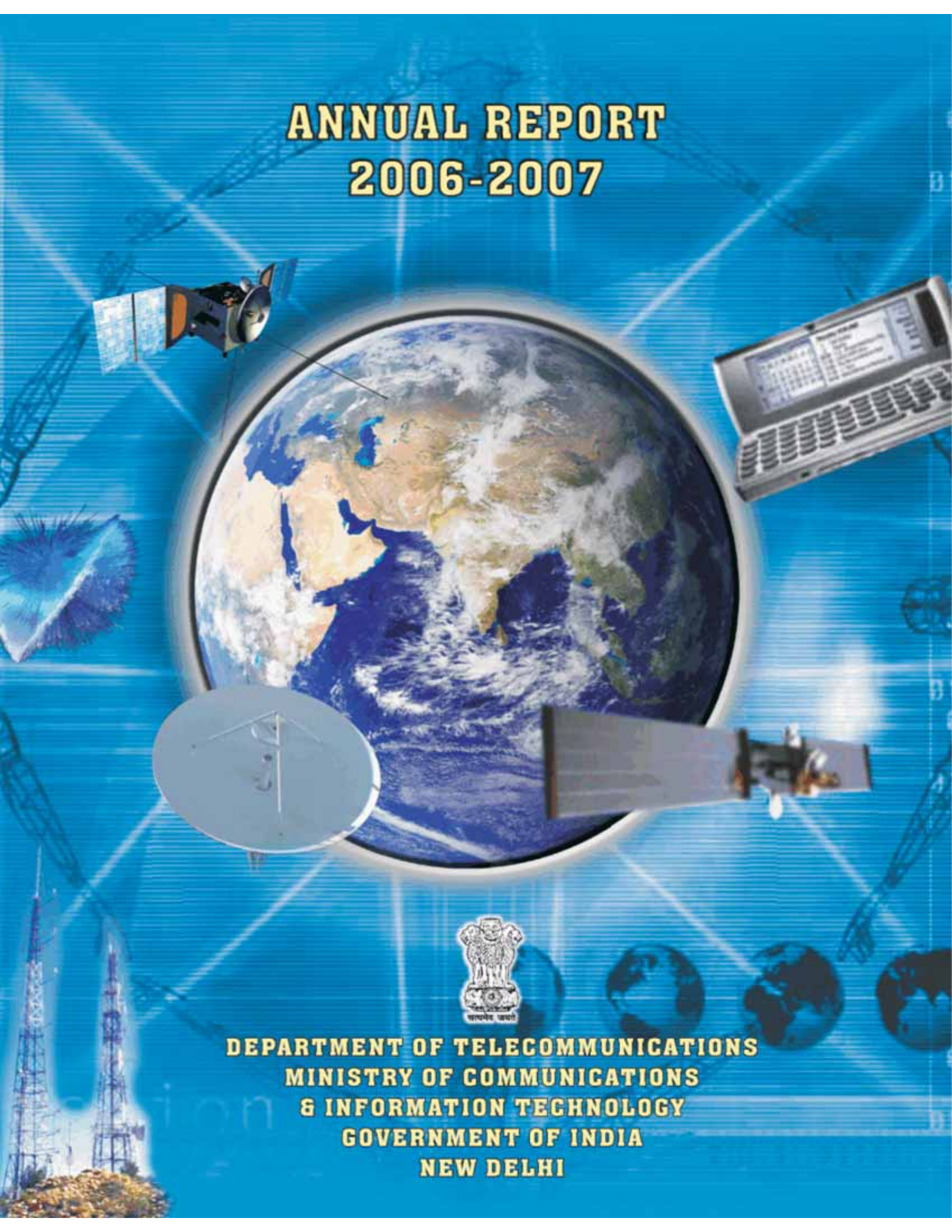
ANNUAL REPORT
2006-2007



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

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Executive Summary

Today, India's telephone network is one of the largest communication networks in the world which continues to grow at blistering pace. The Indian Telecommunications network with over 190 million connections is the third largest in the world and the second largest among the emerging economies of Asia. Today, it is the fastest growing market in the world. The telecommunication sector continued to register significant success during the year and has emerged as one of the key sectors responsible for India's resurgent economic growth. The sector, which was growing in the range of 20 to 25 per cent up to the year 2002-03, has moved to a higher growth path of an average rate of more than 40 per cent. This rapid growth has been possible due to various proactive and positive decisions of the Government and contribution of both the public and the private sector. The Department of Telecom (DoT) has set a target of providing 250 million telephone connections by the year 2007 (a tele-density of 22 %) as against a tele-density target of 15 by the year 2010 envisaged in NTP-1999. The details of important policy initiatives taken are as under:

- Annual license fee for National Long Distance (NLD), International Long Distance (ILD), Infrastructure Provider-II, VSAT commercial and Internet Service Provider (ISP) with internet telephony (restricted) licenses was reduced to 6% of Adjusted Gross Revenue (AGR) w.e.f. January 2006.
- Entry fee for NLD licenses was reduced to Rs. 2.5 Crore from Rs. 100 Crore. Entry fee for ILD has been reduced to Rs. 2.5 Crore from Rs. 25 Crore from December 14, 2005.

250 million telephone connections by 2007 ..... 500 million by 2010

Mobile coverage of geographical area - 85% by 2007 ..... 90% by 2010

- Leased line charges have been reduced to make the bandwidth available at competitive prices to facilitate growth in IT enabled services.
- In respect of states having two telecom circles e.g. Tamilnadu, Maharashtra, U.P and West Bengal, calls between Chennai and rest of Tamil Nadu, Mumbai and rest of Maharashtra, Kolkata and rest of West Bengal and Andaman & Nicobar and UP East and UP West service areas treated as local calls instead of STD calls. (May 2005)
- NLD service providers have been permitted to access the subscribers directly for provision of leased circuits/closed user groups and can provide last mile connectivity. The ILD service providers can also access the subscriber directly only for provision of leased circuits/closed user groups. (December 2005)
- Access service providers have been allowed to provide Internet telephony, internet services and broadband services. If required, access service provider can use the network of NLD/ILD service licensee. (December 2005)

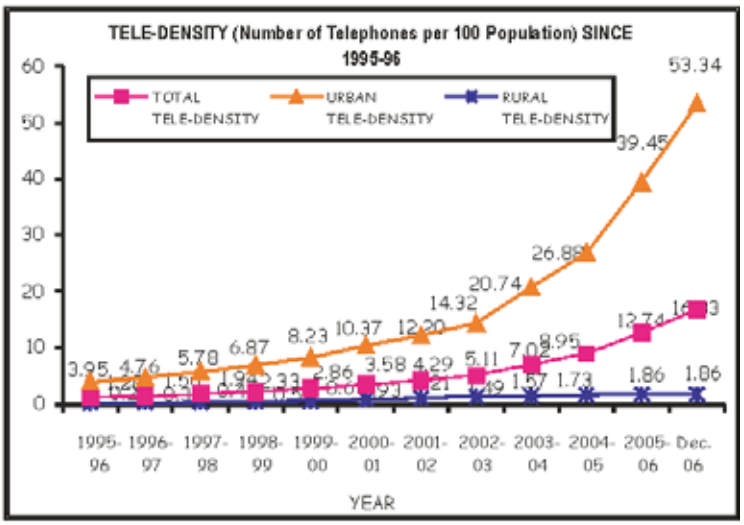
- In July 2006, the Hon'ble MOC&IT launched an initiative by the Telecom industry for sharing of cellular infrastructure in the urban areas starting with Delhi. This initiative includes sharing of cellsites, tower, power backup etc among the operators to minimize regulatory delays and operational cost.
- Inauguration of Falcon Undersea cable was done in September 2006. It will improve connectivity to middle-east countries and is expected to result in drop of bandwidth prices.
- BSNL reduced tariff for international calls to Sri Lanka by 40% and Middle East countries by 20% from October 2006.
- One India plan i.e. single tariff of Re. 1/- per minute to anywhere in India was introduced from March 1, 2006 by the Public Sector Undertakings of DoT. This tariff was emulated by most of the private service providers also. This scheme has led to death of distance in telecommunication and is going to be instrumental in promoting National Integration further.
- The project at a cost of Rs. 980 crore for release of 45 MHz spectrum from Defence for growth of mobile services has been launched. This additional spectrum is likely to be made available in the beginning of the year 2007.
- The project for sharing of infrastructure by mobile operators has been launched in Delhi and Mumbai. This would facilitate sharing of passive and active infrastructure and network operating expenses. The project aims at reducing the number of towers in the skyline of the city, optimal utilization of resources and reduction in clearances from local agencies.
- SACFA sitting procedure for cellular tower etc. have been simplified for sites more than 7 Kms away from nearest airport and having height less than 40 meters. This is expected to reduce the lead time for creation of cellular infrastructure.
- Project for submarine cable connectivity between India and Singapore, India and Gulf countries initiated by MTNL and BSNL to provide cost effective international bandwidth.
- In June 2006, elaborate telecom coverage was provided for Amarnath Yatra. This included first time mobile coverage of Baltal and Chandanwari.
- Hon'ble MOC&IT inaugurated the GSM Board Meeting on June 13, 2006 in Delhi. This was the first time that GSM Board meeting comprising of international representatives of GSM sector was held in India. It reflects the growing importance in telecom sector.
- The work of laying BSNL first submarine cable project, Bharat-Lanka cable system between Tuticorin, India and Mount Lavania, Sri Lanka was completed in June 2006. This link will be utilized for providing International Long Distance services.
- Restoration of telecom services was promptly done in the flood affected areas of Gujarat and Rajasthan.

`H.E. President, Dr. APJAbdul Kalam, at the inaugural function of India Telecom 2006 held at Delhi during December 14-16, 2006.

The Union Minister for Communications and Information Technology, Shri Dayanidhi Maran addressing at the inauguration of the Falcon Submarine Cable Link with five Middle East Countries, in New Delhi on September 05, 2006.

The Union Minister for Communications and Information Technology, Shri Dayanidhi Maran delivering special address at the Industry Meet on Shared Cellular Infrastructure "One Vision, A Reality", in New Delhi on July 05, 2006.

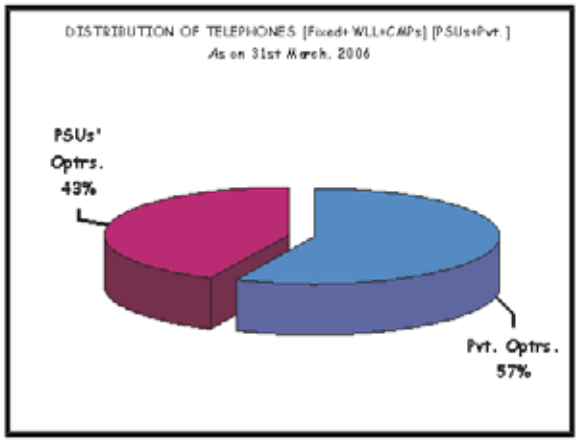
2. NETWORK EXPANSION

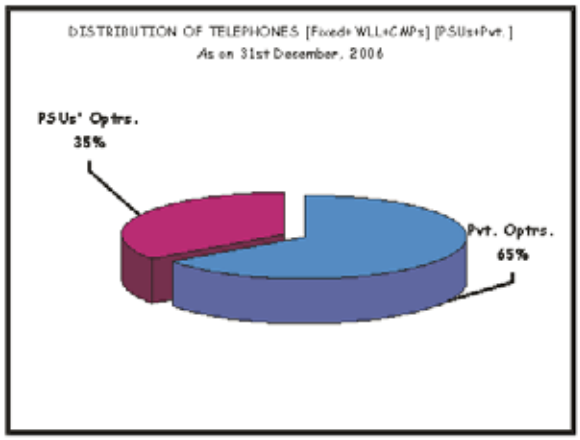


- There were 189 million telephone connections by the end of December 2006. This is almost double of the 98 million connections as on March 2005. The number of wireless subscribers has surpassed the number of fixed line subscribers.
- The overall teledensity increased from 8.95 per cent as on March 2005 to 16.8 per cent as on December 2006.
- On an average over five million phones per month have been added during last nine months of 2006-07.
- The number of internet and broadband subscribers increased from 69 lakh and 13 lakh respectively, as on March 31, 2006 to 86 lakh and 20 lakh respectively as on December 31, 2006.
- Further, 710 cities have been provided with broadband connectivity by the public sector undertakings.

Increasing role of private sector

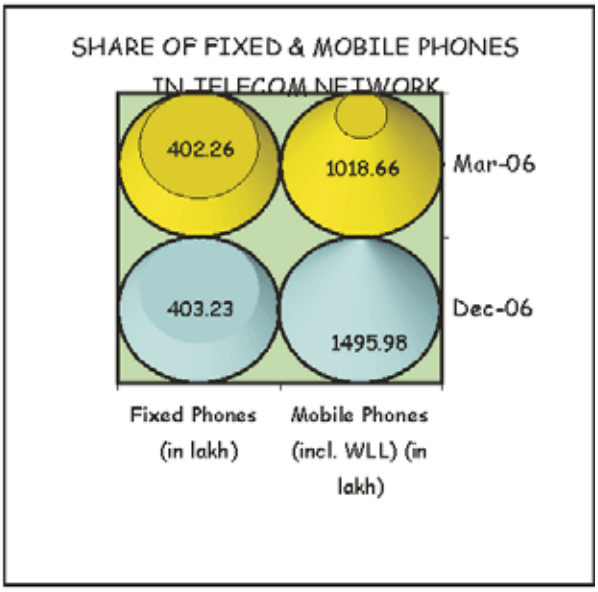
The private sector has continued its dynamism and entrepreneurial spirit to play a significant role in the growth of telecom sector. The share of private sector in the total telephones has increased from 57% as on March 31, 2006 to 65% as on December 31, 2006. Of the 478.29 lakh additional phones provided during 2006-07, major share i.e. 424.38 lakh (about 89%) was provided by the private sector.





Increasing share of mobile phones

The revealed preference of the subscribers in favour of wireless telephony is continuing unabated. The mobile service which was popularly associated with tycoons has been transformed into mass consumption service. This is confirmed from the rising share of mobile phones (CMPs and WLL) which has increased from 71.69% as on March 31, 2006 to more than 79% (1054.25 lakh CMPs and 441.73 lakh WLL) as on December 31, 2006. The share of mobile phones has thus surpassed the share of landlines and this trend is likely to continue. Though the PSUs entered late in the mobile sector, BSNL & MTNL have provided an impressive 260.43 lakh CMPs & 31.63 lakh WLL phones as on December 31, 2006.



Tariff Changes

i) Tariff of different postpaid plans have been rationalized with effect from September 1, 2006. Under this revision massive reduction for intra circle call charges has been made. Free calls have been increased from worth Rs. 25/75/175 to Rs. 60/100/300 under plan-225/325/525 respectively.

ii) Activation charge under both post paid and prepaid services has been reduced from Rs.200 to Rs.100 with effect from September 15, 2006.

iii) In addition to the above a special plan "BSNL One India" was introduced w.e.f. March 1, 2006. Under postpaid One India plan with a monthly rental of Rs. 299/-, a customer can call across the country with one rupee per minute. Under Prepaid One India Plan, the customers can make calls across the country with one rupee per minute with a recharge voucher of Rs. 799/-. Subsequently under BSNL One India rental for landline has been reduced to Rs.180/- with 50 free calls with effect from November 15, 2006.

iv) As a measure of rationalization, BSNL has reduced the fixed monthly charged under general plan for exchange system capacity of more than 1,00,000 lines to Rs.180/- per month as against Rs. 250/- per month.

