of the treaty is to provide for mutual cooperation in the allocation, coordination and use of radio frequencies in the American continent.
4. For coordination purpose the right to receive and the obligation to supply information pertaining to the use of radio frequencies.
5. Exchange of information.
6. Related costs of participation are nil.
7. With the possible exception of International police services. Canada gains nothing that is not also achieved under the current ITU Radio Regulations.
8. The arrangement is out of date and to be meaningful would need revision.
9. From a technical point of view it need not be maintained. However, from a diplomatic or political point of view there may be reasons to retain it. But it needs updating.
10. In keeping with above remarks updating is required. It is typical of these arrangements that they are outdated by new ITU Radio Regulations and no channels are outlined or provided for easy revision.

1. AGREEMENT ON THE ALLOCATION OF CHANNELS FOR RADIO BROADCASTING (FM BROADCASTING IN FREQ. BAND 88-108 MC/S).
   C.T.S No. 30, 1947.
2. Exchange of Notes (January 8 and October 15, 1947)
   Signed by H.H. Wrong, Canadian Ambassador to U.S.A.
   No expiry date. Still in force.
   Also listed as still in force by (FCC rules-release July 1/69)
3. To coordinate the use of FM Broadcast Channels with coordination zone 250 miles both sides of CAN/US border.
4. Mutual coordination of frequency assignments.
5. Exchange of information
6. Relative costs are nil.
7. We gain by the benefits of frequency coordination.
8.
9. Arrangement should be maintained.
10. Arrangement could be studied with a view to updating of appendices if considered necessary.

1. AGREEMENT CONCERNING THE OPERATION AND MAINTENANCE OF THE LAND LINE COMMUNICATION SYSTEM BETWEEN EDMONTON, ALBERTA AND FAIRBANKS, ALASKA
   C.T.S. No. 6, 1948
2. Effective March 31, 1948. Signed by H.H. Wrong, Canadian Ambassador to the U.S.A. Upon agreement between US and Canada or 1 year notice by either Govt of intention to terminate.
   It is still in force; see file 32-2-7.
3. Title is self-explanatory. The agreement forms the basis for negotiation of contracts between Canada and the United States re provision of communication circuits between Canada and Alaska.
4. It is a mutual agreement between Canada and United States regarding the provision of communication circuits by Canada and remuneration for same by the U.S. modifications to basic agreement are contained in legal contracts entered into as a result of the agreement.
5. Exchange of notes, with provision for supplementary arrangements.
6. Canada receives certain remuneration for services rendered.
7. It provides a basis for legal contracts between Canadian Communication organization (CNT) and the United States for the supply of communication facilities.
8. -------
9. It appears that the arrangements should be maintained.
10. There is some question of interpretation which is being studied by External Affairs and US counterparts.

1. AGREEMENT AND FINAL ACT OF A MEETING BETWEEN REPRESENTATIVES OF THE GOVERNMENTS OF THE BRITISH COMMONWEALTH AND OF THE GOVERNMENT OF THE UNITED STATES OF AMERICA (SEE NOTE 1 BELOW)
   C.T.S. No. 2, 1950.
2. Date of signature August 12th, 1949 (See Note 2 below).
   In force February 24th, 1950.
   Still in force (amended October 1st, 1952, See Treaty Series 1952 No. 19). No expiry date stated.
3. The treaty relates to the establishment of direct telegraph circuits between Commonwealth countries (excluding Canada) and the United Statessof America and established ceiling rates for various classes of telegraph traffic and also the terminal and transit charges applying thereto.
4. The treaty only affects minor Canadian streams (the Canada - Continental U.S. telegraph traffic arrangement is under separate agreement) and hence the rights and obligations are minimal. (See note 3 below).
5. Participation is covered by recognition of the details of the treaty.
6. Related costs of participation - nil.
7. Canada obtains very little out of the treaty which primarily is of benefit to other Commonwealth countries and the United States of America.
8. None.
9. There would be no advantage in Canada trying to cease the agreement.
10. At some time in the not too distinct future the ceiling rates and terminal and transit charges may need to be renegotiated.

NOTES:

1) This treaty is signed by: U.S.A., U.K., Canada, Australia, New Zealand, The Union of South Africa, India, Pakistan, Ceylon and Southern Rhodesia.
2) This treaty replaces the Telecommunications Agreement between the Government of the United States of America and British Commonwealth Governments signed at Bermuda on 4th December, 1945.
3) This treaty covers telegraph traffic exchanged between Canada and:- Guam, Wake Island, Midway, Hawaii, U.S. Virgin Islands, American Samoa, Puerto Rico, Burma, Indonesia, Israel, Jordan, Netherlands, Netherland Antilles, South Africa, South West Africa.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA
CONTINENTAL RADAR DEFENCE
C.T.S. No. 31, 1951.
This is a defence agreement concerning the extension and coordination of the Continental Radar Defence system. It deals with the construction of these stations and either it was not considered necessary or it was overlooked but the agreement does not contain the usual telecommunications clause and therefore as it exists does not concern telecommunications.

2. Signed August 1, 1951, by H.H. Wrong, Canadian Ambassador to the USA.

1. RADIO CONVENTION CANADA AND USA RE OPERATION BY CITIZENS OF EITHER COUNTRY OF CERTAIN RADIO EQUIPMENT OR STATIONS IN EITHER COUNTRY. C.T.S. No. 7, 1952.
2. Signed February 8, 1951 by Lionel Chevrier, Minister of Transport. In force May 15, 1952 (for a period of five years and thereafter until terminated by either party on six months notice. It is still in force (FCC rules also list it as still in force).
3. It is a reciprocal agreement which provides a legal means whereby citizens of either country may operate certain radio equipment or stations in either country. I.E. Canadian Amateurs may operate such stations in the U.S. and vice versa. Mobile radio units in public safety vehicles, etc. may be operated in both countries.
4. Mutual cooperation with the United States.
5. N/A
6. Cost of participation is nil.
7. Citizens of Canada are able to enjoy the convenience and benefits gained from being able to operate certain radio equipment in the United States.
8. Arrangement has overcome problems rather than create any.
9. Arrangement should be maintained.
10. No changes are recommended.

1. TELEVISION AGREEMENT, CANADA AND USA RE ALLOCATION OF TELEVISION CHANNELS C.T.S. No. 13, 1952.
2 Exchange of Notes April 23, 1952 and June 23, 1952
Signed by L.B. Pearson, Secretary of State for External Affairs.
Still in force (FCC rules also list it as being in force).
3. To provide a basis for the coordination of Television channel assignment within the coordination zone in Canada and United States.
4. Mutual cooperation with the United States.
5. Exchange of notes.
6. Costs of participation are nil.
7. The benefits gained are those of mutual coordination of television channel assignments.
8.
9. Arrangement should be maintained.
10. No changes are recommended.

