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THE IMPACT OF NEW COMMUNICATION TECHNOLOGIES ON INTERNATIONAL TELECOMMUNICATION LAW AND POLICY: CYBERSPACE AND THE RESTRUCTURING OF THE INTERNATIONAL TELECOMMUNICATION UNION

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> We are in the midst of a fundamental economic and social transformation whose extent and implications we only partially grasp. . . .
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> This transformation and the more richly interconnected, complex and turbulent world, the vast increase in information availability, and the compression in both time and space that result, has been labelled 'the information society.'
>
> In this interconnected, turbulent environment, older ways of organizing and governing, which are premised on a more restricted flow of information and more limited interconnections (including public and corporate bureaucracies, and even representative democracy and the nation-state) seem to be overwhelmed.[1]

INTRODUCTION

The advent of digital technology has eroded clear lines that once existed between distinct and traditional telecommunication services, such as radio, television, telephone, and telegraph. Miniaturized computer chips capable of

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1. S.A. ROSELL, ET AL., GOVERNING IN AN INFORMATION SOCIETY 3 (1992).

storing immense amounts of data and yet small enough to fit into virtually every sort of device, from hand-held telephones to facsimile machines, has transformed the technological landscape of communication and information storage and retrieval. The capability of solid-state circuitry and miniaturized computer chips to emit and translate electronic streams of binary, digital data has resulted in the potential for virtually any sort of communication or information device to connect with any other.[2]

With the rise of digital technology, a new pantheon of increasingly integrated, interchangeable and interactive technologies has arisen, including facsimile, electronic mail, and the Internet. Such technologies are ever more global in application and conjoin computer, radio and video technologies to generate, send, and receive information. [3]

No longer, for example, is there a clear distinction between telephone and radio where cellular technology is concerned. No longer is there a clear line drawn between television and computers where interactive video or the World Wide Web of the Internet are concerned.[4] One can no longer be sure whether international communication is taking place via satellite or through overland or undersea fiber-optic cables. The convergence of telecommunication, computer, information, and broadcasting technologies has created an environment where a rapidly accelerating number of integrated communication industries, technologies and services exist. [5]

The proliferation of these systems has forged a demand for open global networks capable of simultaneously transmitting voice, data, and video to multi-point, multi-purpose terminals. At the same time, such open, global networks require mechanisms and standards for coordination and for interoperability and interconnectivity. The phenomenal growth, evolution and convergence of these new telecommunication technologies and industries, combined with their global application and economic importance, has thus posed a significant challenge to international telecommunication law, regulation and policy. [6]

This challenge is exemplified by a masthead used on a service on the Internet's World Wide Webb. It simply states: "National borders are just speedbumps on the information superhighway."[7] As this brief slogan illustrates, not only are the distinctions between telecommunication services breaking down, but with the rapid increase and availability of these new technologies and services, the ability of nation-states to control the ebb and flow of transborder communication and information is also waning.[8]

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2. *See generally* GEORGE GILDER, LIFE AFTER TELEVISION (1990).

3. *Id.*

4. *See generally* Barbara Kantrowitz, *The Birth of the Internet*, NEWSWEEK, Aug. 8, 1994, at 56.

5. *Id.*; GILDER, *supra* note 2.

6. *See generally* JAMES G. SAVAGE, THE POLITICS OF INTERNATIONAL TELECOMMUNICATIONS REGULATION (1989); ROSWELL, *supra* note 1.

7. WWW URL: http//akebono.stanford.edu/yahoo/; Information and Infrastructure link.

8. *See generally* SAVAGE, *supra* note 6.

This new technological challenge to international telecommunication law, regulation and policy is posed most directly in the international organization primarily responsible for the identification, formulation and oversight of that law, regulation and policy. That organization is the International Telecommunication Union (ITU).[9] As a direct result of these "challenges of change,"[10] the ITU, the specialized agency of the United Nations (UN) responsible for coordination and regulation of international telecommunication, has just completed a process leading to its first fundamental restructuring since 1947.[11]

The ITU is actually older than the UN.[12] The genesis of the ITU, the oldest international, intergovernmental organization in the world, dates to the International Telegraph Union, which was formed in 1865[13] by various European countries to facilitate transborder traffic of a new telecommunication technology: telegraphy.[14]

Like the modern ITU, Members of the early International Telegraph Union (Union or Telegraph Union) held periodic conferences to revise its legal charter and regulatory provisions. Just as today at the ITU, the Plenipotentiary Conference[15] acted with full power to change the Union's constitutional document: the Convention. Administrative Conferences, with more limited authority, were charged by the Convention to consider specific matters related to the different telecommunication technologies—at that time telegraph, and later telephone and radio—and to formulate international law and regulatory provisions as needed.[16]

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9. *Tomorrow's ITU: The Challenges of Change*, Report of the High Level Committee to Review the Structure and Functioning of the Telecommunication Union (Telecommunications Union, Geneva) Apr. 1991 [hereinafter HLC Report].

10. *Id.*

11. *See generally Final Acts of the Additional Plenipotentiary Conference* (Int'l Telecommunications Union, Geneva), Dec. 22, 1992 [hereinafter APP Final Acts]; *Final Acts of the Plenipotentiary Conference* (Int'l Telecommunications Union, Kyoto), Oct. 14, 1994 [hereinafter Kyoto Acts].

12. GEORGE A. CODDING, THE INTERNATIONAL TELECOMMUNICATION UNION 137 (1952). The ITU was created in 1932 in Madrid. Joint meetings of the Plenary Assemblies of the two Plenipotentiary Conferences from the juridically separate International Telegraph and International Radiotelegraph Unions merged Conventions, forming a single, combined organization governed by one treaty document.

13. RITA LAURIA-WHITE & HAROLD M. WHITE, JR., THE LAW AND REGULATION OF INTERNATIONAL SPACE COMMUNICATION 30 (1988). Technological change caused by the establishment of telegraph lines in the major nations of the world prompted early international agreements aimed at coordinating and making uniform operation of the lines. Prussia and Austria established the Austro-German Telegraph Union in 1849, and France and Belgium established the West European Telegraph Union in 1851. In 1865 these two Unions met in Paris and merged to form the International Telegraph Union.

14. The ITU was one of the earliest working models for all subsequent international organizations including the League of Nations, the UN, and most of the other specialized agencies of the UN. These specialized agencies include the Universal Postal Union (UPU), the International Civil Aviation Organization (ICAO), the World Health Organization (WHO), the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

15. The word "plenipotentiary," as defined by Webster's Seventh New Collegiate Dictionary, means a person and especially a diplomatic agent invested with full power to transact any business. This definition recapitulates the legal significance of the "Plenipotentiary Conference" of the ITU or of any international organization, meaning a conference with full power to change any and all operating provisions, including the constitutive documents.

16. LAURIA-WHITE & WHITE, *supra* note 13, at 67, 69, 76.

The Convention, then as today, established the legal existence of the Union, its composition, purposes, structure, functions, and general provisions related to telecommunication. The Convention is an international treaty document that is legally binding upon signatory countries that have ratified, accepted or approved it, or have acceded to its provisions.[17]

The Conventions of the Union and its direct successor, the ITU, and the structures and organs created by those Conventions, went through various incarnations over the years as each attempted to respond to the evolving telecommunication environment. In 1875, for example, the St. Petersburg Telegraph Plenipotentiary Conference established for the Union most of the permanent elements, such as a secretariat, that have come to be associated not only with the modern ITU, but also with international, intergovernmental organizations in general.[18] The structure established by this 1875 Convention remained essentially intact until the creation of the modern ITU in Madrid in 1932,[19] followed by the post-World War II reorganization of the ITU in Atlantic City in 1947.[20]

Prior to 1932, the Telegraph Union made several adjustments to accommodate the newly emerging technology of radio. For example, international regulations were needed to ensure safety of life at sea. Several naval incidents occurred endangering life because the Marconi Wireless Company, which held the exclusive right to install and to operate radio equipment on ships, refused to communicate with any other radio station that did not use Marconi equipment.[21] Even the Titanic disaster might have been averted or the rescue of its passengers expedited except for Marconi employees who refused communications from operators not using Marconi equipment.[22]

As a result of such incidents, in 1906 most of the important maritime members of the Union convened the 1906 Berlin Radiotelegraph Conference which adopted a Radiotelegraph Convention and an annexed set of Radio Regulations.[23] The Union's Berne Bureau was designated to administer these Regulations. From this 1906 Radiotelegraph Convention and annexed set of Radio Regulations emerged a *de facto* International Radiotelegraph Union.[24] Although a formally constituted organization called the "International Radiotelegraph Union" was not established by the 1906 Radiotelegraph Convention and the name of the International Telegraph Union was not officially changed, the co-existence of an International Telegraph Convention

17. *Id.* at 30-32; CODDING, *supra* note 12, at 135-42.

