Annual Report
2008 - 2009

सत्यमेव जयते

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

ANNUAL REPORT
2008-09

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I. Indian Telecom Sector: An Overview

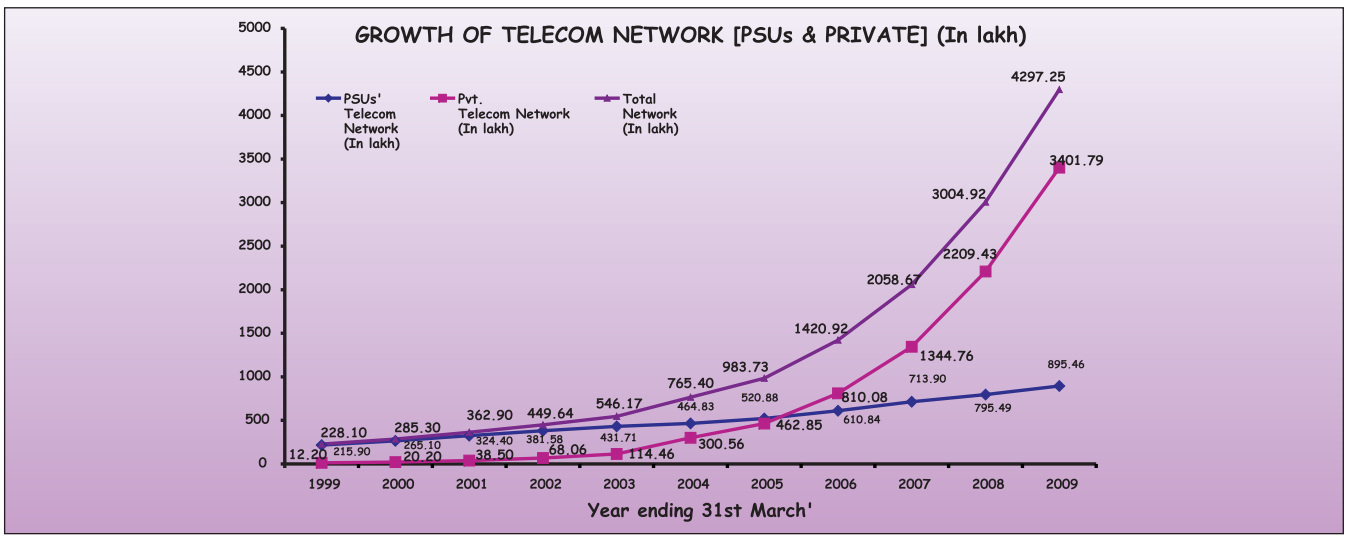
The telecom services have been recognized the world-over as an important tool for socio-economic development of a nation. Telecommunication is one of the prime support services needed for rapid growth and modernization of various sectors of the economy. It has become especially important in recent years because of enormous growth of information technology and its significant potential for the impact on the rest of the economy.

Telecommunications is one of the few sectors in India, which has witnessed the most fundamental structural and institutional reforms since 1991. Considering the great potential for the growth of telephone demand with the accelerated growth of economic activities, the Government of India announced the National Telecom Policy in 1994 and the New Telecom Policy in 1999. The National Telecom Policy provides for private sector participation to supplement the efforts of DoT in basic telephone services. The opening up of the basic services provided a big opportunity for private & foreign investors. More policy initiatives included Addendum to NTP -1999, Broadband Policy 2004, and Amendment to Broadband Policy 2004.

The entire sector is now open to unrestricted competition in all. The opening of the sector has not only led to rapid growth but also helped a great deal towards maximization of consumer benefits. The tariffs have been falling continuously across the board as a result of healthy and unrestricted competition and India today has one of the lowest tariffs in the world. Besides, as a result of the various measures and initiatives taken by the Government, India is now fast emerging as one of the leading telecom nations.

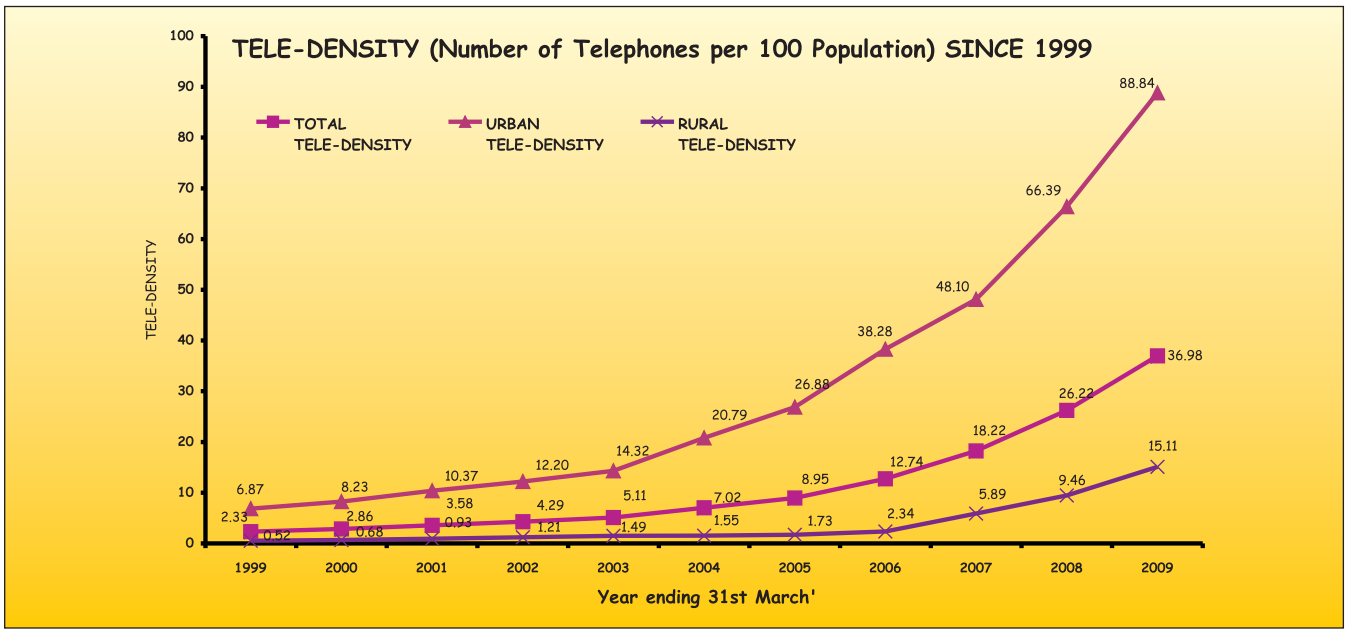
The reforms process in the telecom sector is still on, aiming to remove the balance hurdles and limitations.

With a strong population of over 1.1 Billion, India has become one of the most dynamic and promising. Telecom markets of the world. In recent times, the country has emerged as one of the fastest growing telecom markets in the world. It has third largest telecom network and the second largest wireless network in the world.



NETWORK EXPANSION

- The total number of telephones has reached 4297.25 lakh as on March 31, 2009 as compared to 3004.92 lakh as on March 31, 2008.
- While 1292.33 lakh connections were added during the twelve months of 2008-09, about 108 lakh 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 26.22% in March 2008 to 36.98% in March 2009.
- Rural teledensity has shown a noticeable improvement in 2009.

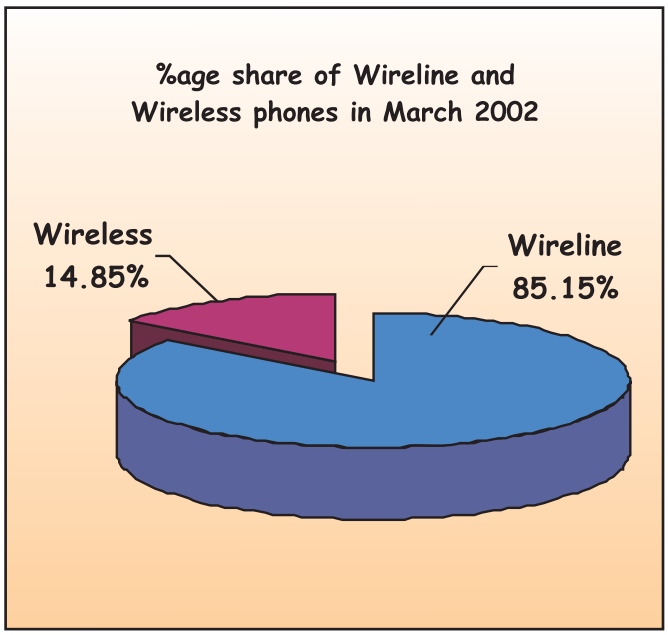


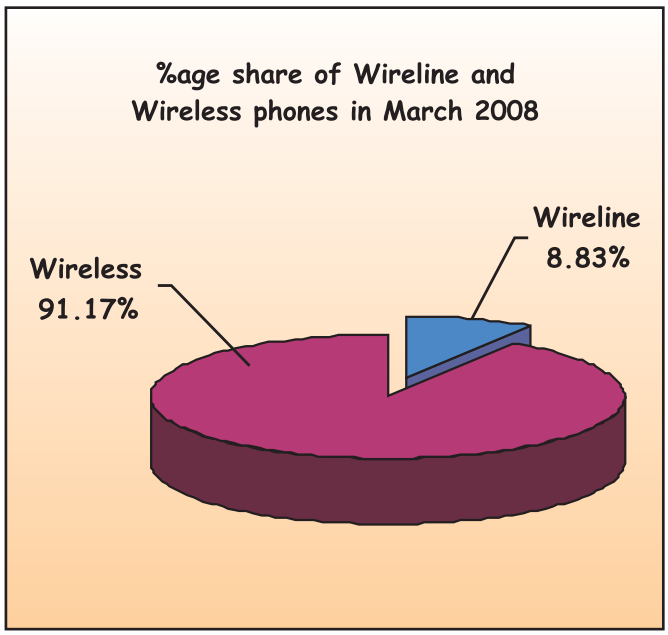
Note. Wireless phones were not included in rural phones before March 2007

STRUCTURAL COMPOSITION

➢ Wireline vs. Wireless

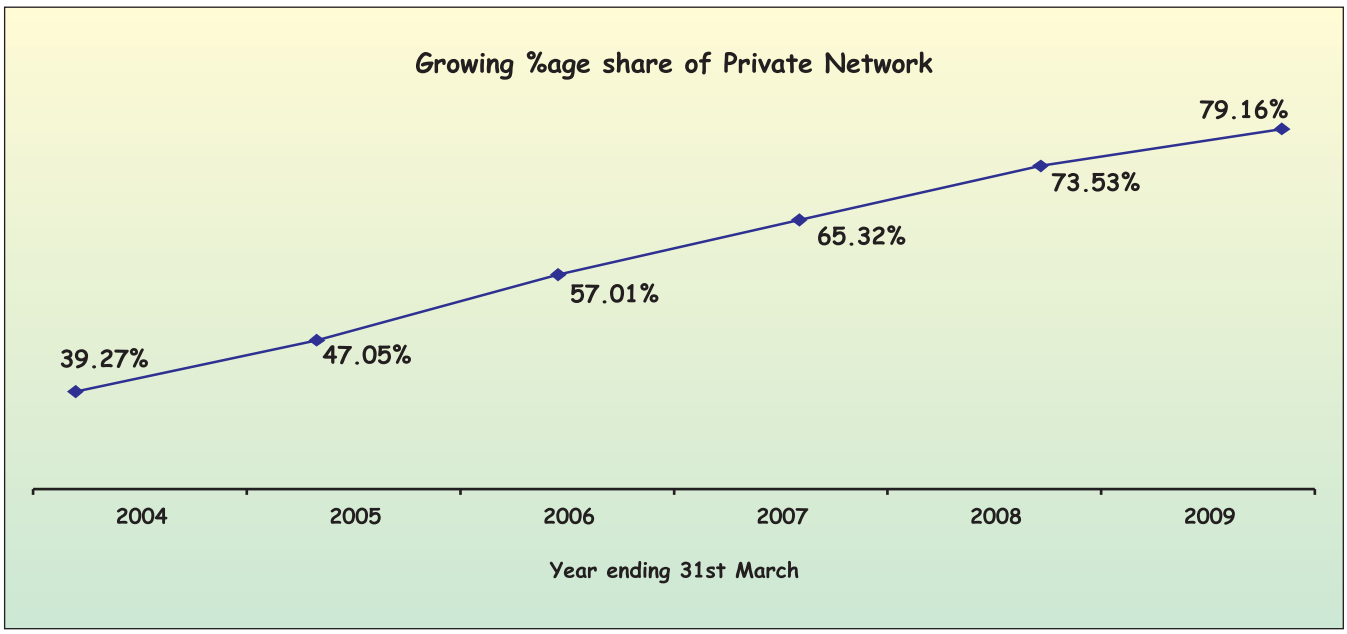
- The structure and composition of telecom growth has undergone a substantial change in terms of Wireless vs. Wireline phones and public-private participation. The growth of wireless services has been phenomenal, with wireless subscribers growing at a compound annual growth rate (CAGR) of 75.7% per annum 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 379.65 lakh & 3917.61 lakh respectively in March 2009. The share of wireless phones therefore, has increased from 14.85% in March 2002 to 91.17% in March 2009.





➢ 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 79.16% in March 2009* from 39.27% in 2004.
- The private sector, however, is mainly active in the wireless segment while wireline accounts for only about 1.17%.
- Private sector has been growing very fast. It grew at a rate of 79.16% in 2009 as against public sector that grew at the rate of 20.84%.



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 March 31, 2009, there are 1235.13 lakh phones in rural areas with a teledensity of 15.11% 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, 57181 VPTs have been provided till March 2009.

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. In the second phase of the scheme, it is proposed to cover the other uncovered rural and remote areas of the country through mobile services by setting up 11000 additional towers.

Today, wireless phones have transformed the urban economy and helped in increasing urban teledensity significantly. With the introduction of wireless phones in the rural areas, rural teledensity is also steadily increasing, which is expected to push up growth in rural areas and reduce rural-urban divide. Through the above efforts the Eleventh Plan target of achieving rural teledensity of 25% by means of 200 million rural connections, seems feasible.

BROADBAND

It is necessary to increase the broadband connectivity for the knowledge-based society to grow quickly and for reaping the consequent economic opportunities. Several policies have been announced and implemented to promote broadband in the country. As a result of these measures the broadband subscribers grew from a meager 0.18 million as on March 2005 to about 6.22 million, upto March 2009. It is also envisaged that internet and broad-band subscribers will increase to 40 million and 20 million, respectively, by 2010.

With the aim to provide e-governance and data services to the rural masses, a proposal is being considered to provide support of broadband connectivity in rural and remote areas of the country in a phased manner. Under this scheme, 5000 blocks shall be connected by wireless broadband and villages coming within a radius of 10 kms. of the taluk/block headquarters shall be covered by such connectivity.

Hon'ble Prime Minister Dr. Manmohan Singh inaugurating "India Telecom 2008" at New Delhi

Shri A. Raja, Hon'ble Minister of Communications & IT inaugurates India Telecom 2008 exhibition on December 11, 2008 at New Delhi

Dr. Manmohan Singh, Hon'ble Prime Minister, launches India's first 3G mobile services of MTNL on December 11, 2008 at New Delhi

Hon'ble Prime Minister Dr. Manmohan Singh addressing the delegates at "India Telecom 2008" at New Delhi

To achieve the stipulated target, the government has issued guidelines for Broadband Wireless Access (BWA) Services. Introduction of BWA services will enhance the penetration as well as growth of broadband subscribers.

MANUFACTURING

Indian telecom industry manufactures a complete range of telecom equipment using state of the art technologies designed specifically to match the diverse terrain and climatic conditions of the country. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecom, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. The last four years saw many renowned telecom companies setting up their manufacturing base in India. The total FDI in this sector has been more than US$2 billion. With the Government initiatives, leading world majors in telecom equipments, like Nokia, Motorola, Sony Ericsson, Samsung, Flextronics, LG Electronics, etc. have already set up their mobile phone manufacturing units and have started their production meeting more than 50% demand within the country and even exporting also. Nokia-Siemens Network, Ericsson and Tejas Networks etc have setup their manufacturing units for complete range of Wireless equipments including BTS and complete transmission equipment within the country. With a view to promote and develop exports of the country, the Government has already setup Telecom Equipment and Services Export Promotion Council.

During 2008-09, production of telecom equipment is expected to increase from Rs.412,700 million (2007-08) to Rs. 518,000 million. During 2007-08, highest increase has been recorded in wireless equipment manufacturing including cellular mobile phones where the production has gone up from Rs.105,450 million in 2006-07 to Rs. 286,000 million in 2007-08, recording a growth of 171%.

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 huge funds that are required for rapid network expansion. The FDI policy provides an investor-friendly environment for the growth of the telecom sector. The policy of the Government of India is to strive to maximize the developmental impact and spin-offs of FDI. At present, 74% to 100% FDI is permitted for various telecom services. The total FDI equity inflows in telecom sector have been USD 2447 million during 2008-09 (April-February 2008-09).

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 2008-09 to

transform the telecom sector and to extend the scope, availability and reach of telecom services in India. These inter-alia, included recommendations on permitting New Entity for Allocation of 3G Spectrum , foreign investment limits for broadcasting sector, 'Allocation and Pricing for 2.3-2.4 GHz, 2.5-2.69 GHz bands & 3.3-3.6 GHz bands', spectrum Usage charges and one time spectrum enhancement charges, restructuring of Cable TV Services ,mobile Virtual Network Operator (MVNO), "Policy Guidelines and Operational issues for Television Audience Measurement/Television Rating Points (TRPs)" ,Issues related to Internet Telephony provision of Calling Cards by National and International Long Distance Operators, Terms and Conditions for Publication of Integrated Telephone Directory for Fixed Line Telephones and Recommendations on "Terms and conditions of Licence for the National Integrated Directory Enquiry Service (NIDQS).

Besides the above recommendations, TRAI made recommendations specific to protection of consumer's interest and those targeted at improving quality of service. These included issue of a Tariff Order and a Direction mandating several regulatory measures to improve transparency in tariff offers in access service. Besides, the Authority also initiated a programme of holding regional workshops aimed at generating awareness amongst the consumer organizations about various initiatives taken to protect consumer interests.

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 has been established in a Public-Private Partnership (PPP) mode with all stake holders onboard. Apart from application oriented research, the Centers are designed to assist and offer training to both high level decision makers of telecommunication 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 telecommunication 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 8.06 million at the end of the fourth quarter of 2008-09. The company provided broadband connections to 695500 customers and internet connections to 1428626 customers during first three quarters 2008-09. 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 eight years, it has become the largest public sector service provider in the country serving 81.49 million subscribers including 52.14 million wireless customers in March 2009. Rural telephony is one of the focus areas of BSNL. It has provided Village Public Telephones (VPTs) in 5.49 lakh villages and has 292.04 lakh Direct Exchange Lines (DELs) in the rural areas as on March 31, 2009. BSNL has introduced broadband services from January 2005 and has provided 35.57 lakh broadband connections till March 2009.

MAJOR POLICY INITIATIVES

Given the central aim of NTP 99 to ensure rapid expansion of tele-density and the objective "to transform in a time bound manner, the telecommunications sector to a greater competitive environment in both urban and rural areas providing equal opportunities and level playing field for all players", the Department has taken various Policy Initiatives, as below which have helped the growth of the Telecom Sector, increased competition to benefit the customers to ensure affordable & quality service:

- Decided that there should be no cap on the number of access provider in any service area.
- Permission of use of dual technology spectrum under the same UAS/CMTS licence were granted to 8 companies including BSNL & MTNL. BSNL & MTNL were exempted from the prescribed fee for such usages.
- The Guidelines for 3G and BWA services were announced on November 12, 2007. Detailed guidelines for a controlled, simultaneous, ascending e-auction process for spectrum for 3G and BWA service were announced on August 1, 2008. The allocation of spectrum for 3G and BWA services will give a boost to the development of telecom sector.
- Revised subscriber based criteria for allocation of GSM and CDMA spectrum were issued on January 17, 2008. Committees have been constituted for Allocation of Spectrum to access services providers and Spectrum Pricing.
- On July 11, 2008, provision of mobile service within 500 meters of international boarder within Indian Territory has been permitted.
- The Government has released new guidelines for 3G spectrum that provide for a reserve price for availing of radio frequency. The guidelines also provides for entry of foreign player.
- Keeping in view the interest of consumers, the department has decided to introduce Mobile Number Portability (MNP). 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.

- FDI Ceilings raised from 49% to 74%. 100% FDI is permitted in the area of telecom equipment manufacturing and provision of IT enabled services.
- With a view 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. The government 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 telecommunication 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.

The government is now looking forward to achieve the target of 600 million telephone subscribers by the end of Eleventh Plan.

Rural telephony continues to be the thrust area of the government. It is recognized that provision of affordable telecom services in rural areas enhances the ability of people to participate in market economy, which, in turn improves their productivity and contributes to their earnings. It is therefore, proposed to achieve rural teledensity of 25% by means of 200 million rural connections at the end of 11th Plan.

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 envisaged that internet and broad-band subscribers will increase to 40 million and 20 million, respectively, by 2010.

The government has a vision to provide telephone connection and broadband facilities on demand across the country and at an affordable price and it thrives to achieve the same.

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II. 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)	Shri R. Ashok	w.e.f. April 7, 2008
Member (Production)	Vacant	w.e.f. January I, 2006
Member (Services)	Shri V.K. Shukla	w.e.f. February 24, 2009
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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III. 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 Telecommunication Union (ITU), its Radio Regulation Board (RRB), Radio Communication Sector (ITU-R), Telecommunication Standardization Sector (ITU-T), Development Sector (ITU-D), International Telecommunication Satellite Organization (INTELSAT), International Mobile Satellite Organization (INMARSAT), Asia Pacific Telecommunication (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).
- ITI 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.

GRANT OF LICENSES

UNIFIED ACCESS SERVICES

- There were 240 Unified Access Service (UAS), 2 Basic Service and 39 Cellular Mobile service (CMTS) Licenses as on March 31, 2009.
- Permission for usage of dual technology spectrum (both CDMA and GSM) under the same CMTS/ UAS Licence have been granted to 8 companies as on March 31, 2009.

Mobile Number Portability (MNP)

Department of Telecom is in the process of introducing Mobile Number Portability (MNP) in India which will allow subscribers to retain their existing telephone number when they switch from one service provider to another or from one technology to another of the same service provider. For the purpose of grant of Licences for MNP service in India, the whole country is divided into 2 MNP zones consisting of 11 service areas each and one licence for MNP service in each MNP zone shall be awarded. Based on Tender dated November 25, 2008 for award of MNP service Licences, following two companies have been short listed for grant of MNP Service licences and letters of Intent for grant of MNP Service Licences

have been issued on March 5, 2009:

i. M/s MNP Interconnection Telecom Solutions India Pvt. Ltd.

ii. M/s Syniverse Technologies (India) Pvt. Ltd.

These companies are likely to sign respective Licence Agreement in April, 2009 and it is expected that within six months thereafter MNP Service shall be available in Metros & Category 'A' service areas. The rest of the country shall be provided MNP service within one year of effective date of MNP Service Licences.

Mobile Virtual Network Operator (MVNO)

The Government has accepted the Recommendations of Telecom Regulatory Authority of India (TRAI) dated August 6, 2008 for introduction of Mobile Virtual Network Operators (MVNOs) Licences in India. The detailed guidelines for grant of MVNO Licence shall be issued by the Department of Telecom shortly.

National Integrated Directory Service (NIDQS)

The Government has accepted the Recommendations of TRAI dated June 19, 2008 regarding introduction of National Integrated Directory Service (NIDQS) Licences in the country. The detailed guidelines for award of NIDQS Licences through open tender shall be issued by DOT shortly.

CARRIER SERVICES

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

- After announcing opening up of ILDS and NLDS for free competition, Government has so far issued 23 ILDS licenses and 26 NLDS licenses (including BSNL) as on March 31, 2009. 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 license 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 licensed telecom service providers. 249 companies have been registered as Infrastructure Provider Category-I as on March 31, 2009.

Voice Mail/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, Unified Messaging Service (UMS). 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 16 licences in 07 cities owned by 10 companies as on March 31, 2009 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 licenses 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 license agreement dated July 14, 2006, the city-wise service area stands changed into circle-wise service area.
- Presently, there are 61 licences in 4 metros and 16 circles owned by 16 companies for providing Public Mobile Radio Trunking 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 licensee is 10% of AGR.

Other Service Providers (OSPs) & Telemarketers

- Registration of call Centres (International and domestic), Network Operation Centres and Vehicle Tracking Systems is being done under OSP category.
- Over 2500 cases have been registered under OSP category.
- Registration under OSP Category and Telemarketing Category has been decentralized from DOT HQ to TERM Cells in 10 circles w.e.f September 1, 2007. Further, w.e.f June I, 2008 the work has been decentralized to all TERM Cells. However, the CS Cell of DOT shall continue to handle the policy issues.

Very Small Aperture Terminal Service (VSAT) Service

- There are 12 licences for Commercial CUG VSAT service as on March 2009. The FDI ceiling has been increased from 49% to 74% for commercial CUG VSAT license. Over 65,000 commercial CUG VSATs are operational as on March 31, 2009.

INTERNET AND BROADBAND SERVICES

- As on March 31, 2009 there were 372 Licencees for Internet Services which includes 96 Category

A Licencees, 128 Category B Licencees and 148 Category C Licencees. Two internet Service Licencee has been permitted to provide IPTV Services. Further, there were 13.65 million internet and about 6.07 million broadband subscribers as on March 31, 2009.

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, V-Sat, Public Mobile Radio Trunked Services (PMRTS), Global Mobile Personal Communications Services (GMPCS) and other value added telecom services

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

ISP (with gateways), end to end bandwidth and Radio Paging Service

FDI upto 74% is permitted subject to licensing and security requirements.
Upto 49% is permitted under automatic route and beyond 49% by FIPB.

Infrastructure Providers providing dark fibre, right of way, duct space, tower(Category-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.

Actual Inflow of FDI in Telecom Sector from August 1991 to August 2008 is Rs. 273,393 Million. Financial year wise break up of FDI since April 2000 is as under:

(Rs. in million)

YEAR	FDI INFLOW	YEAR	FDI INFLOW
2000-01 (April 2000 - March 2001)	7,841.59	2004-05	
2001-02	39,384.61	2005-06	27,759.53
2002-03	9,077.31	2006-07	21,550.77
2003-04	5,139.21	2007-08	51,026.09
2004-05	5,695.38	2008-09 (April-August 2008)	14,568.22
		GRAND TOTAL	**182,042.72**

MANUFACTURING OF TELECOM EQUIPMENT

Indian telecom industry manufacturers a complete range of telecom equipment using state of the art technologies designed specifically to match the diverse terrain and climatic conditions of the country. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecom, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. The last four years saw many renowned telecom companies setting up their manufacturing base in India. The total FDI in this sector has been more than US$ 2 billion. With the Government initiatives, leading world majors in telecom equipments, like Nokia, Motorola, Sony Ericsson, Samsung, Flextronics, LG Electronics, etc. have already set up their mobile phone manufacturing units and have started their production meeting more than 50% demand within the country and even exporting also. Nokia-Siemens Network, Ericsson and Tejas Networks etc have setup their manufacturing units for complete range of Wireless equipments including BTS and complete transmission equipment within the country. With a view to promote and develop exports of the country, the Government has already setup Telecom Equipment and Services Export Promotion Council.

