

The Emerging Global Telecom Law: An Indian Perspective

**Dissertation submitted to Jawaharlal Nehru University in partial
fulfillment of the requirements for the award of the Degree of**

MASTER OF PHILOSOPHY

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CERTIFICATE

This is to certify that the M.Phil. dissertation titled "**The Emerging Global Telecom Law : An Indian Perspective**" submitted by **Pankaj Kr Patwari** in partial fulfilment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY** from **Jawaharlal Nehru University** is an original work. This has not been published or submitted to any other University for any other purpose.

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*In Tender Remembrance of a
Bunch of Innocent Colourful
Flowers that Withered before it
could Bloom*

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Pankaj Kr Patwari

Preface

The importance of the telecom sector to a national economy hardly needs to be emphasised. It is a strategic element for industrial progress and development. Unless and until telecommunication is brought within the reach of all at reasonable price, it would simply be paradoxical to concentrate on developmental issues. Technology changes the way we live and think; the technologies relating or associating with telecom has done it perhaps more radically. The present boom of Information Technology (IT) depends largely on telecom. It would be appropriate to remark that the convergence of telecom and Information Technology holds the key to progress in this new millennium.

Logically, following suit is the need for a well managed telecom policy as a way to secure an ideal and advanced telecom network to foster economic growth. Strategically or otherwise this sector used to be managed by State authorities. But with the negotiation of GATS (General Agreement on Trade in Services) within the ambit of GATT/WTO, trade in services has been sought to be brought within the domain of progressive liberalization, following the basic principles of Most Favoured Nation (MFN), National treatment and Transparency (with exceptions) as enshrined in the WTO text. It has opened up considerable controversies and avenues in the telecom area. More particularly, the 1997 WTO Basic Telecommunications Pact whereby sixty nine countries, including India, have made commitments (subject to specific exemptions) towards increasing international competition in the basic telecommunications market, has added new dimensions. For the sector that was a state monopoly over which the state authorities had “exclusive privilege” would proposedly be opened for competition. Consequently, the need now arises to change the rules of the game whereby, the transformation from the present monopoly framework to a competitive setting could be achieved. Subsequently, now the telecom sector needs reworking the whole process of policy framing and its regulation by surpassing certain values it cherished in the immediate past.

It is exactly at this juncture that the present study attempts to analyse the emerging global regime from a legal background and quests to identify elements which would foster greatest development in the sector. Particularly with regard to strike a balance between national development and global commitments, especially when various developing nations have to traverse miles to reach a tele - density to match desired development.

Pankaj Kr Patwari

Chapter I

INTRODUCTION

The rapid change in the creative and worldwide application of technology, with its immensely varied commercial applications, is a daily reality in the evolution of the Information Age. Every day the telecommunications industry is in the news, with announcements ranging from mergers and acquisitions among telephony service providers to the ongoing discussions of V-chip application in filtering content on television and Internet. Wireless technology is adept at the delivery of video and data. Broadband telecommunications is evolving and promising to revolutionize communications by offering greater online capabilities and higher quality at reasonable prices. Modernized telecommunications system is a vital underlying means of transport of all forms of economic activity, and is the central to the economic development of any country.

The telecommunications market is one of the largest markets in the world, second only to the financial services market. The International Telecommunication Union (ITU ¹) estimated in the mid -

¹ The ITU is a United Nations body that makes recommendations for regulators, provides technical assistance to developing countries, sets standards for shared telecommunications resources such as radio frequencies and the geostationary stationary orbit for satellites, and helps mediate disputes among Members. Wilson P. Dizard, "International Regulation: Telecommunications and Information", in *International Regulation: New rules in a Changing World Order*, p. 115, (1988). The purpose of ITU is "to harmonize the actions of nations" for the "improvement and rational use of telecommunications of all kinds." Organisation for Economic Co-Operation and Development (OECD), *Trade in Information, Computer and Communication Services*, 14 (1990).

1990s that the telecommunications market was worth about \$ 513 billion.² Access to telecommunications services has become the prime mover of the socio economic development in this information age. The role of telecommunications, an engine of growth with multiplier effect and a social leveler, has been globally well recognized. To bridge the prevailing information gap between 'the connected' and 'the not connected', governments the world over have endeavored to ensure the ubiquity of telecommunication nation wide. Provision of Universal Access to Basic Telecommunication Services at affordable price is considered important by the governments of all countries and mandated by their policies, regulation or legislation.³ Benefits of large-scale use of telecommunications are likely to influence productivity, cost effectiveness and competitiveness of the economy, as communication and information availability are key to creating a competitive economic environment. Key sectors of the economy, viz. finance, trading, retailing, transportation, maintenance, almost the entire service sector and education are likely to benefit from an advanced telecommunications system. The telecom infrastructure is indeed going to govern the way individual will live in future⁴. Addressing the Telecom 95 in Geneva, Mr. Nelson Mandela said: " In the 21st century, the right to communicate will be the main human right".⁵ This view is now shared by many leaders in the world. The world rich in information, the so-called Global Information Village, coming into being is increasingly capturing the attention of policy makers at both national and international levels. The new

² WTO, Press Breif: *Telecoms* (Dec. 16, 1996) (quoting estimates of the ITU).

³ Telecom Regulatory Authority of India (TRAI) Consultation Paper No. 2000/3 on Universal Service Obligations, Chapter 1, < <http://www.trai.gov.in/ch1.htm>>.

⁴ TRAI: *Consultation Paper on Licensing Issues Related to Fixed Service Providers* (12.6.2000), Chapt.1, <<http://www.trai.gov.in/c2.htm>>.

⁵ Victor Montviloff of UNESCO, *Some Legal and Ethical Issues of the Access to Electronic Information*. [ITU, World Report 1996]

information and communication technologies are shrinking the world and, as powerful agents of change, are raising new hopes for economic development, eradication of ignorance and promotion of democracy. Telecommunication is the prime core infrastructure needed for rapid growth and modernization of various sectors of the economy. Developments in the telecom sector is taking place at a fast pace resulting in improvement in quality of service and introduction of a range of innovative services, which hitherto were not available⁶.

Increasing globalization of the world economy and the sustained growth of international traffic depend imperatively upon the telecom sector. However, until a few years ago in most countries⁷ the provision of basic telecommunication services was seen as a "natural monopoly", in which it made no sense to envisage the introduction of competition, let alone foreign competition. Against this background, the idea of using trade negotiations to promote liberalization of telecommunications was an alien concept. It was perceived as a threat to national regulators, and in some countries, it was even portrayed as a threat to national sovereignty and security imperatives⁸. In most countries this sector has been a state-owned Public Telecommunications Operator (PTO) or often name as Post, Telegraph and Telephone Administration (PTT) or the so-called "national carrier". But, with the development of technologies

⁶ Ibid., n. 4, Introduction.

⁷ The United States has an atypical telecommunications history. This may have to do with the fact that most countries, including Japan, built their communications infrastructures through government agencies, whereas private industry American Telephone and Telegraph (AT&T) built, owned, and operated the infrastructure in the United States from the very beginning and it enjoyed a monopoly status, (until 1984, when in a landmark Antitrust suit it was broken and monopoly status reduced by competition in long distance).

⁸ Even countries like the United States of America (USA) where the telecom sector was never a government monopoly has raised national security concerns about the \$5.5 billion takeover bid for USA Internet service provided by Verio Inc., by Nippon Telephone and Telegraph Communications Corporation, (NTT), the Japanese phone giant's international arm. *The Economic Times*, Calcutta, 14.7.2000.

inherently transnational, such as the Internet, growth of private VSAT⁹ networks, satellite telephony, the growth of global markets and multinational telecommunications service suppliers challenged the existing order even in countries that were trying to retain their national PTO monopolies. International "call back" services, in which the callers in a high-tariff country can use a carrier in a low-tariff country to place their international calls, provide one good example. Despite efforts by many national governments to make these services illegal and shut down the companies offering them, the callback business keeps many expanding. National governments find it very difficult to enforce their regulations on commercial firms operating outside their borders in cyberspace.¹⁰ Leaving apart, controversies about the need of ushering in competition in a sector that was traditionally monopoly oriented, or to have a better "market access", it was also necessitated but for the changed technological advancements that, the rules of the game needed a reconsideration to garner the situation fruitfully. Members of the ITU, compelled to adapt their labouriously developed consensus rules to new technological realities, also found them divided sharply by philosophical differences as to the proper role of competition in the provision of international telecommunication services.¹¹ All these factors - the high demand for telecommunications services, the interconnectedness of telecommunications sector inputs and uses,

⁹ Very Small Aperture terminal . A VSAT sends data to a Central hub Station (CHS) via dedicated transponder of a chosen satellite. CHS acts as a switching centre and retransmits the data to the receiver VSAT again via satellite. VSAT network is suitable for connecting remote locations and also for setting up private network among nation wide spread of offices.

¹⁰ For details about call back services see- Kenneth R. Propp, The Eroding Structure of International Telecommunications Regulation: The Challenge of Call-back Services, *Harvard International Law Journal*, vol.37, No.2, Spring, 1996, p. 493.

¹¹ Ibid.

and international dependence - created the need to avoid piecemeal and segmented trade policy.¹²

With the negotiations of the General Agreement on Trade in Services (GATS)¹³, within the ambit of GATT/WTO¹⁴, trade in services has been sought to be brought within the domain of "progressive liberalization" following the basic principles of Most Favoured Nation (MFN), National Treatment and Transparency as enshrined in the WTO text, has opened up considerable controversies and avenues in the telecom area. More particularly, the 1997 WTO Basic Telecommunications deal, whereby sixty nine members, including India, have made commitments [subject to specific exemptions] towards increasing international competition in the basic telecommunications¹⁵ market, has added new dimensions and shape to this vital sector and backbone of national development. For the

¹² Taunya L. McLarty, " Liberalized Telecommunications Trade in the WTO: Implications for universal Service Policy", *Federal Communications Law Journal*, vol 51, 1999. (See <http://www.fcc.gov>).

¹³ General Agreement on Trade in Services, Apr. 15, 1994, WTO Agreement, Annex 1B, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 325 (GATT Secretariat 1994), 33 I.L.M. 44 (1994) [hereinafter GATS].

¹⁴ Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 2 (GATT Secretariat 1994), 33 I.L.M. 1140, 1144 (1994) [hereinafter WTO Agreement]. The WTO Agreement establishes an umbrella organization that will apply institutional rules to all of the multilateral trade agreements.

¹⁵ Basic telecommunications services include voice telephony, telex, telegraph, facsimile, data transmission, private leased circuit services, fixed and mobile services, paging and personal communications services and it could encompass (a) local, long distance and international services for public and non public use, (b) may be provided on a facilities basis or by resale , and (c) may be provided by any means of technology (e.g., cable, wireless, satellites). "Value added services" or telecommunications for which suppliers "add value" the customers information by enhancing its form or content or by providing for its storage and retrieval were not formally part of the negotiations. Nevertheless, a few participants chose to include them in their offers. Example include on-line data processing, on-line data base storage and retrieval. electronic data interchange, e-mail or voice mail. More commonly liberalized than basic services, value added services were already included in the commitments of 50 governments as a result of the Uruguay Round of Multilateral Negotiations and the accession of the 4 new WTO members since the Round ended in 1994.

sector that was in most countries a State monopoly over which the State authorities had "exclusive privilege"¹⁶ would be opened for competition. Following the Basic Telecommunication deal member countries have treated the telecom sector as the prime target for liberalization because they believe that telecom competition will facilitate liberalization of other sectors, including stock-broking, banking, consultations, accounting, etc. Although many countries, such as the United States¹⁷ and United Kingdom permitted competitors to build long distance facilities and compete with the incumbent PTO. A handful of other industrialized countries - including Japan, New Zealand, Australia, Sweden and Finland - have followed, and the European Union has mandated that its members (with few exceptions) to allow competition from January 1, 1998 - the WTO telecom deal would improve market access and accelerate regulatory reform in more than fifty additional countries and will allow majority foreign ownership for the first time in the United States, Europe and many markets. The global telecom scenario has changed phenomenally and has witnessed mega mergers between telecom companies to grab greater market share. The 190 billion dollar of "Mannesmann-Vodafone" merger created history by being one of the biggest merger in corporate world. The combined company which eclipsed the American On Line's (AOL) 130 billion dollar acquisition of Media Group Time Warner last January, 2000, will now control mobile phone networks in three of Europe's biggest phone markets - Britain, Germany and Italy - alongwith a forty five percent

¹⁶ Section 4, of the Indian Telegraph Act, 1885, grants Central Government of India, the "exclusive privilege" of "establishing, maintaining and working telegraphs".

¹⁷ Ever since the historical judgement of divestiture of AT&T in 1984, whereby the monopoly of AT&T was broken on grounds of antitrust activities, it mandated that the local telephone operating companies be divested from the parent AT&T into Bell Operating Companies (BOCs). The decree divided the country into 164 Local Access and Transport Areas (LATAs), and, subject to certain exceptions, allows BOCs to provide telecommunications services within a LATA (intraLATA), but not between (interLATA).

stake in the biggest American network and holdings in more than 30 other countries from Sweden and Poland to India and Japan.

A critical study of the telecom deal envisages a fundamental transformation in the world of telecommunications. It introduces competition in a sector that was a natural monopoly and seeks to level the playing field for the private and government operators. A major service sector which previously seemed far removed from trade policy is now fully integrated into the multilateral trading system, as one part of a general agreement covering all services, for the WTO telecom deal leads to - increased opportunity for operators to integrate and control their international marketing and operations supported by improved dispute resolution and enforcement mechanisms to support market access. Bound commitments in GATS give assurance that policy will not be changed lightly, and this stability is a powerful inducement to potential foreign investors.¹⁸

Consequently, the need now arises to change the rules of the game whereby; the transformation from the present monopoly framework to a competitive setting could be achieved. It now necessitates a legal regime that would administer changed situations and transformations in this vital sector. What poses a daunting task is to balance the grey area where national interest clashes with those of the private enterprises. For the telecom deal provisions has the potential to fundamentally change the basis and legal environment in which the industry operates. For instance, it could mean reduced profitability for some telecom operators if the "accounting rate" reform is accelerated. Hence what it is vital to have a thorough understanding of the deal to work out a legal basis ensuring

¹⁸ Renato Ruggiero, Director -General of the WTO, Address to the ITU 2nd World Telecommunication Policy Forum, Geneva, 16th march, 1998, <<http://www.wto.org/speeches/itu.htm>>

international obligations and identify elements¹⁹ to protect national interests.