18. LAURIA-WHITE & WHITE, *supra* note 13, at 30-32; CODDING, *supra* note 12, at 135-42.

19. CODDING, *supra* note 12, at 29, 140.

20. *Id.* at 223; LAURIA-WHITE & WHITE, *supra* note 13, at 50.

21. CODDING, *supra* note 12, at 84-87.

22. GEORGE A. CODDING & ANTHONY M. RUTKOWSKI, THE INTERNATIONAL TELECOMMUNICATION UNION IN A CHANGING WORLD 14 (1982).

23. CODDING, *supra* note 12, at 51, 81, 87.

24. *Id.*

and an International Radiotelegraph Convention resulted in a sort of dual organization composed of the International Telegraph and Radiotelegraph Unions from 1906 until 1932.[25]

In 1932, at the Madrid Plenipotentiary Conference, the separate International Telegraph and Radiotelegraph Conventions were merged into one International Telecommunication Convention, the Madrid Convention, which combined the International Telegraph Union and the *de facto* Radiotelegraph Union into a single juridical organization.[26] This new, combined organization was given a new name: the International Telecommunication Union; the ITU.[27]

Still, the first major structural reorganization since 1875 of the ITU or its predecessor, the Telegraph Union, did not take place until 1947.[28] The 1947 Atlantic City Conferences established the post-World War II structure of the International Telecommunication Union and the modern regulatory principles and provisions that would serve sufficiently for almost another half century to respond to the needs of a rapidly developing post-war telecommunication environment.[29] (See Figure 1, The Structure of the ITU after Reorganization in 1947)

Change in technology drives social, political, and legal transformation by prompting changes in culture and commerce. Social needs and expectations are correspondingly affected.[30] New developments in the telecommunication industry and the concomitant growth of a global information society is compelling rapid change in every area of human activity and organization.[31] A prime example of this change is the switch in priority of investment from transportation and other manufacturing processes to telecommunication and other information processes.[32] Statistics as early as 1978, for example, showed that more than fifty-one percent of the American workforce was employed in areas of information technology, earning forty-seven percent of the Gross National Product (GNP).[33]

The purpose of this article is to look at how the evolving telecommunication technologies have caused the ITU to review its structure of governance. The ITU's original structure reflected institutional properties fashioned on a premise of national sovereignty. In recent years, the ITU has been required

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25. *Id.*

26. *Id.* at 135-142.

27. *Id.* at 135-42.

28. LAURIA-WHITE & WHITE, *supra* note 13, at 50-58.

29. *See generally* DAVID M. LEIVE, INTERNATIONAL TELECOMMUNICATIONS AND INTERNATIONAL LAW: THE REGULATION OF THE RADIO SPECTRUM (1970); CODDING & RUTKOWSKI, *supra* note 22.

30. LAURIA-WHITE & WHITE, *supra* note 13, at xxi.

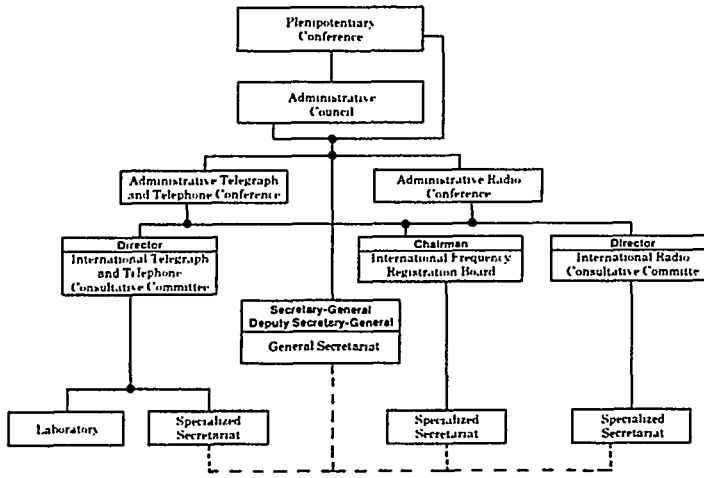
31. Pekka Tarjanne, *The ITU Responds to New Concepts for Public Policy in the Global Information Society*, 20 INTERMEDIA 6, 13 (1992).

32. JAMES R. TAYLOR & ELIZABETH J. VAN EVERY, THE VULNERABLE FORTRESS: BUREAUCRATIC ORGANIZATION IN THE INFORMATION AGE 20-27 (1993).

33. *Id.* at 25.

Figure 1: Structure of the ITU after 1947 Reorganization

Source: GEORGE A. CODDING, JR. & ANTHONY M. RUTKOWSKI, THE INTERNATIONAL TELECOMMUNICATION UNION IN A CHANGING WORLD (1982) reprinted with permission.



*The ITU Convention designates the CCIR, CCITT, IFRB, and the General Secretariat as the permanent organs of the ITU. The ITU also has a Coordination Committee, not shown in this diagram, made up of the Secretary General, Deputy Secretary General, Director of the CCIR, Director of the CCITT, and Chairman of the IFRB whose major task it is to "assist and advise" the Secretary General. See ITU, *International Telecommunication Union, Malaga-Torremolinos, 1973*, Arts. 5 and 12.

to adapt its structure to the "realities of a telecommunication industry which is leading the way to the global information society of the future."[34]

This article describes the latest organizational changes that have occurred in the oldest international, intergovernmental organization in the world. These changes began in 1959 and culminated in 1994 with the completion of a thorough restructuring, prompted by the impact of a rapidly changing telecommunication environment. This article will also consider whether these changes will allow the ITU to retain a significant role in the new telecommunication environment. Finally, this article will analyze future strategies that could facilitate the ITU's mission: To foster cooperation among its Member countries[35] in order to promote and harmonize the development and efficient use of telecommunication services.[36]

I. THE CALL TO CHANGE

The beginnings of the call for change at the ITU came only twelve years after its 1947 reorganization. Significantly, this occurred in 1959, at the first conferences of the ITU held after the launch of Sputnik in 1957.[37] Both a Plenipotentiary Conference and a World Administrative Radio Conference were simultaneously held in Geneva in 1959.[38] The advent of the Space Age had spurred rapid technological advance, providing an impetus to consider modifying the post-war mission and structure of the ITU, and to update the International Radio Regulations.[39] Although discussions at the 1959 Plenipotentiary Conference did not result in any concrete provisions in the 1959 International Telecommunication Convention calling for structural reorganization of the ITU, the Plenipotentiary did make several modifications to the Convention that set the stage for changes to come.[40]

The 1959 Plenipotentiary Conference revised the Convention to begin accommodating the needs of a rapidly growing number of new and developing countries.[41] At this time, an increasing number of new countries, once colonial appendages of industrialized nations, were realizing their status as nation-states and beginning to participate in the governance of global telecommunication. Yet, many of these countries had only the barest of

34. Tarjanne, *supra* note 31, at 13.

35. CODDING, *supra* note 12, at 134-38; Interview with William H. Jahn, Deputy Director, Bureau of International Communications and Information Policy, U.S. Department of State, August, 1994. More than 170 Member states now adhere to the provisions of the new combined Constitution and the Convention of the ITU [hereinafter Convention], having ratified, accepted, approved, or acceded to the Convention according to their respective constitutional processes. This compares to 80 countries that adopted the first International Telecommunication Convention at Madrid in 1932.

36. Kyoto Final Acts, *supra* note 11, Res.Com.4/1, Annex II, A.

37. CODDING & RUTKOWSKI, *supra* note 22, at 39-40, 287.

38. LAURIA-WHITE & WHITE, *supra* note 13, at 113-16.

39. *Id.* at 112-13; Radio Regulations, Dec. 21, 1959, art. 1, 12 U.S.T. 2389.

40. LAURIA-WHITE & WHITE,, *supra* note 13, at 115-16.

41. *Id.*; International Telecommunication Convention, Dec. 21, 1959, arts. 4, 13, 12 U.S.T. 1761.

telecommunication infrastructure in place and so sought the assistance of the ITU.[42]

The ITU responded by amending Article 4 of the Convention to include a new function: to foster "the creation, development and improvement of telecommunication equipment and networks in developing countries by every means at its disposal."[43] Article 13 of the ITU Convention was also amended, requiring consultative committees of the ITU to "pay due attention to the study of questions and to the formulation of recommendations directly connected with the establishment, development, and improvement of telecommunication in new or developing countries."[44]

Henceforth, this new purpose of the ITU, to address the growing telecommunication development needs of the lesser developed countries, would remain consistently on the regulatory agenda. As telecommunication technologies rapidly advanced, new pressures bore upon the developing countries to cultivate their telecommunication environment for the information age. The ITU was seen by the developing world as a primary organization that could aid in this process. Development assistance has been a major activity of the ITU since 1959.