Rural Telephony

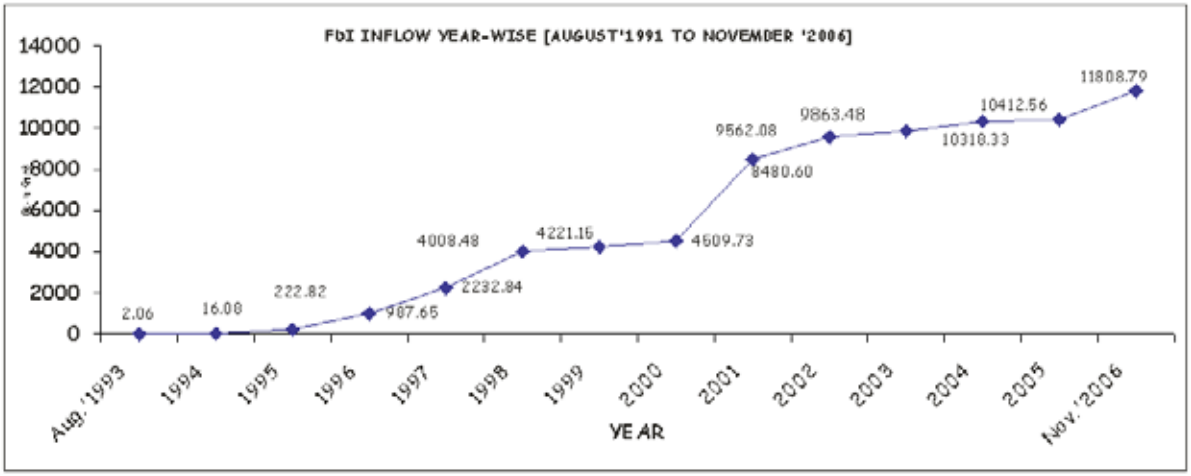
- While 92% of the villages have already been provided with Village Public Telephones (VPT), under the Bharat Nirman Programme, a focused programme to provide VPTs in 66,822 uncovered villages has been undertaken. 38795 of these villages have been provided till December 2006, the remaining 28027 villages will be provided with VPTs by November 2007.

- Rural connections - 50 million by 2007 …….. 80 million by 2010
- Reduce urban-rural digital divide from present 25:1 to 5:1 by 2010
- Make available mobile handsets at ~ Rs. 1000 within one year to spur this initiative

- 46,253 villages with a population exceeding 2000 and without a public phone facility other than a VPT were to be provided with Rural Community Phone (RCP). As on December 2006, 35221 villages have been provided with RCPs.
- More than 80% of 1.86 lakh MARR VPTs replaced.
- Arrangements made for launching a pilot project for provisioning of Public Tele-Info Centers (PTICs) and High Speed PTICs (HPTICs) in 2,000 villages.
- The notification to amend Indian Telegraph Rules 1951 was issued on November 17. 2006. With this amendment, it will be possible to provide USO support for provision of mobile services and broadband connectivity in rural areas.

3. Foreign Direct Investment (FDI)

During the period August 1991 to November 2006, Foreign Direct Investment (FDI) of Rs. 41,551 crore were approved, which is second only to Power & Oil Refinery sector. The actual inflow of FDI up to November 2006 was Rs. 11808.79 crore. The pace of FDI inflow improved substantially after 2001. Government has enhanced composite foreign holding to 74% from 49%. Accordingly, the FDI ceiling has been raised to 74% for the services such as Basic, Cellular, Unified Access Services, NLD/ILD, GMPCS, VSAT & other Value Added Services.



4. Broadband

- Broadband Policy announced in October 2004 with a vision of covering 20 million broadband subscribers by the end of 2010.
- Nation-wide Broadband Services were launched by BSNL & MTNL in January 2005 to cover 200 towns in one year. The spread now covers 710 towns with more than 2 million connections.

Broadband with minimum speed of 1 mbps.

2007 will be the year of broadband in India taking the broadband connections to 9 millions.

Broadband connection to all secondary & higher secondary schools, public health institutions and panchayats by 2008.

- To encourage expansion of broadband connectivity at a faster pace, both outdoor and indoor usage of low power Wi-fi and WiMax systems in 2.4 GHz- 2.4835 GHz band has been delicensed. The use of low power indoor systems in 5.15 - 5.35 GHz & 5.725 - 5.875 GHz has also been delicensed.
- Extensive plan is being prepared for roll out Broadband services in the country. An Inter-Ministerial Group has been formed with representation from Ministries of Home, HRD, Health, Panchayati Raj and Department of IT for this purpose.

5. Research & Development

India has proven its dominance as a technology solution provider. Efforts are being continually made to develop affordable technology for masses, as also comprehensive security infrastructure for telecom network. Research is on for the preparation of tested infrastructure for enabling interoperability in Next Generation Network. It is expected that the telecom equipment R & D shall be doubled by 2010 from present level of 10%. Modern technologies induction is being promoted. Pilot projects on the existing & emerging technologies have been undertaken including WiMax, 3G etc. Emphasis is being given to technologies having potential to improve rural connectivity. 3G Policy is to be announced in 2007.

6. Manufacture of Telecom Equipments

Indian telecom industry manufactures a complete range of telecom equipments using state of the art technologies designed specifically to match the diverse terrain and climate conditions. To boost indigenous manufacturing of telecom equipments a large number of fiscal incentives including zero custom duty on all 217 ITA-1 items, zero custom duty on all imports of components and raw material required for manufacturing telecom equipment have been provided in the Budget 2005-06. BSNL and MTNL have decided to insist on value addition in their procurement exercise to ensure speedy rollout and better after sales service.

Production of telecom equipment has increased from Rs. 16,090 crore in 2004-05 to Rs. 17,833 crore in 2005-06. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecommunication, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. Global leading companies like Ericsson, Alcatel, Elcoteq, LG have already set up their manufacturing base. Nokia is also setting up an integrated manufacturing facility near Chennai with an investment of US$ 150 million. Flextronic, Siemens, Motorala, Foxcon, Aspcomomp, etc. are also firming up their investment plan. With these initiatives, telecom equipment manufacturing sector is expected to attract about US$ 855 million in next 1-2 years.

7. International Cooperation

For promoting international co-operation in the field of Telecom & IT, several meetings were held both in India and abroad. Hon'ble Minister of Communication & IT visited Korea and Singapore from June 18-25, 2006 for meeting and interactions with Korean Government, industry professional

and with the officials of semiconductor companies. He also visited UK and USA from July 13-20, 2006 for attending bilateral/ official meetings.

The Ministerial level delegations from Kingdom of Jordan, Arab Republic of Egypt and Brunei Darussalam met the Hon'ble Minister of State for Communication and IT to exchange the notes on telecom scenario and to enhance bilateral activities in the field of ICT.

A high level Indian delegation led by Secretary (T) participated in the ITU's Plenipotentiary Conference held in Antalya (Turkey) from November 6-24, 2006. Apart from this, Secretary Telecom visited USA for attending Indian Telecommunication Day from October 11-14, 2006.

8. Vision

Network expansion will be the focus of the future which would be greatly possible by penetrating into rural areas. By the end of 2010, a total of 500 million telephone connections are expected to be achieved, out of which 80 million are expected to be in the rural areas. Explosive growth of mobile network was possible mainly because of competition, affordability, flexibility and ease of use, lower marginal cost of network roll out. Mobile telephony is identified by ITU's Report as the missing link which will bridge the digital divide. The studies show income wise, there can be market in rural areas. Technology advances are enabling commercial viability even at low ARPUs. The cost of mobile handset has come down drastically and Rs.1000/- handset is about to become reality. The competition has led to introduction of attractive packages. The approach of USOF would be to support infrastructure for taking mobile telephony and also broadband into rural and remote areas.

For optimum sharing of spectrum by the stake holders, its planning would be done for longer period keeping in view the emerging new technologies and needs of various sectors. The spectrum management would be strengthened. Transparency in allocation of spectrum, spectrum audit etc, will be adopted.

Through easily available and affordable broadband, social and economic progress of the country can be accelerated. Therefore, broadband expansion in rural areas and for priority areas of the economy would be encouraged. Its quick growth is necessary for establishing knowledge based society and thereby for reaping consequent economic opportunities. Various strategies for encouraging growth of infrastructure, use of alternative technologies, allocation of adequate spectrum, levying low sharing charges etc are envisaged for expanding broadband facilities.

It is envisaged to make India a hub for telecom equipment manufacturing. However, it is necessary to carry out restructuring and reforms required for promotion and strengthening of R&D in view of rapidly evolving technologies in telecom sector. In view of highly competitive market scenario, Government's involvement in R&D backed by a strong R&D policy seems to be necessary to enable achievement of national growth targets and other social commitments. Public Private Partnership would be required for strong participation and pooling of funds by service providers, manufacturers, research organizations and academic institutions, so as to fully tap the economic benefits of growth in the sector.

I. Telecom Commission

ROLE AND FUNCTIONS

The Telecom Commission was set up by the Government of India vide Regulation dated April 11, 1989 with administrative and financial powers of the Government of India to deal with various aspects of Telecommunications. The Commission consists of a Chairman, four full time members, who are ex-officio Secretaries to the Government of India in the Department of Telecommunications, and 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 Dinesh Shankar Mathur	w.e.f. July 17, 2006
Member (Finance)	Ms. Manju Madhvan	w.e.f February 5, 2007
Member (Production)	Vacant	w.e.f. January 1, 2006 due to superannuation of Shri B. Sivaramakrishnan
Member (Services)	Vacant	w.e.f. February 1, 2007 due to superannuation of Shri A.K. Saxena
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 and standardization/validation of equipment and international relations.

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II. Department of Telecommunications

ROLE AND FUNCTIONS

The Department of Telecommunications (DOT) is responsible for policy formulation, performance review, monitoring, international cooperation, research and 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, licensing and coordination matters relating to telegraphs, telephones, wireless, data, facsimile and telematics services and other like forms of communications.
- International cooperation in matters connected with telecommunications, including matter relating to all international bodies dealing with telecommunications 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).
- Indian Telephone Industries Limited.
- Post disinvestment matters relating to M/s Hindustan Teleprinters Limited.
- Bharat Sanchar Nigam Limited.
- Mahanagar Telephone Nigam Limited.
- Videsh Sanchar Nigam Limited and Telecommunications Consultants (India) Limited.
- All matters relating to Centre for Development of Telematics (C-DOT).
- Residual work relating to the erstwhile Department of Telecom Services and Department of Telecom Operations, including matters relating to the following:-
  (a) cadre controlling functions of Group 'A' and other categories of personnel till their absorption in Bharat Sanchar Nigam Limited.
  (b) administration and payment of terminal benefits.
- Execution of works, purchase and acquisition of land debitable to the Capital Budget pertaining to telecommunications.

PHYSICAL PERFORMANCE

During the first nine months of the current year (i.e. April- December 2006), the telecom sector exhibited a growth, which is much higher as compared to the same period of the preceding year. The net addition in phones has been 478.29 lakh during April - December 2006 as against 274.16 lakh in the corresponding nine months of 2005-06, which is 74.46% higher. The point-to-point comparison of December 31, 2005 to December 31, 2006 shows an increase of 50.98% in the number of telephones. The tele-density increased from 11.32% on December 31, 2005 to 16.83% on December 31, 2006. The total number of phones, as on December 31, 2006, stood at 1899.21 lakh.

Predominant role of private sector and wireless telephony

- The share of private sector in the number of telephones has increased from 54.54% (686.11 lakh) in December 2005, to 65.00% (1234.46 lakh) in December 2006 while the share of public sector has declined to about 35.00%.
- The preference for use of wireless telephony continues. This is confirmed from the rising share of wireless phones (CMPs+WLL), which increased from 68.29% as on December 31, 2005 to 78.77% (1495.98 lakh) as on December 31, 2006.
- The public sector has added 53.92 lakh phones during April-December 2006 as against 50.90 lakh phones during April-December 2005 while private sector added 424.38 lakh phones during April-December 2006 as against 223.26 lakh added during April-December 2005.

- During April-December 2006, 9932 VPTs were added as compared to 8794 during April-December 2005.

Unified Access Services

- 22 new UAS licenses issued in 2006-07 upto December 2006.
- The number of Unified Access Service Licenses was 97 as on December 31, 2006.
- Indian Telegraph (Ammendment) Act, 2006 (57 of 2006) is enacted w.e.f. October 30, 2006, vide which the following amendment was made:

  In section 3 of the Indian Telegraph Act, 1885 (hereinafter referred to as the principal Act), in clause (1A), for the words "obligation to provide access to basic telegraph services", the words - "obligation to provide access to telegraph services" shall be substituted

Carrier Services

- After announcing opening up of ILDS and NLDS for free competition, Government has so far issued 10 ILDS licenses and 16 NLDS licenses (including BSNL). 06 companies have been given license for IP-II out of which two companies have migrated to NLD licenses. 142 companies have been registered as Infrastructure Provider Category-I. From January 1, 2006, IP-II license has been abolished.
- The entry fee for both NLD/ILD licenses has been reduced from 1000 crore and 25 crore respectively to 2.5 crore.
- 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. This is also true for ILD operators except for setting up at least one switch in India.

Voice Mail Service/Audiotex/Unified Messaging Service

- Revised 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 from one mailbox using telephone instrument, fax machine, mobile phone, Internet browser etc.
- There are 15 licences in 7 cities owned by 9 companies as on December 31, 2006 for providing Voice Mail/Audiotex/Unified Messaging Service.
- There is neither entry fee nor licence fee.

Internet and Broadband Services

- There are 385 ISP licencees, with over 8.6 million Internet subscribers. 125 ISPs have been permitted to offer Internet Telephony Service, as on December 31, 2006. Private ISPs are permitted to set up their own international gateways for Internet using satellite and submarine cable landing medium.

- The number of broadband subscribers as on December 31, 2006 was more than 2 million, and the coverage of broadband connectivity by the PSUs has reached 710 cities.

Very Small Aperture Terminal Service (VSAT) Service

- There are 11 licences for Commercial VSAT service as on December 2006.

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.
- There are 32 licences in 3 metros and 7 circles (17 cities) owned by 14 companies for providing Public Mobile Radio Trunking Service.
- There is no entry fee for this licence. The licence fee to be paid by these licensees is 5% of AGR.

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)

- The terms and conditions for registration under Other Service Provider(OSP) category were formulated in February 2000.
- Registration of call centres (International & domestic), Network Operation Centres and Vehicle Tracking Systems is being done under OSP category.
- Over 1600 cases have been registered under OSP category.

UNIVERSAL SERVICE OBLIGATION FUND (USOF)

BACKGROUND

- The New Telecom Policy -1999 (NTP '99), approved by the Union Cabinet, sought to achieve the following Universal Service Objectives:
  - i) Provision of voice and low speed data service to the balance 2.9 lakh uncovered villages by the year 2002;
  - ii) Internet access to all district headquarters by year 2000; and
  - iii) Telephone on demand in urban and rural areas by year 2002.
- The NTP-99 provided that the resources for meeting the Universal Service Obligation (USO) would be raised through a 'Universal Access Levy' (UAL), which would be a percentage of the revenue earned by the operators under various licenses, to be decided in consultation with the Telecom Regulatory Authority of India (TRAI).
- The implementation of USO obligation for rural/remote areas would be undertaken by all fixed service providers who shall be reimbursed from the USO Fund. Other service providers would also be encouraged to participate in USO provision subject to technical feasibility and would be reimbursed from the funds.