In sum, the global picture for the telecom sector has witnessed radical changes with regulated monopolies, regulated rates, and regulated dividends slowly giving way to open policies and mega-mergers. Subsequently, now the telecom sector needs reworking and reorientation of the whole process of policy framing and its regulation by surpassing certain values it cherished in the immediate past and subsequently ensuring, especially for developing countries like India, that it remains connected to the mainstream of national development, enjoy the benefits of Information Technology (IT), ensure better standards of living.

Though there are issues of divergent import on the subject²⁰ in the following chapters of this paper an attempt is made to identify the legal regime that governs this sector world wide, and India specifically, following the GATS agreement and the Basic Telecom deal of 1997 in particular, and distinguish elements of crucial importance, their effects and implications to the sector, in the backdrop that would foster greatest development.

¹⁹ like - the provisions for fair competition, whereby it could be ensured that authority is not abused by any private operator to the detriment of other operators. The "Microsoft Antitrust" suit could be a watershed to shape the future of competition pattern in this sector also.

²⁰ Issues related to economic, social, technical and political causes.

CHAPTER II

The Emerging Global Telecommunications Law

Before the 1980s, the telecom sector world wide, was mainly a "natural monopoly" and it was not open to competition. It meant that the bigger is more efficient and competition cannot thrive. For a bigger firm is more efficient and will therefore grow at the expense of smaller rival or that competition would be inefficient, because one way or another it involves splitting the market, with the result that no firm is as big (that is efficient) as it could be.¹ It is less costly for a single firm to serve the market than it is for two or more firms.² A study of the telecommunications history of the United States would essentially reveal that competition in the sector was only in peripheral areas. It was only very recently in 1996, that the new Telecommunications Act ³ introduced competition and that too after considerable debate and deliberations.⁴ However, among other

¹ Joseph Farrell, *Creating Local Competition* <<http://www.fcc.gov/farrel.htm>>

² Jeffrey Walker, *Missed Connections : One Failed Attempt to Ease Restrictions on Bell Operating Companies*, <<http://www.fcc.gov.walker.htm>.>

³ Telecommunications Act of 1996, Pub. L.No. 104-104, 110 Stat.56.

⁴ It was questioned - whether in changing the rules so as to federalize all aspects of telecommunications, it has violated the constitution (for details see: *Borders and Federalism in Telespace*, Published by the *E.L. Wiegand Practice Groups* of the Federalist Society, Spring 1998; vol.2,, No.1.)

things, if we consider the history of GATS⁵, it was at the behest of the United States that the service sector was included within the realm of the multilateral rules of WTO.

Between 1970 and 1980, international trade in services was growing by about 19 percent annually [even though trade liberalization in service markets was much further behind the liberalization of trade in goods],⁶ and such trade accounted for an estimated 50 percent of Gross Domestic Product [GDP] in emerging economies and 70 percent of GDP in developed countries.⁷ Realizing the vast market potential, U.S. service providers in the 1970s began to lobby for negotiations on information services and related sectors.⁸

During the 1980s, the momentum for negotiations really began to stimulate action in multilateral fora. The Organization for Economic Co-operation and Development [OECD] Trade Committee, after being urged by the United States, compiled a report which showed that trade in services, even though substantial, could be further facilitated by multilateral negotiations in trade barriers⁹. Also, a GATT report found that trade in certain services was linked to trade in goods.¹⁰ Among the GATT Members, there was disagreement about

⁵ Noting that the telecom deal of 1997 is a part of GATS.

⁶ Jimmie V. Reyna, *Services in The GATT Uruguay Round: A Negotiating History (1986-1992)* 2342 (Terence P. Stewart ed., 1993).

⁷ Ben Petrazzini, *Global Telecom talks: A Trillion Dollar Deal*, 28 (1996)

⁸ *Ibid.*, Reyna, note 7, at 2343. Congress responded by: requiring trade in services to be a specific objective of future negotiations, including the Tokyo and Uruguay Rounds; allowing the President to use the **section 301** procedures on countries that maintained restrictive trade measures in services; and making trade barriers a part of the USTR's annual report on foreign trade barriers. *Id.* at 2343-45 (citing the Trade Act of 1974, 19 U.S.C. § 2411 (1990); the Trade and Tariff Act of 1984, 19 U.S.C. § 2102 (1990); and Omnibus Trade and Competitiveness Act of 1988, 19 U.S.C. § 2901 (1990).

⁹ *Ibid.*, at 2345.

¹⁰ *Ibid.*, (citing the Report of the Consultative Group of Eighteen to the Council of Representatives, GATT Doc. No. L/5210, reprinted in GATT B.I.S.D. (28th Supp.) at 71, 74, (1980-81).

whether services should be an issue for negotiation. However, it was generally agreed that within the context of GATT, the issue of service barriers and the work of other international bodies on services should be further explored¹¹. In 1985 and 1986, as the Contracting Parties¹² made plans for a new round of negotiations, twenty-five OECD Members pushed to include services in the Uruguay Round [1986-1994), while twenty-three developing nations resisted.¹³ After some compromise on the part of each side, the 1986 Ministerial Declaration on the Uruguay Round was released. The Declaration set the objectives for negotiations in two general areas: trade in goods and trade in services.¹⁴ Deliberations and discussions continued at various levels. With the release of the "Dunkel Draft" in December 1991, which put forward a MFN article represented a new consensus on the issue. MFN was to be applied to all service sectors; reservations inconsistent with MFN could only be taken on specific commitments and only under the specified conditions listed in an annex for MFN exemptions. The U.S. recommendation was taken and the Parties concluded the services agreement i.e., the GATS in 1994. GATS is divided into six parts, with a total of twenty-nine articles and

¹¹ Ibid.

¹² Note that this Article will refer to the Members of the WTO in different ways. "Members" is only used to refer to countries after the conclusion of the Uruguay Round. The reference to "Contracting Parties," however, is used to reference the parties to GATT before the formation of the WTO, and is used when the countries act individually, for ex-ample, implementing the commitments made during the Tokyo Round into domestic law. The reference to "Contracting Parties" is used when the parties to GATT, prior to 1994, act as a whole, for example passing an amendment to GATT.

¹³Ibid., Reyna, note 7, at 2354-55. The United States went so far as threatening to begin its own separate bilateral negotiations in place of the multilateral round of negotiations unless services were included.

¹⁴ Ibid., at 2359. The topics to be negotiated included: "Trade Related Investment Measures (TRIMS); Functioning of the GATT System (FOGS); Trade Related Aspects of Intellectual Property Including Trade in Counterfeit Goods (TRIPS); Tropical Products; MTN Agreements and Arrangements; Agriculture; Subsidies and Countervailing Measures; Natural Resources; Tariffs; Non-Tariff Measures; Safeguards; Textiles and Clothing; GATT Articles; Dispute Settlement; [and] Negotiations on Trade In Services."

eight annexes.¹⁵ These articles and annexes lay out a framework on which the Members have made their specific sectoral commitments. The annexes specify more narrow commitments for certain sectors and commit the Parties to continued negotiations.

Most of the annexes to the GATS concern particular service sectors -- such as air transport, financial services, and telecommunications¹⁶. One of the annexes permits individual members a one-off chance to exempt certain measures from the MFN obligation ¹⁷ [these were inscribed by some members in lists of MFN exemptions, which also form part of the Agreement).

The Annex on Negotiations on Basic Telecommunications of GATS ensured that the basic telecommunications were not a part of the GATS commitments unless the Member specifically included commitments on basic telecommunications in its Schedule. Therefore, the Members were not required to take Article II MFN exemptions on basic telecommunications at the time of the GATS

¹⁵ GATS, Briefly, Part I, Article I, contains the scope and definition of services. Part II, Articles II through XV, contains the general obligations and disciplines. Part III, Articles XVI through XVIII, contains the specific commitments. Part IV, Articles XIX through XXI, contains provisions for progressive liberalization. Part V, Articles XXII through XXVI, contains the institutional provisions. Part VI, Articles XXVII through XXIV, contains the final provisions. The annexes cover the following: Article II [MFN] exemptions, movement of natural persons, air transport services, financial services (on which there are two annexes), maritime transport services, telecommunications, and future negotiations of basic telecommunications.

¹⁶ The Annex on Telecommunications is composed of seven sections, but its core obligations are contained in a section on access to and use of "public telecommunications transport networks and services" It requires each Member to ensure that all service suppliers seeking to take advantage of scheduled commitments are accorded access to and use of public basic telecommunications, both networks and services, on reasonable and non-discriminatory basis.

¹⁷ GATS, Annex on Article II Exemptions, Apr. 15, 1994, WTO Agreement, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 352, para. 1 (GATT Secretariat 1994), 33 I.L.M. 68 (1994) [Annex on Article II Exemptions]. The individual Member's Schedule on Article II exemptions became an integral part of the Annex on Article II Exemptions. Any new MFN exemptions after the date of entry into force of GATS will have to be taken in accordance with the waiver procedures of Article IX, para. 3 of the WTO Agreement. Annex on Article II Exemptions, In that case, a three-fourths vote by the WTO Members in favor of the MFN exemption would have to be obtained by the exempting Member. WTO Agreement, art. IX, para. 3(a); GATS, Annex on Article II Exemptions.

entry. However, the Annex states that the exemptions would have to be taken at the conclusion of the negotiations on basic telecommunications that are directed in the Annex.¹⁸

Included in the GATS was an annex¹⁹ to extend negotiations on trade in basic telecommunications beyond the Uruguay Round. Ministers hoped that through the extension more liberalization could be captured as the negotiations could take into account some of the reforms under way in telecommunications regulatory regimes and rapid advances in technology. The negotiations began in May 1994. There were nineteen original negotiating Members, counting the European Union as one.²⁰ The Parties negotiated through the Negotiating Group on Basic Telecommunications (NGBT). The negotiations began in May 1994, and the first deadline was set for April 30, 1996. Because the negotiations had made insufficient progress by that date, the WTO agreed to extend the deadline for concluding the negotiations to February 15, 1997. On 15 February 1997, Members of the WTO adopted the Fourth Protocol to the GATS.²¹ It concluded nearly three years of extended negotiations on

¹⁸ GATS, Annex on Negotiations on Basic Telecommunications, WTO Agreement, Annex 1B, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 364 [GATT Secretariat 1994], 33 I.L.M. 44, 77 (1994) [hereinafter GATS, Annex on Negotiations on Basic Telecommunications].

¹⁹ Decision on Negotiations on Basic Telecommunications, Ministerial Decisions and Declarations, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 439, 461 (GATT Secretariat 1994), 33 I.L.M. 136, 144 (1994) [hereinafter Decision on Negotiations on Basic Telecommunications].

²⁰ Included were: "Australia, Austria, Canada, Chile, Cyprus, European Communities and their Member States, Finland, Hong Kong, Hungary, Japan, Korea, Mexico, Newzealand, Norway, Slovak Republic, Sweden, Switzerland, Turkey, and the United States." Decision on Negotiations on Basic Telecommunications, *Ibid.*, n. 19.

²¹ The commitments, made as a result of the basic telecommunications negotiations in 1997, were officially incorporated into GATS 1994 by the Agreement's Fourth Protocol, which retained January 1, 1998, as the date of implementation for the Schedule of Commitments. On that date, scheduled commitments would come into effect and MFN suspension would end. Fourth Protocol to the General Agreement on Trade in Services (WTO 1997), 36 I.L.M. 354 (1997) [hereinafter Fourth Protocol to GATS or the WTO Basic Telecom deal]. A protocol is a document to annex schedules of further negotiations to the original 1994 Agreement.

market access for basic telecommunications services. A total of 71 governments tabled offers by the close of the negotiations and the commitments of 69 of these governments [contained in 55 schedules] are to be annexed to the Fourth Protocol of the General Agreement on Trade in Services. The world's industrialized countries all participated in the deal. Over forty developing countries large and small from virtually every region of the world also took part as did six of the Central and Eastern European economies in transition. The markets of the participants accounted for more than 91 percent of global telecommunications revenues in 1995. In addition fifty-five Members agreed to adopt the Reference Paper ²², which sets out pro-competitive regulatory principles and another ten WTO members agreed to adopt these regulatory principles in part or at a future date. The Reference Paper, if agreed to by a Member, was to be attached to that Member's Schedule of Commitments as an "additional commitment." Members could incorporate the Reference Paper as a whole and still take particular exceptions to some of its provisions ²³. For basic telecommunications services, the Reference Paper is a framework to address many of the regulatory concerns service providers would have when entering a market that is not privatized or fully liberalized.

Thus, for each Member that participated in the continued negotiations, the following apply to its basic telecommunications services sectors: The obligations of GATS 1994; the 1994 Annex on Telecommunications; any 1997 limitations to MFN for basic telecommunications that it annexed to its 1994 List of Article II Exemptions; any 1997 commitments or limitations on market access

²² WTO, Negotiating Group on Basic Telecommunications, Reference Paper, Apr. 24, 1996, 36 I.L.M. 367.

²³ Fifty-five of the countries adopted the Reference Paper and its regulatory principles in full. Three countries committed to adopt it at a later date. Eight countries adopted some of the principles (including India, Pakistan, Malaysia, the Philippines and Venezuela), and three countries (including Ecuador) did not make any regulatory commitments.

and national treatment for basic telecommunications that it annexed to its 1994 Schedule of Specific Commitments, and any additional commitments made in its 1997 Schedule. First, the Parties generally agreed that the scope of the continued negotiations would be basic services provided through the four modes of supply. Next, they added in their individual Schedules, their reservations and clarifications on how MFN, national treatment, and market access would apply to the various types of basic telecommunications services as supplied through the four modes. Additionally, most of the exceptions were taken with regard to commitments on market access. Most Members also under-took the commitments in the "Reference Paper" on regulatory principles by incorporating the Paper into their Schedules under the "additional commitments" column.