Although the purpose of the ITU was expanded in 1959 from its original, exclusively technical mission to include this attention to the telecommunication environment in the developing countries, the original, fundamental purpose of the ITU was not abandoned.[45] The ITU's basic purpose was, and continues to be, to foster cooperation among nations in order to ensure interconnection and interoperability of national telecommunication systems so that these systems could be used on a global basis, unfettered by national borders.[46] However, various strategies have been initiated over time to change the ITU's basic legal instrument, the Convention, to gradually accommodate the growing number of developing countries and the ever more rapidly evolving telecommunication environment.[47]

This increasing need to fine-tune the ITU's capability to respond to the rapid developments of the dawning information age has prompted both consideration of the procedures required for such adjustments and also scrutiny of the structure of the ITU. Because the ITU Convention was designed as a comprehensive document, each amendment raised the possibility that its basic, central articles and even the basic purpose of the ITU were subject to change.[48] The prospect of reformulating fundamental purposes and principles at each successive Plenipotentiary Conference,

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42. CODDING & RUTKOWSKI, *supra* note 22, at 39-40, 283.

43. International Telecommunication Convention, *supra* note 41, art. 4.

44. *Id.* art. 13.

45. *Id.*

46. *Id.*; APP Final Acts, *supra* note 11, Constitution art. 1; Kyoto Final Acts, *supra* note 11, Constitution, art. 1.

47. *See generally* HLC Report, *supra* note 9.

48. Interview with William H. Jahn, *supra* note 35.

especially in face of the rapid changes taking place, became a more and more burdensome and difficult problem.[49]

In addition to the problem posed by the Convention's comprehensive nature, the traditional one-country, one-vote method of changing the Convention made it possible for voting blocs of countries to exercise control at a Plenipotentiary to revise core articles of the Convention. Such a revision could entirely alter the historic function and purpose of the Union: that of facilitating technical coordination and cooperation, potentially threatening the ITU's utility and effectiveness.[50]

In 1963, this threat prompted the first move to restructure the Convention to allow for greater responsiveness to change, while preserving its primary mission. Advocates saw restructuring the Convention as a way to diminish the ability of the developing countries to reformulate the core mission of the Union into one primarily centered on distribution of developmental assistance.[51]

At the 1963 Convention, which was the first Plenipotentiary to be held after the deployment and use of the first communication satellites,[52] Members passed Resolution 35. This Resolution called for creation of a study group "to prepare a draft Constitutional Charter and General Regulations for the International Telecommunication Union."[53] The purpose of such a "Constitutional Charter" was to establish a set of fundamental purposes and principles which would not be at issue every time a Plenipotentiary Conference grappled with ways to make the ITU more responsive to the changing telecommunication environment.[54]

As a result of the study called for by Resolution 35, and in response to accelerating changes in the telecommunication environment, the 1973 ITU Plenipotentiary Conference divided the Convention into two parts.[55] Although a "Constitutional Charter" section of the Convention was not yet adopted, the new Convention did include a section setting forth the "Basic Provisions" of the ITU, which were intended to be "texts of a permanent character."[56] The Basic Provisions addressed issues such as the ITU's

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49. *Id.*

50. Interview with Stephen E. Doyle, Esq., Chairman of the FCC Space WARC Advisory Committee for the ITU World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and Planning of the Space Services Utilizing It, June, 1987.

51. *See* SAVAGE, *supra* note 6, at 7.

52. *See generally* LOY A. SINGLETON, TELECOMMUNICATION IN THE INFORMATION AGE 80 (1986); Communications Satellite Act of 1962, 47 U.S.C. §§ 731-735 (1988). In 1962, Bell Laboratories' TELSTAR satellite provided the first instantaneous transmission of live television pictures between the United States and Europe. The U.S. Communications Satellite Act of 1962 authorized the establishment of the Communications Satellite Corporation (COMSAT), and authorized COMSAT to create, own, manage, and operate, itself or in conjunction with foreign governments or business entities, a worldwide, commercial telecommunication satellite system.

53. *International Telecommunication Convention* (Int'l Telecommunications Union, Montreal), 1965 Res. 35 [hereinafter Montreux Convention].

54. Interview with William H. Jahn, *supra* note 35.

55. CODDING & RUTKOWSKI, *supra* note 22, at 54.

56. *Id.*

purposes and structure. The Basic Provisions were separated from the "General Regulations," which set forth the Union's functions and procedures—elements more likely to require periodic revision. Following the practice established since 1875, the ITU's technical, or administrative regulations were annexed to the Convention.[57]

The impact of satellite communication also required the enunciation in the 1973 Convention of new legal principles. The 1973 Plenipotentiary Conference was the first to be held after the inauguration of widespread satellite communication using the geostationary orbit.[58] Several articles and resolutions in the 1973 document dealt with the ITU's regulatory response to the changing communication environment.[59]

Despite these efforts to preserve, unaltered, the core principles of the ITU, the developing countries succeeded at the 1982 Plenipotentiary Conference in altering the most basic article of the Convention, Article 4, which dealt with the purpose of the Union.[60] In a move strongly opposed by many Western nations, including the United States, the majority of Member countries—predominantly lesser developed countries—voted[61] to make development assistance one of the central purposes of the ITU. Article 4 was amended to add to the ITU's mission: "to promote and offer technical assistance. . . ."[62] A major goal of the developing countries at this time was to establish a new organ for telecommunication development.[63] Within ten years this goal would ultimately be accomplished with a fundamental, bureaucratic restructuring of the ITU.[64]

At the same time the developing countries were pushing to emphasize development assistance, Members from the industrialized world continued advocating change in the structure of the Convention to forestall even further additions to or deviation from the basic, historic mission of the ITU.[65] In 1989 at the Nice Plenipotentiary, the Conference finally agreed to divide the basic instrument of the ITU into a constitution and a convention. Although

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57. *See International Telecommunication Convention,* (Int'l Telecommunications Union, Malaga-Torremolinos), 1973 [hereinafter Malaga-Torremolinos Convention].

58. *See generally* LAURIA-WHITE & WHITE, *supra* note 13, at 9-10; SINGLETON, *supra* note 52, at 80-82. The geostationary orbit is a circular orbit about 35,800 kilometers (22,300 miles) above the equator. At that altitude, a satellite takes 23 hours, 56 minutes, or exactly one day, to make a complete revolution of the Earth. The practical result is that the satellite is synchronous with the Earth's rotation and appears to be always at a fixed position in the sky, i.e., geostationary. Such a satellite has a constant view of about 40 percent of the Earth's surface, so that only three such satellites are necessary to cover nearly the entire surface of the Earth. The first geostationary satellite, SYNCOM I, was launched in 1963 for COMSAT by the National Aeronautics and Space Administration (NASA) of the United States of America.

59. Malaga-Torremolinos Convention, *supra* note 57, arts. 10, 33, Res. 27, 28.

60. *International Telecommunication Convention,* (Int'l Telecommunications Union, Nairobi), 1982, art. 4, [hereinafter Nairobi Convention].

61. SAVAGE, *supra* note 6, at 47.

62. Nairobi Convention, *supra* note 60, art. 4(1)(a).

63. Bureau of Int'l Communications and Info. Policy, U.S. Dep't of State, *Report of the Delegation of the United States to the Plenipotentiary Conference of the International Telecommunication Union, Nice,* at 5 (1989) [hereinafter *U.S. Delegation Report, Nice, 1989*].

64. *See generally* HLC Report, *supra* note 9.

65. SAVAGE, *supra* note 6, at 47, 52-53; CODDING & RUTKOWSKI, *supra* note 22, at 54-62.

earlier attempts to split the Convention had failed, agreement was reached at Nice, "well in advance of the conference and oiled by the agreement in principle to create the BDT,"[66] the Telecommunication Development Bureau. In exchange for the agreement of the developing countries to divide the Convention, the developed countries agreed that the BDT be made a permanent organ of the ITU, holding equal status with the other permanent organs of the ITU, such as the Secretariat, the Administrative Council, the Consultative Committees on Radio and Telephone and Telegraph, and the International Frequency Registration Board (IFRB).[67]

As newly structured, the Constitution contains the basic provisions of the ITU, while the Convention contains provisions related to the ITU's routine functions, thus more easily subject to change. The provisions of both the Constitution and the Convention are further complemented by administrative regulations. To make the Constitution more difficult to revise, thus less vulnerable to voting bloc manipulation, amendments require a two-thirds majority. In contrast, changes to the Convention need only a simple majority.[68]

Also at the Nice Plenipotentiary, Member countries adopted Resolution 55, calling for an even more comprehensive review of the structure and functioning of the ITU.[69] Members resolved that a High Level Committee (HLC) be established to study the organizational structure of the ITU, and to recommend measures to enable it to effectively respond "to the challenges of the changing telecommunication environment."[70] In addition to approving the creation of the HLC, the Nice Plenipotentiary Conference authorized the convening of an Additional Plenipotentiary Conference (APP) to consider the HLC recommendations.[71]

The HLC's report was issued in 1991. Titled *Tomorrow's ITU: The Challenges of Change*,[72] the report analyzed the structure and functioning of the ITU. The report listed ninety-six specific recommendations designed to enable the ITU to remain effective and to be able to be responsive "on a continuing basis to the accelerating currents of change."[73]

The High Level Committee also engaged in extensive preparation for the Additional Plenipotentiary Conference to be held in 1992. A drafting group of experts composed of representatives from thirty-two countries[74] revised

66. *U.S. Delegation Report, Nice, 1989, supra* note 63, at 5.