1. TELECOMMUNICATIONS SUPPLEMENTARY AGREEMENT.
   C.T.S. No. 19, 1952 (Supplement to C.T.S. No. 2, 1950)
2. Date of signature - October 1st, 1952.
   In force - October 1st, 1952
   Still in effect. No expiry date specified.
3. Modifies Article 2 of the main agreement (C.T.S. No. 2, 1950), particularly reduces ceiling collection charges.
4. The treaty only affects minor Canadian streams (the Canada - Continental U.S. telegraph traffic arrangement is under separate agreement) and hence the rights and obligations are minimal. (See note 3 below).
5. Participation is covered by recognition of the details of the treaty.
6. Related costs of participation - nil.
7. Canada obtains very little out of the treaty which primarily is of benefit to other Commonwealth countries and the United States of America.
8. None.
9. There would be an advantage in Canada trying to cease the agreement.
10. At some time in the not too distinct future the ceiling rates and terminal and transit charges may need to be renegotiated.

NOTES:

1) This treaty is signed by: U.S.A., U.K., Canada, Australia, New Zealand, The Union of South Africa, India, Pakistan, Ceylon and SouthernRhodesia.
2) This treaty replaces the Telecommunications Agreement between the Government of the United States of America and British Commonwealth Governments signed in Bermuda on 4th December 1945
3) This treaty covers telegraph traffic exchanged between Canada and:- Guam, Wake Island, Midway, Hawaii, U.S. VIrgin Islands, American Samoa, Puerto Rico, Burma, Indonesia, Israel, Jordan, Netherlands, Netherland Antilles, South Africa, South West Africa.

1. AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA FOR THE PROMOTION OF SAFETY ON THE GREAT LAKES BY MEANS OF RADIO.
   C.T.S. No. 25, 1952.
2. Signed at Ottawa, Feb. 21, 1952 by Lionel Chevrier, Minister of Transport.
   Ratifications and in force Nov. 13, 1954.
   Still in force.
3. Provides a common system of communication on the Great Lakes thereby contributing to the safety of life through communications.
4. The right to expect the benefits of a common safety service and the obligation to provide the facilities for participation in the common safety service I.E. provide a continuous guard on the distress frequency at Coast Stations.
5. Negotiation and consultation.
6.
7. As stated in Item 4 above.
8. The system requires modification in keeping with changing International Regulations. Present system is a DSB operation and new regulations will require a SSB operation. There is a strong feeling in Canada a complete change to a VHF system would be the best move. These problems have been recognized and action is now under way to negotiate a new or revised agreement with the United States.
9. An arrangement for a common safety communication system on the Great Lakes is desirable and should be maintained.
10. A change to an all VHF system is recommended.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES FOR THE ESTABLISHMENT OF UNITED STATES GLOBAL COMMUNICATIONS FACILITIES IN NEWFOUNDLAND.
   C.T.S. No. 27, 1952.
2. Exchange of Notes November 4 and 8, 1952, signed by Brooke Claxton, Acting Secretary of State for External Affairs.
3. This is a defence agreement making land in Newfoundland available to the U.S. for the establishment of certain communications facilities.
   It contains the clause that such technical matters as frequencies and powers and the location, making and lighting of antenna masts will be coordinated with the RCAF and DOT and will be subject to the approval of the DOT.

   The Agreement is still in effect; however, we must assume the question of approval of frequencies and powers would now lie with the D.O.C.

1. AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE SEALING OF MOBILE RADIO/TRANSMITTING EQUIPMENT.
   C.T.S. No. 1, 1953
2. Exchange of Notes March 9, and 17, 1953, signed by G. Ignatieff, for the Ambassador to the U.S.A.
   It is still in force (FCC rules also indicate it is still in force).
3. It refers to T.S. 1947 No. 25 which is now cancelled and to the Convention between Canada and US re the operation, by citizens of either country, of certain radio equipment or stations in either country (TS 1952 No. 7). Its purpose is to continue the means whereby Canada may seal certain types of radio equipment installed in US vehicles entering Canada without necessity of removing such equipment from the vehicles.
4. Canada retains right to seal certain radio equipment in US vehicles entering Canada.
5. -------
6. -------
7. Conflict between Domestic regulations and the Convention with the U.S. (TS 1952 No. 7) is removed.
8. No problems.
9. Arrangement should be retained.
10. No changes recommended.

1. DEFENCE AGREEMENT BETWEEN CANADA AND UNITED STATES OF AMERICA. TRANSFER OF LORAN STATIONS IN NEWFOUNDLAND TO THE CANADIAN GOVERNMENT. C.T.S. No. 12, 1953.
   This is an agreement of transfer of Responsibility for the Loran Stations in Newfoundland to the Canadian Government.
   It is an accomplished fact. No further action is required or possible.
2. Signed on June 30, 1953 by L.D. Wildgress, for the Secretary of State for External Affairs.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA REGARDING THE CONSTRUCTION AND OPERATION OF A LORAN STATION BY THE UNITED STATES COAST GUARD AT CAPE CHRISTIAN, BAFFIN ISLAND. C.T.S. No. 6, 1954.
2. Exchange of notes (May 1 and 3, 1954).
   Signed by Brooke Claxton, Acting Secretary of State for External Affairs.
   Agreement was for ten years and thereafter as long as both countries agree that the station is required.
   The agreement is still in force and the Loran Station is still being operated by the United States.
3. As stated in title (Item 1 above).
4. Canada has the right to assume operation of the Station, the cost being shared by the two countries.
   Canada has the right to approve technical matters such as frequencies and powers.
   Scientific data obtained in the course of operation of Cape Christian shall be transmitted to the Canadian Government.
5. Exchange of notes.
6. There is no cost to Canada until such time as we exercise the right to take over operation of the station.
7. Canada gains the use of the Loran navigational system in Canadian territory, and the benefits of mutual defence interests.
8.
9. The arrangement should be continued as long as it is considered necessary.
10. No changes are recommended.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA REGARDING THE ESTABLISHMENT OF A DISTANT EARLY WARNING SYSTEM. C.T.S. No. 8, 1955.
2. Exchange of notes, May 5, 1955.
   Signed by A.D.P. Heeney, Ambassador of Canada to U.S.A.
   A basic period of 10 years - changes to be mutually agreed.
   It is still in force.
3. The agreement establishes the basis on which United States could build, maintain and operate the DEW system in Northern Canada.
4. Canada has the right to take over the operation of any of the stations,Canada has the right to approve telecommunication facilities and such technical matters as frequencies and power, etc.
   Canada has right to any scientific information obtained.
5. Exchange of notes.
6. In the event Canada assumes operation of any of the stations we must also assume cost of operation.
7. Benefits of mutual defence interests.
8.
9. The arrangement so far as it involves telecommunication should be maintained.
10. No changes are recommended.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA FOR THE ESTABLISHMENT OF CERTAIN RADAR STATIONS IN THE NEWFOUNDLAND-LABRADOR AREA.
   C.T.S. No. 29, 1955.
2. Signed at Ottawa, June 13, 1955 by L.B. Pearson, Secretary of State for External Affairs.
   This is the usual defence agreement which contains the usual telecommunication clause re the right of Canadian Government to approve these facilities so far as the technical matters of frequency and power are concerned.

1. DEFENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA FOR THE ESTABLISHMENT OF CERTAIN RADAR STATIONS IN BRITISH COLUMBIA, ONTARIO AND NOVA SCOTIA, TO AUGMENT THE RADAR EXTENSION IN THE SOUTHERN PART OF CANADA.

   C.T.S. No. 30, 1955

2. Signed at Ottawa, June 15, 1955, by L.B. Pearson, Secretary of State for External Affairs.

   This is another defence agreement which contains the usual telecommunication clause regarding the right of the Dept. of Transport to approve telecommunication facilities so far as the technical matters of frequency and power are concerned.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE ORGANIZATION AND OPERATION OF THE NORTH AMERICAN AIR DEFENCE COMMAND (NORAD).
   C.T.S. No. 9, 1958.
2. Signed at Washington May 12, 1958, by Norman A. Robertson, Ambassador of Canada to U.S.A.
   This is a defence agreement as the title indicates and it does not specifically mention Telecommunications in any way.

1. DEFENCE 1 - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING AERIAL REFUELING FACILITIES IN CANADIAN TERRITORY.

   C.T.S. No. 15, 1958.

2. Signed at Ottawa, June 20, 1958, by the Secretary of State for External Affairs.

   Agreement still in force.

3. This is a defence agreement as indicated by the title. There is a telecommunication clause which requires U.S. authorities to obtain approval of DOT for the establishment of radio stations associated with the refueling project. Such stations to be established and operated in accordance with licences issued by DOT.

1. TELECOMMUNICATTON:- MULTILATERAL DECLARATION TO DENOUNCE PART II OF THE INTER-AMERICAN RADIO COMMUNICATION CONVENTION (TSA 38 #18). C.T.S. No. 32, 1958.
2. Done at Washington, December 20, 1957.
   In force in Canada December 20, 1958.
3. This multilateral declaration cancels Part II of the Inter-American Radio Communication Convention thereby terminating the operation of the Inter-American Radio Office (OIR) in Habana, Cuba, and arranged for the Pan American Union to perform the function with respect to the exchange of broadcasting notifications which had been performed by the OIR.
4. We cancelled our obligation to support the OIR and agreed to shift our financial support for the exchange of broadcasting notifications to the Pan American Union.
5. Financial contribution and exchange of notifications.
6. Our financial contribution should be approx. $6,000.00 annually. We have not however made such a contribution for a number of years as we have been unable to get an account from the organization.
7. The benefit of the exchange of broadcasting notifications.
8. The problems resulting from this arrangement are very complicated. The notification exchange function was carried on by the Pan American Union from the same office in Habana with the same staff as the old OIR and its function was relatively satisfactory until the new Government took over in Cuba. At this point the service began to deteriorate and finally came to a complete halt. Eventually the Cuban Government notified that under the terms of the Inter-American Radio Convention they were taking over a caretaker operation of the OIR. However, the OIR was no longer in existence so the Cuban Govt. were really saying they were taking over on a non-existent organization. External Affairs have been trying to clarify the situation with the United States but it is a delicate situation and little progress that we in DOC are aware of has been made.
9. Its not a question of continuing the arrangement of CTS No. 32, 1958 that is an accomplished fact. It is desirable; however, that the broadcast notification exchange be carried on in a more efficient manner.
10. Recommendations for changes and improvements need to be developed in cooperation with External Affairs.

1. DEFENCE AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE CONSTRUCTION AND EQUIPMENT REQUIRED FOR THE AUGMENTATION OF COMMUNICATION FACILITIES AT CAPE DYER, BAFFIN ISLAND (DEW EAST).
   C.T.S. No. 9, 1959.
2. Exchange of Notes, April 13, 1959, signed by D.V.L., Acting Secretary of State for External Affairs.
   No expiry date mentioned.
   Deemed to have taken effect as from January 15, 1959
3. It is an agreement which gave the United States permission to augment certain communication facilities at Cape Dyer, Baffin Island to support the Greenland Extension of the DEW line (DEW East).
3. A telecommunications clause in the agreement gives Canada (DOT) the right to approve and licence and under certain conditions negotiate the take over of the installations in Canada.
5. Recognition of the agreement.
6. Relative costs are nil.
7. Mutual defence interests.
8. Nil
9. N/A
10. No changes recommended.

1. DEFENCE EXCHANGE OF NOTES BETWEEN CANADA AND THE U.S.A. CONCERNING THE ESTABLISHMENT IN CANADA OF SHORT RANGE TACTICAL AIR NAVIGATION FACILITIES AT NINE SITES (TACAN).
   C.T.S. No. 10, 1959.
2. Exchange of notes, May 1, 1959.
   Signed by D.V.L., Acting Secretary of State for External Affairs.
   The agreement is still in effect.
3. This is an agreement to permit the United States to establish TACAN facilities at nine locations in Canada.
   This is a defence agreement which contains a telecommunications clause which requires U.S. Military Authorities to obtain approval from the DOT for the establishment of radio stations associated with this project and requires such stations to be licensed by the DOT.

1. DEFENCE - EXCHANGE OF NOTES BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA GOVERNING THE ESTABLISHMENT OF AN INTEGRATED COMMUNICATION SYSTEM TO SUPPORT THE BALLISTIC MISSILE EARLY WARNING SYSTEM (BMEWS)
   C.T.S. No. 12, 1959.
2. Ottawa July 13, 1959, signed by Norman A. Robertson, Secretary of State for External Affairs.
3. This is a defence agreement as stated in the title. It includes a Telecommunications clause which requires that U.S. Military authorities shall obtain approval of DOT for the establishment and operation of radio stations associated with this project and that such stations shall operate in accordance with the terms of licences issued by the DOT. However, where possible, telecommunication circuits shall be provided through existing Canadian public carriers.

1. DEFENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA WITH ANNEX CONCERNING THE CONTINUED UTILIZATION OF THE EXISTING UPPER ATMOSPHERE RESEARCH FACILITIES AT FORT CHURCHILL, MANITOBA.
   C.T.S. No. 12, 1960
2. Ottawa, June 14, 1960, signed by H.C. Green, Secretary of State for External Affairs.
3. This is a defence agreement for the continued operation of the test facilities at Fort Churchill, Manitoba as mentioned in the title. The agreement contains the usual telecommunication clause regarding U.S. Authorities obtaining the approval of DOT for any radio stations associated with the project and that such stations must be licensed by the DOT.

1. SCIENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE ESTABLISHMENT OF A SATELLITE TRACKING STATION NEAR ST. JOHN'S, NEWFOUNDLAND.

   C.T.S. No. 19, 1960.

2. Exchange of Notes, Ottawa, August 24, 1960, signed by H.C. Green, Secretary of State for External Affairs.

   Still in effect.

3. This is an agreement for Canada and the United States to cooperate in establishing a satellite tracking station in Newfoundland. It contains a telecommunications clause to the effect established commercial communication systems will be used where practical and that Canada will be responsible for appropriate approvals and the assignment of frequencies.

   The station has been licensed from the beginning and is still in operation.

1. DEFENCE - AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING COST SHARING AND RELATED ARRANGEMENTS WITH RESPECT TO PLANNED IMPROVEMENTS IN THE CONTINENTAL AIR DEFENCE SYSTEM (WITH ANNEX).
   C.T.S. No. 9, 1961.
2. Exchange of Notes, September 27, 1961, signed by H.C. Green, Secretary of State for External Affairs.
   In force, September 27, 1961 for a period of ten years unless agreed otherwise and thereafter as long as the two parties agree it is necessary.
3. This is a defence agreement concerning the establishment of gap filler radar sites, one SAGE Combat Centre/Direction Centre and two BOMARC missile squadrons. There is no telecommunication clause but there is one concerning radio interference which provides that in selecting the various sites consideration will be given to the avoidance of interference of other use of radio frequencies.

1. DEFENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE ADDITION OF CAPE DYER TO THE ANNEX TO THE AGREEMENT ON MAY 1, 1959 (TS 1959 NO. 10) RELATING TO SHORT-RANGE TACTICAL AIR NAVIGATION FACILITIES IN CANADA.
   C.T.S. No. 14, 1961.
2. Exchange of Notes, September 19 and 23, 1961, signed by H.C. Green, Secretary of State for External Affairs.
3. As the title implies this is only an addition to Canada Treaty Series No. 10, 1959.

1. RADIO - EXCHANGE OF NOTES BETWEEN CANADA AND VENEZUELA CONCERNING AMATEUR RADIO STATION COMMUNICATIONS
   C.T.S. No. 16, 1961
2. Exchange of notes, Caracas, November 22, 1961, signed by A.D. Ross, Chargé d'Affaires, ad interim, for Canada in Venezuela.
   Still in force. (See additional agreement signed 29-10-68).
3. This agreement provides that Amateur stations of Canada and Venezuela may exchange messages or other communications from or to third parties.
4. Mutual recognition of the agreement.
5. Exchange of Notes.
6. Costs are nil.
7. Canadian Amateurs and other citizens benefit from the exchange of third party traffic.
8. No problems.
9. The arrangement should be maintained.
10. Improvements and additional privileges have been provided by an additional agreement signed at Caracas, October 29, 1968 which came into effect November 13, 1968. This agreement allows licensed radio amateurs of one country to operate their stations in the territory of the other country while temporarily resident therein.

1. RADIO - EXCHANGE OF NOTES BETWEEN CANADA AND MEXICO CONCERNING AMATEUR RADIO STATION COMMUNICATIONS
   C.T.S. No. 9, 1962
2. Exchange of Notes, July 30, 1962, signed by W.A. Irwin, Canadian Ambassador to Mexico.
   Entered into force August 29, 1962.
   Still in force.
3. This agreement provides that Amateur Radio Stations of Canada and Mexico may exchange messages or other communications from or to third parties.
4. Mutual recognition of agreement.
5. Exchange of notes.
6. Costs are nil.
7. Canadian Amateurs and other citizens benefit from the exchange of third party traffic.
8. No problems.
9. The arrangement should be continued.
10. No changes recommended.

1. RADIO - EXCHANGE OF NOTES BETWEEN CANADA AND CHILE CONCERNING AMATEUR RADIO STATION COMMUNICATIONS.
   C.T.S. No. 14, 1962.

2. Exchange of notes Santiago October 4, 1962, signed by J.Y. Grenon, Chargé d'Affaires to Chile.
   Entered into force October 14, 1962.
   Still in force.

3. This agreement provides that Amateur Radio Stations of Canada and Chile may exchange messages or other communications from or to third parties.

4. Mutual recognition of agreement.

5. Exchange of notes.

6. Costs are nil.

7. Canadian Amateurs and other citizens benefit from the exchange of third party traffic.

8. No problems.

9. The arrangement should be continued.

10. No changes recommended.

1. RADIO - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING COORDINATION AND USE OF RADIO FREQUENCIES.

   C.T.S. No. 15, 1962.

2. Exchange of notes Ottawa October 24, 1962, signed by H.C. Green, Secretary of State for External Affairs.
   Entered into force October 24, 1962.
   Still in force.

3. This agreement establishes the basis for coordinating the use of frequencies above 30 Mc/s in Canada and the United States and outlines the procedures to be followed and the technical parameters to be considered.

4. Mutual adherence to the agreement.

5. By negotiation and exchange of notes.

6. Related costs are nil.

7. Advantages gained from the coordination of frequency assignments. The mutual understanding and common aims developed through the close cooperation and regular contacts at the working level.

8. There are coordination problems but the agreement provides the channels through which these can be overcome.
   Coordination of all frequency bands above 30 Mc/s is not provided for and in this sense the agreement could be made more inclusive.

9. The arrangements should be continued.

10. The arrangements become out of date from time to time and a review is probably desirable at this time or in the near future.

