Preparatory study for the 1982 ITU Plenipotentiary Conference

by Brian Segal, Ph.D.

Canada

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I INTRODUCTION

Since the Second World War, activity in international telecommunications has increased dramatically. Growing demand for telecommunication services coupled with the economic and social impact of new technologies such as communication satellites, larger capacity intercontinental submarine cables, fibre optics, and more effective switching systems have resulted in greater global interest in the problems, issues, and technical complexities of maintaining order in global communications. There has also emerged a more shared consciousness about the need to increase access to telecommunications so that all members of the world community, rich and poor, can share the benefits of appropriate telecommunication infrastructures and systems.

This essay will attempt to identify and analyze some of the major policy issues likely to face administrations as they prepare for the 1982 Plenipotentiary Conference, and to assist in national and international preparations. While the essay will not necessarily hide the biases of the author, it is not designed to formulate a position on any policy issue. Rather, it will develop a perspective on the context within which the Plenipotentiary Conference will occur and offer alternative viewpoints on how the internal structures, processes and tasks of the ITU might be more responsive to a changing and complex global telecommunication environment.

II INTERNATIONAL TELECOMMUNICATION UNION

The ITU, founded in 1865, is the United Nation's specialized agency responsible for telecommunications. It is concerned with international regulation of telecommunications, the establishment of equipment, operational and tariff standards and practices, the coordination, exchange and publication of telecommunication information, the establishment of global or regional agreements to prevent the occurrence of harmful interference, and the promotion of orderly development of national communication systems.

The ITU Headquarters is comprised of four permanent organs:

- the General Secretariat, responsible for general administration, executive management and technical cooperation;
- the International Frequency Registration Board (IFRB), responsible for recording of frequency assignments and the positions of geostationary satellites, coordination procedures and the equitable, effective and economical use of the radio frequency spectrum and geostationary orbit;
- the International Radio Consultative Committee (CCIR), responsible for studying technical and operating questions relating to radiocommunications and for making recommendations; and
- the International Telegraph and Telephone Consultative Committee (CCITT), responsible for studying technical, operating and tariff questions relating to telegraphy and telephony and for making recommendations.

The regulation of telecommunications is achieved essentially through the work of conferences of the Union. The Plenipotentiary Conference determines the general policies of the Union and establishes the fundamental treaty relationships and the rights and obligations between members. The Administrative Conferences complete intergovernment treaty provisions through administrative regulations, planning and other agreements.

The Plenipotentiary Conference, which last met in Malaga-Torremolinos, Spain in 1973, is the supreme organ of the ITU and will have as its main tasks:

- revision of the International Telecommunication Convention (Malaga-Torremolinos, 1973), the Union's basic instrument;
- determination of general policies for the Union;
- establishment of the basis for the budget and determination of the limits of fiscal expenditure;
- election of the Secretary General, Deputy Secretary General, members of the IFRB, and those members of the Union which will serve on the Administrative Council until the next Plenipotentiary Conference;
- conclusion or revision of agreements with other international organizations.

Regulatory, Distributive and Development Functions

The ITU, through the work of its conferences, provides an institutionalized process for international negotiation and adjustment. Additionally, the ITU incorporates regulatory and distributive functions. The regulatory function includes establishing technical procedures for the coordination, notification and recording of frequency and orbital assignments in order to prevent and eliminate harmful interference between radio stations of different countries and to make more efficient use of the radio frequency spectrum and the geostationary satellite orbit. The regulatory function also involves the establishment of rates between services of member countries at levels as low as possible, consistent with maintaining efficiency.

The distributive function of the ITU involves equitable access for all countries to the radio frequency spectrum and the geostationary orbit as well as the distribution of the benefits from the use of the spectrum and orbit among member countries. Not surprisingly, the distributive function generates considerable policy differences and conflict among member countries, particularly as the number and technical competence of competing states increase. For many developed nations there is a growing reluctance to accept the distributive role of the ITU if this would tend to constrain domestic flexibility and hinder the further development of technology. There is also a question of legitimacy. As many new countries enter the bargaining process, the legitimacy of the regulatory function is strengthened for reasons of self-protection, yet the legitimacy of the distributive function becomes weaker as nations perceive an exaggerated erosion of sovereignty. Such perceptions are likely to make governments more jealous of their prerogatives, and international agreement on distribution is likely to become more difficult to achieve.[1]

The development function is concerned with promoting the development of technical facilities and the development and improvement of telecommunication equipment and networks in third world countries. In carrying out this function tension among members of the Union arises as the third world countries increase their demands for resources for development from the ordinary budget of the Union. The richer countries oppose this, since their contributions would then increase. The developed countries are also concerned that the possible reordering of priorities would reduce resources for other essential matters.

III THE ITU ENVIRONMENT AND FORCES FOR CHANGE

There is a growing convergence of understanding today in the world community about the great disparities between rich and poor countries. There is also a heightened awareness that international action is required to seriously address this problem through more equitable distribution of natural resources, economic benefits and technological capabilities. The Report of the Independent Commission on International Development Issues,[2] under the Chairmanship of Willy Brandt, presented a plea for change in a range of spheres such as commodity trade and development, energy, investment, the sharing of technology, development finance and the world monetary order. The Commission identified and described the glaring differences between rich and poor countries and the sheer inhumanity of suffering, hunger and deprivation faced by many of the poorest nations. But, on the other hand, the Commission also demonstrated that the "mortal dangers threatening our children and grandchildren can be averted; and that we have a chance -- whether we are living in the North or South, East or West -- if we are determined to do so, to shape the world's future in peace and welfare".[3]

Many Voices, One World, the Report by the International Commission for the Study of Communication, UNESCO, assesses the imbalances and inequalities in the sphere of communications within countries and regions, and between developed and developing nations. Through the analysis of global communications issues it attempts to build an international consensus on "major guidelines for the development of a New World Information and Communication Order".[4] At the UNESCO General Conference, Twenty-First Session, held in Belgrade in October, 1980, the final report of the MacBride Commission was debated and an International Programme for the Development of Communication (IPDC) -- to be governed by a 35-member Intergovernmental Council -- was approved. While the funding, strategy, projects and institutional procedures of IPDC will require intensive negotiations, the intent and will of member countries to take action is embodied in the principles underlying its establishment.

In Canada, Prime Minister Pierre Trudeau has taken a strong interest in the advancement of the North-South dialogue. Mr. Trudeau has noted that, "the problems of the least developed countries are especially compelling. There can be no real solutions until the world community finds the will and the way to replace sterile, rhetorical confrontation with a united and practical response to the poverty, hunger and stunted economies which oppress so many of the world's people".

The Canadian Department of Communications over the years has been concerned with issues of telecommunications and development and has demonstrated a desire to facilitate changes not only through its participation at ITU and UNESCO, but also through a commitment to provide arenas for discussion about approaches to change. This attitude is exemplified by the Workshop on Special Aspects of Telecommunications Development in Isolated and Underprivileged Areas of Countries which the Department of Communications sponsored in 1978 in Ottawa, and the International Institute of Communications Annual Conference which it hosted in September, 1980 in Ottawa, with the North-South Dialogue as its theme. In that Conference, the Honourable Francis Fox, Minister of Communications, stated that "A clear responsibility, therefore, resides with industrialized countries, as each of us reappraises our efforts in international assistance, to ensure that essential communication requirements are integrated in development planning."

The crystallization of international efforts to address North-South differences, while largely symbolic in the past decade, will undoubtedly be transformed into substantive expectations for the coming decade. Demands will grow for action to replace discussion. Pressure for global cooperation to respond to North-South inequities will be significant, but not the sole source of structural tension within the ITU in the 1980's.

In the future it is expected that bipolar differences, confrontational politics, national passions and revolutionary changes will continue to heighten tensions in international arenas and create enormous pressure on international organizations. As the 1982 Plenipotentiary Conference approaches, there are those who believe that the ITU will be under increasing pressure to reflect in its deliberations and negotiations the political tensions which characterize the North-South dialogue and the uneasy peace which confronts the world today. Conversely, in all international endeavours, but particularly in telecommunications, there is a strong desire for national self-preservation and a recognition that order in the world community is essential if vital resources are to benefit all mankind. And so, pressures for change and political tensions must be contrasted with the existing forces of cooperation, mutual problem-solving and collective bargaining.

As administrations plan for the 1982 Plenipotentiary Conference, an essential issue which confronts them is how to accommodate the pressures for change while maintaining the legitimacy of the ITU with minimal political conflict.

As in all areas of foreign affairs, each country participates in international organizations to secure actions which will provide for its own security and interests and its own social, economic and cultural development. There is often a paradox between the expectations of countries to reach international agreements on the one hand and an unwillingness to be more flexible on perceived questions of sovereignty on the other. In any domain where decisions are required to distribute the benefits of a scarce resource or to change tariffs, there is usually a requirement for countries to compromise domestic ends for the good of global interests. When conflicting domestic interests between countries become polarized, and when there is a loss of desire to restrain domestic demands, conflict bargaining may replace the collective problem-solving process.

The serious dilemma which will confront the ITU regulatory regime in the last two decades of this century is that all countries are seeking to combine their appetites for telecommunication services with domestic political processes, which do not encourage the flexibility and willingness to minimize such demands for the common good of all countries. The problem is one of domestic self-interest and world public interest; of domestic pressures and global pressures.

There are real areas of conflict ahead for ITU administrations. The conflicts will not only arise from political tensions, but will also reflect the exposed and growing dilemma of domestic self-interest and global interest.*

* The analysis framework used here is based on Daniel Bell's book; see, in particular, Chapter 6 titled "The Public Household: On Fiscal Sociology and the Liberal Society" (The Cultural Contradiction of Capitalism New York: Basic Books, 1976).

The ITU has tried to fulfill two basic and sometimes contradictory functions: allocation and legitimization. This means that the ITU must try to maintain or create the conditions through which collective agreements on allocative and distributive solutions are possible.

However, the ITU also must try to maintain or create the conditions of international harmony in communications matters. If the ITU is perceived to use its mechanisms to facilitate some countries in meeting their requirements at the expense of others, its legitimacy will be lessened and the basis of its support and loyalty could be increasingly undermined.* For example, to the extent that the CCIs are viewed by many developing countries as largely irrelevant to their needs, or to the extent that developing countries perceive the IFRB to be constrained by limited resources, the legitimacy of the ITU may be weakened over time.

Modifying or fine-tuning the ITU organs to be more responsive to the needs of all administrations would not only serve to make the ITU more effective, but would also strengthen its perceived legitimacy.

IV ARE MAJOR CHANGES REQUIRED IN THE ITU?

Unlike most other international organizations, which meet annually or bi-annually to debate major policy issues and establish future directions, the ITU Plenipotentiary Conference meets at irregular intervals, generally six to nine years. Although the 1973 Convention states that the Plenipotentiary Conference "shall be convened at regular intervals and normally every five years", World and Regional Administrative Radio Conferences are held only as needed.

An issue which has been raised in a number of quarters is whether the ITU is adequately structured to debate major policy questions. The Report for the 1973 Plenipotentiary Conference, published by the American Society of International Law and written by David M. Leive[5], recommended that the ITU should give greater consideration to the 'policy', non-technical aspects of international telecommunications. This would not require assuming responsibility for matters outside its jurisdiction. The Report suggested that the desired results can be accomplished through a revitalized Plenipotentiary Conference, a more active Administrative Council, and a modest new resources unit within the ITU Secretariat.

George Codding, writing about the "ITU in the 1980's" in Inter Media, stated that the ITU needed to address the issue of "....the absence of any arena in which the members of the ITU can engage in debate on major policy issues".[6] Edward Ploman, also in an article in Inter Media on "The Whys and Wherefores of International Organizations", points out that "in terms of the present ITU structure and working process there is no other way to handle the increasing work which the international community requires except by these specialized (WARC, RARC) conferences which will take place over the next ten years".[7]

* The discussion of the issue of legitimacy also borrows heavily from Bell's analysis of "The Public Household".

The determination of whether the ITU is appropriately structured to debate major policy issues calls for a differentiation of those global political issues which would regularly find their way into all significant international forums, from global policy issues which are legitimately within the jurisdiction of the ITU, and from those which fall outside ITU jurisdiction. It also demands an analysis of the particular substance of those issues which are clearly within the Union's domain.

Throughout the history of the ITU, administrations have attempted to insulate the Union from global political pressures. The ITU is essentially a technical body which has successfully been able to hold politics in its proceedings to a minimum. Some in fact would argue that the long interval between Plenipotentiary Conferences serves to reduce the opportunities for protracted political confrontation. In any case, the majority of administrations, while recognizing the existence of serious global political differences, prefers to continue to minimize the impact of such differences on ITU proceedings. It can safely be said that the spirit of collective problem-solving which characterizes the ITU has tended in the past to overshadow pressures for greater political influence. This practice will likely continue in the future, if major policy issues can be resolved through the work of the Conferences. It can be assumed, therefore, that if the existing structures and processes of the ITU can resolve major policy issues, the structures should be maintained. Changes to the structures may be required, however, in the mode of their operations, priorities and responsiveness.

There are many general international telecommunication issues arising from national decisions (e.g. ratio of transoceanic cable to satellite circuits); bilateral negotiations (e.g. Canada-U.S. UHF negotiations); or through actions of international operating agencies (e.g. INTELSAT, Intersputnik) which are outside the role and responsibilities of the ITU, as long as those decisions conform to the Administrative Regulations. In most cases, issues of this type do not directly involve the ITU in the process of policy development and many would argue the ITU should not deal with them unless of course signatories act in contravention to the Convention.

The ITU, it should be noted, acts as a "switchboard" or "post office" between two administrations or two groups of administrations which do not have adequate relations for direct negotiations. Many regulations are written in a manner which accommodates this reality.

There is, however, a significant set of policy issues which bears directly on the work of the ITU. Based on the assumption made earlier, if accommodation of these issues is not possible through the existing structure of the Union, then pressures for structural change may emerge.

V Policy Issues Bearing on the ITU

What are these major international telecommunication policy issues? Is the ITU structured adequately to deal with them? Before attempting to answer these questions it should be noted that there is not necessarily universal consensus amongst ITU member countries on the definition or priority of the issues.