During 2008-09, production of telecom equipment is expected to increase from Rs. 412,700 million (2007-08) to Rs. 518,000 million. During 2007-08, highest increase has been recorded in wireless equipment manufacturing including cellular mobile phones where the production has gone up from Rs. 105,450 million in 2006-07 to Rs. 286,000 million in 2007-08, recording a 171% growth. However, this year expected production from the wireless equipment market including cellular phones is estimated to be Rs. 416,500 million with a growth rate of 46%.

The performance on the wire line equipment production is, however, not very encouraging due to reduced demand from the operators. The wire line equipment production has gone down from Rs. 131,000 million to Rs 117,800 million and is further expected to fall down to Rs. 94,500 million this financial year. Only the silver lining is the production of optical fibre cables which increased from Rs. 4,460 million in 2006-07 to Rs. 5,340 million in 2007-08 and is further expected to increase to Rs. 6,090 million in 2008-09.

Production of Telecom Equipments including export and import during 2007-08 is as under:

Telecom Equipment Production during 2007-08	:	Rs. 412,700 million
Telecom Equipment Production during 2008-09	:	Rs. 518,000 million (projected)
India's Export of telecom items during 2007-08	:	Rs. 81,310 million
India's Import of Telecom items during 2007-08	:	Rs. 390,350 million
India's export of telecom consultancy during 2007-08	:	Rs. 25.5 million
India's export of telecom consultancy during (April 2008 to September 2008)	:	Rs. 16.9 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

- Inter-Ministerial preparatory meetings for the Indo-Sweden, Indo Iran, Indo-Austrilia, Indo-EU, Indo-Kuwait, Democratic Republic of Congo and Indo-croatia were held during 2008-09.

- An official level Mid-Term Review Meeting for the JCM was held in Tehran on 10-11 May, 2008. The Indian delegation comprising of officials from various department/Ministries was led by JS(PAI), MEA. The sub group on Telecommunication and Information Technology had exchange of view on bilateral cooperation.

Indian and Foreign delegates participating in "India Telecom 2008" held at New Delhi

- An Inter-ministerial meeting was held under the chairmanship of the Secretary (Urban Development), Ministry of Urban Development on comprehensive mobility planning and management using Intelligent Transport System(ITS) in New Delhi on July 2, 2008.
- A delegation from Iridium Satellite, LLC of USA visited with the senior management officials Team on August 5, 2008 and given presentation in DOT, New Delhi.
- Telecommunications Consultants India Limited (TCIL) arranged a workshop on ASEAN e.network Project in New Delhi on 25-26 March, 2009.
- An Inter Ministerial Meeting was held on March 12, 2009 on the Year of India in Russia.

Foreign Deputation

- Deputation of DDG (WPF) and DDG (AS-I), DOT for participation of Government nominees in the meeting of Board of Directors of Tata Communication Limited from 1-3 April, 2008 Singapore.
- Deputation of DDG (Security) DOT for attending the Meeting of Study Group-17 regarding Telecommunication security aspects from 07-18 April, 2008 at Geneva, Switzerland.
- Deputation of Director (SM&FLA), TEC, DOT for participating as a speaker and panelist at WiMAX Forum Asia 2008 Congress in Singapore from 08-10 April, 2008.
- Deputation of Member (T), DOT for participating in the meeting of Spectrum requirement for future generation Wireless Technology at Aalborg, Denmark from 8-11th April, 2008.
- Deputation of DDG (C&A), DOT as a member Indian delegation led by Joint Secretary, Department of Commerce for attending Sixth India- Japan Joint Task Force for concluding a Comprehensive Economic Partnership Agreement during 10-14th April, 2008 at Tokyo, Japan.
- Deputation of Indian delegation led by Chairman Telecom Commission with Administrator, USOF, Sr. DDG, TEC and Executive Director, C-DOT of Department of Telecommunications for participation in the WiMAX Forum Member Conference held at Athens, Greece from 28th April-2nd May, 2008.
- Indian delegation led by Member (F) DOT along with Joint Secretary (T), DDG (IR), Director, (B&P), DOT for participation in the ITU Telecom Africa 2008 held in Cairo, Egypt from 12-15th May, 2008.
- Indian delegation led by Hon'ble Minister of Communication &IT, participated in the 16th World Congress on Information Technology (WCIT 2008).
- Deputation of Indian delegation led by Member (S), T.C. & Ex-officio Secretary DOT and Director (P&M), DOT participated in the 2008 Global Event on Measuring the Information Society from 27-29th May, 2008 to Geneva, Switzerland.
- Deputation of Joint Secretary (T), DOT as a member of Indian delegation led by Commerce and Industry Minister to attend JCM, India-Sweden CEO,s Roundtable and Opportunities in India Seminar held during 30th May- 3rd June, 2008 at Stackholm, Sweden.

- Joint Wireless Advisor, DOT and Chief Engineer, Doordarshan, Prasar Bharati were deputed for participating in Joint Task Group 5-6 meeting of ITU-R during May 28-June 03, 2008 at Geneva, Switzerland.
- Deputation of Indian delegation led by Chairman Telecom Commission alongwith Director (T), Department of Telecommunications for participating in the NXTcomm 2008 event held at Las Vegas, USA from 16-19th June, 2008.
- Deputation of Indian delegation led by Administrator USO Fund along with Administrator DOT participated in the WI-Max Forum Global Congress 2008 event at Amsterdam , Netherland from 16th to 18th June 2008.
- Deputation of DDG (IR) DOT as a member of composite team led by Commerce Secretary, Department of Commerce to discuss with the Democratic Republic of Congo authorities, the project proposals made by them and also to discuss areas of India's interest during 23-27th June, 2008 held at Kinshasa, Congo.
- Deputation of DDG (C&A) DOT as a member of composite team led by Special Secretary, Department of Information Technology participate in a meeting of India-US ICT Working Group during 30th June to 3rd July, 2008 held at Washington, USA.
- Deputation of Indian delegation led by Chairman Telecom Commission along with Joint Secretary (T) and Jt Wireless Advisor, WPC of Department of Telecommunications for attending the meeting on Bilateral Cooperation in the field of Telecommunication to held at London, UK from 7-11th July, 2008.
- Sr. DDG (Vig), DOT participated in FTTH Council Asia Pacific 2008 conference at Kuala Lumpur, Malaysia from 22-24th July, 2008.
- Deputation of Joint Secretary (T), DOT for participation in the Short term training programmes on Successful Evaluation & Management of Public Sector Projects from 11th-22nd August, 2008 at Australian national University, Canberra, Australia on DOPT Fellowship.
- Deputation of Joint Wireless Advisor, Mumbai, DOT for participation in 5th Meeting of APT Wireless Forum at Macao, China from 26-29th August, 2008.
- Deputation of Indian Delegation led by Member (T), DOT along with DDG (IR) DOT and Senior Director, DIT for participation in the 9th ASEAN Telecommunications & IT, Senior officers meeting (TELSOM) held in Bali, Indonesia from 25th -29th August 2008.
- Indian delegation led by Secretary DOT with the senior officers of DOT participated in the Mobile World Congress, Ministerial Programme at Barcelona, Spain from 16-18 February, 2009.
- Indian delegation led by DDG (Security), DOT with other officers of DOT had meetings with British Telecom, U.K. during 16-17 March, 2009 regarding setting up of Telecom Testing and Security certification Centre in India.

- Indian delegation led by Additional Secretary, DOT with the senior officers of DOT had meetings with Telecom regulators in U.K. and France during 16-19 March, 2009.
- Indian delegation led by Secretary DOT with the senior officers of DOT participated in the India Telecom Day and APCC meeting held in Hong Kong from 12-13 March, 2009.

Visit of DOT delegation to foreign countries

In addition to above, officials were deputed to foreign countries during the period for participating in ITU-T, ITU-R, ITU-D of ITU and other international and regional organizations like APT, APSCC, UNDP etc.

USE OF OFFICIAL LANGUAGE (HINDI)

ACTIVITIES

During the period 2008-09 (April-December 2008), 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

The official of DOT, its PSUs and attached/Subordinate offices were acquainted with the Official Language Act and Rules and instructions issued thereunder, so that the targets fixed by the Official Language Department in their Annual Programme for the year 2008-09 are 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. Inspections regarding the progressive use of Hindi in seven Attached Offices/PSUs were carried out during the month of August, 2008 in respect of seven Attached Offices/ PSUs. Inspection of all the Sections of the Department is also proposed so as to ensure the compliance of the provisions issued under Official Languages Act and Rules therein.

Training in Hindi Language, Hindi Typewriting and Hindi Stenography

Five (5) Typists and Five (5) Stenographers, who were not trained in Hindi Typing and Stenography, were nominated for training in Hindi typing and Hindi Stenography.

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. During the year, four such meetings were held.

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

During the period Eighteen inspections were undertaken by the Second Sub-Committee of Committee of Parliament on Official Language in respect of Subordinate Offices/Undertakings under the administrative

control of Department of Telecom. The co-ordination work for these inspections all over the country and the follow-up was done.

Celebration of Hindi Pakhwara

Hindi Pakhwara was organized from September 15, 2008 to September 30, 2008 in the Department. 15 competitions relating to the promotion of Official Language in the Department were organized. Separate competitions in Noting /drafting and Essay writing were organised for the Non-Hindi speaking officers/officials. About 200 officers/officials participated in the competitions. Cash Prizes/Certificates were given to the successful participants by Joint Secretary (Admn) in a function organised on November 11, 2008.

Ms. Sudha Shrotria, Joint Secretary (Admn.) with the Officers and Staff of DOT during Hindi Pakhwara-2008

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, 8 Offices under the administrative control of this Department were notified under the Rule 10(4) of the Official Language Rule, 1976 as per the information received from the respective offices.

Translation Work

During the period under report number of documents related to Parliamentary Meetings/Standing Committee/Demand for Grants/Parliamentary Assurances etc. were translated from English to Hindi and vice versa. The Division is also actively involved in the Hindi Translation of the Website of the Department. Apart from routine translation important documents, specified in Section 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.

STAFF 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 2008-09 the following activities were undertaken under the revised schemes:

- Financial Assistance of Rs. 30,000/- (Rupees Thirty thousand only) was provided to the families of deceased employees and Rs 25,000/-to the families in distress.
- Excursion trips to Kullu, Manali, Dharamsala and nearby places was arranged by the department from June 1-6, 2008.
- 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 during 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. 5,90,000/-
Expenditure incurred on Development of SC/ST	:	Rs. 3,13,100/-

GENDER BUDGETING

In the Department of Telecommunications the Gender Budget Cell was constituted in November 2006. After constitution of Gender Budgeting Cell, first meeting was convened on January18, 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 was 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 INFORMATION 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, its PSUs and autonomous bodies and other departments/ministries.

RTI Unit of department of Telecommunications is continuously in the process of strengthening the system of disposal of RTI applications to the satisfaction of the public. Accordingly, during the year, 13 more CPIOs were designated with additional First Appellate Authority in addition to the 48 CPIOs and First Appellate Authority.

During the year 2008-09, 1493 applications were received out of which 524 applications were transferred to other departmental Public Authorities and PSUs. Disposal of applications with information was approximately 99%. There was no denial of information except as per the provisions of the RTI Act.

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 and 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 2008-09, 156794 complaints were received in PG Cell and 153995 cases were disposed.

During the year 2008, Department of Telecommunications has also implemented C-PGRAMS in Public Grievances Cell, which is an integrated applications system based on web technology with an objective of speedy redressal and effective monitoring of grievances received in the Department of Telecom.

IMPLEMENTATION OF RESERVATIONS ORDERS FOR SCHEDULED CASTES / SCHEDULED TRIBES AND OBCS EMPLOYEES

In accordance with the policy of the Government of India, a SCT cell is functioning in the Department of Telecommunications under the supervision of Director (Staff Relations) who has been appointed as Liaison Officer for SC/STs for the Department of Telecommunications. The Liaison Officer provides relevant

guidelines not only to the officers in the Department but also to all Public Sector Undertakings, Autonomous Bodies, Statutory Bodies, Attached and Subordinate Offices under the Department of Telecommunications. During the year 2007-08, instructions were issued to all Public Sector Undertakings, Autonomous Bodies, Statutory Bodies, Attached and Subordinate Offices namely Bharat Sanchar Nigam Limited. Mahanagar Telephone Nigam Limited, Telecommunications Consultants of India Ltd, ITI Ltd, C-DOT, Telecom Dispute Settlement and Appellate Tribunal, Telecom Regulatory Authority Limited and Controller of Communications Accounts to strengthen the monitoring system, ensure creation of SCT Cell and ensure Constitutional safeguards provided to members of SC/STs. In order to ensure that at least a member of Departmental Promotion Committee belongs to SC/ST Community, a system of monitoring at Headquarter level has also been developed. All the organizations under the administrative control of Department of Telecommunications were asked to sponsor Officers dealing with matter relating to SC/ST for training being conducted by ALTTC, Gaziabad.

IMPLEMENTATION OF JUDGEMENTS/ORDERS OF CENTRAL ADMINISTRATIVE TRIBUNAL (CAT)

(31st Report of the Department Related Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice on Demands for Grants 2008-09 and inclusion of a paragraph on the implementation of the judgements/orders of the CAT in Annual Report of the Departments)

During the period 2008-09, 20 judgements/orders of Central Administrative Tribunal were implemented by the Department of telecommunications.

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III. 1 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)

PERFORMANCE DURING 2008-09

Frequency Assignment for Terrestrial Networks

Assignments of frequencies for CDMA networks are made for varities of applications, i.e. CDMA/CorDECT 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.

The frequency in 869-889 MHz paired with 424-844 MHz is considered for assignments of CDMA based networks & 1880-1900 MHz is considered for assignments for CorDECT based networks.

Guidelines of allocation of Spectrum for 3G & Boradband Wireless Access (BWA).

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 Sitting Clearance regarding installation of wireless antennas by Cellular Service providers and other wireless users. SACFA look up cases of unauthorize use/construction of wireless antennas by wireless users and it also takes up the cases of interference/obstruction/flying hazards caused by any wireless user/network. Wireless users have to abide by other local bye-laws regarding structural safety, environment and pollution.

National Frequency Allocation Plan (NFAP-2008)

The current policy document on spectrum viz. the National Frequency Allocation Plan (NFAP-2002) has been revised and National Frequency Allocation Plan-2008 (NFAP-2008) has been evolved in line with the Radio Regulation of the ITU edition 2008 with a view to catering for conflicting demands on the spectrum, including those of new emerging technologies without unduly constraining the existing usages. NFAP-2008 effective from April, 2009 is available on WPC Wing web site.

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.

Satellite coordination with other Administrations

Coordination with other Administrations: Coordination agreement between PAKSAT-1(38E) & PAKSAT-1R (38E) satellite networks of Pakistan and concerned Indian satellite networks were sent through diplomatic channel.

Coordination agreement between INSAT-2(93.5E) satellite network of India PAKSAT-DR (88E) & PAKSAT-ER (101E) satellite networks of Pakistan was communicated to Pakistan Administration through diplomatic channels.

Coordination of NANO-JASMINE, SPRITE-SAT and AS20-1 non GSO satellite networks of Japan with Indian Satellite networks were communicated to Administration of Japan.

Coordination of INSAT-EK48R satellite network of India with Turksat-K3 (50E) satellite network of Turkey was communicated to Administration of Turkey.

Coordination between INSAT-EK 48R satellite network of India and PAKSAT-2 (41E) satellite network of Pakistan was communicated to Administration of Pakistan through Diplomatic channel.

Coordination between MEASAT Satellite networks of Malaysia at 93.5E and INSAT systems at 91.5E have been completed for c and Ku band.

Bilateral Satellite coordination Meetings

Bilateral satellite coordination meeting between Administration of India and Thailand was held during 20-23 January 2009. Many Indian satellite networks were coordinated.

1st Bilateral satellite coordination meeting between Administration of India and Kazakhstan was held during 27-30 January 2009. Many Indian satellite networks were coordinated.

Coordination with ITU

Detailed coordination request i.r. AGRANI-3 (98.5E) satellite network were sent to ITU for its publication in Bureau International Information Circular (BRIFIC)

Additional information for coordination request of INSAT-NAV-A (34E), NAV-A (83E), NAV-A (132E), NAV (131.5) were sent to ITU

Additional information in connection with notification of INSAT EK-83 , INSAT-EK48, INSAT-EK-55 & INSAT-EK 55 (R), INSAT-EK-83R (83E) and INSAT-EK-48R (48E) satellite network was submitted to ITU.

Advanced Publication Information iro TWSAT (N-GSO) satellite network was sent to ITU for its publication in BRIFIC.

Additional information iro INSAT EXC-40.5E, 49E and 59.1E were sent to ITU for processing of these satellite networks under AP-30 B Plan of Radio Regulation.

The additional information for coordination request of ESSEL-1 (98.5E) satellite network was sent to ITU

As a follow-up action of World Radiocommunication Conference 2007 revised technical parameters i.r.o INSAT-EXC40.5E, 49E and 59.1E were sent to ITU. The extension of period of validity of existing satellite networks in the list of AP 30B plan were also submitted to ITU.

Coordination request for additional carriers for INSAT-TTC satellite networks at 48E, 55E, 74E, 83E, 93.5E and 111.5E were submitted to ITU.

Coordination Request i.r.o INSAT KA UHF at GSO locations 74E, 83E, 93.5E were submitted to ITU for Publication in BR IFIC.

The data under Appendix 30B of Radio Regulation in respect of ESSEL-2 (98.5E) and INSATEXK (82.5E) were communicated to ITU for publication in Bureau International Information Circular (BRIFIC).

Advance Publication Information i.r.o MEGHATROPIQUES were sent to ITU.

Advance Publication Information (API) and coordination request for INSAT-TTC (82E) 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 Radiocommunication Bureau (BR) were examined and objections sent to Administrations of China, Iran, Belarus, UK. Luxembourg, Pakistan, U.A.E, Holland, France, Malaysia, Japan, Korea, Indonesia, turkey and Kazakhstan, Cyprus, U.K, Kazakhstan, Germany, Singapore, USA, Canada, PNG, Norway, Russia, Australia, Israel requesting for detailed coordination with a view to protecting Indian Satellite and terrestrial networks.

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

Progress report of INSAT-NAV (34), INSAT-NAV (83), INSAT-NAV (132), INSAT-NAV (GS), INSAT-2M(48E), INSAT-2M(74E), INSAT-2M(83E) and INSAT-2M(93.5E) satellite network.

Advanced publication Information iro INSAT KU55E ,INSAT-MSS-NG (83), INSAT-MSS-NG (93.5) INSAT-MSS-NG (111.5), and AGRANI-3(98.5), INSAT -MSS-NG (48E), INSAT-MSS-NG (55E), INSAT-MSS -NG (74E), INSAT-KU113.5E,-KU117.5E,-KU123.5E, INSAT-G5(48E),-G5(55E), -G5(74E), -G5(82E), -G5(83E),-G5(93.5E), -G5(111.5E) and TWSAT satellite networks were published.

Part-1S Notification of INSAT-2E (74) INSAT-2E (93.5), INSAT-EK 83R, INSAT-EK 93.5R INSAT-EK93.5 (93.5E), INSAT-EK (74E) and INSAT-EK-55 (R).

Entry of INSAT-EK74R, INSAT-EXC 55E, INSAT-2(48E) in Master International Frequency Register (MIFR).

Coordination request iro INSAT-NAV 55(55E), ESSEL-1 (98.5E), INSAT-MSS-NG(48), INSAT-MSS-NG(55), INSAT-MSS-NG(74) and INSAT-2E93.5 satellite networks.

Meetings: 14 meetings were held with Indian satellite operators to discuss the issues relating to coordination of Indian Satellite network.

International Conference and Meetings

National Working Groups (NWGs) corresponding to the ITU-R Study Groups was constituted and placed in WPC website. These National Working Groups shall study the various ITU-R questions by national experts for harmonizing national views and projecting them in various fora of ITU-R.

A National Preparatory Committee for WRC-11(NPC-2011) under the Chairmanship of Joint Wireless Adviser was constituted to harmonise the national views on various agenda item of WRC-11. Its 1st meeting was held on June 10, 2008.

One officer of WPC Wing participated in the meeting of ITU-R Task Group JTG 5-6.

One officer of WPC Wing participated in the meeting of ITU-R Study Group 1 and Its Working Parties.

One officer of WPC Wing participated in the meeting of Working Party of Special Committee on Regulatory and Procedural Matters (SC-WP)

One officer of WPC Wing participated in World Radiocommunication Seminar of ITU.

One officer of WPC Wing participated in the meeting of 2008 session of ITU Council

India submitted modification of ITU-R question 105/6 on "Spectrum requirements for television broadcasting" to ITU for consideration by ITU-R Study Group 6.

India submitted a document on "Results of measurement carried out on Digital Radio Mondiale (DRM) in MW and SW bands" for consideration by ITU-R Study Group 6.

One officer of WPC Wing participated in the 6th India-EU Joint Working Group on Information Society.

Regulations

Following frequency bands have been delicensed and have been declared Licensed Free bands through Gazette Notifications. It gives a great deal of benefit to the people of our country, in the field of Medical

Industry, Oil, Power, Surface Transport Industry, Automobile Industry, Aero mobile Industry and other industries.

Usage of frequency band 50-200 KHz for very low power Radio Frequency devices, or equipments including Radio Frequency Identification devices (RFID) vide GSR No.90(E) dated February 10, 2009.

Usage of frequency band 402-405 MHz for very low power remote cardiac monitoring radio frequency wireless medical devices, medical implant communication systems (MICS) or medical implant telemetry systems (MITS), and other such very low power medical devices or equipments vide GSR No.673(E) dated September 23, 2008.

Usage of frequency band 865-867 MHz for low power Radio Frequency devices, or equipments including Radio Frequency Identification devices (RFID) vide GSR No.564(E) dated July 30, 2008.

The Equipment Type Approval Certificate (in all delicensed frequency bands - License Free bands) has been decentralized to five (5) Regional Licensing Offices RLOs viz. Delhi, Mumbai, Chennai, Kolkata and Shillong, benefiting and more reaching the people of our country at Regional level.

Permitting usage of Satellite communication system based SATCOM equipment on-board Aircrafts benefiting the Aeromobile Industry.

Automation of Spectrum Management & augmentation Monitoring System

The project 'Design, Supply, Installation & Commissioning of "National Radio Spectrum Management & Monitoring System (NRSMMS)" is being implemented by the WPC Wing. Under the project, spectrum management and monitoring functions will be automated with a view to making these activities effective and efficient. The NRSMMS has two interrelated components of "Automated Spectrum Management System(ASMS)" and "National Spectrum Monitoring System(NSMS). ASMS has been completed and in operation.

Out of 24 fixed sites (Wireless Monitoring Stations etc.) under the project, 20 was completed and acceptd. All the 21 V/UHF Mobile Monitoring System(MMS) vehicles were delivered to their respective sites after successful completion of Acceptance Testing of IMS Delhi campus and are operational. The Operational Acceptance Test for final acceptance of Natinal Radio Spectrum Management and Monitoring System (NRSMMS) has been completed. The Fixed and V/UHF part of the project stands completed & closed. The Defect Liability period of NRSMSS has commenced from October 15, 2008.

As the project has already completed on October 15, 2008 and NRSMMS System is under Defect Liability period which is to be completed by October 14, 2009 monitoring of NRSMMS system during Defect Liability period is to be performed.

Left over payment for outstanding bills were processed & sanctioned issued. The various issues observed in NRSMSS system during defect liability period are being taken up with the Contractors.

The achievements during 2008-09 in the field of Radio Frequency Spectrum Management, new frequency assignment / licenses issued etc. were as under:

	Particulars	2008-09
1.1.	**Radio Frequency Spectrum Management**	
	New Radio Frequency authorized to various users	184173
	Inter-departmental meetings held	11
	Sites cleared for new wireless stations	334732
1.1	**Wireless Licences Issued**	
	No. of Import Licences Issued	2499
	No. of Licences issued to new Wireless Stations	36283
	No. of Licences Renewed (for Wireless Stations)	20067
1.1	**Certificate of Proficiency (COP) Examination/Licences**	
	No. of COP Examination conducted	54
	No. candidates admitted	17002
	No. of Licences issued	6881
	No. of Licences renewed	3520
	No. of Licences issued to New Radio Amateur Stations	235
	No. of Licences renewed for Old Radio Amateur Stations	960

WIRELESS MONITORING ORGANISATION

Actual achievements during 2008-09

Wireless Monitoring Organization 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.

WMO undertook special recovery campaign in the band 600-800 MHz band. country-wide monitoring by a network of 21 Wireless Monitoring Stations of WMO resulted in the successful recovery of practically the entire frequency band of 600-800 MHz.

Some interference complaints were reported by the private operators to the CDMA networks at

Ahmedabad, Bangalore, Chandigarh, Amritsar, Kolkata and Delhi. the WMO successfully resolved most of the interference complaints of CDMA networks and the remedial action were taken.

WMO is currently putting in all the resources to determine the actual status of the usage of the frequency spots identified for 3G services in the DOT's document titled **"Auction of 3G and BWA Spectrum Information Memorandum"**. WMO is also concurrently working on determining the actual status of the frequency bands 2.3 - 2-4 GHz and 2.5 - 2.69 GHz, both of these bands identified also in the DOT's document titled "Auction of 3G and BWA Spectrum Information Memorandum".

WMO intends to procure 20 nos. of "SHF Microwave Monitoring Terminal (MWT)" and other monitoring related products to augment its radio monitoring facilities under the two schemes: "Augmentation/Up-gradation of Microwave Monitoring Terminals" and the "Augmentation/Up-gradation of Wireless Monitoring Facilities, " in 11th Five Year Plan. Towards these goals, WMO has developed the design/architecture of 4 types of SHF Mobile Monitoring Terminals. The proposal for development of these terminals to be integrated by WMO itself will be submitted shortly for approval of the Telecom Commission. It may be added that the WMO was led to design the SHF terminal as commercial products were not available to meet the monitoring requirements in the existing and future radiocommunication environment in the country.

A Specialized Mobile Monitoring Terminal having monitoring capabilities up to 40 GHz is operational. The primary objective is to monitor special transmissions from terrestrial stations.

At a few Monitoring Stations, fixed direction finding systems are being used for locating the direction radio transmissions in the HF frequency band.

Satellite Monitoring Earth Station at Jalna (Maharashtra) has the task of monitoring of signals from all satellites located in the arc of interest to India.

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

- Antenna Towers have been erected to augment the monitoring facilities under the project at Ahmedabad, Ajmer, Bhopal, Delhi, Chennai, Gorakhpur, Nagpur, Mumbai, Shillong and Trivandrum.

- 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. Further, LAN wiring etc. has been completed at all the Wireless Monitoring Stations.

- 20 Mobile Monitoring vehicles (MMS), comprising V/ UHF monitoring systems under the project have been dispatched and are already operational at respective Wireless Monitoring Stations.

