ANNUAL REPORT
2007-2008

सत्यमेव जयते

DEPARTMENT OF TELECOMMUNICATIONS
MINISTRY OF COMMUNICATIONS
& INFORMATION TECHNOLOGY
GOVERNMENT OF INDIA
NEW DELHI

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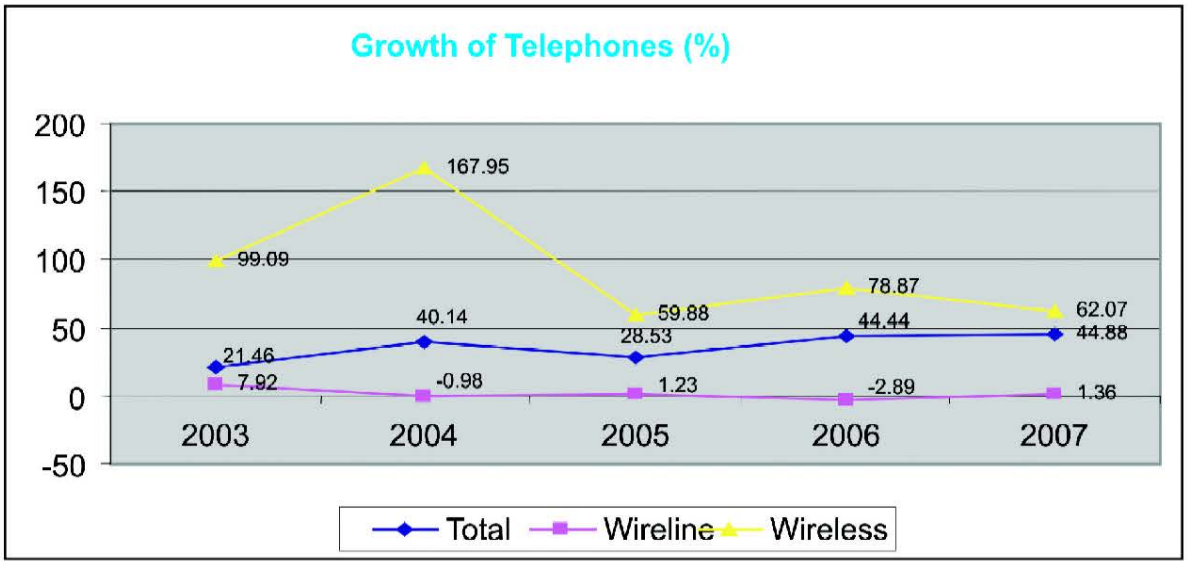
Contents

Executive Summary

Indian telecom sector has come a long way in achieving its dream of providing affordable and effective communication facilities to its citizens as envisaged in New Telecom Policy (NTP) 1999. As a result common man today has access to this most needed facility. Larger efforts are continuously being made to provide universal service to all uncovered areas including, rural areas. The other thrust areas include, building a modern and efficient telecommunications infrastructure, transforming telecommunications sector to a greater competitive environment with equal opportunities and level playing field for all players, strengthening research and development efforts in the country, achieving efficiency and transparency in spectrum management and enabling Indian telecom companies to become truly global players.

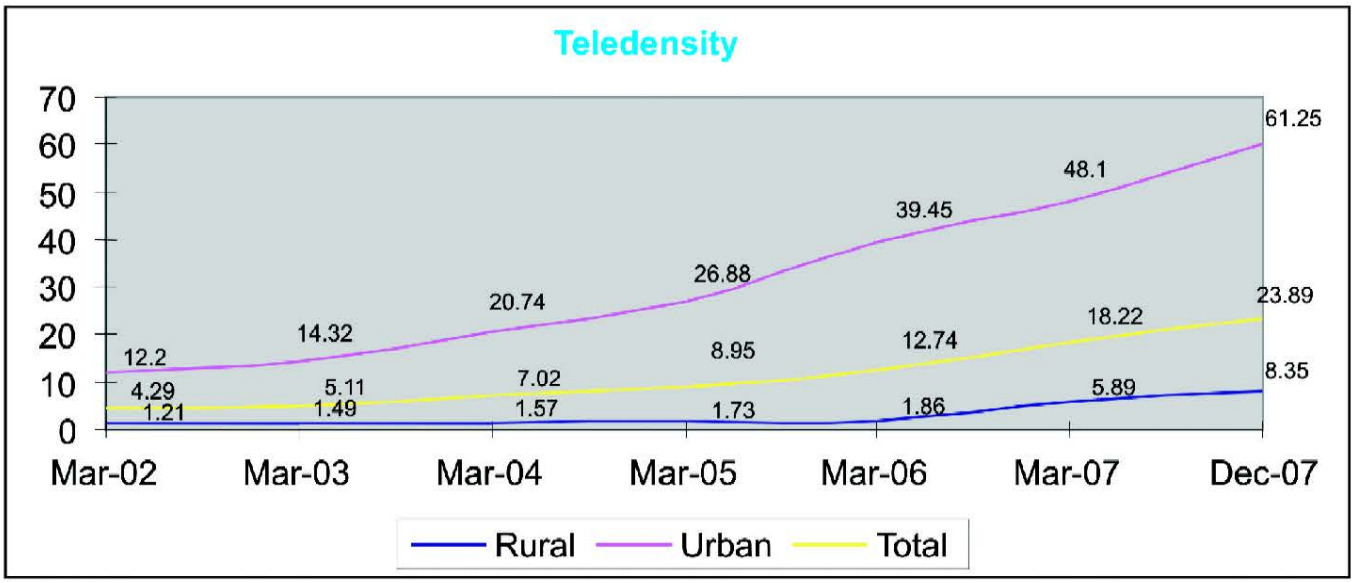
The reform measures coupled with the proactive policies of the Department of Telecommunications have resulted in an unprecedented growth of the telecom sector. Today, the Indian telecommunications network with over 270 million connections is third largest in the world and the second largest among the emerging economies of Asia. India has emerged as a major base for the telecom industry worldwide and it is the endeavor of the Government to facilitate further growth of this vital industry as it is not just the growth of a sector but it has 'multiplier effect' on the entire economy.

During the last few years the sector has witnessed high growth rates. Since 2004 the number of telephones grew at a rate of 40 percent plus, with the exception of 2005. The sector continues to register significant growth during 2007-08. The targeted growth of 250 million by the end of 2007 was achieved in the month of October 2007, when the total number of telephones touched 256.55 million. The current addition of about eight million lines per month puts the telecommunications sector on a strong footing to achieve the target of 500 million connections by 2010.



Network Expansion

- The total number of telephones has reached 272.87 million as on December 31, 2007 as compared to 189.92 million as on December 31, 2006.
- While 64.7 million connections were added during the twelve months of 2006-07, about eight million connections were added every month during the current fiscal year.
- The teledensity, as given in the following graph, has shown a sustained increase during last few years. It increased from 16.83% in December 2006 to 23.89% in December 2007.
- Rural teledensity has shown a noticeable improvement in 2007.

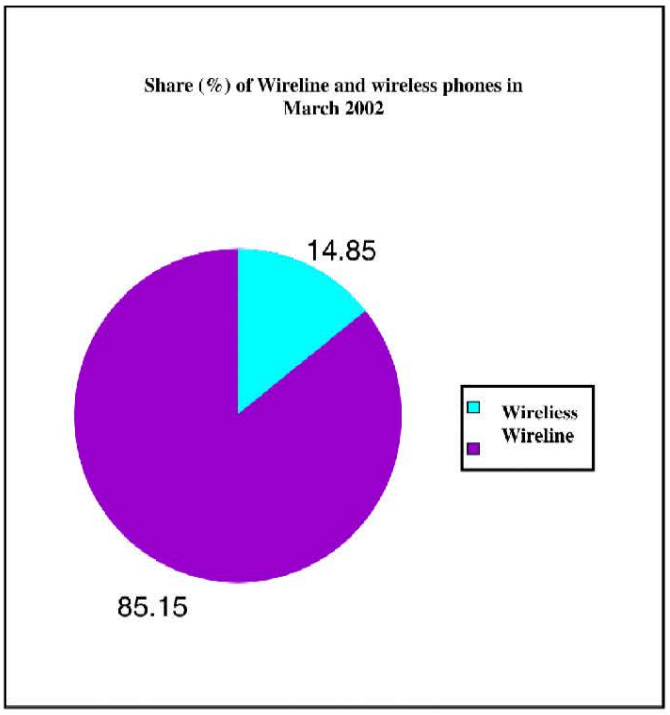


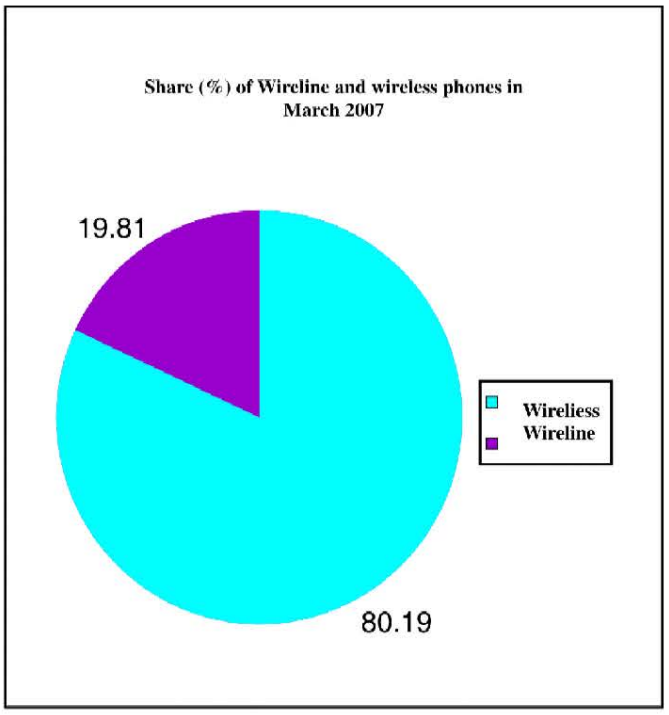
Note. Wireless phones were not included in rural phones before March 2007

Structural Composition

➢ Wireline vs wireless

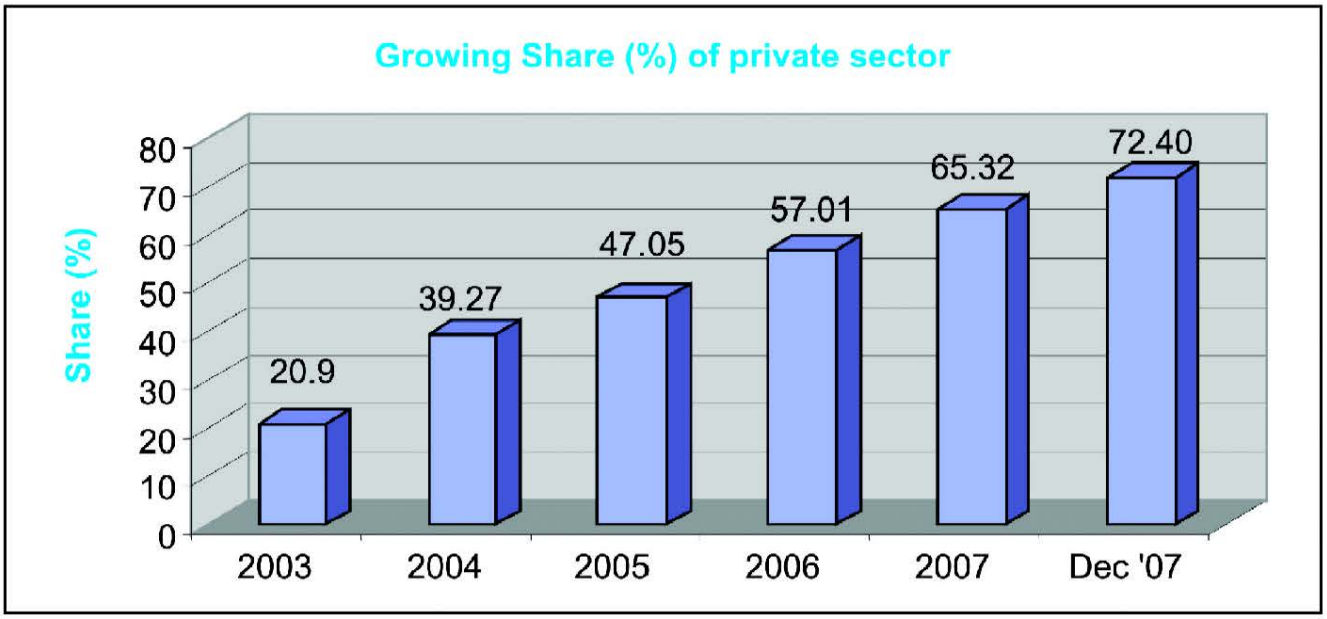
- The structure and composition of telecom growth has undergone a substantial change in terms of Wireless vs. Wireline phones and public-private participation. The growth of wireless services has been phenomenal, with wireless subscribers growing at a compound annual growth rate (CAGR) of 87.7% per annum since 2003.
- Today, the wireless subscribers are not only much more than the wireline subscribers in the country, but also increasing at a much faster pace. The number of wireline and wireless telephones was 382.91 lakh & 66.77 lakh respectively in 2002. This increased to 407.74 lakh & 1650.94 lakh respectively in March 2007. The share of wireless phones therefore, has increased from 14.85% in March 2002 to 80.19% in March 2007. The share of wireless phones has further increased to 85.62% in December 2007.





➢ Public vs Private

- The liberalization efforts of the government are evident in the ***growing share of private sector in total telephone connections, which has steadily increased to 72.40 percent in December 2007*** from 20.9% in 2003.
- The private sector, however, is mainly active in the wireless segment while wireline accounts for only about 2%.
- Private sector has been growing very fast. It grew at a rate of 66% in 2007 as against public sector that grew at the rate of 16.88%.



Telecom Tariff

As a result of growing competition in the sector, the telecom tariffs, which were among the highest in the world less than four years ago, have now dipped to being among the lowest. This year the roaming tariffs on mobile have been lowered by TRAI in the range of 22% to 56%. Since TRAI issued Telecom Tariff Order in the year 1999, ***the local call tariff from mobile calls has seen steady decline from Rs 16 per minute to Re 1 per minute***. Most of the major operators have launched tariff plans under the name and style of 'One India' wherein STD tariff is offered at Re 1 per minute irrespective of distance. It is worth mentioning that in spite of having low tariffs, the telecom sector in India has shown positive financial results. Gross revenues for the sector have grown at a compound annual rate of about 21 percent and currently stand at 26 billion US dollars. This accounts for about 3 percent of the national GDP.

Accessibility of telephones in rural and remote areas

Promotion of rural telephony and accessibility of telephones to remote areas is an important thrust area of the department. It is well recognized that a well spread out provision of telecom services in rural areas enhances the ability of people to participate in the market economy, which, in turn, improves their productivity and contributes to their earnings.

As on December 2007, there are 673.31 lakh phones in rural areas with a teledensity of 8.35% and the strategy for network expansion in rural areas mainly involves provision of phones in the viable areas through market mechanisms and through Universal Service Obligation Fund (USOF) in the non-viable areas. While Village Public Telephones (VPTs) and Rural Community Phones (RCPs) will enable public access, a scheme of Rural Community Phones (RCPs) has been launched under USOF to create infrastructure in rural and remote areas.

Under ***Bharat Nirman,*** a target of providing Village Public Telephones (VPTs) in 66822 uncovered villages was visualized. Out of this, 52342 VPTs have been provided till December 2007 and the remaining VPTs are likely to be provided by June 2008 in a phased manner.

Having realized the role of wireless phones because of the convenience, affordability and the capacity to reach out to the masses, particularly in rural and remote areas, efforts have been made under USOF to strengthen infrastructure for providing wireless phone services in these areas. It is envisaged to provide support for setting up and managing 7871 number of infrastructure sites spread over 500 districts in 27 states of the country for the provision of wireless phone services. The infrastructure so created will be used in the provision of wireless phone services in the specified rural and remote areas, where there is no existing fixed wireless or mobile coverage. Wireless phone services through these shared towers are targeted to be made operational in a phased manner by May 2008.

Hon'ble Prime Minister Dr. Manmohan Singh Inaugurating "India Telecom-2007"

Hon'ble Minister of Communications & IT Shri A Raja at the exhibition of "India Telecom-2007"

AGREEMENT FOR CENTRES OF EXCELLENCE

Hon'ble Minister of Communications & IT Shri A Raja on the occasion of signing of memorandum on December 12, 2007

Hon'ble Minister of Communications & IT receiving momeato from Additional Secretary (Telecommucations)

Today, wireless phones have transformed the urban economy and it is expected that these will be harbinger of growth in rural areas also. Through the above efforts the Eleventh Plan target of achieving rural teledensity of 25% by means of 200 million rural connections, seems feasible.

Broadband

Recognizing the potential of ***Broadband service*** in the growth of GDP and creation of an enabling environment for promoting knowledge based society, the Broadband policy announced in October 2004 has a vision of covering 20 million broadband subscribers by the end of 2010. It has been proposed in the Eleventh Plan targets to provide the broadband for all secondary and higher secondary schools, all Public Health Care Centers and Gram Panchayats.

The year 2007 was christened as the 'Year of Broadband' for popularising broadband services in villages. As on December 31, 2007 there are 3.02 million broadband subscribers, which is a substantial increase from 0.18 million as on March 31, 2005.

Government has issued new guidelines and a new single licence for internet service in year 2007 instead of four permissions/licences required earlier. As on December 31, 2007 there are 378 licencees for internet services and 9.69 million internet subscribers.

Manufacturing

Indian telecom industry manufactures a complete range of telecom equipments using state of the art technologies designed specifically to match the diverse terrain and climate conditions. Production of telecom equipment has increased from Rs. 17,833 crore in 2005-06 to Rs. 23,656 crore in 2006-07. Rising demand for a wide range of telecom equipments, particularly in the area of mobile telecommunications, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector.

The last three years saw many renowned telecom companies setting up their manufacturing units in different parts of India. Ericsson, for instance has set up GSM Radio Base Station Manufacturing facility in Jaipur and recently launched their R & D Centre in Chennai and Gurgaon respectively. Elcoteq has set up handset manufacturing facilities in Bangalore while Nokia set up its manufacturing plant in Chennai. Other major companies like Motorola, Foxconn, Aspocomp, Salcomp, Samsung, Siemens, CISCO, Perlos, Solectron etc. have set up their manufacturing bases in India.

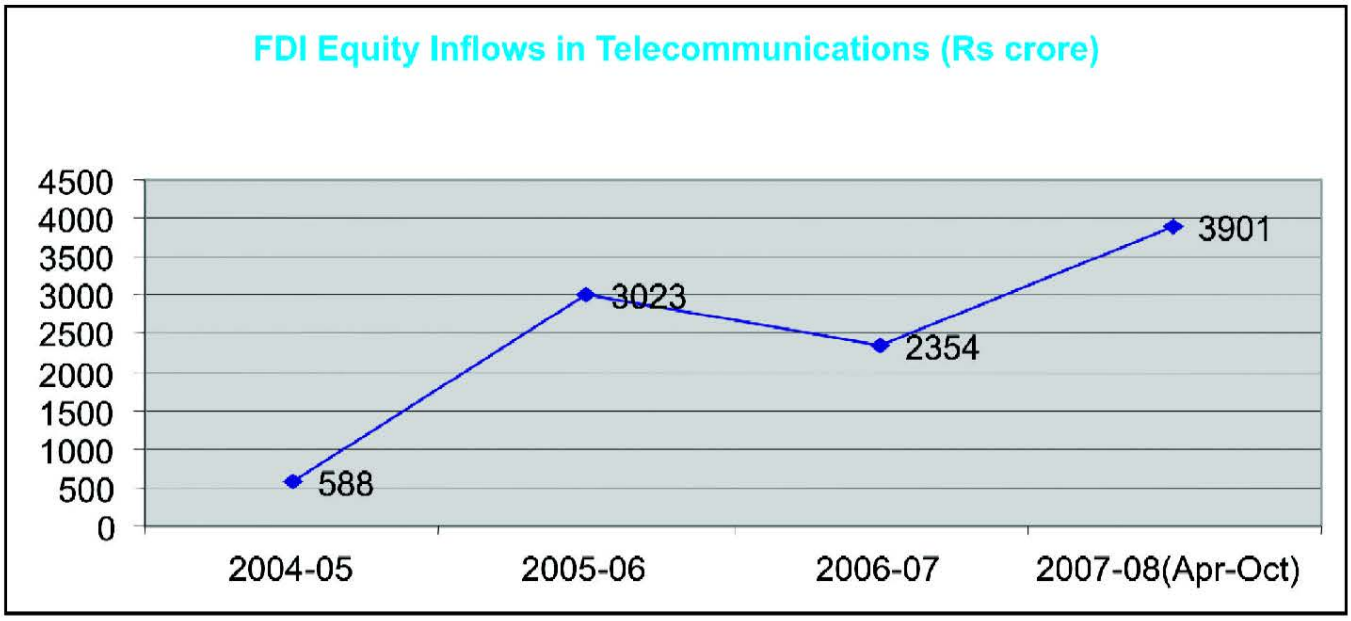
Foreign Direct Investment

Foreign Direct Investment (FDI) plays an important role in the long-term economic development of a country not only as a source of capital but also for enhancing competitiveness of the domestic economy through transfer of technology, strengthening infrastructure, raising productivity and

generating new employment opportunities. FDI also has an important role in enhancing exports. FDI is quite critical for the Telecom sector as it is capital intensive in nature and thus requires huge investments for its expansion.

Foreign direct investment (FDI) is one of the important sources to meet the requirement of huge funds for rapid network expansion. The FDI policy provides an investor-friendly environment for the growth of the telecom sector. The total FDI equity inflows in the telecom sector from April 2000 up to October 2007 have been Rs. 15546 crore which is 8.4% of the total FDI equity inflows in India during the period.

FDI in telecommunications sector has a bright future. Today, it is the third largest recipient of FDI after services (financial & non-financial) and Computer hardware & software, which attract 20.43% and 15.21% respectively.



Regulatory framework

The Telecom Regulatory Authority of India (TRAI) has always endeavored to encourage greater competition in the telecom sector together with better quality and affordable prices in order to meet the objectives of New Telecom Policy, 1999. A number of policy initiatives were taken in 2007-08 to transform the telecom sector including the broadcasting and cable services to extend the scope, availability and reach of these services in India. These inter-alia, included notification of regulations such as Telecom Unsolicited Commercial Communication Regulation, 2007 the Regulation on International Telecommunications Access to Essential Facilities at Cable landing stations, Telecom Consumers Protection and Redressal of Grievances Regulations, 2007, Regulation on Telecommunications Consumers Education and Protection Fund Regulations, 2007, Regulation on Quality of Service of DTH 2007. Besides, measures have been initiated to improve the billing system and towards capacity building of the consumer organizations.

The above measures are expected to facilitate orderly growth of telecom sector by promoting healthy competition and enhancing investment efficiency besides protecting interests of consumers.

Research & Development

The increased use of new technologies, the move towards corporatisation, competition and the separation of regulatory functions from operational services require advanced level of policy, regulatory, managerial and technological expertise. In order to develop and strengthen the capability to generate this expertise, ***the Telecom Centers of Excellence (TCOE) concept is being established in a Public-Private Partnership (PPP) mode*** with all stakeholders onboard. Apart from application oriented research, the Centers are designed to assist and offer training to both high level decision makers of telecommunications entities to manage sector reforms and to corporate managers for management of networks and services. There will be eight TCOEs at the premier academic institutes of the country with the seven major telecom operators supporting one center each. The spectrum management center is being developed in an autonomous model with the support of an industry consortium.

To provide a further boost to our manufacturing and R&D efforts, it has been further decided to set up a Telecom Testing and Security Certification Center (TETC) for communication security, research and monitoring. A large number of companies like Alcatel, Cisco etc. have also set up their research & development (R&D) centers in India.

Telecom PSUs

MTNL and BSNL are the two premier PSUs under the department that have thrived to meet the growing requirements of telephones and other related services. MTNL, which was set up mainly to expand the quality telecom network and to raise revenue for developing telecommunications facilities in India's key metros - Delhi and Mumbai, has taken rapid strides since its formation in 1986, to emerge as India's leading and one of Asia's largest telecom operating companies. Besides having a strong financial base, MTNL has achieved a customer base of 6.81 million at the end of the third quarter of 2007-08. The company provided broadband connections to 77278 customers and internet connections to 51556 customers during first three quarters of 2007-08. The Company has also been in the forefront of technology induction by converting 100% of its telephone exchange network into the state-of-the-art digital mode. The Govt. of India currently holds 56.25% stake in the company.

BSNL formed in October 2000, is the World's 7th largest Telecommunications Company providing comprehensive range of telecom services in India: Wireline, CDMA wireless, GSM wireless, Internet, Broadband, Carrier service, MPLS-VPN, VSAT, VoIP services, IN Services etc. Within a small span

of seven years, it has become the largest public sector service provider in the country serving 68.51 million subscribers including 32.71 million mobile customers in December 2007. Rural telephony is one of the focus areas of BSNL. It has provided Village Public Telephones (VPTs) in 5.18 lakh villages and has 241.31 lakh Direct Exchange Lines (DELs) in the rural areas as on December 31, 2007. BSNL has introduced broadband services from January 2005 and has provided 14.10 lakh broadband connections till December 2007.

Further Policy Initiatives

Apart from the above initiatives measures following other activities were undertaken for the betterment of the sector.

- Keeping in view the interest of consumers, the department has decided to introduce Mobile Number Portability (MNP) in the four metro cities i.e. Delhi, Mumbai, Kolkata and Chennai in the initial phase. This will provide the consumer the facility to retain the same number while switching over from one operator to another within the same service area. This would make the telecom market truly competitive.
- The broad guidelines for the third generation (3G) mobile services and Broadband Wireless Access (BWA) services have been released.
- With a view to regulate the unsolicited calls from the telemarketers, a regulation has been implemented whereby "National Do Not Call Registry (NDNC)" has been put into place. Consequent upon its implementation, there has been a substantial reduction in the number of unsolicited calls. As per the statistics available with TRAI, about 7.2 million subscribers have registered on the NDNC so far.

Vision for the future

While celebrating the success in the telecom sector, the government recognizes the fact that there is no room for complacency. Telecom development in rural areas, particularly assumes special significance as more than 70% of the population lives in villages. It is therefore, proposed to achieve rural teledensity of 25% by means of 200 million rural connections at the end of 11th Plan.

The government is also working steadily towards addressing the issue of releasing additional spectrum from government use for the use of commercial telecom operators so that the growth of this dynamic sector is not constrained by the shortage of this vital resource. The government also recognizes the need to take a forward-looking approach, based on an appreciation of changing

technologies and to accelerate structural changes in this sector in line with trends in other countries to ensure that the telecommunications services are not only made available on the scale needed to sustain rapid growth in the economy as a whole but also that the quality and cost of these services come up to the requirements of a modernizing economy.

Recognizing the potential of Broadband services in the growth process, it has been proposed in the Eleventh Plan targets to provide the broadband for all secondary and higher secondary schools, all Public Health Care Centers and Gram Panchayats. It is also visualized to link Block headquarters and nearest exchange through State Wide Area Networks (SWAN) connectivity. It is also envisaged that internet and broad-band subscribers will increase to 40 million and 20 million, respectively, by 2010.

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I. Telecom Commission

ROLE AND FUNCTIONS

The Telecom Commission was set up by the Government of India vide Regulation dated April 11, 1989 with administrative and financial powers of the Government of India to deal with various aspects of Telecommunications. The Commission consists of a Chairman and four full time members, who are ex-officio Secretaries to the Government of India in the Department of Telecommunications, besides there are four part time members who are the Secretaries to the Government of India of the concerned Departments. The present composition of the Commission is as follows: -

Chairman	Shri Siddhartha Behura	w.e.f. January 1, 2008
Member (Finance)	Ms. Manju Madhvan	w.e.f February 5, 2007
Member (Production)	Vacant	w.e.f. January 1, 2006
Member (Services)	Shri G. S. Grover	w.e.f March 13, 2007
Member (Technology)	Shri K. Sridhara	w.e.f. July 27, 2006

The Part time Members are Secretary (Information Technology), Secretary (Finance), Secretary (Planning Commission) and Secretary (Industrial Policy and Promotion).

The major functions of the Telecom Commission include policy formulation, review of performance, licensing, wireless spectrum management, administrative monitoring of PSUs, research and development, standardization/validation of equipment and International Relations.

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II. Department of Telecommunications

ROLE AND FUNCTIONS

The Department of Telecommunications (DOT) is responsible for policy formulation, performance review, monitoring, international cooperation, Research & Development and grant of licences to operators for providing basic and value added services in various cities and telecom circles as per approved policy of the Government. The Department also allocates frequency and manages radio communications in close coordination with the International bodies. It is also responsible for enforcing wireless regulatory measures and monitoring the wireless transmission of all users in the country. The office of Administrator, Universal Service Obligation (USO) Fund has been set up w.e.f. June 1, 2002 for the purpose of implementation of Universal Service Support Policy. After formation of Bharat Sanchar Nigam Ltd (BSNL) in October 2000, following are the functions assigned to the DOT under Government of India (Allocation of Business), Rules, 1961:

- Policy formulation, licensing and coordination matters relating to telegraphs, telephones, wireless, data, facsimile and telematics services and other similar forms of communications.
- International cooperation in matters connected with Telecommunications, including matters relating to all concerned international bodies such as International Telecommunications Union (ITU), its Radio Regulation Board (RRB), Radio Communication Sector (ITU-R), Telecommunications Standardization Sector (ITU-T), Development Sector (ITU-D), International Telecommunications Satellite Organization (INTELSAT), International Mobile Satellite Organization (INMARSAT), Asia Pacific Telecommunications (APT).
- Promotion of standardization, research and development in Telecommunications.
- Promotion of private investment in Telecommunications.
- Financial assistance for the furtherance of research and study in Telecommunications technology and for building up adequately trained manpower for telecom programme, including:

  (a) assistance to institutions/scientific institutions and to universities for advanced scientific study and research; and

(b) grant of scholarships to students in educational institutions and other forms of financial aid to individuals including those going abroad for studies in the field of Telecommunications.