Many would argue that it is in the long term interests of the ITU to maintain the status quo; others believe that an overriding issue for the Plenipotentiary Conference would be to determine the functions and structures of the ITU necessary to meet the challenges of the information age.

At least on the surface, it appears that ITU organs can provide the appropriate international forums for consideration of these policy matters. Their effectiveness, however, is a question of judgement and evaluation. Many observers believe that the existing structures are valid, but can become more effective in responding to the needs of the developing world and to the challenges of the information age, without undermining either their historical functions or their capacity to serve all administrations.

Many developing countries believe that a significant issue for the 1982 Plenipotentiary Conference will be (1) to develop and improve third world telecommunication facilities and infrastructures; (2) to redress perceived inequities in international tariffs; and (3) to ensure guaranteed access to the radio frequency spectrum and the geostationary satellite orbit. While the developed countries generally agree in principle with these needs, there is much disagreement about the institutional methods and technical procedures required to meet them.

The institutional sub-issues include the method of financing and the effectiveness of technical cooperation and assistance; the relevance and usefulness of the CCIs to developing countries; and the strength of the IFRB. The technical sub-issues include equitable access to radio frequency assignments; orbital planning; and rate structure or tariff questions. Clearly each of these issues has appropriate structures within the ITU for debate and decision. The institutional sub-issues can be raised at the Plenipotentiary Conference and, to some extent, at Administrative Council. The technical issues are dealt with by Administrative Radio Conferences and the CCIs.

The approach taken in this essay generally supports the view that the Convention in its current form provides a reasonable framework through which policy matters can be considered. The ITU does not require major structural changes or reorganization, but does require some modification and positive adjustment over time, in order to best serve all administrations, thus reaffirming its legitimacy.

The remainder of this essay identifies possible pressures for changes in the operations of the ITU which may emerge at the 1982 Plenipotentiary Conference. Furthermore, options for incorporating changes which may increase the effectiveness of the Union are discussed.

VI IMPACT OF WARC-79 ON PLENIPOTENTIARY NEGOTIATIONS

There are some observers who argue that the inconclusiveness of WARC-79 negotiations on such contentious issues as equitable access to radio frequency assignments and the geostationary orbit; fixed satellite planning; and to a lesser extent, orbit sovereignty, may result in efforts by developing countries to modify the Convention to include provisions to satisfy their interests in these matters. The importance of the Convention as the supreme instrument of the ITU was highlighted during the WARC, particularly as it was invoked during

the voting process on issues which generated much conflict between administrations.[8] Many new countries came to realize its importance and may use the Plenipotentiary Conference to attempt to change the Convention as a means of redressing perceived inequities in allocative, distributive and regulatory issues.

There are those who believe that incorporating definitions of equitable access, planning and prior consent into the Convention would set the stage in their favour for all future Administrative Conference negotiations. It would, therefore, not be unreasonable to expect proposals from some quarters to amend Article 33 of the Convention which deals with rational use of the radio frequency spectrum and of the geostationary orbit. Although the Plenipotentiary Conference is competent to deal with these matters, some members may claim otherwise to avoid action being taken. It does not appear likely that proposals of this type will succeed, since work has already begun for the planning of the 1984 Space Conference. The first session of the Conference is to establish the principles, technical parameters and criteria for planning.

WARC-79, through provisions in the Radio Regulations and Appendices, and through Resolutions, dramatically increased the scope and workload of the IFRB. The IFRB in its report to the 1980 Administrative Council on the impact of the WARC 1979 decision on the work of the IFRB has estimated that for 1981 an additional 22 fix-termed staff will be required at a cost of 1.475 million Swiss francs.

A significant question which the Plenipotentiary will have to handle is whether the additional resources requested by the IFRB will be granted, in light of all other priorities -- especially the Arthur Anderson study on the computer needs of the IFRB.

Other important matters arising out of the WARC-79 focus on technical cooperation and assistance. A resolution put forward by Algeria and approved by WARC-79 calls for the CCIR and the IFRB to convene meetings on frequency management with administrations of developing and developed countries, and to design standard structures for the establishment and operation of radio frequency management units. As well, the resolution urges that ITU resources be made available to advance the frequency management capabilities of developing countries. Other resolutions of WARC-79 which will affect technical cooperation, resource allocations and priorities, include the provision of assistance to developing countries for the study of radiowave propagation in tropical areas and the provision of technical assistance to improve maritime telecommunications. Other impacts of WARC-79 on particular ITU organs or on policy issues will be discussed in the next sections as part of the analysis of each organ.

VII CONSTITUTIONAL CHARTER OR A CONVENTION

The 1965 Plenipotentiary Conference agreed in principle on a constitutional charter and general regulations for the Union to replace the ITU Convention, and instructed the Administrative Council to set up a study group to prepare the draft of such a charter to be distributed at least one year before the next Plenipotentiary Conference. The members of the Union were invited to submit any comments on the draft. The study group held three sessions, lasting a total of six weeks, between December 1967 and March 1969. The Secretary General transmitted the draft constitution and general regulations to the members of the Union in 1970.

Preceding the 1973 Plenipotentiary Conference there was much international discussion and debate about the advantages and disadvantages of the adoption of a permanent instrument for the Union. The arguments in support rested on the advantage of eliminating the need for each Plenipotentiary Conference to engage in a time-consuming review of the many key provisions in the Convention, which were unlikely to be the subject of modification. In the report for the 1973 Plenipotentiary Conference by David M. Leive, referred to earlier, Samuel D. Estep presented a critical commentary on the draft constitutional charter. The criticisms were, essentially, directed at the study group's decision not to address questions about restructuring the ITU's organs. The Panel on International Communications Policy of the American Society of International Law, which sponsored the publication, recommended that the 1973 Plenipotentiary Conference adopt a permanent constitution, but not before making basic changes in the Union structure.

After much deliberation during the 1973 Plenipotentiary Conference, the Plenary adopted Resolution 41, which resolves to retain a convention as the basic instrument of the Union. Since many delegations feared that certain provisions in the text prepared by the study group might pose legal and constitutional difficulties for a number of members, a consensus emerged that the Conference should retain a convention as the Union's basic instrument. Resolution 41 suggested a division of the convention in two parts as recommended by the study group. The first includes those articles of a more permanent nature, whereas the second groups those articles likely to be subject to change. The Resolution confers a sense of permanence to the first part by stipulating that it shall not be subject to revision except where deemed essential.

It appears unlikely that the 1982 Conference will experience much pressure towards the replacement of the Convention with a permanent charter or constitution. There does not seem to be much positive sentiment among administrations for such a change. The changes in the division of the Convention as agreed to with the adoption of Resolution 41 in 1973 will likely remain intact.

VIII PLENIPOTENTIARY CONFERENCE

The Plenipotentiary and Radio Conferences held in Atlantic City in 1947 had, as their task, the revision of the 1932 Madrid Telecommunication Convention. Due to World War II there was a 15 - year interval between the Madrid and Atlantic City Conferences. There were, however, the Administrative Radio, and Telegraph and Telephone Conferences, held in Cairo in 1938, that were primarily concerned with radio frequency matters. The 1947 Plenipotentiary Conference was followed by others in Buenos Aires in 1952, Geneva in 1959, Montreux in 1965 and Malaga-Torremolinos in 1973.

The Conferences usually last six to eight weeks and, as noted above, range from intervals of five to nine years. Past Conferences have been primarily occupied with revising the ITU Convention; electing the officers in the Union; and approving the projected budget, staffing complement, future conferences and meetings, method of contributions and financing of the Union, and directions for technical cooperation. The 1973 Conference modified the Convention and took decisions contained in 48 resolutions, three recommendations and three opinions. The 1982 Conference, to be held nine years after the last Plenipotentiary Conference, represents the longest interval between Conferences in the post-war

era. Many observers wonder whether such a long interval and the irregularity of scheduling of such Conferences best serve the ITU, given the rapidity with which changes in telecommunications are occurring. One reason for the long interval was the convening of WARC-79, which took enormous preparation and resources.

The Plenipotentiary Conference is the supreme organ of the ITU and is responsible for determining the general policies for fulfilling the purposes of the Union. International policies in any field, especially in the complex and changing domain of telecommunications, require constant review, evaluation, and modification by administrations if adaptability and relevance are to be maintained. There are a number of consequences associated with long and irregular intervals between conferences. One obvious consequence is that major policy issues are not dealt with and current policy issues are not modified to reflect changing conditions. The second consequence is that the Administrative Council, which is composed of 36 members and thus does not represent all administrations, may de facto determine policy changes and evolve different policy directions. The third consequence is that the ITU General Secretariat is left to assume the role of interpreting and implementing policy. This is usually the de facto situation although the Administrative Council is the organ to interpret policy and ensure its implementation.

The real situation is an amalgam of these consequences. Experience has shown that major new policies do not evolve and significant changes in operating procedures of the organs do not occur. The Administrative Council deals mainly with budgeting, staffing and scheduling of conferences. The General Secretariat, IFRB and the CCI Secretariats continue to interpret and pursue policies agreed upon at the last Plenipotentiary Conference. Although it is true that the CCIs have held Plenaries between 1973 and 1982, the mechanisms and procedures followed by the Plenaries in the establishment of study questions and study groups are based upon principles and policies established at the 1973 Plenipotentiary Conference.

The most significant advantage in convening of Plenipotentiary Conferences more regularly and more frequently is that it will provide all administrations with the opportunity to exercise control over ITU policy matters and activities in a more consistent and regular way. A potential disadvantage is that more frequent meetings may only serve to increase the level of political and non-technical debate which could serve to undermine the technical objectives and overall effectiveness of the ITU. During the 1973 Conference much time was spent debating political matters which did not necessarily bear directly on the Union's main technical activities. It should, however, be pointed out that a significant group of administrations at Torremolinos was in favour of regularizing and shortening the interval between Conferences so that the Union could more effectively assess past activities and evolve new directions for the future.

The question of regularizing and shortening the intervals between Plenipotentiary Conferences relates to the more basic notion of legitimacy. Not only is it necessary for the Plenipotentiary Conference to assess past activities and evolve future policies, but it is also necessary for the Conference to act as an instrument for all administrations to propose changes in the Convention and to engage in collective bargaining and negotiations. This serves to reaffirm the strength of the Union in being able to resolve complex political, as well as technical issues.

It is likely that regularization and shortening of the interval between Conferences will be an issue for debate at the 1982 Plenipotentiary Conference. Administrations will have to determine their position on this matter, not only in accordance with their short-term domestic interests, but also in a context of the continued legitimacy of the ITU.

In the preparation of positions on this issue it should not be forgotten that the Plenipotentiary Conference is responsible for electing individuals to manage the Union. The luxury of a nine-year interval between elections is not generally accepted as the most democratic process of accountability and responsibility to the constituencies. It should also be noted that other United Nations agencies hold general conferences at regular and much shorter intervals than the ITU.

IX ADMINISTRATIVE COUNCIL

In 1947 the Atlantic City Plenipotentiary Conference, recognizing the lack of any permanent ITU governing body, approved a recommendation by the Moscow Preparatory Conference to establish an Administrative Council to control the administrative and technical work of the Union. The Administrative Council, which at that time was considered to be a permanent organ of the Union, was composed of 18 members elected by the 1947 Conference. Although no changes were made by the 1952 Plenipotentiary Conference, the 1959 Conference increased the membership on Council to 25 and removed Council as one of the permanent organs.

The 1965 Montreux Conference made certain changes in the structure of the Administrative Council by increasing the number of members from 25 to 29. Discussion on the Administrative Council at the 1965 Conference centred around two questions: the number and distribution of seats; and the possibility of introducing a rotational system to allow additional countries to serve on Council for part of its term of office. This latter proposal was rejected and it was decided by secret vote to accept the 29-member Council. Proposals to change the title of the Adminstrative Council, to have the Council act by means of correspondence between its regular sessions, and to have the Chairman continuously discharge his duties at Headquarters were rejected by the Conference.

A major decision taken by the 1973 Conference was to increase the size of the Administrative Council from 29 to 36 members. The pressure for enlargement of the Council came from the developing countries which argued that the accession of many new countries to the Convention since 1965 justified an increase in size of the Union's governing body. Most developed countries believed that an increase was inevitable and were prepared to accept an increase of five members (one additional member for each of the five ITU electoral regions) as had been proposed by a large number of African nations prior to the Conference.

Early in the debate on this question, however, these proposals were withdrawn in favour of proposals which suggested an increase of seven in size of the Council. This included one new member from each of the five ITU electoral regions as well as an additional member from both Africa and Asia-Oceania, reflecting the fact that the majority of the new members came from these two regions.

After discussion, during which it became clear that the majority of delegations favoured the proposal for a 36-member Council, the Committee, followed by the Plenary, quickly adopted the proposal unanimously.

During the debate on the size of the Council at the 1973 Conference, the question of rotation of the membership on Council arose again. Several delegations sought to limit the number of times a member could be re-elected as a means of encouraging wider participaton on Council. Many delegations spoke against these proposals, arguing that they would unnecessarily restrict the free choice of members in electing the Council and, in any event, were unlikely to achieve the desired results. Following much discussion, the proposals were withdrawn in Committee in favour of a unanimous resolution that called upon all delegations when electing the Council, to bear in mind the desirability of ensuring the widest possible representation of all members of the Union, and particularly those members from the developing areas. The issues pertaining to the Administrative Council most likely to arise at the 1982 Plenipotentiary Conference are the size and representativeness of Council, frequency of Council meetings and rotation of membership.

Currently, representation is as follows:

- seven seats for the Americas with Canada, Mexico, U.S.A., Brazil, Argentina, Venezuela, and Trinidad and Tobago as members;
- seven seats for Western Europe with France, the Federal Republic of Germany, United Kingdom, Sweden, Italy, Switzerland and Spain as members;
- four seats for Eastern Europe with U.S.S.R., Poland, Hungary and Romania as members;
- nine seats for Africa with Ethiopia, Egypt, Algeria, Morocco, Cameroun, Senegal, Nigeria, Zaire, and Tanzania as members; and
- nine seats for Asia and Oceania with Australia, China, India, Japan, Saudi Arabia, Iran, Malaysia, Lebanon and Thailand as members.