Statistical performance data during the year 2008-09

S.No.	Particulars	Actual achievements during 2008-09
a.	Channel days utilized for Radio Monitoring.	7814
b.	Monitoring Assignments Handled.	13280
c.	No. of Radio Noise measurements.	915040
d.	No. of Wireless Transmission monitored.	140909
e.	Infringements communicated to various wireless users for remedial action.	5827
f.	Technical assistance to users to maintain their operation within specified standards.	1000
g.	No. of Wireless Stations Inspected.	3644
h.	No. of Officers/Officials trained.	132
i.	No. of Courses conducted.	10

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III. 2 Telecommunications Engineering Centre

INTRODUCTION

Telecommunications Engineering Centre (TEC), is the Technical wing of the Department of Telecommunications (DOT). Its responsibilities 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, TDSAT, USOF, BSNL and MTNL, 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 and D.
- Coordinate with C-DOT to provide details on the technological developments in the Telecom Sector for policy planning at DOT level.

ACHIEVEMENTS DURING 2008 - 09

New GRs/IRs issued	30
GRs/IRs revised	42
GRs/IRs amended	9
White Papers issued	18
Test Schedules/Procedures prepared	72

- As part of its activity for according approval, 186 Interface Approvals were issued for the products for interfacing with the BSNL/MTNL network and 87 Certificate for approval were issued for the network coverage of private operators.

To keep the officers of TEC abreast with new developments in new technologies in the Telecom Sectors:-

(a) 3 officers were deputed to attend Meeting of NGN-GSI event and SG-meeting at Geneva.

(b) 5 officers attended various meetings/trainings of APT out of India.

(c) 15 officers of TEC were deputed in different inservice courses/training in various Telecom training Centres in India.

- SFC for setting up of Next Generation Network (NGN) Lab was approved by DOT in January 2009. Expression of Interest(EOI) were called in January, 2009 and 12 parties have been short listed. Request of Proposal(RFP) for NGN Phase-I Lab is under finalization. The Civil and the Electrical works for the same are in progress and the NGN Lab will be commissioned in phases during the current Five Year Plan.

- As part of NGN lab project, Rupees One Crore was to be utilized in the North-East Region of India. TEC has started implementation of this project by installing three VSATs in the state of Sikkim. Remaining 17 VSATs in Sikkim, 20 in Meghalaya, 9 in the Manipur and one in TEC, shall be installed in the first quarter of 2009.

- For the work related to Mandatory testing certification of telecom products in India, four documents namely, "Network Conformity Standards- System and Procedure," Scheme for designating domestic lab," " Scheme for recognizing foreign labs", "Roadmap for implementing mandatory testing" were prepared.

- Telecom Commission approved guidelines for Adoption of International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines in Telecom Sector in India regarding Basic Restriction and Reference Levels for limiting EMF exposure.

- Revenue collected from various vendors as test fee and sale of documents for the year 2007-08 was Rs. 6.01 crore and during 2008 - 09 was Rs. 2.55 crore (Approx).

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III. 3 Universal Service Obligation Fund

Organizational Structure

The Universal Service Obligation Fund formed by an Act of Parliament is headed by the Administrator USO Fund, appointed by the Central Government, for the administration of the Fund. He is empowered to formulate procedures for implementation of USO Fund schemes and disbursement of funds from USOF. His office works as an attached office of the Department of Telecom, Ministry of Communications and Information Technology.

Amendment of Telegraph Act for creation/ administration of USO Fund

The Universal Service Support Policy came into effect from April 1, 2002. The guidelines for universal service support policy were issued by DOT and were placed on the DOT website on 27th March 2002. Subsequently, the Indian Telegraph Act, 1885 was amended vide the Indian Telegraph (Amendment) Act, 2003 giving statutory status to the Universal Service Obligation Fund (USOF) in December 2003. An ordinance was promulgated on October 30, 2006 as Indian Telegraph (Amendment) Ordinance 2006 to amend the Indian telegraph Act 1885 in order to enable provision of all types of telegraph services in rural and remote areas. Subsequently Indian Telegraph (Amendment) Act 2006 was passed on December 29, 2006.

Rules for administration of USOF

The Rules for administration of the Fund known as Indian Telegraph (Amendment) Rules were initially notified on March 26, 2004. The Rules were subsequently amended as Indian Telegraph (Amendment) Rules 2006 in order to enable support for mobile services and broadband connectivity in rural and remote areas of the country and the same were published in gazette on November 17, 2006. The Rules were again amended as the Indian Telegraph (Amendment) Rules 2008 on July 18, 2008 for providing subsidy support to eligible operators for operational sustainability of Rural Wireline Household DELs installed prior to April 1, 2002.

Resources for USO Fund

The resources for implementation of USO are raised through a Universal Service Levy (USL), which is 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. Annual License fee payable by Basic Telephone Service/ UAS Licensees for rural fixed wire-line services in rural areas has been exempted with effect from October 1, 2008. In addition, the Central Govt. may also give grants and loans. The balance to the credit of the Fund does not lapse at the end of the financial year. Credits to the Fund are being made through Parliamentary approvals.

➢ Functions and objectives

The USO Fund was established with the fundamental objective of providing access to **'Basic'** telegraph services to people in the rural and remote areas at affordable and reasonable prices. Subsequently the scope was widened to provide subsidy support for enabling access to all types of telegraph services including mobile services, broadband connectivity and creation of infrastructure like OFC in rural and remote areas. As per the Rules, the following services shall be supported by the Fund, namely:-

Stream-I: Provision of Public Telecom and Information Services

a) 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

b) Provision of additional rural community phones in areas after achieving the target of one Village Public Telephone in every revenue village

c) 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 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 telecommunication 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 the aforesaid Indian Telegraph (Amendment) Rules covering Basic Service Operators, Cellular Mobile Service Providers, Unified Access Services Licensees, Infrastructure Providers (IP-I) and Internet Service Providers (ISPs). These Telecom Service Providers are both public and private sector companies. The implementation status of the activities being undertaken by the USO Fund is available on DOT website (www.DOT.gov.in).

➢ Current Status: Ongoing USF Schemes

Stream-I: Public Access

Village Public Telephones

OPEX FOR EXISTING VPTs

Agreements were signed with M/s BSNL and six Private Basic Service Operators (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. As on March 31,2009, about 5, 58,007 villages i.e. 94% of the Census 2001 inhabited revenue villages are already covered with Village Public Telephones (VPTs) including the VPTs being provided under para ii) & iii) below.

UNCOVERED VPTs UNDER BHARAT NIRMAN

Agreements were signed with M/s BSNL in November 2004 to provide subsidy support for provision of VPTs in 66822 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. The provision of VPTs in these villages has been included as one of activities under Bharat Nirman Programme. As on March 31, 2009, 57181 VPTs have been provided. The remaining VPTs are likely to be provided in a phased manner by November 2009.

NEWLY IDENTIFIED VPTs

Reconciliation of the VPTs working in the inhabited villages as per Census 2001 has recently been carried out taking into account the existing VPT and those provided under Bharat Nirman. All the remaining 62443 inhabited villages as per Census 2001 irrespective of criteria of population, remoteness, accessibility and law &order situations have been included for provision of VPTs with subsidy support from USO Fund under this scheme. Agreements in this regard have recently been signed with BSNL on February 27, 2009. As per the terms and conditions of the agreement the VPTs installed between the period October 1, 2007 to February 26, 2009 are also eligible for subsidy support. A total number of 29211 VPTs have been provided under this agreement as on March 31, 2009. The remaining VPTs are likely to be provided in a phased manner by February 2011.

Replacement of MARR based VPTs (MARR-A & MARR-B)

Agreements were signed with M/s BSNL for replacement of 1,85,121 number of VPTs with reliable technologies, which were earlier working on Multi Access Radio Relay (MARR) technology and installed before April 1, 2002. These included 47075 MARR VPTs already replaced before 30.06.2003 (MARR-B) and 138046 MARR VPTs to be replaced from July 1, 2003 onwards (MARR-A). A total number of 1,83,865 MARR VPTs have been replaced as on March 31, 2009. The remaining MARR VPTs are likely to be replaced by June 2009.

Provision of Rural Community Phones (RCPs)

Agreements were signed on September 30, 2004 for providing 40,705 Rural Community Phones (RCPs) [BSNL: 21,958, RIL: 18,747] in villages with population more than 2000 and not having PCO facility. Out of these, 40689 RCPs have been provided till March 2009 as per details given below. The remaining RCPs are likely to be provided by May 2009.

Service Provider	Target	Achievement
BSNL	21958	21958
RCL	18747	18731
Total	**40705**	**40689**

Stream-II: Individual Access

Support for RDELs installed prior to April 1, 2002 (RDEL-D)

Support has been extended to nearly 90.5 lakh rural household Direct Exchange Lines (RDELs) installed prior to April 1, 2002 towards the rental differential between the TRAI prescribed rental and the rental charged by the Service Provider. The support was for the limited period of April 1, 2002 to January 31, 2004.

Support for RDELs installed after April 1, 2005 (RDEL-A and RDEL-X)

Agreements were signed with M/s BSNL, M/s RIL, M/s TTL and M/s TTL (MH) in March 2005 for installation of Rural Household Direct Exchange Lines (RDELs) during the period April 1, 2005 to March 31, 2007 **(RDEL-A)**. These RDELs are to be installed in 1685 Short Distance Charging Areas (SDCAs), where cost of providing telephone is more than the revenue earned. Subsequently the cutoff date for installation of the RDELs has been extended to March 31, 2010 **(RDEL-X)**. As on March 31, 2009, about 63 Lakh RDELs have been provided with subsidy support from USO Fund under this scheme as per details given below:

Service Provider	Number of SDCAs	Total number of RDELs
BSNL	1267	2019069
RCL	203	1782393
TTSL	172	1800033
TTMH	43	710962
Total	**1685**	**6312457**

Support for RDELs installed during April 1, 2002 and March 31, 2005 (RDEL-B)

Subsidy support on the same Representative Rate is also being provided for about 18, 65,690 Rural DELs [BSNL: 18, 26,923, RIL: 38,767] installed in the eligible SDCAs during the period April 1, 2002 and March 31, 2005. Agreements to this effect were signed with M/s BSNL and M/s RIL in May 2005 and August 2005.

Support for operational sustainability of Rural Wireline Household DELs installed prior to April 1, 2002

A MoU has been signed with BSNL on March 12, 2009 wherein subsidy support of Rs. 2000 Crore per annum for a period of three years shall be given from USOF to BSNL for operational sustainability of their Rural Wireline Household DELs installed prior to April 1, 2002 in lieu of ADC being phased out.

Stream-III: Mobile Services

Shared Mobile Infrastructure Scheme (Phase-I)

A scheme has 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 number of towers is subject to change based on actual field survey and coverage achieved thereof as per the terms and conditions of the Agreements.

The infrastructure so created shall be shared by three service providers for provision of mobile services. The agreements effective from June 1, 2007 have been signed with the successful bidders in May 2007. As on March 31, 2009, 4755 towers have been set up under this scheme. The remaining towers are under different stages of installation. Most of the towers under this scheme are likely to be commissioned in a phased manner by June 2009.

Number of towers commissioned by the successful bidders (Part-A)

Sl. No.	Name of Bidder	No. of Towers to be set up	Revised number of towers	No. of Towers Commissioned
1.	Bharat Sanchar Nigam Ltd.	6175	5845	3280
2.	GTL Infrastructure Ltd.	421	412	391
3.	Vodafone Essar Cellular Ltd.	123	93	93
4.	Vodafone Essar South Ltd.	208	216	215
5.	National Information Technologies Ltd. (Now KEC)	384	378	318
6.	Quipo Telecom Infrastructure Ltd.	88	88	88
7.	Reliance Communications Infrastructure Ltd.	472	408	370
	Total	**7871**	**7440**	**4755**

Utilizing the infrastructure so created, 4919 BTSs have been commissioned by different Universal Service Providers as on March 31, 2009 and mobile services have been started as per details given below:

Number of Mobile Services commissioned by the successful bidders (Part-B)

USP	No of clusters	No of mobile service sites As per Agreement	Actual No. of Sites	Total no. of BTS commissioned
Bharti (BAL)	10	963	887	135
Bharti (BHL)	3	294	289	171
BSNL	59	5755	5386	1465
Dishnet (Aircel)	3	293	247	160
Dishnet (Dishnet)	16	1515	1405	175
Idea (BTA)	12	1244	1198	331
Idea (ICL)	12	1280	1234	525
Idea (IMCL)	3	207	211	170
Reliance (RCL)	53	5118	4795	472
Reliance (RTL)	40	3864	3724	345
Vodafone (ADIL)	7	733	714	148
Vodafone (VECL)	10	988	951	176
Vodafone (VESL)	14	1293	1217	591
Fascel (VEGL)	1	66	62	55
TOTAL	**243**	**23613**	**22320**	**4919**

Stream-IV: Rural Broadband Scheme for expanding provision of Wireline Broadband Connectivity upto village level.

A Scheme has been launched to provide wire-line broadband connectivity to rural & remote areas by leveraging the existing rural exchanges infrastructure and copper wire-line network. The objective is to make the rural and remote areas broadband enabled by facilitating the service providers for creating Broadband infrastructure. The speed of each of the broadband connections shall be at least 512 Kbps Always On, with the capability to deliver data, voice and video services in the fixed mode. The rural broadband connectivity will cover institutional users, such as Common Service Centres (CSCs), being set

up by DIT, Gram Panchayats, Higher Secondary Schools and Public Health Centres, as well as Individual Users located in the villages.

An Agreement has been signed with BSNL on January 20, 2009 to provide 8, 61,459 wire-line Broadband connections to individual users and Government Institutions and 27789 number of kiosks under this Scheme over a period of 5-years, i.e., by 2014. The subsidy disbursement is for (i) broadband connections, Customer Premises Equipment (CPE), Computer/Computing devices and (ii) setting up of Kiosks for public access for broadband services. 22912 numbers of broadband connections and 3 numbers of kiosks have been provided by BSNL under this Scheme as on March 31, 2009.

The Service Providers, with valid license from DOT for BSO/UASL, were also eligible to apply under this Scheme and their EoIs are under consideration.

➢ Planned USF Schemes

Stream-III: Shared Mobile Infrastructure Scheme (Phase-II)

It is proposed to cover other uncovered areas in the country through mobile services for which additional towers are being identified. About 10128 towers are proposed to be installed under the second phase of the shared mobile infrastructure scheme, which is likely to be launched shortly. Villages or cluster of villages having population of 500 or more and not having mobile coverage have been taken into consideration for installation of the tower under this scheme.

Stream-IV: Wireless Broadband Connectivity for Rural Areas

It is also proposed to provide wireless broadband connectivity in about 5 lakh villages. The different User Ministries/Departments are being coordinated to prioritize and firm up their requirements. Further, various issues, related to the subject, including availability and allotment procedures for spectrum, have been discussed in detail. The Scheme would be launched after the BWA and 3G Spectrum auctioning position is announced by the Govt.

Stream-V: Creation of General Infrastructure like OFC in Rural Areas

With a view to provide sufficient back-haul capacity to integrate the voice and data traffic from the access network in the rural areas to their core network, USOF has taken initiative to strengthen the OFC network in the rural and remote areas. This scheme considers OFC Network augmentation between the blocks' HQ and Districts' HQ to begin with. The State of Assam has been taken up first for implementation under this scheme.

Stream-VI: Pilot Projects

For induction of new technological developments in the telecom sector on a Pilot Project basis in rural and remote areas, a scheme has been launched wherein about Five Pilot Projects shall be provided subsidy support. Support is also being considered for renewable energy resources (Solar, Wind, Diesel Hybrid solutions) for 20 sites on pilot basis.

➢ Budget allocations and disbursements

Status of Disbursements made and availability of Funds as on March 31, 2009

(Rs. in crore)

Year	Opening Balance	Funds collected as USL	Funds allocated and disbursed	Balance at the end of Year
2002-03	0.00	1653.61	300.00	1353.61
2003-04	1353.61	2143.22	200.00	3296.83
2004-05	3296.83	3457.73	1314.59	5439.97
2005-06	5439.97	3533.29	1766.85	7206.41
2006-07	7206.41	4211.13	1500.00	9917.54
2007-08	9917.54	5405.46	1290.00	14033.00*
2008-09	14033.00*	5759.52**	1600.00	18192.52
Total		**26163.96**	**7971.44**	

** Ministry of Finance vide letter No. F.1(20)-B(AC)/2007 dated 04.06.08 is of the view that the reimbursement of license fees and spectrum charges to BSNL for fulfilling rural obligation during the period 2002-03 to 2005-06 amounting to Rs. 6948.64 Crore must also be considered while arriving at the available balance figure. Taking into account the compensation made to BSNL, the available balance would be Rs. 11243.88 Crore only (18192.52-6948.64) as on 1st April, 2009.*

*** Provisional.*

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III. 4 Controller of Communication 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 1.8 lakh pensioners. During 2007-08, Rs 1511.94 crore of pension was disbursed as compared to Rs 1345.39 crore in 2006-07. Figures for 2008-09 are Rs. 1109.55 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 v-sat licence fee. The revenue on account of spectrum charges and license fee has shown increase during the last few years, as is evident from the table below:

(Rs. in crore)

Sl.No.	Item	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
1	Spectrum charges	677	1040	1396	2090.39	3055.72	3454.55
2	License fee	8421*	6816	6624	7037.92	8855.24	3997.02
3	Total	9098	7856	8020	9128.31	11910.96	7451.51

**This includes one time entry fee for UASL*

Macro Economic 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)
2003-04	200.00
2004-05	1314.58
2005-06	1766.85
2006-07	1500.00
2007-08	1290.00
2008-09	1599.60
TOTAL	**7671.03**

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 hitherto 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 there under, 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 stake holders.

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III. 5 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 2008-09, a total of 335 complaints were handled out of which 91 complaints were taken up for investigation. Besides investigation, advice of disciplinary/other action was given against 14 officers/officials. During the same period, 25 Officers were charge sheeted. 51Officers/officials were punished for major penalty and 15 officers/officials were punished for minor penalty 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 22 such courses were conducted all over the country. A total of around 387 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 6878 officers/officials 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. Action against Government Officers/Officials 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.

CVC COMPLAINTS RECEIVED AND DISPOSED OFF DURING THE PERIOD 2008-09

Opening balance as on April 1, 2008	Received upto March 31, 2009	Disposed off upto March 31, 2009	Closing balance as on March 31, 2009
4	11	4	11

VIGILANCE AWARENESS WEEK 2008

Vigilance Awareness Week was observed in DOT during November 3-7, 2008. The focus of observing the Vigilance Awareness Week, as directed by CVC was "Need for efficiency and Transparency in public spending" to raise awareness among the user of the services provided by the department/organizations, of the initiative taken for improvement of the systems and procedures and the avenues available to the user citizen for redressal of grievances. In this regard vigilance wing had conducted essay, quiz and debate competitions for spreading awareness amongst the staff.

Statistical Summary of departmental vigilance Activities during 2008-09

Sl. No.	Activities		Actual (March 2009)
1.	No. of complaints handled during the period		354
2.	No. of officers charge sheeted for		23
	(a) Major penalty	GOs	21
		NGOs	-
	(b) Minor penalty	GOs	7
		NGOs	-
3.	No. of officers punished with MA/ MI penalty		144
4.	No. of prosecution sanctions issued		5
		GOs	-
		NGOs	-
5.	No. of investigation reports examined and sent to CVC for advice (other than CVC cases)		41
6.	No. of CBI reports referred to CVC for advice.		5
7.	No. of officers in respect of whom Vigilance clearance issued		6878
8.	No. of cases (received from ACU of PMO) disposed off after investigations		-
9.	No. of appeal cases settled	Group 'A'	11
		Group 'B'	18

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III. 6 Telecom Network Security

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

ACTIVITIES

(i) Coordination and Administration of Telecom Enforcement, Resources & Monitoring (TERM) Cells

With the increasing number of telephone operators in the country, the Government felt the need for presence of Telegraph Authority in all licence areas and large Telecom Districts of the country. With the growth of private telecom service providers and ISPs, an increase in illegal/clandestine telecom operations, was also observed. To tackle this menace, the Government created initially 4 Vigilance Telecom Monitoring cells (VTM) in 2004 at Delhi, Mumbai, Hyderabad and Chennai. 9 more VTM Cells were created during the 2006 for the circle of Punjab, Rajasthan, Gujarat, Kerala, Karnataka, Maharashtra, Tamil Nadu, West Bengal and UP(E), 15 VTM Cells were subsequently added in January 2007 for Andhra Pradesh, Bihar, Madhya Pradesh, Haryana, UP(West), Andaman & Nicobar, Assam, Chhattisgarh, Jammu & Kashmir, Jharkhand, Himachal Pradesh, North East-I, North East -II, Orissa and Uttaranchal. 6 more VTM Cells were recently created in March 2007 at Kolkata, Ahmedabad, Bangalore, Pune, Jaipur and Lucknow taking the total number of VTM Cells of 34. Since information of VTM Cells, many more functions have been assigned to the VTM Cells, and therefore it has been decided to change the name of VTM cells to TERM (Telecom Enforcement, Resources & Monitoring) Cells to reflect the entire gamut of functions.

(ii) Nodal unit for C-DOT, in DOT.

(iii) Security Related Projects

(a) Centralized Monitoring System

The requirements for the Project on Centralized Monitoring System had been finalized after detailed deliberations among various agencies concerned. Proof of concept has been demonstrated and R&D activities are ongoing for the project.

(b) Dedicated and Fully Secure Communication Network

Architecture and dimensioning of the network had been finalized; scale and size of the project are under deliberation. Phase I of the dedicated network will cover the National Capital.

Functions assigned to TERM Cells

The TERM Cells are functioning as the subordinate offices of the DOT in field. These cells represent the Telegraph Authority and the Licensor and perform the following functions:

Monitoring Functions

- Coordination and monitoring of various network operators in the filed.
- Monitoring of network parameters.
- To check the compliance to the roll-out obligation as per license condition.
- Checking of the compliance by the licensee in respect of the license conditions and any directions issued by the licensor in public interest.
- To ensure optimum call completion ratio of inter operator calls.
- Subscriber Verification Audit to ascertain whether the mobile service operators follow guidelines for Customer verification before providing connections.
- 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.

Vigilance Functions

- Inspection of curb illegal/clandestine grey telecom market activities.
- Inspection of licensed Telecom Service Providers and ISPs.
- Curbing illegal activities in telecom services.
- Control over clandestine/illegal operation of telecom networks by vested interest having no license.
- 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 licensees.
- Technical arrangement for the lawful interception / monitoring of all communications passing through the licensee's network.
- To ascertain that the licensee is providing the services within permitted area. Enforcement of licence conditions under Telecom and ISP Licences.

Security Functions

- Interface between Service Providers in the filed and Security Agencies.

Other Functions

- Service Testing of various Licensed Service Providers in the Licence area and checking roll-out obligation as per license conditions.
- Registration of OSPs and Telemarketers in all License service areas.
- Checking Mobile Spectrum Utilization.
- Investigation of complaints regarding Telecom and Internet services.

Achievements of TERM Cells

Major achievements are as follows:-

- Mobile subscriber verification audit conducted for about 2.86 million samples by TERM CELLS in the field resulted in enhanced compliance by Service Providers, from 60% to more than 85%.
- Due to decentralization of Registration for OSP and Telemarketing to TERM Cells, pendancy has been reduced substantially.
- Service testing of Mobile Service Providers has been decentralized to TERM Cells and more than 160 Certificates have been issued until March, 2009.
- Verification of Mobile Spectrum related Data has been taken up in TERM Cells.

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III. 7 Empowernment 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 Organizations. 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 9710 women employees working at various levels in MTNL. Over 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 897 women employees as on March 31, 2009.

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 34% of staff in C-DOT are women.
- C-DOT has also taken initiative to provide opportunities to technically qualified and talented women to work from home. In 1999, a scheme of External Engineers was introduced; wherein women engineers were recruited for specific time bound projects in C-DOT. These women were allowed to work on the project from home, and their compensation was admissible on achievement of pre-defined milestones of the project.

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.
- Reimbursement for residential telephone expenses is admissible to about 36% of the women staff. Multifunctional allowance is admissible to 47% of the women employees.
- 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, 40% of them were women.

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III. 8 Persons with Disabilities

INTRODUCTION

Department of Telecommunications appreciates the requirements of providing reservation to the physically challenged in appointments and various Government directives in this regard are duly followed by it.

Department has already identified physically handicapped persons suffering from Hearing impairment and Locomotion 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 and T Accounts and Finance Service and one more physically handicapped candidate has been nominated to IP and T AFS.

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-D C-DOT follows guidelines issued by Government of India with respect to reservations in jobs for persons with disabilities. As in the past, adequate encouragement was given during the years 2008-09 also to differently enabled persons.

The C-DOT new R&D Complex at Delhi, has all necessary facilities like exclusive elevators for differently enabled persons, ramps connecting the two levels of the working areas etc. theses facilities enable such persons to move freely from one wing to another of this intelligent R&D Complex.

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 246 persons with disabilities as on September 30, 2008.

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 155 physically challenged employees as on March 31, 2009.

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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IV. Telecom Regulatory Authority of India (TRAI)

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 'telecommunication service' in terms of section 2(k) of the Telecom Regulatory Authority of India Act, 1997 as amended by the TRAI (Amendment) Act, 2000.

Major Recommendations/Regulations and other initiatives

The Journey towards excellence of Telecom Regulatory Authority of India in the regulation of telecom sector that commenced a decade back in 1997 continued during the fiscal also. It took several initiatives for the betterment of the telecom sector, including broadcasting and cable services. It specifically gave emphasis on protecting the interests of the consumers. Some of the major recommendations made during 2008-09 for the effective regulation and overall development of the sector, inter-alia, included the following:

- Recommendation on "Provision of Calling Cards by National and International Long Distance Operators" dated August 20, 2008.
- Recommendations on permitting New Entity for Allocation of 3G Spectrum dated April 25, 2008
- Recommendations on "Allocation and Pricing for 2.3-2.4 GHz, 2.5-2.69 GHz bands, & 3.3-3.6 GHz bands" dated July 11, 2008.
- Recommendation on the modifications proposed by DOT on spectrum Usage charges and one time spectrum enhancement charges dated July 16, 2008. TRAI has decided to go along with the DOT proposal of enhancement of spectrum charges by 1% across the board along with the amendment in spectrum slabs taking into consideration the broader picture of telecom sector.
- Recommendations on Mobile Virtual Network Operator (MVNO) dated August 6, 2008.
- Recommendations on Issues related to Internet Telephony dated August 18, 2008.
- Recommendations on Terms and Conditions for Publication of Integrated Telephone Directory for Fixed Line Telephones and Recommendations on"Terms and Conditions of Licence for the National Integrated Directory Enquiry Service (NIDQS) dated April 24, 2008 and June 19, 2008.
- Recommendations on Growth of Value Added Services and Regulatory Issues dated February 13, 2009.
- Recommendation on An approach to Rural Telephony - suggested measures for Accelerated Growth dated March 19, 2009.