- Procurement of stores and equipment required by the Department of Telecommunications.
- Telecom Commission.
- Telecom Regulatory Authority of India.
- Telecom Disputes Settlement and Appellate Tribunal.
- Administration of laws with respect to any of the matters specified in this list, namely:

  (a) The Indian Telegraph Act, 1885 (13 of 1885);

  (b) The Indian Wireless Telegraphy Act, 1933 (17 of 1933); and

  (c) The Telecom Regulatory Authority of India Act, 1997 (24 of 1997).

- Indian Telephone Industries Limited.
- Post disinvestment matters relating to M/s Hindustan Teleprinters Limited.
- Bharat Sanchar Nigam Limited.
- Mahanagar Telephone Nigam Limited.
- Videsh Sanchar Nigam Limited and Telecommunications Consultants (India) Limited.
- All matters relating to Centre for Development of Telematics (C-DOT).
- Residual work relating to the erstwhile Department of Telecom Services and Department of Telecom Operations, including matters relating to the following:

  (a) Cadre controlling functions of Group 'A' and other categories of personnel till their absorption in Bharat Sanchar Nigam Limited.

  (b) Administration and payment of terminal benefits.

- Execution of works, purchase and acquisition of land debitable to the Capital Budget pertaining to Telecommunications.

GROWTH OF TELECOM SECTOR

- The Indian Telecommunications network with over 250 million connections today is third largest in the world and the second largest among the emerging economies of Asia. The telecommunications sector continues to register significant growth during the year and has emerged as one of the key sectors responsible for India's resurgent economic growth. The targeted growth of 250 million by the end of 2007 was achieved in the month of October 2007 itself, when the total number of telephones touched 256.55 million. The current addition of about eight million lines per month puts the telecommunications sector on a strong footing to achieve the target of 500 million connections by 2010. The total number of telephones has reached 272.87 million as on December 31, 2007 with a tele-density 23.89%.
- The structure and composition of telecom growth has undergone a substantial change in terms of wireless vs. wireline phones and public-private participation. The growth of wireless services has been phenomenal, with wireless subscribers growing at a Compound Annual Growth Rate (CAGR) of 87.7 % per annum since 2003. Today, the wireless subscribers are not only much more than the wireline subscribers in the country, but also increasing at a much faster pace. The share of wireless phones has increased from 24.3% in March 2003 to 85.62 % in December 2007. Improved affordability of wireless phone has made universal access objective more feasible.
- The liberalization efforts of the government are evident in the growing share of private sector in total telephone connections, which has increased to 72.40% in December 2007 from a mere 5% in 1999.
- Greater access of telephones in rural areas has been one of the thrust areas of the government. Under Bharat Nirman, a target of providing Village Public Telephones (VPTs) in 66,822 uncovered villages was visualized. Out of these 52,342 villages have been provided with VPTs by BSNL as on December 31, 2007 and the remaining VPTs are likely to be provided by June 2008 in a phased manner. The rural teledensity stands at 8% as on December 31, 2007.
- Recognizing the potential of Broadband service in the growth of GDP through enabling the development of knowledge based society, the government has announced Broadband Policy 2004. Several measures have since been taken to promote broadband in the country. As a result of these measures, broadband subscribers grew from a meager 0.18 million as on March 31, 2005 to 3.02 million, up to December 2007.

GRANT OF LICENCES

Unified Access Services

- There were 97 Unified Access Service (UAS), 2 Basic Service and 60 Cellular Mobile service (CMTS) Licences as on December 31, 2007.
- Use of dual technology spectrum (both CDMA and GSM) has been allowed under one UAS licence.
- Mobile Number Portability (MNP) to be launched in metros by fourth quarter of 2008.

Carrier Services

Licensing for National Long Distance (NLD) and International Long Distance Service (ILDS)

- After announcing opening up of ILDS and NLDS for free competition, government has so far issued 13 ILDS Licences and 20 NLDS Licences (including BSNL) as on December 31, 2007. The networth and paid up capital requirement for obtaining NLD and ILD licence by the applicant company is Rs. 2.5 crore each.
- The annual Licence fee for NLD/ILD has been reduced to 6% (including USO contribution) of Adjusted Gross Revenue w.e.f. January 1, 2006.
- There is no mandatory roll out obligation for NLD operators. For ILD operators the roll out obligation is the establishment of at least one ILD gateway within a period of three years.

Registration Certificate of Infrastructure provider Category-I (IP-I)

- Under IP-I registration, Company can provide Dark Fibre, Right of way, duct space, tower etc. to Licenced telecom service providers. 175 companies have been registered as Infrastructure Provider Category-I as on December 31, 2007.

Voice Mail Service/Audiotex/Unified Messaging Service

- New Policy for Voice Mail/Audiotex Service in terms of NTP-99 was announced in July 2001 by incorporating a new service, namely, Voice Mail Service/Audiotex/Unified Messaging Service (UMS). Voice Mail Service/Audiotex/UMS is a system by which voice mail, fax and e-mails (all the three) can be received by one mailbox using telephone instrument, fax machine, mobile phone, Internet browser etc.
- There are 17 licences in 07 cities owned by 11 companies as on December 31, 2007 for providing Voice Mail/Audiotex/Unified Messaging Service.
- There is neither entry fee nor licence fee.

Public Mobile Radio Trunk Service licence

- Policy for Public Mobile Radio Trunk Service (PMRTS) in terms of NTP-99 was announced on November 1, 2001. The new PMRTS Licences shall be granted on non-exclusive "first come first service" basis. It has been decided to provide PSTN connectivity to PMRT service.

- As per amendment to PMRTS Licence agreement dated July 14, 2006, the city-wise service area stands changed into circle-wise service area.
- Presently, there are 41 licences in 3 metros and 10 circles owned by 15 companies for providing Public Mobile Radio Trunked Service.

GMPCS Service licence

- Policy for grant of licence for Global Mobile Personal Communication by Satellite Service (GMPCS) in terms of NTP-99 was announced on November 2, 2001.
- As on date, there is no licence for providing GMPCS service in India.
- There is one crore entry fee for this licence. The licence fee to be paid by the Licencee is 10% of AGR.

Other Service Providers (OSPs)

- The terms and conditions for registration under Other Service Provider(OSP) category were formulated in the month of February 2000.
- Registration of call centres (International and Domestic), Network Operation Centres and Vehicle Tracking Systems is being done under OSP category.
- Over 2000 cases have been registered under OSP category.
- Registration under OSP Category and Telemarketing Category has been decentralized from DOT HQ to field units of VTM Cells in 10 circles (i.e. Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra, Delhi, Haryana, Gujarat, Kolkata, Chennai and Mumbai) w.e.f September 1, 2007.

Very Small Aperture Terminal (VSAT) Service

- There are 11 licences for Commercial CUG VSAT service as on September 2007. The FDI ceiling has been increased from 49% to 74% for commercial CUG VSAT licence. About 65,000 commercial CUG VSATs are operational as on September 30, 2007.

Internet and Broadband Services

- Government has issued new Guidelines and a new single Licence for Internet service in year 2007 instead of the earlier four permissions/licences as following (i) ISP licences without Internet Telephony; (ii) ISP licences including Internet Telephony; (iii) Permission for International Gateway using Satellite; and (iv) Permission for Internet Gateway using Submarine Cable Landing station.
- As on December 31, 2007 there are 378 Licencees for Internet Services which includes 69 Category-A Licencees, 121 Category-B Licencees and 188 Category-C Licencees. One Internet Service Licencee has been permitted to provide IPTV Services. Further, there are 9.69 million Internet subscribers and 3.02 million broadband subscribers.

INVESTMENT POLICY (IP)

Telecom Sector is considered to be one of the most attractive sectors for foreign direct investment. Present FDI Policy for the Telecom sector is as under:

- Basic and cellular, Unified Access Services, National/ International Long Distance, VSAT, Public Mobile Radio Trunked Services (PMRTS), Global Mobile Personal Communications Services (GMPCS) and other value added telecom services

Foreign Direct Investment (FDI) upto 49% is permitted under automatic route and beyond 49% and upto 74% (including FDI, FII, NRI, FCCBs, ADRs, GDRs, convertible preference shares, and proportionate foreign equity in Indian promoters/ Investing Company) is permitted as per the conditions of Press Note 3 (2007 series).

- Internet Service (with gateways), Infrastructure Providers providing end to end bandwidth and Radio Paging Service

  Foreign direct investment upto 74% is permitted subject to licensing and security requirements. FDI upto 49% is permitted under automatic route.

- Infrastructure Providers providing dark fibre (IP - I), Electronic Mail and Voice Mail.

  FDI upto 100% is allowed subject to the conditions that such companies would divest 26% of their equity in favour of Indian public in 5 years, if these companies are listed in other parts of the world. Proposals for FDI beyond 49% shall be considered by FIPB on case to case basis.

- Manufacturing of Telecom Equipments: 100% FDI is permitted under automatic route subject to sectoral requirements.

- FDI Inflows: The actual Inflow (Year Wise) of FDI in Telecom Sector from August 1991 to October 2007 is as below:

(Rs. in million)

YEAR	FDI INFLOW	YEAR	FDI INFLOW
August1991 to December 1999	50,202	2004	6,004
2000	3,428	2005	7,062
2001	42,478	2006	41,702
2002	7,749	October 2007	45,973
2003	6,910	**TOTAL**	**2,11,508**

Source: DIPP

Manufacture of Telecom Equipment

Indian telecom industry manufactures complete range of telecom equipment using state of the art technologies designed specifically to match the diverse terrain and climate conditions. Production of telecom equipment has been increased from Rs. 17,833 crore in 2005-06 to Rs.23,656 crore in 2006-07 and projected figure for the year 2007-08 is Rs. 26,253 crore. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecommunications, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. The last three years saw many renowned telecom companies setting up their manufacturing units in different parts of India. Ericsson has set up GSM Radio Base Station Manufacturing facility in Jaipur and recently launched their R and D Centre in Chennai and Gurgaon respectively. Elcoteq has set up handset manufacturing facilities in Bangalore. Nokia set up its manufacturing plant in Chennai. LG Electronics set up plant of manufacturing GSM mobile phones near Pune. Flextronics has set up an SEZ in Chennai. Other major companies like Motorola, Foxconn, Aspocomp, Salcomp, Samsung, Siemens, CISCO, Perlos, Solectron etc. have set up their manufacturing bases in India. The total committed FDI is more than US$ 1.5 billion.

•	Telecom Equipment Production during 2006-07	:	Rs. 2,36,560 Million
	Telecom Equipment Production during 2007-08	:	Rs. 2,62,530 Million (Projected)
•	India's Export of Telecom Items during 2006-07	:	Rs. 1,898 Million
•	India's export of Telecom Consultancy during 2006-07	:	Rs. 25.6 Million
	India's export of Telecom Consultancy during (April-September, 2007)	:	Rs. 5.4 Million

INTERNATIONAL COOPERATION

In the field of international cooperation, workshops, seminars and training programmes are held within the country and outside. Deliberations are held with the visiting foreign dignitaries, apart from the visits. Some of these meetings are listed below:

Bilateral Co-operations / Joint Commission Meetings

- A six member Singapore delegation led by CEO Info Comm Development Authority of Singapore (IDA), called on Chairman, TC on April 10, 2007 in Sanchar Bhawan. Both sides shared views on developments in the field of Telecom in the two countries.
- A seven member Chinese delegation led by H.E. Dy Chief of Economic Committee of Chinese People's Political Consultative called on Chairman, Telecom Commission in Sanchar Bhawan on April 17, 2007.
- Minister of Foreign Affairs of Sweden called on Hon'ble MOC & IT on May 3, 2007 in New Delhi Both the dignitaries exchanged views and discussed the present Scenario of the ICT in both the countries.
- A high level delegation led by Hon'ble Minister of Science and Technology, Republic of Sudan, visited TCIL from August 13-17, 2007. TCIL gave detailed presentation of TCIL's range of services in Telecom, IT, Civil and Architecture and brief of projects executed /being executed by TCIL. On August 16, 2007 the delegation had a meeting with Hon'ble Minister of Communications and IT, Chairman Telecom Commission and Secretary Telecom, DOT, DDG(IR) DOT and other officers from TCIL were also present during the meeting to discuss the bilateral issues and ICT developments taking place in both the countries.
- A 12 member Chinese delegation led by Vice Minister, Ministry of Information Industry of People's Republic of China (PRC) visited India in late August 2007.
- Vice President- Technology, Iridium Satellite, USA and Head of Business Operation for Iridium Satellite Asia pacific gave a Presentation on current services, future trend, plans for Iridium for India on September 6, 2007 in Committee Room, Sanchar Bhawan.
- A six members Bostwana delegation led by, Minister of Communications, Science and Technology, met Hon'ble MOS (C&IT) on October 17, 2007 New Delhi. DDG(IR) from DOT

also participated in meeting to assist Hon'ble MOS (C&IT) during the discussions in the meeting. Both the dignitaries exchanged views and discussed matters concerning each countries in the field of ICT.

- A six member Finnish delegation led by Minister for Foreign Trade and Development met Hon'ble Minister of State for Communications & IT on October 22, 2007 in New Delhi. Visiting Finnish Minister was accompanied by Ambassador, DDG Ministry for Foreign Affairs, Director Strategic Development and Executive Vice President, Nokia Corporation. From DOT Director (IR-I) attended the meeting to assist Hon'ble MOS(C&IT). Both the dignitaries exchanged views on the developments taking place in India in the IT and Telecommunications Sector. During discussions Hon'ble MOS(C&IT) also replied some of the queries raised by EVP, Nokia.

- A seven member Fujitsu (Japanese) delegation led by General Manager (S & M), Fujitsu met DDG (IR) on December 11, 2007 in Sanchar Bhawan, New Delhi. Both sides had discussion and exchanged views on building infrastructure in India by way of Public Private Partnership (PPP).

- A five member Vietnam Public Utility Telecommunications Service Fund (VTF) delegation from Vietnam visited India from December 24-29, 2007. Presentations were made on TCIL, BSNL, MTNL, USOF activities in India and scope of future cooperation with Vietnam in the telecom sector. DDG(IR), DOT chaired the meeting in DOT.

- Chairman, Telecom Commission led the Indian delegation for participation in the "IT Ministerial Conference 2007" at Seoul, South Korea from April 19-22, 2007 on the invitation from H.E. Minister of Information and Communication, Republic of Korea addressed to Hon'ble MOC & IT.

- An Inter-Ministerial meeting was held with the Department of commerce to discuss the agenda for forthcoming JTC meeting with Tanzania .

- A meeting with two member Polish delegation was convened with the representatives of Indian Telecom companies namely, BSNL, MTNL, Bharti Enterprises, Reliance Infocomm, Tata Tele Services under the chairmanship of DDG (IR), DOT on May 10, 2007 in Sanchar Bhawan. A presentation was given by the Polish delegation on the current status of Polish Telecom market in respect of Tender to be floated by Poland for Basic services in Poland. Poland side was interested for participation in their telecom market by Indian operators.

- An Inter-Ministerial preparatory meeting under the Chairmanship of JS (Gulf/Haj), MEA, prior to the 9th Session of India-UAE Joint Commission was held in MEA, South Block on June 1, 2007.

- An Inter-Ministerial meeting regarding the "follow up of the decision taken in the fourth meeting of the Indo-Pakistan composite Dialogue held on July 31 to August 1, 2007 was held on December 12, 2007 in Department of Commerce from Telecom side Director (IR-I), DOT attended the meeting.

- In order to prepare for the ASEAN-India working group meeting, an inter-ministerial meeting was convened by MEA on October 25, 2007 which was chaired by JS (MER). From Telecom side Director (IR-I), DOT, Director (Technical) and GM, TCIL attended the meeting. MEA was requested to convey the necessary approvals for the CLMV project.

Membership Contribution to International Telecommunications Union (ITU)

It has been decided to enhance the annual membership contribution to ITU from 5 units to 10 units w.e.f January 2008. This has been announced by Chairman (TC) during ITU Council Session of 2007 in Geneva.

SUMMARY OF FOREIGN DEPUTATIONS

SL No.	Activity	No. of officers deputed
1.	ITU-T/ ITU-D and ITU-R	15
2.	APT	13
3.	Others	57

USE OF OFFICIAL LANGUAGE (HINDI)

ACTIVITIES

During the period 2007-08(April - December 2007), the following items of important work relating to progressive use of Hindi were undertaken by the Official Language Division.

Implementation of Official Language Policy and the Annual Programme of the Government of India

All the Sections, Offices and Public Sector Undertakings under the administrative control of the Department were appraised of the Official Language Act and Rules and instructions issued there under, so that the targets fixed by the Official Language Department in their Annual Programme for the year 2007-08 could be achieved. Quarterly Progress Reports regarding progressive use of Hindi were called for from various Sections of the Department and other Offices and PSUs under this Department. The same were reviewed and necessary corrective measures were taken wherever necessary. The Section 3(3) of the Official Language Act, 1963 was fully complied with during the year under report. All the Sections of the Department were inspected to ensure the compliance of the various provisions and directions issued under Official Languages Act and Rules.

Training in Hindi Language, Hindi Typewriting and Hindi Stenography

Typists and Stenographers, who were not trained in Hindi Typing and Stenography, were nominated for training in Hindi typing and Hindi Stenography. Apart from this, 2 officials were sent for computer training in Hindi in order to familiarize them with the latest technology in computers. Apart from this 41 officers were trained to work in Hindi on computers in a workshop organised on December 18, 2007.

Official Language Implementation Committee

Quarterly meetings of Official Language Implementation Committee of the Department were held at regular intervals wherein the progress relating to the use of Hindi in official work in the Department was reviewed. The meeting for the quarter ending September, 2007 was held under the Chairmanship of chairman Telecom Commission and Secretary (Telecom) on September 18, 2007.

Inspection by 2nd Sub-Committee of Committee of Parliament on Official Language

The Official Language Division worked as a co-coordinator during the course of inspections conducted by the Second Sub-Committee of Parliament on Official Language of the various offices/

corporates under the Departments. During the period under review, 9 such inspections were carried out throughout India. This committee also inspected the Department of Telecommunications on June 5, 2007.

Celebration of Hindi Pakhwara

Hindi Pakhwara was organized from September, 1-15, 2007 in the Department. 15 competitions relating to the promotion of Official Language in the Department were organized for the Hindi speaking as well as Non-Hindi speaking officers/officials. About 270 officers/officials participated in the competitions. Cash Prizes/Certificate were given to the winners under the schemes for doing their original work in Hindi as well as the successful participants of the Hindi Pakhwara by the Hon'ble Minister of State for Communications and Information Technology in a function organised on November 8, 2007.

Hindi Workshop

During the period under report one Hindi workshop was organized wherein more than 60 officers/ officials were trained to do their maximum official work in Hindi.

Notification of the Offices under Rule 10(4) of the Official Language (Use for Official Purposes of the Union) Rules, 1976

During the period under review, 109 offices under the administrative control of this Department were notified under the Rule 10(4) of the Official Language Rule, 1976.

Translation Work

During the period under report apart from routine translation important documents, specified in 3(3) of the Official Language Act, 1963 (including all papers/reports to be laid by the Department on the table of both the Houses of Parliament) were translated and prepared in bilingual form.

Hindi Salahakar Samiti

The first meeting of the newly constituted Hindi Salahakar Samiti of the Department was held on March 20, 2007 under the Chairmanship of Hon'ble Minister of States for Communications and IT. The second meeting of the above Samiti was held on December 19, 2007. The subjects relating to Official Language as given in the Constitution, the Official Language Acts and Rules were discussed in detail during this meeting.

WELFARE AND SPORTS ACTIVITIES

Under the Welfare Programmes, scholarships, book-awards and incentives are granted to meritorious school/college going children of the DOT employees. Besides this, conveyance allowance/hostel subsidy is also granted to mentally/physically challenged children of the employees. The programme also includes financial assistance to employees in distress and providing subsidies for recreation tours etc.

During the year 2007-08 (April-December), the following activities were undertaken under the revised schemes.

- Financial Assistance of Rs. 35,000/- (Rupees Thirty Five thousand only) was provided to the families of deceased employees.
- Excursion trips to Nainital, Ranikhet and nearby places was arranged from June 19-23, 2007 and to Vaishno Devi from November 2-5, 2007.
- Officials of DOT(HQ) were deputed to participate in different sports events conducted by Northern Telecom Region(NTR)/Bharat Sanchar Nigam Limited.
- Book Award and Incentive were distributed to the meritorious school going children of DOT employees.

The welfare schemes are largely gender neutral and composite in nature. However, some of the schemes namely Book Awards, Scholarship awards contains pro women and SC/ST orientation by way of relaxation in marks for these categories. There is no earmarked amount for these categories as Book Awards/Scholarships are awarded to the deserving applicants fulfilling the eligibility criteria. The expenditure incurred out of Staff Welfare Fund in respect of women and SC/ST is as under:

Expenditure incurred on Women Welfare : Rs. 77,100/-

Expenditure incurred on Development of SC/ST : Rs. 48,000/-

GENDER BUDGETING

In the Department of Telecommunications the Gender Budget Cell has been constituted in November 2006, and is headed by DDG (FEB).

After constitution of Gender Budgeting Cell, first meeting was convened on January 18, 2007 to analyze the welfare activities of Department of Telecommunications including all field units. Thereafter, two meetings under the Chairmanship of Secretary (T) were convened on May 21, 2007 and October 3, 2007 in which Senior Officer of BSNL, MTNL and C-DOT also participated. In the budget of DOT a sum of Rs.4 lakh has been allocated during BE 2007-08 for gender budgeting purpose. The Gender Budgeting Cell of the department is trying to generate awareness about the gender budgeting initiative of the government and how department of telecom can play a role in mainstreaming gender concern at the planning and formulating stage of various schemes in the sector.

RIGHT TO IINFORMATION ACT

In pursuance of the gazette notification of the Govt. of India regarding Right to Information Act 2005 for its implementation, Department of Telecom, Ministry of Communication and IT also initiated its implementation in the Administrative Division since October 2005. A separate RTI Unit was established in this Department and started working form January 1, 2007 with one CPIO at the level of Deputy Secretary, one APIO at the level of Under Secretary and DDG(C&A) as Appellate Authority for the entire Department.

PUBLIC GRIEVANCES AND REDRESSAL

Department of Telecom receives complaints directly in its Public Grievances Cell from the office of the Hon'ble Prime Minister, Minister of Communications & IT, MPs, MLAs, VIPs, Chairman's Office, Department of Administrative Reforms and Public Grievances (DARP&G) and from the public. Public Grievances Cell of DOT monitors complaints for their early and timely settlements.

During the period 2007-08(April- December), 2273(in PGRAM) grievances were received, out of 2631 (including 358 B/F) grievances 1481 were disposed off.

UNIVERSAL SERVICE OBLIGATION FUND (USOF)

USO and Disbursement of Fund

- The Universal Service Support Policy came into effect from April 1, 2002. The Indian Telegraph (Amendment) Act, 2003 that gave statutory status to the Universal Service Obligation Fund (USOF) was passed by both Houses of Parliament in December 2003. The USOF has been established under the Indian Telegraph Act with the fundamental objective of providing access to basic telecommunications services to people in the rural and remote areas at affordable and reasonable prices. The Rules for administration of the Fund known as Indian Telegraph (Amendment) Rules, 2004 were notified on March 26, 2004.
- Indian Telegraph (Amendment) Ordinance 2006, was promulgated on October 30, 2006 to amend the Indian Telegraph Act, 1885 in order to enable support for mobile services and broadband connectivity in rural and remote areas of the country. Subsequently, Indian Telegraph (Amendment) Act 2006 was passed on December 29, 2006, to amend the Indian Telegraph Act, 1885. Indian Telegraph (Amendment) Rules 2006 prescribing rule for administrator of the fund were published on November 17, 2006.
- The resources for implementation of USO are raised through a Universal Service Levy (USL) which has presently been fixed at 5% of the Adjusted Gross Revenue (AGR) of all Telecom Service Providers except, the pure value added service providers like Internet, Voice Mail, E-Mail service providers etc. In addition, the Central Govt. may also give grants and loans.
- The Universal Service Obligation Fund is headed by the Administrator, USOF. He is empowered to formulate procedures for implementation of the USO and disbursement of funds from the USOF. His office functions as an Attached office of the Department of Telecom, Ministry of Communications & IT.

USF Activities

As per the Rules, the following services shall be supported by the Fund, namely:

- Stream-I: Provision of Public Telecom and Information Services
  - i) Operation and Maintenance of Village Public Telephone in the revenue villages identified as per Census 1991 and installation of Village Public Telephone in the additional revenue villages as per Census 2001.
  - ii) Provision of additional rural community phones apart from the target of one Village Public Telephone in every revenue village.

iii) Replacement of Multi Access Radio Relay Technology Village Public Telephone installed before 1st day of April 2002.

- Stream-II: Provision of household telephones in rural and remote areas as may be determined by the Central Government from time to time.
- Stream-III: Creation of infrastructure for provision of Mobile Services in rural and remote areas.
- Stream-IV: Provision of Broadband connectivity to villages in a phased manner.
- Stream-V : Creation of general infrastructure in rural and remote areas for development of telecommunications facilities.
- Stream-VI: Induction of new technological developments in the telecom sector in rural and remote areas.

The implementation of USO related activities is carried out by the "eligible operators" as per Indian Telegraph (Amendment) Rules 2006 covering Basic Service Operators, Cellular Mobile Service Providers, Unified Access Services Licencees and Infrastructure Providers (IP-I). These Telecom Service providers are both public and private sector companies.

Status of USF activities undertaken in the country

- Agreements were signed with M/s BSNL and six PBSOs in March 2003 for operation and maintenance of existing Village Public Telephones (VPTs) in the country in the identified revenue villages as per Census 1991. In addition, subsidy support is also admissible for the VPTs installed in additional revenue villages as per census 2001. About 5,26,772 (BSNL:5,18,059 PBDO:8,713) Village Public Telephones (VPTs) in the country are currently eligible for financial support for operation and maintenance as on December 31, 2007.
- Agreements were signed with M/s BSNL in September 2003 and March 2004 to replace 1,86,872 numbers of VPTs in the country, which were earlier working on Multi Access Radio Relay (MARR) technology and installed before April 1, 2002. The number of MARR VPTs to be replaced has subsequently been revised to 1,82,766. Out of these, 1,80,115 MARR VPTs have been replaced by BSNL till December 2007. About 1000 MARR based VPTs are expected to be replaced during the period January-March 2008.
- Agreements were signed with M/s BSNL in November 2004 to provide subsidy support for provision of VPTs in 66,822 no. of uncovered villages in the country excluding those villages having population less than 100, those lying in deep forests and those affected with insurgency. Out of these, 14,183 VPTs are to be provided on satellite based media as per the Agreement signed. Provision of these VPTs has been included as the Telephone Connectivity component

under Bharat Nirman Programme. As on December 31, 2007, 52,342 VPTs have been provided by BSNL and the remaining villages are likely to be provided with VPTs in a phased manner by June 2008. About 4000 VPTs are expected to be provided during the period January-March 2008.

- Agreements were signed with M/s BSNL and M/s RIL in September 2004 to provide 46253 Rural Community Phones (RCPs) [BSNL: 24822, RIL: 21431] in the country in those villages with population exceeding 2,000 and without a Public phone. The number of RCPs to be provided has since been revised as 43,409 [BSNL: 21,978, RIL: 21431]. Out of these, 38,112 RCPs have been provided [BSNL: 21,885, RIL: 16,227] as on December 31, 2007. About 500 RCPs are expected to be provided during the period January-March 2008.
- Subsidy support has been provided from USO Fund for 90.5 Lakhs of rural household Direct Exchange Lines (RDELs) installed in the country prior to April 1, 2002 as per Rules.
- Agreements were signed in March 2005 with M/s BSNL, RIL, TTL and TTL (MH) for installation of individual Rural Household Direct Exchange Lines (RDELs) in the country during April 1, 2005 and March 31, 2007. As per the agreements signed, these RDELs were to be provided on Land Lines or on Fixed Wireless Terminals in case of any wireless technology. These RDELs were to be installed in the eligible 1685 Short Distance Charging Areas (SDCAs) out of total 2,647 SDCAs, where cost of providing telephone connection was more than the revenue earned. The contracted SDCAs amongst these companies were 1,267, 203, 172 and 43 respectively. About 25,64,577 RDELs were provided [BSNL (8,91,306), RIL (7,37,207), TTL (7,26,915) and TTL (MH): 2,09,149] under this scheme, which ended on March 31, 2007. The scheduled date for installation of the RDELs has been extended in January 2008 by one year period i.e. upto March 31, 2008. About 5,00,000 RDELs are expected to be provided during the extended period April-March 2008.
- Subsidy support is being provided for about 18,65,690 Rural DELs installed in the eligible SDCAs during the period April 1, 2002 and March 31, 2005.
- A scheme has recently been launched by USO Fund to provide subsidy support for setting up and managing 7871 number of infrastructure sites (towers) in 500 districts spread over 27 states for provision of mobile services in the specified rural and remote areas, where there is no existing fixed wireless or mobile coverage. The infrastructure so created shall be shared by three service providers for provision of mobile services including other Wireless Access Services like Wireless on Local Loop (WLL). The agreements effective from June 1, 2007 have been signed with the successful bidders in May 2007. Mobile services through these shared towers are targeted to be made operational in a phased manner by May 2008.

- Complete Tower details (District-wise and Tower-wise locations) are available on DOT Website (www.DOT.gov.in) under the heading "What's New" and further sub-heading "Tender".