The February 15, 1997 negotiations on basic telecommunications reached significant commitments. However, these commitments on basic Telecommunications cannot be considered outside of the bigger framework of The GATS in the WTO. The conclusion of the GATS in 1994 set the stage for continued negotiations on various service sectors and subsectors. Thus, while the 1997 basic telecommunications commitments specifically addressed the problems faced by those wanting to offer such services, they were annexed to, and became an integral part of, GATS, which is the foundation for all trade in services. (However, there are multiple reasons that services, generally, and telecommunications specifically, need flexible negotiations²⁴). Thus, while the 1997 basic telecommunications commitments specifically addressed the problems faced by those wanting to offer such services, they were also annexed to, and became an integral part of,

²⁴ For selling of a service involves many intricacies. Take for example opening markets for cars, for instance, mostly involves tariff and non-tariff barriers faced by the exporter. But trade in telecommunications involve the transmission of an electrical signal that does not stop at national boundaries, it must be received, routed and terminated within the foreign country in order to be successful.

GATS²⁵, which is the foundation for all trade in services. Therefore, to appreciate and comprehend the scope and effectiveness of the basic telecommunication commitments - it is crucial that the Basic Telecom deal is understood in tandem with certain core principle of the GATS²⁶ agreement.

In GATS, the Members sought to expand trade in services through “progressive liberalization” and “higher levels of liberalization.” Liberalization essentially encompasses the multiple concessions that would potentially allow higher levels of competition in the services markets and that would keep those markets competitive²⁷. The GATS sets out the “scope” of how services can be supplied called the “modes of supply.”²⁸ Unlike GATT, GATS separates the means of liberalization and the Member’s commitments into two Parts the “General Obligations” and the “Specific Commitments.” The “General Obligations,” such as MFN treatment, transparency, and non-tariff barriers, applies to all service sectors. The “Specific Commitments,” such as national treatment and market access, apply only to those service sectors that Members include in their Schedules.

The GATS defines “trade in services” as the supply of a service through four different modes²⁹. Telecommunications services can be

²⁵ At the time GATS entered into force, the Members had fairly narrow commitments in their Schedules for telecommunications. However, following the conclusion of the 1997 negotiations, the basic telecommunications services commitments supplemented the original GATS schedules. Thus, GATS now covers the basic telecommunications sector of those WTO Members that participated in the ongoing GBT negotiations.

²⁶ The discussion of GATS, therefore, will focus on its application to basic telecommunications generally.

²⁷ McLarty, Liberalized Telecommunications Trade in the WTO: Implications for universal Service Policy, *Federal Communications Law Journal*, vol. 51, 1999. [See <http://www.fcc.gov>].

²⁸ GATS, art 1, para 2.

²⁹ The “supply of a service” is defined to include “the production, distribution, marketing, sale and delivery of a service.” GATS, art. XXVIII (b).

supplied or traded through all of the four modes: cross-border supply³⁰, movement of customers³¹, commercial presence abroad³², and presence of natural persons abroad³³. The GATS Members must ensure that any measures taken by central, regional, and local authorities, and by non governmental bodies that affect a service supplier's ability to supply services through one of these modes is in accordance with the obligations of GATS³⁴. Members are exempt, however, from applying GATS obligations to those service suppliers that are supplying the service "in the exercise of

³⁰ GATS, art. I, para. 2. "Cross-border supply," as defined in GATS, is the most utilized mode of telecommunications trade. For instance, this would be the carrying of voice telephony over a network that transcends national borders. [ITU, World Report] Some countries bound themselves to the other modes of supply, but not to this mode. For example, Hong Kong, in its 1994 Schedule of commitments on value-added services, did not bind itself to giving market access or national treatment for cross-border supply even though it made commitments for all of the other modes. See WTO Secretariat, Hong Kong, Schedule of Specific Commitments, GATS/SC/39, 94-1037, at 11 (Apr. 15, 1994).

³¹ GATS, art. I, para. 2. "Movement of customers" is of growing importance to telecommunications services as advances in mobile communications technology allow geographic flexibility and movement of the consumer equipment unit, such as use of mobile telephones linked to roaming satellites or use of a calling card. [ITU, World Report]

³² 96. GATS, art. I, para. 2(c). "Commercial presence" is defined as any type of business or professional establishment, including through (i) the constitution, acquisition or maintenance of a juridical person [such as a corporation, trust, partnership, joint venture, or association], or (ii) the creation or maintenance of a branch or a representative office within the territory of a Member for the purpose of supplying a service.

³³ In the case where there is commercial presence abroad, this would be of significance for managerial and technical operations. However, when labour is the only interest abroad, presence of natural persons abroad may be significant in those instances where a developing country is receiving technology transfers or is implementing a program of temporary privatization to effect upgrades in technology or infrastructure. For instance, in Build-Operate-Transfer (BOT) arrangements, the foreign investor would need to place its natural persons in the foreign country in order to operate temporarily the facility. [ITU, World Report]

³⁴ "[M]easures by Members affecting trade in services" is defined by GATS to encompass measures with regard to:

- (i) the purchase, payment or use of a service;
- (ii) the access to and use of, in connection with the supply of a service, services which are required by those Members to be offered to the public generally;
- (iii) the presence, including commercial presence, of persons of a Member for the supply of a service in the territory of another Member.-- art XXVIII (C).

governmental authority."³⁵ The overall objective of the GATS, to liberalize trade in services, is similar to the objective of GATT, to liberalize trade in goods. However, the general obligations that the Parties must undertake in GATS, such as applying MFN treatment to foreign service suppliers, ensuring transparency, and reducing non-tariff barriers, are quite unique in many respects in their application to services.

1. Most-Favored-Nation Treatment

Article II of GATS requires that Members “accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favorable than that it accords to like services and service suppliers of any other country.”³⁶ Under the MFN obligation, all countries, whether they have state-owned or privatized infrastructures should allow access to their market on a nondiscriminatory basis between service providers from different countries³⁷. While the concessions made as a result of the basic telecommunications negotiations are similar to those made in a plurilateral agreement [in that only those Members that were part of the negotiations are bound], MFN is not granted on a “conditional” basis as with the plurilateral agreements. Thus, all Members that made basic telecommunications commitments are bound to grant the

³⁵ GATS, art. I, para. 3(b). The GATS states, though, that measures affecting trade in services must conform to GATS obligations when the measures would cover a governmental supplier that is either supplying the services on a commercial basis or supplying the services in competition with another supplier. *Id.* art. I, para. 3(c). Therefore, under the Parties’ negotiations of basic telecommunications services, this provision would subject PTOs to GATS principles unless the Parties specifically exempted their domestic PTO from the obligations.

³⁶ GATS, art II, para 1.

³⁷ For instance, MFN would require the United States to be country-neutral to all Members of the WTO that wanted to provide services in the U.S. market—regardless of the level of openness of those countries’ markets to U.S. service providers. Countries would be in violation of the MFN principle for telecommunications if they, for instance, acted discriminatorily when granting licenses to operate or own networks, giving interconnection rights, setting access fees, and assigning radio frequencies to wireless services.

benefits of those commitments on an MFN basis to all WTO Members regardless of those Members' participation in the basic telecommunications negotiations. In effect, all Members to the WTO receive the benefits of the telecommunications negotiations, but not all Members are bound by the resulting negotiations. There is a caveat, though. The MFN provision in GATS can be excepted. All countries guarantee MFN treatment in all service sectors, but they are authorized to accord particular countries less than MFN treatment as long as they list these exemptions in their MFN Article II Schedule in accordance with the requirements of the Annex on Article II Exemptions. The GATS requires that the exempting Member notify the Council on Trade in Services of all MFN exemptions it takes, state a date of termination of the exemptions that should not exceed ten years³⁸, make the exemptions, subject to a five-year review by the Council for Trade in Services and make the exemptions subject to future negotiations³⁹. This divergence from GATT's MFN application, which does not allow such exemptions reiterates that the "fungibility of goods" concept does not apply equally to services.

2. Transparency

As with GATT, transparency is a core principle of GATS. Article III requires that each Member publish all international agreements to which it is a party that affect trade in services as well as "all relevant [domestic] measures of general application which pertain to or affect" the provision of services. The Members must also notify the Council

³⁸ GATS, Annex on Article II Exemptions, Apr. 15, 1994, WTO Agreement, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 352, (GATT Secretariat 1994), 33 I.L.M. 68 (1994) [hereinafter GATS, Annex on Article II Exemptions]. paras. 5-6. The provision states that "in principle, such exemptions should not exceed a period of 10 years." Ibid. para. 5 (emphasis added). However, many countries listed their MFN exemptions as "indefinite." The United States, for instance, listed indefinite on every MFN exemption it took. GATS, The United States of America, Final List of Article II (MFN) Exemptions, GATS/EL/90, 94-1153 (Apr. 15, 1994).

³⁹ Ibid., para 4 (a) -The Council will review the exemptions to determine "whether the conditions which created the need for the exemption still prevail."

for Trade in Services about any new measures that “significantly affect trade in services.” Although, Members are not obligated to publish any information that is confidential.⁴⁰

3. Other Non-tariff Barriers

Articles VI and VII of GATS, which deals with “domestic regulation” and “Recognition” are of core importance to the telecommunications sector. The Members to the basic telecommunications negotiations set out guidelines in these areas. A non-tariff barrier to the services sectors are often considered prohibitive or so to say tools to slow the process of “progressive liberalization”. These articles lay the guidelines for Members to identify and negotiate the reduction of specific service sector non-tariff barriers, such as criteria for licensing, anti-competitive business practices, and activities of monopoly providers. Article VI requires Members to ensure that “measures of general application affecting trade in services are administered in a reasonable, objective and impartial manner”,⁴¹ to ensure that licensing schemes or other such qualification requirements are administered in a manner that is fair to the applicants and are based on standards that do not nullify specific sectoral commitments⁴²; and to put in place, when practicable, a mechanism for review of administrative decisions that affect a provider’s ability to supply services⁴³. Article VII addresses licensing criteria as technical barriers to trade. The Article allows Members to impose autonomously their standards and criteria for denying certifications or licenses. Preferably, Members should agree,

⁴⁰ GATS, art III *bis*.

⁴¹ GATS, art IV, para 1.

⁴² *Ibid.* art. VI, paras. 3, 5(a). When determining whether a Member’s licensing and qualification requirements or technical standards are being used to nullify a commitment, standards of international organizations will be considered, *id.* para. 5(b), as well as the disciplines on standards that are established by bodies of the Council on Trade in Services. *Ibid.*, para. 4.

⁴³ *Ibid.*, art. VI, para. 2.

in a multilateral forum, to use internationally recognized criteria for licensing⁴⁴. However, where this option is not practical, Members may enter into bilateral arrangements for mutual recognition criteria ⁴⁵, or a Member may continue to set its standards unilaterally⁴⁶. Procedurally, however, the criteria for the licensing or certification of a service supplier cannot be applied in such a way that would discriminate between countries or that would constitute a disguised restriction on trade ⁴⁷.

Although most of the obligations of GATS concern measures taken by Members that affect trade in services, Article IX addresses business practices that restrict trade in services. Members are not obligated to end such restrictive business practices, but they are required to consult with another Member that complains about such practices and to "accord full and sympathetic consideration" to that Member's request⁴⁸. Granting a monopoly share of a service market to a domestic supplier is generally inconsistent with the goal of market liberalization, but such practice is common for the basic telecommunications service sector. Although the Members recognize that the elimination of monopoly suppliers in these sectors is a decision that individual countries should have the sovereign right to make based on their national objectives and their domestic anti-competition policy, the Members have committed not to let these monopolies become an additional barrier. Therefore, the Members allow monopolies to stay in place, but subject their operation to

⁴⁴ GATS, art VII, para 5.

⁴⁵ Ibid., para. 1. When the bilateral arrangement is used, the parties to the arrangement must notify the Council for Trade in Services of the arrangement, id. para. 4(b), and they should allow other interested Members to become party to the recognition arrangement. Ibid. para. 2.

⁴⁶ Ibid., para. 1.

⁴⁷ Ibid. art. VI, para. 3.

⁴⁸ Ibid., art. IX, para. 2.



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certain obligations. Any monopoly supplier of a service⁴⁹ must, within its relevant market of monopolization, comply with the Members' general obligations and specific sector commitments,⁵⁰ and, outside its monopolized market, it must not abuse its monopoly position or act inconsistent with any of the Members' commitments⁵¹.

GATS Specific Commitments - market access and national treatment are incorporated in a different Part of the Agreement than the General Obligations because the Members are bound only by these two principles if they make an affirmative commitment in their Schedule to be bound. Whereas, for the General Obligations, Members are bound by the principles for all service sectors, unless otherwise excepted in their Schedules.

1. Market Access

The market access commitment compliments MFN and national treatment obligations. The principles of MFN and national treatment state that if a country allows others to enter its borders and to operate in its market, it should do so on a nondiscriminatory basis. The principle of market access goes one step further and states that a country should allow the highest possible access to its market, for instance, by not imposing certain types of quotas or quantitative restrictions. The market access principle applies to services differently than it does to goods. Under GATT, market access encourages tariffication, which is the transfer of non-tariff barriers into tariff barriers, and then it requires the overall reduction or

⁴⁹ A "monopoly supplier of a service" is "any person, public or private, which in the relevant market of the territory of a Member is authorized or established formally or in effect by that Member as the sole supplier of that service." Ibid. art. XXVIII(h). Also, the obligations on any "monopoly supplier of a service" apply as well to those "exclusive service suppliers, where a Member, formally or in effect, (a) authorizes or establishes a small number of service suppliers and (b) substantially prevents competition among those suppliers in its territory." Ibid., art. VIII, para. 5.

⁵⁰ Ibid., art. VIII, para. 1.