- The Telecommunications Interconnection Usage Charges (Tenth Amendment) Regulation 2009.
- The Standards of Quality of Services of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations 2009.

Steps taken to protect the interest of consumers

Issue of Tariff orders and directions regarding transparency in tariff offers

TRAI on September 1, 2008 issued a Tariff Order and a Direction mandating several regulatory measures to improve transparency in tariff offers in access service and other consumer protection measures which are listed below:

- Subscribers to get full talk time on talk time recharges, barring an administrative fee which shall not exceed Rs.2 per recharge and applicable taxes.
- Subscribers to automatically get the benefit of straight tariff reductions without any preconditions of any explicit action by the subscriber, for example, sending SMS etc.
- Customers in existing lifetime plans can migrate to new lifetime plans with lower entry fee without having to make additional payment or recharges.
- Lifetime customers need not recharge more than once in 6 months for remaining connected.
- Customers to get key tariff information in vernacular language also at all the retail outlets of the service providers and their franchisees.
- No change in mobile number when subscriber change tariff plans or move from prepaid to postpaid or vice versa.
- Blackout days (customary/festival days on which free/concessional calls/SMS are not available) limited to a maximum of 5 days in a calendar year. Such days to be pre-specified and no subsequent alteration or addition permitted.
- Promotional offers to be streamlined.
- The new measures effective from September 15, 2008 and applicable for all subscribers, new and existing.

Auditing of Metering and Billing System

In order to (i) bring uniformity and transparency in the procedures being followed by service providers with regard to metering and billing; (ii) prescribe standards relating to accuracy of measurement, reliability of billing; (iii) measure the accuracy of billing provided by the Service Providers from time to time and to compare them with the norms so as to assess the level of performance; (iv) minimize the incidences of billing complaints; (v) and to protect the interest of consumers of telecommunication services, TRAI had issued the Quality of Service (Code of Practice for Metering and Billing Accuracy)

Regulation 2006 on March 21, 2006. The Regulation mandates the service providers to arrange audit of their Metering and Billing System on an annual basis through any one of the auditors notified by TRAI and to furnish to TRAI an audit certificate thereof not later than 30th June of every year. The Regulation also provides that the service providers have to take corrective action on the inadequacies, if any, pointed out by the Agency in the Certificate and to file with TRAI an Action Taken Report thereon not later than 30th September of every financial year. The audit reports for the year 2007-08 have been received from all the service providers.

The said Regulations provides in regulation 4 that the service provider will comply with the Code of Practice for metering and billing accuracy as laid down in Annexure-1, Code 3.1 of the Code of Practice for metering and billing accuracy provides that all charges must be consistent with the published Tariff applicable to the end-user charged. The Authority issued a show cause notice to three service provider for violation of the above Regulations to show cause, within fifteen days from the date of receipt of this notice. In response of the same, service providers have filed their reply to the Authority.

Consumer Education and Capacity Building of Consumer Organizations

The Telecom Regulatory Authority of India has issued several orders, regulations and directions aimed at the growth of the Telecommunication Sector as well as protection of the interests of the consumers. The Authority has initiated a programme of holding regional workshops aimed at generating awareness amongst the consumer organisations about these initiatives. The first such workshop for this year was held on May 9, 2008 in Dehradun. The CAG Members from the Northern Region and also the service providers from the region attended the workshop. The second and third workshop were held on August 8, 2008 at Madurai and August 12, 2008 at Agartala in Tripura State (North East Region). The participants appreciated the workshop and expressed the need for having more such workshops The fourth workshop is scheduled to be held on November 28, 2008 at Goa for western region.

Ensuring the quality of service provided by the service providers through

TRAI monitors the performance of Basic and Cellular Mobile service, Internet and Broadband Service against the benchmarks prescribed by TRAI through quarterly Performance Monitoring Report (PMR) received from service provider.

Network/Point of Interconnection (POI) reports

The growth of mobile network is taking place at a very rapid pace and about 8 million subscribers are added every month. In order to ensure seamless interconnection, TRAI has been monitoring the level of congestion at the Point of Interconnection (POI) between various service providers on a monthly basis. The POI Congestion Report analysis for the month of April, 2008 to June, 2008 shows that the performance of the CMSPs with respect to the congestion on POIs has improved in the month of June, 2008 as compared with the performance in March, 2008. During the period Cellular Mobile Telephone Subscriber base has increased from 261.07 million in March 2008 to 286.87 million in June, 2008. The number of POIs having congestion has decreased from 275 in March, 2008 to 156 in June, 2008.

Lowering of entry barriers for consumers in rural areas

While abolishing the ADC as a percentage of AGR from April 1, 2008, the Authority noted that it is difficult to establish a direct and transparent nexus between the savings on account of ADC and reduction of tariff. However, the Authority expected that the service providers shall utilize whatever savings accrue from phasing out of ADC for the overall growth of telecom sector especially for rural areas that are still awaiting concrete steps from the service providers.

It has been the endeavor of the Authority to evolve a framework which would ensure positive gains to consumers once the ADC is removed from the domestic sector. The Authority organized a series of consultations with the telecom associations i.e. AUSPI, COAI and also with the service providers. The concern of the Authority in this regard as also poor penetration in rural areas was conveyed effectively. The Authority entreated the service providers to make the year 2008-09 "the year for rural telecom access".

As a result of these initiatives, both GSM and CDMA operators have launched Rural Plans w.e.f. May / June 2008. As per communication received from telecom associations, the service providers offered upfront discount of Rs.50 and Rs.75 in airtime in rural areas for 50 millions new customers. This is being further pursued by the Authority to ensure that the benefits actually reach the consumers.

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V. Telecom Disputes Settlements and Appellate Tribunal (TDSAT)

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 licensee, 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 'Telecommunication 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 and the two members are Dr. J.S Sarma and Mr. G.D. Gaiha.

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 increased to 559 in 2007 and 509 in 2009 (as on January 7, 2009). 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 2008-09, the Tribunal organized four Seminars at Chennai, Ranchi, Pune and Jodhpur. The distinguished speakers including Hon'ble Judges of the Supreme Court, during various seminars organised by TDSAT have commended the delivery system of TDSAT. The counseling extended by the Registry of TDSAT to various litigants has been appreciated by speakers at these seminars.

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 stake holders. This compendium is now used as reference manual for purposes of citation in Supreme Court and other High Courts.

TDSAT has been imparting internship to law students from leading law institutes. During the year 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 2007-08 increased to Rs. 1,73,27,663/-. The Revenue receipt during 2008-09 is Rs. 41,42,883/-.

As sector Member of International Telecommunication 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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VI. Audit Observation of C and AG

DEPARTMENT OF TELECOMMUNICATIONS

Report No.CA 1 of 2008

Non-recovery of liquidated damages from Unified Access Service Licencees

Department of Telecommunications failed to recover liquidated damages of Rs. 400.20 crore from Unified Access Service Licencees for delayed/non-fulfillment of first phase and second phase roll out obligations as per terms and conditions of the licence agreement.

(Paragraph No. 3.10)

Non-realisation of financial bank guarantee

Department of Telecommunications failed to obtain financial bank guarantee of Rs. 16.63 crore from M/s Mahanagar Telephone Nigam Limited for securitization of spectrum charges.

(Paragraph No. 3.11)

Performance Audit of Administration of the Universal Service Obligation Fund

Some of the major deficiencies observed by Audit in respect of administration of USO Fund in DOT were as follows:

- During 2002-03 to 2006-07, only Rs 5,081.44 crore i.e., 33.87 per cent of Universal Service Obligation (USO) Fund had been utilised out of total funds of Rs 14,998.98 crore collected from service providers.

(Paragraph No. 1.7.1.1)

- Despite phenomenal growth and expansion in telecom sector in the country, the pace of expansion of telecom services in rural India, particularly in the states of Bihar, Chhatisgarh, Madhya Pradesh, Assam, Jammu & Kashmir, Uttar Pradesh and West Bengal has been rather very slow and the tele-density in these states ranged merely between 0.88 to 1.81 per hundred population. This indicated that the objectives of establishing Universal Service Obligation Fund exclusively for accelerating growth of rural telephony were not achieved despite substantial collection of funds through Universal Access Levy.

(Paragraph No. 1.7.1.2)

- The amounts collected through Universal Access Levy have not been credited fully to the Universal Service Obligation Fund.

(Paragraph No. 1.7.1.1)

- Subsidy of Rs 1850.77 crore was paid retrospectively towards rural household direct exchange lines (RDELs) installed during April 2002 to March 2005 without ensuring that the amount was disbursed only towards eligible RDELs.

(Paragraph No.1.7.3.1)

- Reliance Communication and Tata Teleservices were paid subsidy of Rs. 84.50 crore for provision of RDELs and Rural Community Phones (RCPs) without ensuring connectivity with network of other service providers as envisaged in the Unified Access Service Licence (UASL) agreements.

(Paragraph No. 1.7.1.5)

- Liquidated damages of Rs 20.60 crore were not recovered from universal service providers for non-fulfillment of roll out obligations even in the extended period.

(Paragraph No. 1.7.1.4)

- subsidy to the tune of Rs 9.25 crore towards Village Public Telephones (VPTs) made to Universal Service Providers(USPs) was not recovered.

(Paragraph No. 1.7.3.2)

- As of March 2007, claims of different USPs amounting to Rs 407.83 crore were pending settlement with the Controller of Communication Accounts in various service areas.

(Paragraph No. 1.7.3.7)

- Large number of operators in rural areas did not meet the minimum quality standard prescribed by Telecom Regulatory Authority of India (TRAI).

(Paragraph No. 1.7.4.1)

Bharat Sanchar Nigam Limited

Revenue earnings from leased line services

Bharat Sanchar Nigam Limited (BSNL) provides leased line services to subscribers for a specific period as dedicated telecommunication links for internal communication between offices at various sites within a city or different cities on point-to-point basis or on a network basis.

Revenue from leased line services of BSNL had grown at a relatively slower pace in the five year period from Rs.349 crore in 2001-02 to Rs.522 crore in 2006-07. Audit found leakages in revenue of over Rs.517 crore, including potential loss of revenue, delays in billing and accumulation of outstandings. This was mainly on account of delays in provision of leased circuits, lack of a proper database on services and subscribers, incorrect application of tariff, and allowing dues to accumulate over the years, especially from private parties.

BSNL needs to take corrective and time bound measures to minimise and control revenue leakage. It needs to maintain complete and updated database, strengthen internal controls, improve coordination

between different branches and between its circles, and monitor recoveries of outstanding bills. Computerizing all activities related to the leased line services would effectively support the Company to ensure maximum output economically and efficiently.

Bharat Sanchar Nigam Limited

System of billing and collection of Interconnect Usage Charges from other Service Providers

Interconnect Usage Charges (IUC) are the charges payable by one service provider to one or more service providers for usage of the network elements for origination, transit and termination of the calls in a multi operator environment. Collection and accounting of IUC was done manually at the Secondary Switching Areas until the Company introduced a computerised Inter operator Billing and Accounting System (IOBAS) in 2005. IUC to the tune of Rs.527 crore pertaining to pre-IOBAS and IOBAS period remained short collected due to incorrect computation of arrear claims, short collection of Access Deficit Charges and weak internal controls associated with the computerised billing system.

Audit Report No. CA 12of 2008 (Regularity Audit)

Non/short billing of Infrastructure Sharing Charges from private service providers Deficiencies in billing and collection of charges for providing infrastructure facilities resulted in non-billing of infrastructure charges; port charges; incorrect fixation of charges; non-recovery of interest on delayed payments; non-recovery of prescribed dues in respect of surrendered ports and consequent non-realisation of revenue of Rs 35.26 crore from private service providers, besides accumulation of dues of Rs 71.89 crore due to control weakness.

(Paragraph 2.1)

Failure of Andhra Pradesh, Madhya Pradesh and Orissa telecom circles as well as 12 Secondary Switching Areas under Bihar, Jharkhand, Uttar Pradesh (East), Uttar Pradesh (West) and West Bengal telecom circles to maintain fault free and/or functional Village Public Telephones led to loss of subsidy of Rs 31.26 crore for the period April 2003 to March 2007.

(Paragraph 2.2)

Continuation of telephone facilities despite non-payment of dues Failure to disconnect telephone connections of subscribers and STD PCO operators by due dates, for non-payment of rentals in 13 Secondary Switching Areas under Rajasthan, Uttar Pradesh (East) and Uttaranchal telecom circles resulted in non-recovery of revenue of Rs 3.69 crore.

(Paragraph 2.3)

Continuous generation of unaddressed bills led to loss of revenue Failure of Dimapur Secondary Switching Area under North Eastern - II Telecom Circle to follow the codal provision to reconcile the working telephone connections with the connections billed led to continuous generation of unaddressed telephone bills resulting in loss of revenue of Rs 3.62 crore.

(Paragraph 2.4)

Non-recovery of compensation for damage to underground cables Failure of 13 Secondary Switching Areas under Punjab, Maharashtra, Rajasthan, Uttar Pradesh (East) and Uttar Pradesh (West) telecom circles to raise compensation claims for damages to underground copper cables resulted in non-recovery of compensation of Rs 2.49 crore from private agencies and telecom service providers.

(Paragraph 2.5)

Short charging of rentals

Failure of two Secondary Switching Areas under Andhra Pradesh Telecom Circle to issue rental bills at higher rates commensurate with the enhanced total capacity of exchanges resulted in short billing of Rs 2.35 crore.

(Paragraph 2.6)

Non/short billing of penal interest on delayed remittances by banks

Seven Secondary Switching Areas under the Kerala Telecom Circle and Calcutta Telephone district failed to realise the penal interest on delayed remittances of telephone bills by banks resulted in non/short billing of Rs 2.09 crore.

(Paragraph 2.7)

Procurement of cable, exchange equipment and other stores for landline telephone service by BSNL without considering the declining trend in the subscriber base of landline telephony and the past consumption pattern of stores, resulted in excess procurement, idling and underutilization of these stores valued at Rs. 794.32 crore.

(Paragraph 3.1)

The Andhra Pradesh Telecom Circle procured Trunk Automatic Exchange equipment during 2004-05 without considering the available spare TAX capacity and without assessing the actual requirement. This resulted in its idling and consequent unfruitful expenditure of Rs 7.96 crore

(Paragraph 3.2)

The Hyderabad Telecom District augmented its existing mass calling intelligent network without any requirement. The management failed to forecast the growth in MCIN traffic over a period of time and hence the MCIN could not be optimally used. This resulted in unfruitful expenditure of Rs 14.20 crore on its augmentation.

(Paragraph 3.3)

BSNL failed to review and file service tax return at the circle level or through centralized revenue earning nodal offices during the years 2005-07 for availing Cenvat credit against the service tax payments. Consequently some of the SSAs wherein revenue generation was low, could not avail Cenvat credit to the full extent resulting in excess cash outflow of Rs 401 crore

(Paragraph 3.7)

Fifty eight secondary switching areas under 11 circles did not avail the cheaper Bill Mail Service provided by the Department of Post for dispatch of telephone bills to its customers. This resulted in extra expenditure of Rs. 15.06 crore.

(Paragraph 3.8)

Space segment charges of Rs. 83.76 crore collected on behalf of Department of Space was wrongly credited to 'income' head by BSNL. This resulted in excess booking of income and consequent extra payment of universal service levy and income tax to the extent of Rs. 9.39 crore.

(Paragraph 3.9)

Principal General Manager, Bangalore Telecom District under the Karnataka Telecom Circle hired personnel for upkeep services in excess of sanctioned strength resulting in irregular extra expenditure of Rs 8.18 crore.

(Paragraph 3.10)

BSNL paid higher rate of commission to a franchisee for sale of India Telephone cards resulting in undue favour to the franchisee and consequent loss of Rs 5.33 crore during November 2005 to September 2006.

(Paragraph 3.13)

MAHANAGAR TELEPHONE NIGAM LIMITED

MTNL procured Wireless-in-Local Loop equipment for its Delhi and Mumbai units without proper assessment of its requirement. This resulted in non-utilization of the equipment and consequent infructuous expenditure of Rs 219 crore.

(Paragraph 5.1)

Inadequate planning resulted in infructuous expenditure. MTNL procured WLL Fixed Wireless Terminals/ Hand Held Terminals for its Delhi unit without forecasting and assessing quantity requirement based on the projected growth of WLL. Inadequate planning resulted in excess procurement of FWT/HHT and consequent infructuous expenditure of Rs 48.60 crore.

(Paragraph 5.2)

Non/underutilization of Digital Loop Carrier system. Procurement of Digital Loop Carrier systems by the Mumbai and Delhi units of MTNL without properly assessing its requirement based on market survey or any other scientific method resulted in non/underutilization of DLCs valuing of Rs 33.02 crore.

(Paragraph 5.3)

Delhi and Mumbai units of MTNL expanded the equipped capacity of six telephone exchanges without considering the decline in the growth rate in landline telephony. This resulted in underutilization of the exchanges and consequent infructuous expenditure of Rs. 8.16 crore on expansion of exchanges.

(Paragraph 5.5)

ITI LIMITED

The Company received advance purchase orders from BSNL for supply of Integrated Fixed Wireless terminals of ZTE model and furnished a Corporate Performance Guarantee (CPG) of Rs 9.90 crore. The Company placed orders for the supply of these terminals to Hindustan Futuristic Communications Limited (HFCL) without proper bank guarantee. HFCL failed to supply the desired number of terminals to the Company and BSNL short closed the order with Company and recovered Rs 19.80 crore of the CPG against the supply bills. The Company, however, could recover only Rs 9.40 crore by invoking the PBG and adjusting from pending bills of HFCL. The Company suffered a loss of Rs 10.40 crore.

(Paragraph 7.1)

The Company suffered a loss of Rs 3.78 crore due to incorrect estimation of the cost of AMC work by Manakpur unit in one of the GSM projects of BSNL.

(Paragraph 7.2)

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VII. 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 Telecommunication.

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 licensees. 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.

PROGRESS OF VARIOUS PROJECTS DURING 2008-09

- **High Bit Rate Network Backbone on Fibre & Satellite**

  The scheme focuses on research and development in the area of optical and satellite to provide technology for high speed communication. Number of technology products has been developed and successfully field tried with technology approval for induction in the network.

  Gigabit Passive Optical Network (G-PON)

  Currently, the scheme focuses on design and development of GPON. Two types of ONTs, namely, ONT-1 related to SFU (Small family Unit) for residence application and ONT-2 related to SOHO (Small Office /Home Office) for business application to deliver triple play services have been completed with the prototypes ready and integration testing in the lab is in progress.

  Development activities for central office equipment namely, OLT (Optical Line Termination Unit) and outside plant equipment namely, ONU (Optical Network Unit) for providing fibre-to-curb access are taken up. The software porting and testing of OLT is in progress.

  It is planned to carry out lab demonstration for Ethernet and POTS services on OLT development platform and SFU-ONT , lab demonstration is also planned for these services using both the types of ONTs, namely, SFU and SOHO and indigenous design with prototype OLT.

- **Communication & Security Research & Monitoring**

Centralized Monitoring System (CMS)

Recent times have seen a phenomenal growth in telecom subscriber base and connectivity. Also, it has given a tremendous boost to basic and value-added services of different types for easy access of subscribers. However, the prolific use of telecom infrastructure by undesirable social elements has also resulted in anti-social networking and unlawful activities by criminal elements.

The scheme plans to focus on research, development and trials for the system related to centralized call interception, monitoring, analysis of social networking of target subscribers' data, end-to-end secured work-flow etc. as per the requirements of law enforcement agencies to address the security threats and unlawful activities by anti-social elements who misuse nation's communication network.

The R&D activities, namely, design and development of Centralized Monitoring System (CMS) related to Security mgmt for law & enforcement agencies is in-progress with focus towards establishing proof-of-concept.

Proof of concept pilot of multi-technology centralized platform has been demonstrated during the year with remote provisioning. Scaling up, creating data centres, creating high band connectivity, integrating various sub systems for provisioning on multiple operators, interception, monitoring and analysis for four metros is the next target.

Technologies for NE Region

North-East region has special requirements because of its topology, terrain, distances from rest of the country and scattering of population over different and distant areas of the region. The above requires feasibility study of appropriate technologies for the region, proof of concept where such technologies can be used in the region, specific research and development work in certain cases and adaptation of upgradation technologies for implementation in other case. C-DOT had initiated a reasonable development on these aspects so that both the new technologies can be adapted to the requirements of the region.

This scheme addresses some of these challenges faced in north eastern region by developing indigenous solutions that are low cost and easily maintainable by local support. Number of fixed voice lines based on C-DOT technology currently operational in North-East region (NE1, NE2 & Assam) of the country are 0.63 million. There is a need to upgrade and enhance the capabilities of this infrastructure with a mix of new technologies so that such a technology migration leads to possibilities of new services and also enhances the efficiency.

The technology currently being focused for adaptations for the region include VoIP technology, Concept Proving and Pilot trial for broadband wireless technology, Migration of C-DOT Fixed-line Tech. technology to next generation Packet Technology - Proof of concept & Pilot Trial, network management system.

Asymmetrical Digital Subscriber Line (ADSL)

A 48 port low cost IP DSLAM (Internet Protocol Digital Subscriber Line Access Multiplexer) system and ADSL 2+ CPE (Customer Premises Equipment) for providing broadband IP access to the subscribers of C-DOT rural exchange (C-DOT RAX technology) technology developed and the system installed for field trial in the BSNL network in the NE region at Shillong, NE1. The field trial is in progress.

VOIP

The next generation Voice over IP (VoIP solution) technology with subsystems - media gateway, signaling gateway and soft switch indigenously developed and the system has been installed at Noida, Gurgaon and Bangalore for technology trial. The technology adaptations for NE region will be carried out after successful completion of technology trial and will include control switch housed in a centralized place and operating the slave equipment in the required area.

Development / adaptations have been done for the interface namely, Line Access Gateway (LAG) which helps in migrating existing C-DOT MAX tech (fixed line) to VoIP tech as next generation MAX. The VoIP technology adaptations for north east region will also help in migrating fixed line technology of NE region to the next generation packet technology.

Shared Radio System

Development of share radio GSM system is in progress which is suitable for rural and tough terrains like north east region, where physical connectivity is a major bottle-neck. The technology facilitates

sharing of transmission resources of wireless network, namely, BTS (Base Station Trans receiver), BSC (Base Station Controller) to provide cost effective mobile services in the region.

Network Management System (NMS)

The technology for NMS is already ready and its implementation also include for north east region.

- ### Rural Technologies

Considering that rural population comprises 70% of the total Indian population, three key aspects of rural uplift that impact national development objectives encompassed in the National Common Minimum Program (NCMP) are:

1. Incentives for growth of rural economy at a minimum annual rate of 7-8%
2. Education and primary health care of men, women and children
3. Enhancing the welfare and well-being of farmers and unorganized sector workers through increased employment opportunities.

The fundamental infrastructural requirements underlying successful fulfillment of objectives relating to these aspects are reliable transportation and communication facilities in the rural and remote areas of the country.

The scheme aims to focus on research and development programs for provisioning of broadband and VoIP services in rural areas. The development includes VoIP-based rural broadband access node, 2G and beyond SDR GSM BTS.

VoIP-based rural broadband access node system integration and link testing is in progress, which will be followed by piloting the technology trial in the field.

Implementation for 2G and beyond SDR GSM BTS activity is in progress.

- **Broadband Technologies**

The scheme broadly aims at research & development on packet based broadband tech for access and transport telecommunication system on various transmission media including optical, wireless, copper etc. Currently, feasibility study is in-progress.

- **Strategic & Enterprise Solutions**

The scheme aims at development of software intensive applications and solutions catering to the requirements of strategic and enterprise segments.

ATM applications for Navy

Some of these technologies have are already completed and ready, namely, ATM technology and clearing house application. A tri-partite MoU between C-DOT, BEL and Indian Navy has been signed to work together for execution of additional projects of Indian Navy related to the use of C-DOT ATM technology. Onboard ATM technology support services for three ships of AISDN-17 project at Mumbai is ongoing on commercial basis as per the agreements. Further, data clearing house services for GSM roaming between east and north zones of BSNL & MTNL Delhi have been awarded to C-DOT on ASP (Application Service Provider) model basis and the project is being executed on commercial basis as per the agreement.

Network Management System (NMS)

Further, development is also ongoing for design and development of Network Management System for Transmission Network (TX-NMS) in the management of transmission elements deployed in BSNL and MTNL network.

- **Basic Research on Telecom Network and Enabling Technologies / Study / Pilot Projects**

It is an exploratory work which is ongoing for taking up new technology areas for implementation.

The pilot projects have been taken up and feasibility reports are being prepared. Report in one of the initial studies has already been compiled.

- **Enhancements / New features / upgradation / adaptation / technical support for developed technologies**

  It is ongoing technology upgradation activity catering to component obsolescence, feature enhancements and adaptation for new interfaces etc. Considerable progress has been achieved.

  It is an ongoing technology upgradation activity catering to component obsolescence, feature enhancements and adaptation for new interfaces etc. Considerable progress has been achieved in the following areas:

  - ❏ New patch release for 2-2-1-9 successfully tested by TEC at Ladwa, Kurukshetra for features like centrex, special priority implementation, hourly billing files' dumped, interface for compact embedded system (CES). Software has been installed at various sites and working satisfactorily. Patch release is ready for propagation in field.
  - ❏ Technology also transferred for CES to transfer CDRs to billing centres.
  - ❏ Design enhancements / adaptations ongoing for migration of C-DOT MAX tech to packet-based tech. The subsystems for migrating MAX tech to packet tech are planned for testing & field trial at Bangalore in last qtr of 2008-09. TEC testing completed for C-DOT IP DSLAM & ADSL2+ CPE, field trial for same is scheduled in last qtr of 2008-09 at Shillong in NE.
  - ❏ Technology support for enhancements & field trial for WIN (Wireless IN) services of IN (Intelligent Network), CIS (Call Interception System) & Clearing House Application.
  - ❏ Regular onsite support for deployment of local NMS (LNMS), Subscriber mgmt and implementation of TAX NMS system in BSNL network

- **Campus**

  The drawings for construction of hostel and dwelling units have been prepared and architect submitted the same for their statutory approval before the construction could commence.

- **C-DOT Alcatel Research Centre (CARC)**

  It is a joint venture program and trials for the first version of CPE (Customer Premises Equipment) with modified base station being field tried at many sites. Reasonable numbers of CPEs have been sold to east European countries.

- **Business Promotion**

  - ❏ C-DOT has entered into an agreement with BSNL and MTNL for providing the Data Clearing House services for GSM National Roaming between East and Nort Zones of BSNL and MTNL Delhi and Mumbai w.e.f February 2009 on commercial basis.
  - ❏ C-DOT has signed an MoU with Administrator, USOF, DOT for providing the technical consultancy for implementation of the project to provide rural broadband services.

- C-DOT has signed an MoU with USOF, DOT for providing the technical consultancy on second phase of planning shared infrastructure for cellular mobile services in rural and remote areas.
- A Transfer of Technology Agreement has been signed with M/s Instrumentation Ltd. for C-DOT HVP (High Voltage Protection) Unit.
- C-DOT has received an order for supply and installation of C-DOT's Missed Call Alert System at 15 BSNL sites.
- C-DOT participated in 'India Telecom 2008' , held between December 11th - 13th 2008 at Pragati Maidan, New Delhi. Next Generation Network Products and Network Management System were demonstrated at the event.