USF activities likely to be undertaken in near future

- It is proposed to cover the other uncovered areas in the country through mobile services for which 11000 additional towers have been identified. These towers will be installed in the second phase of the scheme which is likely to be launched shortly.
- With the aim to provide e-governance and data services to the rural masses, a proposal is also under consideration of the Government to provide subsidy support for Broadband connectivity in rural and remote areas of the country in a phased manner by utilizing the infrastructure created for provision of mobile services. The broad parameters under which the connectivity is required to be provided are being worked out. The detailed scheme in this regard shall be prepared taking into consideration the views, suggestions and comments from the stakeholders. This scheme will cover Common Service Centers (CSCs) being set up by DIT, schools, primary health centers and Gram Panchayats in a phased manner.
- For creation of general infrastructure for development of telecom facilities, it is proposed to improve the OFC network between the Block HQs and the District HQs to begin with. M/s TCIL has been entrusted with the work of compiling the details of existing network set up by the Service Providers to identify where the OFC network is to be set up in rural areas.
- For induction of new technological developments in the telecom sector on a Pilot Project basis in rural and remote areas, USOF has recently invited Applications from the eligible companies to undertake Pilot Projects for demonstrating their products/ services in the field of Rural Broadband, Rural Telephony (Fixed, Wireless in Local Loop, Mobile), Transmission Media in Rural Areas, General Telecom Infrastructure in Rural Areas like Tower, Batteries, Power Plant etc., Hybrid power, other solutions for meeting power requirement of rural telecom installation, Customer Premises Equipment etc.

USO Levy Collections and Disbursements made

- The contribution from Service Providers towards USO collected as Universal Service Levy from April 1, 2002 has been Rs. 1653.61 crore in 2002-03, Rs. 2143.22 crore in 2003-04, Rs.3457.73 crore in 2004-05, Rs.3533.29 crore in 2005-06 and Rs.4211.13 crore in 2006-07.
- The entire budgetary provision of Rs. 5081.44 crore allocated for the financial years 2002-03, 2003-04, 2004-05, 2005-06 and 2006-07 was fully utilized (Rs 300.00, 200.00, 1314.59, 1766.85 and 1500.00 crore).
- A sum of Rs. 1800 crore was allocated for the Financial Year 2007-08, which has since been revised to Rs. 1450.00 crore. Out of this, Rs. 430.56 crore has been disbursed from USOF during the FY 2007-08 as on December 31, 2007.

CONTROLLER OF COMMUNICATIONS ACCOUNTS OFFICES

With the expansion of the range of functions delegated to DOT Cells in all Telecom Circles, beyond the mere settlement of pension and terminal benefits, the nomenclature of these DOT Cells was changed to office of Controller of Communications Accounts.

The role of the CCA offices flows from the various policy initiatives taken over a period of time such as; NTP;1994, NTP 1999, USO 2003. The CCA Unit has evolved into a critical professional interface between the Department of Telecom and its various stake holders on various policy issues, such as licence fee and spectrum charges management, USO fund disbursement etc.

Functions Being Performed By the CCA Offices

The 26 CCA Offices are located across the length and breadth of the country and perform the following vital functions:

Statutory Functions

Statutory Functions include those relating to pension & related matter, audit functions and as Central Public Information Offices (CPIOs). Presently, the CCA offices are disbursing pension to over 1.6 lakh pensioners. During 2006-07, Rs 1345.39 crore of pension was disbursed as compared to Rs. 1299.75 crore in 2005-06. Figures for 2007-08 (actuals upto December, 2007) are Rs. 1020.81 crore.

Revenue Functions

Revenue Functions include collection of licence fee & Spectrum charges, Verification of deductions, Collection of spectrum charges, Maintenance of financial bank guarantees and Collection of captive VSAT licence fee. The revenue on account of spectrum charges and Licence fee has shown increase during the last few years, as is evident from the table below:

Sl No		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 (upto December, 2007
1	Spectrum charges	640	677	1040	1396	2090.39	2101.91
2	License fee	4827	8421*	6816	6624	7037.92	4103.67
3	**Total**	**5467**	**9098**	**7856**	**8020**	**9128.31**	**6205.58**

*This includes one time entry fee for UASL

Macro Functions

The USOF is disbursed and monitored at the State level by the offices of CCAs. While performing the USO functions the CCAs are verifying the claims before the funds are disbursed. They also carry out physical inspection and monitoring for establishing the veracity of claims. The amount being disbursed has been increasing over years as is indicated in the table given below:

Financial year	Disbursement of USO levy to the operators (Rs. in crore)
2002-03	300
2003-04	200
2004-05	1314.58
2005-06	1766.85
2006-07	1500
2007-08	430.56*
TOTAL	**5511.99**

* Actual disbursement upto December 2007

Administrative functions

The CCAs are performing DDO functions for WMO and VTMs, the field offices of DOT. Apart from carrying out other administrative functions as the Head of the Departments (HOD), the CCAs also handle court cases at field level where the Govt. of India is a party in matters of licence fee, spectrum charges, pension, absorption issues etc. The CCA offices are also conducting Pension Adalats to settle the pension related grievances at a single forum that was not hither to available to them.

With a view to ensuring a better information outreach on the functions/activities of the CCA offices to those who are covered thereunder, several CCA offices have launched websites. The contents of the websites have been designed with the special focus on the specific information requirement of the clientele, while equally focusing on the role of the CCA Unit as the interface between DOT/Government of India and the different stakeholders.

Pension Adalats being conducted by office of controller of communications accounts to solve pension related problems

Physical inspection of VPTs & other rural telephones are conducted by office of controller of communications accounts.

REGULATORY FRAMEWORK IN THE TELECOM SECTOR

The Telecom Regulatory Authority of India(TRAI) has always endeavored to encourage greater competition in the telecom sector together with better quality and affordable prices in order to meet the objectives of New Telecom Policy, 1999. Vide a Notification dated January 9, 2004 of the Government Broadcasting and Cable Services also have been brought within the definition of 'telecommunications service' in terms of section 2(k) of the Telecom Regulatory Authority of India Act, 1997 as amended by the TRAI (Amendment) Act, 2000. A number of policy initiatives were taken in 2006-07 to transform the telecom sector including the broadcasting and cable services to extend the scope, availability and reach of these services in India.

Activities undertaken

During the period April-September 2007, the following achievements were made, viz., Recommendations, Notification of regulations and issuance of directions:

- The Telecom Unsolicited Commercial Communication Regulation, 2007 was notified.
- The Regulation on International Telecommunications Access to Essential Facilities at Cable landing stations was notified in June 2007.
- The Domestic Leased Circuits Regulation, 2007 was notified in September 2007.
- Regulation on Telecom Consumers Protection and Redressal of Grievances Regulations, 2007 was notified on May 10, 2007.
- Regulation on Telecommunications Consumers Education and Protection Fund Regulations, 2007 was notified on June 15, 2007.
- Regulation on Guidelines for Registration of Consumer Organisations / Non Government Organisations (NGOs) and their Interaction with TRAI Second Amendment 2007.
- Regulation on Quality of Service of DTH 2007, was issued in August 2007.
- Telecom Regulatory Authority of India sent its Recommendation on Infrastructure sharing to DOT in April 2007.
- The Authority gave its recommendations on 'Improvement in the effectiveness of NIXI' to Department of Telecommunications in April 2007.
- Recommendation on Review of internet services was sent to DOT in May 2007.
- Recommendations on Review of Licence terms and conditions and capping of number of access providers.
- Publication of AGR Data on TRAI website.

- Ensuring the quality of service provided by the service providers through:
  (a) Quarterly reports received from service providers for Basic and Cellular Mobile Services.
  (b) Broadband service.
  (c) Monitoring of Quality of Service Parameters of ISPs.
  (d) Network/Point of Interconnection (POI) reports.
  (e) Objective Assessment of QOS through and Independent Agency.

Measurers to protect consumer interest

The following measures have also been initiated to protect the interest of consumers:

- Auditing of Metering and Billing System.
- Direction on information to be included in the Telephone Bills issued to the consumers by the service providers.
- Consumer Education and Capacity Building of Consumer Organizations.
- Periodic meeting with the registered consumer organizations and NGOs.
- Constitution of the Committee on Telecommunications Consumers Education and Protection Fund (CUTCEF).

In addition to these, following measures have also been initiated:

i) The Authority had been issuing directions to service providers to enhance consumer transparency in the matters of service provision. To enhance consumer awareness, the Authority advised all Telecom Access Service Providers who implement 'black out' on specified days for SMS to implement such SMS tariffs in a more transparent manner. Specific guidelines on this are given below:

   a) The 'black out' days i.e., the days on which free / concessional SMS are not available shall be clearly indicated in the packages itself.

   b) The SMS charges applicable on these special days shall be explicitly conveyed to the subscribers.

   c) The dates corresponding to the black out shall not be altered after the pack is subscribed by the customer.

   d) There shall be no addition to the list of black out days after the pack is subscribed by the customer.

ii) The Authority advised all Access Service Providers that while offering and implementing handset bundled tariff schemes, hike in any item of tariff during the period during which a customer is locked-in to a network will be inconsistent with the provisions of 43rd amendment to the TTO.

iii) The Authority has notified the 45th Amendment to the TTO specifying call charges of Rs.500/- each for unsolicited commercial communications.

iv) The Authority has advised all IPLC & Domestic Leased Line Service Providers to provide details of the discount criteria on the ceiling tariff, i.e., the basis on which the discounts are to be offered to the buyers of domestic and international bandwith and other related services in their websites, so as to ensure that the consumers of these services have access to information on prices including discount criteria.

v) The Authority advised all Access Service Providers not to offer any plans which prescribe separate charges for rectifying the defects etc., and if any such plans are under offer the same may be withdrawn forthwith and report compliance to the Authority.

vi) Direction was issued to all Service Providers wherein and it was mandated that CLIP facility cannot be made a compulsory item of tariff for the subscribers in any tariff plans

Customer Perception of Service

Section 11 (i) (b) (v) of TRAI Act, 1997 lays down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of Telecommunications service.

For the purpose of assessment of customer perception of service, the QOS Regulations 2005 stipulate parameters of Subjective assessment for both Basic & Cellular Mobile Telephone Services. The Independent Agency appointed for assessment of customer perception of service has submitted the reports for quarter endings December 2006. These reports were analyzed and put on the TRAI website for the information of all Stakeholders / Public.

Activities proposed to be undertaken during October 2007 to March 2008

Recommendation on growth of Broadband

The TRAI observed that even after taking various initiatives to increase the growth of broadband, the expected growth of broadband has not been achieved. TRAI felt the need to identify various impediments affecting to achieve higher growth of broadband by capping the various impediments affecting its growth.

Provisioning of Internet Protocol Television (IPTV)

To facilitate the growth of IPTV services in the country and removing gray areas in the promotion of IPTV services, the TRAI came up with a position paper on provisioning of IPTV services in September 2007. The paper analyses various technological options to provide IPTV and associated regulatory issues with the objective of bringing clarity on various regulatory provisions and licensing requirements to encourage stakeholders to launch IPTV services. Depending upon the responses received from stakeholders, TRAI will send its recommendations to the DOT.

TELECOM DISPUTES SETTLEMENT AND APPELLATE TRIBUNAL

Telecom Disputes Settlement and Appellate Tribunal (TDSAT) has been established by the Central Government by an amendment to section 14 of the Telecom Regulatory Authority of India Act, 1997 (as amended in 2000) for adjudication of any dispute between a licensor and Licencee, between two or more service providers, between a service provider and a group of consumers; and to hear and dispose of appeal against any direction, decision or order of the Telecom Regulatory Authority of India.

By a notification issued on January 9, 2004, as the Central Government expanded the meaning of the term 'Telecommunications Services' so as to also include 'Broadcasting Services and Cable Services'. The Tribunal being an adjudicatory body exercises both original and appellate jurisdiction in respect of disputes pertaining to telecom, cable and broadcasting services.

Hon'ble Mr. Justice Arun Kumar, former Judge of the Supreme Court of India is the Chairperson of TDSAT.

The number of cases in the Tribunal has been increasing every year since its establishment in May 2000. The total number of cases filed before TDSAT in the year 2001 were 103, which have increased to 522 in 2006 and 473 in 2007 (as on October 26, 2007). The disposal of cases has kept pace and all efforts are made to ensure that there is speedy disposal. This is corroborated by the fact that there is no pendency of the cases filed upto the year 2004 except 3 cases which are pending due to technical reasons/pendency of writ petitions before High Courts/appointment of Commissioner etc.

TDSAT, since inception, has delivered landmark judgments in the cases both in telecom as well as broadcasting and cable sectors, which came before it for adjudication and these, are cited in all leading legal reports.

TDSAT has been organising seminars in different parts of the country to bring awareness amongst various stakeholders including consumers about the dispute redressal mechanism in the telecom, broadcasting and cable sectors and to find ways and means to strengthen the grievance redressal system in these sectors. During the year 2007-2008, the Tribunal has organised Seminar in Srinagar (J&K) on October 20, 2007 and attendance at the seminar was testimony to success of the seminar. The distinguished speakers including Hon'ble Judges of the Supreme Court, during various seminars organised by TDSAT have commended the counseling extended by the Registry of TDSAT to various litigants and appreciated the efforts taken by TDSAT for speedy redressal of grievances.

The TDSAT also publishes an authoritative compendium of Telecom and Broadcasting laws. This compendium is distributed free of cost and has proved to be a boon for the stakeholders. This compendium is now used as reference manual for purposes of citation in Supreme Court and other High Courts.

Under the Telecommunications Sector Reforms Technical Assistance Project of the World Bank, the Tribunal was able to set up a reference library, organises seminars to generate awareness amongst various stake holders including consumers about dispute resolution mechanism in telecom, cable and broadcasting. The World Bank in its appraisal report has rated the performance of TDSAT as highly satisfactory.

TDSAT has been imparting internship to law students from leading law institutes. During the year 2007 - 2008 law students from various institutes including one foreign student from Institute d'Etudes Politiques, Paris, France have undergone internship in TDSAT.

The Tribunal has started levying ad-valorem rate of court fees on cases which are in the nature of recovery/claim suits. As a result of this, the revenue receipts of the Government of India have increased manifolds. For instance as against revenue receipt of Rs. 5,47,670/- in the year 2004-2005, the revenue receipts for the year 2006-2007 increased to Rs. 80,10,377/- and to more than Rs. 2.10 crore for the year 2007-2008 (as on October 2007).

As sector Member of International Telecommunications Union(ITU), TDSAT has been participating in the international seminars, conferences and events organised by ITU and other international bodies.

TDSAT maintains its own website with all the important judgments and other activities of the Tribunal on the Website at www.tdsat.nic.in. The e-mail address of the Tribunal is tdsat1@yahoo.co.in. TDSAT has also developed an SMS Alert System in this Tribunal for the purpose of informing to the parties to the legation about the daily cases listed before the Tribunal.

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II. 1. Centre for Development of Telematics

INTRODUCTION

Centre for Development of Telematics (C-DOT) is the telecom research and development centre of the Government of India under administrative control of the Department of Telecommunications.

C-DOT develops total telecom solutions, technologies and applications for the fixed-line, mobile and packet-based converged networks and services. C-DOT has also developed technologies which are intensively based on Software and are useful to the service providers for provisioning of services, as also for operations and management of networks and services. C-DOT technologies have a significant presence in the Indian telecom network directly as well as through its Licencees. C-DOT's recent focus has been on development and deployment of Next Generation Networks, cost-effective rural wireless solutions, software based systems, optical and satellite transport and access technologies and solutions required for strategic sectors.

C-DOT's product portfolio includes fixed line PSTN systems, Advanced Intelligent Network solutions, Access Network products, Synchronous Digital Hierarchy (SDH) and Wavelength Division Multiplexing (WDM) systems, Satellite Communication systems, Network Management Systems, Operation Support Systems and Rural Wireless Access and Broadband Solutions based on Cognitive Radio, SDR based GSM systems. C-DOT continues to support the legacy systems deployed in the field.

Objectives for the 11th Plan

To explain the work done in the first half year of 2007-08, it may be appropriate to briefly mention the objectives of the 11th five year plan as envisaged for C-DOT as the year happens to be the first year of the current plan.

Schemes emphasized by C-DOT for the 11th five year plan lay major emphasis on the technologies related to security, strategic sectors, rural, broadband and technology for the north-east region etc. These technology schemes will not only provide telecom solutions related to this priority sector but also contribute to various programmes of national importance linked with the growth. Effort will also be made to include schemes which meet the objectives of National Common Minimum Program (NCMP).

C-DOT has also been mandated to work as nodal agency for telecom security related programmes including Centralized Lawful interception, monitoring and analysis as well as creation of a secured Network for Defense and Government agencies.

Progress during the period (April- December 2007)

Major activities were planned for the year 2007-08 based on the objectives set for 11th five year plan. In the first three quarters of the year, the R&D efforts have been mainly devoted to bring some of the existing technology projects close to logical end as well as initiating the preliminary study / exploratory work in respect of new technology areas proposed for financial year 2007-08.

Advanced Intelligent Network (AIN)

- Field trial in progress for Wireless Intelligent Network (WIN) system, enhancements completed for inter-working with ZTE switch for WIN service's field trial. Currently, integration and testing with ZTE switch are in-progress as part of the field trial mandate for WIN solution.
- Presentation given to MTNL for the enhanced AIN soln proposed to replace the existing currently deployed legacy C-DOT IN solution to comply with TRAI guidelines released for multi-operator multi-network scenario; awaiting MTNL's communication to commence further activities.
- Formulation of specs for IN for Converged network completed. Study work in progress to explore possibility of inter-working of C-DOT IN solution with the soft switch to provide IN for converged network services

High Bit Rate Network Backbone on Fibre and Satellite

- Development in progress for a Gigabit Passive Optical Network (GPON) system for two types of ONTs (Optical Network Termination) for applications - SFU (Small Family Unit), residence application and SOHO (Small Office / Home Office) for business applications to provide fibre-to-the-home (FTTH) access to deliver triple play services. Design activities have also commenced for central office equipment, namely, OLT (Optical Line Termination Unit) and outside plant equipment, ONU (Optical Network Unit), for providing fibre-to-curb access.
- System integration and lab testing are also in progress for broadband satellite system to cater to the North-East region requirements.

Cell and Packet Technology for Voice and Data Convergence

- System integration completed for IP /MPLS router & testing in the lab in-progress. Prototypes ready for signaling and media gateway, preliminary version of C-DOT soft-switch completed and internal validation in-progress.
- Specification formulation in progress for new NGN services namely, video call and video mail.
- C-DOT NGN solution with strategic partners installed at allocated field trial site for trial of class 4 (IPTAX) & class 5 (subscriber) services have been upgraded with additional functions and features namely, traffic, billing, new NGN services - video call etc. and same had been tested for commercial trial for these enhanced functionality, which are planned to be scheduled shortly in the BSNL network.

Product enhancements and Field Support

- Field trial for CIIS (C-DOT Interception System) is in-progress at Enforcement Directorate. Further, enhancement in parallel are also ongoing for CIIS to provide interface support for different technologies (for field trial) at Enforcement Directorate. Development for advanced lawful interception function based on recent Haryana Police Tender requirements etc. completed. CIIS feature enhancements - fax & data (through internet dial-up) detection & interception for post processing is being carried out.
- Clearing house application for BSNL/MTNL integrated for field trial. Field trials and AT (Acceptance Testing) completed for Clearing House application for BSNL/MTNL network. Discussion is also in-progress to deploy the application in select zone(s) on commercial basis. Clearing house application feature enhancements also completed.
- As part of MAX support in the field, development & validation completed for Compact Embedded System (CES) for transferring Call Detail Records (CDRs) to billing centres and field trial for the same is expected to commence shortly. Further, a new field release for MAX software namely 2-2-1-9 had been finalized and installed at Ladwa (Kurukshetra, Haryana) for field trial which includes major enhancements e.g. centrex feature, interface for CES and enhancements for no. of special priority for subscriber & trunk to support.
- Enhancements are in-progress in C-DOT MAX and RAX to migrate to the next generation technology switches with VoIP capability: signaling gateway & low capacity media gateway prototype ready for MAX.
- Support for TAX NMS deployment ongoing in the field.

Achievements/Progress in other major schemes /projects

- Major projects during the plan period for C-DOT are those related with telecom related security. These include centralized security management systems for law enforcement agencies, and creation of secured network. Specifications, architecture and network dimensioning work was initiated with various agencies participating in several meetings to work out the requirements and strategy. C-DOT has already brought the manual request based system to trial stage and the same is likely to be commercialized soon. This has set the platform for various phases of the future phases of lawful interception, monitoring and analysis starting with digitally automated provisioning and monitoring system.
- The work on strategic solutions also includes creation of secured network for Government agencies and Defence. Work for Navy adaptation of broadband ATM network is in progress under another project.
- Broadband technology, technology for NE and rural / remote areas are the other technology programs . For NE region and rural /remote areas, development for migration of C-DOT MAX technology to next generation IP based technology is ongoing which is planned to be pilot tried in NE region. Preliminary also study initiated to understand the functional requirements,

composition of various sub-systems, their integration and various other interfaces towards national / regional internet backbone, high speed routers, remote terminal with VoIP facility and ethernet bridging port for connection to LAN or multi-media terminal for broadband access from 256Kbps to 2Mbps. Similarly, in broadband technology, basic study has also been initiated to understand types of various client interfaces such as, SDH Optical Transport Network (OTN), GbE (Gigabi ethernet) etc for their aggregation on to STM 64 or optical transport unit for the purpose of efficient carriage in a metro environment. However, there may be a re-look w.r.t. priorities for the development of these technologies.

- C-DOT Alcatel Research Centre - A joint venture programme between Alcatel and C-DOT to develop broadband wireless Technologies.
- Design implementation is already in progress for mobile WiMax technology. Extended lab trials of first product are in progress. Field trials in some RF bands are planned.
- C-DOT Missed Call Alert (MCA) system has been chosen for field trial on commercial basis in European Operator Network, and on its successful conclusion it is planned to be inducted in other countries.
- Directorate of Enforcement has accepted C-DOT techno-commercial proposal for commissioning of Lawful Enforcement Monitoring Function (LEMF) for field trial which will be subsequently installed in other various zones and sub-zones of the Directorate after successful completion of the field trial.
- A tripartite umbrella MoU signed between C-DOT, Indian Navy and M/s BEL to establish a framework for cooperation of the parties in development, production and deployment activities relating to products of ATM technology. Subsequently, project agreement for customization, deployment, maintenance, and support of CAX 16 R1 ATM switching system for explicit use by Indian Navy has also been signed.
- C-DOT has signed a Definitive Agreement with M/s NMS Works Software Pvt. Ltd, Chennai, for development, validation, deployment and maintenance of a NMS solution inter-working with the multi-technology, multi-vendor EMSs and NEs, for the Transmission Network of BSNL, across the country.

Promotion of Hindi

- C-DOT is making various efforts to ensure compliance of Official Language Policy of Government of India. Many innovative and different programmes have been initiated in this regard. C-DOT Celebrated Hindi Utsav from September 1-14, 2007 at Delhi centre and from September 14-28, 2007 at its Bangalore centre. The well-known media persons were invited for "Inse Miliye..." on the opening day of Hindi Utsav. Kavi Sammelans were organised on the occasion of Hindi Diwas at both the centres.

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II. 2. Telecommunications Engineering Centre

INTRODUCTION

Telecommunications Engineering Centre (TEC), is a Technical wing of the Department of Telecommunications (DOT), Ministry of Communications and Information Technology, Government of India. Its responsibility include among other things:

- Preparing Standards and Specifications for harmonious growth of the Indian Telecom Network and Services for the public as well as private sector operators.
- Carrying out evaluation of equipment and services.
- According approvals for equipment, technology and services.
- Studying new technology and services and give technical advice to DOT for their introduction in the Indian Telecom Network.
- Technical and Advisory support for DOT.
- Technical advice to TRAI and TDSAT on request of DOT.
- Drawing up Fundamental Technical Plans of DOT.
- Interaction with multilateral agencies like APT, ETSI and ITU etc., through DOT.
- Creating facilities to further the objectives of MRA.
- Develop necessary expertise to imbibe the latest technologies and results of R & D.
- Coordinate with C-DOT to provide details on the technological developments in the Telecom Sector for policy planning at DOT level.

ACHIEVEMENTS DURING 2007-08 (APRIL-DECEMBER 2007)

- During the period from April 2007 to December 2007; 10 GRs/IRs were issued, 33 GRs/IRs were revised and 3 GRs/IRs were amended. GRs included; Element Management System, Metal Free Optical Fibre Cable (G.652 D Fibre), Services for NGN Subscribers, Wi-Fi Hotspot, 1.2 and 1.8 m Earth station antenna operating in Ku-band, etc.
- 44 Test Schedules were prepared for new and revised GRs.
- Technical paper on Spectrum allocation issued. Compendium on Next Generation Network (NGN) compiled and released by MOC&IT.
- 10 Field Trials/ Testing/Validation including the evaluations were carried out for some of the new products in Optical, Satellite, Switching and Radio Technology Areas.

- TEC was referred 27 field problems on switching and transmission, which were looked into and expert advice rendered.
- 17 Technical papers/ white Papers/Concept Paper were issued: White paper included; NGN Architecture, NGN Services, Disaster Management (for NGN compendium),All-IP CDMA Networks and CDMA 2000 1x, FTTX etc.
- As part of its activity for according approval, 91 Interface Approvals were issued for the products for interfacing with the BSNL/MTNL network. 316 Service Test Certificates were issued for the network coverage of private operators. 7 DCC meetings and 15 Manufacturers forum were conducted for various Generic Requirements (GRs).
- To keep the officers of TEC abreast with new developments in new technologies in the Telecom Sectors, 20 Officers of TEC were deputed in different inservice courses/ training/ seminar/ workshops in various Telecom Training Centres and other organizations in India. 6 Officers attended workshop on Motivation and Vitalization and change arranged in TEC. Two officers attended the World Radio Conference 2007 of ITU for reviewing Radia Regulations in Geneva. Technical presentation on Effective Utilisation of Spectrum given to COAI and AUSPI by TEC
- Setting up of NGN test labs in TEC is in progress.
- Revenue as test fee collected from various vendors for the year 2006-07 was Rs.10,50,50,899 and during April - December 2007 it was Rs. 5,43,32,650.

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II. 3. Wireless Planning and Coordination

INTRODUCTION

The Wireless Planning and Coordination Wing in the Department of Telecommunications, deals with the policy of spectrum management, wireless licensing, frequency assignments, international coordination for spectrum management and administration of Indian Telegraph Act 1885, (ITA, 1885), for radio communication systems and Indian Wireless Telegraphy Act 1933, (IWTA, 1933)

ACHIEVEMENT, ACTIVITIES AND PERFORMANCE DURING 2007-08 (APRIL-DECEMBER)

Frequency Assignment For Terrestrial Networks

Assignments of frequencies for terrestrial networks of government and private sector were made for variety of applications, namely, GSM band Cellular network, PMRTS, CDMA and Cor-DECT based networks, point-to-point and point-to-multipoint microwave networks, etc. after necessary technical examinations, analysis and coordination with other wireless networks, as appropriate for establishing electromagnetic compatibility so as to ensure interference-free operation of all such networks. Assignment of frequencies in 869-889 MHz/824-844 MHz and 1710-1885 MHz/1805-1880 MHz band have been made to various UASL and others cellular operators. Assignment were also made in the bands 2.5 GHz, 2.7 GHz, 3.3-3.4 GHz, 5.7 GHz, 10.5 GHz and 26 GHz to ISPs for last mile connectivity besides other captive wireless users.

Broad guidelines for 3G and Broadband Wireless Access (BWA) services have been issued.

Efforts for coordination of additional spectrum for the GSM based cellular services have been continuing at the highest level. Some spectrum has been allotted for the growth of existing service providers as per criteria. The initial/start up spectrum has been allotted to few new operators also as per availability. As per the guidelines of the Government, spectrum for 3G and BWA would be coordinated/refarmed.

Standing Advisory Committee on Radio Frequency Allocations (SACFA)

SACFA is a high level inter-departmental standing committee under the chairmanship of the Secretary (Telecom) and is responsible for formulating policies on radio frequency allocations, including formulation of National Frequency Allocation Plan (NFAP) and the sitting of new wireless installations in the country, etc. It also harmonises and coordinates the usages of the radio frequencies in various bands amongst all the wireless users of the country. The WPC Wing provides the Secretariat of this Committee.

During the year under review, the Committee took a major, forward looking decision of exempting those sites from the elaborate procedure of clearance, wherein the mast/antenna height, at a distance of more than seven kilometers from the nearest airport, does not exceed 40 meters from the level of airport reference point. Such sites would need only a "Registration" with the Secretariat. This would benefit a large number of wireless users. About forty %of the total new wireless installation sites falling under the criteria are expected to be covered for a fast-track clearance procedure.

About fifty three thousand sites awaiting consideration of clearance were processed and cleared in special drives undertaken during the year with the cooperation of all SACFA members, heralding a major boost in the expansion of the telecom services in the country.

It is expected that about 50,000 sites would be cleared during next three months under special drives.

National Frequency Allocation Plan (NFAP-2005)

The current policy document on spectrum viz. the National Frequency Allocation Plan-2002 (NFAP-2002) has been placed on WPC website. Based on the comments received from various agencies on the above, revised National Frequency Allocation Plan-2005 (NFAP-2005) has also been placed on WPC website. This revised National Frequency Allocation Plan would take care of the requirements of various telecom operators.

National Frequency Allocation Plan would be aligned in line with the decisions taken in the WRC-07, appropriately taking into account the national considerations.

Satellite System Coordination

International coordination of satellite systems is required to be undertaken as per the provisions of the International Radio Regulations (RR) of the International Telecommunications Union (ITU). Coordination of frequency assignments for the individual satellite networks is necessary with satellite networks of other administrations for mutual coexistence and interference free operations of these networks.

Pending coordination issues of various administration would be taken up in consultation with Indian satellite operators. Satellite filings received from satellite operators would be examined and forwarded to ITU for necessary coordination.