STATUS OF THE FUND

- The guidelines for universal service support policy were issued by DoT and were placed on the DoT website on March 27, 2002. While the guidelines provided for creation of a separate fund for crediting the receipts towards USO, the Finance Ministry did not fully allocate the funds received from Universal Service Levy for USO purposes on grounds that for such allocation, the Fund should have a statutory status. It was therefore decided that the Indian Telegraph Act, 1885 should be amended so as to provide such status. Accordingly, the Indian Telegraph (Amendment) Act, 2003 giving statutory status to the Universal Service Obligation Fund (USOF) was passed by both Houses of Parliament in December 2003. The Fund is utilized exclusively for meeting the Universal Service Obligation and the balance to the credit of the Fund does not lapse at the end of the financial year. Credits to the Fund are through Parliamentary approvals. The Rules for administration of the Fund known as Indian Telegraph (Amendment) Rules, 2004 were notified on March 26, 2004. The Universal Service Obligation Fund has come into force from April 1, 2002 under the Indian Telegraph Act 1885 as amended by Indian Telegraph (Amendment) Act, 2003. The Indian Telegraph Act has further been amended through the Indian Telegraph (Amendment) Ordinance 2006. The implementation of USO Fund is governed by the Indian Telegraph (Amendment) Rules, 2004 and Indian Telegraph (Amendment) Rules, 2006 framed there under. A copy of the above said Act and Rules is available on DoT website www.dot.gov.in.

- The resources for implementation of USO are raised through a Universal Service Levy (USL) which has presently been fixed at 5% of the Adjusted Gross Revenue (AGR) of all Telecom Service Providers except the pure value added service providers like Internet, Voice Mail, E-Mail service providers etc. In addition, the Central Government may also give grants and loans.
- The government decided to set up a separate attached office of DoT for the purpose of administration of USF. Accordingly, the Administrator, Universal Service Obligation Fund was appointed on June 1, 2002. The office of the Administrator is an attached office of DoT with a small complement of officers and support staff. The powers and functions of the USF Administrator are prescribed in the Indian Telegraph (Amendment) Rules, 2004 and Indian Telegraph (Amendment) Rules, 2006.
- The Administrator shall have powers to:
  i. Formulate bidding procedures including its terms and conditions for the purposes of implementation of Universal Service Obligation;
  ii. Evaluate the bids called for the purposes of implementation of Universal Service Obligation;
  iii. Enter into agreement with the Universal Service Providers for the purpose of implementation of Universal Service Obligation;
  iv. Settle the claims of Universal Service Providers after due verification, and make disbursements accordingly from the Fund;
  v. Specify relevant formats, procedures and records to be maintained and furnished by the Universal Service providers; and
  vi. Monitor the performance of the Universal Service Provider as per the procedure specified by him from time-to-time.

IMPLEMENTATION STATUS

- Although the Universal Service Obligation Policy came into effect from April 1, 2002, the USOF has come to be statutorily recognized after the Amendment to the I.T. Act in December 2003. The activities undertaken so far had to be restricted taking into account the allotment of funds, especially since the commitment is over a period of 7 years. Another restraining factor was the time taken in obtaining data both in terms of numbers of villages/ VPTs as well as cost and revenue details of VPTs/ DELs in all Short Distance Charging Areas (SDCAs) for working out the benchmark as well as for inclusion in the tender document.

ACTIVITIES COVERED

(A) PUBLIC (SHARED) ACCESS

- USO Fund is providing financial support for operation and maintenance of about 5,54,000 Village Public Telephones (VPTs), covering more than 90% of the eligible villages, where VPTs are to be provided. About 8,876 VPTs have been provided by Private Basic Service

Operators. Agreements were signed with M/s BSNL and six Private Basic Service Operators in March 2003 for maintenance of existing VPTs across the country. Subsidy support is being provided for operation and maintenance of existing Village Public Telephones (VPTs) in the identified revenue villages as per Census 1991 and installation of VPTs in additional revenue villages as per census 2001. The details of VPTs being maintained by Universal Service Providers (USPs), namely, M/s BSNL (www.bsnl.co.in), RIL (www.relianceinfocom.com), TTL & TTL (MH) (www.tatateleservices.com), Bharti (www.airteltelephone.com), HFCL (www.hfclconnect.com) and Shyam Telecom (www.hellorainbow.com) are available on the respective websites of these service providers.

- For the remaining uncovered eligible 66,822 villages as on June 2004, agreements have been signed with M/s BSNL in November 2004 to provide VPTs in such villages. Insurgency prone villages and those with population less than 100 totaling about 24,000 villages are not to be covered as per the present policy. Subsidy support in the form of capital and operational expenses will be provided for provision of these VPTs for a period of five years from the date of installation of the VPTs. Out of 66,822 VPTs, 14,183 VPTs are to be provided on satellite based media and the remaining 52,639 shall be provided on other technologies. 20% of these VPTs i.e. 13,364 were to be provided by M/s BSNL by November 2005, another 40% i.e 26728 by November, 2006 and 40% i.e. remaining 26,728 by November 2007. As against this target, 38,795 VPTs have already been provided by M/s BSNL till December 2006. The remaining villages are likely to be provided with VPT by November 2007. The provision of VPTs in these villages has been included as one of activities under Bharat Nirman Programme. The details of the villages to be covered under this programme are placed on the DoT website www.dot.gov.in & Bharat Nirman website www.dot.gov.in/bharatnirman.htm.
- 1,86,872 no. of VPTs which were earlier working on Multi Access Radio Relay (MARR) technology and installed before April 1, 2002 are to be replaced as most of these were non -functional. Both capital and operational expenses are to be supported for this activity. 1,67,259 MARR VPTs have been replaced by M/s BSNL till December 2006.
- 46,253 villages with population exceeding 2,000 and without a public phone facility (other than VPT) are being provided with a Rural Community Phone (RCP). Agreements were signed with M/s BSNL and M/s RIL in September 2004 to provide 24,822 and 21,431 RCPs respectively in these villages over a period of three years. These installations are eligible for both capital and operational expenses. 35,221 RCPs [BSNL: 20,601, RIL: 14,620] have been provided till December 2006 and the remaining RCPs are likely to be provided by September 2007.

(B) INDIVIDUAL ACCESS

- Agreements have been signed in March 2005 for providing subsidy support towards installation of Rural Household Direct Exchange Lines (RDELs) to the individual customers in rural areas. The support for these RDELs will be extended to cover 1685 Short Distance Charging Areas (SDCAs), which are High Cost Low Income Areas out of a total of 2,647 SDCAs in the

country. This covers about 64% of the total geographical area covered by telecommunications. BSNL has emerged as successful bidder in 1,267 SDCAs of the total tendered SDCAs while M/s Reliance, M/s Tata Teleservices Ltd. and M/s TTL (MH) have been successful in 203, 172 and 43 SDCAs respectively. Support in the form of front loaded subsidy and an equated annual subsidy shall be given for all the lines (RDELs) installed after April 1, 2005 and up to the plan period i.e. March 31, 2007. The equated annual subsidy, where payable, shall be given up to a maximum period of validity of the Agreement (Five years) and validity period ends in March 2010. As per the Agreement conditions, the Service Provider should provide at least 100 lines per Secondary Switching Area (SSA) within six months. Thereafter all the wait listed subscribers are to be provided with a telephone connection on demand within three months of registration. About 15,22,999 RDELs have been provided [M/s BSNL (5,82,625), M/s RIL (3,86,485), M/s TTL (4,44,185) and M/s TTL (MH) (1,09,704)] till December 2006.

- One time financial support has also been provided to nearly 90.5 lakhs rural household DELs (Direct Exchange Lines) from USO Fund for the period April 1, 2002 to January 31, 2004 which had been installed in the country prior to April 1, 2002 as per rules. The Access Deficit Regime has come into operation from February 1, 2004.

USO LEVY COLLECTIONS

- The contribution from Service Providers towards USO collected as Universal Service Levy from April 1, 2002 has been Rs. 1653.61 crore in 2002-03, Rs. 2143.22 crore in 2003-04, Rs. 3457.73 crore in 2004-05, Rs. 3533.29 crore in 2005-06 and the inflow into the fund for the Financial Year 2006-07 is anticipated at Rs. 3488 crore.

DISBURSEMENTS MADE

- The entire budgetary provision of Rs. 3581.44 crore allocated for the year 2002-03, Financial Year 2003-04, Financial Year 2004-05 and Financial Year 2005-06 was fully utilized (Rs 300 crore, 200 crore, 1314.59 crore and 1766.85 crore respectively).
- A sum of Rs. 1500 crore has been allocated for the Financial Year 2006-07, out of which Rs. 737.98 crore has been disbursed till December 2006.

ACTIVITIES TO BE TAKEN UP IN NEAR FUTURE BY USOF

Infrastructure Support for Cellular Mobile Services

- With the aim to provide rapid connectivity to all rural areas, inclusion of mobile services in the roll-out of rural household lines is being considered. The mobile services have an edge over the wireline or fixed wireless terminals based wireless services because of faster roll-out and lower per line cost. A proposal is under active consideration of the Government to support infrastructure for providing mobile services in rural and remote areas of the country. The detailed modalities of the project are being worked out. Consultations have been held with the Access Service Providers, Infrastructure Providers, Association of Telecom Service

Providers and Manufacturers on this subject. The infrastructure shall be created in those specified areas where there is no existing fixed wireless or mobile coverage and the same shall be shared amongst three telecom service providers. For this, the draft tender document for setting up and managing infrastructure sites and provision of mobile services in rural and remote areas of the country has been placed on DoT Website on November 21, 2006 for seeking suggestions/ comments from the stakeholders.

Broadband Connectivity for Rural Areas

- With the aim to provide e-governance and data services to the rural masses, a proposal is also under consideration of the Government to provide subsidy support for Broadband connectivity in rural and remote areas of the country. The broad parameters under which the connectivity is required to be provided are being worked out. The detailed scheme in this regard shall be prepared taking into consideration the views, suggestions and comments from the stakeholders.

MONITORING

- One of the prime concerns is that the funds disbursed towards provision of services covered under USO are effectively utilized and the services are available to the users as intended. To ensure proper quality of service and maintenance of various records, conditions do exist in the Agreements with the USPs. The Agreements also provide for deductions in subsidies if the facility is non-functional on account of faults or disconnected for non-payment or do not record any calls over a specified period. The Agreement for new installations also provide for imposition of liquidated damages in case of not meeting the roll-out obligation within the specified period. In terms of the stipulations in the Agreements, the service providers have to submit a self-certification of fault incidence on the VPTs while submitting the claims in the Proforma prescribed.
- While the quality of service provided is the domain of TRAI, USOFA is concerned with the availability of facilities supported from the fund and that the claims reflect the correct position in respect of incidences of fault etc which qualify for deductions in subsidy and the technology where the rate is technology specific. The USOF staff at headquarters therefore carried out sample verification. The discrepancies noticed were addressed through clarifications/ modifications of the conditions of the Agreements. The job of monitoring has also been entrusted to the Controller of Communication Accounts (CCAs) with the limited purpose of establishing the veracity of claims from the records maintained by the service providers.

ELECTRONIC SUBMISSION OF CLAIMS

- In order to streamline the filing of claims and to facilitate submission and settlement of claims considering the large volume of data and the number of activities involved, the process of evolving a user friendly software for filing of claims has been taken up with the National Informatics Centre (NIC).

- The package of e-preparation, submission and settlement of RCP claims is complete and is already in use. For the quarter ending June 30, 2006, the package is presently being used by various field units all over the country.
- The package for operation and maintenance of VPTs is also ready and has been put to use for Punjab & Rajasthan. The data is being loaded to the master for the remaining areas.
- The package for RDELs installed between April 1, 2002 and March 31, 2005 is ready for trial and the master data is being uploaded for service areas to make it available to various users for field run.

CONTROLLER OF COMMUNICATION ACCOUNTS OFFICES

The Offices of Controller of Communication Accounts (CCAs) came into existence on October 1, 2000, following the corporatization of the erstwhile operational arms of the DoT. These were created with a view to ensure smooth and efficient performance of major functions of the Department of Telecom at the field level. They have played a crucial role in ensuring smooth management of retirement and other terminal benefits of lakhs of employees of DoT, BSNL and MTNL.

Functions being performed by CCA Offices

The 26 CCA offices spread across the length and breadth of the country are performing following important functions:

- **Disbursement of Pension :** CCA offices are responsible for the settlement of pensionary and terminal benefits i.e. issue of pension payment orders, authorization of payment of commuted value of pension, gratuities, recovery of pension contribution, etc.
- **GPF, loans and advances:** The CCAs are responsible for maintenance of GPF accounts and recovery/ accounting of long term advances taken by employees.
- **License Fee collection:** Majority of the licensees is under revenue share regime of license fee. License Fee is based on fixed percentage of Gross Revenue/Adjusted Gross Revenue. The CCAs collect and account license fee from the telecom service providers in the circle. The preliminary scrutiny of license fee related documents as per license agreement is also performed by them. CCA offices deal with license fee related work of approximately 200 licensees under UASL/Basic/CMTS/NLD and other services.
- **Maintenance of Financial Bank Guarantees:** The CCAs have been entrusted with the work of maintenance, renewal, revision and invocation of Financial Bank Guarantees submitted by the licensees.
- **Verification of Deductions:** As per the license agreement, licensees claim deductions to calculate license fee payment. The CCAs are verifying the deductions on an quarterly basis (on account of pass thru charges, roaming service charges, sales tax , service tax)claimed by the licensees . The deductions claimed vary from 23% to 91% of the Gross Revenue under different categories of licenses.
- **Spectrum Charges:** The CCAs are responsible for collection and monitoring of Spectrum Revenue from Telecom service providers in respect of 113 licensees relating to GSM/CDMA/ UASL etc.
- **Universal Service Obligation:** The CCA is responsible for the verification of the claims of the eligible service providers and release of payment. The CCA is responsible for physical inspection of facilities and monitoring the progress of Rural Telephony which has a direct bearing on subsidy disbursed.

- The CCAs also handle court cases at field level where the Government of India is a party in matters of licence fees, spectrum fees, pension, absorption issues etc.
- The CCAs also hold pension Adalats and liaison with State Departments and other ministries on various issues.

Sanctioned staff strength of each CCA Office is as follows:

Designation	Level	Numbers
CCA	SAG	1
Jt. CCA	JAG	2 or 3
Dy. CCA/ACCA	STS/JTS	5 or 6

Achievements of CCA Offices

The CCA offices are responsible not only for the collection of revenue and but also for the disbursement of pensionary benefits as well as the Universal Service subsidy. The collections and disbursement for the year 2005-06 & up to December 2006 for the year 2006-07 are as follows:

(Rs in crore)

S.No	Particulars	2005-06	2006-07 (up to December 2006)
1.	License Fee collection (including UAL)	6647.64	3333.22
2.	Spectrum charges	1371.49	1435.17
3.	Pension payments	578.27	394.47
4.	Universal subsidy disbursed to service providers	1766.85	772.50

The Prime Minister, Dr. Manmohan Singh unveiling the plaque to inaugurate the Flextronics Industrial Part at Sriperumbudur in Tamil Nadu on November 04, 2006. The Chairperson, UPA, Smt. Sonia Gandhi, the Chief Minister of Tamil Nadu, Dr. M. Karunanidhi and the Union Minister for Communications and Information Technology, Shri Dayanidhi Maran are also seen.