C-DOT participated in '17th Convergence India 2009' held between March 18th-20th, 2009 at Pragati Maidan, New Delhi.

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VIII. Public Sector Undertakings

VIII. 1 Bharat Sanchar Nigam Limited

ROLE AND FUNCTIONS

BHARAT SANCHAR NIGAM LIMITED (BSNL) was formed on October 1, 2000 by corporatisation of the erstwhile Department of Telecom operation & Department Telecom Services. The company has taken over the erstwhile functions of the Department of Telecom in respect of provision of telecom services across the length and breadth of the country excluding Delhi and Mumbai. BSNL has one of large base of skilled work force of around 3.0 lakh as on March 31, 2008. BSNL is a 100% Govt. of India owned Public Sector Undertaking.

BSNL 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 nation-wide telecom network covers all District headquarters, Sub-Divisional headquarters, Tehsil headquarters and almost all the Block Headquarters.

Telecommunications is a basic infrastructure along with power and transportation and is thus recognized as the means for accelerating the economic growth in all the regions including remote and inaccessible areas in the country. Telecom in the modern world is expected to usher a concept of global economy and single world market place. BSNL telecom network, therefore, is part of modern global network, providing access to countries around the world for transporting information in the form of voice and data.

HIGHLIGHTS of 2008-09

Bharat Sanchar Nigam Ltd. (BSNL) runs the telecom services all over the country, except Delhi and Mumbai, through 24 Telecom Circles and 2 Metro Districts of Chennai & Kolkatta.

BSNL is the largest Public Sector Telecom service provider in the country having 814.91 lakh customers as on March 31, 2009. During 2008-09, it has added 91.52 lakh customers.

BSNL has provided Village Public Telephones (VPTs) in 5.20 lakh villages, up to March 31, 2008, out of 5.94 lakh villages in the country as per census 2001. During 2008-09, it has covered 29,304 villages increasing the coverage to 5.49 lakh villages.

The total number of rural DELs as on March 31, 2008 was 255.65 lakh (i.e. about 35.34% of total DELs). During 2008-09, BSNL added 36.22 lakh rural DELs raising the rural DELs to 292.04 lakh (i. e. about 35.84% of total DELs).

BSNL provides wireless service in its network. It had 407.87 lakh Wireless (WLL-M +GSM-M) connections as on March 31, 2008. During 2008-09, it has added 113.57lakh wireless connections raising the wireless customer base to 521.44 lakh.

BSNL also provides WLL telephones service in its network. There were 45.78 lakh WLL connections as on March 31, 2008. During 2008-09, it has added 8.55 lakh WLL connections raising the WLL connections to 54.33 lakh.

As on March 31, 2008, BSNL had 38,158 wired line telephone exchanges with equipped capacity 467.61 lakh lines and customers base 315.52 lakh. The wired line status as on March 31, 2009 is 38,231 telephone exchanges with equipped capacity of 461.92 lakh lines and 293.46 lakh connections.

BSNL provides high speed Broadband services and has 20.32 Lakh Broadband connections up to March 31, 2008. During 2008-09, it has added 15.25 lakh broadband connections raising the broadband connections to 35.57 Lakh.

BSNL is an Internet Service Provider (ISP) and provides a full range of Internet services for which it has established National Internet Backbone (NIB). As on March 31, 2009, BSNL had provided 36.02 lakh Internet connections. During 2008-09, BSNL added 1.31 lakh internet connections raising the internet connections to 36.93 lakh.

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 October 1, 2000 have been valued at Rs. 63,461 crore in lieu of the capital structure which consists of equity of Rs. 5,000 Crore, Preference equity of Rs. 7,500 crore, Government loan Rs. 3,056 crore, loan from MTNL of Rs. 3,056 crore and surplus of Rs. 40,405 crore as capital reserve.

BSNL has earned total revenue of Rs. 38,053 crore in the financial year 2007-08. Despite intense competition and reduction in Access Deficit Charges (ADC) charges by TRAI the company has earned a profit after tax of Rs. 3,009 crore. The Net Worth of the company has also increased by Rs.1,180 crore during the year and reached at Rs. 88,128 crore.

For the year 2007 08, BSNL has paid total dividend of Rs. 1500 crore to the Government.

Achievements during 2008-09

Sl. No.	Parameter	Unit	Achievement during 2008-09	Status as on March 31, 2009
1	Wire line Connections	Nos.	(-) 22,05,865	2,93,46,431
2	WLL connections	Nos.	8,55,306	54,33,038
3	Mobile Connections	Nos.	1,05,02,156	4,67,11,196
4	Broadband Connections	Nos.	15,35,035	35,57,471
5	Internet connections	Nos.	1,31,091	36,93,423

INTELLIGENT NETWORK

With the commissioning of 5 new technology IN Platforms (4 r General-Purpose and 1 Mass Calling), IN Services are available throughout the country. Various IN services being offered by BSNL are ITC & Call Now (Prepaid Calling Cards), 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 & Fixed line Pre-Paid (FLPP) Service.

Tele-voting 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 is available.

FLPP Pre-paid over Post- paid service is available on telephone connections.

Combined Voice VPN including BSNL landline, BSNL CellOne & MTNL landline is available.

BSNL has signed an interoperability agreement for making available BSNL's Toll and UAN service through network of almost all the private operators.

Online sale of Pre-paid cards of IN services is available.

COMPUTERIZATION & INFORMATION TECHNOLOGY

Proof of Concept (POC) phase of CDR Project has started. CDR Project Data Centers are located at Kolkata, Hyderabad, Pune & Chandigarh for East, South, West & North Zones. These 4 Data Centers will take care of all the activities relating to landline services of the circles in the respective zones.

Customer Care Portal has been implemented in all the circles of BSNL.

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 in 265 SSAs, which is a single point approach for addressing all customers' needs cum grievances.

Web based Telegraph Messaging System (WTMS) has been implemented in 15 Circles and is being implemented progressively in the remaining circles of BSNL.

Tendering for procurement of Operation Support System & Business Support System (OSS&BSS) for IMPCS Phase 6 expansion for all the 4 zones is under process.

RURALTELEPHONY

Village Public Telephones [VPTs]

- BSNL has covered 5, 49, 294 villages as per census 2001 with VPT facility in the country up to March 31, 2009 out of the 5,93,601 villages.

- BSNL has entered into agreement with USOF, DOT for provision of VPTs in 66,822 undisputed, undisturbed, accessible and inhabited villages having population more than 100 as per Census 1991 in the country. Out of 66,822 VPTs awarded to BSNL as per USO tender, 57,181 VPTs have been provided unto March 31, 2009.

- BSNL has entered into an agreement with USOF, DOT for provisioning of VPT facility in 62,443 newly identified uncovered inhabited villages of Census 2001. Out of awarded 62,443 villages, BSNL has covered 20,527 villages with VPT facility till March 2009.

Shri Kuldeep Goyal, CMD, BSNL having a brief with Shri Tejbir Singh, Director-Marketing, ITI at the ITI stall during Convergence India-2009 Exhibition held at Pragati Maidan, New Delhi from 18th to 20th March, 2009

Rural Community Phones (RCPs)

BSNL has entered into an agreement in September 2004 with USOF, DOT to provide RCP facility in 24,822 villages having population more than 2,000 as per census 1991 where there is no public telephone facility other than VPT. The agreement was subsequently revised by USOF; DOT to 21,958 villages for provisioning of RCPs. BSNL has already provided 21,958 RCPs by the end of February 2009.

Replacement of MARR VPTs

BSNL had signed agreement with USOF, DOT for replacement of 185,121 number (revised from earlier allotted 1, 86,872) of VPTs which were earlier working on Multi Access Radio Relay (MARR) technology. A total number of 183,865 MARR VPTs have been replaced upto March 31, 2009.

TELEGRAPH SERVICES

The number of various types of Telegraph Offices in the country as on March 31, 2009 as given below:

1	Central Telegraph Offices (CTOs	87
2	Telegraph Offices (T.Os)	169
3	Telecom Centres (T.Cs)	169
4	Combine Posts and Telegraph Offices (C.Os)	416
	Total	**841**

Telegraph Network Modernization

A New Web Based Telegraph Messaging System (WTMS) for transmission of Telegrams has been implemented in all Circles except Assam and Jharkhand Telecom Circle as on March 31, 2009.

Conversion of Telegraphs Offices and Telecom. Centres into Customer Service Centres

A total No. of 695 loss making and low Revenue of Telegraph Offices were converted into Customer Service Centres (CSCs) in 2008-09 for their gainful utilization in the interest of BSNL.

TELECOM FACTORIES

BSNL Telecom Factories located at Kolkata, Gopalpur, Kharagpur, Jabalpur, Bhillai, Richhai and Mumbai are in-house manufacturing units of the company. They 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, DDF, and SIM Cards etc. In the changed telecom scenario, it is the endeavor of the Telecom Factories to venture into new technology areas to support BSNL as manufacturing-cum-service support organization. Amidst all constraints posed by declining demand of conventional products, decreasing work force, TFs have supplied 4,099 Nos. of towers during 2008-09. All the seven Telecom Factories are now ISO 9001:2000 certified. In addition, TF Mumbai has also awarded ISO 14001 in July, 2008.

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.

INTERNATIONAL RELATION

Activities during 2008-09

A total 211 BSNL officers were deputed abroad during 2008-09 for various events. Out of these, 103 officers were deputed abroad for different technology training Programmes in order to upgrade the knowledge and skill of officers working in BSNL.

14 officers were deputed abroad for testing and validation of equipment supplied by the vendors to BSNL at the vendor's premises / laboratory.

94 officers were deputed for attending exhibitions / meetings / conference / business visits to have first hand information on latest developments taking place in telecommunication.

Further, 10 officers from BSNL attended the ITU Forum of the Regional Working Group on Private Sector Issues: Asia & Pacific Region in New Delhi from 3-5 April 2008.

CMD, BSNL Shri Kuldeep Goyal with foreign delegates at "India Telecom 2008" in New Delhi

DEVELOPMENT OF TELECOMMUNICATIONS FACILITIES IN SELECTED AREAS

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

North East Region:- North Eastern Region comprises of eight states i.e. Assam, Meghalaya, Mizoram, Tripura, Arunachal Pradesh, Manipur Nagaland & Sikkim. These states are 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

Network Status of NE Region States:- The status of telecom facilities as on March 31, 2009 in each of the state of North East Region is shown in the following table:

Sl. No.	Name of State	Telephone Exchange	Total Capacity (lines)	Total DELs (Nos.)	Waiting List (wireline)	VPTs (As per census 2001)
1	Assam	605	19,27,033	13,24,128	447	23,369
(2a)	Meghalaya	119	2,45,335	1,55,753	0	2,873
(2b)	Mizoram	99	1,69,632	1,33,399	107	679
(2c)	Tripura	126	3,04,807	2,80,378	0	722
	NE-1	344	7,19,774	5,69,530	0	4,274
(3a)	Arunachal Pradesh	106	2,57,780	2,57,886	0	1,169
(3b)	Manipur	53	1,81,556	1,81,609	109	1,786
(3c)	Nagaland	63	2,56,858	2,56,921	0	1,111
	NE-2	222	6,96,194	5,35,179	109	4,066
4	Sikkim	47	1,33,800	1,11,552	0	374
	NE Region	**1,218**	**34,76,801**	**25,40,389**	**663**	**32,070**

Development Status: Target and achievement during the year 2008-09 for the North East Region are as follows:-

Item	2008-09	
	Target	Achievements
Net Switching Capacity (Lines) (Wired +WLL+CMTS)	385,000	451,585
DELs (Nos.)		
(i) Fixed	60,600	-55,998
(ii) Mobile	261,000	106,479
VPTs (Nos.) as per census 2001	4,088	1,402
Broadband Capacity(ports)	28,600	70,460
Broadband Connections (Nos.)	24,200	29,431
Internet Connections (Nos.)	12,500	3,965

Tele-density: Status of telephone connections in NE Region and the tele-density State/Circle- wise as on March 31, 2009 are given in the following table:

Name of State	Tele-density				
	BSNL Urban	BSNL Rural	BSNL Total	All Operator	% BSNL Contribution
Assam	20.45	1.71	4.44	20.59	21.54
Meghalaya	19.29	2.67	6.08		
Mizoram	17.96	8.63	13.51		
Tripura	25.57	3.93	7.94		
NE-1	**21.30**	**3.86**	**8.04**	28.62	29.95
Arunachal Pradesh	40.72	6.43	15.97		
Manipur	13.27	2.42	5.29		
Nagaland	38.75	3.59	9.76		
NE-2	**27.36**	**3.69**	**9.21**		
Sikkim	96.30	7.73	18.85		
Total NE Region	21.70	2.37	5.86	27.83	24.70
All India	**17.02**	**3.57**	**7.25**	**36.94**	**18.98**

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 balanced 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 & 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) & West Bengal.

Targets and achievements for the year 2008-09 under Tribal-sub-plan (TSP) are as follows:-

Sl.No.	Items	2008-09	
		Target	Achievement
1.	Telephone exchanges (Nos.)	12	13
2.	Switching Capacity (in lakh lines)	23.90	10.47
3.	DELs (in lakh Nos)	15.85	9.12
4	OFC (RKms)	2,388	3,693

Staff Welfare

Measures/ Facilities undertaken by BSNL

BSNL is running various welfare programmes for its employees and their family members as part of BSNL's Welfare measures. During the year 2006-07, it has spent Rs. 10.80 crore on various Welfare Programmes.

Grant of Scholarship to the wards of BSNL employees.

Grant of Book Award & Incentive to school going children of the BSNL employees.

Immediate financial assistance of Rs.15, 000 to the family of BSNL employees who die in harness.

Financial assistance of up to Rs.25, 000 in case of serious illness or major surgical operations.

Financial assistance to victims of natural calamities/communal riots/terrorist attacks is granted financial assistance up to a maximum of Rs.3,000/-.

Organizing of excursion trips and providing transport subsidy.

Grant in aid to TWCO/TWWO

The main role/objective of these organizations are promotion of the welfare of the families of the employees and its main activities are:

Setting up of crèches for child care in P&T residential colonies and offices. There are 8 crèches all over the country.

TWCO/TWWOs have been allowed usage of computer facilities of telecom Training Centres for training children and spouse of BSNL employees.

There are 25 Holiday Homes all over the country for use by its employees and their family members.

Sexual Harassment at the Work Place

As per the guidelines of the Supreme Court a complaints Committee to deal with such cases has been formed at Corporate Office, all Circles & its field units.

Staff Grievance Redressal

A staff Grievance Cell has been formed at Corporate Office and Circle/SSAs level to redress the grievances of Staff related to Service matters.

SPORTS ACTIVITIES

BSNL on its formation has started recruiting five outstanding sportsperson per Circle per year in Group 'C' & 'D' posts and so far 337 sportspersons have been recruited.

In the year 2008, for the outstanding sportsperson, a career progression policy has been formulated and till date 56 sportspersons have been granted to next higher grade. All the Group 'D' sportsperson have been designated as Junior Sports Assistant. Sanchar Krida Awards are being given to the sportspersons who get 1st and 2nd Positions in National and National level tournaments and to the Coach of the winning team. It consists Rs.10,000/- as cash award, a silver medal and a citation. Cash award for excellence in International level tournaments.

BSNL sports Board is affiliated with 12 sports federations. Team selected in all India BSNL tournament is sent to participate in National/ National level tournament conducted by various Federations to which BSNL is affiliated.

Sports grant is being given for organizing 15 All India BSNL sports tournament and one Cultural meet.

CORPORATE SOCIAL RESPONSIBLITIES

BSNL Corporate Social Responsibilities (CSR)Board has been constituted at Corporate Office and territorial Circle, for implementation of various schemes under CSR.

For implementation of CSR policy in BSNL, Rs. 5 crore has been allotted for the year 2008-09 and the following activities have been carried out.

A pilot CSR project has been started in Assam Circle for which an amount of Rs.80, 48,850 has been allotted. Rs. 1 crore has been donated to CM relief fund for rehabilitation of flood affected people of Bihar in September, 2008.

BSNL has allocated Rs. 3, 50, 62,500 to 24 Circles for various CSR activities for the year 2008-09.

The provision for expenditure under various heads is as follows.

Health: Provision for donation of 42 Ambulances by various Circles to the Govt. Hospitals at the cost of Rs. 1.05 cr. has been done.

Education: Provision for donation of 210 PCs with printer & Broad band connection by various circles to schools for physically handicapped/retarded children and orphanages at the cost of Rs.1.05 crore has been done.

GSM Mobile PCOs: Provision of 750 GSM Mobile PCOs on tricycle/rickshaw to physically handicapped persons at the cost of Rs. 1,40,62,500.

TABLE - 1

STATUS OF TELEPHONE EXCHANGES AND DIRECT EXCHANGE LINES AS ON MARCH 31, 2009 & MARCH 31, 2008

S. No.	Circles	No. of Telephone Exchanges as on		Direct Exchange Lines (Fixed+WLL+CMTS) as on	
		31.3.2009	31.3.2008	31.3.2009	31.3.2008
1	Andaman & Nicobar	48	50	99,037	82,702
2	Andhra Pradesh	4,166	4,003	5,657,526	4,930,309
3	Assam	605	597	1,324,128	1,348,990
4	Bihar	1,235	1,223	3,148,722	2,235,990
5	Chhattisgarh	633	625	1,157,157	959,637
6	Gujarat	3,225	3,218	4,574,565	4,379,402
7	Haryana	1,285	1,274	2,580,484	2,260,206
8	Himachal Pradesh	1,095	1,062	1,267,336	1,050,291
9	Jammu & Kashmir	369	372	1,170,478	1,181,566
10	Jharkhand	492	479	1,,260,723	1,086,690
11	Karnataka	2,753	2,727	4,916,904	4,400,013
12	Kerala	1,241	1,241	6,554,016	6,255,762
13	Madhya Pradesh	2,558	2,686	3,317,684	2,863,189
14	Maharashtra	4,937	4,942	7,086,925	7,062,222
15	North East - 1	344	330	569,530	527,869
16	North East - 2	222	223	535,179	524,386
17	Orissa	1,163	1,159	2,250,870	1,943,240
18	Punjab	1,529	1,542	4,241,213	3,445,026
19	Rajasthan	2,334	2,335	4,721,530	4,102,948
20	Tamilnadu	2,030	2,086	5,572,185	5,144,949
21	Uttar Pradesh (East)	2,280	2,296	7,538,520	6,028,043
22	Uttar Pradesh (West)	975	977	2,780,005	2,474,761
23	Uttaranchal	458	455	1,120,078	1,010,049
24	West Bengal	1,385	1,385	2,960,002	2,620,872
25	Kolkata	542	550	2,948,318	2,427,517
26	Chennai	327	321	21,37,550	1,992,439
	BSNL TOTAL	**38,231**	**38,158**	**81,490,665**	**72,339,068**

TABLE - 2

STATUS OF RURAL TELEPHONE CONNECTIONS AS ON MARCH 31, 2009 & MARCH 31, 2008

S. No.	Circles	2008-09			2007-08		
		Rural Telephone Connections	BSNL Total Telephone Connections	%age of Rural Telephone Connections	Rural Telephone Connections	BSNL Total Telephone Connections	%age of Rural Telephone Connections
1	Andaman & Nicobar	47,972	99,037	48.44	40,124	82,702	48.52
2	Andhra Pradesh	2,417,557	5,657,526	42.73	1,918,666	4,930,309	38.92
3	Assam	436,504	1,324,128	32.97	443,150	1,348,990	32.85
4	Bihar	1,296,414	3,148,722	41.17	859,123	2,235,990	38.42
5	Chhattisgarh	330,966	1,157,157	28.60	251,691	959,637	26.23
6	Gujarat	1,554,297	4,574,565	33.98	1,485,914	4,379,402	33.93
7	Haryana	1,394,394	2,580,484	54.04	976,661	2,260,206	43.21
8	Himachal Pradesh	902,976	1,267,336	71.25	778,733	1,050,291	74.14
9	Jammu & Kashmir	169,412	1,170,478	14.47	164,623	1,181,566	13.93
10	Jharkhand	339,878	1,260,723	26.96	276,133	1,086,690	25.41
11	Karnataka	1,251,964	4,916,904	25.46	1,173,746	4,400,013	26.68
12	Kerala	4,002,329	6,554,016	61.07	3,788,502	6,255,762	60.56
13	Madhya Pradesh	870,893	3,317,684	26.25	740,782	2,863,189	25.87
14	Maharashtra	2,756,760	7,086,925	38.90	2,664,574	7,062,222	37.73
15	North East - 1	208,038	569,530	36.53	182,249	527,869	34.53
16	North East - 2	164,126	535,179	30.67	146,792	524,386	27.99
17	Orissa	1,080,258	2,250,870	47.99	887,104	1,943,240	45.65
18	Punjab	1,871,669	4,241,213	44.13	1,490,377	3,445,026	43.26
19	Rajasthan	1,696,444	4,721,530	35.93	1,496,124	4,102,948	36.46
20	Tamilnadu	1,469,961	5,572,185	26.38	1,479,073	5,144,949	28.75
21	Uttar Pradesh (East)	2,216,969	7,538,520	29.41	1,970,116	6,028,043	32.68
22	Uttar Pradesh (West)	663,218	2,780,005	23.86	575,044	2,474,761	23.24
23	Uttaranchal	421,451	1,120,078	37.63	353,756	1,010,049	35.02
24	West Bengal	1,517,134	2,960,002	51.25	1,300,568	2,620,872	49.62
25	Kolkata	0	2,948,318	—	0	2,427,517	—
26	Chennai	122,737	2,137,550	5.74	121,445	1,992,439	6.10
	BSNL TOTAL	**29,204,321**	**81,490,665**	**35.84**	**25,565,070**	**72,339,068**	**35.34**

TABLE - 3

STATUS OF VILLAGE PUBLIC TELEPHONES (VPTS) AS PER CENSUS 2001 AS ON MARCH 31, 2009 & MARCH 31, 2008

S. No.	Circles	Total Villages as per census 2001	As on March 31, 2009		As on March 31, 2008	
			Villages Covered by VPTs	%age of villages covered	Villages Covered by VPTs	%age of villages covered
1	Andaman & Nicobar	501	271	54.09	179	35.73
2	Andhra Pradesh	26,613	21,600	81.16	20,396	76.64
3	Assam	25,124	23,369	93.01	22,407	89.19
4	Bihar	39,032	37,870	97.02	36,620	93.82
5	Chhattisgarh	19,744	17,480	88.53	17,185	87.04
6	Gujarat	18,159	16,504	90.89	14,978	82.48
7	Haryana	6,764	6,600	97.58	6,369	94.16
8	Himachal Pradesh	17,495	17,045	97.43	15,945	91.14
9	Jammu & Kashmir	6,417	5,795	90.31	5,642	87.92
10	Jharkhand	29,354	27,170	92.56	26,534	90.39
11	Karnataka	27,481	27,254	99.17	26,425	96.16
12	Kerala	1,372	1,372	100.00	1,372	100.00
13	Madhya Pradesh	52,117	51,893	99.57	49,636	95.24
14	Maharashtra	41,442	38,437	92.75	35,245	85.05
15	North East - 1	7,347	4,274	58.17	4,132	56.24
16	North East - 2	7,456	4,066	54.53	3,785	50.76
17	Orissa	47,529	40,783	85.81	38,835	81.71
18	Punjab	12,301	12,008	97.62	12,000	97.55
19	Rajasthan	39,753	38,560	97.00	33,998	85.52
20	Tamilnadu	13,837	13,794	99.69	13,351	96.49
21	Uttar Pradesh (East)	76,993	76,485	99.34	70,457	91.51
22	Uttar Pradesh (West)	20,949	20,061	95.76	19,468	92.93
23	Uttaranchal	15,761	13,005	82.51	12,521	79.44
24	West Bengal	37,512	31,533	84.06	30,110	80.27
25	Kolkata	893	567	63.49	567	63.49
26	Chennai	1,655	1,498	90.51	1,459	88.16
	BSNL TOTAL	**593,601**	**549,294**	**92.54**	**519,616**	**87.54**

TABLE - 4

URBAN/RURAL TELEDENSITY AS ON MARCH 31, 2009 (BSNL)

S. No.	Circles	Total No. of Telephone Connections as on March 31, 2009			TELEDENSITY AS ON March 31, 2009		
		URBAN	RURAL	Total	URBAN	RURAL	Total
1	Andaman & Nicobar	51,065	47,972	99,037	28.89	16.57	21.24
2	Andhra Pradesh	3,239,969	2,417,557	5,657,526	14.08	4.01	6.80
3	Assam	887,624	436,504	1,324,128	20.45	1.71	4.44
4	Bihar	1,852,308	1,296,414	3,148,722	18.53	1.52	3.31
5	Chhattisgarh	826,191	330,966	1,157,157	15.55	1.81	4.90
6	Gujarat	3,020,268	1,554,297	4,574,565	13.09	4.44	7.88
7	Haryana	1,186,090	1,394,394	2,580,484	14.72	8.41	10.48
8	Himachal Pradesh	364,360	902,976	1,267,336	50.65	15.18	19.01
9	Jammu & Kashmir	1,001,066	169,412	1,170,478	33.14	2.02	10.24
10	Jharkhand	920,845	339,878	1,260,723	13.02	1.44	4.11
11	Karnataka	3,664,940	1,251,964	4,916,904	17.21	3.39	8.44
12	Kerala	2,551,687	4,002,329	6,554,016	29.14	15.76	19.19
13	Madhya Pradesh	2,446,791	870,893	3,317,684	12.74	1.71	4.74
14	Maharashtra	4,330,165	2,756,760	7,086,925	14.04	4.56	7.76
15	North East - 1	361,492	208,038	569,530	21.30	3.86	8.04
16	North East - 2	371,053	164,126	535,179	27.36	3.69	9.21
17	Orissa	1,170,612	1,080,258	2,250,870	17.81	3.23	5.62
18	Punjab	2,369,544	1,871,669	4,241,213	20.84	11.01	14.95
19	Rajasthan	3,025,086	1,696,444	4,721,530	19.33	3.39	7.18
20	Tamilnadu	4,102,224	1,469,961	5,572,185	14.94	4.58	9.36
21	Uttar Pradesh (East)	5,321,551	2,216,969	7,538,520	12.63	1.46	3.88
22	Uttar Pradesh (West)	2,116,787	663,218	2,780,005	10.69	1.62	4.58
23	Uttaranchal	698,627	421,451	1,120,078	25.97	6.04	11.59
24	West Bengal	1,442,868	1,517,134	2,960,002	13.97	2.39	4.01
25	Kolkata	2,948,318	0	2,948,318	20.06	-	20.06
26	Chennai	2,014,813	122,737	2,137,550	25.61	-	25.61
	BSNL TOTAL	**52,286,344**	**29,204,321**	**81,490,665**	**17.02**	**3.57**	**7.25**

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VIII. 2 Mahanagar Telephone Nigam Limited

INTRODUCTION

Mahanagar Telephone Nigam Limited (MTNL) was incorporated on February 28, 1986 under the Companies Act as a wholly owned Govt. Company. In April 1986, MTNL assumed responsibility for the control, management, operation of the telecommunications services in the two metropolitan cities of Delhi & Mumbai. The jurisdiction of Company comprises the city of Delhi and the areas falling under the Mumbai Municipal Corporation and Thane Municipal Corporation.