Satellite coordination with other Administrations

Proposals for coordination of satellite networks of UAE, Russia, Pakistan and Thailand with Indian satellite networks were examined in consultation with Indian satellite operators

Coordination requests sent to ITU

- Detailed coordination request i.r.o INSAT TTC satellite networks at 48E, 55E, 74E, 83E, 93.5E and 111.5E, INSAT-KA48, INSAT-KA55, INSAT-KA74, INSAT-KA83, INSAT-KA 93.5 and INSAT-KA111.5 were sent to ITU.
- API of INSAT KU71.5 satellite networks were sent to ITU.

Protection of Indian space, Terrestrial and Radio Astronomy Services from the Satellite Networks of other countries

With a view to protecting our frequency assignments and satellite orbital position for interference free operation of Indian satellite networks, detailed examination of Special Sections of weekly circulars published by the ITU have been undertaken on a continuous basis. Space Circulars received from Radio communication Bureau(BR) have been examined and objections have been sent to Administrations of Indonesia, UAE, Turkey, Malaysia, China, France, Australia, Japan, Singapore, Russia, Holland, Thailand, Kazakhstan, Ukraine, Azerbaijan, Spain, Algeria, Malaysia, Brazil, Korea and USA, requesting for detailed coordination with a view to protecting Indian Satellite and terrestrial networks.

Filing Indian satellite networks were published in the special sections of International Frequency Information Circular (BRIFIC):

- Advance Publication Information i.r.o INSAT-KA-UHF satellite networks at the location 48E, 55E, 74E, 83E, 93.5E and 111.5E and GSAT-7 at locations 86E and 89E satellite networks.
- Frequency assignment of INSAT-2M (48E), INSAT-2M (74E), INSAT-2M (83E) INSAT- 2M (93.5E) , INSAT-2(48E), INSAT-2E (83E), INSAT-2(55E), INSAT-2T(48), INSAT-2T (55E) and INSAT-2T (74E).
- Coordination request of INSAT-NAV -34 (34E), INSAT NAV -83 (83E), INSAT- NAV-132 (132E).

International Conferences and Meetings

Wireless Adviser participated as an elected Member of Radio Regulation Board in the meeting of the Board at Geneva. It is an international commitment. In the 2007 session of Council India announced enhancement of its contributory units from 5 to 10 units which was greatly appreciated by all.

An Indian delegation comprising of representatives from government and private sectors led by secretary (DOT) participated in the highly important World Radiocommunication Conference-2007 (WRC-07) held in ITU head quarters at Geneva during October 22 - November 16, 2007. Radiocommunication Assembly (RA-07) & Conference Preparatory Meeting (CPM-11) for next WRC-11 were also attended by part of the Indian delegation.

Some of the major achievements of the WRC and related ITU meetings are:-

- Indian nominees were selected as Vice Chairman of ITU-R Study Group-1, ITU-R Study Group-5, ITU-R Study Group-6 and Special Committee on Regulatory and Procedural Matters
- Indian proposal to ITU-R Working party 8F to include IPOFDMA as one of the Interface in IMT-2000 was approved in Radiocommunication Assembly-2007 (RA-07)
- Election of India as one of the vice-Chairmen of WRC-07.
- Allocation and identification of frequency bands 698-790 MHz, 2.3-2.4 GHz and 3.4-3.6 GHz for IMT applications.

Formation of National Working Group (NWGs) corresponding to the ITU-R Study Groups for carrying out study of the various ITU study Group questions. Constitution of National Preparatory Committee (NPC) to harmonise the national views on various agenda item of WRC-11.

Automation of Spectrum Management and augmentation of Monitoring System

The project Design, Supply, Installation and Commissioning of "National Radio Spectrum Management and Monitoring System (NRSMMS)" is being implemented by the WPC Wing. Under the project, spectrum management and radio monitoring functions will be automated /augmented with a view to making these activities more effective and efficient.

During the period, the ASMS at Sanchar Bhawan have been made operational. Out of 21, V/UHF Mobile Monitoring System (MMS) so far 20 vehicles have been delivered to their respective sites. Acceptance Testing has been completed at all the fixed sites without antenna tower except Wireless Monitoring Station (WMS) Siliguri, and all the fixed sites with antenna tower except IMS, Kolkata & Mumbai and WMS, Bhopal and the same has also been accepted.

Acceptance testing at the remaining fixed sites, Operational acceptance of NRSMMS and delivery of remaining one V/UHF vehicles to its respective site would be completed by March 31, 2008.

The achievements during the year 2006-07 and 2007-08 in the field of Radio Frequency Spectrum Management, new frequency assignment/ Licences issued etc. were as under.

	2006 - 2007 (Actual)	2007-2008 (April-December)
Radio Frequency Spectrum Management		
New Radio Frequency authorized to various users	39386	60108
Frequency assignments intimated to Radio-communication Bureau of the ITU for registration	4	146
Radio Frequency Assigned for visits of VVIPs	189	117
SACFA (Standing Advisory Committee on Frequency Allocations) meeting held	-	-
Inter-departmental meetings held	40	30
Sites cleared for new wireless stations	145834	138711
No. of special Monitoring cases	7	7
Wireless Licences Issued		
No. of Import Licences Issued	1208	600
No. of Licences issued to new Wireless Stations	58099	37645
No. of Licences Renewed (for Wireless Stations)	45958	29833
Certificate of Proficiency Examination/Licences		
No. of COP Examination conducted	54	41
No. candidates admitted	9170	5638
No. of Licences issued	3039	1648
No. of Licences renewed	2152	1408
No. of Licences issued to New Radio Amateur Stations	499	335
No. of Licences renewed for Old Radio Amateur Stations	908	404

Wireless Monitoring Organisation

Wireless Monitoring Organisation continued to provide technical and allied data on the basis of Wireless Monitoring observations for effective and efficient Radio Frequency Management and Radio Regulatory aspects.

Statistical performance data during the year 2006-07 and also during 2007-08 (April- December) is as given below :-

S.No.	Particulars	Actual achievements during 2006 – 2007	Actual Achievements during 2007-08 (April-December)	Anticipated Achievement during January-March, 2008
a.	Channel days utilized for Radio Monitoring	9455	6400	1500
b.	Monitoring Assignme-nts Handled	15316	10427	5400
c.	No. of Radio Noise measurements	245998	207569	93000
d.	No. of Wireless Tran-smission monitored	157567	111029	49000
e.	Infringements com-municated to various wireless users for remedial action	12962	4987	1200
f.	Technical assistance to users to maintain their operation within speci-fied standards	1316	1019	550
g.	No. of Wireless Stat-ions Inspected	23626	12515	1500
h.	No.of Officers/Offi-cials trained	72	64	30
i.	No. of Courses conducted	09	08	03

Many important Radio Surveys/Investigation assignments were carried out by way of Mobile Monitoring during the year.

Microwave Mobile Monitoring Terminals continued to monitor radio transmissions in microwave frequency bands to verify emissions, characteristics and interference potential. The measurements on terrestrial microwave links viz LOS Systems, Radars etc. to ensure compatibility are also being carried out regularly. Assistance are also provided to the users by way of conducting noise surveys for wireless/ earth stations and site selection.

A Specialized Mobile Monitoring Terminal having monitoring capabilities up to 40 GHz is operational. The primary objective is to monitor unauthorized transmission in the satellite communication bands, as well as from terrestrial stations.

At a few Monitoring Stations, fixed/mobile direction finding systems are being used for locating the direction/location of authorized/unauthorized transmissions.

Satellite Monitoring Earth Station at Jalna (Maharashtra) is continuing the monitoring of signals from all satellites located in orbit arc of interest to India. Observations for related data are being made.

W.M.O is undergoing major modernization of Radio Spectrum Monitoring capabilities through World Bank assisted Telecom Reform Project. Under this the following has been done:-

i) Antenna Towers have been erected measuring around thirty meters in height for better reception of Radio signal to be used for the sophisticated receiving systems coming under the project at Ajmer, Delhi, Chennai, Nagpur, Mumbai, Shillong and Trivendurm. Installation procedure is processing at Ahmedabad, Jallandhar, Goa, Gorakhpur and Bhopal Wireless Monitoring Stations.

ii) The installation of the LAN (Local Area Network) comprising of thirty workstations has been completed at Wireless Monitoring Organisation Head Quarters (MHQ). Pushpa Bhawan, New Delhi. The ISDN leased lines between Sanchar Bhawan and MHQ have been connected and communication through these lines is to be tested. LAN wiring etc. has been completed at several Wireless Monitoring Stations spread all across India.

iii) Acceptance test procedures of mobile and fixed monitoring systems are completed. After completion of the mobile monitoring V/UHF systems, these are already dispatched to respective Monitoring Stations except at Jalpaiguri. Operations for the above systems are under progress.

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II. 4. Vigilance Activities

VIGILANCE ACTIVITIES

Punitive Vigilance

Complaints are received from various sources like public, private, Ministers, Member of Parliament, MLAs, Prime Minister's Office, Central Vigilance Commission, CBI etc. by the Vigilance wing of DOT and the field units of MTNL/BSNL. These complaints are then taken up for investigation to identify the delinquent officers/officials and to fix responsibility. During the period April 1, 2007 to October 31, 2007, a total of 292 complaints were handled out of which 61 complaints were taken up for investigation. Besides investigation, advice of disciplinary/other action was given against 55 officers/officials. During the same period, 24 Officers were charge sheeted for major penalty and 5 officers for minor penalty. 98 officers/officials were punished after conclusion of disciplinary proceedings.

Staff Training

To keep the staff aware of the different activities which attract Vigilance Angle, a Training Schedule is prepared every year:-

- Different Telecom Circles are covered every year where presentation on preventive vigilance is given by the DOT Vigilance.
- Similarly, Senior Officers in different Telecom Circles are given presentations of Technological Frauds for their monitoring and prevention.
- 5 day training courses are also organised for various telecom Circles. During the period 12 such courses were conducted all over the country. A total of around 312 officers of various levels were acquainted with various activities relating to vigilance and disciplinary proceedings. These trained officers later on provide a pool of officers to work as IOs, POs and VOs.

Vigilance Clearances

This is an important activity of the vigilance wing because it is required at the time of promotion, trainings abroad, deputation to other organizations/Department, obtaining passports etc. During the period April - October 2007, 2681 officers were granted vigilance clearances for various purposes.

Consultation with the Central Vigilance Commission

It is the nodal agency of the Government of India having jurisdiction over all the Ministries/ Departments/PSUs etc for vigilance related matters. Actions against Government Officers/Officials

CVC COMPLAINTS RECEIVED AND DISPOSED OFF DURING THE PERIOD FROM APRIL – NOVEMBER 2007

Opening balance as on April 1, 2007	Received upto November 30, 2007	Disposed off upto November 30, 2007	Closing balance as on November 30, 2007
14	8	15	7

are taken after following the due consultation process with the CVC. The vigilance wing of DOT coordinates with the CVC for the vigilance related matters of the Department of Telecommunications.

VIGILANCE AWARENESS WEEK 2007

Vigilance Awareness Week was observed in DOT during November 12-16, 2007. The focus of observing the Vigilance Awareness Week, as directed by CVC was "Efficiency and Transparency in Customer Oriented Programmes." In this regard the vigilance wing had conducted essay, quiz and debate competitions for spreading awareness amongst the staff.

Statistical Summary of departmental vigilance Activities during April-November 2007

	Activities		
1.	No. of complaints handled during the period		292
2.	No. of officers charge sheeted for		
	(a) Major penalty	GOs	24
		NGOs	-
	(b) Minor penalty	GOs	5
		NGOs	--
3.	No. of officers punished with MA/ MI penalty = 98		
4.	No. of prosecution sanctions issued		
		GOs	04
		NGOs	-
5.	No. of investigation reports examined and sent to CVC for advice (other than CBI cases)		13
6.	No. of CBI reports referred to CVC for advice.		05
7.	No. of officers in respect of whom Vigilance clearance issued		2681
8.	No. of cases (received from ACU of PMO) disposed off after investigations		1
9.	No. of appeal cases settled		
		Group 'A'	25
		Group 'B'	40

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II. 5. Telecom Network Security

A need was felt to distinctly address the issue of Telecom Network Security at DOT (HQ) level, consequent to enhancement of FDI limit in Telecom Sector from 49% to 74%. A new unit named as Security has been formed in DOT(HQ).

ACTIVITIES

Security Related Projects

(i) Centralized Monitoring System

The requirements for the Project on Centralised Monitoring System have been finalized by TEC after detailed deliberations with Security Agencies. The first phase of the Project is scheduled to be implemented by March 31, 2008.

(ii) Dedicated and Fully Secure Communication Network

The Scope, Architecture and dimensioning of the network have been finalized by C-DOT. Based on the Architecture and size of the project, budget estimate has been prepared, which is under process of approval. Part I, phase I of the dedicated network covering national capital is proposed to be implemented by March 31, 2008.

Vigilance Telecom Monitoring Cells

With the increasing number of telephone operators in the country, the Government felt the need for presence of Telegraph Authority in the circles. With the entry of the private operators, there has also been an increase in illegal / clandestine operation in the country. To tackle this menace, the Government has created 34 Vigilance Telecom Monitoring Cells (VTMC) in 24 Telecom Circles and 10 large Telecom districts in the country. The sanctioned staff strength for each VTM Cells is as follows:-

Designation	Level	Numbers
DDG	SAG	1
Director	JAG	1 or 2
Divisional Engineer/ADE	STS/JTS	4 or 5

Functions assigned to VTM Cells

Vigilance Functions

- Inspection of premises of the Licenced service provider to ensure compliance to licence conditions.

- Unearthing the clandestine / illegal operation of telecom networks by vested interest having no Licence.
- To file FIR against the culprits, pursue the cases; issue notices indicating violation of conditions of various Acts in force from time to time.
- Analysis of call/subscriber/traffic data of various Licencees.
- Technical arrangement for the lawful interception / monitoring of all communications passing through the Licencee's network.
- To ascertain that the Licencee is providing the services within permitted area and domain.

Monitoring Functions

- Coordination and monitoring of various network operators.
- To check the compliance to the roll-out obligation as per Licence condition.
- Checking of the compliance by the Licencee in respect of the Licence conditions and any directions issued by the licensor in public interest.
- To ensure optimum call completion ratio of inter operator calls.
- Customer Document Verification with the objective to ascertain whether the mobile service operators are following the DOT guidelines for Customer verification before providing connection.
- Disaster Management: Taking over of network in the events of natural calamities or the other emergency situations.
- Grievance redressal of subscribers in respect of deficiency by various operators.
- Perform such other functions as may be entrusted to it from time to time by the DOT in overall interest of the country and consumers.
- Matter related to national security; VTMs are acting as the technical interface between Security Agencies and Service providers.

Licence-related Functions

- Registration under Telemaking and OSP categories.
- Service Tests/roll out obligation verification.

Achievements of VTM Cells

Major achievements are as follows:-

- Mobile subscriber verification audited by VTMs in the field resulted in enhanced compliance by Service Providers, from 60% to more than 85%.
- Due to decentralization of Registration for OSP and Telemarking, and Service testing activities to VTM cells, pending cases have been reduced substantially.
- Raids conducted by VTMs on illegal set up have plugged losses to the tune of 15 crore rupees for the exchequer.

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II. 6. Empowerment of Women

INTRODUCTION

In accordance with the strategic approach of the Government to achieve the goals of gender mainstreaming and gender justice laid down in the National Policy for Empowerment of Women, certain steps have been taken by the Department of Telecom and the Public Sector Enterprises under its administrative control.

The Department of Telecommunications is effectively implementing the guidelines/instructions of the Supreme Court on prevention of sexual harassment of women at work place in all its units. In pursuance of the orders of the apex court, it has setup a committee on the sexual harassment of women, headed by a woman. The steps taken for empowerment of women by various wings of the Department are given below:

BHARAT SANCHAR NIGAM LTD. (BSNL)

BSNL employs more than 40,000 women at various levels. They are retained on promotion to the extent possible at the station where they are working. Wherever the spouse is also working, generally they are posted at the same station. Further, action has been taken to follow the Supreme Court guidelines on prevention of sexual harassment. To encourage and help women employees, crèches/ schools/tailoring centers are being run/maintained by voluntary Telecom Women Organisations. 15% relaxation in marks is given for getting Book Award for girl students. There is a complaint committee at BSNL Corporate Office as well as Circle/SSA levels.

MAHANAGAR TELEPHONE NIGAM LTD. (MTNL)

There are about 9800 women employees working at various levels in MTNL. 20% of total manpower is women employees.

Several steps have been taken towards furthering empowerment of woman employees. A few of those are enumerated below.

- Special care is taken in case of female employee working in night shift and they are provided with rest room and dropping facility after duty hours.
- In order to redress and prohibit sexual harassment at work place Committee for prevention of Sexual Harassment has been constituted at Unit level as well as in Corporate Office.

- The service conditions are uniform and there is no gender bias.
- Crèche facility has also been provided for woman employees with infants. Maternity leave rules are on par with those in Government of India.
- Special grant is being sanctioned to Telecom Women's Central Organisation at New Delhi and for MTNL Woman Welfare Association at Mumbai, which in turn provides vocational training to kith and kin of working as well as retired or deceased employees.

ITI LIMITED

ITI Limited, being a socially conscious Public Sector Undertaking, has from its inception been committed to the concept of employees' Welfare. Due importance is given to the welfare of its women employees. There are 906 women employees as on October 1, 2007.

The major facilities being provided to the women employees are as follows:

- Separate lunchrooms in Canteens, restrooms and Crèches have been provided in the units.
- The company has comprehensive health care scheme providing medical treatment/ reimbursement to the employees and their families. Hospitals have been set up in Bangalore, Naini, Mankapur and Rae Bareli Plants, by the company to provide medical facilities which emphasize women and child welfare.
- In the light of the Supreme Court Judgements on sexual harassment in the work place, the Standing Orders applicable to Non-Officers and Officers has been amended in most Units to incorporate the clause on sexual harassment and during the year 2004-05, CDA rules were amended accordingly.
- Complaints Committee formed in each Unit to inquire into complaints of sexual harassment made by any women employees in the Company.
- Care is taken to ensure that women employees are nominated for training programmes, which are need based.
- It is a matter of pride to the Company that many of its women employees have been selected for the Shram Devi Awards in the past.

CENTRE FOR DEVELOPMENT OF TELEMATICS (C-DOT)

C-DOT's management has always been sensitive to gender issues and has consistently worked towards creating organizational culture reflecting gender equality.

- Presently, about 33 % of staff in C-DOT is women.

Existing Policies

- All female staff members are allowed to avail up to 135 days maternity leave for delivery and up to 270 days leave subsequent to that (inclusive of 135 days maternity leave). For miscarriage/ abortion, leave of a total of 45 days in the entire service is permissible.
- C-DOT offers accommodation and transport benefits to all its women employees with different options that maybe availed as per individual suitability. This ensures the safety and security of all women employees in the company.
- Career growth opportunities for women are available to women employees in C-DOT. In the last financial year, of the total employees promoted to higher grades, 37% of them were women. In management cadres (Team Leaders, Group Leaders, Technical Experts and Sr. Technical Experts) about 24 % are women.

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II. 7. Persons with Disabilities

INTRODUCTION

Department of Telecommunications appreciates the requirements of providing reservation to the physically challenged in appointments and the various government directives in this regard are duly followed by it. Various facilities which are being provided by the department and its Public Sector Undertakings as given below:

Department has already identified physically handicapped persons suffering from Hearing impairment and Locomotor Disability as suitable for jobs performed by officers of Indian P and T Accounts and Finance Service Group 'A'. Two physically handicapped officers have already been enrolled in the cadre of Indian P & T Accounts and Finance Service and one more physically handicapped candidate has been nominated to IP and TAFS.

It is worthwhile to mention that the Department of Telecom has recently acceded to the request in the light of recommendation of National Institute for the Visually Handicapped (NIVH) that the persons with Low Vision (LV) as defined in Section 2(u) of PWD Act 1995 may also be taken to discharge the functions and responsibilities required by IP and TAFS Officer".

CENTRE FOR DEVELOPMENT OF TELEMATICS (C-DOT)

C-DOT follows guidelines issued by Government of India with respect to reservations in jobs for persons with disabilities.

The C-DOT Campus at Delhi has beenv constructed in such a manner to ensure barrier free environment for the persons with disabilities. The main entrance/exit can be approached through a ramp together with stepped entry. Even elevators connecting the various working areas have been installed in a way to facilitate persons with disabilities to move around freely from one wing to another.

BHARAT SANCHAR NIGAM LTD. (BSNL)

Various facilities for persons with disabilities which are being provided by BSNL are as under:

Visually blind persons are entitled for following concessions on their telephone:

- Rental rebate - 50 % of normal rental
- Advance rental - 50 % of the normal advance rental and bi-monthly rental as applicable to normal subscriber.
- Registration - Admissible under Non-OYT Special Category

The application for availing above concessions should be supported by a "Visually Blind Certificate" issued by the CMO/MS/Ophthalmic Surgeon of District level Government Hospital or above. The blind persons already having the facility of telephone can avail rental rebate on producing the requisite certificate and the concession will be effective from the date of change of category.

MAHANAGAR TELEPHONE NIGAM LTD. (MTNL)

Mahanagar Telephone Nigam Limited has always endeavored towards upliftment of social status of physically disable people by innovating and executing action plans falling under its realm. There are 115 persons with disabilities as on September 30, 2007.

Below mentioned steps have been taken by MTNL in fulfilling its social responsibility:-

- The provisions of reservation as per GOI Rules have been made in recruitment of officers in various streams.
- In order to provide them with livelihood physically challenged people are allotted PCOs on priority basis and also the commission made to them is 22% as against 20% for others.
- Further, to avoid delay in allotment of PCOs mobile booths are being provided to them based on CDMA/GSM technology.

ITI LIMITED

ITI Limited, being a socially conscious Public Sector Undertaking, has from its inception been committed to the concept of employees' welfare. Due importance is given to the welfare of persons with disabilities. There are 169 physically challenged employees as on October 1, 2007.

The facilities being provided to persons with disabilities are as follows:

- Physically challenged employees who are residing in the township are given special allowance at the rate of 5% of the basic pay subject to maximum of Rs.75/- per month.
- Those employees who are not residing in the Company's township but are utilizing Company's transport for commuting between residence and factory are given special allowance at the rate of 5% of basic pay subject to maximum of Rs.100/- per month.
- Physically challenged employees are permitted 10 minutes grace time to punch in and out at the commencement and closure of the shift respectively.
- Physically challenged employees are allotted quarters on "Out of Turn" basis.
- As per the Government directive, ITI has been maintaining 3% (1% for OH, 1% for VH and 1% for HH) reservation for physically challenged in recruitment and the reservation in promotion has also been maintained wherever applicable.
- In case of physically challenged, the company has been relaxing 10 years in age in case of recruitment for Group C and D posts and 5 years in case of Group A and B posts. In case of

candidates belonging to SC/ST/OBC, among them an additional relaxation in age by 5 years for SC/ST and 3 years for OBC is given for posts in Group A and B.

- The physically challenged employees are fully exempted from Professional Tax subject to production of Certificate from the Government Doctor.
- Employees with disability are exempted from Income Tax for a maximum of Rs.50,000/- over and above the normal exemption subject to production of medical certificate from Government Doctor. For an employee having severe disability, Income Tax deduction will be Rs.75, 000/-.

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II. 8. Audit Observations of C & AG

BHARAT SANCHAR NIGAM LIMITED
(Report No. 12 of 2007)

Revenue paragraphs relating to BSNL based on transaction audit findings

Six Secondary Switching Areas under the Andhra Pradesh, Uttar Pradesh (East) and Punjab telecom circles did not issue rental bills at higher rates commensurate with the enhanced capacities of exchanges resulted in short billing of Rs 30.03 crore.

(Paragraph 2.1)

Twenty three Secondary Switching Areas under Bihar, Jharkhand, Karnataka, Rajasthan, Uttar Pradesh (East) and Uttar Pradesh (West) telecom circles did not disconnect telephone connections by the due dates in respect of subscribers and STD/PCO operators owing to non-payment of rentals for the period September 1996 to February 2006 resulted in non-recovery of revenue of Rs 9.28 crore.

(Paragraph 2.2)

Six Secondary Switching Areas under the Bihar, Gujarat and Rajasthan telecom circles could not raise rental bills of Rs 1.11 crore for the period July 2001 to December 2006 due to non-receipt of completed advice notes in their Telephone Revenue Accounting branches.

(Paragraph 2.3)

In Eastern Telecom Region, Patna the Company failed to realize charges amounting to Rs 38.61 crore for the period May 2003 to September 2004 from Reliance Infocom Limited for unauthorized routing of calls in violation of the interconnect agreement.

(Paragraph 2.6)

Sixteen Secondary Switching Areas under five telecom circles as well as the Eastern Telecom Region, Bhubaneshwar did not realize interest of Rs 2.46 crore for delayed payment of the access charges/ interconnection usage charges relating to the period March 2002 to January 2006 from 11 private telecom service operators. Further, four Secondary Switching Areas under two telecom circles also failed to realize the interconnect usage charges of Rs 63.01 lakh for the period October 2003 to August 2005 from five private telecom service operators.

(Paragraph 2.7)

Fourteen Secondary Switching Areas under Andhra Pradesh, Gujarat, Maharashtra, Punjab and Tamil Nadu telecom circles did not levy charges for infrastructural facilities in respect of passive

links provided to private telecom service providers for the period March 2001 to December 2006. This resulted in non-billing of Rs 2.60 crore.

(Paragraph 2.8)

Six Secondary Switching Areas under Andhra Pradesh Telecom Circle did not collect interconnect licence fees from e-Seva, Andhra Pradesh for the period June 2004 to November 2006. This resulted in non-billing of Rs 1.35 crore.

(Paragraph 2.9)

Failure of 10 Secondary Switching Areas under three telecom circles to bill port charges correctly and in time resulted in non/short billing of port charges of Rs 1.05 crore.

(Paragraph 2.10)

Failure of 10 Secondary Switching Areas under Chhattisgarh, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Uttaranchal and Uttar Pradesh (West) telecom circles to raise bills for leased circuits for the period February 1980 to February 2007 resulted in non-billing of Rs 2.43 crore.

(Paragraph 2.15)

Failure of Hyderabad and Gurgaon Secondary Switching Areas under Andhra Pradesh and Haryana telecom circles to charge rentals for the period December 2002 to March 2006 in respect of local leased circuits within Short Distance Charging Areas as per the resources utilized, resulted in short billing of Rs 1.28 crore.

(Paragraph 2.16)

Failure of three Secondary Switching Areas under Bihar and Karnataka telecom circles and Calcutta Telephones District to provide leased circuits within the stipulated time resulted in loss of potential revenue of Rs 1.04 crore.

(Paragraph 2.17)

Chennai Telephones continued to pay rent at higher rates ranging from Rs 3.46 crore to Rs 7.90 crore although Telecom Regulatory Authority of India had fixed the ceiling on lease rent for the STM-1 bandwidth at Rs 2.99 crore per annum with effect from November 29, 2005. This resulted in excess payment of rent of Rs 2.53 crore for the period November 2005 to March 2006 for two STM-1 bandwidths hired from Videsh Sanchar Nigam Limited and one STM-1 bandwidth hired from Bharti Infotech Limited.

(Paragraph 3.1)

Eleven SSAs in the Rajasthan Telecom Circle continued to pay electricity charges at the old rates instead of the lower new rates under the mixed load category. This resulted in excess payment of Rs 1.62 crore during the period January 2005 to February 2006.

(Paragraph 3.2)

Karnataka, Kerala, Orissa Punjab, West Bengal Telecom Circles and the Calcutta Telecom District failed to consider the changing technologies such as introduction of Global System for Mobile Communication (GSM), Wireless in Local Loop (WLL) and shift towards poleless cable networks before procurement of telecom stores. Besides, the circles also did not exercise proper discipline in their procurement and did not consider the past consumption pattern before procurement. This resulted in injudicious procurement and consequent idling of stores of Rs 74.82 crore.

(Paragraph 3.3)

Thirteen telephone exchange buildings were constructed in seven Secondary Switching Areas under the Bihar, Karnataka, Rajasthan and Tamil Nadu Telecom Circles between January 2001 and July 2004 at a total cost of Rs 6.07 crore. Inadequacy of project monitoring mechanism and failure in synchronisation of various activities for commissioning of exchanges at the Circle and SSA levels in these circles led to non-utilisation of newly constructed telephone exchange buildings even after two to four years of their construction. This resulted in idling of exchange buildings and blocking of funds of Rs 6.07 crore.

(Paragraph 3.4)

The Bhopal Secondary Switching Area under the Madhya Pradesh Telecom Circle laid primary cables far in excess of the actual requirement, resulting in unfruitful expenditure of Rs 5.63 crore.

(Paragraph 3.5)

General Manager, Telecom District, Ranchi, under the Jharkhand Circle sanctioned six project estimates between February 1999 and January 2003 for expansion of six exchanges. All the six exchanges remained underutilized even after one to three years due to higher projection of growth of subscribers and failure to consider the exchange capacity utilisation before expansion. This resulted in unproductive expenditure of Rs 3.61 crore on expansion of exchanges. Further a 2k exchange was newly commissioned (March 2004) at Devi Mandap road, Ranchi which provided only 228 connections. This resulted in unproductive expenditure of Rs 1.22 crore on commissioning of the new exchange.

(Paragraph 3.6)

Controllers of Communication Accounts, Chennai and Hyderabad circles irregularly allowed weightage in the qualifying service to Bharat Sanchar Nigam Limited officials who had retired voluntarily, which resulted in overpayment of pensionary benefits of Rs. 1.01 crore.

(Report No. 2 of 2007)

The Controllers of Communications Accounts, Assam, Jharkhand and Madhya Pradesh circles failed to claim interest of Rs. 99 lakh on delayed payments of pension contribution from Bharat Sanchar Nigam Limited.