67. *Final Acts of the Plenipotentiary Conference* (Int'l Telecommunication Union, Nice), 1989, Constitution art. 14 [hereinafter Nice Final Acts]. For a more complete description of the workings of the Permanent Organs of the ITU prior to reorganization at the APP in 1992; *see also* LAURIA-WHITE & WHITE, *supra* note 13, at 67-104.

68. Nice Final Acts, *supra* note 67, Constitution art. 44; *Id.* Convention art. 35.

69. *Id.* Res. 55.

70. HLC Report, *supra* note 9, at 11.

71. Nice Final Acts, *supra* note 67, Res. 1.

72. HLC Report, *supra* note 9.

73. *Id.* at 11.

74. Interview with William H. Jahn, *supra* note 35.

the Nice Constitution and Convention to reflect the changes recommended by the HLC.[75] Proposals to the APP by Member countries were based on the revised draft of this HLC group of experts. In 1992, the APP resolved that the new provisions of the Constitution and the Convention, setting forth the new structure and working methods of the ITU, would be provisionally applied beginning March 1, 1993. The treaty document would not go into force until July 1, 1994.[76] This provisional application of the new structure was necessary to implement on a timely basis the recommendations of the HLC.[77]

II. THE UNION RESTRUCTURED

It is clear from the HLC Report that Members of the HLC recognized the revolutionary change that took place in the telecommunication environment in the 1980s. As we have seen, both the nature and the means of providing telecommunication were transformed. The personal computer became a common tool, with more than eighty million personal computers in use in worksites and homes. One-half of these are used in the United States alone.[78] This number has continued to grow rapidly as price decreases have made computers more accessible to the average consumer.

This explosion in the use of personal computers, coupled with improvements in semiconductor density, digital technology, local area networks (LAN) and router technology, has transformed telecommunication. Once conducted via distinct, vertically integrated services that were heavily regulated by the central planning of government institutions, telecommunication is now carried out on commoditized information networks that work on an open information marketplace system driven by consumer competition.[79] This transition from traditional telecommunication services to computer networking has spurred a need for change in intergovernmental organizational models. The ITU had to respond.[80]

Accordingly, based upon the recommendations of the HLC, the Additional Plenipotentiary Conference approved structural changes that categorized the ITU's main activities into three vertical sectors: Radiocommunication, Telecommunication Development, and Telecommunication Standardization. The work of the ITU is carried out within these three sectors, thus realigning the permanent organs according to their functions. Each sector includes a Bureau with staff in Geneva, headed by a Director,

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75. Bureau of Int'l Communications and Info. Policy, U.S. Dep't of State, *Report of the Delegation of the United States to the Additional Plenipotentiary Conference of the International Telecommunication Union,* Geneva at 2 (1992). The Nice Constitution and Convention had not entered into force at the time of the HLC report as it had not yet received the required number of ratifications and accessions.

76. APP Final Acts, *supra* note 11, Res. Plen/8.

77. Interview with William H. Jahn, *supra* note 35.

78. GILDER, *supra* note 2, at 31.

79. *See generally* ROSELL, et al., *supra* note 1.

80. *See generally* Tarjanne, *supra* note 31.

and complimented by study groups and conferences.[81] (See Figure 2, New Structure of the ITU)

The Constitution was amended to include as a fundamental purpose of the ITU a policy domain in addition to the technical and development domains: "to promote, at the international level, the adoption of a broader approach to the issues of telecommunication in the global information economy and society."[82] The means to achieve this mission were set forth by the following principles: 1) cooperation between ITU Member administrations in "policy matters with a view to achieving the highest possible degree of harmonization of their actions;" 2) participation by non-administration organizations in the activities of the Union's Sectors; and 3) information exchange among all "ITU participants and with the wider community."[83]

Another change made by the 1992 APP was that the Administrative Council was renamed the Council, to reflect a broader role for the Council beyond administrative matters.[84] The Council will continue to meet annually and to act as the governing body of the ITU on behalf of the Plenipotentiary Conference, maintaining its supervisory role for the overall management and administration of the ITU. The Council was also given a new mandate to focus more on broad policy issues, not just on issues concerning ITU resources.[85] This new function is intended to allow the Council to adapt the decisions and policies approved at the Plenipotentiary in a manner more responsive to a rapidly changing telecommunication environment.[86]

Under the provisions adopted in 1992, the Secretary-General's role remains the same but with greater emphasis on preparing strategic policies and plans.[87] The Secretary-General is responsible for the management of the General Secretariat, the overall management of ITU resources, and coordination of all ITU activities, with the direct management of the three vertical sectors delegated to their Directors.[88]

A new horizontal mechanism, the Strategic Policy and Planning Unit, was placed under the Secretary-General.[89] This unit works with the three sectors via the Coordination Committee to ensure that major decisions are prioritized and implemented. The HLC also recommended that the Head of the Strategic Policy and Planning Unit be closely associated with the Coordination Committee and serve as its Secretary.[90]

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81. *See* APP Final Acts, *supra* note 11.

82. Kyoto Final Acts, *supra* note 11, Res. Com4/1: International Telecommunication Union Strategic Plan 1995-1999, Annex II, A, 5 & 6.

83. *Id.*

84. HLC Report, *supra* note 9, at 21.

85. APP Final Acts, *supra* note 11, Constitution art. 10(4)(2).

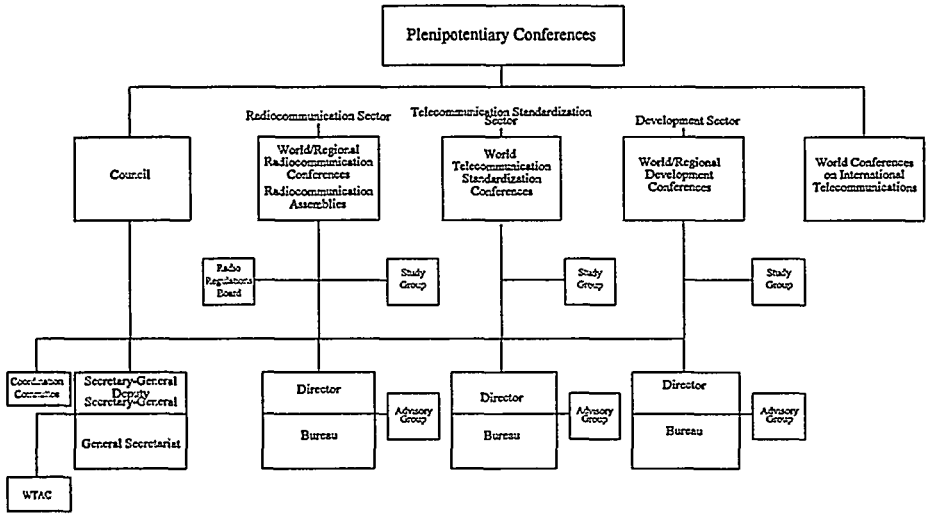
86. HLC Report, *supra* note 9, at 21.

87. APP Final Acts, *supra* note 11, Constitution art. 11(1)(2), Convention art. 4. The post of Secretary General of the ITU is currently occupied by Pekka Tarjanne.

88. *Id.*

89. *See id.* Res. Com 5/5.; *see also* Kyoto Final Acts, *supra* note 11, Res. Com 4/1.

