THE INTERNATIONAL TELECOMMUNICATIONS UNION AT THE CROSSROADS

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The authors were members of the Advisory Group of Experts on Telecommunications Policy whose report helped prepare for the Plenipotentiary Conference of the ITU in Nice in June this year. This paper is based on the Group's report. It discusses the role of the ITU in the organisation of the world's telecommunications systems and suggests what changes will be required if the ITU is to be as influential in future telecommunications developments as it has been in the past. Particular attention is paid to the importance of information and computing technologies in modern telecommunications. While the ITU has begun to bridge the gulf between developed and developing countries in their approach to telecommunications, continuing insistence on secrecy in its deliberations may be an indication that the ITU has not yet come to terms with the difficulties it faces.

Keywords: telecommunications, International Telecommunications Union, telecommunications policy, networks, telecommunications services

INTRODUCTION

The International Telecommunication Union (ITU) is one of the world's oldest surviving international organisations. Created in 1865 (soon after the invention of telegraphy) to facilitate and co-ordinate international telecommunications, it is now the United Nations specialised agency responsible for all telecommunications matters, with 166 member countries. It operates on the basis of an international Convention established periodically by plenipotentiary conferences as an international treaty. The Convention to guide global telecommunications developments over the next five years was elaborated at the recent Plenipotentiary Conference in Nice during May and June, 1989.

International telecommunications has come a long way in 125 years and is now in the midst of unprecedented change. The widespread application of new technologies, such as satellites, optical fibre cables, mobile terminals and digital networks, is providing the technological infrastructure for the future global information economy.[1] The computer industry, which grew up providing data processing, is becoming ever more dependent on efficient teleprocessing, which correspondingly requires even greater integration of computer hardware, software and service functions into the telecommunications system.

Major new markets in electronic information and communication services are being opened, many on a global basis.

In times past, telecommunications policy was formulated by national governments to achieve what were seen as broad public service objectives for the national society under controlled monopolistic arrangements. Telecommunications (usually post-telegraph-telephone, or PTT) operators were responsible for attempting to achieve universal service at charges within the reach of everyone. The effectiveness of these policies has varied among countries and over time.

The new technologies have made possible the entry of new suppliers and the continuing erosion of the traditional monopoly industry structures. This new diversity of supply has expanded opportunities for many user groups, while at the same time sometimes making it more difficult to enforce the historic public service objectives. Although the new competition may be a very effective tool of policy in achieving certain economic and social objectives, it is clearly not a substitute for the public service objectives, or for the need to implement them through a system of national regulation.[2]

Yet, to date little attention has been paid to the problem of defining precisely and implementing effectively public service objectives in the new environment. Australia is one of the leaders in that it at least has seriously raised the issue of the meaning of 'universal service' and 'community service obligations' in the new telecommunications environment.

The telecommunications industry is now in the process of transcending national boundaries. Increasingly, the international telecommunications network is being transformed from a set of interconnected national networks to fully integrated regional and global networks. National economic and social objectives must now be pursued within a context of regional and global organisations such as the European Community, the ITU, OECD and GATT. These organisations are being forced to face up to the responsibility of assuming an increasing role in establishing and implementing broad economic and social objectives that historically have rested entirely with national governments.

The most significant agency that will influence the direction, speed and trend of future global telecommunications development is the ITU. It could prepare the ground to facilitate the changes necessary to achieve international and national economic and social objectives in the new environment; or it could be a barrier to constructive development if it cannot adapt its own policies, procedures and practices to the new environment. The recent ITU Plenipotentiary Conference in Nice set the stage for international telecommunications development in the 1990s. This paper examines issues leading up to the Conference and assesses whether, on the basis of the Conference, the ITU is likely to be a leader or a follower of events in global telecommunications development over the next decade. It is based in part on the recent Report of the Advisory Group of Experts on Telecommunications Policy, presented to the ITU

Secretary General in preparation for the Plenipotentiary Conference.[3] The authors were members of the Group.

HISTORICAL BACKGROUND

ITU is the principal international organisation charged with responsibility for the regulation and planning of worldwide telecommunications; for the formulation of equipment and systems operating standards; for the co-ordination and dissemination of information required for the planning and operation of telecommunications services; and for the promotion of the development of global telecommunications.