(Report No. 2 of 2007)

MAHANAGAR TELEPHONE NIGAM LIMITED

Telecom Revenue Accounting wings of four exchanges of Mumbai unit of MTNL failed to issue disconnection orders in time and also delayed in disconnecting Wireless-in-Local Loop telephone connections for non-payment of rentals in respect of 717 subscribers for the period from October 2004 to October 2005. This resulted in loss of revenue of Rs 1.16 crore.

(Paragraph 4.1)

MTNL, Delhi could not get possession of land for a telephone exchange because of delayed payment of Rs 10.62 crore (November 2002) towards cost of land and non-payment of ground rent of Rs 26.56 lakh. Besides, DDA demanded interest of Rs 1.59 crore owing to the delayed payment.

(Paragraph 4.4)

MTNL Delhi made payments of electricity charges at higher rates applicable to non-domestic, mixed load category instead of lower rates of industrial category in West I, Central and Trans Yamuna areas of MTNL, Delhi. This resulted in excess payment of electricity charges to the tune of Rs 3.62 crore.

(Paragraph 4.5)

MTNL Delhi failed to prefer compensation claims costing Rs 3.43 crore during 2001-06 for damage to underground cables from outside agencies. In respect of damages of Rs 1.14 crore, the Company could not locate the agencies that had damaged the underground cables. In the remaining cases involving Rs 2.29 crore, although the agencies were known, the Company did not lodge any claims. Thus failure of the Company to prefer compensation claims on the parties concerned even after lapse of one to four years resulted in non-realization of compensation claims of Rs 3.43 crore.

(Paragraph 4.6)

ITI Limited

The Company incurred a cash loss (material price minus cost of sale) of Rs 1.25 crore in the purchase order of February 2004 due to non-supply of equipment within the prescribed period (August 2004) and subsequent revision of price by the purchaser. Further, due to delayed supplies the Company made a provision of Rs 1.24 crore for liquidated damages in the books, out of which Rs 39.40 lakh had been recovered by BSNL from the bills released till December 2006.

(Paragraph 5.1)

The Company failed to provide required facilities to the purchaser for testing of Wireless-in-Local Loop Subscriber Terminals along with antennae, feeder cables and other accessories, as agreed in the purchase order. This resulted in delay in inspection, supply and consequent levy of liquidated damages amounting to Rs 1.16 crore.

(Paragraph 5.2)

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III. Public Sector Undertakings

III. 1. *Bharat Sanchar Nigam Limited*

INTRODUCTION

Bharat Sanchar Nigam Limited (BSNL) is a 100% Govt. of India owned Public Sector Undertaking. It is a technology-oriented company and provides all types of telecom services namely telephone services on landline, WLL and mobile, Broadband, Internet, leased circuits and long distance telecom Service. The company has also been in the forefront of technology with 100% digital new technology switching network. BSNL has one of the largest base of skilled work force of around 3.20 lakh as on March31, 2007.

HIGHLIGHTS

- Bharat Sanchar Nigam Ltd. (BSNL) runs the telecom services all over the country except Delhi and Mumbai.
- BSNL is the largest Public Sector Telecom service provider in the country. It is serving 685.10 lakh customers (Wireline + Wireless phones) as on December 31, 2007.
- BSNL has provided village public telephones (VPTs) in 5.18 lakh villages, out of 5.93 lakh villages in the country by December 31, 2007.
- The total number of rural DELs is 241.31 lakh (about 35.22 % of total DELs) as on December 31, 2007.
- It has 327.12 lakh Mobile customers as on December 31, 2007.
- There are 40.87lakh WLL customers as on December 31, 2007.
- BSNL has 37,898 wireline exchanges with an equipped capacity of 469.47 lakh lines serving 317.11 lakh customers.
- BSNL has provided 14.10 Lakh Broadband connections as on December 31, 2007.
- BSNL has provided 34.75 Lakh Internet connections in the country as on December 31, 2007.
- BSNL has introduced Intelligent network Service (IN) and thus provides a range of services like India Telephone Calling Card (I.T.C.), VPN.
- Faults per 100 telephones per month have come down to 5.56 % this year (2007-08) from 7.5 % during the corresponding period ending December 31 of last year (2006-07).

FINANCIAL PERFORMANCE

The assets and liabilities of the erstwhile DTS/ DTO stand transferred to Bharat Sanchar Nigam Limited w.e.f October 1, 2000. The assets (fixed assets, CWIP, Debtors and Inventory etc.) taken over by BSNL as on 1st October, 2000 have been valued at Rs. 63,520 crore. In lieu of the above transferred assets, BSNL is given a capital structure which consists of equity of Rs. 5,000 crore, Preference equity of Rs. 7,500 crore, Notional Government loan of Rs. 7,500 crore, loan from MTNL of Rs. 3,056 crore and surplus of Rs. 40,464 crore as capital reserve.

After the corporatisation, the company has borne extra financial burden on account of Corporate Tax, Wealth Tax, Fringe Benefit Tax, Licence Fee, Spectrum Charges, interest on notional Government loan and dividend. BSNL is also a major operator for providing VPTs and rural connections which are uneconomical but socially desirable and generally affect adversely the financial position of the company.

BSNL has earned an income of Rs. 39,715 crore in the financial year 2006-07. Despite a downward revision of tariff charges and sharp reduction in Access Deficit Charges (ADC) due to regulatory rules and regulations, the company has registered a net profit after tax of Rs. 7,806 crore during the year 2006-07. BSNL Net worth has been increased by Rs. 6,192 crore during the year to reach at Rs 86,948 crore.

During the year 2006-07 BSNL has declared and paid Rs. 500 crore as 10% dividend on equity share capital of Rs. 5,000 crore. The company has also declared Rs. 675 crore as dividend on 9% preference share capital of Rs. 7,500 crore for the financial year 2006-07. Further, BSNL has repaid the government loan of Rs. 2,500 crore during the year 2006-07.

Achievements and Performance for the period April- December 2007

No. of broadband Connections (DataOne) provided during the year 2007-08 (up to December 31, 2007)	3,49,547
Status of Broadband Connections(DataOne) as on December 31, 2007	1,410,347
No. of Internet connections provided during the year 2007-08 (up to December 31, 2007)	1,54,512
Status of Internet connections as on December 31, 2007	3,474,837
No. of Internet Leased Lines provided during the year 2007-08 (up to December 31, 2007)	152
Status of Internet Leased Lines connections as on December 31, 2007	994

BROADBAND/ INTERNET SERVICE

- No. of Cities where DataOne service is operational : 1,077
- No. of cities where CLI Internet service is Operational : All over Country
- No of Cities with MPLS VPN Services customers : All over Country

The minister of State for Communications & Information Technology, Dr. Shakeel Ahmad being presented dividend cheque from the CMD, BSNL, Shri Kuldeep Goyal and the Director (Finance), Dr. S. D. Saxena, in New Delhi on October 18, 2007

INTELLIGENT NETWORK

- With the commissioning of 5 new technology IN Platforms (4 General purpose and one mass calling) IN Service are available throughout the country. The available IN services are ITC (Prepaid Calling Card), ACC (Account Card Calling), FPH (Free Phone), UAN (Universal Access Number), PRC (Premium Rate Calling), Voice VPN (Virtual Private Network), UPN (Universal Personal Number), Tele-voting and Fixed line Pre-Paid (FLPP) Service.
- Televoting service is provided by BSNL's mass calling IN platform at Hyderabad to programs such as 'Indian Idol', "Kaun Banega crorepati" (KBC)", "Sa re gama" etc.
- Fixed Line Pre-Paid (FLPP) telephony service for PCOs has been commercially launched on July 31, 2006 in Kolkata, West Bengal and Gujarat. This service has been launched in 18 telecom circle so far.
- FLPP Pre-paid over post paid has been launched in January 2007 and is available in 18 telecom circles so far.
- Combined Voice VPN has been offered which includes BSNL land line, BSNL Cell one and MTNL land line.
- BSNL has signed an interoperability agreement for making available BSNL's Toll Free and UAN services through network of all the private operators except Hutch, Shyam Telelink and BPL.

Cellular Mobile: - 52.84 Lakh cellular connections have been provided during 2007-08 (up to December 31, 2007).

WLL: - BSNL has provided **5.31** Lakh WLL connections during 2007-08 (up to December 31, 2007).

TAX TRUNK DIALING: - 324 Kilo Circuits have been added in the BSNL network during 2007-08 (up to December31, 2007) bringing the TAX capacity as on December31, 2007 to 8,239 Kilo Circuits lines.

TELEGRAPH SERVICES

- There are 107 Central Telegraph Offices (CTOs); 854 Telegraph Offices (TOs); 716 Telecom Centers and 11,628 Combined Posts and Telegraph Offices as on November 30, 2007.
- **Telegraph Network Modernization: -** There are 352 message switching systems in the Telegraph Network. The details are as follow:-

  1. Store and forward message switching system : (a) 128 Lines-10 Nos.
     (b) 64 Lines -12 Nos. and (c) 32 lines - 21 Nos.
  2. FTC/ EKBC/ PH CONC—309

     National Telegraph Message Switching Network facilitates the speedy transmission and reception of telegram throughout the country, eliminating the transit delay.

- **Quality of Services** – The quality of Telegraph Services has been maintained consistently at high level. This is measured in percentage with respect of number of telegrams delivered in 12 day light hours. The efficiency achieved from April 2006 to March 2007 is 96.2 % as against the target of 97 %.

Details of Telegrams and Bureau FAX booked and Revenue during the year 2006-07are given as under:

S.No.	Items	Number	Revenue (Rs. in Crore)
1.	Telegram booked	79,27,430	Rs. 17.35
2.	Bureau Fax booked	5,85,433	Rs. 1.08

- Transmission/ Reception of Telegram - Through Internet : The transmission/ reception of Telegrams on Internet is working in Tumkur, Mysore and Bangalore SSAs of Karnataka Circle from December 2003 on live traffic. Tamil Nadu Circle has also been permitted for the same and the Project has been extended to three more station in Tamil Nadu Circle.
- Phonogram and Franchising of Telegraph Services: The Phonogram service on level 1,585 has been extended in all the Circles numbering 26. The Franchising of Telegraph Service in parallel to Combined Offices has been implemented in 14 Circles.

COMPUTERIZATION AND INFORMATION TECHNOLOGY

- CDR based Customer Care and Convergent Billing System: A Brief on this system is as given below:
  i. BSNL is targeting a massive growth in customer base and to cater this growth and extend better customer care, adequate IT infrastructure is required to be put in place. CDR based Customer Care and Convergent Billing System Project is a BSNL initiative in this direction. Purchase Order for implementation of CDR based Customer Care and Convergent Billing System has been placed.
  ii. This CDR Project has Centralized Billing and Accounting System, CRM, Web based capabilities for Self Care by customer, Revenue Assurance and Fraud Management System (FMS), Provisioning in various technology switches, Inventory, Directory Enquiry, Enterprise Reporting etc. for BSNL.
  iii. Zonal high end IVRS system co-terminus with Data centers are also part of CDR project for various customer related applications /services. These IVRS will access centralized database for extending customer care and ultimately all circle and SSA level call centers shall be integrated to it.
  iv. A countrywide Intranet shall be built up connecting every exchange and most of the terminals of all 335 SSAs for communication with respective zonal data center utilizing MPLS network.
  v. This CDR Billing project envisages a complete change from existing decentralized systems at SSA level to high end centralized systems.
- As on date in 330 SSAs, Integrated Billing and Commercial Packages have been introduced which provide for better customer care by effective computerization of all customers related activities. PSTN Call center facility has been introduced for 238 SSAs, which is a single point approach for addressing all customer needs cum grievances.
- Customer Care Portal, to provide all BSNL services at one place, has been launched in 21 circles and is under implementation in the remaining 5 circles.

Planned activities

- ERP shall be implemented in BSNL to computerize vital activities. Draft tender document has been approved by BSNL board. Draft NIT schedule for ERP implementation in BSNL is under approval.
- E-procurement system is planned to be implemented to bring about greater efficiency and transparency.
- Web based Telegraph Messaging Systems (WTMS) shall be rolled out in 9 Telecom circles of BSNL and to be implemented in remaining circles also.

TELECOM FACTORIES

- The Telecom Factories are presently engaged in production of Pay Phones, Mini Pillars, CT Box, DP Box, Line Jack Unit, OFC Accessories, FDMS, Towers, SS Drop wire, Joining Kits, SIM Cards etc. All the Telecom. Factories except Telephone Factory Kharagpur are now ISO 9001:2000 certified.
- In the changed telecom scenario, Telecom Factories are venturing into new technology areas to support BSNL as manufacturing-cum-service support organization. The Telecom Factories have supplied 3,018 nos. of towers, the highest ever, during 2006-07. During the current year (up to December 31) 2503 nos. of towers have been supplied.

Physical Performance of Telecom Factories (up to December 2007)

Item	Dispatch Programme 2007- 08	Total Supply	% age supplied	Expected Achievement During 2007-08
Buttinski Telephone	55,000	43,955	80	55,000
C. T. Boxes 100 pairs	1,35,000	85,680	63	1,35,000
Coin Box Telephone	15,000	3,841	26	15,000
D.P. Boxes	22,00,000	4,85,067	22	22,00,000
Line Jack Unit	30,00,000	18,90,212	63	30,00,000
Mini Pillar / MPJ Box	34,000	13,672	40	34,000
SS Drop Wire(Km.)	3,50,000	1,10,499	32	3,50,000
Tower (In Nos.)	5,700	2,503	44	5,700
OFC Accessories				
Joint Closures	75,000	49,807	66	75,000
OFTB	15,000	10,812	72	15,000
FDF	6,000	3,697	62	6,000
PIG TAIL	1,25,000	66,243	53	1,25,000
PATCH CORD	75,000	24,474	33	75,000
TOOL KIT	500		0	500
FC-PC Adaptor	20,000	20,130	101	20,000
IPM	15,00,000	16,38,488	109	15,00,000
IN PCO	6,000	155	3	6,000
FDMS	12,200	9,532	78	12,200
Jointing Kits	10,00,000	19,560	2	5,15,000
CT Block (MDF Type)	16,500	19,051	115	16,500
Card Repair	45,000	24,884	55	45,000
SIM CARD	1,00,00,000	35,57,000	36	1,00,00,000

- Factories are engaged in repairing activities through service support centers (SSCs) at Kolkata, Lucknow, Mumbai, Jabalpur, Bhillai, Jaipur, Bangalore and Vijayawada for repair of C-DOT/ E-10 B Exchange cards and other products of factories. Besides this, TF Kolkata has started repair of IFWTs from December 2006.

INTERNATIONAL RELATION

- A total 143 BSNL officers were deputed abroad during the period April - December 2007 for various events. Out of these, in order to upgrade the knowledge and skills of officers working in BSNL, 47 officers were deputed abroad for various technology trainings: 50 officers were sent for exhibitions /meeting / conference / business visits to have first hand information on latest developments taking place in Telecommunications. In addition, 40 officers are likely to be deputed during January-March 2008.

DEVELOPMENT OF TELECOMMUNICATIONS FACILITIES IN SELECTED AREAS

- **Special Component Plans**

Annual Plan of BSNL pays special emphasis on accelerated growth and early implementation of telecommunications facilities under Special Component Plans in (1) North Eastern Region and (2) Tribal sub-plan areas Plan. The details are given below:

North East Region: - North Eastern Region comprising eight states is being covered by BSNL in four telecom circles as given below:

Sl. No.	Name of Circle	Name of State
1	Assam	Assam
2	NE-1	Meghalaya, Mizoram, Tripura
3	NE-2	Nagaland, Manipur, Arunachal Pradesh
4	West Bengal	Sikkim

(a) Tele-density: Status of number of telephone connections and the tele-density State/Circle wise as on December 31, 2007 are given in the following table:

S. No	Name of State	Population as on December 31, 2007 (in thousand)	Telephone as on December 31, 2007 (Wired + WLL+ CMTS)	Tele-density as on December 31,2007
1.	Assam	29,371	1,113,469	3.79
2	Meghalaya	2,527	156,990	6.21
3	Mizoram	965	116,013	12.2
4	Tripura	3,485	193,821	5.56
	NE-1	6,977	466,824	6.69
5.	Arunachal Pradesh	1,142	156,092	13.67
6	Manipur	2,490	125,504	5.04
7.	Nagaland	2,089	191,409	9.16
	NE-2	5,721	473,005	8.27
8.	Sikkim	541	92680	17.12
9.	NE Region	42,611	2,145,978	5.04
10.	BSNL	1,105,727	68,516,318	6.20

(b) **Network Status:-** The status of telecom facilities as on December31, 2007 in each of the state of North East Region is shown in the following table:

Sl. No.	Name of State	Tele-phone Exchange	Total Capacity	Total DELs	Waiting List	VPTs
1	Assam	597	15,71,993	1,113,469	8,822	22,163
2	Meghalaya	117	204,371	1,56,990	0	2,931
3	Mizoram	92	140,633	1,16,013	21	608
4	Tripura	122	255,392	1,93,821	415	856
	NE-1	331	600,396	4,66,824	436	4,395
5	Arunachal Pradesh	104	190,178	1,56,092	33	1,011
6	Manipur	55	149,694	1,25,504	4,422	1,646
7	Nagaland	62	195,253	1,91,409	400	1,100
	NE-2	221	535,125	4,73,005	4,855	3,757
8	Sikkim	47	121,760	92,680	0	374
	NE Region	1,196	2,829,274	2,145,978	14,113	30,689

(c) **Development Status :-** Target and achievement for the year 2007-08 for the North East Region are as follows:

Item	2007- 08	
	Target	Achievement up to December 31, 2007
Net Switching Capacity (Lines) (Fixed+WLL+CMTS)	11,35,500	28,29,274
DELs (Nos.) (Fixed+WLL+CMTS)	10,30,310	21,45,978
VPTs (Nos.)(As per Census 2001)	3,173	30,721
Broadband Connections (Nos.)	49,016	5,497
Internet Connections (Nos.)	43,000	26,179

TRIBAL SUB PLAN

The Tribal Sub Plan (TSP) is a part of the Annual Plan for providing telecom facilities in the tribal areas. For a balance and faster development of telecom facilities in tribal areas, these areas are treated as special focus areas. The main objectives of the Tribal Sub Plan areas are (i) to provide the telephone facility on demand in tribal areas (ii) to provide NSD facility to all exchanges in tribal areas and (iii) to provide public telephone in all tribal villages.

Tribal areas fall in the States of Andaman and Nicobar, Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, NE-I, NE-II, Orissa, Rajasthan, Tamil Nadu, Uttaranchal, U.P (East) and West Bengal.

Targets and achievements for the year 2007- 08 under Tribal-sub-plan (TSP) are as follows:

Sl. No.	Items	Target for 2007- 08	Achievement up to December 31, 2007
1.	Telephone exchanges (Nos.)	6	15
2.	Switching Capacity (lines)	10,00,000	5,87,558
3.	DELs (Nos)	6,00,000	4,24,331
4.	VPTs (Nos)	3,000	3,463

TABLE – 1
STATUS TELEPHONES CONNECTIONS CIRCLE-WISE
AS ON DECEMBER 31, 2007

SL NO	NAME OF THE CIRCLE	WIRELINE	WLL	CELLULAR	TOTAL
1	Andaman & Nicobar	25942	2947	48259	77148
2	Andhra Pradesh	2520190	198820	2173710	4892720
3	Assam	436132	92658	584679	1113469
4	Bihar	963855	156184	910036	2030075
5	Chhattisgarh	256077	111160	484341	851578
6	Gujarat	2158394	173976	1766740	4099110
7	Haryana	914285	104874	1210742	2229901
8	Himachal Pradesh	425025	74856	511574	1011455
9	Jammu & Kashmir	266778	96028	794958	1157764
10	Jharkhand	444572	78120	504731	1027423
11	Karnataka	2327243	249346	1717436	4294025
12	Kerala	3589376	465345	2108001	6162722
13	Madhya Pradesh	1200931	356412	1097826	2655169
14	Maharashtra	3505881	361960	2735842	6603683
15	North East - 1	207484	38230	221110	466824
16	North East - 2	130399	29930	312676	473005
17	Orissa	764133	146658	931003	1841794
18	Punjab	1466500	94441	1631910	3192851
19	Rajasthan	1570736	250763	2201890	4023389
20	Tamilnadu	2376410	389300	2182974	4948684
21	Uttaranchal	328995	58356	599725	987076
22	Uttar Pradesh East	1449864	259816	4024713	5734393
23	Uttar Pradesh West	937637	95001	1148525	2181163
24	West Bengal	1133835	130103	1097178	2361116
25	Kolkata	1323048	31609	841578	2196235
26	Chennai	987497	39985	870064	1897546
	TOTAL	**31711219**	**4086878**	**32712221**	**68510318**

TABLE - 2

TELE-DENSITY
(TELEPHONE PER 100 POPULATION) CIRCLE-WISE
AS ON DECEMBER 31, 2007

SL NO	NAME OF THE CIRCLE	URBAN	RURAL	TOTAL	%AGE OF RURAL TELEPHONES
1	Andaman & Nicobar	38677	38471	77148	49.87%
2	Andhra Pradesh	2989505	1903215	4892720	38.90%
3	Assam	787872	325597	1113469	29.24%
4	Bihar	1265304	764771	2030075	37.67%
5	Chhattisgarh	635301	216277	851578	25.40%
6	Gujarat	2685879	1413231	4099110	34.48%
7	Haryana	1331738	898163	2229901	40.28%
8	Himachal Pradesh	258575	752880	1011455	74.44%
9	Jammu & Kashmir	998589	159175	1157764	13.75%
10	Jharkhand	770901	256522	1027423	24.97%
11	Karnataka	3164184	1129841	4294025	26.31%
12	Kerala	2446597	3716125	6162722	60.30%
13	Madhya Pradesh	1967965	687204	2655169	25.88%
14	Maharashtra	4130213	2473470	6603683	37.46%
15	North East - 1	307714	159110	472824	34.08%
16	North East - 2	345787	127218	473005	26.90%
17	Orissa	996223	845571	1841794	45.91%
18	Punjab	1814712	1378139	3192851	43.16%
19	Rajasthan	2579715	1443674	4023389	35.88%
20	Tamilnadu	3464452	1484232	4948684	29.99%
21	Uttaranchal	641723	345353	987076	34.99%
22	Uttar Pradesh East	3886599	1847794	5734393	32.22%
23	Uttar Pradesh West	1691993	489170	2181163	22.43%
24	West Bengal	1205285	1155831	2361116	48.95%
25	Kolkata	2196235	0	2196235	0.00%
26	Chennai	1777676	119870	1897546	6.32%
	TOTAL	**44379414**	**24130904**	**68510318**	**35.22%**

TABLE - 3

STATUS OF URBAN /RURAL TELEPHONE CONNECTIONS CIRCLE- WISE AS ON DECEMBER 31, 2007

SL NO	NAME OF THE CIRCLE	WIRELINE	WLL	CELLULAR	TOTAL
1	Andaman & Nicobar	5.81%	0.66%	10.81%	17.28%
2	Andhra Pradesh	3.06%	0.24%	2.64%	5.95%
3	Assam	1.48%	0.32%	1.99%	3.79%
4	Bihar	1.03%	0.17%	0.97%	2.17%
5	Chhattisgarh	1.10%	0.48%	2.09%	3.67%
6	Gujarat	3.79%	0.31%	3.10%	7.19%
7	Haryana	3.79%	0.44%	5.02%	9.25%
8	Himachal Pradesh	6.46%	1.14%	7.77%	15.36%
9	Jammu & Kashmir	2.38%	0.86%	7.08%	10.31%
10	Jharkhand	1.48%	0.26%	1.68%	3.41%
11	Karnataka	4.05%	0.43%	2.99%	7.48%
12	Kerala	10.61%	1.38%	6.23%	18.22%
13	Madhya Pradesh	1.75%	0.52%	1.60%	3.87%
14	Maharashtra	3.90%	0.40%	3.04%	7.35%
15	North East - 1	2.97%	0.55%	3.17%	6.69%
16	North East - 2	2.28%	0.52%	5.46%	8.27%
17	Orissa	1.93%	0.37%	2.35%	4.65%
18	Punjab	5.26%	0.34%	5.85%	11.45%
19	Rajasthan	2.44%	0.39%	3.42%	6.25%
20	Tamilnadu	4.02%	0.66%	3.69%	8.37%
21	Uttaranchal	3.47%	0.62%	6.32%	10.40%
22	Uttar Pradesh East	1.26%	0.19%	2.73%	4.17%
23	Uttar Pradesh West				
24	West Bengal	1.55%	0.18%	1.50%	3.24%
25	Kolkata	9.13%	0.22%	5.81%	15.16%
26	Chennai	12.25%	0.50%	10.79%	23.53%
	TOTAL	**2.87%**	**0.37%**	**2.96%**	**6.20%**

TABLE - 4

NUMBER OF VILLAGES WITH DIRECT ACCESS TO TELECOM FACILITIES CIRCLE-WISE AS ON DECEMBER 31,2007

SL. NO.	NAME OF TELECOM CIRCLE/ METRO DISTRICTS	WIRELINE	WLL	OTHER MEDIA	TOTAL
1	Andaman & Nicobar	146	28	5	179
2	Andhra Pradesh	13,540	7,537	7	21,084
3	Assam	2,943	19,118	102	22,163
4	Bihar	7,924	28,695	1	36,620
5	Chhattisgarh	3,739	13,123	299	17,161
6	Gujarat	9,985	4,969	20	14,974
7	Haryana	5,122	1,227	20	6,369
8	Himachal Pradesh	12,033	3,849	52	15,934
9	Jammu & Kashmir	1,583	3,736	228	5,547
10	Jharkhand	1,306	24,990	6	26,302
11	Karnataka	18,780	7,598	47	26,425
12	Kerala	1,368	4	0	1,372
13	Madhya Pradesh	10,589	38,462	261	49,312
14	Maharashtra	20,985	14,055	149	35,189
15	North East - 1	554	2,628	816	3,998
16	North East - 2	447	3,082	228	3,757
17	Orissa	12,176	26,666	196	39,038
18	Punjab	10,859	1,141	0	12,000
19	Rajasthan	11,928	21,517	365	33,810
20	Tamilnadu	9,494	3,850	7	13,351
21	Uttaranchal	4,601	7,838	59	12,498
22	Uttar Pradesh East	24,330	46,126	1	70,457
23	Uttar Pradesh West	9,653	9,815	0	19,468
24	West Bengal	10,515	18,303	51	28,869
25	Kolkata	631	92	0	723
26	Chennai	774	685	0	1,459
	TOTAL	**206,005**	**309,134**	**2,920**	**518,059**

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III. 2. *Mahanagar Telephone Nigam Limited*

INTRODUCTION

Mahanagar Telephone Nigam Limited (MTNL) was formed on April 1, 1986 and was incorporated as a Limited Company to manage and control telecommunications services (excluding telegraph services) in the two metropolitan cities of Delhi and Mumbai. The jurisdiction of the company comprises the city of Delhi and the areas falling under the Mumbai Municipal Corporation and Thane Municipal Corporation. As per the service condition, MTNL is providing cellular services in Delhi including the peripheral town of Gurgaon, Faridabad, Ghaziabad and Noida and in Mumbai including Kalyan. MTNL is also offering high-speed Internet service on broadband using ADSL2+ technology on its landline. Further MTNL is providing Dial up Internet Services in Delhi and Mumbai under separate non-exclusive Licence agreement.

The company has an authorized capital of Rs.800 crore and a Paid up Share Capital of Rs. 630 crore. At present, 56.25% equity shares are held by President of India and his nominees and remaining 43.75% shares are held by FIIs, Financial Institutions, Banks, Mutual Funds and others including individual investors.

The vision of the company is to provide world-class telecom services at affordable rates and to become total solution provider in telecom sector.

PERFORMANCE

- **Telephone Services**
  - MTNL offers a variety of phone plus services to the customers which inter-alia include computerized morning alarm, Voice mail, automatic changed number announcement, computerized fault booking/ payment reminder system etc. MTNL has taken several steps to improve its interface with the customers. Telephone Adalats and Open House Sessions are being held for effective communication with the customers. Quick customer service centers are running at all divisional offices for catering to the day-to-day needs of customers for accessories, phone plus services, STD barring/restoration, local shift of telephone, ISDN, Internet connections and IN services.
  - A total of 879743 lines gross switching capacity and 742544 DELs (including WLL and GSM) were added by the MTNL during 2006-07. During the period April-December 2007 an additional 42649 Lines gross switching capacity and 139944 net connections have been added after adjusting the disconnections due to subscriber verification. Details of achievements are given in Annexure-I and Annexure-II of this chapter.

- There is a declining trend in the number of faults in Delhi while it is almost stagnant in Mumbai. The increase in fault rate in Mumbai during the current year is mainly due to digging work going on in Mumbai and unprecedented rains.

No. of faults per 100 telephones per month

Units	2003-04	2004-05	2005-06	2006-07	2007-08 (April -December 2007)
Delhi	15.10	11.13	8.8	9.42	6.76
Mumbai	10.44	9.00	11.56	10.53	10.15

- With sustained efforts and timely implementation of various projects, there is no waiting list in Delhi and Mumbai. MTNL is providing telephone on demand in service areas.

GSM Cellular Mobile Services

- Presently the total capacity of GSM services is 1325K in Mumbai and 1025K in Delhi and it is planned to be further increased by 750K in each cities.
- MTNL has plans to expand its GSM services (2G/3G). The plan includes expansion of GSM network by 2 Million lines of 2G & 3G GSM/WCDMA technology. Orders have been placed with M/s ITI and M/s Motorola for expansion of 750K GSM lines (2G+) each in Mumbai and Delhi respectively under phase-1. The order for 3G equipment and remaining under phase-2 is proposed to be released after spectrum for 3G services is made available to MTNL by the Govt. The project work in MTNL Delhi is in advance stage & validation of the equipment is in progress. However, in Mumbai the progress is slow due mainly to capacity as well as coverage constraints.