⁵¹ Ibid., para. 2.

phasing out of tariffs. Market access, as applied to services, includes allowing a country to provide services through the four modes of supply such as cross-border supply and commercial presence abroad. Article XVI does not require Members to open their service markets to foreign service suppliers. It only states that when a Member undertakes sector-specific market access commitments in its Schedule, they must be within certain parameters. Before the conclusion of the 1997 Negotiations, Members' individual market access concessions were fairly narrow for the telecommunications sector. However, following the basic telecommunications deal of 1997, the market access commitments provide considerable foundation.

2. National Treatment

The principle of national treatment requires a country to grant foreign service-providers treatment no less favorable than it grants its own domestic service suppliers. For basic telecommunications, this means that foreign suppliers must have the opportunity to receive the same access to the public networks as a national provider, regardless of whether that provider is public or private. There are serious implications to the application of national treatment in a market that is dominated by a government-operated service provider that is supplying services on a commercial basis or supplying the service in competition with another supplier. These telecommunications specific problems prompted many of the GATS Members to take national treatment exceptions to their commitments. In GATS, unlike GATT, the national treatment requirements are not mandatory⁵². A country has to undertake the national treatment commitments in its Schedule sector by sector in order to be bound by the principle, and a Member is not responsible for the inherent disadvantages that a foreign supplier faces in the Member's market due to consumer preferences for domestic supply. Even after undertaking the

⁵² Ibid., art XVII.

commitments of national treatment, a Member can specify conditions or qualifications to such commitments.

GATS Exceptions to Obligations

1. General Exceptions

There are exceptions in Article XIV of GATS, similar to those in Article XX of GATT, that allow countries to adopt measures inconsistent with an obligation as long as the measures are not disguised restrictions on trade and they are: “(a) necessary to protect public morals or to maintain public order; (b) necessary to protect human, animal or plant life or health; [or] (c) necessary to secure compliance with laws or regulations which are not in-consistent with the provisions of this Agreement”

2. Security Exceptions

GATS, Article XIV *bis* allows a Member to withhold information or take actions that are necessary to its essential security interests. This provision is similar to the generally applicable national security exception in GATT⁵³ that “is so broad, self-judging, and ambiguous” that it can be used essentially for whatever a country desires⁵⁴. Some countries that have fought the trend to liberalize their telecommunications service sectors cite national security concerns.

3. Safeguards for the Balance of Payments

Members have an option in the International Telecommunication Convention and in GATS, Article XXII to take a balance of payments exception, which allows Members to suspend

⁵³ GATT, art XXI.

⁵⁴ John H. Jackson, *The World Trading System: Law and Policy of International Economic Relations* (1989) p. 204 (1989) (referring to an instance in which a country claimed that it had to maintain restrictive measures for shoe facilities because “an army must have shoes!”). However, the GATT national security exception has been rarely used. *Ibid.*, at 204-05.

their telecommunications service obligations⁵⁵. However, this is not a likely tool for protectionism because when this exception is taken, it has to be done under fairly strict guidelines⁵⁶.

Though the GATS provisions are or core concern to the service sector⁵⁷, it also encourages the WTO Members to continue negotiations on specific commitments under the Agreement⁵⁸. Article XIX of GATS calls for a general round of negotiations on services, and sets out the parameters for these negotiations. Also, further negotiations are scheduled for specific topics, which are set out in the GATS Articles covering such topics. For instance, Article XV states that subsidies will be an area for further negotiation. The same applies to Article XIII on government procurement and Article X on emergency safeguard measures. In order to facilitate the commitments to liberalize their services markets, Members can negotiate further on a bilateral, plurilateral, or multilateral basis.

⁵⁵ See International Telecommunication Convention, Nov. 6, 1982, art. 20, S. Treaty Doc. No. 99-6, at 35 (1985). See also GATS, art. XXII.

⁵⁶ [a] shall not discriminate among Members; (b) shall be consistent with the Articles of Agreement of the International Monetary Fund; (c) shall avoid unnecessary damage to the commercial, economic and financial interests of any other Member; (d) shall not exceed those necessary to deal with the circumstances [that necessitated the exception to be taken]; (e) shall be temporary and be phased out progressively as the situation [that necessitated the exception to be taken] improves. GATS, art. XII, para. 2.

⁵⁷ Like the issue of subsidies. As with the negotiations on goods, Members recognized that subsidies, in some instances, distort the effects on trade in services, and all Members, therefore, should strive to avoid giving subsidies. At the same time, the solution could be "sympathetic consideration" because the service sectors have traditionally been state owned, the subsidies provision in GATS, not surprisingly, is weak. When the state owns and operates the public telecommunications net-work, it will often subsidize cross-sectors of the telecommunications markets. For example, it may use its revenues from the basic service sectors to subsidize those markets that it has opened up to competition. It may be harder to negotiate specific reductions in telecommunications subsidies because unlike in goods, where the subsidy is often a direct payment or financial incentive, the subsidies to service providers will likely be favorable licensing and interconnection arrangements. These types of subsidies are difficult to detect and hard to assess in value.

⁵⁸ GATS, art X, XIII, XV.

The principles of GATS are of indispensable significance to the telecommunications agreement in the present circumstances and more specifically the provisions on consultation and dispute settlement. The process of dispute settlement gives a legal basis and vindication against arbitrary use of the various obligations undertaken by the Members. If a Member believes that another Member is violating one of its obligations in the GATS framework, one of the Annexes, or in its Schedule of Commitments, then that Member can invoke the dispute settlement procedure under the WTO⁵⁹. Article XXIII, however, only provides a basic outline of authority and rights; it does not establish the procedural formalities for dispute settlement. The current rights and obligations are set out in the Dispute Settlement Understanding (DSU) of the WTO, which is referred to by GATS, Article XXIII⁶⁰. Dispute settlement procedures have developed over a period of time through practice and various rounds of negotiations. To address directly some of the problems of the pre-Uruguay Round dispute settlement procedures, the Members of the WTO made various changes that indicate their willingness to take more of a legal rather than diplomatic approach to dispute settlement. Currently, Members have recourse to the Dispute Settlement Body (DSB) without the ability of one party to block panel formation,⁶¹ without the consensus requirement that applied

⁵⁹ "If any Member should consider that any other Member fails to carry out its obligations or specific commitments under [GATS], it may with a view to reaching a mutually satisfactory resolution of the matter have recourse to the [Dispute Settlement Understanding]." GATS art. XXIII, para. 1.

⁶⁰ Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, WTO Agreement, Annex 2, The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts 404 (GATT Secretariat 1994), 33 I.L.M. 1226 (1994) [hereinafter 1994 Dispute Settlement Understanding].

⁶¹ The DSB must establish a panel no later than the second time it considers a panel request, unless there is a consensus against establishment. 1994 Dispute Settlement Understanding, *Ibid.*, art. 4

before 1994⁶², with strict time limitations,⁶³ with a right of appeal,⁶⁴ with the possibility of a cross-retaliation remedy,⁶⁵ and with the option of arbitration on the issue of retaliation.⁶⁶

Among other issues of crucial import is an understanding of the schedule of Specific Commitments and the Reference Paper. The Schedule of Specific Commitments is a unique feature of the GATS agreement and more particularly the sector-specific commitments on market access or national treatment. By listing a service sector in its schedule, a Member makes a binding commitment to allow foreign suppliers into its market and to treat them the same as its domestic suppliers. If any sector specific reservations will be taken, the Member must include those in its schedule as well. Each Member's Schedule of commitments consists of four columns, one for each of the following: a list of sectors and sub sectors, limitations on market

⁶² A Member can no longer block adoption of a panel report, authorization of retaliation, or time limitations for each step. The panel report has to be adopted by the DSB between 20 to 60 days after circulation to Parties unless a Party appeals or there is a consensus not to adopt the report. Ibid., art. 16. Parties can state in writing their objections to the report, but this will not have the effect of unilaterally blocking the report. Ibid.

⁶³ Overall, it is now possible to adopt a panel report within 14 months or less.

⁶⁴ Either party is authorized to make an appeal to the Appellate Body. 1994 Dispute Settlement understanding, art. 17. The appeal is limited to issues of law covered in the panel report, and the DSB must adopt the Appellate Report within 30 days unless there is a consensus not to adopt the report. The total time for the appeal is not to exceed 90 days.

⁶⁵ This is a significant addition to the 1994 agreement. The Multilateral Trade Agreements have been "packaged," and a Member that accedes to the WTO must accede to each agreement, including GATS. The preferred retaliatory action is within the same agreement and the same sector, such as among types of telecommunications services. If this is not possible, then retaliation may be effected within the same agreement but in a different sector, such as between telecommunications and financial services. Then, if those two alternatives are not possible, retaliation can be authorized within a different agreement, such as between telecommunications services and goods.

⁶⁶ The findings of arbitration are to be adopted by the DSB and implemented unless the DSB rejects by consensus the arbitration findings. 1994 Dispute Settlement Understanding, art. 25. The arbitration procedure is available only for the issue of when a Party must comply with panel and DSB recommendations. It is not for the issue of whether the Party is ultimately liable to comply with the recommendations because "liability" or noncompliance under the terms of GATT—is locked in by adoption of an unfavorable panel or appellate report.

access for the listed sectors, limitations on national treatment for each sector, and additional commitments on each sector. There are twelve general categories of service sectors of which communications is one.⁶⁷ These are broad categories whose scope can be expanded or minimized by Members. Additionally, Members may leave any of the categories out of their Schedules. The limitations on the market access column must contain any limitations on the number of service suppliers, such limitations must be listed for each of the four modes of supply: cross-border supply, consumption abroad, commercial presence, and presence of natural persons. The limitations on national treatment column follows the same general format as the market access column. Once a commitment is made in a Member's Schedule, it cannot be withdrawn unless the commitment was one that did not benefit any other Member or the withdrawing Member gives a compensatory adjustment in the case that there was a benefit withdrawn under Article XXI, Modification of Schedules.⁶⁸ If compensation is not given under this provision, the injured Member can request consultation with the withdrawing Member or utilize the dispute settlement mechanisms of the WTO DSB, which can result in required compensation.⁶⁹

Many commitments on the regulation of the basic telecommunications services industry were agreed upon multilaterally and were set out in a Reference Paper, which was adopted by the negotiating group in April 1996. Adopting the Reference Paper was an attempt by the Members to address some of the specific domestic

⁶⁷ In order to ensure that inconsistencies between Members' Schedules do not become an additional barrier to trade, the WTO identified twelve sectors that Members should use as a framework for listing their sectoral commitments. At the time GATS was adopted, these included: (1) business, (2) communication, (3) construction and engineering, (4) distribution, (5) education, (6) environment, (7) financial, (8) health, (9) travel and tourism, (10) recreation, culture, and sports, (11) transportation, and (12) other.

⁶⁸ GATS, art XXI, para 2(a).

⁶⁹ Ibid., art. XXII (concerning consultation), art. XXIII (concerning dispute settlement).

barriers that service providers are most frequently faced with when they attempt to access the network of domestic PTOs. In the telecommunications industry, often it is not feasible for new entrants to build their own networks because even though the variable costs are generally low, the fixed costs are extremely high. Thus, the new entrants needed to be allowed to interconnect to the existing network of the dominant provider. There must be competitive-based principles in place that regulate the relationship between these new entrants and the dominant provider. Another requirement for robust competition is regulatory reform. Regulatory reform should also include the development of a fair appeal process for agency determinations regarding licenses and access charges. It appears that many of the commitments of the Reference Paper are modeled after U.S. telecommunications and antitrust laws and practices. It was felt that to further the process of liberalization, regulatory reform was needed, in part, because the laws and regulations covering telecommunications in most countries are anti-competitive in nature as the telecommunications market has historically been monopolized by the state. Additionally, unlike goods where the provider does not have much interaction with regulators beyond the country's borders, the service provider has significant interaction with regulators once inside the borders of a country.

The Reference Paper sets the framework for licensing procedures, interconnection to the public network, competition policy, transparency, and independence of regulators. Some of the Parties adopted the Reference Paper in whole, and others took some exceptions to elements of the Reference Paper, which were also attached in their Schedules.

a. Licensing

In the licensing process, new entrants often face both technical and procedural barriers. The technical barriers are loosely addressed in GATS. The Recognition provision of GATS, Article VII, says that the

domestic body with the authority to review a license application should not use technical or non technical criteria as a “disguised restriction” on trade in services. The Reference Paper further requires the domestic regulatory body to provide the criteria, terms and conditions, and reasons for the denial of a license application.

b. Interconnection

To have full facilities of competition, new entrants must be given interconnection rights to connect to the public networks. Optimal market access depends on multiple options: interconnecting to private and public networks, leasing available circuits, sharing leased circuits, interconnecting between leased and switched works, and reselling transmission capacity. Additionally, the terms of interconnection must provide adequate technical interface, provide adequate usage and supply conditions, and be based on competitive tariffs. The Reference Paper sets the interconnection framework. Interconnection must be done on nationally based MFN principles. The technical standards and specifications, and other conditions must be transparent and reasonable, and they must regard economic feasibility. Rates should be cost-oriented, transparent, and reasonable, and they should regard economic feasibility and be unbundled.⁷⁰ Transparency is a requirement for the terms of interconnection as well as for the concluded interconnection contracts. An independent domestic body should be made available for commercial dispute settlement. By way of example, these liberalized interconnection rules are especially important to the international cellular market, which has had an appreciable impact on communications technology. Cellular service providers, which provide radio-based services, depend heavily on local exchange

⁷⁰ Unbundling of services is when the PTO allows the applicant, for a right of interconnection, to acquire only those services that it needs to service its potential customers.

carriers and inter exchange carriers to connect the land line system with the cellular system.

c. Anti-competitive Practices

Rules on licensing and interconnection fit hand-in-hand with competition laws that prohibit market participants from limiting access to an essential facility and thus keeping out competition. The Reference Paper incorporates the U.S. antitrust concept of market power. To avoid anti-competitive effects, the Members are to ensure competitive safeguards, by preventing the dominant supplier from (1) engaging in anti-competitive cross-subsidization; (2) using information with anti-competitive results; and (3) withholding technical information that is necessary for an entrant to compete⁷¹.