There are some observers who suggest that the size of the Council should be further increased in line with the increased number of administrations in the ITU. This is a similar argument to that presented at the 1973 Plenipotentiary Conference which resulted in the last increase in Council membership. Pressure for increased representation may come from Latin American countries, since all three countries in North America are represented, whereas only four countries are represented in South America, Central America and the Caribbean. Further pressures for increased representation may also come from African countries who would argue that nine seats do not reflect an appropriate proportional representation.

Increasing the size of Administrative Council, however, does present the problem of costs and management effectiveness. Costs would increase as the ITU budget finances the travel and subsistence expenses for all Administrative Council members for the annual meeting. To date, Administrative Council meetings generally convene for three weeks in Geneva. If the number of members increases, Council meetings may need more time to complete the work and the decision-making process would no doubt become more cumbersome and complex. Pressures to increase the size of Council may possibly be relieved if the Plenipotentiary Conference decided to convene future Conferences within regular and shorter intervals, such as every five years.

Since pressures for increasing the size of the Council emerged out of the perception of an imbalance in proportional representation, some countries may propose that the size of the Council remain at 36, but the number of seats be redistributed among the ITU electoral regions to effect greater proportionality. Such a proposal is unlikely to gather support from major financial contributors to the ITU, particularly if this would lessen their influence on Union decision-making.

There are those who believe that more frequent Council meetings are required as one meeting a year is insufficient for Council members to effectively appreciate all the complexities of the Union and to be well enough informed to make appropriate decisions. Often important matters are treated superficially or deferred to the following meeting. There is also a view in some quarters that Administrative Council provides the only mechanism through which administrations can monitor and evaluate the work of the Union and the performance of its elected members. There is some concern that without close scrutiny on the part of Council to these matters, the procedures for accountability and overall supervision -- which are the responsibility of Council -- will be weakened.

One possible solution is to hold two Council meetings a year. Of course, this would double the cost and is not likely to be supported by the majority of countries. A second possible solution, which was proposed in previous years and which may re-emerge, is to have the Chairman of Council spend more time in Geneva and take a more active role in the management of Council affairs. This would not only increase costs, but may also create a role conflict situation between the Secretary General and the Chairman of Administrative Council. This idea, if proposed, would also likely be subject to intense debate and much difference of opinion among the members. The third solution is for Council to create working groups or visiting committees that might be attached to the organs of the Union. These working groups or visiting committees would liaise with the organs, become better briefed on their activities, problems and use of resources. The working groups or visiting committees would then be able to keep members of Council better informed and would enable Council to maintain a closer liaison with the individual organs. There are, however, problems associated with this approach, not only of cost, but also of mandate and jurisdiction. Since each of the organs have elected members either by the Plenipotentiary or by the CCI Plenaries, greater involvement of the Administrative Council in their affairs could conceivably cause jurisdictional disputes. One of the benefits of such a structure would be to provide the CCIs and the IFRB with a direct link to Council. Currently the directors of the CCIs and the Chairman of the IFRB are on the Coordinating Committee, which is essentially advisory. From the point of view of some observers in the IFRB and CCIs the internal bureaucratic procedures within the ITU do not at all times permit direct access between the IFRB and the CCIs and Administrative Council. They believe this causes a lack of appropriate knowledge on the part of Administrative Council about the work of these organs on the one hand, while on the other, it prevents the organs from expressing their needs and requirements directly to Council on a more ongoing basis. This view is not shared by observers in the General Secretariat, nor is it necessarily shared by all members of Administrative Council.

The issue of rotation of members on Administrative Council was raised in both the 1965 and 1973 Plenipotentiary Conferences. Should efforts to increase Council size fail, then it is likely that this question of rotation of membership will again emerge. The objective of any such proposal would be to limit the number of times a member country could be re-elected as a means of encouraging wider participation on Council. This would, however, unnecessarily restrict the free choice of members in electing the Council. Aside from the question of free choice there is also the issue of continuity. Many of the countries which are currently on Administrative Council have been extremely active in ITU affairs for many years. Along with such participation comes a domestic bureaucratic infrastructure designed to support a level of participation necessary for the productive work of Administrative Council. The existence of domestic infrastructures permits the cataloguing and storage of all

relevant ITU documents, and domestic analysis of major ITU policy issues. They also allow for bilateral and multilateral discussions between member countries prior to and between Administrative Council meetings in order to ensure that discussions at Administrative Council move smoothly and that the activities of the Union are conducted in an effective and efficient manner. Membership on the Administrative Council, however, relates to the issue of power. Since Plenipotentiaries meet so irregularly, the capacity to direct Union affairs is vested in Administrative Council.

X GENERAL SECRETARIAT

The General Secretariat of the ITU is directed by a Secretary General, assisted by one Deputy Secretary General. It is the responsibility of the Secretary General to take all action required to ensure economic use of the Union's resources. He is responsible to the Administrative Council for all administrative and financial aspects of the Union's activities. The Deputy Secretary General is responsible to the Secretary General.

The General Secretariat must coordinate the activities of the different permanent organs with the advice and assistance of the Coordination Committee. The Secretary General appoints the staff of the Secretariat; undertakes administrative arrangements for the specialized Secretariats of the permanent organs of the Union; and appoints the staff of those Secretariats in agreement with the head of each permanent organ and according to the directives of the Plenipotentiary Conference and the rules established by the Administrative Council.

The Secretary General must ensure the application of the financial and administrative regulations approved by the Administrative Council and provides legal advice to the organs of the Union. The Secretary General must supervise -- for administrative management purposes -- the staff of the headquarters of the Union. The General Secretariat is responsible for the publication of the principal reports of the permanent organs of the Union and for the publication of international and regional telecommunication agreements, the technical standards of the International Frequency Registration Board, etc.

The General Secretariat is also responsible for the management and conduct of all Administrative Conferences. In addition to all of its other tasks, this is clearly a most critical area of activity for the General Secretariat which is performed with great efficiency and effectiveness.

The great complexity of administrative conferences requires a very effective and competent General Secretariat to ensure that the conferences are carried out according to the Convention and the budget allocations provided by the Administrative Council. A recent example of the excellence of the work of the General Secretariat in conduct of conferences is the WARC-79 which required an enormous amount of preparation, logistical support and operational activities. The general consensus among all administrations was that WARC-79 was managed and implemented with the highest degree of competence and excellence.

Secretary General

The 1973 Plenipotentiary Conference adopted a number of modifications to the Convention that had the effect of reinforcing and strengthening the authority of the Secretary General, particularly as it relates to heads of the other

permanent organs, for the overall management and operation of the Union's activities. The most important change was a new provision which permitted the Secretary General to temporarily reassign staff members from their appointed positions so as to meet fluctuating work requirements at Headquarters. Other modifications which were made in 1973 include provisions which provide the Secretary General with a greater role in the establishment of budgets for the other permanent organs, and responsibility for administrative and financial arrangements regarding meetings of the Consultative Committees. The degree to which there is a desire to vest more or less authority in the Secretary General is related to whether more or less centralization is believed to be required. At the 1973 Plenipotentiary Conference, those countries which supported the vesting of greater authority in the Secretary General believed that the ITU would run more effectively and efficiently with greater centralization of financial and administrative controls. Those who argued in favour of greater centralization were also concerned that with more financial and administrative responsibilities vested in the office of the Secretary General, the Administrative Council would be able to exercise more effective control over the Union's work program and budget. It was recognized in 1973 that a potential risk of providing more authority to the Secretary General was that the technical autonomy of the IFRB and the CCIs might be weakened. It was, however, the view of some that it was possible to achieve greater centralization of financial and administrative functions without undermining the autonomy or the effectiveness of the permanent organs' technical activities.

It is, however, commonly recognized that budgetary decision-making, allocations, and management to a large extent determine the programming style and operational modes of an organization. While it is true that budgeting should follow programming, it is often the case that fiscal requirements in decision-making precede and drive the programming process. The current situation at the ITU is that resources are centralized for purposes of control within the General Secretariat, and senior managers who have been elected claim they do not have their own total budgets to control and manage. They do have a meetings budget, but believe that other administrative costs are not within their control. The ITU does not operate on a functional budgeting mode, wherein managers are allocated an annual budget and are required to manage within the parameters of that budget.

The current centralization of the budgeting process within the ITU leads to a great deal of internal dissension, conflict and bureaucratic wrangling over the rights of each organ and the capacity of managers to manage effectively. Some would even go so far as to argue that the current budgeting mode, although not intended, in fact decreases the autonomy of the IFRB and CCIs. While ultimate responsibility for the overall financial management of the ITU should rest with the Secretary General, the introduction of functional budgeting for each of the organs could certainly occur within the larger framework of accountability. Indeed, this is the case in most large bureaucracies, in both the private or public sectors. When elected members have to appeal to the Secretary General for funds for particular activities rather than allocating funds within their own budgets to such activities, the efficiency of the organization is less than desirable. Clearly, it is inconsistent with the substantial salaries paid to senior managers and the expectations attached to those salaries, for accountability and responsibility for operational decision-making to be made by the Secretary General.

A second issue associated with the budgeting process and with the dilemma of centralization versus decentralization is the jurisdictional role question between the Secretary General and the other organs. Given that the General Secretariat controls the budget, it permits the Secretary General to take actions, even on rare occasions, which may rest within the jurisdiction of one of the other organs. On occasion other organs may also exceed their authorities and transgress on those of the Secretary General. It is not uncommon for the Technical Cooperation Department to engage in activities (such as spectrum management technical assistance) without involving the organs (e.g. the IFRB).

The 1982 Plenipotentiary Conference will elect both the Secretary General and the Deputy Secretary General. While it is certainly outside the mandate of this paper to evaluate the current leadership of the ITU, or to recommend individuals to succeed those currently in place, it may be useful to elaborate a number of general principles about the kind of guidance various observers believe is required during a most difficult period ahead. There are those who argue that the administration has to transcend the particular functions of the ITU and have a broad understanding of geopolitical issues and a very strong capacity to diplomatically maintain harmony within the Union. The executive must have technical competence. The leaders chosen at the next Plenipotentiary Conference should also have a good understanding of the UN system and the organizations responsible for international telecommunications outside the system. It has been argued that much greater coordination of ITU effort with activities of other international bodies will be required, certainly with UNESCO, and that the external function of the new management will be increasingly burdensome. At the same time, there is a sense, in some quarters, that the management style should be open and should encourage shared governance of the ITU by the heads of the other organs. In many respects, the choice of leadership should also relate to the expected direction that will be followed in the medium term and to perceptions about the most effective way for the current ITU structure to operate.

While there are some observers who would propose that the decentralized structure of the ITU be changed and a more hierarchical centralized structure be created, there is an opposing view which suggests that the decentralized structure is a most appropriate one for the Union. This is particularly so in light of its historic constituencies. Any new leadership should be responsible for making that structure work effectively. Therefore, the role of the General Secretariat should be taken into account when administrations participate in the electoral process. From one point of view it could be argued that the role of the General Secretariat is to facilitate the work and excellence of the other three organs.

From 1973 to 1978 the staff (excluding those on short-term contracts) allocated to the General Secretariat increased 8.9% from 383 to 426. Staff allocated to the International Frequency Registration Board (IFRB) decreased 11.2% from 106 in 1973 to 96 in 1979. This apparent loss was the result of merging departments and enhancing computerization, as an outcome of a 1975 study. The IFRB supported the changes, effected to save 20-30 posts; but in the end only 10 were eliminated. During the same period staff of the CCITT rose from 36 to 43, an increase of 19%, while that of the CCIR remained almost constant with an increase from 28 in 1973 to 29 in 1978.

XI. TECHNICAL COOPERATION DEPARTMENT AND TECHNICAL COOPERATION ISSUES

This section will discuss the Technical Cooperation Department of the General Secretariat; issues associated with the financing of technical cooperation and assistance; and pressures on the ITU for increased efforts in this important area.

Technical Cooperation Activities

The Technical Cooperation Department is part of the General Secretariat. It primarily responds to the following purpose of the Union as stated in Article 4 of the Convention:

> To foster the creation, development and improvement of telecommunication equipment and networks in developing countries by every means at its disposal, especially its participation in the appropriate programmes in the United Nations.

The technical cooperation activities of the Union which are directed towards the realization of this purpose are carried out through the implementation of different projects. The Technical Cooperation Department has been involved in the promotion of development of telecommunication networks in Africa, the Americas, Asia, the Pacific, Europe and the Middle East. In Africa, the Technical Cooperation Department has been involved with the work programme and activities in connection with the implementation of the Pan-African Telecommunication Network (PANAFTEL). In the Americas, the Department has cooperated with the Central American Telecommunication Commission (COMTELCA) and its member administrations in the development of telecommunication networks. The ITU regional advisor in the Americas took part in various missions in many different Central and South American countries; advised Chairman of CITEL; and assisted the Permanent Technical Committee of the CITEL in studies in connection with the Inter-American Telecommunications System. In Asia, the Union was involved in a variety of projects ranging from the selection of switching systems for Nepal, the establishment of a telephone exchange in a local network and HF and VHF links for Western Samoa, planning for a INTELSAT station in Afghanistan, to finalization of route details for the coaxial cable link between India and Pakistan.

The second area of technical cooperation activities involves strengthening national communication for developing countries through the improvement and modernization of telecommunications facilities. This often requires the reorganization and reinforcement of administrative and technical services. Missions carried out by the Technical Cooperation Department took place in Africa, the Americas, Asia and the Pacific, Europe and the Middle East.

The third area of technical cooperation activities involves the development of human resources for telecommunications. Generally speaking almost two-thirds of the total field expenditure of the Union's technical cooperation programmes is disbursed for the training of staff to meet the manpower demands in various sectors of telecommunications in developing countries. This type of assistance consists of the establishment and/or improvement of national or multinational training institutions in-service and on-the-job training, the organization of short-term specialists meetings and seminars, and the implementation of

fellowships. The aim of this area of activity is to meet immediate requirements in specialized staff and to cover new services and techniques introduced by the particular countries concerned. In countries that tend to be more technologically advanced, training activities include dissemination of information with respect to new technologies, recent system development and possible new services.

In 1978 the volume of assistance provided by the Union to developing countries increased over previous years due to the improved financial situation of the UNDP. The main characteristics of the assistance provided in 1978, for example, from all sources were:

- 543 expert missions carried out, against 526 in 1977
- 463 fellows (including 174 participants in short-term group training) underwent training abroad, against 423 in 1977
- 198 projects were assigned to the Union against 178 in 1977
- $5,837,032 (U.S.) worth of equipment was delivered to various field projects, against $3,800,000 in 1977
- four projects were being implemented, partially or entirely, under subcontracts, against six in 1977.