The basic structure of ITU dates back to the late 1940s and consists of four permanent organs: The General Secretariat, which includes the Technical Co-operation Department; the International Frequency Registration Board (IFRB); the International Consultative Committee for Telephone and Telegraph (CCITT); and the International Consultative Committee for Radiocommunications (CCIR). In 1985, a small Centre for Telecommunications Development (CTD) was established within the framework of ITU as a result of the recommendation of the Independent Commission for World-Wide Telecommunications Development (Maitland Commission),[4] with a view to providing expanded assistance to developing countries.

A basic provision for the work of the ITU is recognition of the sovereign right of each country to regulate its telecommunications system. CCITT and CCIR recommendations provide a basis for international standardisation of telecommunications. Recommendations are not legally binding on ITU members. However, because of the imperative interconnectability and interperability of all national networks, they are so far almost universally applied.

This status of UN specialised agency has led to requests that ITU assume further responsibility to provide more direct and specific assistance to the developing countries that request advice on technical and operational matters. These advisory services, which are partly executed with the financial support of the United Nations Development Programme (UNDP), encompass manpower development, planning and maintenance of networks, advice on managerial and organisational issues, and more recently, advice on telecommunications policy matters.

The more intensified globalisation of telecommunications networks, including the increasing complexity of telecommunications technology and a growing diversity of actors in the telecommunications field, has created additional pressures. There are now more pressing demands on ITU for accelerated handling of information and closer co-ordination of the activities of members. With increasing network interdependence, more effective harmonisation of actions is necessary to ensure optimal connectivity and operability of networks and services.

The increasing integration of microelectronics, computer and communications technologies is expected to bring new telecommunications products and services progressively within reach of larger proportions of the global population. Yet the trend toward technical convergence is contributing to considerable uncertainty for organisational restructuring across traditionally technically distinct spheres of operation and expertise. This has become a major concern for developed countries, and is increasingly becoming one for developing countries. It raises an important policy issue of the appropriate institutional structure that will best meet the needs of different countries, different regions and the global telecommunications system.

For most developing countries, one of the central problems is how to ensure that the existing telecommunications infrastructure incorporates new technical developments efficiently, while at the same time maintaining provision of traditional services (such as telex) where they are the most effective, and sometimes the only, services available to some users.

The new telecommunications and information technologies are seen by researchers as increasingly pervasive across all sectors of society, in factories, in offices, and in homes. They can lead to major reductions in cost and to productivity gains. They are also linked to the fact that research and development productivity in this field appears to be shifting to a new and higher trajectory. The productivity potential of the new communications and information technologies is further enhanced when considered in conjunction with technological developments in other areas, such as new materials and biotechnology, which to a significant degree are based upon applications of new communications and information technologies.

In the past there was a tendency to view telecommunications as an independent industry providing services that were not an integral part of economic and social service activity. Consideration of telecommunications as a facilitator of economic development, as a source of global competitive advantage, as a provider of social and welfare benefits, as a contribution to reducing regional disparities, and as a provider of information for the general education of the population, has not been dominant in the formulation of national telecommunications policies. For the future, with information and knowledge becoming strategic resources, and telecommunications becoming a primary means determining their availability, a broader policy framework for making telecommunications a truly universal resource will need to emerge. Telecommunications matters are becoming increasingly important for national economic and social policy in all countries.

During 1988 the preparation for the World Administrative Telegraph and Telephone Conference (WATTC-88) of ITU attracted much interest. A WATTC is by nature an instrument for seeking agreement among all nations on the basic provisions necessary for the interconnection and interworking of the world's telecommunications networks and services.

However, the evolution of national policies has resulted in some clear differences among nations in the policies and approaches established; for example, in the scope of monopoly and competitive services, and in the definition of terms such as 'basic' and 'enhanced' services. Such discrepancies among national policies make the task of establishing a framework for international services more difficult. A primary concern of WATTC-88 was the degree to which a binding treaty instrument implies that providers of telecommunications services throughout public international networks are obligated to comply with the standards of CCITT or the accounting provisions in ITU regulations.