The Union Minister of Communications and Information Technology, Shri Dayanidhi Maran at the inaugural function of the Ericsson R&D facility in Chennai on February 25, 2006.

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 as per the conditions of Press Note 5 (2005 series).

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

Foreign direct investment upto 74% is permitted subject to licensing and security requirements. Proposals for FDI beyond 49% shall be considered by FIPB on case to case basis.

- **ISPs not providing gateways (both for satellite and submarine cables), Infrastructure Providers providing dark fibre (IP - I), Electronic Mail and Voice Mail.**

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

- **Manufacturing of Telecom Equipments**

100% FDI is permitted under automatic route subject to sectoral requirements.

Actual Inflow (Year Wise) of FDI in Telecom Sector from August 1991 to November 2006

(Rs. in crore)

Year	FDI INFLOW	Year	FDI INFLOW
August 1991 - December 1993	2.06	2000	288.58
1994	14.02	2001	3,970.87
1995	206.74	2002	1,081.48
1996	764.83	2003	301.40
1997	1,245.19	2004	454.85
1998	1,775.64	2005	94.23
1999	212.67	November 2006	1396.23
		TOTAL	**11808.79**

Actual Inflow (Sector Wise) of FDI in Telecom Sector from August 1991 to November 2006

(Rs. in crore)

Sl. No.	SERVICE/ITEM	FDI
1.	Basic Telephone Service	393.70
2.	Cellular Mobile Telephone Service	3109.68
3.	Radio Paging Service	91.00
4.	E-Mail Service	68.80
5.	VSAT Service	28.10
6.	Cable TV Network + Internet	172.20
7.	Satellite Telephone Service	48.10
8.	Radio Trunking Service	7.10
9.	Manufacturing and Consultancy	1619.10
10.	Holding Companies	4842.00
11.	Other Value Added Services	23.06
12.	Automatic Route	1405.95
	TOTAL	**11808.79**

* Source - DGCIS

Manufacture of Telecom Equipment

Indian telecom industry manufactures complete range of telecom equipment using state of the art technologies designed specifically to match the diverse terrain and climate conditions. Production of telecom equipment has been increased from Rs. 16,090 crore in 2004-05 to Rs. 17,833 crore in 2005-06. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecommunication, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. The last two years saw many renowned telecom companies setting up their manufacturing base in India. Ericsson has set up GSM Radio Base Station Manufacturing facility in Jaipur. Elcoteq has set up handset manufacturing facilities in Bangalore. Nokia set up its manufacturing plant in Chennai. LG Electronics set up plant of manufacturing GSM mobile phones near Pune. Ericsson recently launched their R & D Centre in Chennai. Flextronics has set up an SEZ in Chennai. Motorola is likely to go into production in the first quarter of 2007. Other major companies like Foxconn, Aspcomomp, and Solectron etc have decided to set up their manufacturing bases in India. The total committed FDI is more than US$ 1.5 billion.

The proposal for setting up Telecom Equipment and Services Export Promotion Council and Telecom Testing and Security Certification Centre (TETC) is in the pipe line. A large number of companies like Alcatel, Cisco have also shown interest in setting up their R & D centers in India. With above initiatives India is expected to be a manufacturing hub for the telecom equipment

INTERNATIONAL COOPERATION

In the field of international cooperation, workshops, seminars and training programmes are held both within the country and outside. Deliberations are held with the visiting foreign dignitaries, apart from the visits to other countries to hold discussions on the relevant subjects.

Bilateral Co-operations / Joint Commission Meetings:

- H.E., Ambassador of Tunisia in India called on Secretary Telecom on May 11, 2006 in his chamber to discuss the issues related to 17th session of the ITU Plenipotentiary Conference (November 6-24, 2006) and other bilateral issues.
- H.E., Ambassador of the Republic of Azerbaijan called on Hon'ble MOS(C and IT) on May 5, 2006 in his chamber to discuss the bilateral relation between Azerbaijan and India in the area of Communication and IT and to explore means to strengthen them further.
- President of Federal Communication Commission (COMCOM), Switzerland along with delegation called on Hon'ble MoS (C and IT) on May 24, 2006 to seek India's support for the Swiss candidate to the post of forthcoming ITU Secretary General Election.
- The 2nd Joint Trade Committee (JTC) meeting with the Republic of Ivory Coast was held on August 3-4, 2006 in Department of Commerce. The Minister of State for Commerce and Industry led the Indian delegation. DDG (International Relations) attended the meeting from DOT side.
- H.E., High Commissioner of Brunei- Darussalam in India, called on Hon'ble MoS (C and IT) in Delhi on September 8, 2006. Both the dignitaries discussed the relations of India and Brunei-Darussalam in the Field of ICT. DDG (International Relations) and Dir (International Relations-1) from DOT were also present in the meeting.
- 5th Indo - French Joint working Group on IT and Telecom was held in Paris at France from September 19-22, 2006. DDG (AS), DOT and Joint Wireless Advisor (N), DOT represented DOT in Indian delegation led by Secretary, Department of IT.
- H.E., Minister of Foreign Affairs and Trade of Brunei Darussalam called on Hon'ble MOS (C and IT) in his chamber at Delhi on October 10, 2006. Both the dignitaries exchanged views on the on going developments in the two countries in the field of Telecom. DDG (International Relations) and Director (International Relations-1) were present in the meeting from DOT side.
- 3rd meeting of India - European Commission Steering Committee on Science and Technology Co-operation and associated bilateral - Inter agency preparatory meeting was held at Department of Science and Technology on October 31, 2006. Advisor (Operations), DOT and Sr. DDG (Telecom Engineering Centre) attended the meeting from DOT.

VISIT OF MINISTERS AND OTHER DIGNITARIES/DELEGATION TO FOREIGN COUNTRIES:

- MoC and IT along with OSD visited to Korea and Singapore from June 18-25, 2006 for meeting and interactions with Korean Government, Industry professionals and with the officials of Semiconductor Companies.

- MoC and IT and JS (T) visited UK and USA from July 13-20, 2006 for attending bilateral/ official meetings.
- Secretary (Telecom) along with DDG (VAS) visited USA for attending Indian Telecommunication Day from October 11-14, 2006.
- Member (Services) lead a delegation to Thimpu , Bhutan for attending 17th Indo Bhutan operation meeting from June 14-15, 2006.
- Member (Technology) along with Advisor (Fin) and Director (IR) participated in the 30th Session of the Management Committee Meeting of the Asia Pacific Telecommunity (APT) from September 18-21, 2006 at Maldives.
- Member (Technology) along with Sr. DDG TEC participated in the 3 GSM World Congress Asia 2006 at Singapore from October 16-18, 2006.

VISIT OF DIGNITARIES OF OTHER COUNTRIES TO INDIA

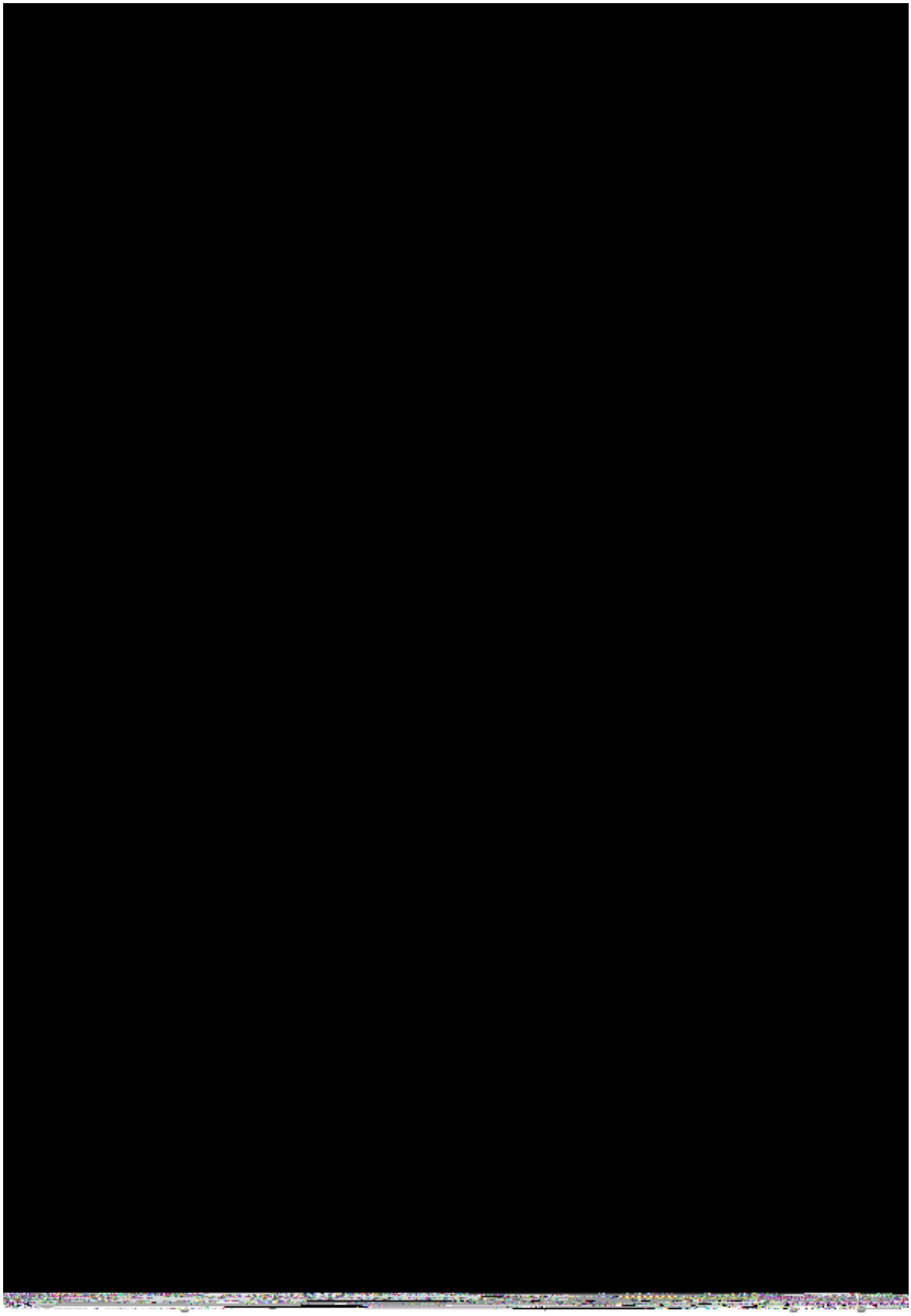
- H.E. Foreign Minister of Tanzania called on Hon'ble MOC & IT November 22, 2006 in New Delhi. Both the dignitaries discussed the bilateral cooperation between the two countries in the field of ICT.
- A 50 member Egyptian delegation consisting of officials from Government as well as business sector and headed by H.E. Minister Communication & IT of Arab Republic of Egypt visited India (New Delhi) on November 27, 2006. A meeting was held in New Delhi on November 27, 2007 with Senior Officers of DOT, DIT and DOP. Hon'ble MOS (C & IT) chaired the meeting from Indian side. An MOU in the field of ICT was signed between the two countries in Chennai on November 28, 2006 at the Minister level.
- A delegation led by H.E. Minister of Communication and IT of Kingdom of Jordan called on Hon'ble MOS(C & IT) on December 1, 2006 in his Chamber in Dak Bhawan, New Delhi. They exchanged the views on the developments taking place in two countries in the field of ICT.
- An American delegation led by Ambassador called on Chairman, TC in his office on December 4, 2006. They discussed issues related to the mutual cooperation in the field of rural telephony in other developing countries.

In addition to above, 55 officers were deputed to foreign countries during the period April-December 2006 in various events of APT, ITU-T, ITU-R, ITU-D and other international and regional organizations, etc. as listed below:

S.No.	Activity	No. of officers deputed	Place / Country of deputation
1.	ITU-T/ ITU-D /ITU-R	21	Bangladesh, Geneva, China, Bhutan, Canada, Turky and Hong Kong
2.	APT	7	China, Bangkok, Japan, Bhutan and Maldives
3.	Misc.	27	Sweden, Korea, Singapore, USA, Thailand, UK, Phillipines, France, Finland, Belgium, Nepal, Pakistan and Germany

The Union Minister for Communications and Information Technology, Shri Dayanidhi Maran and the Arab Republic of Egypt Communications & IT Minister, Dr. Tarek Kamel exchanging signed document of the MOU for Bilateral Co operation in ICT, in Chennai on November 28, 2006

The President of Swiss Federal Communications Commission (COMCOM), Mr. Marc Furrer calls on the Minister of State for Communications & Information Technology, Dr. Shakeel Ahmad, in New Delhi on May 26, 2006



with the Minister of State for Communications and Information Technology, Dr. Shakeel Ahmad,
in New Delhi on October 10, 2006

USE OF OFFICIAL LANGUAGE (HINDI)

Official Language Division of the Department of Telecom is looking after all the activities relating to implementation of the official language policy of Government of India.

During the period 2006-07(April - December 2006), 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

Acquainted all the Sections, Offices and Public Sector Undertakings under the administrative control of the Department with the Official Language Act and Rules and instructions issued there under so that the targets fixed by the Official Language Department in their Annual Programme for the year 2006-2007 could be achieved. Quarterly Progress Reports regarding progressive use of Hindi were called for from various Sections of the Department and other Offices and PSUs under this Department. The same were reviewed and necessary corrective measures were taken wherever necessary. The Section 3(3) of the Official Language Act, 1963 was fully complied with during the year under report.

Training in Hindi Typewriting and Hindi Stenography

Typists and Stenographers, who were not trained in Hindi Typing and Stenography, were nominated for training in Hindi typing and Hindi Stenography. Apart from this, 6 officials were sent for computer training in Hindi in order to familiarize them with the latest technology in computers.

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.

Monitoring and Inspection

The Official Language Division worked as a co-coordinator during the course of inspections conducted by the Second Sub-Committee of Parliament on Official Language of the various offices/ Corporates under the Departments. During the period under review, 14 such inspections were carried out throughout India. The O.L. Division also conducted 6 inspections of Telecom offices/PSUs independently to ensure the compliance of the provisions of Official Language instructions issued there under.

Celebration of Hindi Pakhwara

Hindi Pakhwara was organized from September 1, 2006 to September 15, 2006 in the Department. 13 competitions relating to the promotion of Official Language in the Department were organized for

the Hindi speaking officers and officials as well as for Non-Hindi speaking officers and officials. About 300 officers/officials participated in the competitions. Cash Prizes/certificates were given to 211 participants by Joint Secretary (Admn.) in function organized in the Department. Hindi Pakhwara was also organized by the offices and PSUs under the administrative control of this Department. Hindi Hasya Kavi Sammelans were organised in C-DOT and BSNL. Renowned poets were invited in the Sammelans held during the Hindi Pakhwara and special programme Inse Miliye was also organized in the C-DOT in every quarter.

Hindi Workshop

During the period under report, four Hindi workshops were organized and practice sessions were held wherein more than 80 officials/officials were trained to do their maximum official work in Hindi.

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

During the period under review, 13 offices under the administrative control of this Department were notified under the Rule 10(4) of the Official Language Rule, 1976. The fresh orders under Rule 8(4) were issued to the proficient officers/officials individually to do their specific work in Hindi in the Department. Thirty sections have also been specified to do their entire work in Hindi excluding Hindi Division.