90. HLC Report, *supra* note 9, at 18.


Plenipotentiary Conferences
Radiocommunication Sector
Telecommunication Standardization Sector
Development Sector
Council
World/Regional Radiocommunication Conferences
Radiocommunication Assemblies
World Telecommunication Standardization Conferences
World/Regional Development Conferences
World Conferences on International Telecommunications
Radio Regulations Board
Study Group
Study Group
Study Group
Coordination Committee
Secretary-General
Deputy Secretary-General
General Secretariat
Director
Bureau
Advisory Group
Director
Bureau
Advisory Group
Director
Bureau
Advisory Group
WTAC

The Strategic Policy and Planning Unit gets input from the World Telecommunication Advisory Council (WTAC), formerly the Business Advisory Forum.[91] The WTAC was established in the General Secretariat to serve as a link with, and to provide strategic advice from, the public and private sectors. Composed of top management representatives from both sectors, the Advisory Council advises the Secretary-General on the changing telecommunication environment and how the ITU can effectively work within that environment to carry out its principal activities.[92]

The Coordination Committee continues to be chaired by the Secretary-General and includes the Deputy Secretary-General and the Directors of the three "Bureaux," or Sectors. The Coordination Committee acts as an internal management team that advises the Secretary-General and offers assistance on all administrative, financial, information system, and technical cooperation matters that do not come under the purview of the three Sectors.[93] It also ensures coordination with all other international organizations having an interest in telecommunication.[94]

The Plenipotentiary Conference continues to serve as the ITU's supreme organ, meeting regularly every four years instead of at intervals of five or more years. [95] This shorter meeting interval was seen as a way that the ITU could keep up with "the pace of change," while allowing conferences to be of shorter duration.[96] In addition to its traditional duties, the Plenipotentiary acts on strategic policies and plans submitted by the Secretary-General and adopts any decisions considered appropriate.[97] The HLC also recommended that although ITU practice had been to restrict attendance at meetings, conferences should normally be open to the public and the press. The HLC concluded that it is preferable for the press to be kept well informed of the ITU's activities.[98] Provisions for the press were incorporated into the Convention and the conferences are now open to the press, although other meetings of the ITU remain closed.[99]

Beneath the Plenipotentiary Conference in the ITU structure are the conferences of the functional sectors: World and Regional Radiocommunication Conferences, World Standardization Conferences, World and Regional Development Conferences and World Conferences on International Telecommunication.[100] With the exception of the latter, these conferences are held at regular intervals throughout the Plenipotentiary period in

91. *Id.*
92. *Id.* at 19.
93. APP Final Acts, *supra* note 11, Constitution art. 15.
94. *Id.*
95. *Id.* Constitution art. 8.
96. HLC Report, *supra* note 9, at 20.
97. APP Final Acts, *supra* note 11, Constitution art. 8.
98. HLC Report, *supra* note 9, at 20.
99. APP Final Acts, *supra* note 11, Convention art. 25.
100. *Id.* Constitution art. 7.

order to generate substantive law and make recommendations responsive to the changes in the telecommunication environment. The World Conference on International Telecommunication (WCIT) took the place of the old World Administrative Telegraph and Telephone Conference, and functions to revise the International Telecommunication Regulations. The WCIT is not part of any of the three established ITU Sectors described below, nor does it meet on a regularly scheduled basis.[101] The work of the other conferences will be considered below within the discussion of the ITU's three vertical Sectors.

A. The Radiocommunication Sector

All the radiocommunication activities of the ITU have been integrated into the Radiocommunication Sector. Under the provisions of the 1992 Constitution and Convention, the mission of the Radiocommunication Sector is, *inter alia*, to ensure rational, equitable, efficient and economical use of the radio frequency spectrum. To accomplish this mission the Sector will ensure that at treaty level the Radio Regulations contain only those provisions necessary to respond to the needs of the international community. The Radiocommunication Sector also meets the specific needs of Members by holding Radiocommunication Conferences, coordinating efforts to eliminate harmful interference of radio stations of different countries, making recommendations on technical radiocommunication matters through the radiocommunication assemblies and study groups, and developing rules of procedure for use in applying the Radio Regulations and the decisions of competent radiocommunication conferences.[102]

What was once the World Administrative Radio Conference (WARC) is now the World Radiocommunication Conference (WRC).[103] The WRC convenes every two years.[104] In contrast, WARCs were convened irregularly as needed.[105] Regional Radiocommunication Conferences can also be convened to consider issues related to activities of the region concerned.[106] The Radiocommunication Conferences are treaty conferences concerned with spectrum allocation and the review and revision of the Radio Regulations. The World Radiocommunication Conference directs the radiocommunication related activities of the ITU.[107]

Radiocommunication Assemblies, essentially the old Plenary Assemblies of the former International Radio Consultative Committees (CCIR), also normally convene every two years in conjunction with the World

101. *Id.* Constitution art. 7, 14D.

102. Kyoto Final Acts, *supra* note 11, Res.Com.4/1: International Telecommunications Union Strategic Plan 1995-1999, Annex III, A.4, 30.

103. APP Final Acts, *supra* note 11, Constitution arts. 11A, 11B.

104. *Id.*

105. Nairobi Convention, *supra* note 60, art. 54(2)(2).

106. APP Final Acts, *supra* note 11, Convention art. 4(c).

107. *Id.* Convention art. 4(c), Constitution arts. 11A, 11B.

Radiocommunication Conferences, to administer the work of the Study Groups and to provide the technical basis for the work of the world conferences.[108] Thus, World Radiocommunication Conferences combine the responsibilities of what was once the Administrative Radio Conference and the CCIR Plenary Assemblies that, with its Study Groups, carried out the work of the consultative committees.[109] The Study Groups are set up by Radiocommunication Assemblies to look at questions and prepare draft recommendations on matters referred to them concerning the use and operation of radiocommunication. The recommendations of the Study Groups are submitted for approval to the Radiocommunication Assembly for consideration by the world conference.[110]

The Radio Regulations Board (RRB or Board) replaces the old International Frequency Registration Board (IFRB). The Board meets quarterly and consists of nine part-time members elected by the Plenipotentiary on the basis of individual qualifications and familiarity with the geographic, economic and demographic conditions of their regions.[111] The original IFRB was charged with overseeing the recordation of frequency assignments of sovereign nations and the interpretation of the Radio Regulations.[112] When the IFRB was established in 1947, it was a full-time board composed of technical radio experts who were involved in the daily examination of requests from Administrations of Member governments to have their radio frequencies registered in the Master International Frequency Register.[113] Over the years, rules of procedure and technical criteria were established that allowed most notices to be treated routinely. Increased use of computers now allows the Board to routinely approve the vast majority of findings produced by the secretariat staff.[114] The change to a part-time Board with an increased number of members was seen as a way to maintain efficiency while balancing operational costs as the nature of the Board's work, now handled on a routine basis and largely automated, no longer justifies maintaining a full-time organ.[115]

The Radiocommunication Bureau organizes, coordinates and directs the work of the Radiocommunication Sector, and thus is charged with the daily work of implementing the Radio Regulations Board's standards and procedures.[116] Headed by an elected Director, who serves as the executive secretary to the Radio Regulations Board, the Bureau is made up of a staff that deals with the Radiocommunication Study Groups and those involved in

108. *Id.* Constitution art. 11B.
109. *Id. See also* Nairobi Convention, *supra* note 60.
110. APP Final Acts, *supra* note 11, Convention art. 5A(2)(1).
111. *Id.* Constitution arts. 8, 12.
112. *See generally* LAURIA-WHITE & WHITE, *supra* note 13, at 86-98.
113. *Id.* at 97.
114. HLC Report, *supra* note 9, at 37.
115. *Id.* at 36.
116. APP Final Acts, *supra* note 11, Convention art. 5B.

the administration of the Radio Regulations.[117] Essentially, the staff of the Radiocommunication Bureau is composed of the specialized secretariat of the replaced IFRB and part of the old CCIR secretariat.[118] The Radiocommunication Bureau provides the administrative and expert support for the Radiocommunication Sector, coordinating preparatory work of the Study Groups and the Bureau, communicating this work to Members, collecting their comments, and generating a report to the Radiocommunication Conference.[119]

In addition to its many duties associated with the Radio Regulations Board, such as providing assistance to Administrations and maintaining the Master International Frequency Register, the Radiocommunication Bureau participates in an advisory capacity in the Radiocommunication Assemblies and Study Groups. The Bureau coordinates and is responsible for the organization of the work of the Study Groups. It also provides assistance to the developing countries in their preparations for radiocommunication conferences and prepares a work plan for consideration of the Radiocommunication Conference for the period between the Conferences.[120]

B. Telecommunication Standardization Sector

The ITU has a distinguished record in the area of standardization and is the only truly global organization where most governments and industry work together to agree on global telecommunication standards. Global standards allowed the development of global markets for telecommunication equipment and services. The ITU played a significant role in standards making. However, deficiencies were recognized by the HLC in the standardization function.[121]

The HLC found that the old International Consultative Committees (the CCIR and the Telephone and Telegraph Consultative Committee - CCITT) needed to respond better to the priorities of the international telecommunication sector and user community. Members of the HLC felt that telecommunication manufacturers, service providers and users needed to play a greater role in the strategic planning and decision-making of the ITU.[122] HLC members also determined that the ITU needed to more effectively harmonize its activities with the growing number of national, regional, and international standards organizations. The HLC report concluded that the standards process needed to be sped up, the study groups streamlined, working methods and procedures improved, and overlap in these areas eliminated. The standardiza-

117. *Id.*
118. HLC Report, *supra* note 9, at 37.
119. *Id. See also* APP Final Acts, *supra* note 11, Convention art. 5B.
120. HLC Report, *supra* note 9, at 37.
121. *Id.* at 29-30.
122. *Id.* at 13, 18-20.

tion work also needed to attract the interest of the developing countries.[123] Consequently, the Standardization Sector was established.