In a formal sense, the WATTC-88 managed to reach a unanimous agreement. Although a wide spectrum of views was expressed at WATTC-88, two principal positions stood out. On the one hand, there are countries which believe the most effective stimulus to technical innovation, and the development of modern efficient international telecommunications services, is through ITU regulations that offer maximum flexibility within a broad framework of general principles. On the other hand, there are countries which, without denying the importance of innovation, want ITU regulations to be sufficiently strong and specific to assist them in implementing effective organisational and technical infrastructures to meet both traditional (basic telephone) and enhanced service requirements.[5]

NEW AND MORE PLAYERS IN THE INTERNATIONAL ARENA

ITU has long been the dominant international organisation in the field of telecommunications, the organisation from which the international telecommunications regime has developed.[6] The participation of countries at the ITU has been primarily through their PTT representatives. However, in recent times the changing global environment has prompted telecommunications issues to be raised before other international organisations. For example, trade in telecommunications and information services is seen as an issue of growing importance. The General Agreement on Tariffs and Trade (GATT) is now dealing extensively with trade in services, including telecommunications services.[7] The GATT is considered by some observers, in parallel with ITU, as a major stabilising factor in the international telecommunications environment. At the GATT meeting in Montreal in December 1988, an outline of a trade in services framework agreement was discussed. The objective is to have a framework agreement completed during 1989-1990.

Since 1984, the Organisation for Economic Co-operation and Development (OECD) also has been studying the area of information, computer and communications policies. The OECD concern focuses on the actual path and speed of movement toward new regulatory and market structures that depart from previous traditional patterns among

its member countries, primarily the most economically developed countries. At this stage there appears to be widespread agreement among OECD countries that national regulations which affect the provision of the so-called value-added services, based on telecommunications networks, should be liberalised to allow new services and new service providers to flourish in a more competitive environment. In addition to dealing with the issue of enhancing the international rules of the game that relate to information and communications technologies, the OECD is also undertaking studies to examine the social and economic implications of the emergence of telecommunications policies nationally and internationally.[8]

Many other regional, or more broadly-based international organisations are dealing with issues related to information, computer and telecommunication policies. For example, a survey of the West European telecommunications environment shows that about 30 organisations are dealing with information technology issues relating to such factors as market access, research and development, manufacturing, standardisation, innovation, technology transfer, satellites, education and training, trade and commerce, consumer interests and protection, and legal aspects. The European Community (EC) is attempting to harmonise telecommunications policies among member countries. The newly established European Telecommunication Standardisation Institute (ETSI) is attempting to establish European standards in the area of telecommunications and related fields, such as information technology and radio/television.

Many similar organisations exist in other regions of the world, including Africa, the Americas and Asia, and even more are being considered. In the increasingly complex world of global telecommunications, regional associations are attempting to facilitate co-ordination and harmonisation across regions as a stepping stone to global co-ordination and harmonisation through the ITU. This development has important implications for the future policy development process of ITU.

The International Institute of Communiations (IIC) and other research centres, such as IDATE (France)and PICT (UK), have carried out studies of national and international telecommunications structures. The studies have dealt with the legal and regulatory issues raised by the emergence of electronic financial and transactional services that may constitute the infrastructure for global trading in securities, commodities, and foreign exchange in the future, as well as a host of other issues.[9]

The present structure of ITU is primarily oriented to respond to two of its purposes, technical standardisation and regulatory matters. There has been relatively little provision for the harmonising and co-ordination of national policy considerations in general, and the development of networks and services in developing countries in particular. The dynamic changes in the national and international telecommunications environments point to the necessity of an adjustment of the role of ITU to the new circumstances. Telecommunications is now closely linked with

international trade and commerce, and involves a much more diverse array of participants. International telecommunications policy can no longer be determined in isolation by the parties traditionally involved in ITU activities — the public telecommunications service providers (mainly PTTs). The question now arises whether ITU's organisational structure, administrative capability, and procedures are capable of resolving current and coming international policy issues.

DEVELOPING COUNTRIES — GREATER AND GROWING COMPLEXITY

The primary concern of the governments of most developing countries is how to achieve a major expansion of basic telephone services. They have faced great difficulties in achieving even very moderate targets in this area, due primarily to lack of investment, scarce foreign exchange, and lack of skilled technical and managerial personnel. Many countries are very cautious about authorising expenditure for telecommunications facilities and services. Telecommunications has not been seen as bringing compensatory foreign exchange into the country. It has been difficult for telecommunications administrations to convince central planners to upgrade telecommunications facilities and to allow introduction of new services.

There is a widespread belief that a relationship exists between investing in telecommunications and stimulating the overall economic health of a country. Yet in the developing world there is often considerable scepticism about the benefits to an economy of improving the telecommunications infrastructure instead of dealing with more urgent needs.

Yet, the on-going integration of information, computer and communications technologies and services is leading to growing pressures on the telecommunications administrations in many developing countries from large international users for access to new services. In some cases the insufficiency of service has created incentives for the large users (including state-owned corporations) to construct their own telecommunications networks. This is often viewed by telecommunications administrations as siphoning resources from the public telecommuniations sector and as leading to duplication of facilities. The establishment of private networks in turn raises important regulatory issues for the governments.