1. RADIO - EXCHANGE OF NOTES BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE REPUBLIC OF EL SALVADOR CONCERNING AMATEUR RADIO STATION COMMUNICATIONS.
   C.T.S. No. 3, 1963.

2. Exchange of notes February 20, 1963, signed by J.L. Delisle, Ambassador of Canada to Costa Rica.
   Entered into force April 9, 1963.
   Still in force.

3. This agreement provides that Amateur Radio Stations of Canada and El Salvador may exchange messages or other communications from or to third parties.

4. Mutual recognition of agreement.

5. Exchange of notes.

6. Costs are nil.

7. Canadian Amateurs and other citizens benefit from the exchange of third party traffic.

8. No problems.

9. The arrangement should be continued.

10. No changes recommended.

1. RADIO - EXCHANGE OF NOTES BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF BOLIVIA CONCERNING AMATEUR RADIO STATION COMMUNICATIONS.
   C.T.S. No. 5, 1963.

2. Exchange of Notes La Paz May 31, 1963, signed by Freeman M. Tovell, Ambassador of Canada to Bolivia.
   Entered into force May 31, 1963.
   Still in force.

3. This agreement provides that Amateur Radio Stations of Canada and Bolivia may exchange messages or other communications from or to third parties.

4. Mutual recognition of agreement.

5. Exchange of notes.

6. Costs are nil.

7. Canadian Amaterus and other citizens benefit from the exchange of third party traffic.

8. No problems.

9. The arrangement should be continued.

10. No changes recommended.

1. RADIO - EXCHANGE OF NOTES BETWEEN GOVERNMENT OF CANADA AND THE GOVERNMENT OF PERU CONCERNING AMATEUR RADIO STATIONS COMMUNICATIONS. C.T.S. No. 11, 1964.

2. Exchange of notes Lima May 8, 1964, signed by Freeman M. Tovell, Ambassador of Canada to Peru.
In force May 8, 1964.
Still in force.

3. This agreement provides that Amateur Radio Stations of Canada and Bolivia may exchange messages or other communications from or to third parties.

4. Mutual recognition of agreement.

5. Exchange of notes.

6. Costs are nil.

7. Canadian Amateurs and other citizens benefit from the exchange of third party traffic.

8. No problems.

9. The arrangement should be continued.

10. No changes recommended.

1. DEFENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE CONTINENTAL RADAR DEFENCE SYSTEM.
C.T.S. No. 16, 1964.

2. Washington, May 25, 1964.
Signed by H.B. Robinson, Chargé d'Affaires, Canadian Embassy, Washington.

3. This agreement covers the phasing out of certain radar stations of the continental radar defence system within Canada and refers to TS 1951 No. 31
TS 1961 No. 5
TS 1961 No. 7

1. SCIENCE - EXCHANGE OF NOTES BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE ESTABLISHMENT OF A LORAN-C STATION IN NEWFOUNDLAND.

   C.T.S. No. 19, 1964.

2. Exchange of notes - Ottawa, September 16, 1964.
   Signed by Paul Martin, Secretary of State for External Affairs.

3. This agreement provides the terms under which Canada (DOT) and the United States (USCG) may establish a Loran C Station in Newfoundland in the vicinity of Cape Race. Certain technical characteristics are outlined including frequency and powers. There is also a telecommunications clause regarding the provision of communication circuits and the assignment of frequencies.

4. This is a cooperative effort. Canada provided the land and is obliged to operate the station for the USCG who pay the operating costs of the station.

5. Mutual cooperation in meeting the requirements of the agreement.

6. The possibility of Canada assuming the operations costs of the station is provided for

7. Canada benefits from the use of the Loran C Navigation System in Canadian waters.

8. There do not appear to be any problems.

9. The arrangement should be maintained.

10. No recommendation for changes at this time.

1. TELECOMMUNICATIONS: AGREEMENT CONCERNING A GLOBAL COMMUNICATIONS SATELLITE SYSTEM.
   C.T.S. No. 24, 1964
2. Date of Signature: August 20th, 1964.
   The agreement was signed for Canada by George P. Kidd, Minister for External Affairs. The Special Agreement was signed by D.F. Bowie and C.S. Gregory of C.O.T.C.
   In force: August 20th, 1964.
   Remains in effect until the entry into force of the Definitive Arrangements which are presently being discussed at Government level.
3. Provides for International cooperation in the provision of the design, development, construction, establishment, maintenance and operation of the space segment of the Global Commercial Communications Satellite System.
4. Provides Canada with an ownership interest in the space segment in proportion to our estimated use of the system and also allows C.O.T.C. to enter directly into appropriate traffic agreements with respect to the use of channels of communication provided by the system established under this agreement.
5. By contributions towards the cost of the space segment, and through representation on the Interim Communications Satellite Committee and through participation in use of Global Communications System.
6. Expenditures and commitments to date by Intelsat amount to approximately $200,000,000 (U.S.) of which $7,500,000 (U.S.) is Canada's share. C.O.T.C. pays 3.75% of design, development, construction and establishment of the space segment.
7. Of great benefit to Canada, as much of our overseas traffic growth is now handled via satellite facilities. At the present time, C.O.T.C. is operating approximately 90 satellite circuits; however, it is desirable to have a good mix of satellite and cable circuits. Membership in the ICSC also gives Canada a voice in the international effort to create a more permanent international satellite communication system.
8. These points are under active consideration at Government level.
9.
10.

1. SCIENCE - AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING THE CONTINUED OPERATION OF THE CHURCHILL RESEARCH RANGE.
   C.T.S. No. 9, 1965
2. First exchange of notes, June 11, 1965 effective from June 14, 1965.
   Second exchange of notes, effective January 1, 1966.
   Signed by Paul Martin, Secretary of State for External Affairs.
   Expiry date June 30, 1970.
3. This is a science agreement with the National Research Council being the Canadian organization primarily concerned. There does not appear to be a Telecommunications clause in the agreement therefore it can be assumed that any telecommunications authorization would be in the name of N.R.C.

1. AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA CONCERNING GROUND-TO-AIR COMMUNICATIONS FACILITIES FOR DEFENCE PURPOSES IN CONNECTION WITH THE DISTANT EARLY WARNING SYSTEM.
   C.T.S. No. 24, 1965
   See also C.T.S. No. 31, 1951
   C.T.S. No. 8, 1955
   C.T.S. No. 14, 1952
2. Ottawa, December 1, 1965
   Signed by Paul Martin, Secretary of State for External Affairs.
   Entered into force December 1, 1965 for period of ten years and thereafter until terminated by mutual agreement.
   It is still in force.
3. It enables the United States Air Force to establish and operate ground to air communication facilities for mutual defence purpose in Northern Canada.
4. Canada enjoys the benefits of improved mutual defence facilities in the Canadian North and is obliged to facilitate the establishment of such facilities in accordance with the terms of the agreement.
5. Exchange of notes.
6. Relative costs are nil.
7. As stated in the above.
8. Problems are nil.
9. The arrangement should be continued as long as required.
10. No recommendation for changes at this time.