The mission of the Telecommunication Standardization Sector is to fulfill the purposes of the ITU related to telecommunication standardization. This is to be accomplished through the study of technical, operating and tariff questions and the issuing of recommendations on them aimed at standardizing telecommunication worldwide.[124] The activities of the old International Consultative Committees (CCIs) that related to standards were integrated into this Sector as the CCIs ceased to exist. The Sector works through World Telecommunication Standardization Conferences, Study Groups, the Telecommunication Standardization Bureau, and with Members of the ITU and any entity or organization authorized to participate as a member of the Sector. Advisory groups also contribute to the work of this Sector.[125]

World Telecommunication Standardization Conferences are convened every four years, but the Council may convene an additional conference at the two-year point if significant standardization issues arise.[126] The duties that were delegated to the Plenary Assembly of the CCITT now rest with the Conference.[127] The Conferences consider the reports of the Telecommunication Study Groups that are established by Standardization Conferences, adopt recommendations related to telecommunication standardization, and approve the work program of the Sector, allocating work accordingly.[128] Due to the adoption of an accelerated procedure for recommendation approval, conference time devoted to such matters has been reduced. Thus, the HLC recommended that Conferences devote more time to policy issues, strategic planning, priority setting, and work programs.[129]

The Telecommunication Standardization Bureau is headed by a Director elected by the Plenipotentiary and replaces the CCITT Specialized Secretariat and Study Groups. The Bureau supports the work of the Sector, updating the work program on an annual basis, preparing for the Standardization Conferences, processing and publishing information from Administrations, and reporting to the Conference on the activities of the Sector. The Bureau also provides technical support to the Telecommunication Development Sector in order to increase the involvement of the developing countries in the standards-making process.[130]

Recognizing that the field of telecommunication is constantly evolving, the Additional Plenipotentiary Conference in Resolution Plen/6 called for the

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123. *Id.* at 29.
124. *Id.*
125. APP Final Acts, *supra* note 11, Convention art. 13B, Res. Plen/6.
126. *Id.* Constitution art. 13C.
127. *Id.* Constitution arts. 13A, 13B, 13C, 13D, 13E, Convention art. 6A, 6B. *See also* LAURIA-WHITE & WHITE, *supra* note 13, at 98-104.
128. APP Final Acts, *supra* note 11, Convention art. 6.
129. HLC Report, *supra* note 9, at 31.
130. APP Final Acts, *supra* note 11, Convention art. 6B.

establishment of Advisory Groups on Standardization and Radiocommunication to review priorities and strategies for standardization activities in these Sectors. Because of objections from several Arab and developing countries, neither the Constitution nor the Convention makes reference to Advisory Groups for the Radiocommunication and Standardization Sectors. The compromise was the call in Plen/6 for measures to be taken by the two Sectors to collaborate with other organizations.[131] The Advisory Groups provide guidelines for the work of the study groups, review the progress of the implementation of the work program of the Sectors, and recommend measures to foster cooperation and coordination with other standards organizations and with and between all three Sectors and the Strategic Planning Unit in the General Secretariat.[132] The Advisory Groups are composed of government representatives, Study Group chairpersons, Recognized Private Operating Agencies (RPOAs), Scientific or Industrial Organizations (SIOs), and are chaired by the Sector Director.[133]

To follow up and fine-tune the work of the special 1992 Additional Plenipotentiary Conference; the regularly scheduled 1994 Kyoto Plenipotentiary Conference adopted a Strategic Plan for the Union for 1995-1999.[134] In that Strategic Plan, the goal for the Standardization Sector is to ensure that the ITU remains the "pre-eminent global telecommunication standardization body." Strategies identified to accomplish this goal include:
1) Adopting a market-oriented approach to standardization;
2) Delivering high-quality recommendations on time;
3) Defining the ITU's role in relation to regional standardization organizations and forums;
4) Developing agreements and relationships with these "partners";
5) Focusing on high-priority standardization areas;
6) Improving the working methods of the Standardization Sector; and
7) Enhancing involvement by non-administration bodies in the standardization process.[135]

Specific priorities for the Sector include but are not limited to:
a) Developing global standards for incorporating new technologies, services, and capabilities into telecommunication networks and for managing these increasingly complex networks;
b) Continuing to develop and review tariff and accounting principles for international telecommunication;

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131. Interview with William H. Jahn, *supra* note 35. The objection centered around the perception of some countries that the Advisory Groups, much like the specialized Study Groups of the old Consultative Committees (CCIR and CCITT) would be heavily dominated by the developed, industrialized countries with greater resources and ability to participate. The compromise broadened the base of participation somewhat without eviscerating the ability of the ITU to necessarily call upon groups of experts for advice.

132. APP Final Acts, *supra* note 11, Res. Plen/6.

133. HLC Report, *supra* note 9, at 30.

134. Kyoto Final Acts, *supra* note 11, Res.Com.4/1: International Telecommunication Union Strategic Plan 1995-1999, Annex III, B.3.

135. *Id.*

c) Continuing to cooperate with other standards-making organizations and forums to harmonize development and implementation of global standards; and
d) Cooperating with the other Sectors to aide the developing countries through information meetings, workshops, seminars and other means.[136]

C. Telecommunication Development Sector

All the ITU's development functions are contained within the Telecommunication Development Sector. In addition to fulfilling the development purposes of the ITU, this Sector enhances the ability of the ITU to perform its dual role as the UN Specialized Agency responsible for telecommunication, and as an Executing Agency for implementing telecommunication development projects under the UN Development Program.[137] The HLC called telecommunication an "essential engine of socio-economic development in the global information economy and society" and "a positive force . . . in closing the development gap between developed and developing countries and within individual countries."[138]

The ITU Development Sector works toward the goal of developing effective telecommunication networks and services in all countries. Its mission is:

- To raise awareness of decision-makers regarding the importance of telecommunication for national and social development and provide information and advice on policy and structural options;
- To promote the development, expansion and operation of telecommunication networks and services especially in the developing countries;
- To promote and coordinate programs to accelerate transfer of technologies to developing countries;
- To encourage industry participation in telecommunication development; and
- To give special attention and assistance to the least developed countries.[139]

The Telecommunication Development Sector works through world and regional Telecommunication Development Conferences, Study Groups, the Telecommunication Development Bureau, and a Telecommunication Development Advisory Board.[140] The World Telecommunication Development Conferences convene on a four-year cycle between Plenipotentiaries, and the Regional Conferences convene subject to resources available and

136. *Id.* B.4.
137. APP Final Acts, *supra* note 11, Constitution arts. 14, 14A, 14B, 14C, Convention arts. 7A, 7B, 7C. *See also* HLC Report, *supra* note 9, at 23-28.
138. HLC Report, *supra* note 9, at 23.
139. APP Final Acts, *supra* note 11, Constitution art. 14.
140. *Id.* Constitution arts. 14, 14A, 14B, 14C, Convention arts. 7A, 7B, 7C.

priorities. These Conferences do not produce treaty level Final Acts, but instead their conclusions take the form of resolutions, decisions, recommendations or reports.[141] The Conferences play a dual role: 1) they are a forum for the discussion and consideration of topics, projects and programs related to telecommunication development, and 2) they provide direction and guidance to the Telecommunication Development Bureau (BDT).[142] The Conferences establish work programs, set goals for telecommunication development, and provide a framework for the consideration of policy, organizational, operational, technical, financial and regulatory issues. Telecommunication Development Conferences can also set up study groups to help accomplish these purposes, replacing the CCITT Special Autonomous Groups that previously studied questions of interest to developing countries.[143] The Conferences oversee the work of the Development Sector and the BDT, evaluating, coordinating, and reviewing the activities of the Bureau.[144]

The Telecommunication Development Bureau is headed by an elected Director and has a secretariat staff.[145] The BDT provides the administrative and expert support for the Sector. The Bureau has staff to support its activities at regional offices in Africa, the Americas, Asia and the Pacific Rim, and the Arab region. The field offices are structured into three functional departments: 1) policies, strategies and programming; 2) field operations; and 3) program support organization and methods. A fourth unit is responsible for evaluation. The mission entrusted to the regional presence is to cover the four basic functions of the Development Sector, as well as to act as both a Specialized Agency and also an Executing Agency concerned with resource mobilization and information distribution.[146]

The Telecommunication Development Advisory Board is made up of members appointed by the Director. The function of the board is to promote external participation by a cross-section of interests and expertise in telecommunication development.[147] Thus, membership can include participants from government, bilateral and multilateral aid organizations, public sector service providers, manufacturers, financial and investment institutions, and consultants.[148]

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141. *Id.* Constitution art. 14A.
142. *Id.*
143. CODDING & RUTKOWSKI, *supra* note 22, at 53, 109-10.
144. APP Final Acts, *supra* note 11, Convention arts. 7A, 7B, 7C.
145. *Id.* Constitution arts. 14, 14A, 14B, 14C, Convention arts. 7A, 7B, 7C.
146. *Id. See also* HLC Report, *supra* note 9, at 26.
147. *See* APP Final Acts, *supra* note 11, Convention arts. 7C, 7D.
148. *Id.*