The increasing internationalisation of new information, computer and communications services, and increasing competition in international telecommunications adds to the complex situation faced by developing countries. It brings increasing pressure for access to international services under competitive tariff conditions. The developing countries need to evolve strategies not only to meet these increasing pressures, but also to bring benefits from the technological advances and the evolving

information-intensive environment to their countries. Many developing countries are now seeking ways to adapt to these challenges. However, their agenda must comprise the traditional items of planning, installation and operation of basic telecommunications facilities and services, as well as the newer issues of sector restructuring, policy development, appropriate regulatory framework, private and foreign participation, and so on. The challenges in question require the formulation of new national strategies in the new international environment.

ISSUES AND OPTIONS OF NATIONAL POLICY

In the past, the primary objective of telecommunications services was the provision of standard public telephone and telegraph services to the largest possible proportion of the population. In some countries, telecommunications services have also provided a subsidy to the postal service or to general government revenues. In some industrialised countries, telecommunications has been an important part of manufacturing industry policy, implemented through such practices as requiring operating entities to purchase equipment from domestic manufacturers.

Many countries, particularly the poorer developing countries, have had special problems of: a) insufficient capital for telecommunications investment, especially when foreign exchange is involved; b) an inability to obtain and retain the technical and managerial skills necessary to operate the telecommunications network efficiently; c) telecommunications operating agencies structured to administer government functions rather than provide services efficiently; and d) low priority of telecommunications in relation to other sectors (typically public health, water, electricity and education) for the allocation of a nation's very limited resources, particularly capital and financial aid. Many countries, both developed and developing, face the problems posed by inflated bureaucracy; a mixture of undefined political and bureaucratic objectives confused with the economic and social objectives for the telecommunications sector; and a failure to establish coherent policies in the telecommunications sector.

There is widespread concern that national telecommunications monopolies may be unable to provide the increasing diversity of communications services necessary to meet an expanding variety of communications needs and demands. This would require that the scope and limits of the telecommunications monopoly be redefined, and areas where alternative suppliers of equipment and services can effectively serve the national interest would need to be specified. This, in turn, requires that national telecommunications policy be formulated, setting guidelines for national telecommunications development, and that effective regulatory mechanisms be established to ensure continuing progress. Many countries, both developed and developing, are now in

the process of redefining their national telecommunications policies and regulatory mechanisms.

The expansion of telecommunications networks and services has pushed many issues of national policy to the international level. Global information and communications networks require much more than compatible technical standards. A higher degree of compatible telecommunications policies and regulations is needed in respect of the definitions of service offerings, tariff structures, service quality and other matters.

ITU, as the principal global forum for negotiating international compatibility in telecommunications, is being pressed to expand, or at least redefine its role. The task of facilitating international interworking in the new, more complex, global telecommunications environment will require major adjustment to the operating procedures of ITU in terms of interested parties to be considered, the extent of co-ordination and information exchange, and the speed of processing and recommending guidelines.

In addition, ITU is being asked more and more frequently to advise national governments on the implications of alternative types of structures for telecommunications development at the national level. Leaving these matters to bilateral negotiations or regional associations is unlikely to produce satisfactory solutions given the large number of countries involved and the growing significance of global telecommunications networks.

There are certain fundamental issues that have arisen that are common to virtually all countries, ranging from the most industrialised to the poorest developing countries. These issues often are mingled into single expressions, such as 'deregulation', 'regulation', privatisation', or 'competition'. But these generalisations are somewhat superficial and often tend to confuse, rather than clarify, the issues at stake.

a) Operational Efficiency

The new environment clearly will require that increased attention be paid to issues of efficient operation and management. The introduction of efficient management via the establishment of effective accounting records, cost controls and measures of performance must be recognised as a specific and identifiable issue. Operational efficiency can be achieved by introducing practices generally employed in commercial management. Experience in many countries indicates that this can be done most effectively if the administration and operation of the telecommunications services are established at least one step removed from the processes of day-to-day politics and government administration. There are a number of possible organisational structures, of which the following are examples:

i) a government department could be given the freedom to manage its own affairs, and be evaluated by criteria of service delivery and efficiency;

ii) a government corporation could be established to operate on a commercial basis, with 100 per cent government ownership; or
iii) a private company could be established to provide telecommunications services on a commercial basis. Government ownership could represent a majority interest, a minority interest, or none at all (complete privatisation). If desired, a variety of restrictions could be placed upon the conditions of local and/or foreign private sector participation.