Translation Work

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

Hindi Salahakar Samiti

The Hindi Salahakar Samiti of the Department has been reconstituted and Resolution issued to all concerned members of the Samiti with the request to send their suggestions for the propagation of Hindi in the Department.

Joint Secretary (Admn.) Sh. H.C. Jayal and Director (OL) Smt. Sanyukta Arjuna with the officers/officials of D.O.T. during Hindi Pakhwara at DOT (HQ).

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 (DOAR and PG) and from the public. Public Grievances Cell of DOT monitors complaints for their early and timely settlements and also implements the recommendations of Department of Administrative Reforms and Public Grievances (DARPG) from time to time.

During the period 2006-07(April- December), 3,578 grievances were received, (including B/F) out of which 3,365 were disposed off.

Staff Employment

The total staff employed at the end of 2005-06 was 3.80 lakh. As compared to 3.96 lakh during the preceding year. This includes staff in DOT, BSNL and MTNL and industrial workers in the Telecom Factories. Of these employees, 65,070 belonged to the Scheduled Castes and 17,360 to the Scheduled Tribes categories. The detailed group-wise break-up is given in the Table No. 5 of the Statistical Supplement. There were 51,307 women employees. Further, 2,118 ex-servicemen (including 39 Disabled) were working in the Department as on March 31, 2006. Among physically handicapped persons employed, there were 38 employees with blindness or low vision, 36 with hearing impairment and 362 employees with locomotor disability or cerebral palsy.

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. The Telecom Staff Welfare Board in its meeting held on March 2, 2006 has revised the rates and eligibility for above schemes and introduced some new schemes in line with the policy emphasis on promoting the cause of **"Women Empowerment and Persons with disabilities"**. During the year 2006-07, the following activities were undertaken under the revised schemes.

- The rate of financial assistance in death cases has been enhanced to Rs. 10,000/- from Rs. 7,000/- per case. An amount of Rs. 20,000/- (Rupees Twenty thousand only) has been given to the families of deceased employees.
- The rates of Book Award has been enhanced to Rs.1,000/- p.a. (Class II-V), Rs. 1,500/- p.a. (ClassVI-VIII) and Rs. 2,000/- p.a. (Class IX-XII). A relaxation of 10% in marks for wards of Gr. 'D' employees has also been introduced alongwith the existing relaxation for SC/ST/OBC and girl students. An amount of Rs. 5,27,600/- has been disbursed under the revised scheme.
- The scheme of Scholarship Award has been revised by removing the Basic Pay limit criteria, hiking of rates for some courses, reduction in percentage of marks for purposes of renewal and introducing 10% relaxation in marks for girl students both for original grant and subsequent renewal.
- The rates of Scholarship for Mentally/Physically challenged students studying in school/college have been raised from Rs. 200/- to 500/- pm. In addition, a lump sum incentive grant for purchasing special teaching aids including Transport Allowance, Hostel Subsidy has also been introduced for **Physically/Mentally challenged wards** of DoT employees.
- Reimbursement up to 50% subject to a maximum of Rs. 300/- user charges for crèche facility availed by DoT employee in respect of their children (for two only) has been introduced w.e.f. April 1, 2006.
- Book Awards and Incentives were distributed to the meritorious school going children of DoT employees.

Regulatory Framework in the Telecom Sector

The **Telecom Regulatory Authority of India (TRAI)** was established under the Telecom Regulatory Authority of India Act, 1997 enacted on March 28, 1997. The TRAI (Amendment) Act, 2000 led to reconstitution of the Authority. It consists of one Chairperson, two full- time members and two part-time members. As the posts of one whole-time Member and one part-time Member are vacant, the present composition of Authority is as follows:

Shri Nripendra Misra	Chairperson
Shri A.K.Sawhney	Member
Shri N.Balakrishanan	Member (Part-time)

The goals and objectives of TRAI are focused towards providing a regulatory regime that facilitates achievement of the objectives of New Telecom Policy (NTP) 1999. TRAI has endeavoured to encourage greater competition in telecom sector together with better quality and affordable prices, in order to meet the objectives of NTP'99. Vide a Notification of the Government dated January 9, 2004, broadcasting and cable services have also been included in the definition of "telecommunication service" under the TRAI Act, and thus, broadcasting and cable services are also under the purview of TRAI.

The following are the policy initiatives undertaken by TRAI during the year:-

(i) The Authority released its recommendations on allocation and pricing of spectrum for 3G and BWA services on September 27, 2006. The Recommendations focus on level playing field, technological neutrality and affordability while ensuring that spectrum is available to telecom operators wishing to provide 3G and BWA and thus deepening the penetration of telecom services in rural and urban India.

(ii) Recommendations were submitted on the question of components of AGR to the Hon'ble TDSAT on September 13, 2006.

(iii) Recommendations for permitting usage of * and # in provisioning of Intra network services like USSD (Unstructured Supplementary Service Data) by Access Providers and need for elaboration and clarification in NNP-2003 were sent to the Government on April 12, 2006

(iv) The Broadband Policy issued by the Government in October 2004 provides for fixation of the quality of service standards for broadband services by TRAI. With the increase in the number of customers, consumer complaints pertaining to broadband services are also increasing. To address consumers' concern and to create conditions for consumer satisfaction, TRAI issued the Regulation on Quality of Service for Broadband Services on October 6, 2006.

(v) On the basis of the recommendations of the Committee constituted by the Authority, a draft Regulation on Intelligent Network Services in Multi Operator, Multi Network Scenario has been prepared and the same has been posted on TRAI's website on October 30, 2006.

Measures Taken for Protection of Consumers

The following consumer protection measures were taken by TRAI during April - October 2006:

- To enhance consumer awareness, the Authority vide letter dated May 23, 2006 advised all service providers to provide printed material in English and Vernacular Language to customers at the time of enrollment inter-alia containing:
  a) Full and complete tariff information sheet,
  b) The features of the service offered with special emphasis on roaming, premium rate services and other optional and value added services,
  c) The Terms and Conditions including the exceptions attached to the service in unambiguous terms,
  d) The rights of the consumers emanating from the various decisions of the TRAI (as published by TRAI) and
  e) The common charter of service agreed upon by the service providers.
- The Authority issued a direction on June 27, 2005 to all access providers to lay down a system of credit limit for postpaid subscribers. The Authority vide direction dated June 7, 2006 further streamlined the procedure/system by mandating that the credit limit set for a postpaid customer shall be included in the monthly statement/bill of the customer on a regular basis.
- The Authority vide direction dated July 14, 2006 has sought yearly report /certificate from service providers of compliance of directions on tariff matters that have continuing application. The first certificate of compliance, covering the entire period from the date of issuance of the respective direction up to June 30, 2006 has been received from the service providers.
- In order to ensure and monitor that the service providers display details of the tariff plans on their website for the information of the consumers, the Authority vide letter dated September 1, 2006 has made it mandatory for the service providers to submit a declaration along with tariff reports to the effect that the reported tariff plan has been displayed on the website.
- For transparency and consumer protection, the Authority had asked service providers to display International Private Leased line tariff and Domestic Leased Line tariff on their websites vide letters dated March 6, 2006 and April 7, 2006, respectively.

Improvement in the Effectiveness of National Internet Exchange of India (NIXI)

NIXI was set up for peering of ISPs among themselves for the purpose of routing the domestic traffic within the country, instead of taking it all the way to US/abroad and for the purpose of better quality of service and reduced charges for customers. It has been observed that only a limited number

of ISPs have joined NIXI so far, resulting into sub-optimal utilization of NIXI's infrastructure. To address the issues involved, TRAI has issued a consultation paper on 'Improvement in Effectiveness of NIXI' in October 2006.

Constitution of Cross-Industry Coordination Committee for Next Generation Networks (NGN)

In March 2006, TRAI gave its recommendations on Next Generation Networks. During the consultation process on the issues pertaining to Next Generation Networks, stakeholders, in general, were of the opinion for setting up of a high-level cross-industry coordination committee for NGN consisting of representatives from Licensor, Regulator, TEC, Service Providers, Vendors and Academician to examine all the relevant issues. TRAI has, therefore, constituted an Expert Committee, NGN-eCO, which has thirty members.

Admissibility of Revenue Share between Visiting Network and Terminating Network for Roaming calls

International Roaming tariff are under forbearance and there is a ceiling on National Roaming tariff. Revenue sharing between home network and visiting network is normally decided by mutual agreement between service providers. In this regard, TRAI received representations from various service providers and their Associations. After detailed consultation/examination, it was concluded that no amendment in the regulation was called for. Thus, the Authority's earlier decision that terminating operator should get only the termination charge as prescribed in the IUC Regulation was reconfirmed.

Interconnect Usage Charges (IUC) for Short Message Service (SMS)

As per the prevailing IUC Regulation, termination and carriage charges for Short Message Service (SMS) have not been specified by the TRAI and are forborne. To address some of the representations from service providers, TRAI had issued a Consultation Paper on the main issues of IUC for SMS and Premium Rate SMS. After obtaining comments from stakeholders on the consultation paper, holding Open House Discussions and its own analysis, TRAI decided as under:

- The forbearance on IUC for SMS should continue for the present.
- The charges of premium SMS are on higher side and bear no relationship with the cost and nature of services rendered.
- It is expected that the telecom operators would voluntarily reduce the charges of premium SMS service and TRAI henceforth would closely monitor the trends.
- It is also observed that the subscribers are not fully aware of premium SMS charges. The telecom operators are required to ensure either themselves or in arrangement with the content provider to give wide publicity for the tariff of the premium rate services.
- Premium SMS should be on short coded SMS numbers only. The use of short coded SMS numbers should be in accordance with the Directives of Department of Telecommunications issued from time to time.

Sale of Inbound International Calling Cards in India / Tata Indicom's Global calling cards/ Top up cards.

TRAI observed that some International Long Distance Operators are introducing / have already introduced inbound international calling cards. In this connection a case relating to sale of this type of cards was examined in TRAI and taken up with DoT. DoT clarified that the sale of these cards by ILDOs is not permitted under ILD license and as per existing policy, a "No Objection Certificate" is required from Licensor for the sale of such inbound international calling cards in India. A letter was issued to all ILDOs on July 3, 2006 asking them to obtain (No objection Certificate NOC) from DoT and also to suspend the introduction/ selling of inbound international calling cards in India.

Directive on compliance with National Numbering Plan

DoT vide their letter dated November 29, 2004 had stated that unified access/basic/ cellular mobile service providers may use the levels except 0,1,7,8 and 9 for allocation of short codes to their content providers including SMS based service within their network. It had come to the notice of TRAI that some CMSPs/UASLs were using short codes which are not permissible under National Numbering Plan and DOT's above mentioned letter for allocation to the content providers or even for services provided within their network and therefore was violating the provisions of NNP 2003. Vide its direction dated July 17, 2006, TRAI directed all CMSPs/UASLs to immediately stop the use of prohibited levels and to report compliance to the Authority. On DoT's request, the deadline for compliance has been extended up to February 1, 2007.

TELECOM DISPUTES SETTLEMENT AND APPELLATE TRIBUNAL

1. Telecom Disputes Settlement and Appellate Tribunal (TDSAT) has been established by the Central Government by a substantial 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 appeals against any decision or order of Telecom Regulatory Authority of India.

2. By a Notification issued on January 9, 2004, the Central Government expanded the meaning of the term "telecommunications services" so as to also include "broadcasting services" and "cable services".

3. The Tribunal exercises both Original and Appellate Jurisdiction in respect of disputes pertaining to telecom, broadcasting and cable services.

4. The Tribunal is headed by Hon'ble Mr. Justice Arun Kumar, former Judge of Supreme Court of India, as Chairperson of TDSAT and the two Members viz. Vinod Vaish, former Chairman, Telecom Commission and Lt. Gen. (Retd.) D.P. Sehgal.

5. The number of cases in the Tribunal has been increasing every year since its establishment in the year 2001. The total number of cases filed before TDSAT in the year 2001 were 103 which have increased to 379 till December 2006. The disposal of cases has been equally faster. There is no pendancy of the cases filed up to the year 2004 except 9 cases which are pending due to technical reasons/pendancy of writ petitions before High Courts/appointment of Commissioner etc. and the disposal rate for the year 2005 and 2006 (till September) has been 91% and 50% respectively.

6. 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.

7. The Tribunal has been organizing 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. The Tribunal has so far organized 10 seminars till March 31, 2006. During the current year the first set of seminars was held in Bhubneshwar on November 26, 2006. Two- three more seminars are proposed to be organized during the remaining part of the year.

8. As Sector Member of International Telecommunication Union (ITU), TDSAT has been participating in the International Seminars, conferences and events organized by ITU and other International bodies.

9. TDSAT maintains its own Website with all the important judgements and other activities of the Tribunal on the Website www.tdsat.nic.in. Recently TDSAT has also developed a SMS Alert system in this Tribunal for the purpose of daily forwarding the cases listed before it to the

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II. 1. Centre for Development of Telematics (C-DOT)

INTRODUCTION

Centre for Development of Telematics (C-DOT) established in 1984 as an autonomous body with the objective of developing a new generation of digital switching systems is the telecom research and development centre of the Government of India. C-DOT develops total telecom solutions, technologies and applications for the fixed-line, mobile and packet-based converged 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 current focus is 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, WiFi and GSM systems. C-DOT continues to support the legacy systems deployed in the field.

THE YEAR AT A GLANCE

C-DOT is working on a new R & D roadmap for both short term and long term in view of the paradigm shift in telecom technology, unprecedented growth rate of networks, introduction of innovative services, lowering of the cost of provisioning and using the services, market competition and enabling policies. Some significant actions were taken during the year as part of road map implementation and considerable progress was made on the development of products, system and solutions with focus on appropriate deliverables.

ACHIEVEMENTS DURING THE YEAR 2006-07

Schemes / Project deliverables planned for the Financial Year 2006-07

- **Innovative Services For Business and Industry**
  - Network Management System (NMS) Enhancements
  - Call Interception and Intelligent System (CIIS)
  - Operating Support System (OSS)
- **Advanced Intelligent Networks Services**
  - IN Enhancements and IN Based Services

- **High Bit Rate Network Backbone On Fibre and Satellite**
  - WDM Technology
  - Gigabit - Passive Optical Network (G-PON)
  - Broad Band Transport Via Satellite (BBTS)
- **Cell and Packet Technologies For Voice and Data Convergence**
  - Next Generation Network (NGN)
  - Network Reliability Optimization for AISDN-17 Navy
- **Wireless and Mobile Communication**
  - Wireless Access System

PROGRESS MADE IN TECHNOLOGY DEVELOPMENT PROJECT

- **INNOVATIVE SERVICES FOR BUSINESS AND INDUSTRY**
  - Trunk Automatic Exchange Network Management System (TAX NMS) deployment activities in the field are in progress.
  - Field trial completed for GSM Network Management System (GNMS) with 32 nodes across the country to provide network management functions for BSNL based mobile network.
  - As part of Operations Support System (OSS) project, internal validation and load testing for version-1 for clearing house application and field trial set up has been completed for national roaming; while pilot trial is under progress with processing on actual billing data files of MTNL and BSNL.
  - In the field of Lawful Enforcement Interception Function (LEIF) feature and capacity implementation completed during the year and load stabilization is ongoing, whereas LEIF interfaces to two more technology switches, namely, OCB and EWSD, and Lawful Enforcement Monitoring Function (LEMF) FAX deduction implemented. As part of LIS implementation for packet network development SIP based (protocol) LEIF and LEMF functionality completed.
  - C-DOT has developed a Missed Call Alert System (MCA) for GSM network of MTNL and BSNL. The system has been installed for field trial at Bangalore, Chennai, Hyderabad, Pune, Chandigarh and Kolkata to cater south (includes Tamil Nadu and AP circles), Western, Northern and Eastern circles respectively. The field trial for the same has been successfully completed. MTNL and BSNL have also accepted commercial proposals for its implementation in the network
  - The trial for SMS on landline application is under progress at Rajahmundry, Andhra Pradesh. This system enables landline subscribers to send SMS to any mobile phone without changing the instrument.