III. NEW APPROACHES TO DEAL WITH THE CHANGING TELECOMMUNICATION ENVIRONMENT

A. The Broader ITU Family

The central strategic challenge for the ITU is to adapt an intergovernmental organization based on national sovereignty to the exigencies of an emerging global information society.[149] Telecommunication plays a key role in socio-economic development while remaining an essential public service. It is also a very important business activity. Traditionally, those participating in the activities and work of the Union were national telecommunication administrations, Recognized Private Operating Agencies (RPOAs) and Scientific or Industrial Organizations (SIOs).[150] The accelerating trend toward liberalization, privatization, deregulation, and new value-added[151] and integrated communication services compelled the ITU to broaden its perspective to involve more participants from within the growing telecommunication sector.[152]

This increased need for involvement from a wider family of participants was recognized in 1989 in Resolution 14 of the Nice Constitution and Convention.[153] The Resolution called upon the ITU to make its role of coordinating telecommunication more effective by strengthening its cooperation with other UN and regional and subregional organizations concerned with telecommunication. These organizations include economic and broadcasting commissions and organizations, principal nongovernmental international organizations and institutes, and academic institutions.[154]

The Additional Plenipotentiary Conference in 1992 added a new article to the Convention: Article 7D - Participation of Entities and Organizations Other than Administrations in the Union's Activities.[155] Participation in ITU activities now extends beyond traditional Members to encompass additional "members" (with a small "m") from the private sector, including financial or development institutions, and regional and other international telecommunication, standardization, financial, and development organizations. "Other entities" with telecommunication interests that are approved by the Member country concerned, that is by the home Administration, may now also take part in the work of a Sector.[156] This includes a long list of operators, service providers and equipment manufacturers, users and broadcasters. Thus,

149. Tarjanne, *supra* note 31, at 13.

150. CODDING & RUTKOWSKI, *supra* note 22, at 93-94, 100-02, 235; and LAURIA-WHITE & WHITE, *supra* note 13, at 32, 99, 101, 204.

151. A value-added service is an enhancement to a basic telecommunication service that allows capability beyond the primary service. An examples of a value-added service would be facsimile.

152. APP Final Acts, *supra* note 11, Convention art. 7D.

153. Nice Final Acts, *supra* note 67, Res. 14.

154. *Id.*

155. APP Final Acts, *supra* note 11, Convention art. 7D.

156. *Id.*

the ITU family has grown to include private sector commercial operating agencies, business and other specialized user groups, multilateral and regional operating agencies, regional and national broadcasting organizations, and international, regional, and bilateral development and financial institutions.[157]

These members make a huge contribution to the work of the ITU, and can keep it attuned to changes in the rapidly evolving telecommunication environment. The APP provided for enhanced participation by these members to broaden and strengthen the foundations of the ITU. The 1994 Kyoto Plenipotentiary Conference encouraged national entities and organizations to participate in national delegations and in Member forums to aid in developing national positions for ITU meetings and Conferences.[158] This enlarged participatory scheme has come to be called the "ITU family."[159]

B. Broader Policy Involvement

As discussed above, traditionally the ITU's mission was technical in nature. Yet, with the increasing membership of developing countries, the ITU's purpose changed to encompass development activities as well. With the increased growth of developing country membership, many plenipotentiaries became fora for expanded political discussion by countries seeking to achieve specific ends related to their development needs. Various contentious issues often stymied work of the Conferences. Many Members feared the ITU was becoming a political forum rather than an agency with a technical mission.[160] Today, compelled to respond to a rapidly changing telecommunication environment, the ITU has added the policy domain to its list of purposes. The Additional Plenipotentiary Conference, in Resolution Com5/5, cited the need to establish a forum to discuss strategies and policies.[161]

On its face, the organization of a forum where strategies, policies, and policy coordination among Members can be discussed seems benign. But critics believe the possibility exists that this forum could become a location where contentious issues are aired, and the objective of meeting special developmental needs is pressed at the expense of the historic prime mission of technical coordination and harmonization.[162]

Nevertheless, the policy domain has been enunciated and action has been called for. The Plenipotentiary is charged with determining the general policies for fulfilling the purposes of the Union.[163] The Council is empow-

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157. *Id.*

158. Kyoto Final Acts, *supra* note 11, Res. Com 4/1: International Telecommunications Union Strategic Plan 1995-1999.

159. *See supra* text accompanying notes 149-59.

160. SAVAGE, *supra* note 6, at 52-53; CODDING & RUTKOWSKI, *supra* note 22, at 61-62; and Interview with Stephen E. Doyle, *supra* note 50.

161. APP Final Acts, *supra* note 11, Res. Com5/5.

162. Interview with Stephen E. Doyle, *supra* note 50.

163. APP Final Acts, *supra* note 11, Constitution art. 8.

ered to adapt the policies and decisions approved at the Plenipotentiary within limits defined by the Constitution and Convention and within guidelines set by the Plenipotentiary.[164] The Secretary-General, aided by the Coordination Committee, prepares an annual report on the policy and strategy of the Union, and the Council reviews and acts upon it.[165]

The emphasis on strategic planning and review is designed to enable the ITU to adapt on a continual basis to an environment that is constantly changing.[166] The Plenipotentiary is charged with reviewing and making decisions on a draft Strategic Plan submitted by the Council, which outlines the work and objectives of the other organs and Sectors between plenipotentiary periods.[167] But the larger mandate is for the Plenipotentiary to focus on longer-term policy issues so the ITU will be able to maintain a significant role and work effectively in the changing telecommunication environment, while still contributing its traditional technical expertise.[168]

IV. CONCLUDING ANALYSIS

The 1992 restructuring of the ITU was an important first step toward responding to the challenges of the information age and the global information society. This restructuring represents not only the most thorough revision of the ITU since 1947, but perhaps also one of the most significant in ITU history. Gabriel Warren, Chairman of the High Level Committee and of the Drafting Group for the new Constitution and Convention adopted in 1992 at the Additional Plenipotentiary, clearly indicated the ITU's response to the currents of the information age by emphasizing that there was a concerted attempt at "'de-bureaucratizing' the ITU and unleashing (bottom-up as well as top-down) the talents of its staff." One of the aims in the restructuring process was to "dedramatize" the sectoral conferences by making them more routine, more frequent, on-going activities rather than "'do or die' affairs." The aim was to make the ITU nothing less than "*the* model of enlightened management within the UN System."[169]

An example of this aim is creation and arrangement of the new vertical Sectors, which were structured to create more autonomous and responsible secretariats in each Sector. Moreover, by assuring new organizational equality among and between these vertically integrated Sectors, a less hierarchical and more horizontal, federal structure was also created, with "better horizontal integration and management of the ITU across its whole range of activities."[170] This horizontal structure, lending a more weblike coordination and

164. *Id.* art. 10.
165. *Id.* art. 11.
166. *See* HLC Report, *supra* note 9, at 17.
167. APP Final Acts, *supra* note 11, Res. Com 5/5.
168. *Id.*
169. Gabriel Warren, *Adapting the ITU*, *in* 59 TELECOMMUNICATION J. 11, 530 (1992).
170. *Id.* at 529.

integration, is facilitated by the strengthened and renamed Council, the Coordination Committee, and the new Strategic Policy and Planning Unit in the Office of the Secretary-General, which make up the strategic center of the ITU web.

The original ITU was a model for all of the international, intergovernmental organizations that exist today, including the UN. It would be historic if the ITU should again lead as the model of management for international organizations - organizations that, of necessity, will face the challenges of change emerging in the information age. Yet, these challenges are so great that it is by no means certain this will be the outcome, even in an organization like the ITU, which is uniquely familiar with the rapidly unfolding changes in the information environment.

The same Gabriel Warren that articulated the effort of his High Level Committee to make the ITU "the model of enlightened management,"[171] also warned against underestimating the "difficulty of achieving a realistic balance between the rights and obligations of governments and private-sector entities" necessary in the liberalizing telecommunication environment.[172] This changing telecommunication environment, in which a concurrent expansion of the information infrastructure is taking place, is the site where a major portion of the work force performs in areas related to or dependent upon these information and telecommunication technologies. Again, as early as 1978, statistics showed that more than fifty-one percent of the workforce in the United States was employed in areas of information technology, earning forty-seven percent of the GNP.[173]

A different society, a "knowledge society,"[174] and a new concept of "space," are emerging where the environment of human activity is different both in kind and in size from the past. Flexible complex systems with increased connectivity that are polycentric in nature, or weblike,[175] are structural qualities signifying this space. Organizations, described as nothing more than a "fabric of communication,"[176] a model of discourse where people talk, write, and engage in various transactions with one another, are affected by the evolving communication technologies and by this evolving concept of space, sometimes described as "cyberspace." As the new communication technologies facilitate such new patterns of association, different economic structures arise that have an organizational effect by changing the "interactive flows and the way in which transactions are carried out."[177]

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171. *Id.*

172. Gabriel Warren, *ITU Takes a Promising "First Step,"* TRANSNATIONAL DATA AND COMMUNICATIONS REPORT, Mar./Apr. 1993, at 18.