The total expenditure for project implementation amounted to $21.67 million (U.S.) in 1978 as compared to $17.095 million (U.S.) in 1977, an increase of 26%. In 1973 the total allocation of all funds for Technical Cooperation was $10.7 million (U.S.); between 1973 and 1978, not counting inflation or the downward pressure on the U.S. dollar, there was over 100% increase in ITU-sponsored technical cooperation and assistance resources. The quantity of service provided, however, is not a measure of quality. Evaluation of technical assistance is not carried out in any systematic or rigorous fashion by the ITU.

Structure and Financing Issues Associated with Technical Cooperation and Assistance

Discussions on technical cooperation and assistance at Plenipotentiary Conferences are normally controversial and cause lengthy debates. At the 1965 Plenipotentiary, the question of properly evaluating the effectiveness of ITU activities in the technical cooperation field received considerable attention. The Conference adopted Resolution 33 concerning assessment of progress and results in carrying out technical cooperation programmes, which calls on administrations to provide such information on a periodic basis and requests the Administrative Council to define the best method of evaluating the activities of experts on mission. As an adjunct, the Conference felt that regional missions (based at UN Economic Commission offices) should be better supervised and controlled from ITU Headquarters, and this is reflected in the aforementioned Resolution.

The 1965 Conference examined a proposal for the replacement of the Standing Committee on Technical Cooperation by a body of telecommunications specialists. A compromise was reached by retaining that Committee and creating a group of telecommunication planning engineers (at ITU expense) to provide an advisory service to member countries on request. Resolution 29 entitled "Improvement of

Union Facilities for Providing Information and Advice to New and Developing Countries" provided the means for Administrative Council to implement this arrangement before early 1968.

The delegations of nine Latin American countries sponsored a proposal in 1965 to establish a study centre for space communications in that region. Such projects fall within the scope of the UN Special Fund, with no ITU involvement, and the Union will only provide the countries concerned with advice in their negotiations with the Special Fund. An Opinion, annexed to the Convention, expressed the hope that such centres would be created in the various regions of the world. Certain recommendations of UNESCO and other organizations were examined concerning training standards. Resolution 31 in the Montreux Convention instructs the Secretary General to collect information on training requirements in the new and developing countries -- drawing on the experience of advanced countries -- and to prepare suitable standards for various grades of personnel, in consultation with younger countries.

The question of a regular ITU programme of technical assistance, financed by the ITU, was one of the most controversial issues discussed at both Montreux and Torremolinos. A number of delegations at Montreux felt that deficiencies exist in the programmes financed by the UNDP such as inadequate numbers of fellowships granted, insufficient funds available to the ITU, lengthy delays in obtaining UN approval of specific projects and, in particular, the ITU's inability to exercise control over the UN-financed projects. The 1965 Conference noted that the introduction of an ITU-financed programme, costing approximately $U.S. 500,000, would result in a large increase in the contributory unit payable by member countries. After a long debate the proposal for an ITU regular Technical Cooperation programme was rejected by a vote of 19 for, 20 against, with nine abstentions.

Another controversial issue dealt with by Plenipotentiary Conferences concerned the proposed establishment of ITU regional offices. This issue was the subject of discussion at the 1959, 1965 and 1973 Conferences and, more recently, has been the subject of much debate in the Administrative Council. At the Montreux Conference it was pointed out by several delegations that the ITU Headquarters is not able to assess regional problems and thus they proposed to set up offices in the three major areas -- Latin America, Africa and the Far East -- to carry out regular ITU activities and to provide efficient supervision and coordination of ITU technical cooperation activities. In view of the serious financial implications, the 1965 Conference decided against the principle of setting up such offices. It did, however, adopt Resolution 40, instructing the Secretary General to study the advisability of such action and report to the Administrative Council, which, in turn, would submit its recommendations to the next Plenipotentiary Conference. Both the Secretary General's report and the report of the Administrative Council to the 1973 Conference proved to be inconclusive -- the latter report, in particular, limited itself to setting out the diverging views expressed on the question.

Following much debate, the Committee studying technical cooperation -- Committee 6 -- adopted, by a small majority, the Resolution suggesting that the matter would require further study and that an unspecified number of pilot offices should be established in order to better assess their usefulness. In Plenary, the major contributors and some developing countries strongly opposed the Resolution on the grounds that they could not accept the establishment of pilot offices until further detailed information on the financial,

organizational and other consequences were known. The Resolution's supporters, however, were unwilling to accept a text which called only for further study of the question and insisted that the Resolution be voted on in its entirety. The Resolution was rejected by the meeting and, consequently, the final acts of the Conference did not make any reference to this matter.

The support for the concept of regional offices came from a large number of developing nations which believed that these offices would permit the ITU to remain more responsive to the needs of the developing nations, provide organizational and administrative stability of ITU activities in the countries of the regions concerned, and render the ITU's participation in the United Nations Development Programme (UNDP) at the local level more direct, effective and continuous.

The position taken by the major contributors -- as well as several developing nations -- was that ITU regional representation should continue to be performed by UNDP-funded regional experts. In view of the position that UN technical assistance should be centrally funded and administered through the UNDP, many delegations argued that in principle, technical cooperation activities should not be funded from the ITU ordinary budget. In addition many delegations are of the view that the establishment of regional offices would place a heavy financial and organizational burden on the Union which could not be justified by the benefits expected.

The major innovation in the Union's technical cooperation activities was the adoption of Resolution 21 at the 1973 Conference. A special Technical Cooperation Fund, to be based on voluntary contributions in cash or in some other form was thus established to meet the needs of developing countries which submit urgent requests to the Union. The contributions may be made by administrations or by approved private operating agencies or scientific and industrial organizations recognized by them.

As in past Conferences, the matter of technical cooperation is likely to generate much controversy and debate at the 1982 Plenipotentiary Conference. Most developing countries believe that the current level of assistance from the ITU is inadequate, and that the availability of UNDP funds including the Voluntary Special Fund established by the ITU is limited. UNDP funds tend to be limited since developing countries have not normally identified telecommunications at a sufficient level of priority to qualify them for UNDP funding. Therefore, developing countries have consistently sought to diversify the possible sources of financing of assistance for telecommunication projects beyond those of the UNDP and the ITU Special Fund. From the point of view of developing countries, one additional source would be the ordinary budget of the Union. The ITU, on the other hand, may need to play a stronger role in assisting developing countries in understanding the economic and social benefits of telecommunications so that telecommunications projects evolve a higher domestic priority for UNDP funding.

The financing issue will certainly emerge as a subject of great significance at the 1982 Conference. The continuing and dramatic inequities between developing and developed countries in telecommunication facilities will form the basis for demands for resources from the ITU ordinary budget to be allocated to technical cooperation. The MacBride Commission pointed out that 80% of the world's telephones are in only ten countries of North America and Europe, which have a total population of about 750,000,000; approximately half of all telephones are

in the United States alone, where several cities have more phones than people. The socialist world has 7% of the world's telephones for a population of 1,300 million and the developing world has 7% for a population of 2,000 million. The Commission went on to indicate:

> "It appears to us that the slow development in many countries of postal and telecommunication facilities and services is a real obstacle both to persons and societies. It is not sufficiently recognized that these facilities and services are not only the outcome of economic growth, but also a precondition of overall development and even of democratic life. The unevenness in telecommunications expansion becomes an increasing obstacle to communication between developed and developing countries. Similarly, the rates of several services which have not yet fallen commensurate to costs, hamper their use by poor consumers. Here is an area of communication which needs to be reconsidered in many countries, particularly in view of its social, economic and cultural significance."[9]

The Commission further stated that:

> "Given the obvious importance of the telephone, many countries appeared to have erred in neglecting to build adequate telephone networks. Unlike the rising cost of some postal services, the decreasing costs for some newer technologies, such as the telephone and electronic data transmittal, will undoubtedly force changes in telecommunication strategies. International and national development assistance institutions will have to consider upgrading the low priority which has hitherto been given to telecommunications projects."[10]

While it is not the intention to quote extensively from the MacBride Commission, since many will have had the opportunity to read it, there is another area which bears mention in the context of financing of technical cooperation. The Commission clearly recommends that funds provided either through bilateral governmental agreements or from international and regional organizations be increased considerably in their allocations for communications infrastructures, equipment and programme development. The Commission makes the point that it is necessary for the international community to take actions that will replace dependence, dominance and inequality with greater inter-dependence and cooperation.

The 1973 Plenipotentiary Conference adopted Resolution 19 which called upon the Secretary General to review the state of telecommunication services in the least developed countries as identified by the United Nations. The Resolution also requested the Secretary General to propose concrete measures calculated to bring about genuine improvements and provide effective assistance to these least developed countries, from the Special Fund for Technical Cooperation and other sources. The Review of the State of Telecommunications Services in the Least Developed Countries and Concrete Measures for Telecommunications Development was presented to the 1980 meeting of the Administrative Council. The study had a specific emphasis on the minimum telecommunication needs of these countries, the fulfillment of which may be expected to accelerate the process of economic and social development. While this report focused primarily on the least developed countries, the authors make the point that their recommendations are equally applicable to many other developing nations which are not officially classified as being least developed. They also point out that even when the level of

economic development in some countries, as measured by per capita gross domestic product, is higher than the case of the least developed countries, telephone development may not be much higher. This report does place a major emphasis on the development of telephone systems since it believes that this mode of communication will play a vital role in the development objectives of the least developed countries.

One of the strongest features of this report is the aggregation and synthesis of data on the state of telecommunications in the least developed countries. It certainly corroborates the research carried out for the MacBride Commission and thus provides a dramatic statement of the need for much greater international development efforts in telecommunications. The greatest weakness of the report is contained in its recommendations. Given the magnitude of the problem identified by the report, the recommendations reflect a pittance of effort to begin to redress inequities. However, it is understandable that the authors of the report were constrained by the existing ITU policy of financing technical cooperation through the UNDP. They did recommend (1) an increase in the Group of Engineers through the addition of a specialist in network planning, (2) an expert mission in manpower planning and the organization of training, and (3) two specialists to prepare a manual for the development of reliable statistical data. However, they refrained from making any recommendations to increase the availability of technical cooperation funds or the use of the ordinary ITU budget for financing of technical cooperation activities.

This report, coupled with the MacBride Commission, will no doubt provide a much stronger informational base for the developing countries to make their case for the allocation of funds from the ITU ordinary budget for technical cooperation. The International Programme for the Development of Communication, as recommended and approved by the 1980 UNESCO Conference in Belgrade, would also provide the developing countries with another international instrument through which development funds could be channelled.

Many observers do believe change is necessary in the ITU approach to technical cooperation and assistance. While changes will no doubt evolve in the spirit of international negotiation and compromise, it may be worthwhile to set forth a number of considerations for the review of administrations in preparation for these negotiations.

A. The first consideration is to increase the self-reliance of developing countries through development and strengthening of the technical and bargaining competence of domestic infrastructures. The MacBride Commission concluded that "there must be a measured movement from disadvantage and dependence to self-reliance and the creation of more equal opportunities".[11]

Domestic policies are formulated by political and bureaucratic processes within each country, and policies based primarily on technical considerations will only evolve if a suitable infrastructure exists. William Coplin points out that the specialization and technical competence of bureaucracies can insulate the specialized foreign policy decision-maker from blatant political control and can protect potentially collective problem-solving relationships from the impact of domestic politics.[12] This assessment no doubt holds true for many developing countries, although the insulation from national political debate diminishes as economic dependence on telecommunication services and commerce increases. There is a strong argument for the need of developing countries to strengthen their technical infrastructure and their national telecommunications

-- particularly telephone -- systems; and to increase their frequency management capabilities. Not only would this pave the way for the domination of international collective bargaining by technical rather than ideological political discussions, but it would also stimulate more efficient telecommunication management.

Indeed, the developing countries recognize this requirement. For example, a resolution put forward at WARC-79 by Algeria and approved by the Conference calls for the CCIR and the IFRB to convene meetings on frequency management with administrations of developing and developed countries, in order to design standard structures for the establishment and operation of radio frequency management units.

The Brandt Commission suggests that "the services provided by the UN system and other international bodies should be developed to strengthen the capability of developing countries to negotiate effective and durable agreements with transnational corporations, and to assist them in the interpretation and implementation of agreements".[13] There is indeed a significant role for the ITU in this area. The quantity of technical assistance and the number of missions are not the only criteria for achieving greater success. There is a concern, which is reflected in many of the studies which have examined technical cooperation and assistance practices, that external experts are often used when more local or regional experts are available. As well, the thrust of many technical assistance missions is not oriented towards evolving stronger local infrastructures, but is rather directed at solving particular problems, without leaving the residue of skills which is essential if viable local infrastructures are to evolve.

Many observers of the process of technical assistance have commented that the level of dependence on these experts by the developing countries is such that agreements which would maximize the benefits and minimize cost for the developing countries are often elusive. Among the developing countries, the more industrialized and stronger prefer bilateral agreements without working through the ITU since they are capable of bargaining and negotiating contracts that are within their own interests.

The consideration of this objective by administrations should not focus solely on the role of the Technical Cooperation Department. It should also include the role, function and relevance of the CCIR and the CCITT to the needs of the developing countries. As will be seen in a section which follows that examines the CCIs, the level of participation by the developing countries in these two Consultative Committees is extremely low. Some would argue this is due to cost, others would argue it is a question of relevance and utility. In fact, both factors may be at play. There is little doubt, however, that ITU activities in the area of technical cooperation and assistance should give priority to dramatically increasing the capabilities of domestic bureaucracies and by so doing to strengthen the self-reliance of the developing countries.