Finally, nondiscrimination safeguards are supposed to be implemented by Members. Safeguards are rules that prevent the dominant carrier from abusing its market power against potential entrants. Abusive actions would include: the cross-subsidization of competitive service with revenues from non-competitive public network services; the overcharging of competitors for access to the Public Telecommunications Network (PTN). Cross-sector subsidization is a significant barrier to full and fair competition. In many countries, service providers use a certain clientele to subsidize another—long-distance and international services to subsidize local services, urban customers to subsidize rural customers, and businesses to subsidize residential consumers. Usage revenue can also be used to subsidize network upgrades, and revenue from one sector, such as cellular, can be used to subsidize another, like wire-line. Finally, telecommunications service fees can be used by a PTO to subsidize unrelated telecommunications infrastructure costs, or even non telecommunications obligations of the government. The Reference Paper sets out the general prohibition on cross-sector subsidization,

⁷¹ Reference Paper, para 1.2.

but it does not set the specific initiatives that have to be taken in order to ensure competition. However, a fully competitive policy would require service providers to keep separate accounts and would allow tariff rebalancing.⁷²

d. Transparency

Never before have the Parties to the WTO negotiated successful transparency for a market that is as pervaded by government participation and regulation as the telecommunications equipment and service market. The regulation related obligations are much more specific under the concluded Agreement on Basic Telecommunications than under GATT and GATS. Transparency for telecommunications includes making available regulations and tariff schedules that govern the provision and utilization of services, an activity inherently within the borders of a country.

e. Independence of Regulators and Review of Decisions

There needs to be independence between the telecommunications regulators and the telecommunications service providers. While the rules must be accessible to the private sector, the regulators must be detached, that is, have no economic or political interest in the outcome of making rules, granting and renewing licenses, reviewing supplier agreements, resolving disputes, and applying sanctions. The Reference Paper further requires the regulatory body [to be] separate from, and not accountable to, any supplier of basic telecommunications services. GATS requires the Members to “maintain or institute as soon as practicable judicial, arbitral or administrative tribunals or procedures which provide, at the request of an affected service supplier, for the prompt review of,

⁷² Tariff rebalancing is when: (1) fixed charges are raised relative to usage charges, particularly in the case of line rentals; (2) local charges are raised, for example, by decreasing the size of the local call zone; (3) long-distance and international calls are reduced with a greater use of off-peak tariffs; and (4) service providers are allowed to reduce rates for high-volume users. ITU, World Report, (1994).

and where justified, appropriate remedies for, administrative decisions affecting trade in services.” The Reference Paper requires that an effective appeal procedure be in place and that the decisions be “impartial with respect to all market participants.

In addition to the exceptions in GATS⁷³, there are two telecommunications specific exceptions to the commitments in the Reference Paper- scarce resources and universal service.

a. Scarce Resources: The provision is intended for allocations of resources such as radio spectrum. The scarce resources exception ensures that procedures for allocation are carried out in an objective, timely, transparent, and nondiscriminatory manner⁷⁴. In effect, the provision may allow a country effectively to cut out new entrants for certain telecommunication sectors. For instance, a country may have a spectrum width of thirty-five for a particular service. It could reserve twenty for its PTT, keep five for non interference, and auction off ten, which would have to be divided non discriminatorily among all new entrants. This creates a technical problem for the new entrants that can affect both their ability to provide services and the quality of those services.

b. Universal Service Obligation [USO): Theodore Vail, then head of AT&T, developed the USO concept in 1914 to avoid antitrust litigation by the United State's department of Justice, in return for AT&T's monopoly being continued. Vail proposed that no person who wanted a telephone connection would be denied one, no matter how remote the area he lived in, how much it would cost AT&T, to lay cable to

⁷³ The five general exceptions: public morals; public health; GATS consistent domestic laws; national security; and balance of payments.

⁷⁴ The complete provision reads:

Any procedures for the allocation and use of scarce resources, including frequencies, numbers and rights of way, will be carried out in an objective, timely, transparent, and non-discriminatory manner. The current state of allocated frequency bands will be made publicly available, but detailed identification of frequencies allocated for specific government uses is not required. Reference Paper, para 6.

him, or how few calls he made. Irrespective of the cost, AT&T, would provide him the same range and quality of services at rates identical to those it charged in metropolises⁷⁵. Other USO terms were providing emergency services at no charge and installing numbers of public payphones⁷⁶. According to Mr. M.S. Verma, the present chairman of the Telecom Regulatory Authority of India (TRAI), "the USO is a dynamic concept that provides for nation-wide coverage, non discriminatory access and wide spread affordability."⁷⁷ This is by far the most controversial feature of the Reference Paper and is seen as an anti-thesis to competition. A common reason cited for failure to liberalize the telecommunications sector are some goals of universal service, such as providing basic telephone services to rural or low-income areas, would not be met in a fully competitive environment. Under the Reference Paper, each country can define its own objectives for universal service.⁷⁸ Conceivably, steps taken to implement an aggressive universal service program that has the government taking the lead role could run contrary to most of the commitments in the Reference Paper, including licensing, inter-connection, allocation of spectrum, and independence of the regulatory body. The Member can take action, however, to implement such a program, and the action will not be considered anti-competitive *per se*, as long as it is ministered in a neutral manner and is "not more burdensome than necessary." Universal service is one of the most significant issues driving domestic basic telecommunications policy. It is an especially pressing goal for developing countries. One of the most significant challenges faced by developing and emerging countries is their lack of comprehensive infrastructure that will provide, at a minimum, basic services. There

⁷⁵ Ravivisvesvaraya Prasad, *Old Obligations are Costly*, *The Telegraph* daily, Calcutta, 18th July, 2000.

⁷⁶ Ibid.

⁷⁷ *The Economic Times*, Calcutta, 5th July, 2000.

⁷⁸ Reference Paper, para. 3.

are traditional ways of addressing this hurdle, namely, maintaining government operation of the infrastructure or subsidization of the services. Alternatively, there are some newly emerging ways to address the need for basic services, such as encouraging multinational conglomerates to finance telecommunications projects⁷⁹ in developing countries or allowing revenue from liberalized international trade in services to finance the developing country's domestic market need for telecommunications infrastructure. In order to implement a universal service program domestically, a government could take a variety of approaches, but most of these will not be consistent with the spirit of GATS or the 1997 Telecommunications Commitments. For instance, owning the telecommunications infrastructure and cross-subsidizing the economically disadvantaged classes in society is not consistent with the Reference Paper, and socializing a private market through tax-funded subsidies may not be consistent with future negotiations on subsidies under GATS.

In sum, the new telecom deal provide important dimensions to this vital sector and back bone of the economy. The new deal, sets the path for better market access for international players and telecom giants, to invest in the prospective markets of the developing nations. For it will be only the developing countries, that have a poor tele-density⁸⁰ who will tap their funds thorough the means of Foreign Direct Investments (FDI⁸¹) and a host of other investment opportunities.

⁷⁹ As it sought to be achieved in India. See the National Telecom Policies of 1994, 1999. However, it has been the subject of criticism, and opposition.

⁸⁰ Measured on the basis of number of telephones per hundred persons.

⁸¹ India has invited 100% foreign equity for the sector. *The Economic Times*, Calcutta, 13th July, 2000.

CHAPTER III

The Indian Legal Scenario

Background

The Indian telecom sector, like most other infrastructure sectors is controlled by the state. It was way back in 1851 that first telephone lines were laid in India. The operations of this sector are determined by the Indian Telegraph Act 1885¹. Till very recently, the Department of Telecommunications [DOT²], reporting to the Ministry

¹ The Indian Telegraph Act, 1885, 13 of 1885.

² The Department of Telecommunications was formed in 1985 when it Department of Post and Telecommunications was separated in to Department of Posts and Department of Telecommunications. However, with effect from October 15, 1999, the DOT has been bifurcated and a new Department of Telecom Services (DTS) was created. While the functions relating to policy, licensing, international relations, promotion of private investment, research and development and matters related to TRAI etc., have been retained with the DOT, DTS has been assigned all the service providing functions. (Government of India, Ministry of Communications, Department of Telecommunications and Department of Telecom Services, Annual Report 1999-2000). Now again, on June 25, 2000, the DTS has again been split into two - Department of Telecom Operations (DTO) and Department of Telecom Services (DTS). DTO will be responsible for operations and maintenance of telecom services in the country while DTS will be involved in the policy issues including the corporatisation of DTO and DTS. - *The Economic Times*, Calcutta, 26th June, 2000.

of Communications (MOC) was the key body for policy issues and regulation, apart from being the basic service provider in the country. Government of India through the Department of Telecommunications (DOT) administers the telecom services throughout the country. For this purpose the country is divided into 20 telecommunication circles and 4 metro districts. At present Basic Telecommunication Services are provided directly by DOT in all telecommunication circles and metro districts except in 2 metro districts (Bombay and Delhi) where a licensee of the government namely Mahanagar Telephone Nigam Ltd., [MTNL] a Government company, provides the same. International telecommunication services are provided by Videsh Sanchar Nigam Ltd., [VSNL], a Government Company.

Recently, A.F Ferguson, international consultant have valued DTS at about Rs 250,000 crores ³. However, what is significant and not much publicized fact is that most of it is self-financing, and build without any significant budgetary support. India operates one of the largest telecom networks in Asia comprising of about 23,000 telephone exchanges with a total equipped capacity of 21.50 million lines and 17.80 million working telephones, an extensive local and long distance Transmission Network with 166,230 route kilometers of terrestrial microwave radio relay and co-axial cables and about 76,261 route of Optical Fibre Cables. 310,687 villages out of about 600,000 villages in the country have been provided with telephone facility. The total number of stations connected to National Subscriber Dialing (NSD⁴) is over 16,010 and this is increasing fast,⁵ moreover, the subscriber base of DTS is growing at a more than

³ *The Economic Times*, Calcutta, 18th July, 2000. During the last fiscal DTS had a total revenue of Rs 17,000 crores and a surplus of Rs 7000 crores. See also - *The Telegraph* daily, Calcutta, 30th July, 2000.

⁴ Also called "Subscribers Trunk Dialling" (STD).

⁵ See- Indian Telecommunications: Telecom Commission - Ministry of Communications, leaflet, published in April, 1998.

twenty percent for the last five years.⁶ But what is significant and matter of concern is that, given the huge population and spread of India the telephone density (measured in terms of the number of telephone connections or Direct Exchange Line [DELS] per 100 people) is one of the lowest in the world⁷.

The Government of India recognizes that provision of world class telecommunications infrastructure and information is the key to rapid economic and social development of the country. It is critical not only for the development of the Information Technology industry, but also has widespread ramifications on the entire economy of the country. It is also anticipated that going forward, a major part of the GDP of the country would be contributed by this sector. Accordingly, it is of vital importance to the country that there be a comprehensive and forward looking telecommunications policy which creates an enabling framework for development of this industry.⁸

Realizing the need to further the development in the sector, the National Telecom Policy was announced in 1994 wherein core sectors was opened to private participation⁹. Whereby, India became one of the first countries to liberalize telecom services. Back then USA, UK, Australia and Japan were the prominent economies that had liberalised the sector, Europe began the process of opening up the sector very late in 1998.

⁶ *The Economic Times*, 21st July, 2000.

⁷ The present telephone density in India is about 0.8 per hundred persons as against the world average of 10 per hundred persons. It is also lower than that of many developing countries of Asia like China (1.7), Pakistan (2), Malaysia (13) etc. There are about 8 million lines with a waiting list of about 2.5 million. [source NTP 94]. However, tele-density has risen to 2.1 lines per 100, compared to the world average of 10 per people. (*The Economic Times*, New Delhi, 10th February, 2000).

⁸ View of DOT - <http://www.dotindia.com/flash/NewTelPo_Details.htm> (visited on 11.6.2000).

⁹ NTP 94 allowed entry of private operators in mobile cellular and basic telecom services at the state level.

The NTP 1994 targeted to cover all the 600,000 villages in the country and provide a PCO for every 500 persons in urban areas by the year 1997. In line with the objectives envisaged in NTP 1994, the efforts of the DOT resulted in providing 7.5 million lines during the 8th five-year Plan, exceeding the target. But given the gigantic task, the achievement did fall short of the target of providing 8.73 million telephone lines envisaged as per NTP 1994. For putting the developments in this sector in perspective, it may be stated that the supplementary efforts as envisaged in the NTP 1994 for providing telephone lines by the private basic telephone operators did not actually fructify. NTP 1994 had recognized the fact that the resources of the government would be inadequate to achieve the targets set in the policy document and, for that purpose it envisaged opening up the basic telephone service segment for participation by the private sector. The government invited bids for private investment in 1995 through a competitive process so as to introduce an additional operator in each service area. Though the response to the invitation of the bids by the government was overwhelming, the progress in terms of private operators becoming operational in various service areas has not been encouraging. Reasons for this among others could have been, it seems, incidence of high up-front license fee, unrealistic market-size projection by the bidders, failure of the private operators to make their projects bankable for effecting financial closure. The government recognizes that the result of the privatization has so far not been entirely satisfactory. While there has been a rapid rollout of cellular mobile networks in the metros and states with currently over 2 million subscribers¹⁰, most of the projects today are facing problems. The main reason, according to the cellular and basic operators, has been the fact that the actual revenues realized by these projects have been far short of the projections and the operators are unable to arrange financing for their projects. Basic

¹⁰ *The Economic Times*, Calcutta, 21st July, 2000.

telecom services by private operators have only just commenced in a limited way in two of the six circles where licenses were awarded¹¹. As a result, some of the targets as envisaged in the objectives of the NTP 1994 have remained unfulfilled. The private sector entry has been slower than what was envisaged in the NTP 1994¹².

Legal Setup

Before India's tryst with ushering in privatization in the sector, legal setup for the sector was similar to various other countries and it was essentially a monopoly service regulated and managed by the government as per the Indian Telegraph¹³ Act, 1885. It was the prime statute that used to govern this vital sector and all the needed powers to run the sector on a monopoly footing was granted to the Central Government. Even as of today, the Government of India has the "exclusive privilege¹⁴" for providing telecommunications services. However, the government may authorize a licensee to provide these services under specified conditions¹⁵. The Director General Telecommunications is invested with the power to issue licence. In fact the licences granted to private operators when the sector was opened up following the NTP 94; were made pursuant to this section.