- All the deliverables planned under the scheme for Call Interception and Intelligent System (CIIS), Network Management System (NMS) enhancements, Operations Support System (OSS) (trial completion) are expected to be completed by the end of Financial Year 2006-07.

ADVANCED INTELLIGENT NETWORK (AIN)

- Internal validation for WIN (Wireless IN) for TLF (Toll-Free) and PPC (Pre Paid Charges) services to be provided in the BSNL network is under progress. The field trial site has been allocated at Jaipur, Rajasthan and the preparatory activities such as site and equipment planning etc. have commenced parallely. C-DOT's WIN Solution shall provide novel value-added services to CDMA users. The services shall be progressively enhanced as and when new requirements emerge from the field.
- The field trial for C-DOT WIN solution is likely to be concluded by the end of the Financial Year 2006-07.

HIGH BIT RATE NETWORK BACKBONE ON FIBRE AND SATELLITE

- Technology approval obtained after successful completion of field trial for Dense Wavelength Division Multiplexing system (DWDM). Transfer of technology has already commenced.
- After completion of internal validation, Coarse WDM (CWDM) system has been offered to TEC for further validation. The system has also been installed in the MTNL network at Laxmi Nagar, Janpath and Jorbagh and working satisfactorily with live traffic.
- Internal validation completed for STM-1 Ku band Broadband Satellite System (BBTS) which include RF up/down converter, modem switch over unit. Design implementation in progress for Gigabit - Passive Optical Network (GPON) system.
- The technology approval for the deliverables, CWDM (Coarse WDM technology) is scheduled for completion during the year. The development work for Broad Band Transport via Satellite (BBTS) and GPON system is also proposed to be completed by the year end.

CELL AND PACKET TECHNOLOGIES FOR VOICE AND DATA CONVERGENCE

- Pilot Trial of C-DOT NGN (Next Generation Network) Solution in the BSNL Network
  - MOU signed with BSNL for the field trial of C-DOT NGN solution in the network. Pilot field trial site allocated at Noida, Gurgaon and Bangalore for trial of Class-4 (IP TAX) and Class-5 (subscriber) services of C-DOT Next Generation Network (NGN) solution with strategic partners.
  - The installation and configuration of Class 4 and Class 5 Soft-switch, Trunk Media Gateway, Signaling Gateway, Announcement Server, Billing and Pre-paid Server have already been completed at NOIDA. The installation of Trunk Media Gateway at Gurgaon is also completed. Trunk Media Gateway and Signalling Gateway have

been installed in Bangalore at Ulsoor Exchange and an additional Class 5 Soft-switch at Bangalore East Exchange. These gateways would be controlled by the Signaling gateway and the Class 4 Soft-switch located at NOIDA.

- The internal Validation for Class-5 Soft-switch installed at NOIDA has been completed, while internal testing is going on for the Class-4 Soft-switch and Class-5 Soft-switch installed at Bangalore East Exchange.
- Indigenous developments for various components are also in progress.

✷ Acceptance Testing (AT) of ATM for Defence Customization and Network Reliability and Optimization for ATM Based Integrated Shipboard Data Network (AISDN-17) project for Navy has been completed and the feedback incorporated. The project includes customization for ATM switch, Network Interface Unit (NIU), Network Health Monitoring system (NHMS), Performance Modeling and Latency Measurements, etc. The System has been reoffered for validation, which is nearing completion.

✷ The pilot trial for C-DOT NGN solution is to be completed by end of the year. During the same period, the ATM customization for Defence is also likely to be completed.

☛ **WIRELESS AND MOBILE COMMUNICATION**

✷ Prototype for the rural wireless system developed and installed in the field for trial.

✷ The field trial is to commence in a specific Radio frequency Band by the end of the year.

TECHNICAL SUPPORT SERVICES

PRODUCT SUPPORT ENHANCEMENTS / FIELD SUPPORT

C-DOT continued to provide Product Support to the existing network in the field by retrofitting and imparting training to Field Staff, wherever required. Various enhancements carried out during first two quarters of Financial Year 2006-07 in the C-DOT Switching Systems, include:

☛ A new software 2218 (3.6) has been developed and being lab-tested for C-DOT switching systems (MAX-XLs and SBM-XLs) to take care of metering and IOP stability related issues reported from various field sites. The software link will be released to field sites shortly for mass propagation after successful lab validation.

☛ A new clean link 2_2_1_9 has also been developed to cater additional requirements such as the CENTREX features etc, currently under lab testing. The link will be updated to cater other requirements of BSNL like Personalized Ring Back Tone (PRBT), Call Completion to Busy Subscribers (CCBS) and Message Waiting indication (MWI) etc.

☛ C-DOT AN RAX has been enhanced with following new capabilities:

- Auto restoration of link to eliminate manual reset operation as required in previous version (the software version ANR-FO2-012.2 supporting the same) successfully completed the TEC testing and the field trial at 8 sites of AN RAXs connected to C-DOT MAX-XL in the BSNL network at Salem, Tamil Nadu and approval accorded for its propagation at sites.

- ISDN capability with development of additional Compact ISDN Terminal (CIT) Unit hardware as a separate set-top box and the complete system is named as AN-RAX (ISDN). The system with software version ANR-FO2-110 has been accorded technology approval after successful completion of its TEC testing and field trial with OCB-283 and C-DOT SBM-VE as Local Exchanges. The existing C-DOT 256P RAXs and AN RAXs in the field can be upgraded with the ISDN capability.

BUSINESS PROMOTION

- C-DOT has made a Compact Embedded System (CES) ready for online collection of CDRs from its MAX - L / XL exchanges in the BSNL network. The system is required for providing a solution to the short-listed System Integrators (SIs) bidding for the BSNL's tender reissued for 'CDR based Customer care and Convergent Billing System'. Commercial proposal has been sent to the respective SIs.
- Commercial proposal has been sent for C-DOT Subscriber Management (SM) product to SIs for integration with the third party provisioning solution-having interfaces with customer care and inventory management system etc.
- C-DOT obtained order for the supply, installation and commissioning of 5 nos. of MCA (Missed Call Alert) system for BSNL's GSM network. The number is expected to increase in the near future. MTNL has also placed the order for deployment of Missed Call Alert (MCA) System in MTNL's GSM network at Delhi and Mumbai.
- C-DOT, along with the technology partners, submitted its bid for Supply, Installation, Commissioning and Technical Support of VoIP Equipment on turnkey basis, against a tender requirement of BSNL, Kolkata.
- C-DOT, along with M/s XALTED Information Systems Pvt. Ltd. submitted the Expression of Interest against the requirement of G-PON based Fibre to the home (FTTH) systems by BSNL, New Delhi
- Techno-Commercial Proposal for the C-DOT's Lawful Interception System has been sent to the Directorate of Enforcement, Government of India and to MTNL, Delhi.
- Commercial proposal for 'First Call Activation' of Virtual Card Calling (VCC) cards, part of IN services, has been sent to MTNL, Delhi as per their requirements and approval received for its implementation for GSM network at Delhi and Mumbai.

EVENTS AND MoUS SIGNED

- C-DOT actively participated in the TEC Sponsored Manufacturers' Forum to contribute towards finalization of TEC GRs on Personalized Ring Back Tone (PRBT) for PSTN, proposed changes for Large size Local cum Tandem Exchanges and amendments on Soft-switch for Transit applications.
- C-DOT has entered into an agreement with BSNL for installation of Local Network Management System (LNMS) at 40 sites.

- C-DOT has signed an MOU with BSNL for joint implementation and deployment of C-DOT's GSM Network Management System (GNMS) in BSNL Network, used for performance monitoring of MSCs, Base Station Controllers (BSCs) and Base Transceiver Systems (BTSs).
- An MOU has been signed with Universal Services Obligation Fund Administration Fund Administration (USOFA) to provide technical consultancy for the project to support infrastructure for Cellular Mobile Services in rural and remote areas.
- C-DOT has signed an MOU with Red Hat India Pvt. Ltd. for working together to promote Linux and Open Source Solutions in the Telecom Sector besides extensive use in C-DOT
- A TOT agreement has been signed with ITI Limited for High Voltage Protection (HVP) Unit, required for alleviating the damage / recurring repair of Line Cards due to lightening, in BSNL network.

PATENTS AND IPR

- C-DOT has filed the US patent application #10595538 on 'A novel architecture for a message bus'.
- C-DOT applied for Intellectual Property Right (IPR) on C-DOT High Voltage Protection (CHVP). It is the main Protection module, which provides Primary Protection, Secondary Protection and Co-ordination between Primary and Secondary Protection on the Subscriber lines of AN-RAX (C-DOT Rural Exchange). The field deployment opportunities include improved protection and thereby improve the performance of the existing systems and new Installations too. CHVP developed for RAX/AN-RAX systems can also be used in C-DOT MAX Switches.

EXHIBITIONS AND CONFERENCES

- C- DOT participated in the "India R & D 2006 - Mind to Market" held from December 4-6, 2006 at Vigyan Bhawan, New Delhi. The exhibition was organized by FICCI in Partnership with Department of Science and Technology, Department of Industrial Policy and Promotion and CSIR. Hon'ble President of India inaugurated the event.
- C-DOT participated in the International Conference and Exhibition "**India Telecom 2006**" organized by **Department of Telecommunications** in association with FICCI and **TEMA** held at Pragati Maidan, New Delhi. Honourable President of India inaugurated the event along with Minister of C and IT.
- C-DOT is participating in "**Convergence India 2007**" organized in New Delhi during last quarter of the year.

EMPLOYEE'S WELFARE

For giving employees the benefit of coverage for hospitalization expenses, to be met from their medical entitlement, C-DOT has taken tailor-made group medi-claim insurance. Staff members (and

their families) in executive cadres have coverage of Rs. 5 lakh and staff in non-executive cadres have been covered for Rs. 3.5 Lakh. The policy has been made effective from April 1, 2006.

PROMOTION OF HINDI IN C-DOT

C-DOT is making different efforts to ensure compliance of Official Language Policy of Government of India. Many innovative and different programmes have been initiated in this regard. Technical Seminars in Hindi were organised at both Delhi and Bangalore centres. C-DOT celebrated Hindi Utsav from September 14-28, 2006. During this fortnight, employees were motivated to work more and more in Hindi. A grand **Kavi Sammelan** was organised on the occasion of **Hindi Diwas.**

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II. 2. Telecommunications Engineering Centre

INTRODUCTION

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

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

TEC has following specialized divisions:

- External Plant
- Information Technology
- Networks
- Transmission
- Radio Transmission
- Satellite Division
- Value Aided Services
- Switching
- Mobile Communication

In addition, Regional Coordination division coordinates all Regional Centres. The Regional Centres facilitate testing of equipment and licensed service networks. These are located with regional headquarters in Bangalore, Kolkatta, Delhi and Mumbai to cover the entire country. The approval certificate is issued from centralized unit called Type Approval Unit under RC Division.

MISSION

- **To take initiative in NGN and set up world class NGN test-bed.**
  - Outsource routine interface approval testing of network equipment and CPEs, to cut delays.
  - Coordinate "National Technology Think-Tank" to address the development of the entire telecom eco-system in India.
  - Give thrust of Wi-Max and PON technologies to ensure fast-track rollout of broadband in the country, especially in rural areas.
  - Evolve technical standards for National Disaster Relief and Security Control for telecom networks.
  - Fund and encourage R&D in telecom in public and private sectors as well as educational Institutions to make India R&D hub in this region.
  - Provide certification for driving indigenization and manufacturing take - off in India.
  - Vigorously participate in professional bodies such as ITU-T, WiMax Forum, TM Forum, Enum Working Group, IETF, IEEE etc and partner with multilateral organisation like APT, CTO etc. to protect country's interests.
  - Setting up Asia Telecom Standards Institute in New Delhi and telecom consultancy to S.E. Asia and SAARC countries.
  - Actively co-operate with C-DoT to develop telecom technologies aimed specially for local manufacture.

Standardization

TEC evolves generic, interface, service requirements and specifications for various telecom products, equipments and services for all the service providers with participation of major stake holders. TEC has revised its "Standards and Specification Formulation Procedure" document to include all major stake holders.

Approvals and Tests

Approvals are being accorded by TEC after the evaluation of products. In addition, licensed networks are being tested and certified by TEC. The various activities in this regard are:-

- Type Approval
- Interface Approval
- Technology Approval
- Service Test Certificate

Technical Support

The Telecommunications Engineering Centre provides support and advice on various technical issues to DoT, Licensing Cell for formulating fundamental plans, technology plans, technology trials, tender evaluation, and software support as well as testing of application software. For Information Technology also full technical inputs are provided by TEC.

ACHIEVEMENTS DURING 2006 - 07

During the period, from April - December 2006, 12 GRs/IRs were issued, 39 GRs revised and 7 GRs/IRs were amended. GRs/IRs issued included Ethernet Media Converter, Intrusion Prevention System, Ethernet to E1 Converter, and Ethernet Traffic Analyzer for Ethernet transport Service-Testing.

- 43 Test Schedules were prepared for new and revised GRs.
- 25 Field Trials/ Testing/Validation including the evaluations were carried out for some of the new products in Optical, Satellite, Switching and Radio technology areas.
- As part of on going activities, TEC was referred 16 field problems on switching and transmission, which were looked into and expert advice rendered.
- As part of its activity for according approval, 119 Interface Approvals were issued for the products for interfacing with the BSNL/MTNL network. 428 Service Test Certificates were issued for the network coverage of private operators.
- 14 DCC meetings and 33 Manufacturers forum were conducted for various Generic Requirements (GRs).
- To keep the officers of TEC abreast with new developments in new technologies in the Telecom Sectors:-
  a. 60 Officers of TEC were deputed in different in-service courses/training in various Telecom Training Centres in India.
  b. 27 Officers attended workshop on Motivation, vitalization and change arranged in TEC.
  c. 37 Technical Presentations by Vendors/Associations were arranged.
- Revenue as test fee collected from various vendors for the year April - December 2006 is Rs.6,12,97,199/-.

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II. 3. Wireless Planning and Coordination

INTRODUCTION

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

PERFORMANCE DURING 2006-2007

FREQUENCY ASSIGNMENT FOR TERRESTRIAL NETWORKS

Assignments of frequencies for terrestrial networks of government and private sector were made for variety of applications, namely, GSM band Cellular network, PMRTS, CDMA and Cor-DECT based networks, point-to-point and point-to-multipoint microwave networks, etc. after necessary technical examinations, analysis and coordination with other wireless networks, as appropriate for establishing electromagnetic compatibility so as to ensure interference-free operation of all such networks. Assignment of frequencies in 890-915 MHz/935-960 MHz and 1710-1885 MHz/1805-1880 MHz band have been made to various UASL and other cellular operators. Assignment were also made in the band 869-889 MHz paired with 824-844 MHz for CDMA based networks.