B. All of the Commissions which have studied the North-South dilemma have argued strongly that developing countries require much greater access to international development finance. There is clearly a role for the ITU in facilitating access to international development finance for the third world countries. These countries currently have access to funds from a variety of different sources. They include export credit agencies, the World Bank Group,

Regional Development Banks, the International Monetary Fund, the UN agencies and other multi-lateral funds, government-to-government aid programmes, private investment (generally through multi-national corporations) and resources from commercial banks. However, only the more advanced developing countries have the skills and capacity to access different sources of development finance. In the field of telecommunications the developing countries in need of such capacity naturally would look towards the ITU. There is, therefore, a need to increase the skills and capacity of the ITU to identify potential sources of development financing; to assist developing countries in evolving proposals; and to establish the infrastructure necessary to building appropriate contractual links. Such an effort would require that the ITU acquire individuals skilled in international development finance, its criteria and its potential applications. There may be, therefore, a need for the ITU to expand its current expertise, and to hire monetary experts to assist the developing countries in understanding how they can have greater access to international development funds for telecommunication projects and programmes.

C. The most contemporary trends in the analysis of North-South relations have identified the need to dramatically increase the role of developing nations in the processes of international decision-making. The pressures associated with this objective will no doubt be debated when discussions occur about the Administrative Council. There will be further debate on the Consultative Committees and the very low level of participation by the developing countries in these two important organs.

D. There is a need for a more appropriate transfer of technology to developing countries. In much of the debate on technology transfer there is a point of view that this often is not appropriate to local requirements. The Brandt Commission argued:

> "That the call for appropriate technology does not prescribe any particular type; much less does it imply that the technology should not be the latest or the most sophisticated. It means that the choice of technology should be a conscious one, taken in the knowledge that it can affect the character and direction of development. The South may wish to choose machines very different from those automatically offered by the North".[14]

Current ITU practices reinforce the possibility that inappropriate technology will be transferred to developing countries. This is the case since many of the missions and training programmes involve personnel who usually are only familiar with their country's equipment.

In the international domain, there is not any mechanism through which developing countries can be familiarized with the benefits and costs of a variety of equipment systems as shaped to their local needs. There is clearly a need for a structure which would permit the dissemination of information about the capabilities, disadvantages, advantages, costs and benefits of types of equipment as they relate to local needs.

There are many who argue that it is in the interests of all administrations for this kind of unbiased education to be made available by the ITU. If the ITU does not perform this role it is likely that the International Programme for

the Development of Communications or some other mechanism within UNESCO will, although UNESCO's track record of unbiased education is suspect to many. It is a role which belongs to the ITU and which clearly fits into the purposes of the Union.

E. A greater shift from global to regional decision-making may serve to improve services to developing countries and increase the manageability of decision-making. The development and distributive functions of the ITU may also call for restructuring of global decision-making into more manageable regionalized units that would be in a better position to develop a distributive and development capacity in the future. The next decade will see the 80 or so developing countries engage in tougher international bargaining. Not only for spectrum and orbit, but also for international development resources. The capacity of the ITU to conduct global allocations and global technical cooperation efforts will be strained. WARC-79 adopted a resolution to study the implications of establishing a separate region (which would be the ITU's fourth) for Africa. As well, more regional conferences are planned for the 1980's. Member countries will have to examine the advantages and disadvantages involved in moving to regional spectrum management and regional technical cooperation. Although the implications for the ITU structure and regional planning are enormous, regional decision-making should be studied. It may be an instrument for the more equitable and efficient allocation and utilization of scarce international resources.

It is generally acknowledged that technical requirements, given HF and satellite services, suggest greater global decision-making, whereas political and economic realities are suggestive of stronger regional structures for allocative purposes. Regional decision-making has the advantage of linking telecommunication decisions with economic, cultural and social development priorities, and of strengthening regional capacities for resource sharing, technical cooperation and more balanced interdependence. Further, regionalized decision-making limits the number of national participants and increases the manageability of allocative decisionmaking: it can reduce demand overload. It can also provide more feasible and manageable mechanisms for the developing countries to participate in decision-making. However, it does create technical incompatibilities between regions which may be difficult, but likely can be resolved.

Regional telecommunication structures are assuming greater importance, along with similar structures for economic, environmental and resources management, and can lead not only to improved regional solidarity, but to a greater measure of linkage between different sectors and the foreign policies associated with regional development. The tension between more globally-organized technical requirements in telecommunications and a greater regional regulatory and distributive alignment will be an issue of significance for the ITU to resolve in the coming decade and indeed at the 1982 Conference. The matter of regional offices will again emerge in 1982 and the positions of the developed countries on this issue should be thought out very carefully. The strengthening of the ITU regional character -- which would include experts on international development finance, local frequency management capabilities, preparation for regional Administrative Radio Conferences, and the interpretation of CCI recommendations and standards -- might go a long way in increasing the self-reliance of developing countries. Should regional ITU offices be considered, it would be likely that decentralization of certain staff and fiscal resources from Geneva would be debated at the Plenipotentiary.

XII INTERNATIONAL FREQUENCY REGISTRATION BOARD

The 1947 Atlantic City Plenipotentiary and Radio Conferences determined the need for an international body to regulate the use of frequencies so as to eliminate harmful interference. The Conference created the International Frequency Registration Board and laid down the rules for its operation. As Codding has pointed out: The creation of this body by the Radio Conference was important in that it represented an entirely new type of administrative body for the Union in that its functions introduced an entirely new concept in the regulation of radio.[15]

The composition of the first IFRB included three members from the Americas, three from Western Europe and Africa, two from Eastern Europe and Northern Asia, and three from the remainder of the world, for a total of eleven members. When the Board was created, the delegates at the Atlantic City Conferences unanimously agreed that individuals chosen to serve on the Board should be as free as possible from any outside influence. The 1947 Atlantic City Convention in Article 6 states that members of the Board shall serve, not as representatives of their respective countries, or of a region, but as custodians of an international public trust. The 1959 Geneva Plenipotentiary and Radio Conferences did not change the structure of the Board.

There was a significant effort at the 1965 Montreux Plenipotentiary Conference to abolish the IFRB as an independent, international institution and to transfer its functions to a unit within the General Secretariat. Delegations from the developed countries submitted proposals that would have replaced the IFRB with a single official responsible to the Secretary General, but elected by an ITU Conference. The basis for these proposals was that the Board's activities could be performed more effectively and with greater efficiency within the General Secretariat. An argument was also made that while historically the work of the IFRB was critical to the establishment of a regulatory framework, its current work was now largely routine. Many countries, but particularly the developing ones, disagreed with this point of view.

The opposition by the developing countries to the abolition of the Board resulted in its continuation. They took the point of view that the IFRB was essential for the ITU to carry out its regulatory responsibilities, and that a Board composed of members from different geographical areas could respond more effectively to problems arising out of conflicting competition for scarce frequency resources. The pressure from the developing countries, while in their eyes substantively related to the maintenance of the Board, symbolically related to the broader question of ITU legitimacy. Developing countries regarded, and still regard, the IFRB as an "impartial referee" between the demands of the developing and the developed countries for more spectrum.

The Montreux Conference decided to reduce the Board to five members. This represented a compromise between those who supported the continuation of the Board and those who proposed its abolition. There was widespread recognition among the delegations at the 1965 Conference that the eleven-member Board was not terribly efficient. There was also pressure to reduce the size of the Board because of the heavy cost incurred by the eleven elected members. Indeed the reduction of six high-paying posts resulted in considerable savings. It should also be noted that between 1963 and 1965 there had been an extraordinary amount of dissension amongst the members of the Board. As Leive points out, "The extent, if any, to which such dissension, if generally known, may have contributed to the decision of many ITU members to propose the Board's abolition or reduction in size is, of course, inherently difficult to assess".[16]

The 1973 Plenipotentiary Conference altered the structure of the Union by transferring the election of the five-member Board from the World Administrative Radio Conferences dealing with general radio communication matters to the Plenipotentiary Conference. The 1973 Conference adopted Resolution 3, which provided the authority to the 1974 WARC for maritime mobile communications to elect a new Board that would remain in office until the date of the next Plenipotentiary Conference, which would elect its successor.

The two alternatives facing the 1973 Conference were to have the Board elected by the Plenipotentiary Conference or to have the Board elected periodically by a specialized WARC. Both of these options posed certain difficulties: the Plenipotentiary Conference, under the provisions of the Montreux Convention, did not meet at regular intervals and, in fact, had not met since 1965; although WARCs met more frequently, they were not convened at regular intervals, and moreover, because of their specialized nature, they were not necessarily suitable electoral bodies. Many countries opposed the election of the IFRB members by Administrative Conferences. The basis of these proposals was that if the Plenipotentiary Conferences were to meet more frequently and at regular intervals, the term of office of the Board could be regularized. Moreover, as the supreme organ of the Union, the Plenipotentiary Conference was the appropriate mechanism for election of the IFRB. This was believed necessary since the activities of the IFRB as a quasi-regulatory body were of critical significance to all members of the Union.

There were opposing proposals which argued for the IFRB members to be elected by Administrative Radio Conferences. The rationale behind these proposals was that the IFRB was essentially a technical body responsible for the administration of the Radio Regulations and, therefore, should be elected by a radio conference.

The basic difference of opinion was whether it was possible or desirable to attempt to separate the technical activities of the Union from the more political forums such as the Plenipotentiary Conference. Some delegations argued that moving the election of the IFRB from the WARC to the Plenipotentiary would violate the ITU principle of separating technical from political issues. Not only might this ultimately destroy the effectiveness of the Board, but also the structure of the Union as a whole. On the other hand, other delegations argued that the Plenipotentiary Conference was, in fact, the supreme body of the Union and that the legitimacy of the Board was so important in the eyes of all members that it ought to be elected by the Plenipotentiary Conference.

The 1973 Conference, therefore, decided that the 1974 WARC for maritime mobile telecommunications be given the authority to hold the next elections and that subsequent elections would be held at the next Plenipotentiary Conference (i.e., 1982).

The Convention drafted at Torremolinos contains a number of references to the role of the ITU in space communications which did not appear in the Montreux Convention. Among these are: a new provision included in the purposes of the Union which calls upon the Union to "coordinate efforts with a view to harmonizing the development of telecommunication facilities, notably those using space techniques, with a view to full advantage being taken of their possibilities"; various provisions relating to the duties of the IFRB charging it with the tasks of effecting "an orderly recording of the positions assigned by countries to geostationary satellites", and of furnishing advice to members "with a view to the equitable, effective and economical use of the geostationary

satellite orbit"; and new provisions which accord the geostationary orbit the same status as the radio frequency spectrum, i.e., that of "limited natural resource", and call upon all members to ensure its efficient and economical use.[17]

Impact of WARC-79 on the work of the IFRB and on IFRB Resource Requirements

The decisions taken by WARC-79 have affected the natural workload of the IFRB. During the period from 1967 to 1979 a number of different Administrative Radio Conferences took decisions which gave additional tasks to the IFRB. Some of these tasks were to be completed within particular time frames, while others required continuing efforts by the IFRB until the mid-1980's. Prior to WARC-79 the tasks imposed on the IFRB by other Administrative Radio Conferences were carried out using existing resources and facilities. Due to the heavy workload prior to WARC-79, there were some backlogs in the work of the Board and some of the work was suspended. At WARC-79 the IFRB reported these problems, and also noted that the staff complement of the IFRB Specialized Secretariat had progressively decreased since the transfer of the Computer Department from the IFRB to the General Secretariat in 1968 (from 100 to 96 in 1979). It should be noted that the transfer of four staff positions to the General Secretariat Computer Department was not necessarily a loss to the IFRB since the staff continued to work on IFRB computer activities. It should also be noted that the decrease in staff complement resulted from its own decision to effect a major internal reorganization.

WARC-79 adopted a number of provisions and resolutions which increased the workload of the IFRB. The increased workload of the IFRB created as a result of WARC-79 decisions is a reflection, in part, of the continued and perhaps even increased importance which many administrations place on the role and function of the IFRB. The compromise reached on HF Broadcasting at WARC-79 was assisted by the referral of actions to be taken by the IFRB.

The issue of reallocating HF spectrum from the Fixed Service to the Maritime Mobile and Broadcasting Service involved a proposal advanced by Algeria, one of the strongest third world delegations, on HF fixed frequencies. The Algerian administration stated, "The HF bands are of primary importance since they are used to set up national and international direct fixed-type links requiring relatively little investment.... A considerable number of links that form part of the backbone of the general network are, and will continue to be, provided in the HF bands. The developed countries...possess reliable telecommunication infrastructures based on wide band transmission media, cables, radio-relay links, communication satellites...etc."[18]

Algeria then proposed that more extensive access to HF bands be reserved for developing countries through a substantial revision of the Radio Regulations. In particular, in order to redress what it saw as an imbalance in the distribution of HF frequencies, it proposed that for relevant services (fixed) the frequencies be divided on a 70%-30% basis between developing and developed nations. In principle, the proposal was not acceptable to most developed countries. Through a process of informal and private diplomacy, the developed countries, while pointing out the technical weaknesses of the proposal, affirmed their willingness and support for the ITU to respond to the present and future telecommunications requirements of developing countries through changes in the Radio Regulations. A resolution was then proposed and accepted which (1) called for an improvement in the accuracy and reliability of the Master International

Frequency Register by the removal of unused HF frequency assignments from the Register, thus freeing a potentially large number of frequencies for reassignment, (2) authorized the IFRB to assist developing countries requesting help to identify new HF frequencies, and (3) provided the authority to the IFRB to identify available frequencies for requesting administrations. There was also the provision for the IFRB to deal with submissions from developing countries out of the usual order. This means that within the backlog of requests for coordination, the IFRB would deal first with those from developing countries, regardless of the chronological order of reception. This is an example of the confidence which most administrations have in the capacity of the Board to carry out its technical functions.

Additionally, there was a resolution put forward by Algeria and adopted by WARC-79 which required the CCIR and the IFRB to provide technical assistance in the establishment of stronger domestic frequency management capabilities. The adoption of this resolution was important to the compromises reached in the area of technical assistance, and to maintain the spirit of harmony at the Conference.

Therefore, the increased workload allocated to the IFRB by WARC-79 enabled WARC-79 to achieve a measure of success. To many developing countries the IFRB represents a mechanism of legitimization to ensure that their requirements are met and that they have equitable access to frequencies and to the geostationary orbit. The developing countries clearly perceived the IFRB as an important mediator in the regulatory process. As indicated earlier in this essay, the ITU must try to maintain or create the conditions through which collective agreement on allocative and distributive outcomes are possible. If the ITU is perceived to use its mechanisms to facilitate some countries in meeting their requirements at the expense of others, its legitimacy could well be lessened and the support and loyalty to the regime may be undermined. The IFRB is perceived as a critical mechanism to facilitate countries in meeting their requirements without doing so at the expense of others.