¹¹ Six Basic Service Providers have licenses for providing Basic Telephone as on 31.3.2000. three of the six viz., Bharti Telnet, Tata Teleservices and Huges Ispat Ltd., have started their services in the state of Madhya Pradesh, Andhra Pradesh and Maharastra respectively.

¹² National Telecom Policy 1999, (NTP 99).

¹³ The title of the Act uses the word "Telegraph" and not telecom or telephone, and nowhere the words are used, however following the broad definition of the word "telegraph" telecom could be suitably included.

¹⁴ Section 4 (1), of the Indian Telegraph Act, 1885, grants the government "exclusive privileges" in operating telecom services. The proviso to the said sec 4(1) entitles that "the Central Government may grant a licence, on such conditions and in consideration of such payments as it thinks fit, to any person to establish, maintain or work a telegraph within any part of India."

¹⁵ Ibid. "The old Telegraph Act had enough flexibility to issue licenses,.....in most cases we found that replacing the Telegraph by Telecom will be enough" comment of an official of sub group headed by constitutional expert Fali S. Nariman. *The Economic Times*, Calcutta, 18th January, 2000. On the issue of changes needed in the Indian Telegraph Act, 1885.

The Act also grants various other important authority to the Central Government. Accordingly, it had the power to establish "telegraph" on land of "Railway Company"¹⁶. It empowers the government to take possession of licenced "telegraphs" and to order interception of messages¹⁷. It authorises the power to notify rates for transmission of messages to countries outside India¹⁸, however paying regard to the rate of dollar, the charges of other countries, and other important criterion. Section 7 of the Act, grants wide powers to the government, whereby it can frame rules for the conduct of telegraphs, and importantly among other provisions, it authorizes the government to fix the rates at which the services be provided. The Act also has extensive provisions enabling the government to lay telephone lines. Though the Act provides for arbitration of disputes, the clause stipulates that for disputes arising under the Act will be settled by arbitration, by an arbitrator appointed by the government and no appeal shall lie against the decision of the arbitration. In sum, the Act provided all the needed powers to the government to run the sector on a monopoly basis.

India is also a party to the GATS agreement and the new Basic Telecommunication¹⁹ Agreement of the WTO, concluded in 1997.

¹⁶ Section 6, The Indian Telegraph Act, 1885.

¹⁷ section 5, Ibid.

¹⁸ sec 6, ibid., interested by Act 33 of 1971, s.2

¹⁹ The following is an extract from India's response to the questionnaire to the Negotiating Group on Basic Telecommunications (NGBT), established under GATS to negotiate the basic telecom pact about what does *basic telecom mean for India*: What are considered to be basic telecommunications under your regulatory regime? How are they defined? How does your regulatory regime define that which is not considered basic telecommunications?

In the Indian Government's Laws and Regulations relating to telecommunications, there is no definition of Basic Telecommunications. However, for the purposes of reply to this questionnaire, the word "basic telecommunication services" is assumed to cover the following services:-

- a. Voice telephone services
- b. Packet-switched data transmission services
- c. Circuit switched data transmission services
- d. Telex services
- e. Telegraph services

Following the requirements of the WTO telecom agreement of 1997, India has tabled her commitments as required under the agreement - namely the Schedule of Specific Commitments²⁰, List of Article II Exemptions²¹, Answer to the Reference Paper and Response to Questionnaire on Basic Telecommunications.

A study of India's specific commitment essentially reiterates its position as taken in the National Telecom Policies. Accordingly it has opened for private participation the Fixed Service (Basic Service) category, whereby one service provider would be given license to operate land based phones. These companies (licensees) will be required to maintain a balance in their coverage between urban and rural areas. Their conditions of operations will include agreed tariff and revenue sharing arrangements. For this purpose, the country is divided into 20 territorial Circles and Delhi Metro district. In each of the telecommunication circles for the first ten years, one private operator will provide competition to the existing supplier, namely, Deptt. of Telecommunication. The competition for voice telephone service will be within the telecommunication circle/metro district. Inter circle/metro district long distance media will be provided solely by DOT initially for a period of five years after which the policy will be reviewed²². International telecommunication service will continue to be provided by the existing monopoly supplier i.e. Videsh Sanchar Nigam Limited (VSNL). The monopoly of VSNL over international long distance is scheduled to be opened for further consideration in the year 2004. As regarding cellular service providers - the provision is

f. Facsimile services

g. Private leased circuit services,

Note: Provision of 64 KBPS V-SAT based telecom networks for closed user groups is considered as a value added service. Provision of radio-based mobile voice telephone services is considered as a Value Added Service.

²⁰ GATS, WTO Doc: S/GBT/W/1/Add.24/Rev.1

²¹GATS, WTO Doc: S/NGBT/W/19

²² See the discussion on the opening up of National Long Distance, hereinafter.

made for two service providers and the position of the DOT/MTNL is however reserved²³

Regarding India's exemption from MFN treatment, though the concern raised by India in its schedule regarding the "accounting rate" is not essentially linked to present WTO telecom deal, and is settled by the ITU, yet it is of core concern for our country²⁴. The accounting rates in India for telecom services are settled on a basis whereby the long distance and international calls are charged more, so as to subsidize the low end rural telephony with a view to achieve the goal of Universal Service Obligation. Consequently, if India is to reduce her accounting rate-pattern as urged by international operators, though among other things which could be benefited, India's USO could be hit hard.

Following India's commitment undertaken in the Reference Paper of the WTO telecom deal to entrust the regulation of the sector to an impartial regulator, The Telecom Regulatory Authority of India [TRAI] has been constituted by the Telecom Regulatory Authority of India Act 1997²⁵. It was subsequently amended this year to frame an Appellate Tribunal²⁶. The TRAI is entrusted to "regulate the telecommunication services, adjudicate disputes, dispose of appeals

²³ However, this reservation is now relaxed and MTNL is permitted to operate cellular services.

²⁴ Para 7 of the Report of the GBT, 15th File, 1997, WTO DOC, S/GBT/4, elucidates the problem concerning accounting rates, accordingly the para states that. The Group noted that five countries had taken Article II exemptions in respect of the application of differential accounting rates to services suppliers of other Members. In the light of the fact that the accounting rate system established under the International Telecommunications Regulations is the usual method of terminating international traffic and by its nature involves differential rates, and in order to avoid the submission of further such exemptions, it is the understanding of the Group that: - the application of such accounting rates would not give rise to action by Members under dispute settlement under the WTO; and that this understanding will be reviewed not later than the commencement of the further Round of negotiations on Services Commitments due to begin not later than 1 January 2000.

²⁵ The Telecom Regulatory Authority of India Act , Act no 24 of 1997.

²⁶ The Telecom Regulatory Authority of India (Amendment) Act, Act , Act no 2 of 2000.

and to protect the interests of service providers and consumers of the telecom sector, to promote and ensure orderly growth of the telecom sector"²⁷

The formation of the TRAI is seen as a major step in the direction towards opening the sector to private participation. Though the old Indian Telegraph Act, 1885, has the provision to permit licencees to operate in the field, what concerned the private investors and mainly the foreign investors is to have a leveled playing field as between the dominant monopoly operator and the new entrant. Since, the nature of telecom services involves a host of factor and cannot work in isolation [say, it need interconnection, unbundling, to be successful). Uncertain rules, cannot thrive competition and it needed a strong regulator to settle disputes in an unbiased manner, upholding judicial propriety. It was with this aim that the TRAI was framed in 1997.

However, the TRAI failed on certain aspects. It all started as the incumbent operators MTNL and the DTS challenged most of the decisions of the TRAI in high court. Like the problems relating to interconnection powers rose from TRAI's attempt to introduce a Calling Party Pays [CPP) regime. Under such a regime, a call from a fixed to a mobile phone is charged more than a local call. Revenue derived from these calls are shared between the basic and the cellular

²⁷ Long title to the TRAI Act. Ibid. India's response to the Reference Paper in WTO *interalia* provided the following functions to be entrusted to the regulatory authority: 1. Fixation of Tariff. 2. Ensure technical compatibility among different service providers. 3. Revenue sharing arrangement between different service providers. 4. Protecting consumer interest, particularly in respect of: (a) time to contact (b) time to repair (c) frequency of break downs (d) call completion rates (e) fair billing administration 5. Resolving disputes between service providers. 6. Spelling out/ensuring compliance of time frames for making available local and DoT long distance circuits between service providers. 7. Facilitating competition and promoting efficiency in the sector as also facilitating growth and innovations in services. 8. Protection of national security interest. 9. Ensuring compliance of licence conditions by all operators and service providers and the stated overall pricing policy. 10. Ensuring effective compliance of universal service obligations. 11. Rendering advice to the Government in the national context on technology options, service provision aspects and other allied matters concerned with telecom industry in general. 12. Any other matter referred to by the Government.

operators. The tariff for calls from basic to cellular phones was fixed by TRAI in such a way that when the call answered, it registered as two local calls, while another local call was metered after one minute. TRAI had said that cellular operators would get eighty paise per local call. MTNL and the DTS said the revenue going to the cellular operators was excessive. They also argued that TRAI did not have the right to decide on revenue sharing in the first place. The Delhi High Court upheld this interpretation.²⁸ Though the verdicts were in favour of the MTNL and the DOT in most of the cases, the controversy between the regulator and the government operators sent a wrong signal to the investors. During the litigations, it was realised that the TRAI Act, 1997, needed amendments. Following same predictions, a new amendments to the TRAI Act, 1997, brought an end to two years of bitter controversy between the TRAI and the DOT. While addressing the joint session of parliament on 25th Oct, 1999, the President of India said, "the TRAI will be strengthened to increase, investors confidence and create a level playing field between public and private operators by suitably amending certain provisions of the TRAI Act"²⁹. The TRAI has been reconstituted with more powers. A telecom dispute settlement and appellate tribunal has been constituted to adjudicate appeals of the service providers. The DOT as a licensor has come under the purview of the appellate tribunal. The decisions of the tribunal can be challenged only in the Supreme Court.

The new amendment makes it mandatory for the DOT to seek TRAI's recommendations on the need and timing for introduction of new service providers, setting up the terms and conditions of licence to a service provider, and the revocation of licences for non-compliance of terms and conditions of licence. However, the recommendations are not binding on DOT. The industry wanted

²⁸ *The Economic Times*, 24th January, 2000.

²⁹ Government of India, Ministry of Communications, Annual Report, 1999, p.2.

TRAI's recommendations should be binding on the government.³⁰ The argument was that if TRAI's recommendations are not binding on the government, then TRAI will be reduced to a recommendatory body only. While, the DOT wanted that the regulator should not have any role in licensing issues. The DOT argument on the other hand was that no where in the world the regulator is the licensing authority. It appears that the government has selected a middle path by making it mandatory for DOT to seek TRAI's recommendations on licensing issues. It received wide acceptance from DOT, TRAI and the industry. Observers feel that amendment will strengthen the regulator as DOT will not be able to neglect TRAI. DOT will have to seek TRAI's recommendations on issues such as timings of new services and on the terms and conditions of licences. If DOT does not agree to a recommendation of TRAI, it will have to give reasons for it. According to the former chairman of TRAI Justice SS Sodhi³¹ the proposed amendment would strengthen the regulator as it would be mandatory for the government to seek TRAI's recommendations on all the important issue. The DOT officials are happy that the final licensing authority is with them. The amendment has given more powers to TRAI. Now TRAI will be able to set the terms and conditions of interconnection and will fix the revenue sharing between two operators. This is crucial for the success of the telecom liberalisation in the country. The government is in the process of opening up the national long distance (NLD) service sector. There will be more cellular and basic service operators in the foray. As more and more players enter the field, interconnection becomes important.

A fair and equitable interconnect regime is the bedrock of a multi-operator telecommunications system. Interconnection between different networks is, therefore, the most critical regulatory issue in telecommunications sector. This is recognized in the TRAI Act, where

³⁰ *The Economics Times*, 10th February, 2000.

³¹ *Ibid.*

under the Authority (TRAI) has been given complete powers to ensure effective interconnection between various networks/service providers. The Act also obliges the Authority to maintain a Register of Interconnect Agreements, open for public inspection. These regulations prescribe the modalities for the maintenance of Register of Interconnect Agreement between service providers and matters connected therewith. This Register would contain all Interconnect Agreements between service providers whether entered into before or after these regulations come into effect from September 1, 1999. The regulations make it mandatory for all interconnecting service providers to register with the Authority within 30 days of execution of any Interconnect Agreement to which they are parties. While the TRAI proposes to make available for public inspection the entire Interconnect Agreement, the regulations contain a provision for keeping, on request of a service provider, any part of the Interconnect Agreement confidential if there are adequate grounds for the same. Even when any portion of the Interconnect Agreement is kept confidential, information containing non-confidential summary of such part would be available for public inspection. The Authority, however, reserves with itself the right to reject any such request for keeping confidential a part of the Register or to disseminate confidential information of the register if in its opinion the disclosure of the information would be in public interest. Any Member of the public would be able to access the Register of Interconnect Agreements on payment of a nominal fee prescribed by the Authority.

The TRAI feels that the notification of these Regulations on Register of Interconnect Agreements, which have been finalized after an extensive consultative process as mentioned earlier constitutes another step forward in the direction of fostering healthy competition in the telecommunications sector and for creating an environment wherein the benefits of liberalization are passed on to the consumers in line with the objectives to which the TRAI is committed.

In sum, the amended TRAI seeks to establish a strong regulatory framework because it will determine the health of the industry, as the industry is privatised and competition allowed, regulation is introduced to define the structure of the industry. Regulation should ensure that customers are well served and that the economy is not disturbed. Another key issue is setting up a dynamic, highly competent and independent regulator that can steer the course of the industry over the next few years.