CDMA Based Mobile Services

- The CDMA network available in Delhi and Mumbai is a state of the art CDMA 20001X technology based network of 400K lines capacity each. In addition to voice the network provides high speed mobile data upto 144 Kbps including host of various value added services. The network is in operation in both the cities and functioning well.

Broadband Network

- Broadband services based on ADSL2+ are being provided by MTNL. Triple play services i.e. voice (including VOIP), high speed Internet and IPTV are being offered on this broadband network. The service is very popular with the subscribers. MTNL presently has a broadband capacity of 5,64,488 and its customer base has reached to 5,11,968 in December 2007.
- Broadband capacity in Delhi and Mumbai was planned to be further expanded by 500K in Delhi and 300K in Mumbai for which orders were placed on M/s SOTL (500K Delhi) and

M/s ITI (300K Mumbai) in the month of April 2007 and June 2007 respectively. Delivery of the equipment against SOTL order is under progress. ITI had supplied 42.7K BB equipment in Mumbai which has also been installed. MTNL has taken a decision to divert 200K lines from Delhi and Mumbai. Installation of 100K lines in Mumbai is already in progress.

Internet International Bandwidth

- Internet International Bandwidth of 900 MB in Delhi and 1200 MB in Mumbai has been procured. This is being constantly augmented to keep pace with demand. An open tender has been floated for procurement of Internet International bandwidth.

Value Added and other Services

- **GSM :** The CRBT facility is currently available to GSM subscribers of both MTNL Delhi and Mumbai. In Delhi the Missed call Alert facility is currently available to limited subscribers only and M/s Motorola as a part of ongoing expansion has already installed Missed call alert for extended capacity for which the Acceptance Testing is in progress and services expected to be launched by end of December 2007. In MTNL Mumbai also , Missed call alert services are expected to be launched by end of this year. MTNL Delhi has also launched the instant messaging services in limited capacity for the GSM subscribers. A Host of other Value Added Services based on VOICE/SMS/GPRS is available & consistent efforts are being made to introduce other new value added services.
- **CDMA:** For commercial launch of BREW enabled value added services on revenue share basis in MTNL's CDMA1X network each in Delhi and Mumbai, a trial has been successfully conducted by M/s eMbience (Mast Mobile) with limited downloadable contents. Due to some commercial and legal issues between M/s Qualcomm and M/s eMbience, further work on finalization of the arrangement of this proposal is on hold.
- **Convergent Billing and CRM Project:** The Convergent Billing and CRM project was awarded to M/s BEL in March 2006 for Supply, installation and commissioning of convergent billing system and CRM system on turnkey basis. The project once implemented will serve as a single converged platform for all billing and CRM application across all the lines of business of MTNL i.e. GSM, CDMA, landline, Broadband, Leased Circuit as well as upcoming services. The customer will get a single consolidated bill for all services which he has subscribed from MTNL. Delivery and installation of all the Hardware and Software of Phase-I and Phase-II is over. Testing of various applications/service modules is in progress and the project is likely to be completed by next year.
- **NGN-Tandem:** MTNL intends to continue to invest in expanding and upgrading its network to improve the quality of service. MTNL has already initiated measures to add 24K tandem capacity based on NGN (Next Generation Network), in Delhi & Mumbai each.
- **IP-MPLS Network:** MTNL has commissioned a state of art IP-MPLS Core network in Delhi & Mumbai to MPLS enabled services and also better quality of services to the

customers. This MPLS core network will also aggregate all the next generation network voice, data broadband and video traffic so as to enable MTNL to have an efficient utilization of its bandwidth. MTNL is working on the expansion of IP-MPLS network to bring the network closer to its nodes (switching centers).

- **Customer Premises Equipment:** In order to cater to the growing demand for BB connection, purchase order for Procurement of 2,50,000 number of CPE's was issued and supply and installation of these CPE's has almost been completed. In addition approx. 195K number of CPE's has also been ordered against broadband tender(s) for Delhi and Mumbai on M/s SOTL and M/s ITI and for which supply is in progress. An open tender for procurement for 3.4 Lakh CPE's has been floated.
- **Managed Lease Line Network (MLLN) Expansion:** The managed leased lines of MTNL have been very popular among the subscriber like corporate, banks etc. There is huge demand for new MLLN circuits and to convert many old PCM circuits into MLLN circuits. Accordingly, MLLN system has been augmented by placing 2nd add-on Purchase Order on the existing vendor (M/s ICOMM). A draft tender document is being prepared for the procurement of MLLN equipment to meet the further demand of these circuits.
- **DWDM Project:** MTNL has placed a orders with M/s ZTE company, China for the supply of 42 terminals (20 Delhi & 22 Mumbai) of 40 channel, 10 GB/channel DWDM equipment to strengthen its transmission network. Presently the equipment is being tested at ITI by QA wing of BSNL and shall be deployed in the network after the completion of testing.

Worldwide Inter Operability For Microwave Access (Wi-Max)

- Wi-Max is an evolving technology. Standards are still under evolution stage 802.16d standard based equipments are already available in the market which supports only fixed services. However, MTNL intends to deploy Wi-Max forum certified 802.16e standard based equipment which supports full mobility in addition to fixed and nomadic features. The 802.16e based Wi-Max forum certified equipments are not commercially available in the market. Moreover WPC is yet to decide and allot the spectrum for Wi-Max services. MTNL has came out with an EOI for deployment of Wi-Max equipment based on 802.16e standards on revenue share basis, however, in view of above referred uncertainties, the said EOI has been kept in abeyance. In the meanwhile to assess the technology and also to gain first hand experience, MTNL has allowed M/s Soma networks and M/s C-DOT Alcatel research center Pvt.Ltd to conduct field trial in MTNL Delhi and Mumbai respectively.

Utilization of MTNL's Assets

MTNL has over the years acquired land and built buildings according to its requirements. It is also in the process of identifying the best use of such property to meet its requirements and build up world class infrastructure for appropriate utilization. In line with the above, it was decided by MTNL to develop a core knowledge park in Sector-62, Noida, UP on partnership basis.

In this connection a project management agreement has been signed by MTNL with a joint venture company of M/s IDEB projects Private Limited & M/s SUCG for development of core Knowledge Park in its land at Noida. The project is scheduled to be completed by August 2010.

Overseas Investments

In its quest to expand business in the overseas market due to shrinking domestic opportunities, MTNL is participating in the bidding process for acquiring 100% stake of Suntel Ltd. (Srilanka). Suntel Ltd. is a profit making CDMA technology based fixed line telephony service provider in Srilanka with highly skilled work force having subscriber base of around 3 lakh. Based on its final bid, MTNL has been selected as a preferred bidder by the sellers. As the target company is currently being run by highly skilled professionals in a very professional manner, in order to maintain its current/ existing structure with regards to the HR and other policies, MTNL has in principle decided to limit it's stake to 50% stake and accordingly is in talk for finding suitable partner(s).

Setting up of data centre by MTNL-STPI Joint Venture

The state of the art Data centre is proposed to be setup at Chennai by the joint venture company of MTNL-STPI. It is proposed to provide exclusive Data centre services, Messaging services, Business application services to the identified sectors of economic activity and thereby also popularizing the .in domain in the networked community across the world. The project will be implemented in three different phases. In addition to the portal and free E-Mail services , the revenue streams identified are hosted messaging solutions for SMS's , Family mail box, Web hosting, Application hosting, Enterprise resource planning (ERP) solutions, portal advertisements etc. through the portal. The location for the proposed data center has already been identified. The data center will be coming up in the STPI building in Chennai. The consultant for creation of infrastructure for the proposed data center has already been appointed. The data center is expected to be operational by second quarter of 2008-09.

Release of spectrum from Defence

In order to enable defence forces to release spectrum for launch of 3G services in the country, DOT decided to build & handover an alternative optical fiber network on all India basis to defence forces i.e. Army, Air force & Navy. The project is being implemented jointly by MTNL and BSNL in consultation with DOT and defence forces & is being funded by DOT. MTNL has been given responsibility of laying optical fibre network in its service area of Delhi and Mumbai. As decided by DOT, currently works for Army & Navy has been kept in abeyance & execution of works for Air Force's network is in advance stage.

Laying of Submarine Cable Project

MTNL through its joint venture with BSNL (Millennium Telecom Ltd. (MTL), with 51% & 49% equity participation) is planning to install the Millennium Submarine Cable System (MSCS) consisting of trunk-and-branch segments from East Coast of India to South East Asia and from West coast of India to middle East with an aim for onward connectivity to the Europe and North America through

existing and newly planned Submarine cables via both East and West routes. For this purpose, MTL has already completed the business plan and project report stage of the project ('Phase 1'), and now has appointed a France based consulting company, M/s Axiom as consultant who will offer necessary support for the full duration of the project which includes establishing dialogue with other telcos for correspondent relationships, DTS, Permit Matrix, awarding contract to submarine cable vendor for supply & implementation of the project etc.

Presently, MTNL is in the process of signing various MOUs and landing party agreements with the distant parties' en-route the cable system. The NIT for the supply and implementation of the cable system has been issued on October 15, 2007 and the contract is likely to be awarded by the end of first quarter of 2008.

E-procurement System

Purchase order to M/s Sai Info-system was issued in 2006 for procurement of E-procurement system. Factory Inspection of all equipments completed. Deliveries of all equipments at site are over. The infrastructure for data Center is ready and installation of the same is in progress. Validation of the system is in progress.

JOINT VENTURE

United Telecom Limited (UTL)

A Joint Venture company named United Telecom. Ltd. (UTL) has been set up by MTNL, VSNL and TCIL along with Nepal Venture (P) Limited (NVPL) to provide CDMA based basic services in Nepal. UTL also have Licence to operate NLD and ILD services. MTNL has so far invested Rs. 29.015 crore as equity in UTL. As of September 20, 2007, United Telecom Limited has a customer base of 1,02,000 customers out of which about 45,000 customers are using CDMS mobile service.

MTNL-STPI IT Services Limited

MTNL-STPI IT Services Limited is a 50:50 joint venture between Software Technology Parks of India (STPI) and Mahanagar Telephone Limited, (MTNL). The JV formed in 2006 combines the STPI's rich experience as an ISP and MTNL's track record of being India's leading Telecom operating company to offer niche Web Portal Services to the Indian community. The JV aims to provide exclusive data centre services, messaging services, business application services to the identified sectors of economic activity and thereby also popularizing the .in domain in the networked community across the world.

Subsidiary Companies

MTNL has two wholly owned subsidiaries viz. Millennium Telecom Ltd. (MTL) and Mahanagar Telephone Mauritius Ltd (MTML).

Mahanagar Telephone Mauritius Limited (MTML): MTNL has set up its 100% subsidiary in Mauritius with the name Mahanagar Telephone Mauritius Limited (MTML). MTML obtained Licence to operate as 2nd operator to provide fixed / mobile / ILD /Internet services in Mauritius.MTML has already rolled out its CDMA based fixed and mobile services as well as Internet and ILD services. As of September 20, 2007, MTML have a customer base of about 33,000 out of which 8200 customer use mobile services.

Millennium Telecom Limited (MTL): is a joint venture company of MTNL and BSNL with 51% and 49% equity participation respectively.The company has entered into partnership with Bharat Sanchar Nigam Limited, India for laying of Submarine OFC Cable from Indian East Coast to South East Asia and from Indian West Coast to Middle East with an aim for onward connectivity to the Europe and North America through existing / newly planned submarine cables via both East and West routes.

MEETING COMPETITION

To meet the challenge of stiff competition, MTNL has taken various initiatives. Besides re-structuring at various levels and broad basing the services portfolio, emphasis has been placed on addition of new and value added services. The company has commercially launched broadband services in the year 2005 using latest ADSL 2 + technology. MTNL has recently launched IPTV and VoIP services not only to add to customer delight but also to enroll more customers for MTNL's landline services.

MTNL has put in place new units namely Marketing, Sales, Corporate Sales, for marketing its products more aggressively. MTNL has also outsourced its customer care call centre services partially for enhanced customer care.

MTNL continues to modernize its network to reduce fault rate and provide newer services. The company is continuously providing value added services on PSTN and mobile network at most affordable rates.

MTNL have also recently launched IP MPLS network to offer seamless data, VoIP and VPN services to its customers. This will help in offering customized networking solution to corporate clients of MTNL.

FINANCIAL PERFORMANCE

During 2006-07, MTNL has achieved a financial turnover of Rs. 5582.85 crore, despite stiff competition from other operators. This is, however, lower as compared to the previous year's turnover of Rs. 6090.99 crore. The reduction of tariff and the ADC cut are the two factors, which are costing MTNL dearly but in spite of all the facts, MTNL could maintain profits during the last three years at the similar level. It registered a profit before tax of Rs. 792.68 crore in 2006-07 as against Rs. 671.36 crore for the previous financial year. The net profit of the company was Rs. 681.74 crore for the financial year as against Rs. 580.29 crore for the previous financial year.

MTNL's net worth increased to Rs.11407.65 crore, an increase of 2.56 % over the previous year's net worth of Rs. 11122.52 crore. During first half of the current financial year (April 1, 2007 to September 30, 2007), MTNL has earned a financial turnover of Rs. 2392.80 crore with a net profit of Rs. 194.82 crore (unaudited). MTNL paid dividend @40% on the paid-up share capital of Rs.630 crore for the financial year (2006-07).

It also improved upon its collections .The collections of basic services has increased from 96.60% in 2005-06 to 97.625 in 2006-07. It has further increased to 97.80% by September 2007.

CAPITAL EXPENDITURE ON TECHNOLOGY

During the year 2006-07, MTNL has spent an amount of Rs. 795.83 crore as against Rs. 685.47 crore in the previous year on capital expenditure. This was achieved entirely through internal resource generation.

TRADING OF MTNL SHARES

Shares of MTNL are listed with principal stock exchanges in the country such as Delhi, Calcutta, Mumbai and Chennai Stock exchanges as well as National Stock Exchange of India The shares are being traded regularly in the National Stock Exchange and Bombay Stock Exchange (NSE and BSE).The ADRs issued by the company are listed with New York Stock Exchange (NYSE) and are regularly traded there.

REVENUE ASSURANCE

Revenue assurance is a process which ensures all billable activities occurring on the network are accurately captured, rated and billed. A revenue assurance program has also implemented in MTNL wherein efforts are being made to ensure that maximum revenue billing and revenue realization takes place to further the outstanding dues. The above program includes:

- Matching of commercial data and billing data.
- Matching of CDRs generated and billed.
- Issue of bills in time and so that payments are received promptly.
- Settlement of Interconnect billing.
- Appointment of Private recovery agents for recovery of old outstanding, etc.

The Union Minister for Communications & Information Technology, Shri A. Raja being presented a Dividend Cheque by the Director (Technical), MTNL, Shri Kuldip Singh, in New Delhi on October 25, 2007

Further, TRAI has also mandated various telecom operators to conduct Audit of Billing and Metering System by the auditors empanelled by TRAI itself, which supplements the revenue assurance program being implemented by MTNL.

As mentioned at Para 1 of New services (page 3), a Convergent Billing System is under installation, which contains a significant component of Revenue Assurance. This is expected to improve revenue assurance efforts of MTNL further.

MANPOWER

The total employees of MTNL were 48529 as on March 31, 2007 belonging to different categories. Of the total employees, the numbers of employees belonging to Scheduled Caste are 9001, which constitute 18.5% of the total employees. The total number of employees belonging to Scheduled Tribe is 1660, which is 3.43% of total employees.

MAN POWER DETAILS

(As on March 31, 2007)

Group	Sanctioned	Total Working Strength	Women	Persons with disabilities	SC		ST	
					Nos.	%	Nos.	%
A	1400	1232	40	0	234	18.99	39	3.16
B	9473	5523	557	7	787	14.25	136	2.46
C	32223	28878	7799	89	5016	17.37	538	1.86
D	12853	12821	1430	19	2964	23.12	947	7.39
DRM		75			0	0.0	0	0.0
TOTAL	**55949**	**48529**	**9826**	**115**	**9001**	**18.58**	**1660**	**3.43**

ANNEXURE -I

DEVELOPMENT TARGETS/ACHIEVEMENTS - DELHI

	Targets (MOU) 2006-07	Achievements 2006-07	Targets (MOU) 2007-08	Achievements 2007-08 (April – December 2007)
A. SWITCHING				
i. Gross Capacity (In 000' lines)	*	242.49	*	13.9
ii. Scrapping (In 000' lines)	*	77.45	*	13.5
iii. Net Capacity (In 000' lines)$	800	165.040	1000	0.4
iv. DELs (In 000' lines)$	500		580	
Gross		687.203		471.521
Net		371.98		18.01
v. TAX/Tandem (In 000' lines)	32	Nil/Nil	100	Nil
B. SUBSCRIBER EXTERNAL PLANT				
i. Cable Laying (In LCKM)	*	2.59186	*	2.42408
ii. Ducting (In Kms.)	*	Nil	*	Nil
C. TRANSMISSION (NAME OF SYSTEM)				
a) SDH System	*		*	
i. STM-16		10		46
ii. STM-4		8		35
iii. ADM-1/STM-1		85		51
D. OPTICAL FIBRE CABLE (in Route Kms.)	*	931.718	*	297.837
D. OPTICAL FIBRE CABLE (in Fibre KMS.)	9000	34960.858	20000	10449.492
E. WAITING LIST		Nil		Nil
F. NEW REGISTRATION		554605		454396
G. Broadband Subscribers	*	117450	*	36108
H. Internet Connections	100K	40266	87.5K	15042
I. IPTV Subscribers	*	44	40000	1823

$ Including (Fixed Lines, WLL (Mobility)&GSM)

* Targets are not specified in MOU Document.

ANNEXURE -II

DEVELOPMENT TARGETS/ACHIEVEMENTS - MUMBAI

	Targets (MOU) 2006-07	Achievements 2006-07	Targets (MOU) 2007-08	Achievements 2007-08 (April – December 2007)
A. SWITCHING				
i. Gross Capacity (In 000' lines)	*	637.253	*	28.749
ii. Scrapping (In 000' lines)	*	137.253	*	31.772
iii. Net Capacity (In 000' lines)$	800	500000	1000	-3.023
iv. DELs (In 000' lines)$	500		580	
Gross.		765.946		374.641
Net.		370.564		121.934
v. TAX/Tandem (In 000' lines)	32	Nil/Nil	100	Nil/Nil
B. SUBSCRIBER EXTERNAL PLANT				
I. Cable Laying (In LCKM)	*	11.728	*	1.2922
ii. Ducting (In Kms.)	*		*	0
C. TRANSMISSION (NAME OF SYSTEM)				
a) PDH OF System	*		*	
i. 34 Mbps OF System		11		2
b) SDH System	*		*	
i. STM-16		25		27
ii. STM-4		42		65
iii. ADM-1/STM-1		104		96
D. OPTICAL FIBRE CABLE (In Route Kms)	*	687.745	*	343.09
D. OPTICAL FIBRE CABLE (IN Fibre KMS.)	9000	21627.216	20000	10524.180
E. ISDN	*	1267	*	1127
F. WAITING LIST		Nil		Nil
G. NEW REGISTRATION		2082		355247
Broadband Subscribers	*	140061	*	41170
Internet Connections	100K	64649	87.5K	36514
IPTV Subscribers	*	203	40000	1661

$ Including (Fixed Lines, WLL (Mobility)&GSM)

* Targets are not specified in MOU Document.

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III. 3. ITI Limited

INTRODUCTION

ITI Limited is India's pioneering venture in the field of Telecommunications since 1948.

With state-of-the-art manufacturing facilities spread across six locations and a countrywide network of marketing / service outlets, the Company offers a complete range of telecom products and total solutions covering the whole spectrum of Switching, Transmission, Access and Subscriber Premises equipment. In tune with the technology trend, ITI has embarked on manufacture of mobile infrastructure equipment based on both GSM (Global System for Mobile) and CDMA (Code Division Multiple Access) technologies. ITI has also acquired the technology for manufacture of broadband infra equipment and next generation network equipment based on IP technology. ITI has a dedicated Network Systems Unit for carrying out installation and commissioning of equipments, as well as for undertaking turnkey projects and providing value-added services. ITI has aptly earned recognition as Top Turnkey Services Company in Indian Telecom for four years in the past.

ITI joined the league of world-class vendors of GSM technology with the inauguration of BTS equipment manufacturing facility at its Mankapur and Rae Bareli Plants, which opened a new era of indigenous mobile equipment production in the country. These two lines will augment the capacity to more than nine million lines. The success of technology upgradation and induction is visible across all units of ITI, which fully conform to ISO-9001: 2000 Quality Management System. Next Generation Soft Switch and STP (Signaling Transfer Point) are slated for production at the Palakkad Plant, which is already producing SIM (Subscriber Identity Module) Cards. The Naini Plant has taken up production of SDH (Synchronous Digital Hierarchy) as also DWDM (Dense Wavelength Division Multiplexing) optical equipment besides DLC (Digital Loop Carrier) equipment. The Company is also starting the manufacturing of the broadband equipment segment. The infrastructure would enable the company to manufacture of DSLAMS and offer network solutions to the customers. The Company is geared to provide all equipment for total network solutions and specific communication needs of Defence forces, the Bangalore Plant is into manufacturing the CDMA infra equipment and IFWTs (Integrated Fixed Wireless Terminals).

By deploying its rich telecom expertise and vast infrastructure, the Company is consolidating its diversification into IT and IT-enabled services, acquiring a competitive edge in the convergence market. ITI's competency in the WAN (Wide Area Networking) segment is reflected through two major projects commissioned successfully for BSNL: Countrywide MLLN (Managed Leased Line Network) and SSTP (Standalone Signal Transfer Point).

ITI is one of the agencies selected for preparation of National ID cards. The Company has struck strategic alliance with BSNL for building a VSAT based network in Ku band for broadband services. Thus ITI has made its debut into revenue sharing with the country's largest operator in the new area of IP-based satellite broadband services. The successful implementation of the project to expand Internet Services equipment of MTNL is a significant step in the continuing growth of the Company in the IT Sector. The CDMA-WLL (Wireless in Local Loop) turnkey project that ITI has completed for TCIL (Telecommunications Consultants India Limited) in Afghanistan is a boost to the Company's export business.

Strategic communications is the Company's forte with a proven record for engineering secure communication networks for India's Defence forces. Extensive in-house R&D work is devoted towards specialized areas of Encryption, NMS, IT and Access products to provide complete customised solutions to various customers.

CAPITAL STRUCTURE

The Authorised Share Capital of the Company as on March 31, 2007 was Rs.700 crore. The paid-up Share Capital as on that date was Rs.588 crore. (Rs.288 crore equity shares of Rs. 10/- each and Rs. 300 crore as preference shares of Rs. 100/- each). The percentage share of Central Government in equity as on March 31, 2007 is 92.87%.

Manufacturing Plants

Plant Location	Products Manufacture
BANGALORE PLANT	WLL CDMA-Infra, CDMA IFWT, Broadband CorDECT, OCB-CSN, AN RAX, SATCOM, WiMAX-CPE, Antenna and Microwave equipment for GSM Project. Telephones Instrument for Defence and Other Defence Equipment.
MANKAPUR PLANT	GSM-BTS, C-DOT Products,Banking Automation Products.
RAE BARELI PLANT	GSM-BTS, SMPS, Roof Top Tower,Shelter
NAINI PLANT	STM-1, 4 and 16, DWDM,DLC-Narrow Band, Broad Band ADSL -DSLAM Mfg., Telephone Instruments and SPV
PALAKKAD PLANT	NGN, IP TAX, SSTP OCB-283 CORE, TAX / TANDEM, MLLN, SIM CARDS, National ID cards.
SRINAGAR PLANT	Telephone Instruments

Details of physical achievements for the year 2005-2006, 2006-2007 and 2007-08 (April – December 2007) are as under:

(Rupees in crore)

Major Products	2005-06	2006-07	2007-08 April-Dec 2007 (Provl.)	Anticipated Achievement 2007-08 Jan-March 2008
MANUFACTURING PRODUCTS				
OCB-283 LOCAL / CSN & Spares	32.92	25.34	23.18	16.17
OCB-TAX / TANDEM	85.15	47.70	30.42	1.54
C-DOT PRODUCTS & SPARES	34.68	30.71	22.61	17.51
SATCOM	0	1.58	8.48	10.16
STMs / OPTIC FIBRE EQUIPMENTS	62.35	57.53	42.71	166.03
SPV / OTHER PHONES	0	3.16	6.39	10.75
DEFENCE, PCM, MUX & SATELITE EQPTS.	31.92	20.20	12.07	1.25
GSM-BTS, RTT, SHELTER, P/P	203.82	205.12	72.28	196.14
DLC/ WiMAX	22.70	0	0	-
SIM CARDS/VRLA BATTERY	28.66	7.23	8.69	17.40
TERMINAL EQPT. TELEPHONES/ LJU	7.89	4.80	1.53	2.23
TRADED PRODUCTS				
WLL- CDMA INFRA	228.58	339.07	50.04	171.46
GSM –INFRA (NETWORKING)	267.26	431.29	106.37	1021.93
CDMA WLL-IFWT TML / HAND SETS	107.11	72.70	62.36	61.79
MPLS/ MLLN/ NET WORK FOR IT RELATED	51.13	134.06	134.12	45.25
MISC. PRODUCTS: IP TAX / SSTP	20.44	53.96	1.7	78.80
DWDM	32.32	12.42	32.18	110.53
ASDL-DSLAM+CPE & MISC.	-	-	6.9	-
SOLUTION BUSINESS/AMC Etc	70.01	-	-	-
NON DOT PSU BUSINESS /TURNKEY PROJECTS	373.80	315.76	228.67	249.29
Total	**1660.74**	**1762.63**	-	-
EXCISE DUTY	88.64	55.70	-	-
TOTAL INCL. ED	1749.38	1818.33	850.07	2178.23

Highlights of Performance during 2007-08 (April - December 2007)

- GSM - equipment worth Rs.178.02 crore supplied.
- MLLN expansion equipment worth Rs.134.12 crore supplied.
- WLL -CDMA Infra, equipment worth Rs.50.04 crore supplied.
- CDMA WLL IFWT Terminal 2.73 Lakhs Nos worth Rs.62.36 crore supplied.
- OCB 283 Digital TAX / TANDEM long distance equipment 119.52 Kilo Circuit worth 30.42 crore supplied.
- OCB 283 Digital Switching equipment 23.18 crore supplied.
- STMs Optic Fibre eqpt. Worth Rs.42.71 crore supplied.
- ADSL-DSLAM+CPE, equipment worth Rs.6.51 crore supplied.
- DWDM - 204 Systems worth value Rs.32.18 crore supplied.
- SIM Card 8.1 Lakhs Nos worth Rs. 8.69 crore supplied.
- Turn Key Projects etc. worth Rs 228 crore executed.

Future Technologies planned

The new technologies planned to be inducted by ITI are as follows:

- **WIMAX / WI-MAX CPEs**

  ITI is in the process of selecting suitable technology partner for manufacturing of WI-MAX BTS / WI-MAX CPEs.

- **G-PON (Gigabit- Passive Optical Network)**

  ITI has entered into TOT agreement with M/s Alphion USA, for manufacture of G-PON equipments at Rae Bareli Plant

- **Broadband Cor-DECT**

  Discussions are in progress with M/s Midas, Chennai for TOT for manufacture of Broadband equipments.

- **GSM - 3G**

  ITI is planning to expand its existing manufacturing facility at Rae Bareli Plant for manufacture of NODE-B equipments for GSM-3G. ITI has also plans to extend the scope of manufacturing to Main Switching Center (MSC) and Base Station Controller (BSC).

- **Fixed Cellular Telephones (FCTs -GSM)**

  GSM operators in India are planning to introduce Fixed Cellular telephones (FCTs) in the network. ITI is gearing up for manufacture of these equipments from component level.

- **Next Generation Networks- (IP TAX)**

  ITI has signed an MoU with M/s Huawei, China for manufacture of IP TAX equipments. Manufacturing is being taken up at Palakkad Plant.

Visit of Hon'ble MOSC&IT stall at 6th International Summit & Expo Telecom India-2007, Mumbai

Visitors at ITI stall in the third International Bank Tech Summit Banknet at Mumbai

A general view of the ITI display at India Telecom-2007 Intl Conf & Exhibition-2007

- **Caller Line Identification Phone (CLIP Phone)**

  ITI has signed an MoU with M/s Gaoxinqi, China for manufacture of CLIP Phones.

- **Terrestrial Trunk Radio (TETRA)**

  ITI is has in discussion with C-DAC, Trivandrum for MoU for joint marketing and TOT for manufacturing. The manufacturing is planned at Palakkad Plant.

- **GSM Handsets**

  Discussions have been initiated with M/s Digibee for tie-up for manufacture of GSM Handsets.

IMPORTANT ACTIVITIES / EVENTS

- BSNL and MTNL has placed orders for 5 Million Lines and for 750 Kilo Lines of GSM equipment respectively. Rs.852 crore worth GSM equipment has been supplied so far.
- WLL-CDMA Infra: During 2006-07, ITI has bagged tender of 21 Lakhs lines valued Rs. 328 crore, which is completely executed.
- WLL-CDMA IFWT: 2.73 Lakh Nos Terminals worth Rs. 62.36 crore has been supplied. Supply will commence shortly against new order of 2.11 Lakh Nos. of IFWT terminals.
- MLLN Expansion order: Existing order worth Rs.134.12 crore equipments has been supplied and acceptance and testing under progress.
- DWDM -32 CH. Equipment worth 32.18 crore supplied.
- Review of operations by Secretary, Dept. of Telecommunications & Chairman Telecom Commission Shri D.S.Mathur, Member-Finance Smt Manju Madhavan and Additional Secretary (Telecom) Shri R. Bandyopadhyay.
- Visit of second Sub-Committee of Parliament on Official Language presided over by Hon'ble Chairman, Prof. Ramdeo Bhandari.
- Visit of the Department-related Parliamentary Standing Committee on Industry led by Hon'ble Chairman Shri Santosh Bagrodia.
- Visit of Parliamentary Standing Committee on Information Technology chaired by Hon'ble MP Shri Nikhil Kumar Choudhary.
- Presentation of National Safety Award 2006 to Rae Bareli Plant of ITI Limited by Hon'ble Union Minister of Labour & Employment.
- Inauguration of Main GSM Moblie Switching Center of BSNL with six million lines capacity, installed and commissioned by ITI, by His Excellency the Governor of Chattisgarh, at Raipur.
- ITI in discussion programme with the Hon'ble Drafting and Evidence Sub-Committee of Parliament on Official Language in Kolkatta.
- A view of the Board of Directors at the 57th Annual General Meeting of ITI in Bangalore.