WARC-79 required the IFRB to take a number of important actions. The first was to review, and purge as appropriate, the data in the Master Register and provide a provisional layout of the Master Register. This involved sending extracts of the Master Register together with notices received, processing replies from administrations, preparing material to be published, and developing computer programming related to these activities. WARC-79 also mandated the IFRB to select replacement frequencies between the 3,000 and 27,500 kHz bands. WARC-79 Resolution 8 (CV) resulted in a substantial increase in IFRB workload. According to the IFRB:

> "The search for frequencies under this Resolution should begin only upon completion of action under Resolution 9 (CT) for the bands concerned. Under the transition procedure (Resolution 8 [CV]), the Board is required to recommend replacement frequencies for the assignments in the Master Register which are on frequency bands for which the allocation was changed by WARC-79. There are, at present, about 15,000 frequencies affected, but after the review of the Master Register, the number is expected to be slightly reduced. The present procedure used by the Board for selecting frequencies is basically manual with the assistance of the computer for calculation. These searches for new frequencies can be made in the time frames adopted by WARC-79 only if the procedure is automated".[19]

Observers should however wonder why the IFRB's procedures were still manual in 1979, when the requisite computer technologies have been in use elsewhere for years. Has the IFRB been effectively managed over the last nine years? Why does it still have relatively backward priorities?

Another example of increased workload was Resolution 20 (AD) relating to assistance to administrations in the form of meetings on national frequency management. WARC-79 also decided that there should be a number of frequency planning conferences held during the next few years. In general, each frequency planning conference involves the Board in the same general functions as follows: receipt and processing of frequency requirements; planning methodology; the conduct of special studies such as for the High Frequency Broadcast Conference and the development of planning tools such as computer programs.

In addition, there is substantial demand on IFRB time and resources to carry out the planning methodologies and studies for the Region 2 MF Broadcasting Conference. The 1984 RARC is expected to require the IFRB to prepare a particular synthesis programme. Given the large number of Administrative Conferences to be held in the 80's, many believe that the IFRB will require additional resources if it is to carry out the workload demanded of it by administrations.

A major item which possibly has more to do with reducing the effectiveness of the IFRB than any other single issue is the IFRB's inability to deal with chronic out-of-band use of frequencies. There are two outstanding examples documented.

1. The extensive out-of-band (hundreds of frequencies) HF broadcasting mainly by the UK and the USSR which is condoned by the IFRB and tolerated by every administration, even those of developing countries.

2. The USSR over-the-horizon HF Radar which is commonly referred to as the "Woodpecker" because it sounds like one and which obliterates maritime, air, amateurs, etc. Despite repeated appeals by the IFRB, the USSR refuses to turn it off. The U.S. also has a similar device but it is so sophisticated that without very sensitive equipment, its operation is undetected.

These and similar problems in other bands cause working level people to say the IFRB is only a paper tiger -- useless in dealing with real problems. The circle goes like this: the IFRB says the problem doesn't exist because there are no interference reports and the administrations say "Why submit an interference report to the IFRB when they don't do anything to stop the interference?"

As administrations prepare for the Plenipotentiary Conference, it is important in domestic deliberations to assess, in addition to the financing of the IFRB, five other issues which may arise.

The first of these issues relates to the composition of the IFRB, the second to the role of the IFRB in technical assistance and the third to the relationship between the IFRB and the CCIR. The fourth concerns the possibility of simplifying and "opening" the Board's procedures and the fifth deals with the relationship between the Board, the General Secretariat and Administrative Council.

Composition of the IFRB

It is very unlikely there will be pressure at the 1982 Plenipotentiary Conference to reduce the size of the IFRB. In fact, there may be pressure to increase the membership on the IFRB. While in the past coordination among ITU members has generally been on a bilateral basis, some of the changes made at WARC-79 indicate a trend towards more multilateral coordination, particularly in view of the complexity of satellite communications and their impact on a variety of different countries. The 1971 Space WARC allocated additional functions to the IFRB for regulating space systems. It also evolved an elaborate advance coordination mechanism to attempt to resolve, in advance, many of the technical, operational, and legal problems between competing administrations in the use of the radio frequency spectrum and the geostationary satellite orbit. In cases where the Board is requested to assist in solving a problem, the Board will, no doubt, play a significant role in facilitating and promoting both bilateral and multilateral coordination. While Article 13, adopted by WARC-79, is consistent with the approach now being taken by the Board, which is to encourage countries to work out their disagreements bilaterally without injecting an international body into the deliberations, there may be advantages to the developing and some developed countries in having a technically-expert and disinterested IFRB make available its expertise in multilateral coordination situations.

Pressures to increase the size of the IFRB will likely come from the developing countries, many of whom are anxious to increase the number of Board members from Africa and Asia. Even though Board members do not represent their own countries or regions, the reality that developing countries perceive the Board as critical to their search for equality of access to the spectrum and orbit may stimulate proposals to increase the size of the Board. All countries are aware that the work of the Board involves elements of judgement and interpretation of a technical and mathematical nature and the decisions which result can affect the economic, cultural and technical interests of administrations. It is, therefore, in the interests of all countries to have a body composed of a number of members reflecting a diversity of interests.

Many observers would argue that the current five-member Board is adequate and generally effective and efficient. A return to an eleven-member Board would, in the view of many countries, not only result in excess costs, but would likely lead to inefficiencies and greater complexity of decision-making. Should substantial pressure from developing countries to increase the size of the Board emerge at the Conference, the likely result will be a compromise of seven members, which would represent an additional member from Africa and Asia respectively. However, any arguments for increasing the size of the Board would be based purely on political rather than technical criteria. Any increase beyond seven, while perhaps satisfying political factors, would not likely be cost-effective.

Role of the IFRB in Technical Assistance

The 1973 Malaga-Torremolinos Convention does not make specific provision under the articles associated with the IFRB for involvement of the IFRB in technical assistance. The Convention in Article 10 does, however, make provision for the IFRB to furnish advice to members regarding the operation of the maximum practicable number of radio channels in those portions of the spectrum where harmful interference may occur, with a view to the equitable, effective and

economical use of the geostationary satellite orbit. Resolution AD relating to the development of national radio frequency management, (noting that the administrations of many developing countries need to create or to strengthen domestic frequency management units appropriate to their administrative structure, with responsibility for the application of the radio regulations at the national and international levels), resolved that meetings shall be organized between representatives of the IFRB, the CCIR and the personnel involved in frequency management matters from administrations of developing and developed countries. It also resolved that such meetings shall be aimed at designing standard structures suitable for administrations of developing countries and shall include discussions concerning the establishment and operation of radio frequency management units. It further resolved that these meetings should identify the particular needs of developing countries in establishing such units, and the means required to meet those needs. This Resolution drew to the attention of the next Plenipotentiary Conference the particular problems identified in establishing frequency management units in developing countries, the need for prompt and effective action, and the need to take all practical measures to ensure that resources are made available for this purpose.

In addition to the functions attributed to the IFRB by WARC-79, the new procedures which were adopted by the 1971 Space WARC also gave the IFRB a greater role in assisting countries during the elaborate coordination procedure. It also permitted more intervention by countries who believed their interests may be affected by the plans or operations of others.

The IFRB, therefore, not only has regulatory and coordination responsiblities, but also has a technical assistance function. Furthermore, its high level of credibility to the developing countries makes its symbolic involvement in frequency management technical assistance as great as its substantive capabilities.

A second area of IFRB involvement in technical assistance concerns the need to make the work of Administrative Conferences more comprehensible to the developing nations and to foster prior coordination. There is a practical inability of the developing countries to participate in all aspects of Administrative Conferences. For example, at WARC-79 many developing countries were unable to participate actively in debate and negotiation at all working levels. Since preliminary decisions were taken at the working level and then sent forward to committee and Plenary for amendment and ratification, many delegations were faced with voting on matters only in their final stages, rather than participating in the evolution of solutions and compromises. This practical inability to participate at all working levels of Administrative Conferences not only has an impact on the developing countries, but also on the negotiating process. Due to the inequitable levels of administrations participating in the negotiating process, the method by which changes were evolved at WARC-79 tended to create a sense of alienation and the suspicion that some states were part of a coalition on specific issues. As a result, the spirit and effectiveness of the collective problem-solving and bargaining process were at times weakened.

Prior to WARC-79, the IFRB held its biennial seminar on frequency management. As well, the CCIR held an extensive special preparatory meeting eleven months prior to the WARC, to prepare technical information likely to be needed by WARC-79 for the use of administrations, particularly developing countries, in preparing and revising their proposals.

The IFRB seminars on frequency management are perceived by the developing countries as being very helpful. There does seem to be a need for the IFRB to continue the practice of holding these seminars as well as preparatory meetings for Administrative Conferences, perhaps on a regional basis.

In order for the IFRB to carry out these educational and advisory activities, there may be a need for the Plenipotentiary Conference to recognize these responsibilities in the Convention in Article 10 pertaining to the International Frequency Registration Board. The capacity of the Board to carry out these activities will also be dependent upon the resources which are allocated to it. Under its current fiscal allocation it is unlikely that the Board would be able to dramatically increase its role in technical assistance.

The relationship between the IFRB and the Technical Cooperation Department in the General Secretariat has also been an area of some concern to many observers. While the mechanisms appear to be in place on paper for consistent coordination between the IFRB and the Technical Cooperation Department, both informally and through the Coordination Committee, the concept of coordination appears to be far greater than the reality. Certainly, if the ITU is to be more effectively poised for improved technical cooperation and assistance on a variety of fronts, its internal organizational mechanisms must be working at a high level of effectiveness and efficiency. There are many examples where the Technical Cooperation Department is working at cross purposes with the IFRB and also with the CCIs. Recognition of the IFRB role in technical assistance in the areas discussed above and included in the Convention would at least provide a legal basis for the evolution of stronger internal mechanisms of coordination between the Board and the Technical Cooperation Department.

Relationship Between the IFRB and the CCIR

The activities of the Board and the CCIR Study Groups and Plenary are closely interrelated. It should be noted at the outset that the Board requires technical expertise and advice which is promptly available. Leive has pointed out that:

> "The Board is dependent upon the CCIR in formulating the technical standards which constitute the basis upon which it evaluates the probability of harmful interference. Although the Board alone is responsible for the formulation of the standards and is not required to base them exclusively on CCIR recommendations and reports, the importance of the latter cannot be underestimated. With the advent of satellite communications and the consequent need to adopt criteria on such matters as sharing of frequency bands by the space and terrestrial services, the Board's dependence on the technical data provided by the CCIR became even more marked."[20]

The CCIR does not possess any direct authority over the IFRB, its procedures and activities. It cannot, for example, insist that the Board accept its recommendations or reports. At the same time the Board has no authority over the CCIR. One of the difficulties faced by the Board is obtaining prompt and detailed responses from the CCIR to its requests for data and advice which it would then incorporate in its technical standards. The three-year interval between the CCIR Plenary Assemblies makes it difficult for the IFRB to manage its activities within the CCIR's response time. In the past there have been recommendations for some amalgamation of the activities of the CCIR and the

Board. These two organs are, however, very different structures with different constituencies. The Board is a permanent international body with a large staff of its own performing both executive and regulatory tasks in a prompt manner, whereas the CCIR has a small permanent staff and performs its activities through study groups composed of national representatives. It is unlikely that any proposals to merge elements of these two organs will evolve at the Conference. There is a need, however, for a more effective relationship between the Board and the CCIR, to ensure a more consistent and rapid flow of information between them. Currently, the Board has the power only to refer matters to the CCIR. There are procedures whereby the Board could refer questions to the CCIR for prompt action. This, if recognized in the Convention, could be implemented in a number of ways. The first possibility would be the immediate referral of questions to the proper study group, and for the study group to defer the issue currently being examined in order to respond to the questions raised by the IFRB. The second mechanism through which this could be implemented would be to establish better coordination between the Board and the CCIR, possibly through the formation of a number of standing joint working groups composed of elected members from the Board Secretariat and CCIR Study Group Chairmen; and also through an increased participation of Board members in the work of CCIR study groups and working parties.

Opening the Proceedings of the Board

There has been concern expressed by some administrations that the acceptability of the Board's findings would have greater impact if administrations were provided with formal and timely opportunities to represent their interests as part of the Board's proceedings. The trend since 1947 has been to reduce an administration's opportunities to appear before the Board and argue its case. It is generally accepted that in most instances the present system of correspondence suffices. There are, however, cases in which representatives from particular administrations would like to appear before the Board to clarify technical details. In extraordinary cases the provision of an opportunity to appear before the Board would improve the availability of technical data and other material so as to increase the rationality behind the Board's decisions. There are opposing views on the degree to which this should occur. Some observers argue that the provision of an opportunity to appear before the Board would not necessarily improve its effectiveness or its judgements. There is also the problem of cost. Appearances before the Board will require funds to cover the Board's time as well as the travel costs of representatives. There is always the chance, therefore, that the countries for which the cost is prohibitive will not be able to present their case.

Relationship Between the Board and the General Secretariat and the Administrative Council

It has been indicated earlier that the centralized nature of the budgeting process at the ITU may have a negative impact on the autonomy on the IFRB. It was further indicated that while ultimate control of the budget is indeed the responsibility of the Administrative Council, a form of programme budgeting with annual or biennial budgetary cycles would permit more effective decision-making by the Chairman of the IFRB in terms of IFRB priorities and the allocation of resources. In the conduct of the research for this paper many discussions were held with representatives from a host of different countries. This opportunity was afforded during the WARC-79. A number of administrations who are concerned with the decisions taken by the IFRB had suggested privately that there was a

need for the Administrative Council to exert greater control on the IFRB. The Board does, however, function relatively autonomous from the Administrative Council since the regulatory regime established by the Convention and Regulations does not provide Administrative Council or the Secretary General with the right of any substantive intervention into the workings of the IFRB. For example, there is no provision which would permit an administration to appeal an action of the Board to the Administrative Council. Furthermore, Administrative Council plays no role in the interpretation of the Radio Regulations.

Successful proposals to give the Administrative Council greater control over the IFRB would undermine the autonomy of the IFRB. If the autonomy of the IFRB is undermined or perceived to be undermined, then its credibility in performing its duties will also be weakened.