The telecom sector in India is at cross roads today. After the WTO deal on telecommunication it was envisaged that Foreign Direct Investment (FDI) would flow into the sector however not very significant memorandums of understanding (MOU) promising FDI has been made, though it is reasonably perceived that investments will flow. The government has adopted the process of further liberalisation. The National Telecom Policy 1999, though it endorses the basic thrust of the 1994 policy, recognizes the shortcomings which surfaced particularly in regard to the crisis faced by the private operators as a result of the high licence fee regime which was the outcome of an open bidding process. Now the operators can migrate from the system of fixed licence fee to the revenue sharing agreement. Opening of the National Long Distance has already been announced and it will come to effect from the 15th of August, 2000. Thereby any number of operators by paying a licence fee and deposit of about rupees five hundred crores, and who have a net worth of rupees two thousand five hundred crores, would be granted permission to privately operate NLD calls on a revenue sharing basis. A sunrise segment, Internet is definitely evolving a new paradigm in communications. According to sources, more than hundred companies applied for the license to operate the Internet services in the country. More than 25 Internet Service Providers (ISPs) have applied for a license to set up gateways for international connectivity. For first three years, VSNL had a monopoly in the ISP segment. The

competition began about a year back with the entry of MTNL in the field. In last one year, the prices have come down by more than 50 percent and the quality of services have improved. In order to meet the bandwidth challenge due to the growing the (DTS) is setting up a backbone network. The first phase on the national Internet backbone with a bandwidth of 8 mbps³² is slated to be complete across 45 cities at the end of the second phase, 536 cities will be covered.³³ With the opening up of the NLD sector everyone seems convinced that there will be enough bandwidth available for the Internet sector to boom and it will drive other markets like Personal Computers, telecom, networking and infrastructure.

Another sector which has performed well is the Very Small Aperture terminal (VSAT) segment. VSATs provide a reliable transmission medium for carrying data and voice for a virtual private network. VSAT networks with over 6500 installations, are emerging as a mainstream technology for retailers, manufacturers and financial institutions. However, the industry is facing a bandwidth problem. The industry wants that the VSAT operators should be allowed to lease transponder capacities from the foreign satellites. Currently, the policy limits restricts them to the INSAT series of satellites.

A new detailed Telecom Act is planned in light of the American Telecommunications Act 1996, which will so to say further the development of telecom in India. For it will ensure to level the playing field for the government operator and the private operator. The sector is also on the verge of disinvestment³⁴. Consequent with the policy of liberalization a new competition law to ensure standards in competition is envisaged. Accordingly, dominance will be allowed but abuse of dominance will not be allowed. This law is of vital

³² Mega Bytes Per Second.

³³ *The Economic Times*, New Delhi, February 17th, 2000.

³⁴ The employees of the DOT/MTNL are very opposed to this issue and they have called for a nation wide strike on the 24th and 25th of August, 2000, so as to protest against the same.

significance to the telecom sector. For given the huge set up needed to operate in the sector only big and serious players can survive in the future. So, there always remain that dominance of an excessive nature could deter free competition.

However, though private industrial players have welcomed the move of the government yet matters of concern loom large. Mainly, with concerns related to Universal Service Obligation (USO). For rural telephony is at a very bad shape in India. To give a better opportunity to the millions of Indians is a core concern. If we study the telecom history of practically all the nations, rural telephony has always been developed on subsidies either from long distance calls or commercial users, or a combination of these. In India the exact happens. The revenue from long distance ³⁵ provides the surplus for rural telephones. The recent decision to open the NLD sector to private participation could prove immoral to India's USO. Though private participants have welcomed the decision and are have welcomed the decision and are optimistic, negative repercussions have been received from DOT authorities. To quote one such concern "we use our surplus from long-distance revenue to surplus from long-distance revenue to fulfil our rural telephony targets. If we have to reduce rates because of competition from private companies, how will be install phones in villages?" ³⁶

Though the concern about USO has been provided as an exception to the new WTO telecom deal, and it gives a basis to subsidise the rural sector, yet concerns loom large. For though the WTO is silent on USO, if terms related to accounting rates are

³⁵ It is said that for a long distance revenue of Rs 100 the DOT earns Rs 75. Outlook Magazine, 24 July, 2000.

³⁶ Bharat Ahluwalia: Still a long Distance, *Outlook Magazine*, 31st July, 2000.

vehemently negotiated³⁷ whereby, countries would be obligated to charge accounting or call rates on cost basis negotiated at international standards, and provide interconnection on such negotiated rates, a little will remain to furnish the USO obligations and providing the teeming millions of rural India may remain a distant dream³⁸.

³⁷ US telecoms giants ask India to cut ISD tariff, *The Economic Times*, Calcutta, 21st June, 2000. In a recent development, USA has urged Japan to reduce by 41% the rates it charges for access to its network of domestic telephone lines. *Economic Times*, Calcutta, the 12th July, 2000.

³⁸ Though the recent TRAI paper of USO, talk about Universal Access Levy (UAL), it is to be negotiated on a reasonable basis.

CHAPTER IV

CONCLUSION

The role of telecom in the present situation is incomprehensible. The boom of Information Technology has concerned governments of all nations to give a top priority to this sector. Considering the huge initial investment required in this sector countervailed by slow rate of return makes it more tough for the developing countries as to how to tackle the scenario. Given the threats of new technologies replacing the old [say for example: the cellular phone segment has posed significant threat to the fixed service provider¹]. Given the limited means and the need of technology for a successful venture, essentially cloud the mind of national thinkers. It is envisaged that the telecommunication agreement reached by the World Trade Organization will accelerate the global trend toward increased market access, competition, and deregulation. A closer look would bring to light the realities of the agreement.

¹ The Fixed Service Providers are at constant threat of losing their market to mobile operators. The success of the "Gramin Telephone" programme in Bangladesh, whereby cellular phones have increasingly spread through various parts of Bangladesh. Grameen Bank in Bangladesh has done an excellent job by providing loans on mobile phones to the rural poor.

Although barriers and uncertainties may slow implementation of the agreement, it could prove to be a significant step as regards opening market access to the telecom sector concerned.

Many countries, such as the United States and the United Kingdom, (including India) were already well established on the track toward telecommunication market liberalization before the agreement was reached. In fact, most European Union countries were already planning to open their markets in January 1998. However, the agreement did provide an impetus for greater market access and accelerate regulatory reform in more than 50 additional countries that were previously deliberating on how to proceed with this vital sector.

This agreement is of notable impact and various pursuits have up been occasioned ensuing it. It focuses on basic telecommunication, including traditional telephony, data transmission, and telex and fax services carried over wire, fiber, radio, and satellite. The WTO accord is particularly important for international long-distance operators and for companies such as Globalstar that are planning satellite telephony systems.

Industry players are excited about the implications because of the new opportunities for globalization created by this agreement. The WTO agreement has three key implications:

- Increased opportunity for operators to integrate and control their international marketing and operations;
- Improved trade dispute resolution procedures and enforcement mechanisms to support market access;
- Reduced profitability for some telecom operators if accounting rate reform is accelerated.

INCREASED OPPORTUNITIES FOR MARKETING AND OPERATIONS

This scenario illustrates one of the key features of the WTO agreement for it provide increased opportunity for foreign control and ownership of infrastructure-based service providers. This is perhaps the most revolutionary aspect of the agreement, considering that until now, even the United States has prevented foreign majority ownership of telecommunication infrastructure, long considered a strategic asset vital to national security.

According to Charlene Barshefsky, the U.S. trade representative who helped negotiate the agreement, the scenario may be possible that within the next five years, companies will have access to "100 percent of the top 20 telecom markets worldwide." Most of the European Union countries, Japan, Australia, and the United States are committed to full market access by 1998, with few if any, of restrictions. A significant number of Asian and Latin American countries have also signed the WTO telecom agreement, although in some cases their commitments do not take effect until after year 2000, or they have excluded key services.

The increased opportunity for cross-border ownership will lead to further industry consolidation as companies convert financial investments into controlling ownership, weaving together their global networks. Companies involved in existing consortia, such as "Concert", "GlobalOne", "Sprint", "Unisource", may move to buy out controlling interest, as in the case of British Telecom's plan to increase its stake in MCI in Concert. Companies will accelerate their plans to enter partnerships with or purchase operators in developing countries or build new competitors. In many countries, companies will be able to bypass the incumbent operator completely and set up their own parallel infrastructures. Where interconnection with the incumbent's network is required, an improved regulatory environment should eventually increase the chances for fair interconnection terms. The chief result will be increased control of

pricing, marketing, operations, customer service, equipment standards, and purchasing worldwide either through wholly, or substantially owned subsidiaries.

International branding will become increasingly important. Companies will have to compete on other fronts, such as range of services and support capabilities, to attract customers. As services become more like commodities, strong marketing and a well-recognized brand will become critical to success. Already, companies are moving to make their brands more recognizable. In *The Wall Street Journal*², Richard Brown, the chairman of Cable & Wireless, (C&W) announced that "over the next year, C&W will begin selling under one brand worldwide to further raise its profile. The fact that we go under a lot of different brands around the world leads some people to believe we're smaller than we really are."

Increased control of foreign operations will also lead to new opportunities for cost reduction. Necessary staff reductions avoided by government owners for political reasons will be easier for private companies with controlling ownership. There will be opportunities to pool equipment and service purchasing worldwide to negotiate better terms with suppliers. This will help standardize more equipment and provide additional opportunities for cost reduction through decreased maintenance costs and centralized network management, customer care, and billing services.

Companies will be able to serve their customers better because of increased market access and operational control. It will be easier to provide international one-stop shopping, capitalizing on new opportunities to bundle wireline, wireless, satellite, and data services around the globe. Companies will be able to provide more seamless international private networks, especially for multinational business customers. This may prompt corporate customers to be more willing

² March 20, 1997

to outsource all of their telecom needs to a single provider. Equipment vendors should benefit from increased demand, as companies modernize existing networks to prepare for competition, and the total market will expand due to lower prices and increased service penetration in developing countries³.

IMPROVED DISPUTE RESOLUTION AND ENFORCEMENT MECHANISMS

The extent to which this vision can become reality depends a great deal on the degree to which this agreement has the "teeth" to be enforceable. The telecom being a natural monopoly, and mostly owned by the State authorities, it was usual that policies and regulations were made and modified as and when necessary and in the way it suited to the incumbent operator. Therefore to usher in competition in the sector need to level the playing field for the new entrants so that anti competitive policies do not hinder or make private participation precarious and uncertain. This scenario may not eventually be possible due to a second key feature of this agreement: the commitment to regulatory reform made by the countries that adopted the WTO Reference Paper. A total of 55 countries have made such a commitment, agreeing in principle to competitive safeguards, fair interconnection policies, publishing of licensing criteria, fair allocation of scarce resources, and the creation of an independent regulator. Although somewhat vague, the reference paper covers the key regulatory requirements for creating a level playing field for new entrants. Without such reforms, the market access promised elsewhere in the agreement would be meaningless.

The key question is whether or not the terms of the reference paper or any terms of the agreement will be enforceable. Proponents of the pact argue that they will. This agreement will replace the former system of bilateral trade agreements with a legally enforceable, multilateral agreement requiring most-favored nation (MFN) treatment for all participating countries and national treatment for all

³ Peter Sission, Which Agreement Which Service, *Telecommunications*, Sept 1, 1997.

foreign operators entering a market. The DSB will uphold the legality of the agreement, and complaints can be brought to an independent WTO panel that can enact legally binding resolutions and impose penalties, as well as permit unilateral trade sanctions by the injured country against the country in violation.

However, the WTO deals with international trade disputes only. Therefore, enforcement on behalf of one locally owned operator against another is not within its realm. Foreign operators themselves cannot lodge a complaint; they must request their government to do so, and this complaint could be against the government of the offending operator, not the operator itself. Getting your government to sponsor such a government-to-government complaint will not be easy. Getting a government even to consider such action will require the type of market power and influence wielded by only the largest telecom companies. When a complaint is lodged, the process will certainly be slow. Smaller companies could be out of business by the time the WTO completes an investigation and enacts sanctions.

In addition to the enforcement problems, other barriers exist, perhaps the largest of which is that compliance with the reference paper will be no easy task for many governments. Setting up a truly independent regulator, and changing laws and regulations to support competition is a daunting, highly politicized task in many countries. Powerful, entrenched interests, such as labor unions, opposition politics or existing telecommunication operator-owners which are mainly government operated monopolies and wield considerable powers, are likely to oppose reform, slowing down the process. Even if the laws are changed, funding and staffing a competent regulatory body is challenging, particularly given the complex and technical nature of issues involved when a country transitions to a competitive environment.

Assuming these barriers can be overcome - which is already happening in the United States and in Europe - the agreement is

likely to reduce the risks of investing abroad. The agreement will accelerate the pace of investment as the megacarriers globalize and smaller domestic operators seek foreign capital to modernize to prepare.

REDUCED PROFITABILITY FOR SOME TELECOM OPERATORS

The WTO agreement, once implemented, accelerates the existing trend toward competition. It spells danger for inefficient operators in any market. Price competition will lead to falling margins at the same time that operators require additional funds to invest in modernization and expansion. Those who have not planned ahead may not survive.

The competition will be felt on all fronts, but nowhere perhaps more than in the international long-distance market. Inflated international tariffs - and the settlement income resulting from tariff and traffic imbalances between countries have funded much of the investment and subsidized the inefficiency of operators around the world, particularly in developing countries.

How low might tariffs drop ? The average accounting rate per minute today for an international call is \$1.00. In the long term, U.S. officials predict an 80-percent drop to about 20 cents per minute, perhaps within 10 years. The United States is making an active effort to bring rates down. Next year, in return for granting them access to U.S. telecom market, the FCC will start pressuring countries to accept a "benchmark" accounting rate from 20 to 25 cents⁴.

Despite the WTO agreement, some governments - reluctant to part with the hard currency generated by settlements - may erect barriers to delay the process. There might even be allegations of "dumping" when multinational operators enter markets with cheap

⁴ *The Telecommunications Act of 1996 and the Changing Communications Landscape*
< <http://www.benetton.library/landscape/home.html> >.

long-distance service. Clearly, accounting rate reform still has difficult obstacles to overcome.