The authorized capital of the Company is Rs. 800 crore. The Paid up Share Capital is Rs. 630 crore divided into 63 crore share of Rs. 10 each. At present, 56.25% equity shares are held by President of India & his nominees and remaining 43.75% shares are held by FIIs, Financial Institutions, Banks, Mutual Funds and others including individual investors.

MTNL is providing cellular services (GSM & CDMA) in Delhi including the peripheral town of Gurgaon, Faridabad, Ghaziabad, and Noida and in Mumbai including Kalyan.

Further MTNL is providing dial up internet services in Delhi and Mumbai under separate non-exclusive license agreement. MTNL launched Broadband service based on the state of the art ADSL2+ technology in the year 2005. MTNL is providing Triple play services i.e voice (including VOIP), high speed internet and IPTV on this broadband network.

PHYSICAL PERFORMANCE

Tele Services

A variety of phone plus services have been made available by MTNL to the customers connected to modern state of art technology digital exchanges e.g. computerized morning alarm, voice mail, automatic changed number announcement, computerized fault booking/ payment system etc.

MTNL is also providing a host of value added services like Call Waiting, Call forwarding, wake up calls, absent subscriber service, caller identification, friend and family night talk, call conference WAP and voice mail etc. to the customers.

Recently MTNL has also been granted the ILD license for providing International Long Distance services.

MTNL has taken several steps to improve its interface with the customers. It has introduced improved bill collection and payment procedures (including bill payment over the Internet and via credit card), opened Tele-marts at which most subscriber services are available, introduced telephone directories on the Internet and on CD-ROM and implemented a customer service management system. MTNL's customer service management system enables our staff to provide customers with access to a range of "on-line" services, including registration for new telephone lines, changes of address and issuances of bills, and allows us to monitor complaints from a single point of contact. MTNL has identified high usage

"commercially important persons" and are making all efforts to strengthen our relationship with these subscribers. In addition to this Telephone Adalats and Open House Sessions are being held for both way effective communications with the customers.

In a detailed survey, conducted by "Reader's Digest", MTNL for the consecutive third year has been rated as the most trusted telecom company and has been awarded the prestigious Reader's Digest Platinum Award.

Shri A. Raja, Hon'ble Minister of Communications & IT looking at demonstration of 3Gservices at MTNL pavilion during India Telecom 2008 exhibition 11-13 December, 2008 – Pragati Maidan, New Delhi

In Delhi during the year 2007-08, 7.50 lakh lines of net switching capacity were added. MTNL provided 1.83 lakh net new connections in Delhi during this period. During the financial year 2008-09 MTNL Delhi has provided 4.40 lakh new cellular connections and a net of 4.04 lakh new connections (including WLL & GSM). Details of achievements are given Annexure-I of this chapter.

In Mumbai during the year 2007-08, 16,938 lines of net switching capacity were added. MTNL Mumbai provided 3.60 lakh net new connections during this period. During the period of financial year 2008-09 10.00 lakh lines of net switching capacity has been added. In addition to this during the same period MTNL Mumbai provided 4.95 lakh new cellular connections and a net of 4.41 lakh new connections (including WLL & GSM).Details of achievements are given in Annexure-II of this chapter.

Thus, during 2007-08 a total of 7.67 lakh lines net switching capacity and 5.43 lakh net new connections including WLL & GSM were added by MTNL. Further during 2008-09 10.00 lakh lines of net switching capacity and 8.46 lakh net connections have been added.

Fault Rate

The fault rate during 2008-09 vis-à-Vis of previous years is as shown below:

No. of faults/100 telephones/month

Units	2004-05	2005-06	2006-07	2007-08	2008-09
Delhi	11.13	8.8	9.42	7.20	6.71
Mumbai	9.00	11.56	10.53	11.38	9.10

The fault rate has come down consistently. The increase in fault rate in Mumbai during current year is mainly due to digging work going on in Mumbai by municipal agencies. This figure for Mumbai is likely to go down in the coming months.

Clearance of Waiting List

With sustained efforts and timely implementation of various projects, the waiting list is "NIL" in Delhi & Mumbai. MTNL is providing telephone on demand in service areas.

DIFFERENT SERVICES

Convergent Billing & CRM Project

The P.O. of Convergent Billing & CRM project was awarded to M/s BEL in March 2006 for Supply, installation & Commissioning of convergent billing system & 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. Internet billing, printing solution has been implemented. AT for rest of the Lines of Business is in progress. Project is likely to be commissioned by August 2009.

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 10.42 lakh and its customer base has reached to 7.03 lakh.

At present two broadband projects are in progress both at Delhi & Mumbai. One is 500K BB ports Network Access Equipment Project awarded to M/s SOTL and another is one million BB ports broadband expansion project awarded to M/s Alcatel. Installation of phase -II (150K ports in Delhi and 100 K ports in Mumbai) equipment to be supplied by M/s SOTL is in progress.

The One million broadband project will be implemented in two phases. The vendor shall commission 300K ports each in phase-I & II in Mumbai and 200K ports each in phase-I & II in Delhi. For phase I implementation of the project PO has already been placed on M/s Alcatel.

IP/MPLS Network

MTNL intends to continue to invest in expanding and upgrading our network to improve the quality of service. MTNL has commissioned a state of art IP/MPLS core network in Delhi and Mumbai to provide a converged IP network for all services. This MPLS core network will 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. The network is currently carrying MTNL's Broadband, IPTV and GSM traffic. Layer 2 & Layer 3 VPN services are also being provided by MTNL through this network. MTNL is working on the expansion of its IP/MPS network so as to further extend the IP reach of its network.

MTNL has floated a tender for the Converged Network to facilitate the convergence of voice, data and video multi media networks into a single unified packet based multi services platform capable of providing futuristic independent network which can facilitate rapid and economical introduction of new services. The tender has been cancelled and a new tender has been planned and is likely to be floated shortly.

NGN Class IV

32K tandem capacity based on Class 4 NGN (Next Generation Network), each in Delhi and Mumbai each has been commissioned in March 2009.

DWDM

To strengthen its transmission network. MTNL has placed a PO for the supply of 42 terminals (20 Delhi & 22 Mumbai) of 40 channels 10 GB/channel DWDM equipment. The installation of the equipment has been completed for 10 terminals which have to be done by the vendor while installation for rest of the terminals is in progress. The testing of the equipment is in final stage of completion and TSEC of the equipment completed.

Customer Premises Equipment

In order to cater to the growing demand for BB connection a global tender for approximately 3.40 lakh numbers of ADSL2+ CPEs was floated and PO for the same was placed on M/s STL and M/s SEMINDIA. Supply of CPES from M/s STL is in progress.

Internet International Bandwidth

Internet International Bandwidth of 3.44 GB in Delhi and 2.88 GB in Mumbai has been procured. This is being constantly augmented to keep pace with demand. At present a tender for procurement of internet bandwidth for the year 2009-10 has been floated. The quantity of Bandwidth to be procured is 5.87 GB for Delhi and 5.50 GB for Mumbai.

Managed Lease Line Network (MLLN) Expansion

A tender for procurement of 25,600 MLLN ports was floated and Purchase Order has been placed on M/s ITI Ltd. The installation of the equipment is in progress.

GSM Cellular Mobile Services

As on March 31, 2009 the total GSM network capacity of MTNL is 2325K in Mumbai and 1775K in Delhi.

A Purchase Order (PO) for expansion of 2G/ 3G GSM/WCDMA network for Delhi and Mumbai have been placed on M/s Motorola and M/s ITI respectively.

MTNL was earmarked frequencies in 2100 MHz band on August 8, 2008 for deployment of 3G services in Delhi and Mumbai. MTNL has been allotted 1 carrier of 5 MHz each in Delhi and Mumbai for the deployment.

3G Jadoo on show at MTNL's pavilion during India Telecom 2008 exhibition 11-13 December, 2008 – Pragati Maidan, New Delhi

On December 11, 2008, Hon'ble Prime Minister of India inaugurated 3G mobile services of MTNL in Delhi. It is the first ever 3G services launched by any operator in India. In addition to better and efficient utilization of spectrum, the 3G services will offer various host of services to the subscribers like Video telephony, High Speed Mobile Broadband, Mobile TV, Video Streaming, Video On Demand, On line Gaming etc. The 3G services will be commercialized soon. On February 5, 2009 MTNL launched 3G services in the NDMC area of Delhi (with 50 Node B) with the brand name "Jadoo". However in entire Delhi the commercialization of services will take some more time. In Mumbai network validation testing is in progress and MTNL Mumbai is planning to commercialize the services in South Mumbai area soon.

In order to provide high speed data services to MTNL 2G/ 3G customers, MTNL is in process of procurement of data cards (HSDPA) through open tender.

CDMA Based Mobile Services

The CDMA Network in Delhi and Mumbai is an state of the art CDMA 20001X technology based network of 400K lines capacity each capable of supporting data speed upto 144 Kbps.

In order to ensure the fixed revenue from the existing CDMA infrastructure, it has been decided by MTNL to appoint the franchisee for providing the services to end customers through 2 Lakh ports of CDMA voice and data wireless services, in each of the cities of Delhi and Mumbai, on a revenue share basis. On August 14, 2008 MTNL has signed a franchisee agreement with Ms IOL Netcom limited for the purpose for five years.

Worldwide Interoperability for Microwave Access (Wi-Max)

In order to assess the technology, MTNL had conducted a trial of Wi-Max services in Delhi and Mumbai.

On August 8, 2008, MTNL was earmarked frequencies in 2.5 GHz band for deployment of Broadband Wireless Access services in Delhi and Mumbai by Government of India. MTNL has been allotted 20 MHz bandwidth in TDD mode for providing Broadband Wireless Access (BWA) service. MTNL has decided to deploy Wi Max services in Delhi & Mumbai on revenue share basis. Presently, MTNL is in the process of finalizing & floating Expression of Interest (EOI) for the same.

Utilization of MTNL's Assets

MTNL has acquired 80,000 square Meter land in sector-62 Noida for institutional use such as Training center etc. Since MTNL has already established an ISO Certified state of the art training center for providing advanced training in telecom field at Mumbai, as such the alternate use of this land for various types of IT enabled and other training facilities (including call center etc.) was decided.

MTNL is developing the land into a Core Knowledge Part on PPP (Public Private Participation) model.

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 has been completed barring few pockets e.g. International Airport, Mumbai Sea Port etc. in Mumbai for want of requisite permissions. MTNL has requested DOT to take up the matter with these authorities to get digging and cable laying permission at their premises without any hindrance so that the pending works can be completed without any further delay.

Partnering Conexus Mobile Alliance

MTNL has joined Conexus Mobile Alliance of Asia-Pacific region. Consequent to partnering in this alliance, the following activities have gathered momentum:

i. Implementation of international data roaming with GRX.

ii. Prepaid roaming with all Conexus members.

iii. Improvements in customer care for roaming customers by improving the process & bilateral facilitation like SIM replacement/ local roaming number etc.

Last meeting of various working groups of conexus mobile alliance & board meeting were held in March 2009 in Bangkok. It was decided that next meetings of various working groups will be held in June 2009 in New Delhi and will be jointly hosted by MTNL & BSNL. Testing and signing of agreements for data (including blackberry) & prepaid roaming is in progress with various conexus members.

Laying of Submarine Cable Project

MTNL through its joint venture Millennium Telecom Ltd. (MTL), with 50:50 equity participation by MTNL and BSNL has planned to lay the Submarine Cable System 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. The bids for the same have been opened in December 2008. Presently the techno-commercial evaluation of the bid is going on. MTL expects to finalize and award the contract for the MCS project in June 2009. The likely date for the completion of the project is approximately 30 months from the date of award of contract. Accordingly, the tentative date for the completion of the project shall be fourth quarter of 2011.

E-procurement System

MTNL has commissioned E- procurement system in Delhi and Mumbai in January 2009 and April 2009 respectively. The system once implemented shall provide for a secured online handling of all procurement processes of MTNL which will include tender creation, uploading, submission, evaluation and automated flow for internal approval cycles etc. all on line and in a secured manner. The system shall provide for all necessary security requirements including bid document privacy, integrity/non tampering, non repudiation and necessary user authentication/access rights management. The system provides for using MTNL digital certificates by the vendors/suppliers and MTNL users.

Converged OSS system

MTNL has proposed to implement a converged OSS system for which it has already empanelled three vendors (through EOI route) to study the existing networks and systems, perform gap analysis and accordingly suggests the solution architecture. The selected vendors are carrying out the studies in the field. Converged OSS has been planned based on TMF's (Tele Management Forum's) NGOSS (Next Generation OSS) architecture, Converged OSS shall integrate with MTNL's converged billing and CRM system under implementation.

The system is proposed to utilize three emerging IT architecture/technologies i.e NGOSS, virtualization & service oriented Architecture(SOA). Implementation of this system shall provide centralized O&M for all networks and system across all the MNL lines of business i.e Transmission network, PSTN, Mobile, BB, and NGN etc. This will mainly include centralized service assurance (NMS) and centralized fulfillment (provisioning) in addition to other business process automation like supplier partner management etc. Converged OSS will provide an end to end view of all the MTNL networks and systems at one place with a single point of provisioning & SLA based end to end management.

Internet Security Solution

MTNL has finalized M/s F-Secure India Pvt LTD as an "Internet Security Solution Providers" to provide client based network downloadable security solutions (consisting of anti virus, Anti spam, software and firmware etc) on "Revenue sharing Model" to its broadband and narrowband internet customer with an objective to free customer from software security works and bring in customer satisfaction. APO has been issued to M/s F-secure India Pvt Ltd for this.

IMS based NGN network

In order to overcome obsolescence and unserviceability of exiting TDM exchange due to stoppage of support by existing vendors and to provide next generation multi media services to its customers, MTNL is contemplating implementation of an NGN, which shall preferably be based on IMS platform, RFP formation is in progress and the tender is expected to be floated in due course.

Certifying Authority Solution

A tender to procure a certifying Authority solution for providing digital signature has been floated on March 16, 2009. This new Certifying Authority (CA) solution set up shall replace the existing set up of MTNL which has been damaged in the fire at Delhi.

JOINT VENTURES

United Telecom Limited (UTL)

A joint Venture company namely United Telecom. Ltd. 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 license to operate NLD and ILD services. MTNL has so far invested Rs 29.015 crore as equity in UTL. As on date the company has a customer base of approx. 1, 36,000 out of which about 73,000 customers are using CDMA 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 MTNL. the joint venture formed in 2006 combines the STPIs 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 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.

Order for Infrastructure creation for data center has been placed on M/s Wipro and the work is in advance stage of completion. APO on M/s HCL for main data centre equipment has been canceled and process is on for retendering of the same. Efforts are being made to operationalize the data center during the current financial year i.e. 2008-09.

Millennium Telecom Limited (MTL)

MTL is a joint venture company of MTNL and BSNL with 50:50 equity partnership. 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. Tender for the same was opened in Dec 08. Presently the techno commercial bids are being evaluated and the contract is expected to be awarded by June 2009 end.

SUBSIDIARY COMPANIES

Mahanagar Telephone Mauritius Limited (MTML)

MTNL has set up its 100% subsidiary in Mauritius with the name Mahanagar Telecom Mauritius Limited (MTML).The company is having license for Fixed telephone service, mobile service ,International long distance services and Internet services.

MTML is providing cost effective services for its customers. It has already rolled out its CDMA based fixed and mobile services as well as internet and ILD services. As on March 30, 2009 the company has a subscriber base of 73,479.

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 and has 700 K customers now and growing further rapidly. 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 & provide newer services. The company is continuously providing value added services on PSTN and mobile network at most affordable rates.

Financial Performance

The financial performance of MTNL during 2008-09 is as follows:

Despite stiff competition, from other operators, MTNL has achieved a financial turnover of Rs. 5304.21 crore, during the year 2008-09, as compared to the previous year's turnover of Rs. 5329.94 crore. MTNL has registered a profit of Rs. 214.83 crore before tax as against Rs. 631.65 crore for the previous year.

Shri A. Raja, Hon'ble Minister of Communications & IT receives Final dividend cheque from Shri RSP Sinha, CMD - MTNL on October 22, 2008; Also seen are Shri S. Behura Chairman – Telecom Commission on extreme left and Smt. Anita Soni, Director (Finance)-MTNL on extreme right

Capital Expenditure on Technology

During the year 2008-09, MTNL has spent an amount of Rs.779.05 .crore as against Rs. 932.46 crore in the previous year on capital expenditure. This was achieved entirely through internal resource generation.

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 been implemented in MTNL wherein efforts are being made to ensure that maximum revenue billing and revenue realization takes place to reduce 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.

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.

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.

Further more to concrete the revenue assurance programme MTNL has deployed an audit firm of International Stature Company in Mumbai for revenue assurance audit for landline interconnect billing process. in this detailed review of basic call charging analysis need to end CDR reconciliation accuracy in service usage recording accuracy of billing / meditation/ switch database of interconnect agreement with partners is being done for further improving revenue realization.

STAFF STRENGTH

The total employees of MTNL were 46,091(excluding safaiwala) as on March 31, 2009 belonging to different categories. Of the total employees, the numbers of employees belonging to Scheduled Caste are 8369, which constitute 18.13% of the total employees. The total number of employees belonging to Scheduled Tribe is 1580, which is 3.42% of total employees.

(As on March 31, 2009)

Group	Total Staff	Women	Persons with disabilities*	ST	SC
A	1269	44	2	55	218
B	5175	568	26	113	778
C	27412	7596	180	512	4744
D	12235	1264	38	900	2629
				1580	8369
DRM	64			-	-
Total	**46155**	**9472**	**246**	**1580**	**8369**

TRADING OF MTNL SHARES

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

CMD MTNL felicitating Mr. Sushil Kumar-Beijing Olympic 2008 Bronze Winner and a ward of MTNL employee

Annexure-I

DEVELOPMENT TARGETS / ACHIEVEMENTS - DELHI

Sl. No.	Items	Targets (MOU) 2007-08	Achievements 2007-08	Targets (MOU) 2008-09	Achievements 2008-09
A	Switching (in K lines)				
	i Gross Capacity	*	776.88	*	39.614
	ii Scrapping	*	26.48	*	39.614
	iii Net Capacity $	1000	750.4	500	0
B	DELs (in K)				
	i Gross	*	667.969	*	701.072
	ii Net $	580	182.638	475	404.451
C	Tax/Tandem (in K lines)	100	0	48	32
D	Transmission (Name of System)	*		*	
	a) SDH System		65		
	(i) STM-16		41		12
	(ii) STM-4		72		31
	(ii) ADM-1/STM-1				30
D	Optical fiber Cable (in Route Kms)	*	591.157	*	246.415
E	Optical fiber Cable (in Fiber Kms)	20000	21895.188	23000	11299.068
F	ISDN	*	15	*	-506
G	Waiting List	*	-	*	-
H	Broadband subscribers	*	47752	*	81488
I	Internet connection	*	17824	*	7216
J	IPTV subscribers	40000	3314	10000	5350
L	VOIP	-	1523	5000	2103

$ including (fixed line, WLL & GSM)

** Target not specified in MOU*

Annexure-II

DEVELOPMENT TARGETS / ACHIEVEMENTS - MUMBAI

Sl. No.	Items	Targets (MOU) 2007-08	Achievements 2007-08	Targets (MOU) 2008-09	Achievements 2008-09
A	Switching (in K lines)				
	i Gross Capacity	*	61.448	*	1123.268
	ii Scrapping	*	44.51	*	123.268
	iii Net Capacity $	1000	16.938	500	1000
B	DELs (in K)	*		*	
	i Gross	*	665.67	*	723.42
	ii Net $	580	305.43	475	441.419
C	Tax /tandem (In K lines)	100		48	45
D	Transmission (Name of System)				
	a) SDH System				
	(i) STM-16		70		59
	(ii) STM-4		79		45
	(ii) ADM-1/STM-1	*	170	*	125
D	Optical fiber Cable (in Route Kms)	20000	588.027	23000	545.85
E	Optical fiber Cable (in Fiber Kms)	*	21161.748	*	25239.45
F	ISDN	*	1209	*	418
G	Waiting List	*		*	
H	Broadband subscribers	*	88149	*	43421
I	Internet connection	40000	45358	10000	65102
J	IPTV subscribers	-	3138	5000	2127
L	VOIP	*	1302		1224

$ inculding (fixed line, WLL & GSM)

** Target not specified in MOU*

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VIII. 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. During the current year, Company has received a total order of 18 Million Lines from BSNL, 9 Million Lines each for West Zone & South Zone and supply of equipment for both orders has already been commenced. The success of technology upgradation and induction is visible across all units of ITI, which fully conform to ISO-9001: 2000 Quality Management System. ISO 14001:2004 Environmental Management System standard also successfully implemented at Palakkad, Mankapur (PCB & Hybrid Circuits Division) and Bangalore Plants. 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) and DWDM (Dense Wavelength Division Multiplexing) optical equipment besides DLC (Digital Loop Carrier) equipment. The Company is also starting the manufacturing of the broadband equipment like WiMAX / WiMAX-CPE and GPON at Rae Bareli Plant. The Company is geared to provide all equipment for total network solutions and specific communication needs of Defence forces. The Bangalore Plant is setting up a Data Center to handle IP Projects for Banks / Financial sector and other Telecom related Software and also 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 V-SAT 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.

Shri Siddhartha Behura, Secretary, DoT & Chairman, Telecom Commission and Shri S.K. Chatterjee, CMD, ITI Ltd., exchange the signed MoU (Memorandum of Understanding) for the year 2009-10 between Telecom Commission and ITI

Strategic communications is the Company's forte with a proven record of 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, 2008 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, 2008 is 92.87%.

MANUFACTURING PLANTS

Plant Location	Products Manufacture
BANGALORE PLANT	WLL CDMA-Infra, Broadband CorDECT, CDMA IFWT, OCB-CSN-MM, AN RAX, SATCOM, PCM MUX, ADSL-DSLAM-CPE, Antenna & 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 and Power Plants. WiMAX and WiMAX-CPE and G PON.
NAINI PLANT	Optical Products-STM-1, 4,16 & 64, 2/34 Optimux and DDF. DLC, DWDM, Telephone Instruments, CLI Phones and Solar Panel.
PALAKKAD PLANT	NGN, IP TAX, SSTP OCB-283 CORE, TAX / TANDEM. MLLN, SIM Card / Smart Card, National ID cards.
SRINAGAR PLANT	Telephone Instruments & CLI Phones / Services.

HIGHLIGHTS OF PERFORMANCE DURING 2008-09 (Provisional)

- GSM - I & C equipment worth Rs.947.26 crore supplied.
- WLL CDMA-Infra equipment worth Rs.66.94 crore supplied.
- SSTP equipment supplied and I&C completed for all 24 sites.
- MLLN equipment worth Rs.66.5 crore supplied and I &C under progress.
- CDMA WLL IFWT Terminal worth Rs.12.44 crore supplied.
- STMs Optic Fibre eqpt. worth Rs.147.86 crore supplied.
- ADSL-DSLAM+CPE, equipment worth Rs.45.86 crore supplied.
- DWDM - worth value Rs.136.21 crore supplied.
- SIM Card worth Rs. 21.25 crore supplied.
- IT Projects -MSWAN under progress.
- NON DOT PSU BUSINESS / Turn Key Projects etc. worth Rs 262.34 crore executed.

Physical Performance for 2006-2007, 2007-2008 and 2008-2009

Major Products	Acctg Unit	2006-07	2007-08	2008-09 (Provl.)
MANUFACTURING PRODUCTS				
OCB-283 LOCAL / CSN & Spares	Rs. Cr.	28.84	62.19	18.36
OCB-TAX / TANDEM	Rs. Cr.	54.28	24.40	0
C-DOT PRODUCTS & SPARES	Rs. Cr.	34.95	41.77	18.06
SATCOM	Rs. Cr.	1.80	8.89	7.48
STMs / OPTIC FIBRE EQUIPMENTS	Rs. Cr.	65.47	45.67	147.86
PCM MUX & 64 Kbps	Rs. Cr.	22.99	17.48	16.11
EPBT / CALLER ID	Rs. Cr.	5.46	1.82	0.24
SPV / OTHER PHONES	Rs. Cr.	3.60	6.39	0
SIM CARDS / VRLA BATTERY	Rs. Cr.	8.23	17.60	21.25
GSM-BTS, RTT, SHELTER, P/P	Rs. Cr.	233.46	106.79	219.78
MISC. PRODUCTS	Rs. Cr.	0	10.11	0
WLL-CDMA INFRA	Rs. Cr.	339.07	62.07	66.94
GSM-INFRA (Net Working)	Rs. Cr.	431.29	160.00	727.48
CDMA WLL-IFWT / HAND SETS	Rs. Cr.	72.70	77.35	12.44
MLLN	Rs. Cr.	134.06	125.88	66.50
MISC. PRODUCTS: IP TAX / SSTP	Rs. Cr.	53.96	2.61	57.05
DWDM	Rs. Cr.	12.42	58.13	136.21
ASDL-DSLAM CPE	Rs. Cr.	-	7.71	45.86
VALUE ADDED SERVICES	Rs. Cr.	-	-	4.97
NON DOT PSU BUSINESS/TURNKEY PROJECTS	Rs. Cr.	315.76	373.14	262.34
TOTAL INCL. ED	Rs. Cr.	1818.33	1210.00	1828.93

FUTURE TECHNOLOGIES PLANNED

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

❖ WIMAX / WI-MAX CPEs

The WIMAX (World-wide Interoperability for Microwave Access) technology is used for high-speed

broadband access. ITI is planning to take up manufacture of WIMAX equipment, initially at SKD Level. ITI is also planning manufacture of WIMAX-CPEs. The products are planned for manufacture at Rae Bareli Plant.

❖ G-PON (Gigabit-Passive Optical Network)

This technology will facilitate higher bit rate broadband access to the subscriber through Optical fiber. A single fiber can provide connectivity to multiple subscribers. This equipment would be manufactured in Rae Bareli Plant.

❖ GSM - 3G

ITI has decided to expand the manufacturing facilities at Rae Bareli Plant to take up manufacture of GSM-3G equipment, which is the next generation Mobile Switch, which has enhanced Data handling capacity. The manufacture of MSC and BSC would be taken up based on Viability assessment for manufacture.

❖ Twin TRX

ITI has taken up manufacture of Twin-TRX to be fitted into the GSM-BTS being presently manufactured by ITI, which would enhance / double the subscriber connectivity capacity of BTS. This product is under manufacture at Rae Bareli and Mankapur Plants of ITI.

❖ GFWP

ITI has signed an MoU with M/s Linktop, China for business of this product. RQ order awaited from BSNL. This product would be manufactured at Bangalore Plant of ITI.