- Hon'ble Minister for IT,PWD and Energy, Government of Madhya Pradesh at the ITI stall in the 6th International Summit & Expo Telecomm India 2007, Mumbai.
- Flagging off the final consignment of the first BTS export order to Alcatel, France from Mankapur Plant of ITI.

Exports

Exports performance for the year 2006-07 is Rs.1.60 crore consisting of C-DOT equipment, Microwave equipment, Magneto Telephone, Batteries and other spares to countries like Afganistaan, Albania, Butan, Sri Lanka, Myanmar, etc and also exported 400 GSM BTS to Alcatel CIT, France worth Rs. 18 crore.

Manpower Position

Total strength of employees of the Company at the end of the year 2006-07 was 13415 as compared to 14257 at the end of previous year.

A total of 532 employees have taken Voluntary Retirement during the year 2006-07.

Manpower as on January 1, 2008 is 13258 employees.

AWARDS

ITI has won the "Top Telecom Turnkey Provider" Award in the 8Th Annual Voice and Data 100 2007 Survey. This is regarded as the prestigious recognition in Indian Telecom industry.

EXHIBITIONS

- ITI participated in 15th Convergence India 2007 International Exhibition at New Delhi.
- ITI participated in India Telecom 2006 International Exhibition organized by Department of Telecommunications at New Delhi.
- Visit of Hon'ble MOSC&IT at ITI stall at 6th International Summit & Expo Telecomm India 2007, Mumbai.
- Visitors at ITI stall in the third International Bank Tech Summit Banknet at Mumbai.
- A general view of the ITI display at India Telecom 2007 Intl Conf & Exhibition 2007, New Delhi.

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III. 4. Telecommunications Consultants India Ltd.

INTRODUCTION

On March 10, 1978, Telecommunications Consultants India Ltd. (TCIL) was incorporated as a wholly owned Government of India Company. The Company was set up with the objective of extending the wide ranging Indian telecom expertise to friendly developing countries. On August 1, 1978, the Company commenced its business. The Company has since then been engaged in adopting world class communication and IT technologies for catering to the local needs of countries mainly in the developing world. The Company is establishing itself in the changed Telecom and IT Scenario and has diversified into Information and Technology and Civil construction sector.

MISSION

The Mission statement of the company is : **"To excel and maintain leadership, in providing Communication Solutions on turnkey basis in telecommunications and information technology service sector globally".**

OBJECTIVES

- To provide world-class technology and Indian expertise globally in all fields of Telecommunications and information technology.
- To sustain, expand and excel in its operations in Overseas / Indian Markets by developing proper marketing strategies.
- To acquire State-of-the-Art technology on a continuing basis and maintain leadership.
- To diversity into Cyber Parks, Cyber Cities, Intelligent Buildings, Highways and Roads and other civil works.

CORE COMPETENCE

Company is undertaking projects in all the fields of Telecommunications and IT in India and abroad. The core competence of the Company is in Network projects, Software Support, Switching and Transmission Systems, Cellular Services, Rural Telecommunications, Optical Fibre based backbone network, CDMA based basic service networks, Billing, Mediation and Customer Care systems for different Telecom services. The company is also diversifying into other business areas such as Optical Fibre on Ground Wire for power utilities, e-governance for State Governments in India, communication system for Airport Terminals and Light Houses, construction of intelligent buildings, cyber parks, roads etc.The Company has also entered into Basic and other Licenced Services in India/ abroad through the JV route. TCIL has operations of GSM cellular mobile services through

a JV in Rajasthan and operation of WLL (Wireless in Local Loop) system based basic services in Nepal, through a JV with MTNL, VSNL and a Nepalese partner.

The Company secures business by participating in international and national competitive bidding. The company is also contributing to establish strategic communication links in the neighboring countries like Nepal, Afghanistan, Bhutan, Myanmar etc.

GOVT. INVESTMENT IN TCIL

Company was incorporated in 1978 with a Paid-up Capital of Rs. 10 lakhs. In 1982-83, the Paid-up Capital of the Company was increased to Rs. 30 lakhs. The Government's investment in the Company as on date is only Rs. 30 lakhs. The Paid-up Capital after 6 Bonus Issues in 1987-88, 1992-93, 1994-95, 1996-97, 2001-02 and 2002-03 stands at Rs. 28.80 crore. Company has paid total dividend of over Rs. 164 crore so far to Govt. of India on direct Government Investment of Rs. 30 lakhs.

The networth of the Company as on March 31, 2007 was Rs. 397.87 crore.

OVERSEAS OPERATIONS

Company has worked in 58 countries so far. The Present on going operations are in Mauritius, Kingdom of Saudi Arabia, Kuwait, Ghana, Oman, Algeria, Nepal, Botswana, Bhutan, Ethiopia, Afghanistan, Myanmar, Sudan, Jordan, Behrain and Qatar.

FINANCIAL PERFORMANCE - HIGHLIGHTS

(Rupees in crore)

	2004-05 Actual	2005-06 Actual	2006-07 Actual	2007-08 RBE
Turnover	449.14	483.50	410.61	595.00
Profit before tax	13.68	17.40	5.94	7.58
Foreign Exchange repatriation to India	47.39	22.02	28.00	55.00
Networth	395.85	396.65	397.87	399.43

HIGHLIGHTS 2007-08

PROJECT EXPORTS

Project Exports during 2007-08 are likely to be over Rs. 254.60 crore.

TURNOVER AND PROFIT

Turnover in 2007-08 is likely to be over Rs. 595.00 crore against previous year's figure of Rs. 410.61 crore and MOU targets of Rs. 700 crore.

THRUST ON HI-TECH PROEJCTS

Company has given thrust on hi-tech projects in new technologies of OPGW based broadband networks, GSM / CDMA Projects, FTTH, Light House and Light Ships, Satellite Networks, E-medicine, E-education, E-Governance Projects consultancy in creation of Cyber cities and Installation of Lawful Interception Monitoring System (LIM).

INFORMATION TECHNOLOGY PROJECTS

With the change in telecom scenario, Company took a bold step and attempted to enter new areas and diversified its operations in the allied fields. Company has also revitalized and restructured the IT Division from software development to take part in IT and Networking Projects and made this as a thrust area of development. These initiatives have paid rich dividends and have pitch-forked the Company as a High-Tech Company with a progressive outlook and capable of operating in cutting-edge technologies like Fibre To The Home (FTTH), Lawful interception, Next Generation Networks (NGN), IT consultancy, e-Governance etc.

ORDER BOOKING

During the year 2007-08, till December 2007, Company has secured orders of over Rs. 564.29. The major orders booked during the year are as under:

- Setting up of High ICT Department for SMT Engg. Co. in Sudan for valuing Rs. 70 crore
- Network Maintenance contract in Kuwait valuing Rs. 54.95 crore
- Feasibility report of Sudan Technology city for Ministry of Sudan valuing Rs. 1 crore
- Mobily contract in KSA valuing Rs. 46.38 crore
- GSM contract in KSA valuing Rs. 17.39 crore
- Maintenance contract in KSA valuing Rs. 11.60 crore
- Relocation of Telephone plant in Kuwait from Copri valuing Rs. 4.51 crore
- Rural road projects valuing Rs. 280.48 crore
- NGN Migration project for Rs. 2.51 crore from Intercol Bahrain
- Project for implementation of ERP for DHBVN valuing Rs. 6.65 crore
- Pilot project for implementation of IT enablement of Network Energy services for DHBVN Haryana valuing Rs. 8.69 crore

FINANCIAL PERFORMANCE FOR THE YEAR 2007-08 (April-December)

(Rupees in crore)

	MOU Target 2007-08 (Very Good)	April -December 2007	Anticipated January -March 2008
Turnover	700	235.37	265
Profit before tax	8	0.92	6.08
Foreign Exchange repatriated to India	20	60.35	5.00

JOINT VENTURES OF TCIL

BHARTI HEXACOM LTD. (HEXACOM INDIA LTD. - EARLIER NAME)

TCIL is operating Cellular Telephone Services in Rajasthan Circle through BHARTI HEXACOM LTD., a Joint Venture promoted by TCIL and now working in partnership with Bharti Televentures Ltd. of New Delhi. Presently the company has subscriber base of over 2.00 million with over 30% market share. TCIL has a share-holding of 30% in this company with investment of Rs. 91.26 crore. The JV Company has achieved a turnover of Rs. 754.06 crore and PBT of Rs. 264.11 crore up to December 2007. TCIL investment in the JV has been increased from Rs. 53.76 crore to Rs. 91.26 crore in September 2006 with the JV's right issue at a premium of 100% over par.

INTELLIGENT COMMUNICATION SYSTEMS INDIA LTD. (ICSIL)

TCIL has a share-holding of 36% in this company with investment of Rs.36 lakhs. Company has achieved a turnover of Rs 3.68 crore and PBT of Rs. 0.09 crore up to December 2007.

TAMILNADU TELECOMMUNICATIONS LTD. (TTL)

Tamilnadu Telecommunications Ltd. (TTL) was promoted in 1988 with Tamilnadu Industrial Development Corp. (TIDCO). Company has diversified its operations by manufacturing of Optic Fibre Cables. TCIL has an investment of Rs. 6.95 crore in TTL. The company has achieved a turnover of Rs. 17.03 crore up to December 2007.

TCIL BELLSOUTH LTD.

TCIL had promoted TCIL BELLSOUTH LTD. (TBL) with BellSouth of USA. TCIL's share in the equity of this company is Rs. 84 lakhs. TBL has executed telecom billing and administration projects in a number of countries including Ukraine, Malaysia, Zimbabwe and Bolivia. TBL has implemented Billing System and Customer Care packages recently in Malawi, Swaziland and in Nepal. The company has achieved a turnover of Rs. 0.56 crore up to December 2007.

TCIL SAUDI CO. LTD.

TCIL has formed a Joint Venture Company in KSA styled as " TCIL SAUDI CO. LTD. (TSCL)" wherein TCIL's equity is 40% with investment of Rs. 67 lakhs. NATEL, the other partner is having 60% equity. NATEL has expressed desire to leave the JVC as partner. Pending their replacement by another suitable partner, the JVC has made an arrangement with NATEL that TCIL shall execute the projects in the name of TSCL and shall be responsible for the profits and losses while NATEL shall have no say in the Management and NATEL shall be paid a sponsorship fee of 3% to 5% of value of such contracts. As such, turnover obtained through TSCL has been merged with TCIL operations. Besides TSCL operations, TCIL in its own name is also executing projects. The company has achieved a turnover of Rs. 21.12 crore and profit of Rs. 2.29 crore up to December 2007.

UNITED TELECOM LTD.

TCIL in association with Mahanagar Telephone Nigam Limited (MTNL), Videsh Sanchar Nigam Limited (VSNL) and Nepal Ventures Pvt.Ltd. (NVPL) formed the JV Company called United Telecom Ltd. The Company has been awarded a Licence for providing Basic Telecom Services in the Kingdom of Nepal based on CDMA technology for providing Wireless in Local Loop. UTL has launched its services in September 2003. The Company has achieved a turnover of Rs. 33.68 crore and profit of Rs. 0.31 crore up to December 2007. Company has about 90,000 subscribers.

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IV. Statistical Supplement

Table-1

Relative performance during March 2006 - December 2007

S.No.	Description		Position at the End of		Absolute Change (4-3)	Position at the End of		Absolute Change (7-6)
			March'06	March'07		March'07	December'07	
1	2		3	4	5	6	7	8
1	Wireline Phones (In Lakh)	Public	392.44	374.61	-17.83	374.61	353.06	-21.55
		Private	9.82	33.13	23.31	33.13	39.44	6.31
		Total	**402.26**	**407.74**	**5.48**	**407.74**	**392.50**	**-15.24**
2	Wireless Phones (GSM+CDMA) (In Lakh)	Public	218.39	339.30	120.91	339.30	400.11	60.81
		Private	800.27	1311.64	511.37	1311.64	1936.10	624.46
		Total	**1018.66**	**1650.94**	**632.28**	**1650.94**	**2336.21**	**685.27**
3	Total Telephones		1420.92	2058.68	637.76	2058.68	2728.71	670.03
4	Teledensity		12.74%	18.22%	-	18.22%	23.89%	-
5	Switching Capacity (In Lakh)	Public	792.14	888.17	96.03	888.17	931.84	43.67
6	Village Public Telephones [VPTs]		547111	564610	17499	564610	530724	-33886
7	PCOs (In Lakh)	Public	23.86	23.65	-0.21	23.65	22.63	-1.02
8	OFC Route kms	Public	490437	519155	28718	519155	544227	25072
9	TAX Lines (In Lakh)	Public	69.53	82.20	12.67	82.20	85.44	3.24
10	Rural Phones (Fixed+CDMA+GSM)		14768247	47099514	32331267	47099514	67331303	20231789

Table-2

Telephone per 100 Population-Urban/Rural (Tele-density)* As on 31st March 2007 & 31st December2007

Sl.No.	Circles/States	Tele-Density						Total Telephones						% of Rural DELs to Overall DELs	
		Overall		Urban		Rural		Overall		Urban		Rural			
		2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07
1	ANDAMAN & NICOBAR	17.39	17.28	23.00	23.37	14.17	13.69	75706	77148	36520	38677	39186	38471	51.76%	49.87%
2	ANDHRA PRADESH	19.62	25.63	58.24	67.63	6.84	9.63	16016072	21078958	11973572	15342227	4042500	5736731	25.24%	27.22%
3	ASSAM	9.74	12.31	54.65	66.97	2.36	3.21	2834286	3616656	2244370	2808427	589916	808229	20.81%	22.35%
4	BIHAR	7.32	10.92	52.28	79.88	2.05	2.83	6760134	10196557	5066467	7833520	1693667	2363037	25.05%	23.17%
5	CHHATTISGARH	3.24	3.93	11.28	13.56	0.99	1.20	743178	911516	566393	695239	176785	216277	23.79%	23.73%
6	GUJARAT	24.14	30.87	45.47	55.84	10.43	14.68	13609557	17604248	10028107	12527348	3581450	5076900	26.32%	28.84%
7	HARYANA	23.11	28.06	49.72	55.92	10.74	14.89	5495803	6761928	3752539	4326062	1743264	2435866	31.72%	36.02%
8	HIMACHAL PRADESH	28.57	37.64	81.75	108.09	22.30	29.25	1865945	2477768	562705	756993	1303240	1720775	69.84%	69.45%
9	JAMMU & KASHMIR	16.08	19.87	47.34	56.48	5.08	6.89	1786775	2231812	1368797	1660153	417978	571659	23.39%	25.61%
10	JHARKHAND	3.43	3.41	11.33	11.15	1.08	1.11	1020487	1027423	772232	770901	248255	256522	24.33%	24.97%
11	KARNATAKA	25.05	32.06	56.44	70.26	7.46	10.41	14270528	18411500	11547204	14595676	2723324	3815824	19.08%	20.73%
12	KERALA	33.54	41.81	69.43	92.90	21.11	24.14	11280494	14145885	6007960	8076284	5272534	6069601	46.74%	42.91%
13	MADHYA PRADESH	12.22	17.97	36.17	53.70	3.28	4.55	8271327	12314316	6657387	10045259	1613940	2269057	19.51%	18.43%
14	MAHARASHTRA	18.78	24.62	42.29	52.36	7.16	10.76	16710473	22127845	12444035	15684270	4266438	6443575	25.53%	29.12%
15	NORTH-EAST- I	16.56	23.53	55.21	79.62	4.63	6.08	1144851	1641815	900271	1318117	244580	323698	21.36%	19.72%
16	NORTH-EAST- II	7.41	8.27	22.58	26.17	2.89	2.89	420114	473005	293835	345787	126279	127218	30.06%	26.90%
17	ORISSA	9.51	13.17	37.26	49.30	4.20	6.20	3737186	5215904	2350757	3159030	1386429	2056874	37.10%	39.43%
18	PUNJAB	37.05	44.69	69.77	80.24	16.16	21.59	10221359	12460490	7500876	8810863	2720483	3649627	26.62%	29.29%
19	RAJASTHAN	15.49	21.56	43.65	55.72	6.75	10.92	9838405	13872300	6569035	8512227	3269370	5360073	33.23%	38.64%
20	TAMIL NADU	22.55	32.06	38.94	53.49	9.65	14.65	13287420	18964173	10106287	14183592	3181133	4780581	23.94%	25.21%
21	UTTARANCHAL	9.50	10.40	23.19	24.61	4.36	5.02	890727	987076	593300	641723	297427	345353	33.39%	34.99%
22	UTTAR PRADESH - [E]	10.77	14.75	38.79	48.61	3.10	5.43	11788942	16390392	8732818	10892239	3056124	5498153	25.92%	33.54%
23	UTTAR PRADESH - [W]	#	#	#	#	#	#	8354889	11583611	6856970	8997205	1497919	2586406	#	#
24	WEST BENGAL	8.63	12.51	33.00	50.25	4.69	6.39	6251376	9123087	3329738	5116586	2921628	4008501	46.74%	43.93%
25	KOLKATTA	45.09	57.39	-	-	-	-	6474333	8313666	5912215	7661367	562118	652299	8.68%	7.85%
26	CHENNAI	75.46	96.36	-	-	-	-	5956506	7768615	5832959	7648745	123547	119870	2.07%	1.54%
27	DELHI	86.89	105.32	-	-	-	-	14356500	17774267	14356500	17774267	0	0	0.00%	0.00%
28	MUMBAI	64.99	78.83	-	-	-	-	12403398	15317445	12403398	15317319	0	126	0.00%	0.00%
	ALL- INDIA	18.22	23.89	48.10	61.25	5.89	8.35	205866771	272871406	158767257	205540103	47099514	67331303	22.88%	24.68%

*Including Public& Pvt. DELs, CMPs and WLL (Fixed & Mobile). # Teledensity is calculated for UP(E) & UP(W) jointly due to non availability of separate population data for UP(E&W).

Table-3

Number of Telephones as on 31st March 2007 & 31st December2007

Sl.No.	Circles/States	Wireline Phones = Fixed DELs						Wireless Phones(GSM+CDMA)						TOTAL TELEPHONES	
		TOTAL		PSUs' Operators		Private Operators		TOTAL		PSUs		Private Operators			
		2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07	2007	December'07
1	ANDAMAN & NICOBAR	31623	25942	31623	25942	*	0	44083	51206	44083	51206	*	0	75706	77148
2	ANDHRA PRADESH	2970278	2752321	2774347	2520190	195931	232131	13045794	18326637	2003651	2372530	11042143	15954107	16016072	21078958
3	ASSAM	502388	436132	502388	436132	0	0	2331898	3180524	664724	677337	1667174	2503187	2834286	3616656
4	BIHAR	986764	967498	985928	963855	836	3643	5773370	9229059	914527	1066220	4858843	8162839	6760134	10196557
5	CHHATTISGARH	275884	316015	275884	256077	*	59938	467294	595501	467294	595501	*	0	743178	911516
6	GUJARAT	2445800	2296073	2342995	2158394	102805	137679	11163757	15308175	1256101	1940716	9907656	13367459	13609557	17604248
7	HARYANA	1025197	943276	1001326	914285	23871	28991	4470606	5818652	1056327	1315616	3414279	4503036	5495803	6761928
8	HIMACHAL PRADESH	457069	427434	456570	425025	499	2409	1408876	2050334	554981	586430	853895	1463904	1865945	2477768
9	JAMMU & KASHMIR	295460	266779	295459	266778	1	1	1491315	1965033	863102	890986	628213	1074047	1786775	2231812
10	JHARKHAND	449270	444572	449270	444572	*	0	571217	582851	571217	582851	*	0	1020487	1027423
11	KARNATAKA	2888017	2825258	2477093	2327243	410924	498015	11382511	15586242	1975742	1966782	9406769	13619460	14270528	18411500
12	KERALA	3678513	3662985	3630567	3589376	47946	73609	7601981	10482900	2347668	2573346	5254313	7909554	11280494	14145885
13	MADHYA PRADESH	1589001	1461858	1282356	1200931	306645	260927	6682326	10852458	1137020	1454238	5545306	9398220	8271327	12314316
14	MAHARASHTRA	3921577	3665189	3804637	3505881	116940	159308	12788896	18462656	2615688	3097802	10173208	15364854	16710473	22127845
15	NORTH-EAST- I	210934	207484	210934	207484	0	0	933917	1434331	209944	259340	723973	1174991	1144851	1641815
16	NORTH-EAST- II	152513	130399	152513	130399	*	0	267601	342606	267601	342606	*	0	420114	473005
17	ORISSA	773925	767752	772196	764133	1729	3619	2963261	4448152	889841	1077661	2073420	3370491	3737186	5215904
18	PUNJAB	1857052	1724014	1588469	1466800	268583	257514	8364307	10736476	1224433	1726351	7139874	9010125	10221359	12460490
19	RAJASTHAN	1827071	1758995	1656183	1570736	170888	188259	8011334	12113305	2281544	2452653	5729790	9660652	9838405	13872300
20	TAMIL NADU	2733866	2538509	2583495	2376410	150371	162099	10553554	16425664	2411785	2572274	8141769	13853390	13287420	18964173
21	UTTARANCHAL	345845	328995	345845	328995	*	0	544882	658081	544882	658081	*	0	890727	987076
22	UTTAR PRADESH - [E]	1546160	1501661	1508806	1449864	37354	51797	10242782	14888731	3052533	4284529	7190247	10604202	11788942	16390392
23	UTTAR PRADESH - [W]	1035766	965964	1016239	937637	19527	28327	7319123	10617647	978548	1243526	6340575	9374121	8354889	11583611
24	WEST BENGAL	1211265	1137147	1209679	1133835	1586	3312	5040111	7987940	1174326	1227281	3865785	6760659	6251376	9125087
25	KOLKATTA	1443347	1421032	1374310	1323048	69037	97984	5030986	6892634	654041	873187	4376945	6019447	6474333	8313666
26	CHENNAI	1319382	1346893	1009492	987497	309890	359396	4637124	6421722	823316	910049	3813808	5511673	5956506	7768615
27	DELHI	2273217	2370302	1583209	1553250	690008	817052	12083283	15403965	1415616	1463585	10667667	13940380	14356500	17774267
28	MUMBAI	2525932	2559388	2138728	2041274	387204	518114	9877466	12758057	1529419	1748807	8348047	11009250	12403398	15317445
	ALL- INDIA	40773116	39249867	37460541	35305743	3312575	3944124	165093655	233621539	33929956	40011491	131163699	193610048	205866771	272871406

*Incuded in the respective circle.

Table - 4

Number of Villages with Direct Access to Telecom Facilities

Sl. No.	Circles/States	No. of Villages	No. of Villages (Rev.w.e.f.OCT.07)	Villages covered with VPTs as on					PCOs as on (Local+STD+Highway)	
				Public		Private*	TOTAL VPTs			
				31.03.2007	31.12.2007	31.03.2007	31.03.2007	31.12.2007	31.03.2007	31.12.2007
1	Andaman & Nicobar	201	501	198	179	0	198	179	620	1112
2	Andhra Pradesh	29460	26613	23936	21084	1408	25344	22492	271327	250684
3	Assam	24685	25124	24265	22163	0	24265	22163	33083	34013
4	Bihar	41077	39032	38475	36620	0	38475	36620	68899	66370
5	Chhattisgarh	19720	19744	17315	17161	0	17315	17161	9458	9220
6	Gujarat	18125	18159	14488	14974	4114	18602	19088	124948	109541
7	Haryana	6850	6764	6811	6369	0	6811	6369	30411	27006
8	Himachal Pradesh	16925	17495	16814	15934	0	16814	15934	12048	11874
9	Jammu & Kashmir	6764	6417	6064	5547	0	6064	5547	16057	14797
10	Jharkhand	31703	29354	27593	26302	0	27593	26302	23521	21122
11	Karnataka	27066	27481	27066	26425	0	27066	26425	262602	252458
12	Kerala	1468	1372	1468	1372	0	1468	1372	125316	128719
13	Madhya Pradesh	51806	52117	49166	49312	611	49777	49923	51772	53588
14	Maharashtra	42467	41442	36691	35189	2643	39334	37832	328100	313868
15	North-East-I	7125	7347	4547	3998	0	4547	3998	8211	9042
16	North-East-II	7020	7340	3916	3757	0	3916	3757	7424	7689
17	Orissa	46989	47529	41268	39038	0	41268	39038	30280	29129
18	Punjab	12687	12301	11808	12000	879	12687	12879	33345	28159
19	Rajasthan	39483	39753	33767	33810	3010	36777	36820	67878	63671
20	Tamil Nadu	17899	13837	16169	13351	0	16169	13351	213567	209116
21	Uttaranchal	15610	15761	13182	12498	0	13182	12498	14338	13043
22	Uttar Pradesh(E)	79792	76993	76006	70457	0	76006	70457	110562	116247
23	Uttar Pradesh(W)	23604	20949	21268	19468	0	21268	19468	48371	43727
24	West Bengal	38337	37365	37306	28869	0	37306	28869	64823	65335
25	Kolkata	437	1040	437	723	0	437	723	59810	58359
26	Chennai	NA	1655	1730	1459	0	1730	1459	88170	82559
27	Delhi	191	0	191	0	0	191	0	91510	82301
28	Mumbai	NA	NA	0	0	0	0	0	168567	160087
	All-India	607491	593485	551945	518059	12665	564610	530724	2365018	2262836

NA = Not Applicable

Table - 5

Number of Employees-Total, Scheduled Caste/Tribe, Ex-servicemen (Abled & Disabled), Women and their %age to respective numbers as on 31st March 2007

Group	No. of Employees DOT	Scheduled Caste	% to Total Employees	Scheduled Tribe	% to Total Employees	Ex-servicemen (Abled)	% to Total Employees	Ex-servicemen (Disabled)	% to Total Employees	Women Employees	% to Total Employees
A	828	122	14.73%	67	8.09%	2	0.24%	0	0.00%	73	8.82%
B	652	65	9.97%	26	3.99%	0	0.00%	0	0.00%	110	16.87%
C	553	110	19.89%	33	5.97%	14	2.53%	0	0.00%	79	14.29%
D	360	127	35.28%	31	8.61%	3	0.83%	0	0.00%	23	6.39%
Total	**2393**	**424**	**17.72%**	**157**	**6.56%**	**19**	**0.79%**	**0**	**0.00%**	**285**	**11.91%**

Table - 6

Number of Disabled Employees as on 31st March 2007

Class	Strength		Difference
	% of Sanctioned	Working	
Blindness of Low Vision	5	4	1
Hearing Impairment	4	1	3
Locomotors Disability or Cerebral Palsy	6	10	-4
Total	15	15	0

*****

V. Graphs and Charts

Figure - 1

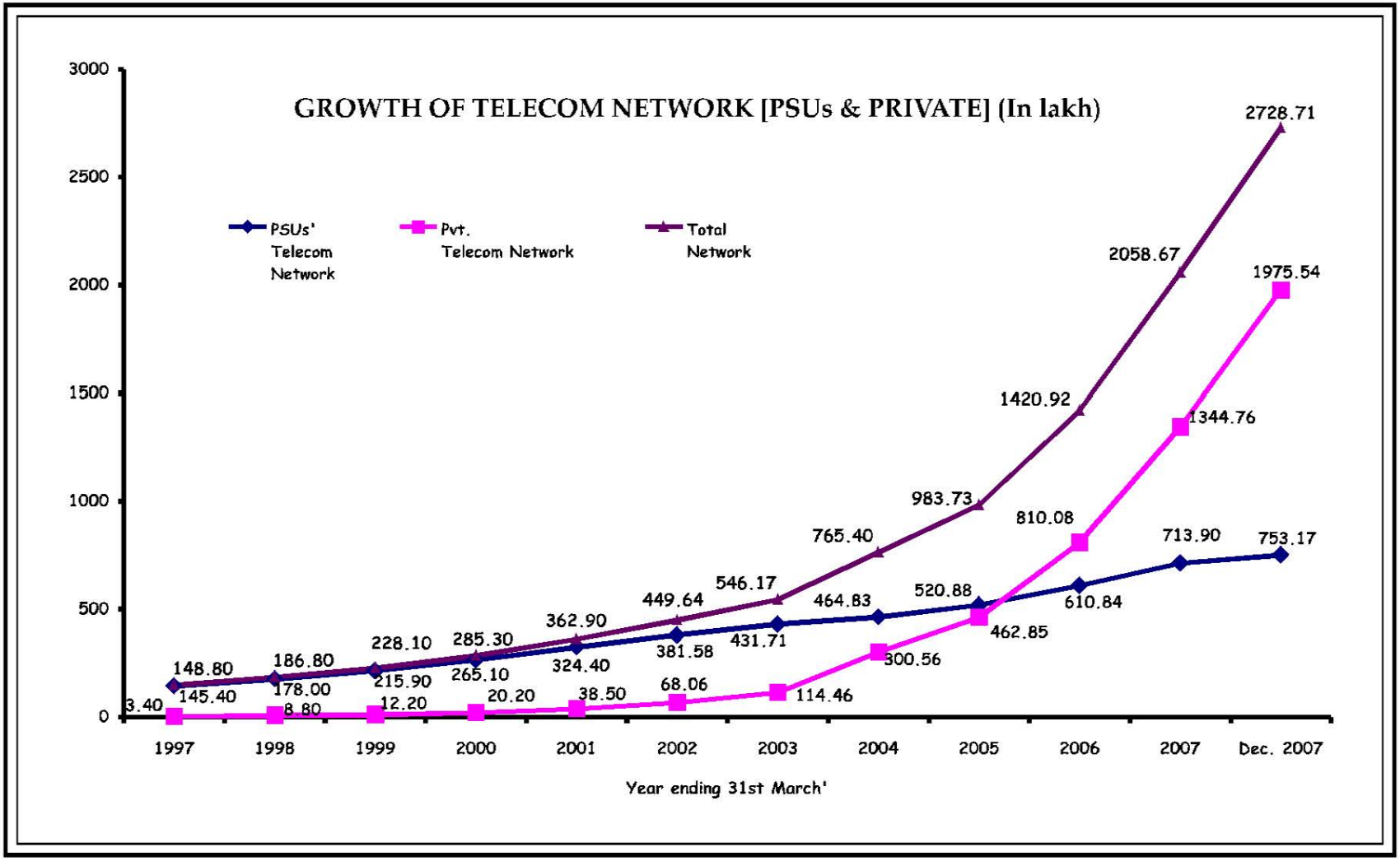

GROWTH OF TELECOM NETWORK [PSUs & PRIVATE] (In lakh)
PSUs' Telecom Network
Pvt. Telecom Network
Total Network
3000
2500
2000
1500
1000
500
0
148.80
186.80
228.10
285.30
362.90
449.64
546.17
765.40
983.73
1420.92
2058.67
2728.71
3.40
145.40
178.00
215.90
265.10
324.40
381.58
431.71
464.83
520.88
610.84
713.90
753.17
8.80
12.20
20.20
38.50
68.06
114.46
300.56
462.85
810.08
1344.76
1975.54
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Dec. 2007
Year ending 31st March'