173. TAYLOR & VAN EVERY, *supra* note 32, at 25.

174. Peter F. Drucker, *The Age of Social Transformation*, THE ATLANTIC MONTHLY, Nov. 1994, at 62.

175. TAYLOR & VAN EVERY, *supra* note 32, at 28. *See also infra* note 180 and accompanying text.

176. *Id.* at xiii.

177. *Id.* at xiv.

Some researchers think that due to the evolving communication technologies, new forms of organization are emerging with institutional properties different from those we now know. From a social and political perspective, institutional properties underlie systems of governance. If the institutional properties change, so does the system.[178]

This challenge is historic. The movement of self-identification, communication, and economic activity from the family to the clan to the community to the city, and finally to the nation-state, has now begun to shift decisively to the planet as a whole, and thus ultimately to humanity as a species, a shift greatly advanced by the advent of the Space Age.

This decisive shift, though only in its infancy, is explosively advanced by the new converging, digital telecommunication technologies. At the same time, however, institutions attempting to accommodate this shifting change, especially political and intergovernmental systems like the ITU, are faced with the abiding and intractable inertia of established practices, vested interests, and jealousies. These arise among the very same traditional and historic identifications and interests described above in relation to the evolution of social structures from family to nation-state.

Pekka Tarjanne, Secretary-General of the ITU, notes a growing trend toward globalization. This trend is leading to the formation of large, powerful organizational entities that could change the basic structure of the telecommunication industry so that "it is dominated by a small number of global actors or alliances which extend beyond national boundaries."[179] This characteristic of extension beyond national boundaries, or "borderlessness," which is characteristic of the new trend toward globalization, carries tremendous cultural as well as political and legal connotations.

Traditionally, telecommunication companies operated mainly within national borders. The telecommunication sector in most countries was monopolistic, nationally owned and governed. Even in the United States, although privately owned, the telephone system existed as a monopoly, predominantly operated and controlled within national borders.[180] Today, the trend toward privatization is leading to global industries and organizations that are transnational in nature. Their activities are not entirely governed by any one nation. As an example, American Telephone and Telegraph (AT&T) recently announced its intention to compete for global communication services in Mexico.[181]

Intergovernmental systems and organizations like the ITU are the arenas in which the struggles related to these historic changes are taking place. Whether the ITU or other international institutions survive and flourish

178. *Id.* at xviii.

179. Tarjanne, *supra* note 31, at 13.

180. Interview with Stephen E. Doyle, *supra* note 50.

181. Bloomberg Bus. News, *AT&T plays $1 billion venture with Mexico's Alfa*, ATLANTA J.CONST., Nov. 10, 1994, at G7.

depends on their ability to accommodate and direct this struggle into successful and transformative outcomes.

The challenges of change are indeed daunting. Only time will tell how the ITU will respond to these challenges, and whether it will continue to play a vital role, as it has throughout its history, both in the evolution of telecommunication and also in the evolution of international institutions and international law. For the foreseeable future, meaning at least until the next Plenipotentiary Conference in 1998, the ITU will employ its new structure to carry out its primary practical functions. These include: harmonizing and recording uses of the radio spectrum and the geostationary orbit, identifying and negotiating standards, and serving as a catalyst for telecommunication development, particularly in the developing countries. In carrying out these functions, the ITU family will be faced with changing concepts and with new challenges to old concepts like "basic service," "natural monopolies," and "scarce" orbit-spectrum resources.[182] At the same time, the ITU must continue carrying out its basic mission to encourage global consensus, open exchange of information, network development, and a global networked environment.

In the area of standards, interconnection and interoperability remain key principles and aims of the ITU. They are at the heart of its mandate and operations. In the development sector, meanwhile, it will be necessary somehow to come to grips with the most fundamental problem: resources. In so doing, it must be recognized that only about five percent of the total resources needed for telecommunication development can be expected to come from *all* multilateral sources, among which the ITU is only one relatively small player.[183]

Perhaps the most important role the ITU can play, particularly in the field of development, is to help define a global vision of telecommunication that enunciates its fundamental values. Thereafter the ITU can promote these values by promoting open network-type approaches, such as policy coordination, and the building of common or complementary national legal frameworks. A good example of such an approach is the newly evolving principal of "transparency" of laws, regulations, and practices. This principle promotes the idea of collecting and exchanging information on national laws concerning foreign access to communication markets, as well as developing model laws under the legal principle of "national treatment" for international and foreign telecommunication companies and investors. Another example is the new

182. Traditionally, basic service referred to the availability of a telephone at an affordable price. In the emerging global information society, basic service may be defined as interactive, digital capability. Natural monopoly is the concept that only a centralized, universal industry is capable of delivering basic services at the lowest possible cost to the maximum number of customers over the widest possible area. Privatization and free market competition are beginning to be seen as more efficient and effective ways to enhance and enlarge the availability of advanced telecommunication services to a greater number of people at affordable rates. Scarce spectrum relates to the concept that the radio frequency spectrum is a limited natural resource. Digital compression technology and other techniques and technologies designed for more effective use of the radio spectrum, however, have greatly reduced the scarcity of this resource.

183. Warren, *supra* note 169, at 530.

principal of "complementarity," which commits the ITU to closely coordinating its activities, in a horizontal and sectoral way, with other international institutions, both private and public, and in particular with the new World Trade Organization created by the GATT.[184]

"This industry is in the process of changing the world," said Pekka Tarjanne. The changes wrought by the exploding information age "have diminished the role of governments, in telecommunications, in the economy, and in the society." Still, Tarjanne noted that these changes do not challenge "the fundamental values on which telecommunications policy has always rested . . . freedom of expression and universal access."[185]

Lon Fuller, the late Harvard Professor of Jurisprudence and Communication Law, put it most aptly when he postulated that "the one central indisputable principle" of natural law is the command to "open up, maintain, and preserve the integrity of the channels of communication."[186] Following the same line of reasoning in defining an overall vision for the ITU, Secretary-General Tarjanne proposed seeking the insertion of a "right to telecommunicate" into the Universal Declaration of Human Rights.[187]

In the end, advancing such an approach may do more to foster and promote telecommunication development than any particular mixture of developmental expenditures. Yet, it is also true that "access to networks and markets cannot be open if they do not exist."[188] The ITU's Development Sector has a catalytic and vital role to play in acting as a clearinghouse and coordinating agency for technical training and coordination, and for the identification and most profitable application of investment resources. To do this, it will be necessary for the ITU to find ways to attract new financing from the private sector. A diverging and ever increasing gulf between the haves and the have-nots in an age where information is becoming economics is not in the interest of world peace, international law, planetary institutions, or human advancement. This growing economic gulf could prove to be the most intractable of the impediments to moderation of the prevailing system of absolute state sovereignty.

In the final analysis, this concept of absolute sovereignty remains the most stubborn obstacle to accommodation and promotion of the most positive aspects of the revolutionary changes confronting humanity. Secretary-General Tarjanne noted that one of the "central strategic challenges" facing the ITU today is the need to adapt the "principles and presuppositions of national

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184. R. Brian Woodrow, *Tilting Towards a Trade Regime: The ITU and the Uruguay Round Services Negotiations*, TELECOMMUNICATIONS POL'Y, Aug. 1992, at 328, 333. *See also* Pekka Tarjanne, *Open Frameworks for Telecommunications in the 1990s: Access to Networks and Markets*, TELECOMMUNICATIONS, Apr. 1, 1990, at 22-23.

185. Tarjanne, *supra* note 31, at 14.

186. LON FULLER, THE MORALITY OF LAW (1964); as *quoted in* GEORGE S. ROBINSON & HAROLD M. WHITE, JR., ENVOYS OF MANKIND: A DECLARATION OF FIRST PRINCIPLES FOR THE GOVERNANCE OF SPACE SOCIETIES 77-78 (1986).

187. Tarjanne, *supra* note 31, at 14.

188. Tarjanne, *supra* note 184, at 23.

sovereignty and multilateralism as it is practiced in the United Nations" to the realities of a telecommunication industry which is creating the global information society of the future. To do this, he said, "We need to invent new concepts for public policy in the global information society, and new structures to put them in place."[189]

This is the challenge of management, of policy making, and of creative statecraft as we head into the global information society and the twenty-first century. Whether it can be accomplished in the ITU, and whether the ITU can play the kind of catalytic role required, will depend upon the creativity of the people involved in the process. For if the twentieth century has been one of social transformations, "the twenty-first century needs to be one of social and political innovations, whose nature cannot be so clear to us now as their necessity."[190] This is the real challenge facing the ITU, international telecommunication law, and the rest of the international system as we navigate the cusp of change.

189. Tarjanne, *supra* note 31, at 13.
190. Drucker, *supra* note 174, at 80.