❖ Next Generation Networks- (NGN - IP TAX) Class 4

ITI has signed with Huawei, China for manufacture / supply of NGN Technology products viz. Softswitch based IP TAX Products, which has IP / MPLS Backbone network. This is capable of providing Multi-Services viz. Voice, Data and Video Transmission. The equipment is planned to be manufactured at Palakkad Plant.

❖ NGN - Class 5

ITI has tie-up with M/s ZTE, China for manufacture of class 5 NGN products. ITI has participated in the tender floated by BSNL which is under technical evaluation.

❖ Solar Panel

Keeping in view the requirement of Solar Energy as a Viable alternative for power generation, ITI has plans to set up manufacturing facilities to take up manufacture of amorphous-Silicon Based Thin-Film Solar Power Panels at Bangalore and Naini Plants. The existing Buildings and Manpower at Bangalore & Naini would be gainfully employed for this purpose, which is being set up on Revenue Sharing Model.

❖ Data Center

The process of setting up of Data Center in existing building at Bangalore Plant, to handle IT Projects for Banks / Financial Sector and other Telecom related Software is under progress. This business is based on Revenue Sharing Model.

❖ GSM: - SOUTH ZONE

ITI is also taking up BSNL-GSM South Zone Infrastructure Project in Technology alliance with Huawei, China. This is in addition to the GSM BSNL West Zone, which is being implemented in Technology alliance with Alcatel-Lucent, France.

IMPORTANT ACTIVITIES / EVENTS

- BSNL has placed a total order for 18 Million Lines GSM equipment, 9 Million Lines each for West Zone & South Zone. Supply of equipment upto end March 2009 worth Rs. 731 crore and Balance supply under progress.
- MTNL has placed order for Rs. 171 Crore for GSM equipment, supply of equipment also under progress.
- WLL-CDMA Infra: ITI has won tender bid as L-1 from BSNL for supply of 9.4 Lakh lines of WLL-CDMA -Infra equipment valued Rs. 205 crore and also additional tender quantity against L-2 of 4.03 lakh lines value Rs. 99 crore.
- WLL-CDMA Infra: ITI has received order RQ from BSNL for supply of 5.76 Lakh lines value worth Rs.118 crore and equipment worth Rs.67 crore have already supplied.
- DWDM: A total order worth Rs.136 crore received from BSNL, which has been executed.
- SSTP: ITI has received order for supply of SSTP equipment worth Rs. 59 crore against the tender quota from BSNL. The order has already executed and I & C completed for all 24 sites.
- STM-1,16 & 64: STMs equipment worth Rs.148 crore supplied and balance order value of Rs.111 crore under execution.
- ADSL-CPE order from BSNL worth Rs.46 crore, which has been executed and another order worth Rs.37 crore received during March 2009.
- MTNL has placed order worth Rs.72 crore for supply of MLLN equipment. All equipment supplied and I & C under progress.
- ITI has also received Advance Purchase Orders from BSNL during February, 2009 for GPoN Next Generation Play Network equipment worth Rs. 238 crore, MPLS based IP TAX equipment worth 79 crore and DWDM 32 Ch. worth Rs.39 crore.

EXPORTS

Exports performance for the year 2007-08 is Rs.9.12 crore consisting of 200 Nos. of GSM BTS equipment to Alcatel CIT, France and CDMA WLL services to Afghanistan.

MANPOWER POSITION

Total strength of employees of the Company at the end of the year 2008-09 was 12556 as compared to 13045 at the end of previous year. The voluntary retirement scheme was not in operation during the year. Since the introduction of VRS, a total of 13744 employees have opted for Voluntary Retirement.

EXHIBITIONS

A view of the stall of ITI Limited during the Convergence India-2009 Exhibition held at Pragati Maidan, New Delhi from 18-20 March, 2009

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VIII. 4 Telecommunications Consultants India Limited

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.

VISION

"To excel in providing solutions in ICT, Power and Civil Infrastructure Sectors globally by anticipating opportunities in technology".

MISSION

The Mission statement of the company is : **"To excel and maintain leadership, in providing Communication Solutions on turnkey basis in telecommunication 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 continuous basis and maintain leadership.
- To diversity into Cyber Parks, Cyber Cities, Intelligent Buildings, Highways and Roads and other civil works.
- Entering areas of cost-effective network technologies for building new Telecom & IT networks and upgrading legacy networks.
- Focusing on Broadband Multimedia Convergent Service Networks.
- Entering new areas of IT as systems integrator in Telecom billing, customer care, value added services, e-Governance networks and the like.
- Aggressively promoting, O&M contracts abroad in the IT and Telecom fields by utilizing TCIL's expert technical manpower.

- Developing Telecom & IT training infrastructure in countries abroad.
- Aggressively participating in SWAN projects in various states.

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 licensed 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.

MOU of Integrity Pack signed on August 27, 2008 by CMD, TCIL and Admiral (Retd.) R.H. Tahiliani, Chairman, Transparency International India in presence of Shri Siddhartha Behura, Secretary (Telecom) & Chairman Telecom Commission

GOVT. INVESTMENT IN TCIL

Company was incorporated in 1978 with a Paid-up Capital of Rs. 10 lakh. In 1982-83, the Paid-up Capital of the Company was increased to Rs. 30 lakh. The Paid-up Capital after 7 Bonus Issues in 1987-88, 1992-93, 1994-95, 1996-97, 2001-02, 2002-03 and 2008-09 stands at Rs. 43.20 crore. Company has paid total dividend of over Rs. 164 crore so far to Govt. of India on direct Government Investment of Rs. 30 lakh.

The networth of the Company as on March 31, 2008 was Rs. 400 crore.

OVERSEAS OPERATIONS

Company has worked in 58 countries so far. The Present on going operations are in Mauritius, Kingdom of Saudi Arabia, Kuwait, Oman, Algeria, Nepal, Bhutan, Ethiopia, Afghanistan, Myanmar, Sudan, Behrain and Qatar. Company is implementing PAN Africa, e-Education project covering all 53 member countries in Africa.

FINANCIAL PERFORMANCE - HIGHLIGHTS

(Rupees in crore)

	2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Provisional
Turnover	483.50	410.61	414.87	602.00
Profit before tax	17.40	5.94	3.51	4.50
Foreign Exchange repatriation to India	22.02	28.00	69.57	31.20
Networth	396.65	397.87	399.99	400.60

HIGHLIGHTS 2008-09

PROJECT EXPORTS

Project Exports during 2008-09 are likely to be Rs. 234 crore.

TURNOVER & PROFIT

Turnover in 2008-09 is likely to be over Rs. 605 crore against previous year's figure of Rs. 414.87 crore and MOU targets of Rs. 750 crore.

THRUST ON HI-TECH PROJECTS

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 & attempted to enter new areas and diversified its operations in the allied fields. Company has also revitalized & restructured the IT Division from software development to take part in IT & 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 2008-09, Company has secured orders of over Rs. 532 crore. The major orders booked during the year are as under:

- Additional order of NIB - II from BSNL valuing Rs. 162.56 crore
- FTTH project by MOC, Kuwait valuing Rs. 20.00 crore
- Supply, Installation and commissioning of V - SAT project in Nepal valuing Rs. 12.00 crore
- Supply, Installation and commissioning of External plant network in Oman valuing Rs. 13.00 crore
- Project for 276 KM OFC laying/ splicing / commissioning in Kuwait valuing Rs. 8.80 crore
- Project for enhancement of Data Network of KNPC Refineries and Local marketing in Kuwait valuing Rs. 7.95 crore.
- Multi order contract for Civil, cabling an DOTher misc works in Mauritius valuing Rs. 3.62 crore.
- Up gradation of Tulsipur - Salyal Road project in Nepal valuing Rs. 21.90 crore
- Rural road projects valuing Rs.108 crore
- Construction of Houses in Hissar valuing Rs. 32.29 crore
- DMRC work in Delhi valuing Rs. 13.65 crore
- Fiber Optic Communications system package for Power Grid Corporation of India (PGCIL) for a value of Rs. 8.2 crore.
- UPRRDA project in UP valuing Rs. 13.06 crore.
- Architectural finishing work at three station on Yanuna bank Corridor of MRTC project valuing Rs. 13.64 crore.
- Supervision and monitoring of quality works under RGGVY scheme for Jharkhand State Electricity Board for a value of Rs. 14.81 crore and from Dakshin Haryana Bijili Vitran Nigam for a value of Rs.0.55 crore and from Department of Power, Government of Arunachal Pradesh for value of Rs.15.80 crore.

FINANCIAL PERFORMANCE FOR THE YEAR 2008-09 (Provisional)

(Rs. in crore)

	MOU Target 2008-09 (Very Good)	April, 2008 - March 2009 (Provisional)	April, 2007 - March, 2008
Turnover	750	602.00	414.87
Profit before tax	11.60	4.50	3.51
Foreign Exchange repatriated to India	20	31.20	69.57

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. 106.20 crore. The JV Company has achieved a turnover of Rs. 1849.06 crore and PBT of Rs. 413.51 crore upto March, 2009. TCIL investment in the JV has been increased from Rs. 91.26 crore to Rs. 106.20 crore in August' 2008 with the JV's right issue at a premium of Rs. 50 per share.

INTELLIGENT COMMUNICATION SYSTEMS INDIA LTD. (ICSIL)

TCIL has a share-holding of 36% in this company with investment of Rs.36 lakh. Company has achieved a turnover of Rs 2.50 crore and PBT of Rs. 0.25 crore up to March, 2009.

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. 21.33 crore upto March, 2009.

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 lakh. TBL has executed telecom billing & administration projects in a number of countries including Ukraine, Malaysia, Zimbabwe & 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. 0.28 crore upto March, 2009.

Hon'ble Brig. Gen. Dr. Brian Chituwo, MP, Minister of Health & Republic of Zambia with CMD TCIL Shri R.K. Upadhyay in New Delhi

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 lakh. 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. 31.86 crore and profit of Rs. 2.53 crore upto March, 2009.

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 license 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. 39.81 crore upto March, 2009.

TCIL OMAN LLC

During the year 2008-09 company has promoted another JV with MSE of Oman. TCIL share holding in the company is 70% i.e. OR 1,05,000. JV company is in the process of getting it registered with different department to take contracts in Oman.

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IX. Statistical Supplement

Table-1

RELATIVE PERFORMANCE DURING MARCH 2007 - MARCH 2009

S.No.	Description		Position at the End of		Absolute	Position at the End of		Absolute
			March'07	March'08	Change (4-3)	March'08	March'09	Change (7-6)
1	2		3	4	5	6	7	8
1	Wireline Phones (In Lakh)	Public	374.61	352.28	**-22.33**	352.28	329.20	**-23.09**
		Private	33.13	41.85	**8.72**	41.85	50.45	**8.60**
		Total	**407.74**	**394.13**	**-13.61**	**394.13**	**379.65**	**-14.49**
2	Wireless Phones (GSM+CDMA) (In Lakh)	Public	339.30	443.21	**103.91**	443.21	566.27	**123.06**
		Private	1311.64	2167.58	**855.94**	2167.58	3351.34	**1183.76**
		Total	**1650.94**	**2610.79**	**959.85**	**2610.79**	**3917.61**	**1306.82**
3	Total Telephones		**2058.68**	**3004.92**	**946.24**	**3004.92**	**4297.25**	**1292.33**
4	Teledensity		**18.22%**	**26.22%**	**-**	**26.22%**	**36.98%**	**-**
5	Switching Capacity (In Lakh)	Public	888.17	959.76	**71.59**	959.76	1103.68	**143.92**
6	Village Public Telephones [VPTs]		564610	532281	**-**	532281	561959	**29678**
7	PCOs (In Lakh)	Public	23.65	22.91	**-0.74**	22.91	20.89	**-2.02**
8	OFC Route kms	Public	519155	564166	**45011**	564166	609223	**45057**
9	TAX Lines (In Lakh)	Public	82.20	86.85	**4.65**	86.85	88.33	**1.48**
10	Rural Phones (Fixed+CDMA+GSM)		47099514	76499675	**29400161**	76499675	123512759	**47013084**

Table-2

TELEPHONE PER 100 POPULATION-URBAN/RURAL (TELE-DENSITY) AS ON MARCH 31, 2008 & 2009

Sl.No.	Circles/States	Tele-Density						Total Telephones						% of Rural DELs to Overall DELs	
		Overall		Urban		Rural		Overall		Urban		Rural			
		2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09
1	ANDAMAN & NICOBAR	18.36	21.24	25.38	28.89	14.20	16.57	82702	99037	42578	51065	40124	47972	**48.52%**	**48.44%**
2	ANDHRA PRADESH	28.25	39.59	74.97	103.38	10.44	15.22	23288508	32952403	17056445	23783900	6232063	9168503	**26.76%**	**27.82%**
3	ASSAM	14.74	20.65	76.30	86.98	4.44	9.36	4343409	6161988	3221811	3774963	1121598	2387025	**25.82%**	**38.74%**
4	BIHAR	12.64	22.18	91.99	133.00	3.33	9.17	11847799	21102313	9056682	13296677	2791117	7805636	**23.56%**	**36.99%**
5	CHHATTISGARH	4.38	5.15	14.87	16.69	1.39	1.81	1019940	1217845	768249	886879	251691	330966	**24.68%**	**27.18%**
6	GUJARAT	33.63	45.16	60.14	75.43	16.37	25.21	19244956	26224524	13568463	17400289	5676493	8824235	**29.50%**	**33.65%**
7	HARYANA	30.39	43.75	58.18	75.98	17.18	28.10	7355723	10777566	4537293	6120251	2818430	4657315	**38.32%**	**43.21%**
8	HIMACHAL PRADESH	41.16	55.50	127.78	179.81	30.81	40.47	2716613	3700542	899861	1293426	1816752	2407116	**66.88%**	**65.05%**
9	JAMMU & KASHMIR	21.84	32.76	61.16	77.42	7.87	16.72	2461397	3743780	1807428	2338207	653969	1405573	**26.57%**	**37.54%**
10	JHARKHAND	3.60	4.11	11.67	13.02	1.19	1.44	1086690	1260723	810557	920845	276133	339878	**25.41%**	**26.96%**
11	KARNATAKA	34.53	45.21	74.98	98.73	11.53	14.36	19887339	26326539	15653416	21023170	4233923	5303369	**21.29%**	**20.14%**
12	KERALA	45.34	58.48	100.79	125.35	26.18	35.43	15370914	19976503	8774742	10976819	6596172	8999684	**42.91%**	**45.05%**
13	MADHYA PRADESH	20.29	30.08	60.21	80.36	5.28	11.07	13964581	21057043	11322444	15435929	2642137	5621114	**18.92%**	**26.69%**
14	MAHARASHTRA	27.42	37.90	56.97	69.67	12.59	21.70	24721967	34615611	17166797	21493048	7555170	13122563	**30.56%**	**37.91%**
15	NORTH-EAST- I	27.67	44.49	93.46	139.10	7.15	14.67	1936420	3150042	1554962	2360195	381458	789847	**19.70%**	**25.07%**
16	NORTH-EAST- II	9.14	9.21	28.43	27.36	3.33	3.69	524386	535179	377594	371053	146792	164126	**27.99%**	**30.67%**
17	ORISSA	15.00	23.30	55.59	78.09	7.14	12.55	5953313	9334750	3580756	5133558	2372557	4201192	**39.85%**	**45.01%**
18	PUNJAB	47.89	58.25	82.79	95.85	25.08	33.11	13399833	16530246	9154840	10899559	4244993	5630687	**31.68%**	**34.06%**
19	RAJASTHAN	23.74	37.15	59.06	102.56	12.74	16.71	15343775	24422555	9066299	16050138	6277476	8372417	**40.91%**	**34.28%**
20	TAMIL NADU	35.09	50.46	58.62	79.48	15.78	25.62	20786207	30038512	15652648	21819719	5133559	8218793	**24.70%**	**27.36%**
21	UTTARANCHAL	10.61	11.59	25.01	25.97	5.13	6.04	1010049	1120078	656293	698627	353756	421451	**35.02%**	**37.63%**
22	UTTAR PRADESH - [E]	16.19	24.91	52.15	77.76	6.28	10.24	17677690	28674570	11429308	18646938	6248382	10027632	**35.35%**	**34.97%**
23	UTTAR PRADESH - [W]	#	#	#	#	#	#	13176916	19659617	10038672	14128941	3138244	5530676	**23.82%**	**28.13%**
24	WEST BENGAL	14.36	22.51	57.38	77.86	7.38	13.50	10503632	16612575	5858965	8042754	4644667	8569821	**44.22%**	**51.59%**
25	KOLKATTA	64.22	89.68	-	-	-	-	9330552	13180947	8600104	12138680	730448	1042267	**7.83%**	**7.91%**
26	CHENNAI	103.90	127.38	-	-	-	-	8436749	10633508	8315304	10510771	121445	122737	**1.44%**	**1.15%**
27	DELHI	110.05	140.18	-	-	-	-	18703590	24501382	18703590	24501344	0	38	**0.00%**	**0.00%**
28	MUMBAI	83.48	110.52	-	-	-	-	16316779	22114803	16316653	22114677	126	126	**0.00%**	**0.00%**
	ALL- INDIA	**26.22**	**36.98**	**66.39**	**88.84**	**9.46**	**15.11**	**300492429**	**429725181**	**223992754**	**306212422**	**76499675**	**123512759**	**25.46%**	**28.74%**

 # Teledensity is calculated for UP(E) & UP(W) jointly due to non availabilty of separate population data for UP(E&W).

Table-3

NUMBER OF TELEPHONES AS ON MARCH 31, 2008 & 2009

Sl.No.	Circles/States	Wireline Phones = Fixed DELs						Wireless Phones (GSM+CDMA)						TOTAL TELEPHONES	
		TOTAL		PSUs' Operators		Private Operators		TOTAL		PSUs		Private Operators			
		2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09	2008	March'09
1	ANDAMAN & NICOBAR	**24856**	**19355**	24856	19355	*	*	**57846**	**79682**	57846	79682	*	*	**82702**	**99037**
2	ANDHRA PRADESH	**2710876**	**2547736**	2459235	2226078	251641	321658	**20577632**	**30404667**	2471074	3431448	18106558	26973219	**23288508**	**32952403**
3	ASSAM	**430310**	**351030**	430310	351022	0	8	**3913099**	**5810958**	918680	973106	2994419	4837852	**4343409**	**6161988**
4	BIHAR	**978340**	**968222**	972623	963222	5717	5000	**10869459**	**20134091**	1263367	2185500	9606092	17948591	**11847799**	**21102313**
5	CHHATTISGARH	**318908**	**290923**	258605	230235	60303	60688	**701032**	**926922**	701032	926922	*	*	**1019940**	**1217845**
6	GUJARAT	**2276756**	**2114175**	2128219	1928277	148537	185898	**16968200**	**24110349**	2251183	2646288	14717017	21464061	**19244956**	**26224524**
7	HARYANA	**954266**	**875206**	923438	839816	30828	35390	**6401457**	**9902360**	1336768	1740668	5064689	8161692	**7355723**	**10777566**
8	HIMACHAL PRADESH	**417515**	**379854**	413908	375823	3607	4031	**2299098**	**3320688**	636383	891513	1662715	2429175	**2716613**	**3700542**
9	JAMMU & KASHMIR	**259485**	**239796**	259484	239795	1	1	**2201912**	**3503984**	922082	930683	1279830	2573301	**2461397**	**3743780**
10	JHARKHAND	**446461**	**416622**	446461	416622	*	*	**640229**	**844101**	640229	844101	*	*	**1086690**	**1260723**
11	KARNATAKA	**2843783**	**2782816**	2314581	2173393	529202	609423	**17043556**	**23543723**	2085432	2743511	14958124	20800212	**19887339**	**26326539**
12	KERALA	**3672698**	**3576370**	3586119	3463628	86579	112742	**11698216**	**16400133**	2669643	3090388	9028573	13309745	**15370914**	**19976503**
13	MADHYA PRADESH	**1473275**	**1384955**	1208622	1109960	264653	274995	**12491306**	**19672088**	1654567	2207724	10836739	17464364	**13964581**	**21057043**
14	MAHARASHTRA	**3642641**	**3270288**	3464144	3015349	178497	254939	**21079326**	**31345323**	3598078	4071576	17481248	27273747	**24721967**	**34615611**
15	NORTH-EAST- I	**212255**	**207603**	212255	207603	0	0	**1724165**	**2942439**	315614	361927	1408551	2580512	**1936420**	**3150042**
16	NORTH-EAST- II	**130019**	**127817**	130019	127817	*	*	**394367**	**407362**	394367	407362	*	*	**524386**	**535179**
17	ORISSA	**773157**	**647460**	768243	641789	4914	5671	**5180156**	**8687290**	1174997	1609081	4005159	7078209	**5953313**	**9334750**
18	PUNJAB	**1684329**	**1648662**	1425306	1344911	259023	303751	**11715504**	**14881584**	2019720	2896302	9695784	11985282	**13399833**	**16530246**
19	RAJASTHAN	**1757037**	**1665813**	1563591	1480889	193446	184924	**13586738**	**22756742**	2539357	3240641	11047381	19516101	**15343775**	**24422555**
20	TAMIL NADU	**2502157**	**2260000**	2336847	2081254	165310	178746	**18284050**	**27778512**	2808102	3490931	15475948	24287581	**20786207**	**30038512**
21	UTTARANCHAL	**324484**	**300680**	324484	300680	*	*	**685565**	**819398**	685565	819398	*	*	**1010049**	**1120078**
22	UTTAR PRADESH - [E]	**1512422**	**1525037**	1454315	1445029	58107	80008	**16165268**	**27149533**	4573728	6093491	11591540	21056042	**17677690**	**28674570**
23	UTTAR PRADESH - [W]	**975480**	**984996**	944506	949340	30974	35656	**12201436**	**18674621**	1530255	1830665	10671181	16843956	**13176916**	**19659617**
24	WEST BENGAL	**1122537**	**1034372**	1117703	1028542	4834	5830	**9381095**	**15578203**	1503169	1931460	7877926	13646743	**10503632**	**16612575**
25	KOLKATTA	**1488116**	**1537935**	1374363	1374422	113753	163513	**7842436**	**11643012**	1053154	1573896	6789282	10069116	**9330552**	**13180947**
26	CHENNAI	**1375549**	**1404179**	1010059	1011580	365490	392599	**7061200**	**9229329**	982380	1125970	6078820	8103359	**8436749**	**10633508**
27	DELHI	**2420641**	**2521309**	1574417	1525981	846224	995328	**16282949**	**21980073**	1607046	2059933	14675903	19920140	**18703590**	**24501382**
28	MUMBAI	**2685109**	**2881401**	2101452	2047225	583657	834176	**13631670**	**19233402**	1926933	2422579	11704737	16810823	**16316779**	**22114803**
	ALL- INDIA	**39413462**	**37964612**	**35228165**	**32919637**	**4185297**	**5044975**	**261078967**	**391760569**	**44320751**	**56626746**	**216758216**	**335133823**	**300492429**	**429725181**

**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.2007)	Villages covered with VPTs as on					PCOs as on (Local+STD+Highway)	
				Public		Private*	TOTAL VPTs			
				31.03.2008	31.03.2009	31.03.2008	31.03.2008	31.03.2009	31.03.2008	31.03.2009
1	Andaman & Nicobar	201	501	179	271	0	**179**	**271**	**963**	**702**
2	Andhra Pradesh	29460	26613	20396	21600	1408	**21804**	**23008**	**241212**	**200291**
3	Assam	24685	25124	22407	23369	0	**22407**	**23369**	**34518**	**33862**
4	Bihar	41077	39032	36620	37870	0	**36620**	**37870**	**66388**	**67160**
5	Chhattisgarh	19720	19744	17185	17480	0	**17185**	**17480**	**9311**	**8630**
6	Gujarat	18125	18159	14978	16504	4114	**19092**	**20618**	**106021**	**89587**
7	Haryana	6850	6764	6369	6600	0	**6369**	**6600**	**28218**	**26273**
8	Himachal Pradesh	16925	17495	15945	17045	0	**15945**	**17045**	**12020**	**11416**
9	Jammu & Kashmir	6764	6417	5642	5795	0	**5642**	**5795**	**14395**	**12693**
10	Jharkhand	31703	29354	26534	27170	0	**26534**	**27170**	**21111**	**18954**
11	Karnataka	27066	27481	26425	27254	0	**26425**	**27254**	**256305**	**242020**
12	Kerala	1468	1372	1372	1372	0	**1372**	**1372**	**129135**	**123469**
13	Madhya Pradesh	51806	52117	49636	51893	611	**50247**	**52504**	**56377**	**56992**
14	Maharashtra	42467	41442	35245	38437	2643	**37888**	**41080**	**313780**	**262797**
15	North-East-I	7125	7347	4132	4274	0	**4132**	**4274**	**9731**	**9531**
16	North-East-II	7020	7340	3785	4066	0	**3785**	**4066**	**7924**	**8628**
17	Orissa	46989	47529	38835	40783	0	**38835**	**40783**	**28848**	**24796**
18	Punjab	12687	12301	12000	12008	879	**12879**	**12887**	**27837**	**23897**
19	Rajasthan	39483	39753	33998	38560	3010	**37008**	**41570**	**63132**	**55445**
20	Tamil Nadu	17899	13837	13351	13794	0	**13351**	**13794**	**236417**	**216555**
21	Uttaranchal	15610	15761	12521	13005	0	**12521**	**13005**	**12868**	**11065**
22	Uttar Pradesh(E)	79792	76993	70457	76485	0	**70457**	**76485**	**122849**	**124809**
23	Uttar Pradesh(W)	23604	20949	19468	20061	0	**19468**	**20061**	**43426**	**44103**
24	West Bengal	38337	37365	30110	31533	0	**30110**	**31533**	**65685**	**60181**
25	Kolkata	437	1040	567	567	0	**567**	**567**	**60024**	**64083**
26	Chennai	NA	1655	1459	1498	0	**1459**	**1498**	**82711**	**79513**
27	Delhi	191	0	0	0	0	**0**	**0**	**82692**	**73819**
28	Mumbai	NA	NA	0	0	0	**0**	**0**	**156643**	**137409**
	All-India	**607491**	**593485**	**519616**	**549294**	**12665**	**532281**	**561959**	**2290541**	**2088680**

*NA= Not Applicable * Due to application of UASL Private VPTs are constant since Oct.'2003.*
In case of Punjab circle 879 VPTs are replaced by Private Operators, so these are deducted from BSNL's figures.