The most appropriate telecommunications structure for any country will depend upon the conditions in that country. The important issue is to ensure that incentives for operational efficiency are built into the telecommunications system. Moreover, the pursuit of efficiency need not compromise development objectives, such as achieving minimum standards of service in rural and low-income urban areas. In fact, it may enhance the capability of meeting such social objectives in some countries, as these can then be specificially identified and explicit measures can be taken to achieve them.

Experience to date indicates that the objectives of efficiency and service extension in most countries are likely to require a clear separation of telecommunications operations from government administration. But even in this situation, a regulatory authority is likely to be necessary to monitor developments and enforce compliance with policy objectives.

b) Attracting the Necessary Investment Capital

It is apparent that substantial amounts of capital will need to be attracted to meet the rapidly growing telecommunications demands in both developed and developing countries. In relatively few countries is the government willing, or generally able, to supply these very large capital needs. Yet the suppliers of capital generally view telecommunications as a good investment, under good management. National telecommunications authorities can attract investment in at least five ways:

i) establishing financial and pricing policies that allow the operating entities to generate and reinvest operating surpluses. Internal generation of funds is normally a significant source of capital for telecommunications investment;
ii) setting up the telecommunications administration as a separate commercial entity, so that it can attract either equity or debt capital from the capital markets. Privatisation is one way of doing this, but it is not essential. Several countries (Sweden and Canada, for example) have used government corporations effectively, mobilising capital by issuing bonds, and sometimes stock, to the public. Some developing countries (such as India and Mexico) are starting to follow similar approaches. But often this must be preceded by steps to demonstrate a commitment to operational efficiency;

iii) allowing the entry of additional suppliers of telecommunications equipment and /or services. They will obtain capital from other sources (such as local banks, and national or foreign capital markets) and increase the total resources available for telecommunications;
iv) allowing subscribers to provide capital as an investment. Subscriber purchase of telephone company bonds or shares has played a major role in enhancing expansion in several developing countries (such as Brazil and Mexico). Local banks have sometimes lent funds to individuals and local businesses to invest in telecommunications; and
v) in addition to financing telecommunications investment directly, capital can also be provided through projects in priority sectors designed to promote and support economic development (for example, export-oriented activities).

Most countries may want to employ more than one means of mobilising capital. The particular financing policies to be employed in each country should be determined by the particular national arrangements and by the feasibility of the changes necessary to make these policies viable.

C) Establishing Telecommunications Policies and Regulations

When the major government telecommunications entity is established at arm's length from the political process, it becomes necessary to build accountability for its performance into the system. Despite increasing numbers of service suppliers and a degree of competition, the major supplier of telecommunications services will have substantial monopoly power. It will need to be held accountable on a continuing basis, both for its performance and for implementing national policy. This leads to the need for clear separation between operating and regulatory functions. Separation generally is beneficial to the achievement of operational efficiency, capital mobilisation, and social policy objectives.

It should be noted that despite the rhetoric of telecommunications deregulation, it virtually never involves abolishing regulation. Rather, deregulation usually implies a change in the structure of regulation, meaning regulatory policies that sometimes permit increased flexibility for the telecommunications entity, sometimes permit new suppliers or new elements of competition, and at other times establish regulatory authorities where they never previously existed. There are a number of options for structuring the regulatory function. Most, if not all, are variations on one of three models of regulation: i) regulation by the appropriate government ministry; ii) regulation by a separate, quasi-independent regulatory authority; and iii) regulation through the judiciary and the application of general laws.

The most appropriate policy and regulatory structure will depend upon the particular circumstances in individual countries. The important objective to be achieved is the establishment of an effective process for formulating telecommunications policies and applying regulatory accountability. Whatever structure is adopted for implementing

telecommunications policy and regulation, there needs to be participation by the user communities. These include both the interests of the general consumer, primarily concerned with access to basic telephone services for the general public in all localities, and also the specialised needs of industry and government users for more sophisticated services. By involving the user communities directly in the policy formulation and regulatory process, the evolving policies and regulations are likely to be more responsive to their needs.

d) The Appropriate Role of Competition

All the policy issues discussed above are separable from the issue of competition. Policy changes addressing each issue can be implemented without requiring the promotion of competition, if that is the desire of national policy in any particular country. The issue of fashioning the most appropriate competition policy is not a simple one, particularly since the traditional justification for a national telecommunications monopoly (a natural monopoly based on scale economies) appears to be less relevant in more countries as time passes. There are many different telecommunications markets and different types of competition that can be considered in a competition policy. One major task of policy and regulatory authorities is to assess, on a continuing basis, the scope and extent of competition likely to promote efficiency, to extend service, to serve the increasing diversity of telecommunications needs, and to serve the nation's public interest in the evolution of its telecommunications system.