1. TELECOMMUNICATIONS. SUPPLEMENTARY AGREEMENT ON ARBITRATION AS PROVIDED FOR BY ARTICLE 14 OF THE SPECIAL AGREEMENT SIGNED PURSUANT TO ARTICLE 11 OF THE AGREEMENT ESTABLISHING INTERIM ARRANGEMENTS FOR A GLOBAL COMMERCIAL COMMUNICATIONS SATELLITE SYSTEM.
   C.T.S No. 25, 1966.
2. Done at Washington, June 4, 1965 and signed by Canada on the same date, by D.F. Bowie and C.S. Gregory of C.O.T.C.
   Entered into force November 21, 1966.
   Expires with Interim Agreement.
3. It provides arbitration procedure in the event it is required under the Interim Satellite Arrangements. See C.T.S. No. 24, 1964
4. Canada has the right to submit any dispute to legal arbitration We are obliged to provide representation or nominees who may be required to serve on the tribunal panel.
5. Participation as tribunal panel members as required.
6. Relative costs are nil except where Canada is involved in a dispute. Cost of the tribunal are shared by the parties involved in a dispute.
7. Canada gains the benefits of arbitration in the event of being involved in a legal dispute.
8. ------
9. The arrangement should be maintained.
10. ------

1. CONSTITUTION OF THE COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION.

2. The Constitution of the present Organization was agreed by Commonwealth Governments on the recommendation of the Commonwealth Telecommunications Conference 1966, and was accepted through an Order in Council (1966-22-77) of December 5th, 1966, accepting the conclusions and recommendations of the conference. N.B.

3. The purpose of the Organization is to provide the machinery for Commonwealth consultation and cooperation in the field of the external telecommunications needs of Commonwealth countries; also, to promote the efficient exploitation and development of the Commonwealth external telecommunications system, within the framework of collaborative financial arrangements.

4. Canada has the right, together with other Commonwealth countries, to exploit the Commonwealth external telecommunications system for their traffic, under the obligation of accepting the duties and responsibilities as set out in the Constitution.

5. Canada's participation is through its signature of the Financial Agreement of the Organization and through representation on the Commonwealth Telecommunications Council.

6. Canada absorbs 8% of the expenses of the Organization's Council. For the year ending March 31st, 1970, Canada's share of Council expenses is estimated at $40,000.

7. The Commonwealth arrangements have been of benefit to Canada as they have allowed Canada to develop its external telecommunications facilities to a degree which would have been more difficult to attain in isolation.

8. The major problem with the present arrangements is that they do not cover all facilities, the notable exceptions being services via the long range wide-band cable systems and services via satellite facilities. This situation can create conflict between systems and between partners. The problem is under active consideration by the Council in an attempt to develop a unified system of accounting which would embrace all traffic and all media.

9. Yes, in a revised form (see 8. above.)

10. Canada is playing a major role in the studies which hopefully will lead to the new financial arrangements referred to in 8. above.

N.B. The Commonwealth Telecommunications Organization continues the Commonwealth Partnership for which the financial arrangements are embraced in a Financial Agreement (1969) which replaces the Commonwealth Telegraph Agreements of 1948 and 1963.

1. TELECOMMUNICATIONS PRE-SUNRISE OPERATIONS OF CERTAIN STANDARD (AM) RADIO BROADCASTING STATIONS AGREEMENT BETWEEN CANADA AND THE UNITED STATES OF AMERICA
   (It has not as yet been issued as a Canada Treaty Series)
   C.T.S. No. _____1967.
2. Exchange of notes March 31 and June 12, 1967
   Entered into force June 12, 1967
   Signed by Paul Martin, Secretary of State for External Affairs
   for limited periods prior to local sunrise, using all or part of their authorized daytime facilities.
4. As outlined in agreement.
5. Exchange of notes and coordination.
6. Relative costs are nil.
7. Certain Broadcasting stations obtain the benefit of operation on higher power prior to the local sunrise.
8. -------
9. The arrangements should be maintained.
10. -------

1. RECIPROCAL AMATEUR RADIO OPERATING AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF VENEZUELA.
   C.T.S. No. _____ 1968.
2. Signed at Caracas, October 29, 1968, by Jean Luc Pépin, Minister of Industry, Trade and Commerce.
   Entered into force November 13, 1968.
   Still in force.
3. It is a reciprocal agreement which permits licensed radio operators of one country to be authorized to operate their stations in the territory of the other country while temporarily resident therein.
4. Mutual cooperation.
5. Mutual agreement and signing of agreement.
6. Related costs of participation are nil.
7. Canadian Amateur radio operators gain the privilege of operating their stations in Venezuela, if they happen to be residing in that country on a temporary basis.
8. No problems.
9. The arrangement should be maintained.
10. No changes required.

1. NORTH AMERICAN REGIONAL BROADCASTING AGREEMENT.
2. Done at Washington, 15th of November 1950
   Signed by C.P. Edwards, Assistant Deputy Minister (Air), Department of Transport.
   - No expiry date stated.
   - It is still in force.

   Canada as a member of ITU was a signatory to this agreement November 15, 1950.
3. This agreement is a regional agreement within the meaning og Article 41 of the International Telecommunication Convention, Atlantic City (1947) - (Article 45 Montreux Convention 1965) The purpose of this agreement is to establish fair and equitable principles governing, and to regulate, the common use of the broadcasting band in the North American Region so that each country within the Region may make the most effective technical use thereof with the minimum of interference between broadcasting stations.
4. Canada has the right to expect and the obligation to give the consideration and cooperation provided for by this agreement.
5. The original Plenipotentiary Conference, any future conference, which is deemed necessary, and adherence to the provisions of the agreement.
6. The relative costs of participation are nil.
7. Canada enjoys the benefit and protection of the planned use of the radio spectrum for radio broadcast purposes.
8. Problems are nil.
9. The arrangement should be maintained.
10. No recommendation is made for change at this time.