Efforts for coordination of additional spectrum for the growth of GSM based cellular services have been continuing at the highest level.

STANDING ADVISORY COMMITTEE ON RADIO FREQUENCY ALLOCATIONS (SACFA)

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

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

About forty five thousand sites awaiting consideration of clearance were cleared in two special drives undertaken during the year with the cooperation of all SACF members, heralding a major boost in the expansion of the telecom services in the country.

NATIONAL FREQUENCY ALLOCATION PLAN (NFAP-2005)

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

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

Bilateral inter-system satellite coordination meetings with Administration of Belarus were held at Bangalore during June 5-8, 2006 and large number of Indian Satellite networks were coordinated with the satellite networks of Belarus. Coordination request from Administration of Pakistan for coordination of PAKSAT-1 (38E) were examined and Indian views were communicated. The proposals for coordination meeting with Administrations of UAE is under examination in consultation with satellite operators.

Coordination with ITU

Information regarding notifications of INSAT-2T and INSAT-2M series of satellite networks were sent to ITU for publication in relevant section.

The detailed coordination request i.r.o INSAT-NAV (34E), INSAT-NAV (83E), INSAT-NAV (132E) and INSAT-NAV (GS) have been submitted to ITU for publication in relevant section of Radio communication Bureau International Frequency Information Circular (BRIFIC).

Technical information for consultation meeting of ITU-R Resolution 609 for Indian Radio Navigation Satellite System (IRNSS) was posted in ITU.

Information for Coordination request of INSAT-NAV (GS) were sent to ITU for Publication in the BRIFIC

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

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

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

1) Frequency notifications for INSAT-EK and INSAT-EK-R series of satellite networks at 48E, 55E, 74E, 83E, and 93.5E.
2) Frequency notifications for INSAT-2E (83E), INSAT-2M (48E) and INSAT-2M (74E).
3) Frequency notifications for INSAT-2T (55E) and INSAT-2T (74E).
4) Detailed coordination request i.r.o INSAT-2(83E).
5) Advance Publication Information (API) i.r.o INSATKU-78 (78E), INSATKU-88 (88E), INSATKU-113.5 (113.5E), INSATKU-117.5 (117.5E), INSATKU-123.5 (123.5E) and INSATKU-126 (126E).

Frequency assignments to satellite based services

Frequency assignments for public/captive satellite communication network including that of VSAT networks and for other satellite applications have been made to various service providers/users/departments. Frequency assignments have also been made to several broadcasters/teleport owners for operation of TV up linking earth stations.

INTERNATIONAL CONFERENCE AND MEETINGS

National preparations, participation and follow-up action for various international and regional conferences under the aegis of International Telecommunication Union (ITU) and Asia-Pacific Telecommunity (APT) were undertaken to protect national interests especially in the context of spectrum management and radio communication related matters.

India participated in the 2006 session of ITU Council in Geneva and also one officer of WPC Wing was a part of Indian delegation to the 5th Indo-French Joint Working Group on IT and Telecom in Paris. India participated in the meeting of working parties of ITU-R Study Group1. India is chairing the Working Party 1B of ITU-R Study Group1.

Meeting of National Preparatory Committee for ITU'S Plenipotentiary Conference under the Chairmanship of Wireless Adviser to the Government of India was held to consider APT common proposals for the ITU Plenipotentiary Conference. Views of Indian Administration on the APT common proposals were sent to APT.

A high level Indian delegation led by Secretary (T) participated in the ITU's Plenipotentiary Conference held in Antalya, Turkey, from November 6-24, 2006. Plenipotentiary Conference is the supreme organ of the ITU and is convened every four years. It determines general policies for fulfilling the purpose of the Union; adopts all decisions it considers appropriate after taking into consideration the reports of the Council on the activities of the Union; establishes basis for the ITU budget; elects officials for various positions of the Union as also members on the Council; amends the Constitution and the Convention, as appropriate; and deals with such other telecommunication issues as may be necessary. Besides elections for the following posts are held in the Conference:

- The Secretary General;
- The Deputy Secretary General;

- The Director, Radio communication Bureau (BR);
- The Director, Telecommunication Development Bureau (BDT);
- The Director, Telecommunication Standardization Bureau(TSB);
- 12 part-time members of Radio Regulations Board (RRB); and
- 46 Member States to serve on the ITU Council.

India participated actively in the Conference. Some of the major achievement are

- India was elected as Member State to serve on the ITU Council. India is a Member of ITU Council since 1952.
- Wireless Adviser to the Government of India was elected as member of Radio Regulations Board (RRB).
- India Chaired the Working Group of Plenary during the Conference.

A meeting of National Preparatory Committee for WRC-07 was held under Chairmanship of Joint Wireless Adviser to finalise our view point on various agenda items of WRC-07.

The following events are expected to take place during January - March 2007:-

- Participation of Wireless Adviser as an elected Member of Radio Regulation Board in its meeting at Geneva. It is an international commitment.
- Participation in the meeting of APT Preparatory Group for WRC-07
- Participation in the Conference Preparatory Meeting (CPM) for WRC-07
- Meeting of National Preparatory Committee for WRC-07

AUTOMATION OF SPECTRUM MANAGEMENT AND AUGMENTATION MONITORING SYSTEM

The project 'Design, Supply, Installation and Commissioning of National Radio Spectrum Management and Monitoring System (NRSMMS)' is being implemented with assistance of the World Bank. Under the project, spectrum management and monitoring functions will be automated with a view to making these activities effective and efficient.

During the current financial year, the ASMS at Sanchar Bhawan have been made operational. Out of 14 tower sites, tower erection work for installation of monitoring antennae has been completed at 12 sites. Installation work of four sites namely Sanchar Bhawan, Pushpa Bhawan, Bangalore and Jammu has been completed and completion certificate for these four sites have also been issued. The Acceptance Test for hardware facility for remaining non-tower sites has also been completed. Anomalies reported, are being rectified by the contractors. V/UHF MMS vehicle has been delivered to Chennai and Ajmer. The Acceptance testing for remaining v/UHF MMS vehicles and other fixed tower sites are under progress.

Acceptance testing at the remaining fixed tower sites and delivery of remaining V/UHF vehicles to their respective sites would be completed by March 31, 2007.

WIRELESS MONITORING ORGANISATION

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 functions. Performance during the year 2005-06, (actual achievements from (April -December 2006) and (January - March 2007 Anticipated) is as given below:-

Particulars	April –December 2006 (Actual)	January – March 2007 (Anticipated)
Channel days utilized for Radio Monitoring	7279	2400
Monitoring Assignments handled	11791	3900
No. of Wireless Stations inspected	19108	6700
Radio Noise Measurements	103522	133000
No. of Wireless Transmissions monitored	118791	31200
Infringements communicated to users for remedial action	9022	1100
Technical Assistance to users	1049	400
No. of Officials trained	55	20

i. Many important radio noise surveys/investigative assignments were carried out by way of mobile monitoring during the year.

ii. Microwave mobile monitoring terminals continued to monitor radio transmissions in microwave frequency bands to verify characteristics and interference potential. The measurements on terrestrial microwave links viz. LOS System, radar etc. to ensure compatibility are also being carried out regularly. Assistance was also provided to the users by way of conducting noise surveys for wireless/earth stations and site selection.

iii. A specialized mobile monitoring terminal having monitoring capabilities up to 40 GHz is operational. The primary objectives to monitor emissions in the satellite communication bands as well as from terrestrial stations.

iv. At a few Monitoring Stations, Fixed/mobile direction finding systems are being used for identifying and locating transmitting stations.

v. Satellite Monitoring Earth Station at Jalna (Maharashtra) is continuing the monitoring of signals from satellites located in orbital arc of Indian interest. Observation for related data are being made.

vi. W.M.O. is undergoing major modernization of Radio Spectrum Monitoring capabilities through Telecommunication, Reform Project under World Bank loan. Under this project the following has been completed :-

a) Antenna Towers up to thirty meters in height have been erected for better reception of Radio signal to be used for the sophisticated receiving system under the project at Ajmer, Delhi, Chennai, Nagpur, Mumbai, Shillong and Trivendrum. Installation work is progressing at Ahmedabad, Jallandhar, Goa, Gorakhpur and Bhopal Wireless Monitoring Stations.

b) The installation of the LAN (Local Area Network) comprising of thirty workstations has been completed at Wireless Monitoring Organization Head Quarters (MHQ), Pushpa Bhawan, New

Delhi. The leased line between Sanchar Bhawan and MHQ has been provided and communication through these lines is to be tested. LAN wiring etc. has been completed at several Wireless Monitoring Stations spread all across India.

c) Acceptance Test Procedure (ATP) of mobile and Fixed Monitoring system are under-progress. After completion of the mobile monitoring V/UHF system, these will be dispatched to respective Monitoring Stations. Till now 2 numbers of V/UHF vehicles have been dispatched to Chennai and Ajmer Wireless Monitoring Stations. The remaining will be dispatched shortly.

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

	April –Dec. 2006 (Actual)	January-March 2007 (Anticipated)
Radio Frequency Spectrum Management		
New Radio Frequency authorized to various users	28491	13400
Frequency assignments intimated to Radio-communication Bureau of the ITU for registration	4	-
Radio Frequency Assigned for visits of VVIPs	82	4
WPCC (Wireless Planning Coordination Committee) Meeting held	-	-
SACFA (Standing Advisory Committee on Frequency Allocations) meeting held	-	-
Inter-departmental meetings held	24	9
Sites cleared for new wireless stations	125257	20000
No. of special Monitoring cases	5	3
Wireless Licences Issued		
No. of Import Licences Issued	2061	490
No. of Licences issued to new Wireless Stations	21601	7515
No. of Licences Renewed (for Wireless Stations)	28324	4505
Certificate of Proficiency (COP) Examination / Licences		
No. of COP Examination conducted	13	4
No. candidates admitted	5364	1300
No. of Licences issued	1542	450
No. of Licences renewed	1028	350
No. of Licences issued to New Radio Amateur Stations	394	150
No. of Licences renewed for Old Radio Amateur Stations	554	225

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II. 4. Vigilance Activities

INTRODUCTION

Department of Telecommunications, Vigilance Wing at DoT HQ caters to Vigilance activities including Vigilance/Disciplinary cases in respect of various telecom circles of BSNL, MTNL and other PSUs like ITI and TCIL. Group A and B officers of BSNL and MTNL being on deemed deputation from DoT, their Vigilance/Disciplinary cases are dealt with in DoT HQ Vigilance Wing in consultation with statutory authorities like CVC and UPSC.

ACTIVITIES OF THE VIGILANCE WING OF THE DEPARTMENT OF TELECOMMUNICATIONS

Preventive Vigilance

For prevention of financial/procedural irregularities, which may take place due of unawareness of the instructions, regular training courses are conducted for the officers. Also the vigilance units carry out surprise inspections during the course of execution of work to check malpractices. After the formation of VTM cells, technical inspections of the service providers has also been started.

The following methods are adopted to check corruption in public services:

(i) By conducting regular and surprise inspections of various sensitive and public dealing places.

(ii) Rotation of personnel handling commercial and public dealing duties and other sensitive places.

(iii) Scrutiny of annual property returns of officers.

(iv) Simplification of rules and procedures.

(v) Awarding deterrent punishment to the public servants found guilty in specific acts of corruption and other serious irregularities.

(vi) By spreading awareness about the harmful acts of corruption.

(vii) Using media for mobilizing the general public against corruption

(viii) Lectures on preventive vigilance and leakage of revenue due to clandestine exchanges.

Punitive Vigilance

Complaints are received from various sources like public, private, Ministers, Member of Parliament, MLAs, Prime Minister's Office, Central Vigilance Commission, CBI etc. by the Vigilance wing of DoT and the field units of MTNL/BSNL. These complaints are then taken up for investigation to identify the delinquent officers/officials and to fix responsibility. During the period April 1, 2006 to December 31, 2006, a total of 820 complaints were handled out of which 150 complaints were taken up for

investigation. Besides investigation, advice of disciplinary/other action was given against 180 officers/ officials. During the same period, 42 Officers were charge sheeted for major penalty and 17 officers for minor penalty. 202 officers/officials were punished after conclusion of disciplinary proceedings.

Staff Training

To keep the staff aware of the different activities which attract vigilance angle, a training schedule is prepared every year:-

- Different telecom circles are covered every year where presentation on preventive vigilance is given by the DoT Vigilance.
- Similarly, senior officers in different telecom circles are given presentations of technological frauds for their monitoring and prevention.
- 5-day training courses are also organised for various telecom circles. During the period, 15 such courses were conducted all over the country. A total of around 468 officers of various levels were acquainted with various activities relating to vigilance and disciplinary proceedings. These trained officers later on provide a pool of officers to work as IOs, POs and VOs.

Vigilance Clearances

This is an important activity of the vigilance wing because it is required at the time of promotion, trainings abroad, deputation to other organizations/Department, obtaining passports etc. During the period April - December 2006, 1,447 officers were granted vigilance clearances for various purposes.

DEALING WITH OTHER AGENCIES OF THE GOVERNMENT OF INDIA

Agencies responsible for checking corruption in the public services

- Administrative Vigilance Division in the Department of Personnel and Training.
- Central Bureau of Investigation.
- Vigilance Units in the Ministries and the Departments.
- Central Vigilance Commission.

Consultation with the Central Vigilance Commission

It is the nodal agency of the Government of India having jurisdiction over all the Ministries/ Departments/PSUs etc for vigilance related matters. Actions against Government Officers/Officials 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 FROM APRIL – DECEMBER 2006

Opening balance as on April 1, 2006	Received upto Dec. 31, 2006	Disposed off upto Dec. 31,2006	Closing balance as on Dec. 31,2006
16	17	29	4

VIGILANCE AWARENESS WEEK 2006

Vigilance Awareness Week was observed in DoT during November 6-10, 2006. The focus of observing the Vigilance Awareness Week, as directed by CVC was "Efficiency and Transparency in Customer Oriented Programs." In this regard the vigilance wing had conducted essay, quiz and debate competitions for spreading awareness amongst the staff.

VIGILANCE TELECOM MONITORING CELLS

With the increasing number of telephone operators in the country, the Government felt the need of presence of Telecom Authority in the circles. With the entry of the private operators, there has also been an increase in illegal/clandestine operation in the country. To tackle this menace, the Government created 3 Vigilance Telecom Monitoring Cells (VTMC) at Delhi, Mumbai and Hyderabad in the month of October 2004. The 4th VTM Cell was created during the month of November 2004 at Chennai. 9 VTM Cells were created during the month of August 2006 at Punjab, Rajasthan, Gujarat, Kerala, Karnataka, Maharashtra, Tamil Nadu, West Bengal and UP (E) and 15 more VTM Cells have been created in January 2007 at Andhra Pradesh, Bihar, Madhya Pradesh, Haryana, UP (West), Andaman and Nicobar, Assam, Chhattisgarh, Jammu and Kashmir, Jharkhand, Himachal Pradesh, North East-I, North East-II, Orissa and Uttaranchal making the total number of VTM Cells to 28. The sanctioned staff strength for each VTM Cells is as follows:-

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

* One post of DE can be upgraded as Director.