In the changing global telecommunications environment, competition is not a substitute for regulation, but rather a tool of regulatory policies to help achieve a nation's telecommunications objectives. The promotion of certain kinds of competition reflects one policy within the overall framework of telecommunications policies. Competition policies must be examined in specific relation to the markets where competition would be encouraged. The implications for each country must be assessed individually.

SPECIAL ISSUES FOR DEVELOPING COUNTRIES

The struggle to develop a telecommunications infrastructure in many developing countries has been extremely difficult. Progress has been made overall, but often it has been at a much slower pace than anticipated. Despite substantial effort, by many measures the gap between the communications-rich and communications-poor countries has widened. Many developed countries and transnational corporations have had the ability to take advantage of the many new opportunities provided by modern telecommunications technologies, and are doing

so at a rapid rate. The newly industrialised countries and some developing countries have improved their telecommunications systems substantially. But in a significant number of countries, the telecommunications system has not improved, and in some cases it has declined.

The fundamental issue of telecommunications network expansion in developing countries is very different from that for industrialised countries. For industrialised countries the primary issue is accommodating the new technological and market opportunities into a maturely developed telecommunications infrastructure. This leads to questions asking how best to modify existing institutional arrangements in the light of the new opportunities and changing conditions. For developing countries, the problem is structuring a set of institutional relations that will achieve two objectives. The first is to stimulate the process of telecommunications development in the direction of building the national telecommunications infrastructure and extending it to the population. The second is to meet the rapidly growing and changing needs of the modern economic sector. Thus, policies that may be most appropriate for developed countries need not necessarily be the most appropriate for developing countries.

In the poorer developing countries, attempts at telecommunications development have often not been totally successful. For a variety of reasons, the internal, sectoral and governmental institutions often have been unable to establish and maintain viable telecommunications systems. In some cases, investment has yielded only limited benefits; in others, the telecommunications system is used inefficiently or is poorly maintained. These problems have been a source of frustration in some developing countries because of the overwhelming difficulties that have prevented telecommunications development. And they have led to scepticism among some potential external contributors of capital and assistance.

Possibly the most significant issue underlying almost all the problems in developing countries is human resource development. Shortages of skills at all levels, including technical, operational, managerial and planning, frustrate the performance of most aspects of telecommunications system improvement and expansion. Despite major efforts in training programmes by ITU, the UNDP, the World Bank and other agencies, shortages of skilled personnel remain severe. Often the most skilled staff in developing countries are attracted to higher paying positions in the telecommunications field in the wealthier countries, or to other sectors within the country.

The creation and establishment of conditions to promote human resource development is the key to the resolution of most, if not all, the other problems. Policies and institutional arrangements must be established that will permit human resources to be nurtured along the learning curve to the stage of maturity, and employed for the benefit of each country's telecommunications system development. However,

this involves much more than manpower training programmes. It requires attention to the structure of career and pay incentives, bureaucratic constraints, ongoing training and education opportunities, among other factors. It requires that the telecommunications operating entities have adequate authority to hire, recruit, promote and fire staff in competitive labour markets. Attention must be given to incentives for individual entity performance, and to the overall conditions that promote development of an efficient approach to supplying service by both managers and staff.

THE ITU IN TRANSITION

The ITU was born in the era of the so-called national monopoly in telecommunication. Traditionally, there was a clear distinction between national and international telecommunications networks. Each country had a gateway exchange through which the national network connected with the international networks. Since there were only a few distinct national telecommunications service providers, for most countries there was a clearly identified telecommunications administration. It was both the major service provider and the representative of the country in the ITU. As a result, ITU focused almost exclusively on the international telecommunications network between national gateways. At this stage of global telecommunications development, ITU acted primarily as a depositry of documentation, distributor of information, and co-ordinator of national telecommunications providers.

Despite the fundamental changes in technology and services noted above, and despite the arrival on the scene of a multitude of new network and service providers, the structure and working methods of ITU have remained fundamentally unchanged over the last four decades. This state of affairs cannot continue if ITU is to be responsive to the new telecommunications environment and to maintain its position as the forum for promoting and guiding global telecommunications development.