Table-5

NUMBER OF EMPLOYEES-TOTAL, SCHEDULED CASTE/TRIBE, EX-SERVICEMEN (ABLED & DISABLED), WOMEN AND THEIR %AGE TO RESPECTIVE NUMBERS (INCLUDING INDUSTRIAL WORKERS) AS ON MARCH 31, 2008

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	631	97	15.37%	52	8.24%	0	0.00%	0	0.00%	73	11.57%
B	617	76	12.32%	29	4.70%	0	0.00%	0	0.00%	122	19.77%
C	477	101	21.17%	31	6.50%	11	2.31%	0	0.00%	76	15.93%
D	349	125	35.82%	31	8.88%	3	0.86%	0	0.00%	22	6.30%
Total	**2074**	**399**	**19.24%**	**143**	**6.89%**	**14**	**0.68%**	**0**	**0.00%**	**293**	**14.13%**

Table-6

NUMBER OF DISABLED EMPLOYEES (INCLUDING DOT) AS ON MARCH 31, 2008

Class	Strength		Difference
	% of Sanctioned	Working	
Blindness of Low Vision	5	4	1
Hearing Impairment	4	1	3
Locomotors Disability or Cerebral Palsy	6	9	-3
Total	**15**	**14**	**1**

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X. Graphs and Charts

Figure-1

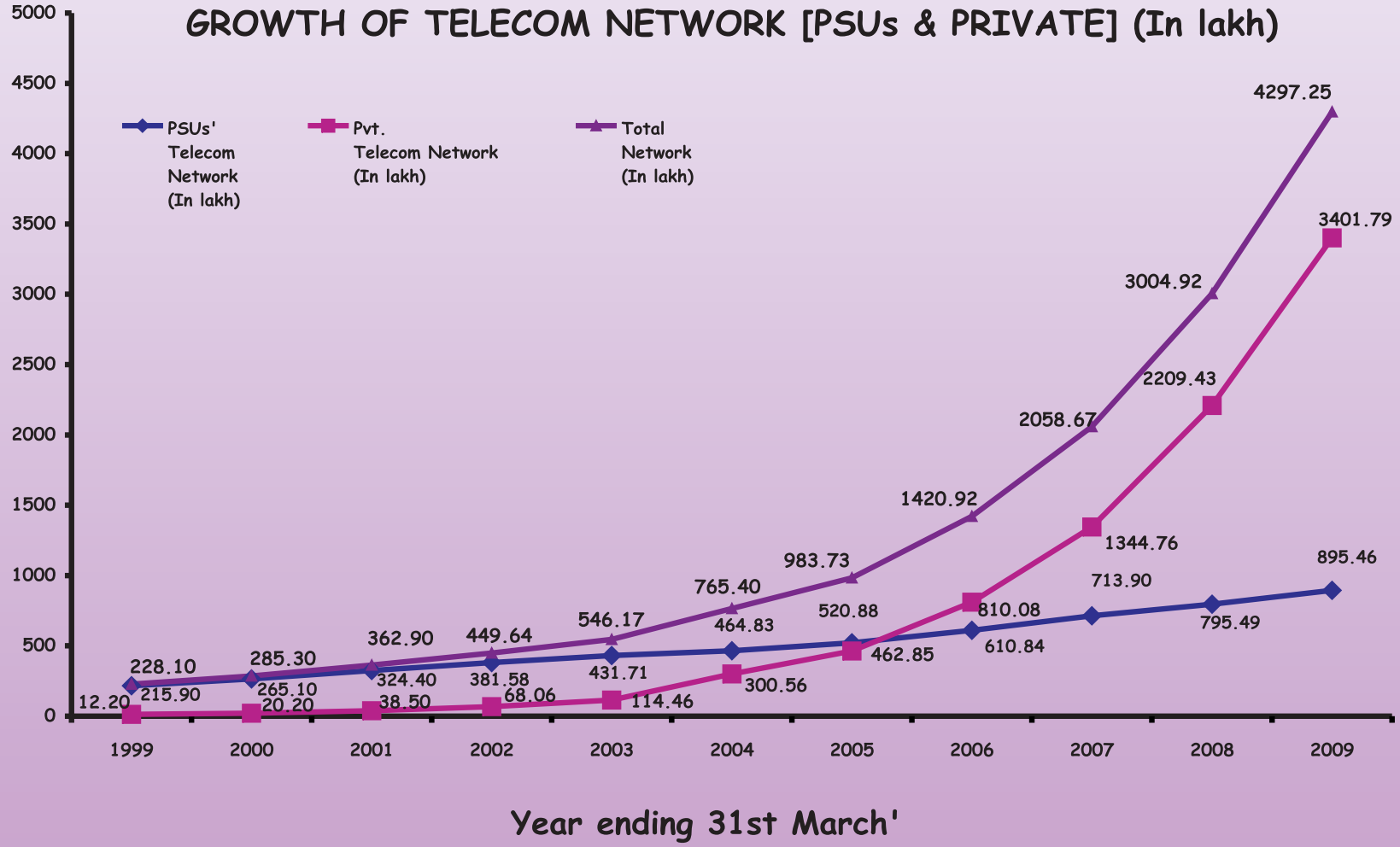

GROWTH OF TELECOM NETWORK [PSUs & PRIVATE] (In lakh)
PSUs' Telecom Network (In lakh)
Pvt. Telecom Network (In lakh)
Total Network (In lakh)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
228.10
285.30
362.90
449.64
546.17
765.40
983.73
1420.92
2058.67
3004.92
4297.25
12.20
215.90
265.10
324.40
381.58
431.71
464.83
520.88
610.84
713.90
795.49
895.46
20.20
38.50
68.06
114.46
300.56
462.85
810.08
1344.76
2209.43
3401.79
Year ending 31st March'

Figure-2

TELE-DENSITY (Number of Telephones per 100 Population) SINCE 1999

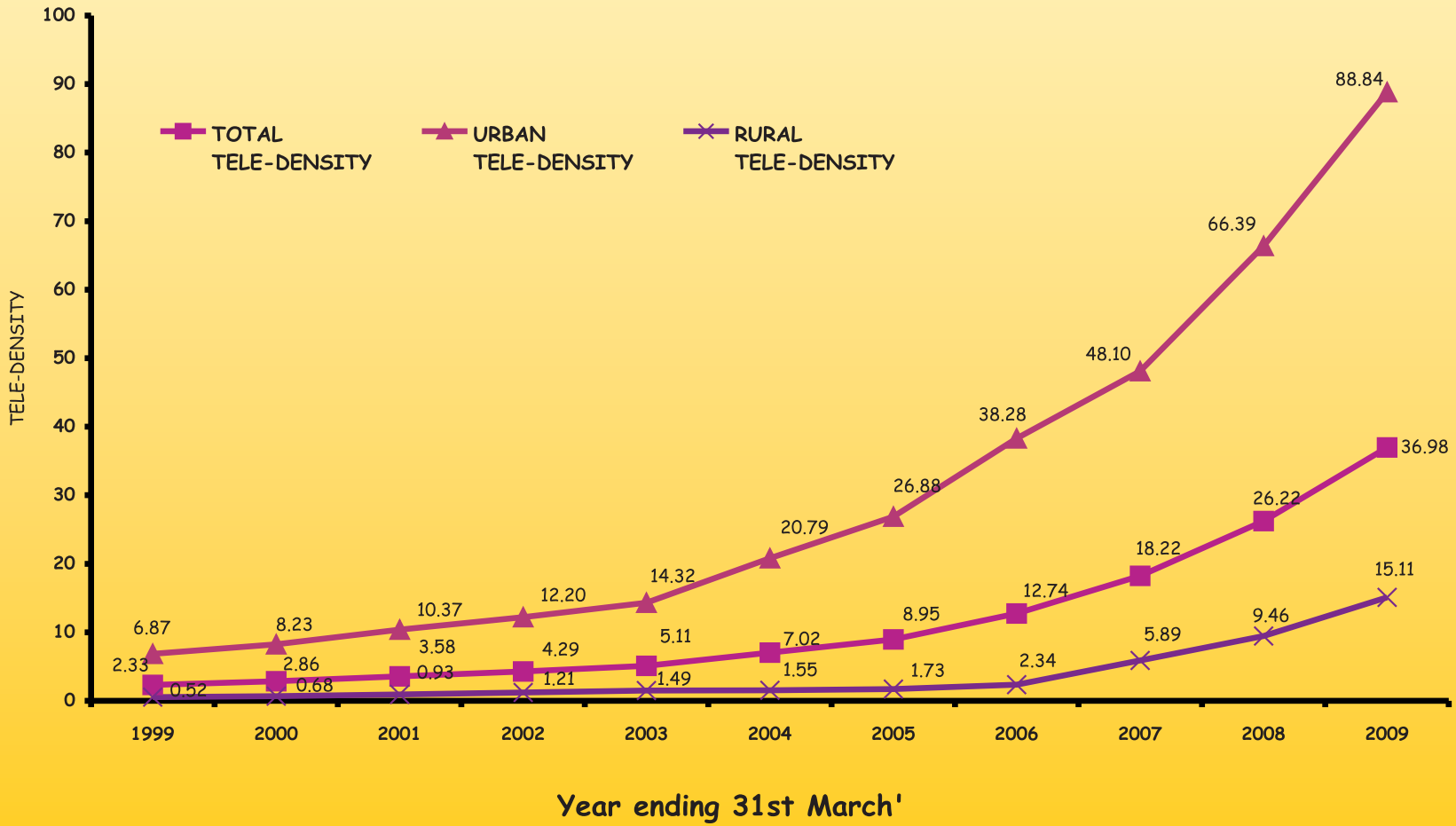


Figure - 3

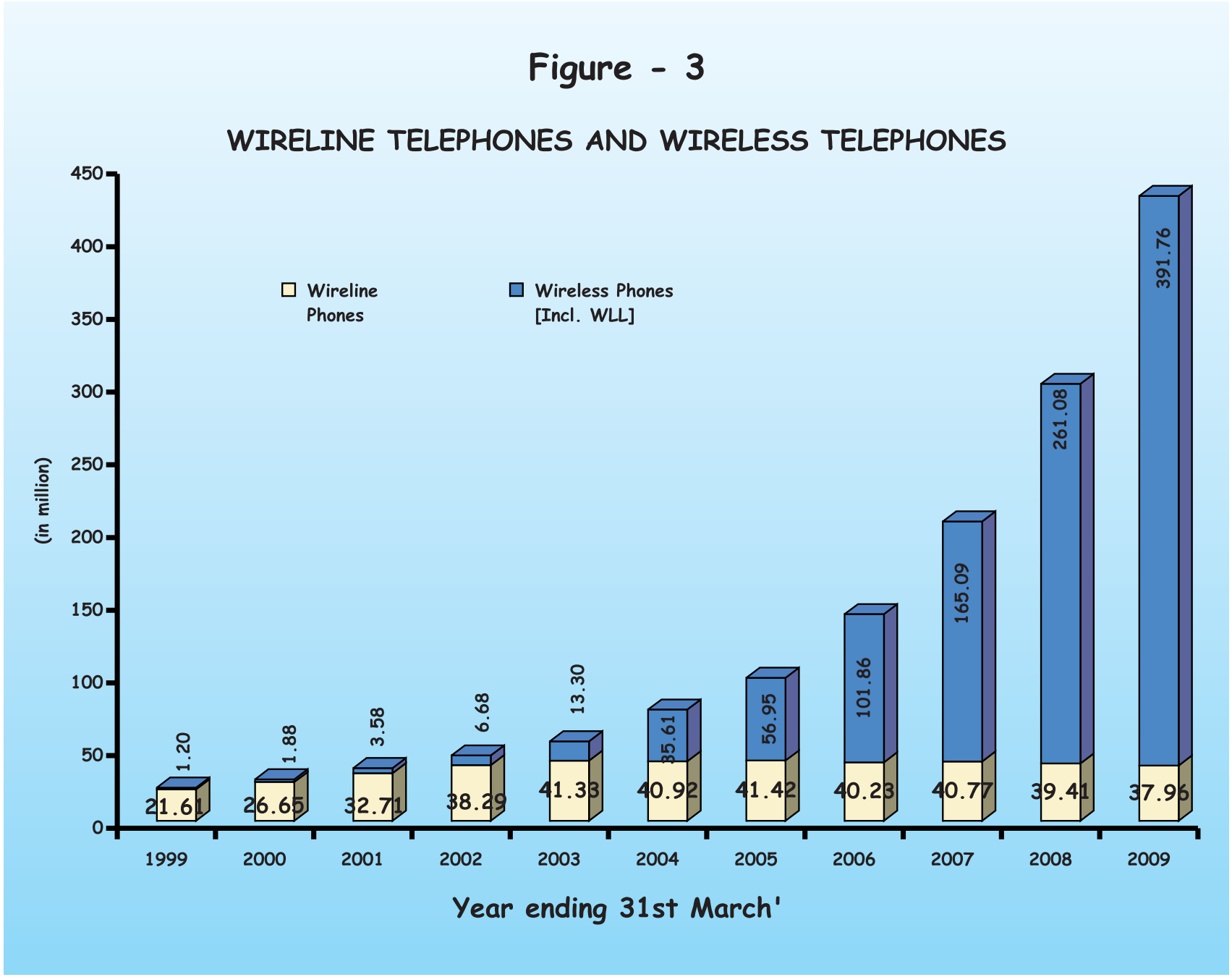

WIRELINE TELEPHONES AND WIRELESS TELEPHONES
Wireline Phones
Wireless Phones [Incl. WLL]
(in million)
450
400
350
300
250
200
150
100
50
0
1.20
1.88
3.58
6.68
13.30
35.61
56.95
101.86
165.09
261.08
391.76
21.61
26.65
32.71
38.29
41.33
40.92
41.42
40.23
40.77
39.41
37.96
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Year ending 31st March'

Figure - 4

DISTRIBUTION OF DIRECT EXCHANGE LINES (DELs) [Wireline+Wireless] [PSUs+Pvt.]

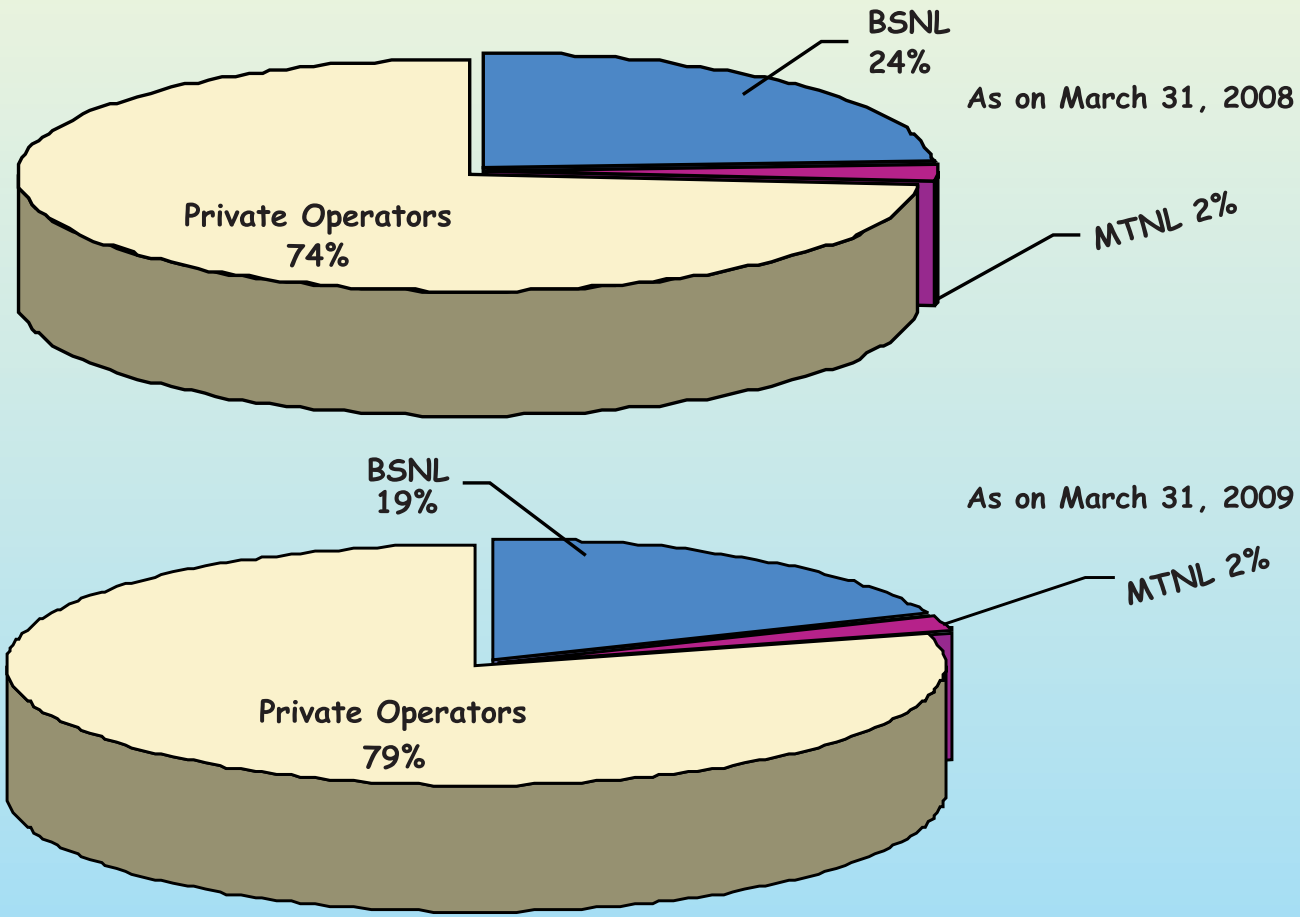


Figure - 5

COVERAGE OF VILLAGES BY VPTs

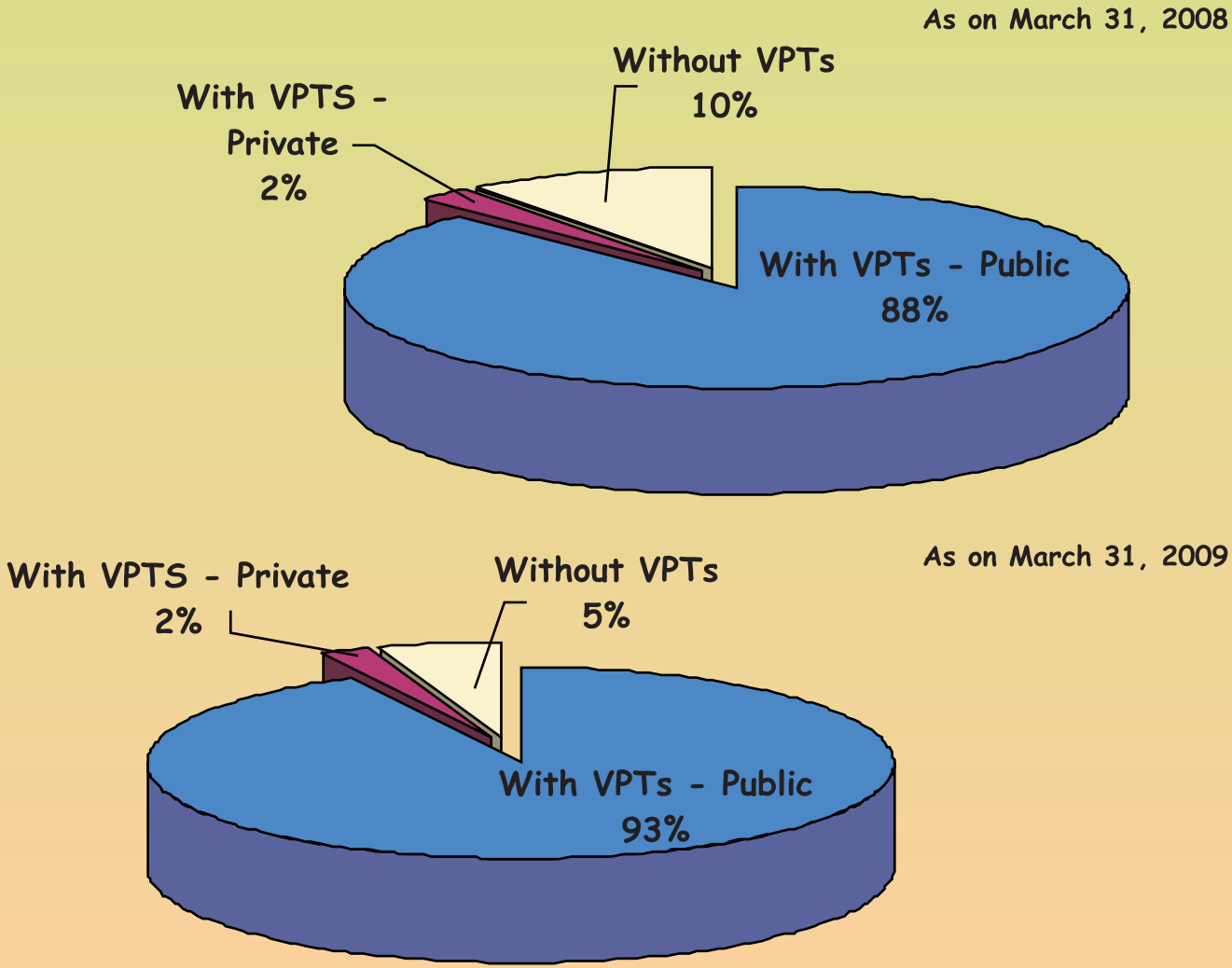
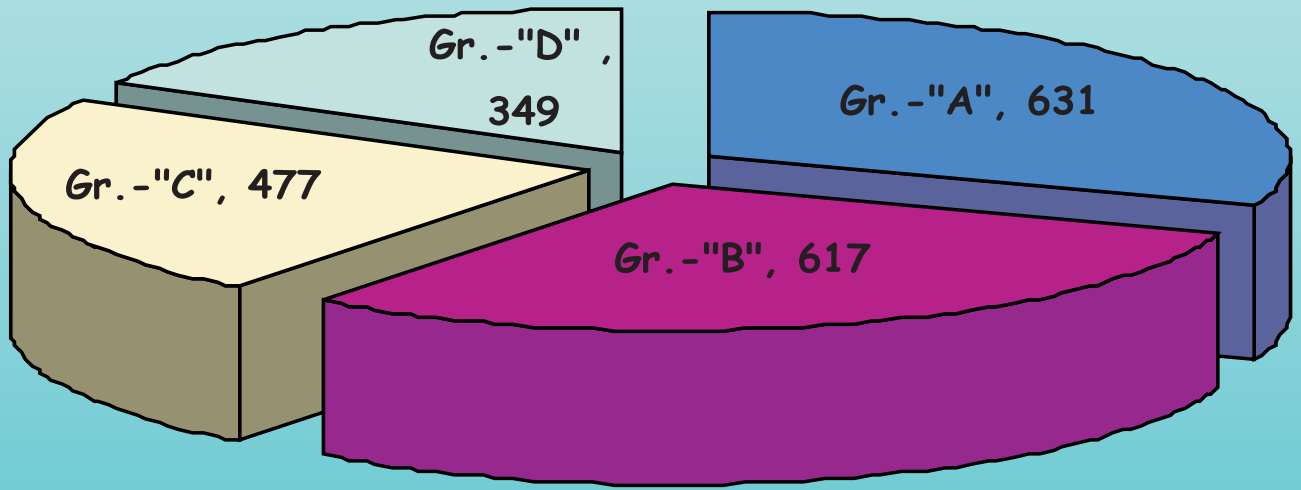


Figure - 6

DISTRIBUTION OF GROUP-WISE STAFF STRENGTH
(As on 31st March, 2008)



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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 Operation & 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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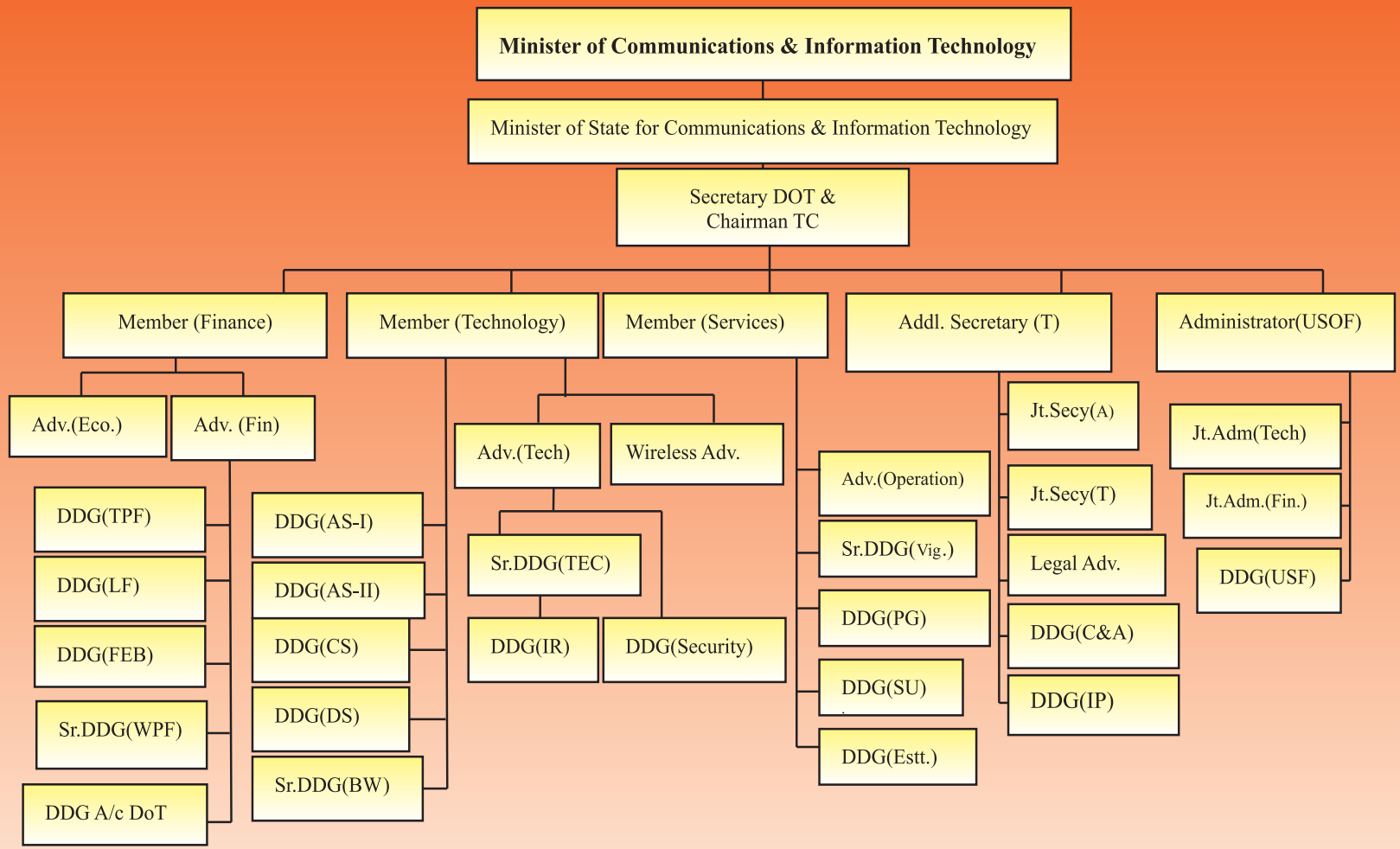
(Current Organisation Chart)
Department of Telecommunications



LEGEND:

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

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

Estt:Establishment
SR: Staff Relations
IR: International Relations
SU: Service Unit
JS : Joint Secretary

FEB: Finance, Establishment & Budget
PG: Public Grievances
LA:Legal Adviser
T: Telecom
Fin : Finance

VIG: Vigilance
BW: Building Works
DDG : Dy. Director General
USOF : Universal Service Obligation Fund

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