Any discussions on the future resource requirements for the IFRB must take into account the Arthur Anderson ITU/IFRB study and design project for frequency spectrum management. As already indicated, the major tasks of the IFRB relate to the recording of the utilization of frequencies and orbital positions as well as a technical examination of frequency assignment notices. To some extent, these tasks are presently supported by computer and require 50% of ITU data processing facility.

The existing systems have emerged over a long period to meet the changing needs of the organization as indicated by the relevant provisions of the Radio Regulations, agreements and final acts of conferences. The present system is based on second generation computer technology and is essentially limited to recording information submitted by member countries, conducting technical examination (calculation of potential interferences of radio signals) through Fortran programs and other means, as well as recording the results of examining this information.

Volumes of transactions and stored data have increased significantly. The nature of operations has been changing and is expected to change in the future as the IFRB must deal with additional facets such as satellite communications, the impact of emerging nations, and the continued crowding of the available frequency spectrum.

There is therefore a growing pressure to provide member countries with a high level of timely, responsive and technically and administratively accurate service in a cost-effective manner.

In 1974, the ITU Administrative Council decided that a study should be undertaken in relation to the organization and working methods of the Union's specialized secretariats. For this purpose, the Union enlisted the service of governmental experts from countries who are members of the Union. With regard particularly to the IFRB specialized secretariat, their report contained a recommendation concerning the increased use of the computer with the view to eliminating as much routine work as possible and to reduce manual processing to a minimum. To implement this recommendation, the Administrative Council decided in 1977 that the IFRB would be assisted in this task by experts belonging to member countries represented on the Council. Thus, experts from three administrations conducted a study along these lines in the autumn of 1977 and produced recommendations. In their conclusions, they noted that the IFRB might apply automatic procedures to improve its efficiency and to alleviate the burden on its staff resulting from the workload.

These experts also recommended that a complete system study should be carried out on the information required by the IFRB to perform its work and on its working methods. Its purpose was to define an automatic data processing system which would not only be beneficial to the IFRB but in addition would enable it to meet the administrations' requirements more effectively. In 1978 the Administrative Council approved the experts' proposal that the problem should be studied in depth. Arthur Anderson and Company, an international management consulting firm, was selected to carry out the study which was completed in November 1980. With the eventual implementation of the frequency spectrum management system, it is expected that the efficiency with which the IFRB carries out its current functions will improve dramatically. Any decisions therefore about future resources for the IFRB must clearly consider the costs and implications of the frequency spectrum management systems project.

XIII CCITT AND THE CCIR

The International Telegraph Union, created in Paris in 1865, established two semi-independent consultative bodies: the International Telephone Consultative Committee in 1924, and the International Telegraph Consultative Committee in 1925.

The 1927 Washington Radio Conference established an International Consultative Committee for Radio, similar to the committees already established for telegraph and telephone. In 1932, the 13th International Telegraph Conference and the fourth International Radiotelegraph Conference met at the same time in Madrid and gave birth to the International Telecommunication Union. The 1947 Atlantic City Conference recognized the three Consultative Committees as permanent organs of the International Telecommunication Union. At the 1952 Conference, held in Buenos Aires, preliminary proposals were made to study the possibility of having only two International Consultative Committees, one for telecommunication by wire and one for telecommunication by radio. The CCITT grew out of a merger in 1956 of the two separate international consultative committees.

The duties of the CCITT are to study technical, operating and tariff questions relating to telephone and telegraph, and to issue recommendations. The duties of the CCIR are to study technical and operating questions relating to radio communications, and to issue recommendations. Each CCI works through its study groups and Plenary Assembly and operates under a Director elected by Plenary Assembly, in accordance with the general regulations. The Plenary Assembly is held approximately every four years by each CCI. It draws up a list of questions on technical subjects relating to telecommunications which are then allocated to the appropriate study group. The study groups, composed of experts from different countries, carry out and coordinate the necessary work of the national study groups. There are four types of participants in the CCIs: Administrations, Recognized Private Operating Agencies (RPOAs) Scientific or Industrial Organizations (SIOs) and international and regional organizations. The RPOAs and SIOs which participate in the work of either of the CCIs contribute separately to the particular CCI to help defray expenses.

CCITT/CCIR Structure and Issues

The CCITT has 17 study groups which deal with such questions as telegraph operation and quality of service, general tariff principles, new networks for data transmission, telephone switching and signalling, telephone circuits, and

data transmission and digital networks. There are also three CCITT/CCIR joint study groups on circuit noise, television and sound transmission, and definitions and symbols. In addition there are five CCITT/CCIR Plan Committees, which are administered by the CCITT. They are: the World Plan Committee, responsible for worldwide telecommunication plans; and four regional committees for Africa, Latin America, Asia-Oceania, and Europe and the Mediterranean Basin.

The CCITT also has what are known as special autonomous working groups (GAS). Prior to the VIIth Plenary Assembly of the CCITT recently held in Geneva November 10-21, 1980, there were three functioning GAS groups. GAS 3 was concerned with the economic and technical aspects of the choice of transmission systems. The work of GAS 3 which began in 1964 will continue. GAS 3 has drafted new handbooks on local networks and on "general network planning" and "rural telecommunications". GAS 5, which will also continue, is concerned with economic conditions and telecommunication development. GAS 5 has drafted various chapters on subjects submitted for study by different Plenary Assemblies, each subject being different but forming part of an overall collection entitled Telecommunications-Economic Studies. Each new chapter was published after the relevant Plenary Assembly. GAS 6, which completed its work and will not continue, was concerned with economic and technical aspects of the choice of switching systems.

The VIIth Plenary Assembly established three new special autonomous (study) groups and reactivated a fourth. The three new groups are:

- GAS 7 - Rural Telecommunications which will complete studies already in progress and update the existing handbook on the subject;
- GAS 8 - Economic and Technical Impact of Implementing a Regional Satellite Network;
- GAS 9 - Economic and Technical Aspects of Transition from an Analogue to a Digital Telecommunication Network.

These studies will include aspects of growth demand, co-existence between traditional and new equipment, and eventual replacement of existing equipment. GAS 4 - Primary Power Sources was reactivated in order to make a comprehensive revision of the existing handbook on this subject. The handbook was originally published in 1969.

There are also, under the direction of the CCITT, four regional tariff groups which are part of SG III [Committee] of the CCITT. These tariff groups are for Africa, Latin America, Asia and Oceania, and Europe and the Mediterranean Basin.

The CCIR has eleven study groups responding to questions which relate to spectrum needs and utilization, spectrum monitoring, space research, radio astronomy services, standard frequencies, time signal services, as well as broadcasting service for sound and broadcasting service for television.

The CCIR study groups also have interim working parties which are set up either by the study groups during their meetings or, in the interim between meetings, by the Chairman in consultation with the Director of the CCIR. Each of the working parties has clearly defined terms of reference forming part of the terms of reference of the relevant study group. The interim working parties normally conduct their work by correspondence.

There are three issues which may emerge at the Plenipotentiary Conference concerning changes in the CCIs. The three possible issues are the merger of the CCI secretariats, the future of the World Plan Committee and the Regional Plan Committees, and the broader question of access and relevance of the CCIs to the developing countries.

Merging the CCI Secretariats and Study Groups

The separation of the two CCIs reflects an historical pattern of development back to an earlier period when the modes of transmission were technically quite distinct. In the last decades, there has been a blurring of the differences and there are observers who question whether the CCIs should remain separate or be fused.

Over the years, the CCIs have become involved in a number of joint committees. As indicated earlier, the Plan Committees and joint working parties between the CCITT and the CCIR are examples of continued interaction between the two consultative bodies. If greater integration were to occur between the CCIs, this could take place at a number of levels: fusion of the secretariats, joint and separate study groups, complete integration of study groups. It is important, however, to note that historically the participants in the CCIs have come from different fields. There are engineers who are primarily concerned with telephone and telegraph related issues, and those primarily concerned with radio frequency and radio communication matters. It is unlikely that there will be sufficient support from the major participants within each of the CCIs for any fusion of the CCI secretariats. Nor will there be much support for total integration of the CCI study groups.

The current pattern, in which there are joint working parties and a separation of study groups questions into the respective committees, is likely to continue. While some may perceive the continuation of the status quo as conservative, others would argue that the separation is necessary because of the complexity of study questions in each of the respective areas. While it can be argued that greater integration between telephone, telegraph, data transmissions, switching mechanisms, satellites and the use of the frequency spectrum is occurring, it can also be argued that the complexity of each of these areas requires a differentiated level of study. Therefore the mix between separate study groups and joint working parties may be the most appropriate for the next decade. There may be some requirements for greater coordination between CCI study groups but arguments in favour of complete integration are not likely defensible. The Plenary Assemblies of the two CCIs are out of phase by about two years. This causes problems of coordination between the CCIs, and joint recommendations have to wait about two years to be finally adopted. On some occasions, when coordination has been necessary between the CCIs, the specialized secretariats have been put in the position of having to speak on behalf of their Consultative Committees in areas which properly should have been dealt with by the administrations. Further difficulties have been encountered when inquiries by

one CCI were not answered promptly by the other. Such delays hinder the progress of CCI work.

An issue which may arise at the Plenipotentiary Conference is whether the CCI Plenaries are to be held at the same time or in the same year.

Many would argue that to have both Plenary Assemblies in the same year would be too heavy a burden for administrations and the ITU. Based on Canadian proposals made to the VIIth Plenary, other ways of increasing coordination between the two Consultative Committees would be to schedule working party/study group meetings that study topics of common interest at the same time, thereby permitting joint meetings if deemed necessary. It is important to note that there is a growing sense among many administrations that greater linkage between the work of the two CCIs should be contemplated at the Plenipotentiary Conference.

Future of World Plan Committee and Regional Plan Committees

The 1973 Malaga-Torremolinos Convention created the World Plan Committee and Regional Plan Committees to develop a general plan for the International Telecommunication Network to facilitate and coordinate development of international telecommunication services. The Plan Committees were to refer to the CCI questions which were of particular interest to developing countries.

Resolution 12 of the VIth Plenary Assembly of the CCITT (Geneva, 1976) resolved to continue the terms of reference of the Plan Committee as laid down in the Convention and as was amplified in Resolution 448 of the Administrative Council.

Resolution 12 did point out, however, that the development, establishment or implementation of specific network plans, either regional or global, was solely within the competence of the countries themselves, acting together in bilateral or multilateral negotiations, in ways which were outside the terms of reference of the Plan Committees. This Resolution clearly indicates that the activities of the Plan Committees should not erode national sovereignty. Since 1973 the role of the Plan Committees has changed. An important function of the Plan Committees originally was to reconcile differences associated with network facilities and international traffic. Since 1973, much of the international planning in this area has been taken over by INTELSAT and while there still is a need for reconciliation between radio relay systems in Europe and Africa, this can be done essentially through bilateral or multilateral negotiations.

The Plan Committees, therefore, have really become forums for:

- the exchange of information
- the collection and publication of valid and relevant planning data
- the consideration of questions to be submitted to the CCIs on international routing, switching, numbering, service quality, etc.
- the consideration of questions on technical assistance to be submitted to the CCIs

- the organization of the exchange of information concerning developments in the field of telecommunications in order to assist countries to update general planning techniques and introduce services and facilities.

A likely issue for debate at the Plenipotentiary Conference is whether or not the Plan Committees should continue. The developed countries may well argue that there is no longer a need for the Plan Committees and they should cease to exist. The developing countries may perceive the Plan Committees as providing an important link between their requirements and the questions which the CCI study groups need to address. Developing countries also see the Plan Committees as providing an important instrument for hosting seminars on matters which are of particular concern to them. Some observers would argue that the Plan Committees are not necessarily the best instruments for conducting seminars and for information exchange concerning the needs of developing countries. Others would argue that these Committees are joint CCIR/CCITT groups and their existence contributes to better contacts between administrations, as well as between them and CCITT and CCIR specialists.

Relevance of CCIs to Developing Countries

Shanta Pai in a most useful article on the "Impact of CCI Recommendations and Publications on Telecommunication Development in the Developing Countries"[21] outlines the relevance and importance of the work of the CCIs on network development in these countries. The paper highlights how publications have satisfied the developing countries' needs for staff training, planning, maintenance and operation, and design and development of equipment for indigenous production. It sheds light on the role performed by the CCIs in the dissemination of technical information at forums provided by their study group meetings and through their literature. It acknowledges a number of key factors associated with the limited participation by developing countries in the work of the CCIs, the high cost of publications, and the costs associated with meeting attendance.

The low level of participation by the developing countries in the CCI study groups has been a matter of concern to many administrations and to the CCI secretariats. For example, in 1979 there was an average of 17 administrations which participated in each of the 17 CCITT study groups and their working parties. An average of 27 administrations participated in the Plan Committees. In 1977 an average of 29 administrations participated in the CCIR study groups. At the CCIR XIV Plenary Assembly in Kyoto in June 1978, 61 administrations participated. This is less than half of the membership of the ITU. Participation by administrations in the special autonomous study groups has also been low. For example, in 1979, 5 administrations attended GAS 3, 6 attended GAS 5, 12 attended GAS 6. In the same year 15 administrations attended the Regional Tariff Group for Europe and the Mediterranean Basin, and 17 attended in 1978. Proportional to the number of countries in these regions, the participation in Regional Tariff Groups is quite high. The same pattern appears to hold true for the Regional Plan Groups. In 1978, the Regional Plan Groups of Asia had 23 administrations participating and the Plan Group for Latin America had 20. In 1979 the Regional Plan Group for Africa had 38 members participating and the European Regional Planning Group had 26.

There certainly appears to be greater interest in CCITT meetings when they are organized around substantive issues which concern particular regional requirements.

No doubt domestic bureaucracies in developing countries can more easily defend the allocation of scarce resources to attend regional meetings directly relevant to domestic concerns, more so than their attendance at global group meetings.

The low level of participation in the CCIR and CCITT study groups by developing countries is due in part to a shortage of fiscal and human resources. Also, the technical issues studied by the two Consultative Committees tend to be at the leading edge of technological development and are generally not relevant to the immediate needs of developing countries. The questions handled by the CCITT study groups assume a priori the existence of fairly sophisticated telephone networks. But as indicated earlier, the MacBride Commission pointed out that 80% of the world's telephones are in only ten countries of North America and Europe. The developing world only has 7% of the world's telephones. When one examines the current state of telephone systems in the developing world and the type of questions worked on by the study groups, it is understandable that developing countries tend to be non-participants.