1. INTERNATIONAL TELECOMMUNICATION UNION
   TELEGRAPH REGULATIONS (GENEVA REVISION 1958)
   (Annexed to the International Telecommunication Convention)
2. Done at Geneva, the 29th of November 1958
   Signed by W.E. Connelly, Superintendent Radio, Department of Transport.
   Expiry date not stated.
   Still in force.
   Canada first signed acceptance of the Telegraph Regulations in 1937.
3. The Telegraph Regulations provide for the standardization of message format, routing, classification, rates, charges and accounting for all international telegraph traffic.
4. The right to participate and vote in all international forums concerning telegraph regulations and the obligation to abide by our undertaking to adhere to these regulations.
5. As a member of the International Telecommunication Union we may participate in any conferences which concern the Telegraph Regulations.
6. The related costs are contained in Canada's annual contribution to the overall expenses of the International Telecommunication Union.
7. Canada enjoys the benefits of coordinated and planned telegraph communications with other member countries of the ITU who have accepted the Telegraph Regulations.
8. No serious problems exist with respect to the Telegraph Regulations.
9. The arrangements should be maintained.
10. It is now over ten years since the current TELEGRAPH Regulations were established, they would probably benefit from a review and updating within the near future.

1. TELEPHONE REGULATIONS (GENEVA REVISION 1958)
   ANNEXED TO THE INTERNATIONAL TELECOMMUNICATION CONVENTION.
2. Done at Geneva the 29th of November 1958
   - No expiry date indicated.
   - It is still in force.

   While Canada is a member of the ITU we have not yet signed acceptance of the Telegraph Regulations, since in the opinion of the telephone industry in Canada the regulations are too detailed in nature and therefore too restrictive to be in the best interests of telephone communications in Canada.

1. THE INTERNATIONAL TELECOMMUNICATION UNION

   Convention Montreux 1965.

2. Done at Montreux Switzerland 12th November 1965, signed by F.G. Nixon Director of Telecommunications, Department of Transport.
   No expiry date indicated. However, ITU Plenipotentiary Conferences are held approximately every 5 years at which time new conventions are signed.
   The Montreux Convention of 1965 is still in foce.

3. The purpose of this Convention and the International Telecommunication Union is as outlined in Article 4 of the Convention.

4. As a member of the ITU, Canada is entitled to participate in conferences of the Union, is eligible for election to any of its organs and shall have one vote at all conferences attended and in all consultations carried out by correspondence.
   The obligations are to abide by the provisions of the convention and contribute to the expenses of the Union.

5. As a member of the ITU, Canada is eligible to attend the Plenipotentiary Conferences of the Union, all administrative conferences and participate in the work of the CCIR and the CCITT.
   As an elected member, Canada participates in the annual meeting of the Administrative Council.

6. By free choice Canada contributes 18 out of a total of 475 contributory units or approximately 3.8% of Union annual expenses.
   This amounts to approximately $245,000 per year.

7. Canada has a voice and is able to participate in the international negotiations concerning telecommunications. We benefit from the cooperation engendered by such negotiations and from the protection we receive there from our telecommunication facilities.

8. There are of course many problems, each member country has its own interests to look after and therefore opinions are not always the same. In these circumstances, decisions are foten based on a compromise which often means that no one is completely satisfied and that in all probability the best solution to a problem has not been adopted. Generally speaking the problems are political, technical and economic and if they are to be solved with any efficiency at all a high degree of cooperation is and will continue to be required.

9. The arrangements should be maintained with such changes and amendments as time and circumstances may indicate.

10. It is recommended that Canada continue to support the principles of the ITU and continue to work to bring about improvements as we see them.

1. RADIO REGULATIONS 1968 EDITION

Additional Radio Regulations

Resolutions and Recommendations

As annexed to the International Telecommunication Convention

2. The Radio Regulations etc. 1968 Edition consist of _

The Radio Regulations etc. done at Geneva the 21st of December 1959 plus the amendments as contained in the:-

Final Acts of the Extraordinary Administrative Radio Conference to allocate frequency bands for space radiocommunication purposes. Done at Geneva 8th November 1963.

Final Acts of the Extraordinary Administrative Radio Conference for the preparation of a revised allotment plan for the Aeronautical Mobile (R) service.

Done at Geneva 29th April 1966.

Final Acts of the World Administrative Radio Conference to deal with matters relating to the Maritime Mobile Service. Done at Geneva 3rd November 1967.

- An expiry date is not stated.
- The Regulations as amended are still in force.

3. The Radio Regulations encourage cooperation among member countries to ensure the use of the radio spectrum in the most efficient and equitable manner. They promote the development of technical standards for radio facilities and the establishment of practices and procedures which increase the safety of life and the efficiency of communications by means of radio.

4. Canada obtains the right of protection for our radio facilities established in accordance with the Radio Regulations and has the obligation to abide by the Regulations in order that other countries radio facilities receive equal protection and consideration.

5. Participation is through our membership in the International Telecommunication Union, attendance at World Administrative Radio Conferences and the day to day cooperation with the permanent organs of the union in fulfilling the obligations imposed by the Radio Regulations.

6. The related costs are contained in Canada's annual contribution to the overall expenses of the International Telecommunication Union.

7. Canada enjoys the benefits of coordinated and planned radio communication facilities.

8. In any program, as broad in scope as the Radio Regulation, there is bound to be problems and the Radio Regulations are no exception. At the present time the frequency allocations and regulations related to space communications are inadequate and plans have been made to deal with this problem. Also the frequency plan for the high frequency bands allocated to the Maritime Mobile Service needs revising and it is anticipated that conference will be held in 1972 to deal with this problem. In a more general way, the Radio Regulations are considered by many to be ineffectual and there is a feeling that they should be made stronger and more binding. This presents very real problems when it is realized that mutual cooperation is the only real force for achieving improvements.
To try to achieve results by adopting stronger regulations without also finding a mutually satisfactory means of inforcing such regulations may well prove to be a retrograde step in that existing cooperation may be diminished.

9. The arrangements should certainly be continued.

10. Many changes and improvements are possible and Canada's efforts to find and effect these improvements should be continued and augmented in every possible way.

(1) AGREEMENT TERMINATING THE COMMONWEALTH TELEGRAPHS AGREEMENTS SIGNED AT LONDON ON 11 MAY 1948 AND 25 JULY 1963

Treaty Series No. 53 (1969) United Kingdom.

(2) This multi-party Agreement was signed in London January 27th, 1969 by Mr. C.S.A. Ritchie, High Commissioner for the Government of Canada.

In force April 1st, 1969 and continuing ad infinitum.

(3) Purpose:

(a) to agree to terminate the Commonwealth Telegraph Agreements of 1948 and 1963.