The changing nature of the telecommunications environment has led to the creation of a number of multilateral satellite organisations, such as INTELSAT, INTERSPUTNIK, and INMARSAT. These organisations have initiated separate sets of international policies for global satellite telecommunications networks. Regional arrangements for fostering close relations between telecommmunications operating entities and for harmonising and improving administrative and technical services have resulted in many different organisations. The Pan African Telecommunication Union (PATU); Asian Pacific Telecommunity (APT); Conferencia Interamericana de Telecommunicaciones (CITEL); Arab Telecommunication Union (ATU); and the Conference Europeenne des Administrations des Postes des Telecommunications (CEPT), are just a few examples.

The tendency toward regionalisation is increasing and adds new challenges to the complex global situation that must be addressed by ITU. The trend within the member countries of the European Community (EC) has been most significant in recent years. It clearly points toward increased co-ordination in policy development as well as in technical affairs. The European Commission strove seriously to co-ordinate the EC member countries' positions in WATTC-88. Also, the CEPT and EC in 1988 established the new European Telecommunication Standardization Institute (ETSI). ETSI organises the interests of PTTs, the telecommunications equipment industry and the major industrial and government users. The major viewpoint of the EC is that technical standardisation is a measure to enable free trade and development of new European systems. Recently a number of European PTTs have established a joint corporation to offer managed data services on a one-step shopping basis to meet the competition from internationally operating companies.

Many of the new developments at the regional level and in other international organisations provide evidence of, and outlets for, the increased international pressure for adapting the international co-ordinating machinery to the new global telecommunications environment. With proper co-ordination, they could enhance the effectiveness of the ITU in its paramount objective of fostering interconnectivity and interoperability of the networks, systems and applications that constitute the global information fabric.

For the future, ITU members must deal with a number of outstanding policy issues to facilitate global telecommunications development in the new environment. The issue of technical compatibility is still important, but the content of the concept has changed fundamentally. The integration of telecommunications technologies with computer and information technologies, and the consequent arrival of enhanced telecommunications services, raise questions of change of the traditional working procedures in the CCITT and CCIR; of participation by 'newcomer' organisations and professional user groups; and of more flexible access conditions for users. The growing tendency of telecommunications policy to become an issue of broader, cross-sectoral character in the member countries, involving a number of policy components beyond the technical, may require modifications to the working methods and organisation of ITU, as well as the representation of countries at its fora.

Developing countries require advice with greater emphasis on economic, financial, managerial and regulatory issues, both to stimulate expansion of basic telephone service and to respond to the new telecommunications environment. They turn to ITU as the most appropriate organisation for providing such advice.

The growing complexity of the international telecommunications policy agenda calls for effective interaction between international organisations, such as ITU, GATT, the World Bank, UNDP, OECD and

regional telecommunications organisations. ITU could serve as an international focal point during the transition to a global information fabric. It could serve as a continuing mechanism for the voluntary harmonisation of diverse national, regional, international and private sector perspectives and activities. ITU could be a catalyst, playing facilitating, stimulating and harmonising roles.

Telecommunications has become pervasive in the economic activities of most nations. There are now a variety of operators and users, as well as governmental and developmental agencies, which have a direct interest in the work of the ITU in one or all of its three major functions. Therefore, it must fall to national governments to ensure that their representation at ITU reflects adequately the interests of the various groups.

ITU needs to promote and conduct ongoing policy research as a basis for building a more informed knowledge base about the implications of policy alternatives. This should include fundamental issues such as the effects of telecommunications on economic and social development, and options for attracting capital for investment in telecommunications. ITU should share this information and knowledge, and facilitate beneficial changes by offering advice to national, regional, and international bodies.

ITU's traditional functions in standardisation, regulation and network development need to be undertaken at an accelerated rate to reflect the pace of technological change. It will be necessary to rationalise its procedures, eliminate overlapping activities and expedite its processes if it is to retain its leadership role in future. ITU will need to give more specific attention than hitherto to its developing responsibilities in order to respond to the pressing needs of its developing country members. ITU should be in a strong position to offer them relevant advice and assistance in policy matters, including structural, managerial, technical and administrative areas. This increased activity is essential to ensure balanced growth of the global telecommunications system.