Figure - 2

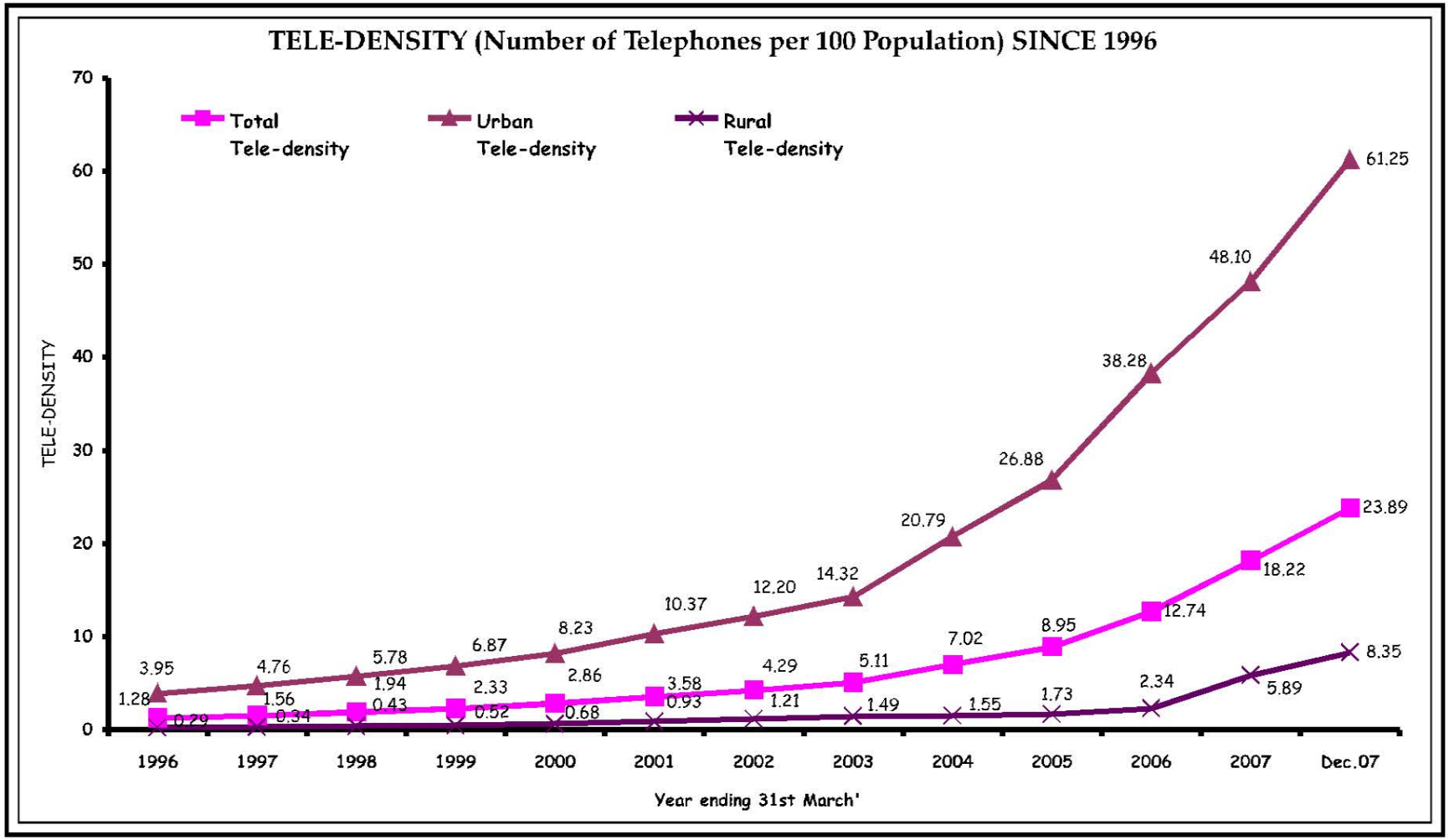

TELE-DENSITY (Number of Telephones per 100 Population) SINCE 1996
Total Tele-density
Urban Tele-density
Rural Tele-density
TELE-DENSITY
Year ending 31st March'
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Dec.07
3.95
4.76
5.78
6.87
8.23
10.37
12.20
14.32
20.79
26.88
38.28
48.10
61.25
1.28
1.56
1.94
2.33
2.86
3.58
4.29
5.11
7.02
8.95
12.74
18.22
23.89
0.29
0.34
0.43
0.52
0.68
0.93
1.21
1.49
1.55
1.73
2.34
5.89
8.35

Figure - 3

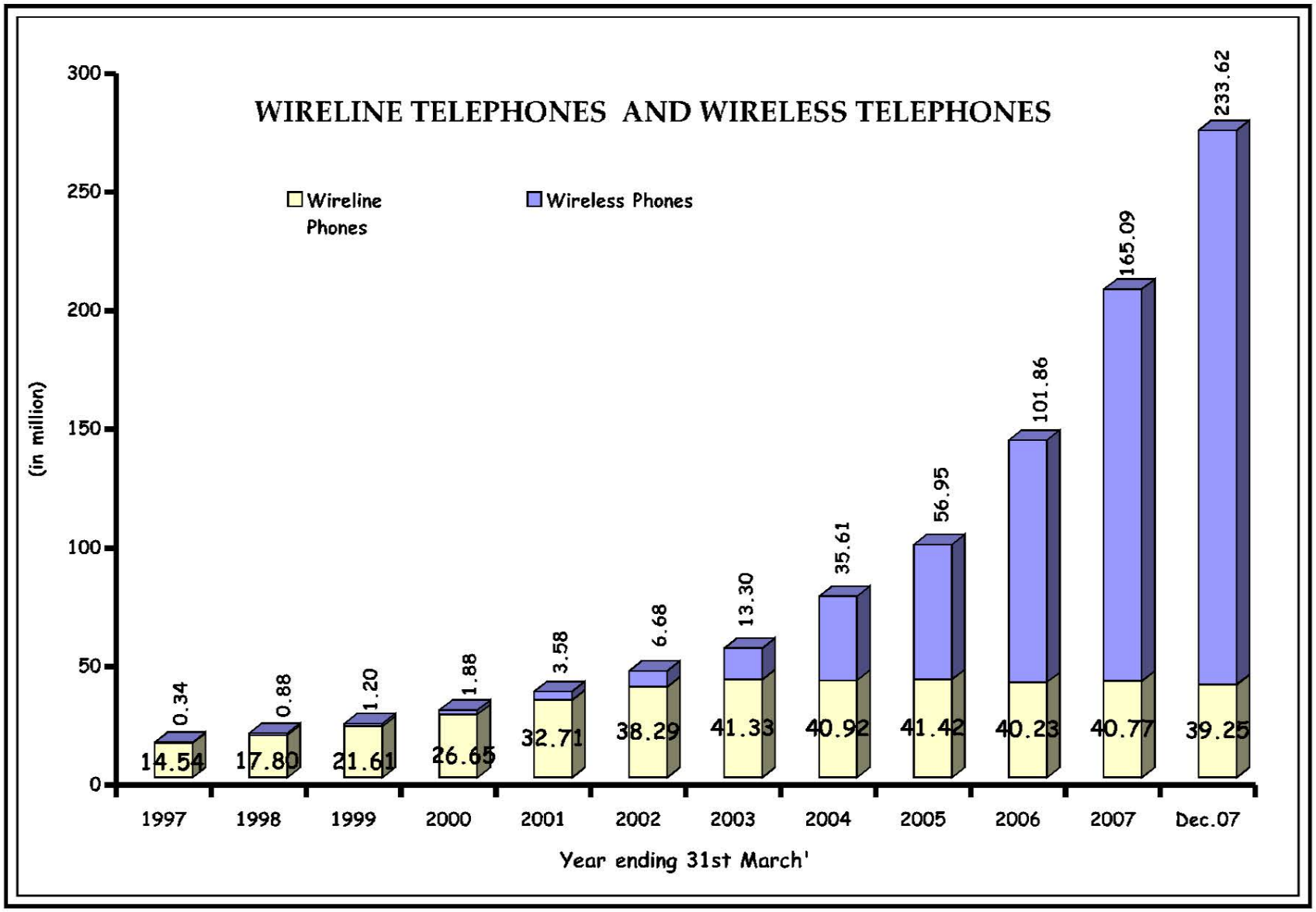

WIRELINE TELEPHONES AND WIRELESS TELEPHONES
Wireline Phones
Wireless Phones
(in million)
300
250
200
150
100
50
0
14.54
0.34
17.80
0.88
21.61
1.20
26.65
1.88
32.71
3.58
38.29
6.68
41.33
13.30
40.92
35.61
41.42
56.95
40.23
101.86
40.77
165.09
39.25
233.62
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Dec.07
Year ending 31st March'

Figure - 4

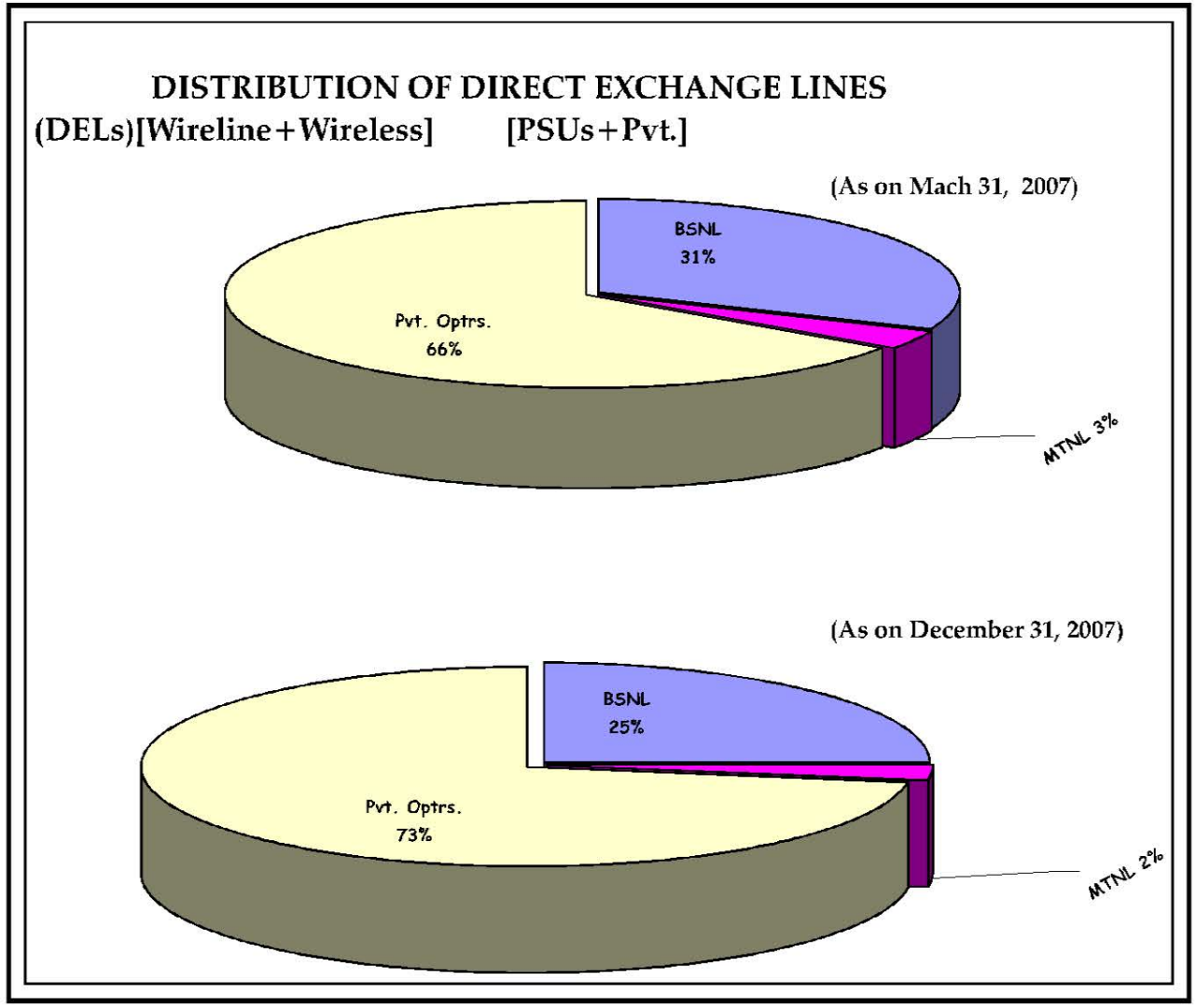

DISTRIBUTION OF DIRECT EXCHANGE LINES
(DELs)[Wireline+Wireless] [PSUs+Pvt.]
(As on Mach 31, 2007)
BSNL
31%
Pvt. Optrs.
66%
MTNL 3%
(As on December 31, 2007)
BSNL
25%
Pvt. Optrs.
73%
MTNL 2%

Figure - 5

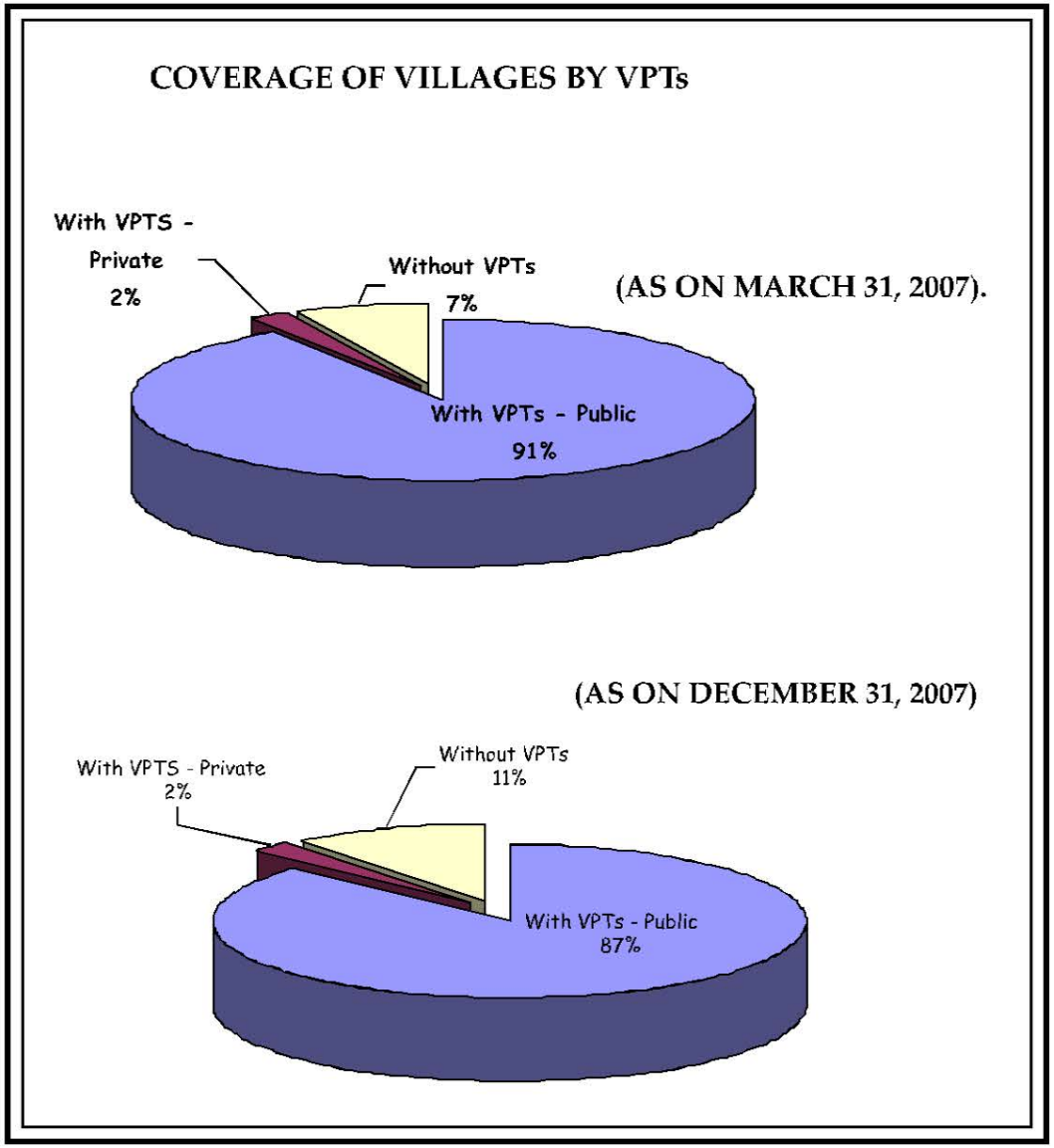
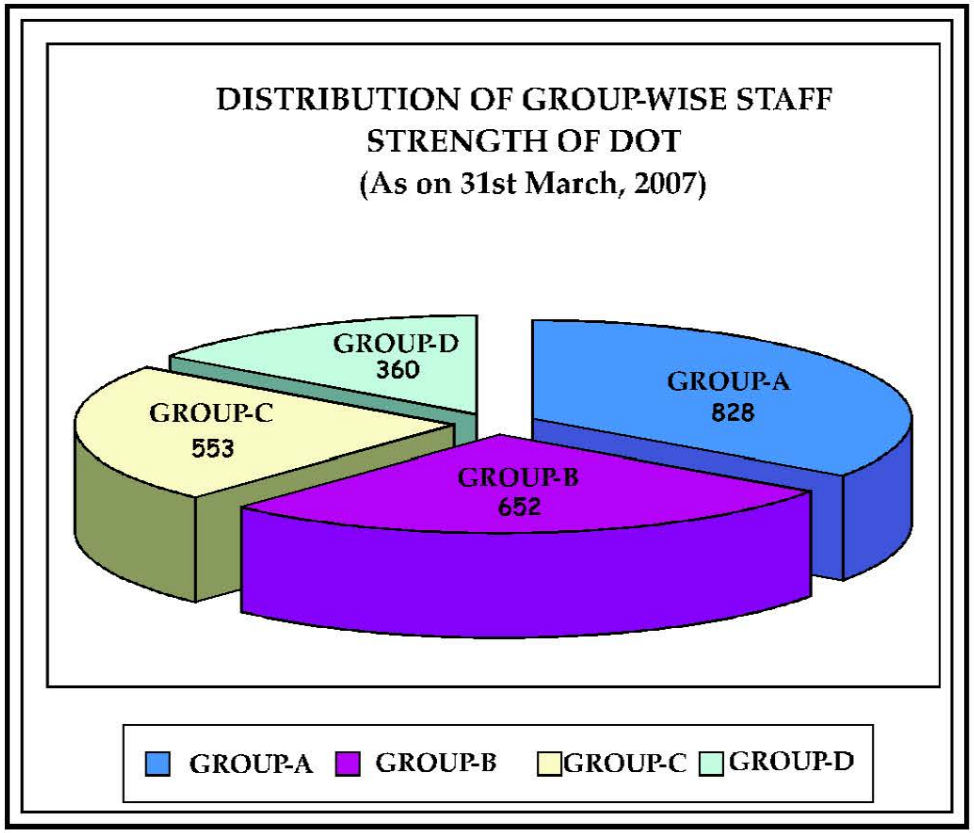

COVERAGE OF VILLAGES BY VPTs
With VPTS - Private 2%
Without VPTs 7%
With VPTs - Public 91%
(AS ON MARCH 31, 2007).
(AS ON DECEMBER 31, 2007)
With VPTS - Private 2%
Without VPTs 11%
With VPTs - Public 87%

Figure - 6


DISTRIBUTION OF GROUP-WISE STAFF STRENGTH OF DOT
(As on 31st March, 2007)
GROUP-D
360
GROUP-A
828
GROUP-C
553
GROUP-B
652
GROUP-A
GROUP-B
GROUP-C
GROUP-D

*****

ACRONYMS

ACC	Accounts Calling Card
ADC	Access Deficit Charge
ADSL	Asymmetrical Digital Subscriber Line
ALTTC	Advanced Level Telecom Training Centre
APT	Asia Pacific Telecommunications
ATM	Asynchronous Transfer Mode
BRBRAITT	Bharat Ratna Bhim Rao Ambedkar Institute of Telecom Training
CACT	Component Approval Centre for Telecom
CAD	Computer Aided Design
C-DOT	Centre for Development of Telematics
CDMA	Code Division Multiple Access
CIDA	Canadian International Development Agency
CLIP	Callers Line Identification Protocol
CMPs	Cellular Mobile Phones
COMAC	Centralised Operaton & Maintenance Centre
CSMS	Customer Service Management System
DCC	Development Coordination Committee
DCME	Digital Circuit Multiplication Equipment
DECT	Digital Enhanced Cordless Telephone
DIAS	Direct Internet Access System
DLC	Digital Loop Carrier
DWDM	Dense Wavelength Division Multiplexing
EMTS	Express Money Transfer Service
FAS	Fibre Access System
FDMA	Frequency Division Multiple Access
FRS	Fault Repair Service
GMPCS	Global Mobile Personal Communication by Satellite
GPSS	Gateway Packet Switching System
GRs	Generic Requirements
HECS	High Erlang Capacity Switch
HSDL	High bit rate Digital Subscriberline
IFRB	International Frequency Regulation Board
ILD	International Long Distance
IMRB	Indian Marketing Research Bureau

IN	Intelligent Network
INSAT	Indian National Satellite
IRs	Interface Requirements
ISDN	Intigrated Services Digital Network
ISP	Internet Service Provider
ITU	International Telecommunications Union
IUC	Interconnection Usage Charge
IVRS	Interactive Voice Response System
LMDS	Local Multi-Point Distribution System
LOI	Letter of Intent
MCIBS	Microprocessor Controlled Intelligent Building Systems
MCPC	Multi Channel Per Carrier
MLLN	Managed Leased Line Network
MMS	Multimedia Messaging Service
MPLS	Multi Protocol Label Switching
MSS	Mobile Satellite System
MTL	Millennium Telecom Limited
MUX	Multiplexer
NIB	National Internet Backbone
NLDS	National Long Distance Service
NTP	New Telecom Policy
NYSF	New York Stock Exchange
OFC	Optical Fiber Cable
OLTE	Optical Line Terminating Equipment
QTS	Quality of Telephone Service
QOS	Quality of Service
PCB	Printed Circuit Board
PCO	Public Call Office
PCS	Personal Communication System
PMRTS	Public Mobile Radio Trunk Service
POI	Point of Interconnection
POT	Plain Old Telephone
PRS	Premium Rate Service
PSTN	Public Switching Telecom Network
RABMN	Remote Area Business Message Network
RAN	Radio Access Network
RTTC	Regional Telecom Training Centre

SAS	System of Accounting Separation
SBM	Signal Base Module
SDCA	Short Distance Charging Area
SDH	Synchronous Digital Hierarchy
SIM	Subscribers Identification Module
SSA	Secondary Switching Area
STM	Synchronous Transport Module
TCP	Transmission Connection Protocol
TDMA	Time Division Multiple Access
TDSAT	Telecom Dispute Settlement Appellate Tribunal
TRAI	Telecom Regulatory Authority of India
TSP	Tribal Sub Plan
TTL	Telecom Testing Laboratory
TTO	Telecommunications Tariff Order
UHF	Ultra High Frequency
UMS	Unified Messaging Service
USF	Universal Service Fund
USO	Universal Service Obligation
UTL	United Telecom Limited
VCC	Virtual Calling Cord
VMS	Voice Mail Service
VPN	Virtual Private Network
VPT	Village Public Telephone
VRLA	Value Regulated Lead Acid
VSAT	Very Small Aperture Terminal
WLL	Wireless in Local Loop
WPC	Wireless Planning & Coordination
WPHS	Web Page Hosting Service
WSHS	Web Server Hosting Service

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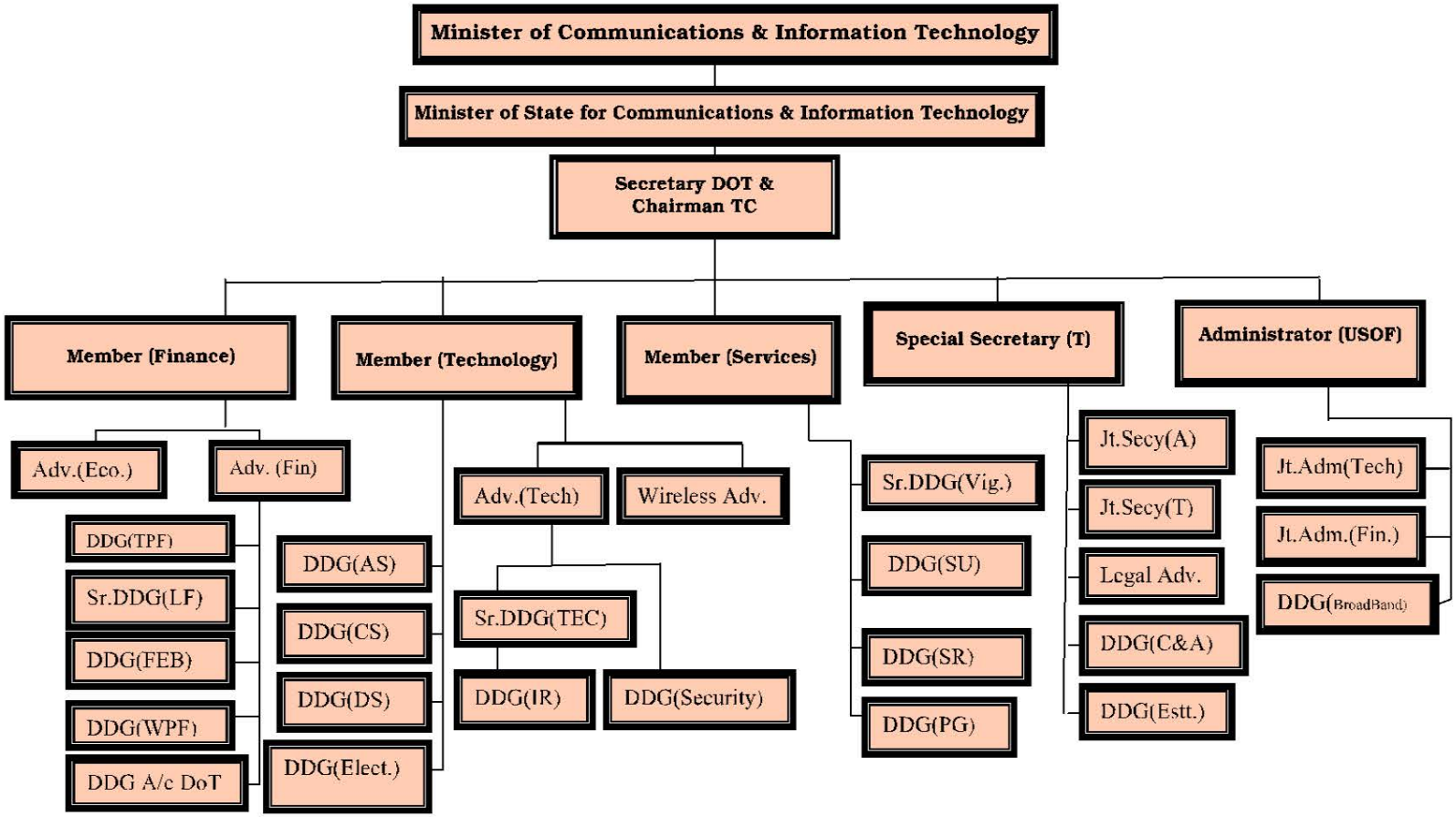
Department of Telecommunications



LEGEND:

TPF: Tariff Public Enterprises Finance
AS: Value Access Section
WPF: Wireless Planning Finance
Eco: Economic
A: Administration

TEC: Telecom Engineering Centre
CS: Carrier Services
DS: Data Section
Prod.: Production

LF: Licensing Finance
SR: Staff Relations
IR: International Relations
SU: Service Unit
JS : Joint Secretary

Estt:Establishment
PG: Public Grievances
LA:Legal Adviser
T: Telecom
Fin : Finance

FEB: Finance, Establishment & Budget
VIG: Vigilance
Elect.: Electrical
DDG : Dy. Director General
USOF : Universal Service Obligation Fund