(b) to agree to settle as soon as possible accounts which have not been settled prior to the coming into force of this Agreement.

(c) to agree to contribute to the costs of any pension or gratuity including any increases payable to employees and their dependants engaged with the former Commonwealth Telecommunications Board.

(4) Obligations are described in 3 above.

(5) Participation relative to 3 (c) above is in the same proportions as the Governments, parties to this Agreement, contribute to the expenses of the new Commonwealth Telecommunications Council.

(6) Costs relative to pensions are included in the budget of the Commonwealth Telecommunications Council.

(7) Termination of the 1948 and 1963 Agreements and the simultaneous establishment of the Commonwealth Telecommunications Organization eliminates the former Commonwealth Telecommunications Board which involved expenses for the participation of resident Canadian and other members in London as well as a Board Chairman and Vice - Chairman. (Board premises and secretarial staff expense continues under the new Commonwealth Telecommunications Bureau.)

(8) ---

(9) This Agreement must be maintained since it is the legal instrument cancelling the other referenced Agreements and contains certain financial obligations (3 b and c above).

(10) No change is necessary although it would have been better to have the financial obligations described in 3 (b) and (c) above included in the Financial Agreement (Treaty Series No. 54 - 1969 - UK).

1. RADIO BROADCASTING ARRANGEMENTS BETWEEN THE UNITED STATES, GREAT BRITAIN, CANADA AND NEWFOUNDLAND FOR THE PREVENTION OF INTERFERENCE BY SHIPS OFF THE COASTS OF THESE COUNTRIES WITH RADIO BROADCASTING.
   U.K. Treaty Series No. 724-A; not in the Statutes at Large.
2. Exchange of Notes, September 18, 23 and October 1, 1925.
   Signed by H. Chilton, Envoy Extraordinary and Minister, Plenipotentiary, Chargé d'Affaires ad interim of Great Britain.
   Effective October 1, 1925.
   No expiry date mentioned.
3. As title indicates.
4. Ships registered in Canada will be prohibited from using waves of 300 to 400 meters within two hundred and fifty miles of the coasts of the United States. The United States will reciprocate the measure. However, since the new ITU regulations have come into effect, neither Canada nor the U.S. operate under these frequencies. Hence, the agreement is inoperative.
5. _____
6. _____
7. _____
8. _____
9. No.
10. Arrangement should be formally terminated.

1. COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION FINANCIAL AGREEMENT

Treaty Series No. 54 (1969) United Kingdom.

2. This multi-party Agreement was signed in London January 27th, 1969 by Mr. C.A.S. Ritchie, High Commissioner for the Government of Canada.

The Agreement came into force April 1st, 1969 and remains in effect between Partners remaining as and when any other Partner gives notice of withdrawal; such period of notice (to ensure settlement of accounts) shall include two complete financial years from the date of receipt of the notice by the Government of the United Kingdom.

3. Purpose: to constitute new financial arrangements between Partner Governments to replace those subsisting under the 1948 and 1963 Agreements which were terminated March 31st, 1969. (United Kingdom Treaty Series No. 53, 1969.)

4. Obligations of each Partner

(a) To nominate a National Body for the purpose of operating and maintaining its common-user facilities and services.

(b) To use the Commonwealth Telecommunications Council as a means of consultation on all matters substantially affecting the common-user system and to give due consideration to the recommendations and advice given by the Council.

(c) To furnish Council with:

(i) particulars before making any substantial addition, extension or alteration to any portion of a Partner's facilities or services which forms or might form part of the common-user system;

(ii) forecasts of expenditures (including capital) and revenues;

(iii) statements of account for each financial year.

(d) To share the aggregate expense of the common-user system in proportion to the net revenue derived from that system.

(e) To agree that Council shall determine from time to time, the accounting and settlement procedures, including the manner of computing expense and revenue.

5. Participation and operation is as outlined under 4 above.

6. The cost of participation by each Partner essentially involves their preparation of accounts to enable Council and its Secretariat (Bureau) to carry-out a clearing house action.

Financial committments are generally outlined in 4 (d) above.

7. The Commonwealth arrangements have been of benefit to Canada as they have allowed Canada to develop its external telecommunications facilities to a degree which would have been more difficult to attain in isolation.

Canada's National Body (COTC) benefits by substantial returns on its investments in facilities forming part of the common-user system.

8. The major problem with the present arrangements is that they do not cover all facilities, the notable exceptions being services via the long range wide-band cable systems and services via satellite facilities. This situation can create conflict between systems and between partners. The problem is under active consideration by the Council in an attempt to develop a unified system of accounting which would embrace all traffic and all media.

9 Yes, in a revised form. (see 8 above).

10 Canada is playing a major role in the studies which hopefully will lead to the new financial arrangements referred to in (8) above.

1. AGREEMENT ON COOPERATION BETWEEN UNITED STATES AND CANADA ON CIVIL EMERGENCY PLANNING
   C.T.S. No. 13, 1967
2. Exchange of notes August 8, 1967 effective same date
   Signed by the Secretary of State for External Affairs (Paul Martin)
   No expiry date but may be terminated upon three months written notice
3. Provides for co-operation between Canada and the United States in civil emergency planning.

   Note: The reference to communications is contained in para 7 of the statement of principles annexed to the agreement which provides

   "When transportation, communication and related facilities and equipment which are subject to the control of one government are made available for emergency use to the other government, the charges to that government shall not exceed those paid by similar agencies of the government making these resources available. To this end, mutually acceptable arrangements shall be worked out as necessary by the two governments."

1. AGREEMENT BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA RELATING TO THE OPERATION OF RADIO TELEPHONE STATIONS.
2. The date of signature was November 19, 1969 subject to ratification. Signed by Mitchell Sharp, Secretary of State for External Affairs. Instruments of ratification exchanged July 24, 1970 upon which date of agreement became effective.
   No expiry date, however, agreement is subject to the termination by either Government giving six months notice in writing of its intention to terminate.
3. To permit a person holding a valid licence for a Class D Station in the Citizens Radio Service in the United States to be authorized to operate that station in Canada, and a person holding a valid licence for a station in the General Radio Service in Canada to be authorized to operate that station in the United States.
4. Mutual co-operation with the United States in providing equal privileges to citizens of both countries.
5. Mutual cooperation.
6. Cost of participation is nil.
7. Allows Canadian citizens to operate their General Radio Service stations while temporarily in the United States.
8. No particular problems.
9. The arrangement should be maintained.
10. No changes recommended.