Many of ITU's operating procedures are a legacy of a bygone period of secrecy, bureaucracy and privilege. ITU must open its processes and documentation materials to the public. It should welcome the participation of the press and other interested parties as observers to its proceedings, and make its documentation available to researchers and others. The primary purpose of ITU is to encourage operation of an efficient international telecommunications network to permit the unrestricted global exchange of information for the use and benefit of mankind as a whole. Most United Nations organisations have taken this step already.

THE NICE PLENIPOTENTIARY: A HALTING STEP FORWARD

The most distinguished characteristic of the previous Plenipotentiary Conference in Nairobi in 1982, was the bitter division between developed

and developing countries on the ITU's dual role and priorities between global technical co-ordination, primarily for developed country interests, and technical assistance to developing countries.[10] One casualty of this unfortunate split was the failure to implement seriously the Report of the Independent Commission for World-Wide Telecommunications Development (Maitland Report). The Centre for Telecommunication Development was set up in 1985, but under conditions in which its viability required funding from the private sector. To date, this funding has not been forthcoming.

Discussions at Nice were less acrimonius and more constructive. The issues examined in this article were discussed at Nice within the context of the Report of the Advisory Group on Telecommunication Policy, *The Changing Telecommunication Environment: Policy Considerations for the Members of the ITU.* By resolution, the Report was commended to the attention of everyone involved, both inside and outside the ITU, and the new Secretary General was instructed to be guided by it. This establishes an environment of opportunity for specific changes, but does not in itself require any. However, some specific policy decisions consistent with the Report's recommendations were adopted.

ITU's development assistance programme was strengthened and its funding for technical assistance and technical co-operation activities was increased. A new Bureau for the Development of Telecommunications (BDT) was established to take over and enlarge the responsibilities of the existing Technical Co-operation Departments. Many developed countries revised their 1982 position to support the expanded use of ITU resources for technical co-operation, although the amount that can be spent is capped for each year until 1994. The Centre for Telecommunication Development (CTD) was continued for two years. If it does not attract private sector funding and become fully operational within that time, the Administrative Council will decide its fate, which may well result in its being absorbed by the new BDT.

The CCITT, CCIR, IFRB and Administrative Council were maintained without change, but a resolution was adopted to review the structure and functioning of the entire ITU system. The Administrative Council was authorised to consider an additional Plenipotentiary Conference to deal with proposals of the study on structural reform before the next planned Conference in 1994. Human resource development is on the priority list of ITU activities in future. Resources for training, fellowships and seminars for people from developing countries, for promoting technical co-operation between developing countries, and for assistance to the least-developed countries were all increased.

The major new activity of the new BDT is a significant expansion of the ITU's regional presence. The number of ITU regional representatives and field missions undertaken will be increased to improve liaison with developing countries. Regional development conferences, modelled on the Arusha Conference of 1985, will promote

development by focusing on regional and global telecommunications issues. Co-operation with regional telecommunications and multilateral financing organisations will be promoted. There is now some real prospect that the ITU may be in a position to promote telecommunications development in developing countries.

The issues relating to the new role of the ITU as a forum for co-ordinating and harmonising the policies of the developed countries were not resolved. It is apparent that the developed countries are still unsure, and perhaps a little fearful, of a more active ITU role. This is undoubtedly influenced by the fact that ITU representation of most countries is still dominated by national PTT interests, by a latent concern that a more active ITU might constrain national policies, and by a preference to pursue regional compatibility and to explore other options, such as GATT and OECD, before seriously considering changes at the ITU.

We will have to wait to see whether the ITU study group on structural reform will consider the overall revision and objectives of the ITU, or whether it will confine itself to considering more effective and expeditious ways of performing existing functions. It is not yet clear whether the breadth of participation in ITU affairs will be opened to the new interest groups, or whether the national PTTs will attempt to use the ITU as their fortress against change.

CONCLUSION

The ITU has clearly made some significant steps forward in an attempt to respond to the changing national, regional and global telecommunications environment. But the course of events may still be changing more rapidly than the ITU. Thus, for the forseeable future, in most circumstances the ITU is more likely to be a follower than a leader of events in global telecommunications.

The most disappointing aspect of the Nice Plenipotentiary Conference was the failure of the ITU to open its processes to public scrutiny. Its procedures in this respect are truly anachronistic, and its failure to act on this issue can hardly give one confidence in its ability to provide leadership in the new telecommunications environment. This sets a formidable challenge for Pekka Tarjanne of Finland, the new Secretary General of ITU, to stimulate continuing reform of the Union's roles, procedures and practices. The ITU will have to run faster just to keep pace with the rapidly changing scene in international telecommunications.

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