Nonetheless, international tariffs will inevitably drop, and without the "subsidy" from settlement payments, smaller operators in developing countries will need to move quickly to reduce costs and improve efficiency. They will probably require foreign partners to gain access to the capital, technology, and marketing skills necessary to modernize, expand, and compete. Governments that have not already privatized their telecom operators will be under increasing pressure to do so to attract partners and investment; domestic operators are not likely to have the resources and expertise to take on their new adversaries alone.

Liberalization of telecommunication markets is an irreversible global trend that will progress with or without the WTO telecom agreement. However, the agreement will accelerate the process, principally due to the commitment to raise the ceiling on foreign ownership. Large operators in countries that have already liberalized will be in the best position to seize the opportunities presented by this improved investment environment. They have the benefit of years of experience of operating under competitive conditions, have already shaved costs and become more efficient, and have the deep pockets required investing heavily throughout the world. Smaller domestic operators around the world will need to work quickly to prepare for their arrival.

Although there are many barriers to implementing the agreement and questions about the effectiveness of the enforcement mechanism, the agreement will empower reformers with an internationally sanctioned framework for opening markets, increasing foreign investment, and promoting a level playing field for new competitors. If the pace of reform could quicken, it could help to ensure that in 10 years, the global telecommunication market might be a very different picture from that of today.

Doubts on the other side opposing liberalization are also not unfounded. Among other concerns raised that it is a tool to have better market access to tap the huge potential markets of the developing countries, or that a full implementation could reduce employment and threaten the future of employees presently engaged in the sector, what remains the core concern for most developing economies -- is the obligation of Universal Service⁵. The general trend in practically all the nations necessarily involved using high-income areas, like long distance, commercial users, to subsidize the obligations of USO. Now if interconnection rates are to be negotiated on a cost basis and long distance charges are reduced, the funding for USO will be very meager. Consequently, for a developing nation like India the edifice the sector is put on a serious strain India's tryst with privatization has not been successful in servicing the obligations of USO and inspite of obligatory criterion of USO in awarding permits to private operators nothing significant has been achieved. It then essentially falls on the incumbent government operator to service the obligations of USO. But, with changing technologies like WLL (Wireless in Local Loop) where a telephone set with an antenna will work like a normal connection within a radius of 20-35 kilometers, are attempting to provide solutions to the problem. However, given the low income that would generate from the remote sectors and the heavy investment and maintenance costs, it could prove to be distant materiality with private operators, howsoever he may be compensated with funds like the UAL (Universal Access Levy)⁶. It could be said by way of conclusion almost all countries have developed high connectivity following cross-subsidisation, and therefore for developing economies like India, privatisation of the sector should be

⁵ The TRAI has also table a paper on USO for discussion and consequent implementation, whereby it is debated that a Universal Access Levy (UAL) would be levied upon operators - which will be a percentage of their revenue earned so with a view to USO. See: < <http://www.trai.gov.in/survey/survey.htm> >.

⁶ Ibid.

contemplated with caution and as suggested by interested groups it could be wise if we delay the implementation for a few more years. Further the obligations of WTO telecom deal, as we have seen in the preceding chapter does not necessarily obligate to open up the sector on an imperative basis as of now⁷ it would be a discerning proposition if we renew our plans for the future.

⁷See- the provisions of exemptions to MFN, to undertake commitments as specified in ones Schedule of Specific Commitments and exemptions for USO.

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TELECOMMUNICATIONS GLOSSARY

Antenna – A device used to collect and/or radiate radio energy.

Analog – Representations that bear some physical relationship to the original quantity: usually electrical voltage, frequency, resistance, or mechanical translation or rotation.

ASCII – (Pronounced ask-ee). American Standard Code for Information Interchange. The binary transmission code used by most teletypewriters and display terminals.

Band – A range of radio frequencies within prescribed limits of the radio frequency spectrum.

Bandwith – The width of an electrical transmission path or circuit, in terms of the range of frequencies it can pass; a measure of the volume of communications traffic that the channel can carry. A voice channel typically has a bandwidth of 4000 cycles per second; a TV channel requires about 6.5 MHz.

Bell-compatible – Essentially this means that a modem conforms to the standards of the Bell Telephone System.

Bit – Binary digit. The smallest part of information with values or states of 0 or 1, or yes or no. In electrical communication systems, a bit can be represented by the presence or absence of a pulse.

Broadband carriers – The term to describe high – capacity transmission systems used to carry large blocks of, for instance, telephone channels or one or more video channels. Such broadband systems may be provided by coaxial cables and repeated amplifiers or microwave radio systems.

Broadband communication – A communications system with a bandwidth greater than voiceband. Cable is a broadband communication system with a bandwidth usually from 5MHz to 450 MHz.

Bypass – Arrangements or facilities-based whereby a customer can access long-distance, international, or other services without using the local operating company's switched network, thus avoiding

payment of access charges. More generally, any means whereby customers avoid usage of a monopoly service or facility.

Byte – A group of bits processed or operating together. Bytes are often a 8-bit group, but 16-bit and 32-bit bytes are not uncommon.

Cable television – The use of a broadband cable (coaxial cable or optical fiber) to deliver video signals directly to television sets in contrast to over-the-air transmissions. Current system may have the capability of receiving data inputs from the viewer and of transmitting video signals in two directions, permitting pay services and videoconferencing from selected locations.

Carrier – Signal with given frequency, amplitude, and phase characteristics that is modulated in order to transmit messages.

Cellular service – A terrestrial radio-based service providing two-way communications by dividing the serving area into a regular pattern of sub-areas or cells, each with a base station having a low-power transmitter and receiver. Although cellular radio is primarily a means of providing mobile telephone service, it is also used to provide data services and private voice services, and as an alternative to fixed wired telephone service where this is scarce, such as in developing countries.

Circuit switching – The process by which a physical interconnection is made between two circuits or channels.

Coaxial cable – A metal cable consisting of a conductor surrounded by another conductor in the form of a tube that can carry broadband signals by guiding high-frequency electromagnetic radiation.

Cost-based pricing – The general principle of charging for services in relation to the cost of providing these services.

Cross-subsidy – A telephone term meaning that funds from one part of the business (e.g., long distance) are used to lower prices in another (local service).

Digital – A function that operates in discrete steps as contrasted to a continuous or analog function. Digital computers manipulate numbers encoded into binary (on-off) forms, while analog computers sum continuously varying forms. Digital communication

is the transmission of information using discontinuous, discrete electrical or electromagnetic signals that change in frequency, polarity, or amplitude. Analog intelligence may be encoded for transmission on digital communication systems (see Pulse code modulation).

Direct broadcast satellite (DBS) – A satellite system designed with sufficient power so that inexpensive earth stations can be used for direct residential or community reception, thus reducing the needs for a local loop by allowing use of a receiving antenna with a diameter that is less than one meter.

Divestiture – The breakup of AT&T into separate companies.

Dominance – A telephone industry term meaning whether a company serving an area has such a high percentage of the business that it drives out competition; a current challenge is in how to define and measure dominance.

Electronic mail – The delivery of correspondence, including graphics, by electronic means, usually by the interconnection of computers, word processors, or facsimile equipment.

Facilities-based service supplier (or operator) – A telecommunications service provider owning, as opposed to leasing, network used to provide telecommunications services.

FAX – Facsimile. A system for the transmission of images. It is a black and white reproduction of a document or picture transmitted over a telephone or other transmission system.

FCC – Federal Communications Commission. A board of five members (commissioners) appointed by the president and confirmed by the Senate under the provision of the Communications Act of 1934. The FCC has the power to regulate interstate communications.

Fiber optics – Glass strands that allow transmission of modulated light waves for communication.

Final mile – The communications systems required to get from the earth station to where the information or program is to be received and used. Terrestrial broadcasting from local stations and/or cable

television systems provide the final mile for today's satellite networks.

Frequency - The number of recurrences of a phenomenon during a specified period of time. Electrical frequency is expressed in hertz, equivalent to cycles per second.

Frequency, spectrum/spectrum management - The spectrum or range of radio frequencies available for communication, industrial, and other uses. Frequency bands or segments are assigned to various categories of users for specific purposes, such as commercial radio and television, terrestrial microwave links, satellites, and police. At the international level this is done by the International Frequency Registration Board (IFRB) of the International Telecommunication Union (ITU). Individual national regulatory agencies monitor the occupancy of the radio spectrum and allocate frequencies to individual users or a groups of users so as to enable a large number of services to operate within the specified limits of interference.

Geostationary satellite - A satellite, with a circular orbit 22,400 miles in space, which lies in the satellite plane of the earth's equator and which turns about the polar axis of the earth in the same direction and with the same period as that of the earth's rotation. Thus, the satellite is stationary when viewed from the earth.

IEEE - Institute of Electrical Engineers, a professional society.

Interconnection/ Interconnection charge - A charge levied by network operators on other service providers to recover the costs of the interconnection facilities (including the hardware and software for routing, signaling, and other basic service functions) provided by the network operators.

Interface - Devices that operate at a common boundary of adjacent components or systems and that enable these components or systems to interchange information.

ISDN - Integrated Services Digital Network; a set of standards for integrating voice, data and image communication; a service now being promoted by AT&T and some regional telephone companies.

LATA – Local access and transport areas; a telephone or computers or other communications devices into their own network for use by an individual or organization. Local area networks are part of the modern trend of office communication systems.

Loop – The wire pair that extends from a telephone company that supports local calls (non long distance); typically a regulated monopoly. LECs are within larger areas called LATAs (Local access and transport areas).

LSI – Large-scale integration. Single integrated circuits that contain more than 100 logic circuits on one microchip (see VLSI).

MFJ – Short for modified final judgment which set AT&T divestiture in motion.

Mobile services – Radio communications services between ships, aircraft, road vehicles, or hand-held terminal stations for use while in motion or between such stations and fixed points on land.

Narrowband communication – A communication system capable of carrying only voice or relatively slow-speed computer signals.

Network – The circuits over which computer or other devices may be connected with one another, such as over the telephone network. One can also speak of computer networking.

Networks or facilities – The ensemble of equipment, sites, lines, circuits, software, and other transmission apparatus used to provide telecommunication services.

Node – A point at which terminals and other computer and telecommunications equipment are connected to the transmissions network.

Non-public (private) network – Any network used to communicate within an organization (as distinct from providing service to the public) or to supply such communications to organizations, based on a configuration of own or leased facilities. The term includes networks used by private companies, state enterprises, or government entities. Self-use of private networks and services is addressed by the GATS Annex on Telecommunications, where as the ability of competitive providers to sell use of such networks and

services to organizations is addressed through commitments taken in GATS schedules.

Optical fiber – A thin flexible glass fiber the size of a human hair which will transmit light waves capable of carrying large amounts of information.

Packet switching – A technique of switching digital signals with computers wherein the signal stream is broken into packets and reassembled in the correct sequence at the destination.

Packet-switched data transmission – A data communications service in which a data stream is divided into units called packets that are separately routed to a destination where the original message is then reconstituted.

Paging service – A service that allows transmitting a signal, usually only an alarm tone, via radio from any telephone in the public-switched network to a personal, portable receiving device in a defined operating area. More sophisticated systems provide audible or visual display messages.

PBX – A private branch exchange which may not be computer but are not a part of it, such as printers, modems, or disk drive.

Personal communications systems or services – A service that enables access to telecommunications services by allowing personal mobility. It enables each user to participate in a user-defined set of subscribed services as well as to initiate and receive calls on the basis of a unique, personal, network-independent number. It can be used across multiple networks at any fixed, movable, or mobile terminal regardless of geographical location.

Private leased circuit service – The service of providing permanent transmission connection between two customer premises for the exclusive use by a customer. This service may be provided over facilities owned or operated by an operator or over transmission capacity sold or leased by a non-facilities-based telecommunications provider, or reseller, and may use terrestrial or satellite facilities. It generally does not involve central office switching operations. Also called a private leased lines.

Protocol – A description of the requirements for enabling one computer to communicate with another.

PTT – Administration for Post, Telegraph and Telephone.

Public network – A country's telephone system, including local loops, exchanges, trunks, and international links for providing telephone services to the general public.

Public switched telephone network – The more formal name given to the commercial telephone business in the United States; includes all the operating companies.

Resale-based service supplier – The subsequent sale or lease on a commercial basis, with or without adding value, of a service provided by a facilities-based telecommunications operator. A resale service supplier or reseller is a company that leases bulk-rated plant (e.g. transmission) capacity from facilities-based carriers and uses that capacity to provide services to individual customers or groups of customers at prices high enough to make a profit yet sufficiently below the equivalent rates of the facilities-based carriers to attract customers.

Separations – A telephone industry term meaning methods for dividing costs, revenues, etc. between different types of carriers, especially long distance versus local exchanges.

Tariff – The published rate for a service, equipment, or facility established by the communications common carrier.

Tariff/Unbundled Tariff – Tariffs are the schedule of rates and regulations governing the provision of telecommunications services. Unbundling of tariffs is where each component of a communications service or product is priced separately, so that customers may select only those components needed and be charged accordingly.

Teleconferencing/Videoconferencing – A two-way telecommunications service that allows live video images and speech of participants in a conference to be transmitted between two or more locations. Videoconferencing services generally require digital transmission.

Telex – A dial-up telegraph service.

Terminal – A point at which a communication can either leave or enter a communications network.

Transponder – The electronic circuit of a satellite that receives a signal from the transmitting earth station, amplifies it, and transmits it to the earth at a different frequency.

Trunk – A main cable that runs from the head end to a local node, then connects to the drop running to a home in a cable television system; a main circuit connected to local central offices with regional or intercity switches in telephone systems.

Trunked radio system – A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group.

Universal service – The concept that every individual within a country should have basic telephone service available at an affordable price. The concept varies, among countries, from having a telephone in every home and business in the wealthier countries to most inhabitants being within a certain distance or time away from a public telephone in developing countries.

Uplink – The communications link from the transmitting earth station to the satellite.

Upload – To transfer information out of the memory or disk file of your computer to another computer.