These groups put out handbooks which provide guidelines for the development of telecommunications. GAS 6, for example is responsible for the preparation of the handbook on economic and technical aspects of the choice of switching systems, and has now completed its work. The estimated cost, however, of printing the handbook is so high that a specific allocation by Administrative Council or by the '82 Plenipotentiary Conference will probably be required for production. The irony is that the technical work produced by the GAS groups is important to the developing countries, yet the costs associated with their publications are so prohibitive that their widespread dissemination and utilization is impossible.

Any proposals to change the organization and working methods of the CCIR and CCITT must take into consideration that they are to serve all administrations. Prior to the VIIth Plenary Assembly of the CCITT recently held in Geneva, there was concern that the study group structure did not take into account the broader questions of data transmission, transborder data flow, interconnections and interactive services. The merger of a number of study groups and the modification of other groups at the VIIth Plenary was clearly an effort to take into account the need to address these broader issues. Concern still exists that the modified study group structure will not address some fundamental policy questions which concern many administrations. Telephone and telegraph policy issues are growing in substance and complexity as electronic mail, integrated service networks and serious concern over issues of privacy abound in the international arena. The 1982 Plenipotentiary Conference may be under some pressure to convene an Administrative Telegraph and Telephone Conference in order to resolve many policy issues which have arisen since the last Conference.

The last World Administrative Telegraph and Telephone Conference met in Geneva in April, 1973, with the following agenda based upon Resolution R-705 of the Administrative Council:

- to revise the Telegraph and Telephone Regulations, especially in the light of the recommendations of the Vth Plenary Assembly of the CCITT,

with respect to the simplification of the provisions of the Telegraph Regulations (Geneva, 1958), and the Resolution No. 36 of the Plenipotentiary Conference (Montreux, 1965), and to adopt, as necessary, new provisions to meet the requirements of the telegraph and telephone services

° to take the necessary steps for subsequent incorporation in the revised Telegraph and Telephone Regulations of such provisions of the Radio and Additional Radio Regulations as the next competent World Administrative Radio Conference may decide to transfer to the Telegraph and Telephone Regulations in pursuance of Resolution No. 37 of the Plenipotentiary Conference (Montreux, 1965).

The 1973 Conference dealt with a range of issues including the routing of traffic and the sovereign right of originating administrations to choose the routing for its outgoing traffic; the U.S. proposal -- which was defeated -- to broaden the Telegraph Regulations to make the provisions of Articles (re-numbered) 8, 9, 10, and 12 applicable to other telegraph services (telex, phototelegraphy, certain forms of data, etc.); the USSR proposal to make "instructions" mandatory -- which resulted in a unanimous decision on the definition of the term "instructions"; meteorological telegrams and the amendment of Article 4 to include meteorological telegrams in the "Obligatory" category; and responsibility of administrations vis-à-vis RPOAs which resulted from a USSR, the Ukraine and Bielorussia proposal -- which was eventually withdrawn -- to make administrations responsible for the activity of RPOAs in observing the Regulations and the Instructions and Recommendations of the CCITT. The issue of electronic mail and the relative roles of the UPU and ITU in this area need to be clearly delineated. Questions of how to define what is post versus what is a telecommunication service, along with other issues of privacy including the storage of data by multinationals need to be studied, and standards and regulations produced. With integrated service networks, it is very important to evolve standardized regulations for the control of transborder data flow.

Since 1973 there has been a burst of legislation which has covered seven Western European countries and involved the Council of Europe, the OECD and the EEC in the preparation of transnational rules. According to Neville Hunnings in an article in Inter Media, these rules usually cover only data that is processed automatically but some do go wider and include manually stored data. Hunnings points out that "most of these provisions have not been properly thought out, and in some cases are violently antipathetic to normal rules on the freedom of information. Indeed, there are signs of a panic reaction, which happens to coincide with a protectionist instinct in a field which offers numerous commercial opportunities".[22] The European Convention on data privacy which was prepared by the Council of Europe is likely to come into force in January 1981. The Council of Europe's Convention on the Protection of Personal Data has the status of an Intergovernmental Treaty and will greatly increase the need for domestic legislation in member countries. It will affect passage of data between Europe and other regions.

As reported in Inter Media, November 1980, a separate set of guidelines adopted by the OECD to govern the protection of privacy and transborder flows of personal data has been recommended by the OECD Council for adoption by member countries. From the point of view of the ITU these guidelines also cover the transfer of data from one country to another, taking into consideration the

possibility that the countries might have different degrees of protection. Only half of the OECD countries have introduced privacy laws and according to the OECD, disparities between laws of different countries could disrupt the flows of information necessary for banking, insurance, diplomacy, transnational activities and a whole range of other activities from meteorology to aircraft preservation.

In the eyes of many observers the CCITT and its study groups are not appropriate structures to develop recommendations on the more sensitive questions of transborder data flow. These issues may be dealt with more appropriately by an Administrative Telegraph and Telephone Conference. To the benefit of all administrations, an Administrative T&T Conference should bring about up-dating changes in the CCITT and shape an appropriate ITU role regarding transborder data flow. The developing countries have as much interest in knowing what information is crossing their borders as do the developed countries.

Both CCIs serve the scientific community, regulatory bodies, manufacturers and Recognized Private Operating Agencies (RPOAs). To date, the CCIR has produced fourteen editions of CCIR volumes which are considered to be a strong reference library on subjects related to radio communications. Not unlike the CCITT, the CCIR also faces problems of inadequate levels of participation on the part of administrations in the work of its study groups. The CCIR also has a similar problem of prohibitively costly publications which do not permit widespread dissemination and utilization.

An irony in the relationship between the CCIR and developing countries is that WARC-79 referred to the CCIR many matters of very significant importance to developing countries. For example, Resolution 35 related to a procedure for resolving a disagreement over the technical standards or rules of procedure of the IFRB. It was decided in the event of an unresolved disagreement between administrations, that with the permission of the administrations concerned, these matters shall be referred to the CCIR for international study. Another important matter referred to the CCIR for study deals with the question of whether or not a fourth ITU region (Africa) should be created. Such weighty considerations under study by the CCIR deeply involve the developing countries, but ironically this is not reflected in the degree of their participation in the CCIR and could lead therefore to scepticism about the potential impact of the CCIR work on domestic considerations in the developing countries.

Many observers believe that the problem of CCITT and CCIR relevance to the developing countries is not a function of the study group structures. The problem facing developing countries is their need to have interpretations and applications of CCITT/CCIR recommendations to their services. Most often these recommendations were put forward five, ten and fifteen years ago and require adaptation to current art and resource availability in the developing countries. Therefore one of the ways of making the CCIs more relevant to the developing countries, without undermining their importance for the developed world, is to have an institutional mechanism for updating, adapting, and interpreting past recommendations in accordance with the needs of the developing world. This leads to issues concerning ITU publication policy and regional ITU structure.

The ITU publication policy will be dealt with in greater detail in a separate section. It is important to point out here, however, that the CCITT handbooks are extremely expensive and that certainly one of the ways of increasing their

availability to the developing countries would be to charge the costs associated with the handbooks to the Technical Cooperation budget of the Union.

As pointed out earlier in the chapter on Technical Cooperation, the development of ITU regional offices, if staffed with individuals capable of interpreting and adapting CCITT and CCIR recommendations to the needs of the countries in that region, would go a long way in increasing the relevance of the CCIs to the developing countries.

XIV FINANCES OF THE UNION

The expenses of the Union are met from contributions of members, each paying a sum proportional to the number of units in one of the fourteen classes of contribution (ranging from one half through thirty units) it has voluntarily chosen. The 1973 Conference unanimously adopted a recommendation of the Administrative Council which suggested that the scale of contribution include a new contributory class of one and a half units in order to provide greater flexibility for those members wishing to select a class of contribution at the lower end of the scale. The Conference also adopted a proposal which denied the right of voting to any members whose contributory payments fall two or more years in arrears.

The provisions of the 1965 Convention which related to the contributions of Recognized Private Operating Agencies and Scientific or Industrial Organizations were not modified by the 1973 Convention.

In 1973, a proposal which caused considerable debate was that members' contributions be established primarily on the basis of the percentage of a country's GNP as is the practice in the United Nations. Many developing countries argued that the present system of free choice is unfair to the developing nations since the existing lowest contributory class of one half unit places these nations in a position where they must pay, comparatively speaking, a greater percentage of the Union's expenses than developed nations with a higher Gross National Product.

There was also a proposal in 1973 for the adoption of the UN system and a percentage correction factor based on international telephone traffic, for example. This proposal was defeated not only because of the principle involved but also because many countries felt that there would be practical difficulties in maintaining the data to be considered in order to calculate the contributory shares.

It is likely that the method of financing of the Union will again be an issue for debate at the '82 Plenipotentiary Conference. The issue will include both the contributions of members and the contributory units for RPOAs and SIOs.

The 1973 Conference fixed the size of the RPOA's and SIO's unit of contribution at one-sixth of a member's unit. There may however be some pressure from certain quarters to increase the size of the RPOA's and SIO's unit to one-quarter or more of a member's unit.

The system of free choice which has been in place in the ITU since its inception has served the Union well and many think it should be retained. Generally speaking, a system which permits voluntary choice of a contributory level would

be considered progressive, and some would argue that the ITU currently has such a system. The only regressive element is the existence of a floor made up of a half a contributory unit. However, in 1979, half a contributory unit would have amounted to approximately 63,200 Swiss francs. A proposal which was made in 1973 and which may be reintroduced in 1982 was that a contributory class of one-quarter unit be established. This was opposed by the majority of administrations since this could readily be offset by a downward readjustment by the major contributors in their unit class contribution.

On the basis of the traditional progressive-regressive taxation arguments, there is no question that a percentage of gross domestic product would be more progressive than the current contributory formula. However, proposals to implement such a change would be vehemently opposed by some of the major contributors and therefore do not appear to be a feasible alternative to the current system of financing.

The issue of the way in which the Union is financed cannot, however, be dealt with in isolation from the question of the financing of technical cooperation and assistance. If compromises on the financing of certain aspects of technical assistance out of the ordinary budget of the Union occur, then it is likely that the existing contributory financing formula of the Union will remain intact. However, should a suitable and harmonious compromise on technical assistance financing out of the ordinary budget of the Union not be feasible, or not be forthcoming, then challenges to the current financing formula will be likely and may gather support.

In accordance with Article 79 of the 1973 Convention, RPOAs and SIOs (and IOs, unless exempted) "shall share in defraying the expenses of the international consultative committees in the work of which they have agreed to participate". The RPOAs also must share in defraying the expenses of those administrative conferences in which they have agreed to participate or have participated. While there may be pressure from some quarters to increase the level of the contributory unit of the RPOAs, SIOs and IOs, a study is currently underway that will reveal that the assessment of one-sixth the value of a member's unit may already be higher than what ought to be calculated based upon Article 79 of the Convention. It is likely that proposals to increase the costs shared by these organizations will be made more on the basis of political differences than on rational economic calculations. However, these proposals will probably be defeated.

XV ITU PUBLICATIONS POLICY

ITU publications are critical to the work of the various organs. They play an essential role in disseminating the work of the CCIs and the IFRB. The publications are funded from a separate ITU budget item which is intended to be self-supporting through sales. This particular budget item currently makes up about ten percent of the total ITU expenditures. A detailed description of the principles which govern the supplementary publications account are incorporated in Annex 1 of the ITU financial regulations. The regulations consider that the sale price of the publication is to be calculated by adding direct costs which range from typesetting and printing costs, postage and packing, to travelling expenses of staff engaged in dispatching publications outside Geneva. The overhead costs include expenditure on specialized staff and additional staff,

expenditure on premises and furniture, equipment expenditures, and costs of producing the lists of publications.

The cost of ITU publications remains prohibitively high and over the past years the ITU publications budget has suffered continuous financial problems. The budget is not self-supporting for a number of different and somewhat complex reasons. The first relates to the normal market mechanism of costing above a level which the market can bear. At the current cost of publications, many administrations reduce the number of publications ordered and use their own reproduction facilities to generate the copies required. This practice reduces the number of publications sold, increases the per unit cost of the publication and escalates the cycle.

A second reason is that an increasingly large number of developed countries receive ITU information either through electronic or microfilm printouts instead of standard publications. This as well reduces the demand for ITU publications and increases the per unit price. In this circumstance, the developing countries which are unable to take advantage of these advanced techniques perceive that they are subsidizing the developed countries. On the other hand, the developed countries feel that the costs of the technologically advanced techniques are kept high in order to subsidize the standard publications.

Another problem associated with the cost of publications, and which was alluded to earlier, is that the publications targeted at assisting developing countries have become so lengthy and expensive that their cost in volume tends to defeat the purpose.

CONCLUSIONS

Roger Hansen has argued there is a need for political choice if North-South relations are to move beyond the stalemate system which has characterized the past. He believes that to move ahead will require the recognition "...that rules that have governed the behavior of states in the international milieu for centuries are no longer congruent enough with the global system and the needs of Northern and Southern states to be followed except at a very high cost to all parties. How much change is needed is highly debatable in both prudential and normative terms ..."[23]

The 1982 ITU Plenipotentiary Conference will provide a forum for the crystallization of political international telecommunication issues. It will no doubt be a forum in which North-South inequities in telecommunications will be expressed loudly, yet could through flexibility and adaptibility of bargaining positions become an arena for change within a context of harmony and order.

Preparations by all administrations for the Plenipotentiary must no doubt illuminate the paths which will balance accommodation and change, efficiency and equity while maintaining an ordered telecommunication environment conducive to technological growth and improvement in telecommunication services in developing countries. These competing tensions represent a tall order to those who are charged with conducting international telecommunication diplomacy and to governments as they prepare their positions and strategies for the 1982 Plenipotentiary. These positions, while representing the telecommunication foreign policies adopted by nations to serve their interests, must also recognize the legitimate demands of other states, and either implicitly or explicitly embody sufficient flexibility to permit accommodation. Such flexibility will be required in 1982 if the ITU tradition of harmony and change through graceful accommodation is to prevail.

NOTES

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