FUNCTIONS ASSIGNED TO VTM CELLS

The VTM cells are functioning as the field offices of the DoT. These cells represent the Telegraph Authority and the Licensor in the field and perform the following functions:-

Vigilance Functions

- To carry out inspection of premises of service providers (illegal) in order to curb illegal/ clandestine activities.
- Inspection of premises of the licensed service provider.
- 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/subscription/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.

Monitoring Functions

- Coordination and monitoring of various network operators.
- 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.
- Matters related to national security.
- 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.

ACHIEVEMENTS OF VTM CELLS

Some of the achievements of VTM cells during the last two years are as follows:-

- Around 300 numbers of successful raids on illegal exchanges had been conducted by 4 VTM Cell which were not only causing the revenue loss but also posing the security risk to the country.
- The notional loss calculated in these cases is approximately 320 crore. The penalties are also being levied to various services provider for their negligence and breach of license conditions.
- The International Call Termination has almost doubled after creation of VTM Cells.
- Sample verification of customers of mobile telephone was carried out in Mumbai, Delhi, Chennai, Hyderabad and Haryana which showed very poor status of the verification being done by service providers. The show cause notices have already been issued by DoT. The operators have also started to take necessary steps to ensure that the mobile telephones are sold after due verification. So the sample verification has sensitized the operators regarding verification required for national security.

Statistical Summary of departmental vigilance Activities during April-December 2006

	Activities		
1.	No. of complaints handled during the period		820
2.	No. of officers charge sheeted for		
	(a) Major penalty	GOs	42
		NGOs	-
	(b) Minor penalty	GOs	17
		NGOs	-
3.	No. of officers punished with MA/ MI penalty = 202		
4.	No. of prosecution sanctions issued		
		GOs	4
		NGOs	-
5.	No. of investigation reports examined and sent to CVC for advice (other than CBI cases)		62
6.	No. of CBI reports referred to CVC for advice.		16
7.	No. of officers in respect of whom Vigilance clearance issued		1447
8.	No. of cases (received from ACU of PMO) disposed off after investigations		4
9.	No. of appeal cases settled		
		Group 'A'	5
		Group 'B'	4

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II. 5. Empowerment of Women

INTRODUCTION

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

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

BHARAT SANCHAR NIGAM LTD. (BSNL)

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

MAHANAGAR TELEPHONE NIGAM LTD. (MTNL)

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

In addition, several steps have been taken towards furthering empowerment of woman employees. A few of those are enumerated below.

a. 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.

b. In order to redress and prohibit sexual harassment at work place Sexual Harassment Complaint Committee has been constituted at Unit level as well as in Corporate Office.

c. The service conditions are uniform and there is no gender bias.

d. Crèche facility has also been provided for woman employees with infants.

e. Special grant is being sanctioned on annual basis for MTNL Woman Welfare Association, 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 931 women employees as on September 1, 2006.

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

- Separate lunchrooms in canteens and crèches have been provided in the units.
- Hospitals have been set up in Bangalore, Naini, Mankapur and Rae Bareli Plants, by the company to provide medical facilities which emphasize women and child welfare.
- In the light of the Supreme Court Judgements on sexual harassment in the work place, the standing orders applicable to non-officers and officers has been amended in most units to incorporate the clause on sexual harassment and during the year 2004-05, CDA rules were amended accordingly.
- Complaints Committee formed in each unit to inquire into complaints of sexual harassment made by any women employees in the company.
- Care is taken to ensure that women employees are nominated for training programmes, which are need based.
- It is a matter of pride to the company that many of its women employees have been selected for the Shram Devi Awards in the past.

CENTRE FOR DEVELOPMENT OF TELEMATICS (C-DOT)

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

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

Existing Policies

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

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II. 6. Person with Disabilities

INTRODUCTION

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

Department has already identified physically handicapped persons suffering from Hearing impairment and Locomotor Disability as suitable for jobs performed by officers of Indian P & T Accounts and Finance Service Group 'A'. Two physically handicapped officers have already been enrolled in the cadre of Indian P & T Accounts and Finance Service and one more physically handicapped candidate has been nominated to IP & 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-DOT follows guidelines issued by Government of India with respect to reservations in jobs for persons with disabilities.

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

BHARAT SANCHAR NIGAM LTD. (BSNL)

Presently there are over 400 disabled employees in 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.

For handicapped/ mentally retarded children of BSNL employees

- Transportation / hostel subsidy is also being provided.

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. Out of 48914 employees there are 224 persons with disabilities as on September 30, 2006.

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

a. The provisions of reservation as per GOI Rules have been made in recruitment of officers in various streams.

b. In order to provide them with livelihood, physically challenged people are allotted with PCOs on priority basis and also the commission made to them is 22% as against 20% for others.

c. Further, to avoid delay in allotment of PCOs mobile booths are being provided to them based on CDMA/GSM technology.

There is no discrimination whatsoever in payment of compensation on the basis of caste, gender, religion etc.

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 173 physically challenged employees as on December 31, 2006.

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

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

- In case of physically challenged, the company has been relaxing 10 years in age in case of recruitment for Group C and D posts and 5 years in case of Group A and B posts. In case of candidates belonging to SC/ST/OBC, among them an additional relaxation in age by 5 years for SC/ST and 3 years for OBC is given for posts in Group A and B.
- The physically challenged employees are fully exempted from Professional Tax subject to production of Certificate from the Government Doctor.
- Employees with disability are exempted from Income Tax for a maximum of Rs.50, 000/- over and above the normal exemption subject to production of medical certificate from Government Doctor. For an employee having severe disability, Income Tax deduction will be Rs.75, 000/-.

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II. 7. Audit Observation of C&AG

BHARAT SANCHAR NIGAM LIMITED

Audit Report No. 9 of 2006

Performance review on Wireless-in-Local Loop telephone system

The Wireless-in-Local Loop (WLL) telephone system is a digital wireless local loop system designed to substitute underground cables by linking exchanges to the customers through wireless. The Company provides both fixed and limited mobile WLL telephone services under the brand name 'Tarang' while the Company created a capacity of 26.89 lakh lines, only 16.28 lakh lines were provided as of March 2005. The capacity remained grossly underutilized mainly on account of deficient planning; mismatches in the procurement of WLL systems and terminals; poor network coverage and poor quality of service which needs to be improved urgently to optimize the benefits/financial return from the WLL services.

Performance review on Human Resources Management

The Company on its formation (October 2000) was facing a unique situation of transiting from a bureaucratic governmental setup to a market driven corporate culture which required it to gear up to meet the challenge by inter alia making the necessary reforms in its human resources management. Although the Company appointed KPMG (consultant) for reviewing and strengthening its human resources management system, it had not considered most of the recommendations till January 2006. Issues like preparation of manpower plans, integration of all the human resource functions under the charge of Director (HRD), promotion management system, preparation of human resource manual etc. remained unaddressed.

Audit Report No. 13 of 2006

Revenue paragraphs relating to the Company based on transaction audit findings

The Company failed to safeguard its financial interest, by not obtaining appropriate bank guarantees from the International Long Distance Operators as per the agreement and also delayed disconnection of Point of Interconnection between October 2003 and April 2005 resulting in non-realization of interconnection charges of Rs. 219.62 crore.

(Paragraph-2.1)

Failure of the company to implement stipulated safeguards resulted in accumulation of outstanding dues of Rs. 41.82 crore in seven telecom circles on post-paid mobile telephones.

(Paragraph-2.2)

Twenty eight Secondary Switching Areas (SSAs) under 10 telecom circles failed to realise interest on delayed payments from private operators for the period August 2002 to April 2005 resulting in non-realisation of Rs. 18.34 crore.

(Paragraph-2.3)

Eleven SSAs under three telecom circles continued to provide telephone services despite non-payment of dues by subscribers and STD/PCO operators resulting in accumulation of dues of Rs. 10.39 crore for the period May 1991 to January 2005.

(Paragraph-2.4)

Delay by the Company in execution of an agreement with Videsh Sanchar Nigam Limited for space segment usage charges resulted in blocking of funds of Rs. 9.73 crore and loss of interest amounting to Rs. 44.08 lakh thereon.

(Paragraph-2.5)

Failure of three SSAs under the Kerala Telecom Circle to compute the correct arrear charges due from M/s Reliance Infocomm for international calls with tampered Calling Line Identification terminated on other than earmarked ports resulted in short realisation of revenue to the tune of Rs. 6.42 crore.

(Paragraph-2.6)

The Company failed to raise bills for the rentals in respect of telecommunication facilities provided to various subscribers due to non-receipt of completed Advice Notes in Telecom Revenue Accounting branch resulting in non-billing of Rs.6.06 crore for the period September 1997 to November 2005.

(Paragraph-2.7)

Rules provided for charging of rentals of leased circuits within Short Distance Charging Areas as per the resources utilized. However, nine SSAs under seven telecom circles failed to charge the rentals as per rules, resulting in short billing of Rs. 3.54 crore.

(Paragraph-2.8)

Nine SSAs under the Andhra Pradesh Telecom Circle failed to collect interconnect licence fees in respect of 32 data circuits provided to the Director, e- Seva resulting in non-billing of Rs. 2.15 crore for the period August 2003 to March 2006.

(Paragraph-2.9)

Two SSAs under the Kerala Telecom Circle failed to bill M/s Reliance Infocomm Limited at higher rates for terminating calls in wrong trunk groups, resulting in non realisation of revenue of Rs. 1.29 crore.

(Paragraph-2.10)

Delayed implementation/non-implementation of revised pulse rates of calls made from local public call offices by three SSAs under the West Bengal Telecom Circle resulted in loss of revenue of Rs. 96.57 lakh for the period September 2004 to March 2005.

(Paragraph-2.11)

Four SSAs under the Tamil Nadu Telecom Circle did not raise bills for infrastructure sharing charges as per the instructions of the corporate office resulting in non-realisation of Rs. 96.19 lakh for the periods ranging from December 2003 to May 2005.

(Paragraph-2.12)

Failure of the Principal General Manager, Patna Telecom District under the Patna Telecom Circle and the General Manager, Dibrugarh Telecom District under the Assam Telecom Circle to provide leased circuits within the stipulated time resulted in loss of potential revenue of Rs. 95.94 lakh.

(Paragraph-2.13)

Failure of the General Manager, Telecom District, Jhansi under the Uttar Pradesh (East) Telecom Circle to issue bills at revised rates in respect of five speech circuits leased to the Railways resulted in short billing of Rs. 93.21 lakh for the period June 1990 to March 2005.

(Paragraph-2.14)

General Manager, Telecom District (GMTD), Itanagar under the North East-II Telecom Circle and GMTD, Nagaon under the Assam Telecom Circle failed to recover installation charges and rentals at enhanced rates consequent to increase in exchange capacity resulting in short billing of Rs. 83.27 lakh.

(Paragraph-2.15)

General Manager, Telecom District, Bhuj under the Gujarat Telecom Circle failed to fix final rentals in respect of optical fibre cable provided on rent and guarantee basis resulting in non-billing of Rs. 67.46 lakh.

(Paragraph-2.16)

Information Technology Audit of Chennai Telephones Billing System of BSNL.

The Chennai Telephone Billing System (CTBS) is a non-integrated billing system used by the Chennai Telephone District (CTD) of the Company with 10.02 lakh working lines as on March 2005. The CTBS was commissioned in February 2002 and generates 6.85 lakh bills every month. CTBS functions in a client/server environment on Oracle Relational Database Management System (RDBMS) with a Sun Solaris Operating System.

(Paragraph 3.1)

Based on its findings, Audit recommended that CTD should attempt on-line integration of CTBS with the existing commercial application software like CANMAPS, FRS, etc after proper cost benefit analysis. CTD should also conduct necessary modifications in the CTBS software so that the billing of leased circuits and I-NET can be done through it. Logical access controls of CTBS should be strengthened by adequate logging of changes to critical data like master data, meter readings, etc. The audit trail function should be activated. CTD should formulate policies for anti virus, data backup and prepare a 'Business Continuity Plan' and 'Disaster Recovery Plan', for early implementation.

The Punjab State Electricity Board (PSEB) issued notice in January 1997 and allowed a rebate of 7.5 per cent for power consumers falling under the nonresidential supply category subject to the condition that the supply of power was given at 11 KV, provided the consumer installed their own transformer. The Chief General Manager Telecommunications, Punjab circle failed to claim the admissible rebate on electricity charges even though the supply of power was given at 11 KV and the Company installed its own transformers. This resulted in excess payment of Rs. 2.31 crore to PSEB.

(Paragraph 4.1)

Zinc dross, a by-product of the galvanizing process is a hazardous metal waste which if allowed to accumulate has an adverse impact on ecosystems, including the human environment. Departmental instructions as adopted by the Company, envisage that zinc dross produced in telecom factories should be disposed of by offering the same to any Central/State Government Department/PSU/autonomous body and in case none is willing to purchase it, it should be disposed of by way of auction after wide publicity, as per the existing procedure of telecom factories.

Audit scrutiny of the records of the Telecom Factory, Bhilai (October 2004) revealed that the Management failed to dispose of zinc dross of 360.23 MT generated during the period 1994-1995 to 2000-01, the net realisable value of which was Rs. 1.26 crore.

(Paragraph 4.2)

M/s Reliance Infocomm Limited (RIL), while undertaking digging work, damaged underground cables of the Company on 237 occasions during August 2001 to May 2003. Audit observed that the Area Managers under Chief General. Manager (CGM), Calcutta Telephones, belatedly intimated (December 2003 /January 2004) the Deputy General Manager (Switching Planning) about damages to the cables. In most of the cases, a formal compensation claim was not lodged with RIL and a consolidated claim for recovery of compensation of Rs 1.26 crore in respect of 237 cases from RIL was lodged only in January 2004. The firm while accepting claims (April 2004) for Rs. 4.82 lakh for damages on 19 occasions rejected 192 claims on the ground that intimation had not been received from Calcutta Telephones regarding damages during the project period of RIL. Thus delay on the part of the CGM to prefer claims resulted in non-recovery of compensation of Rs. 1.21 crore from RIL for the cables damaged by the latter.

(Paragraph 4.3)

General Managers, Telecom District (GMsTD), Rourkela and Bhubaneswar under the Orissa Telecom Circle, entered into agreements with M/s Indian Telephone Industries (ITI) in June 2001 and September 2003 respectively for repair of all types of cards used in E-10-B exchanges. ITI delayed repairing of 1496 cards pertaining to GMTD Rourkela and 1169 cards pertaining to GMTD, Bhubaneswar. However compensation charges of Rs. 87.57 lakh were not recovered from ITI.

(Paragraph 4.4)

The General Managers, Telecom District, Ghaziabad under the Uttar Pradesh(West) Circle and Surendranagar under the Gujarat Circle injudiciously expanded the equipped capacity of five telephone exchanges considering a growth rate of 30 to 40 per cent resulting in under utilisation and consequent idle investment of Rs. 3.46 crore on expansion of these exchanges.

(Paragraph 4.5)

The Principal General Manager, Telecom (PGMT) Coimbatore, sanctioned the project for installation of a 1K EWSD Remote Switching Unit (RSU). The exchange was commissioned (October 2003) at a cost of Rs. 2.83 crore. But no connections were released till July 2004. Only 20 centrex connections were working from the EWSD RSU as on September 2005. Thus the decision of PGMT, Coimbatore to install a 1K EWSD RSU at Peelamedu was injudicious, resulting in unproductive expenditure of Rs. 2.83 crore.

(Paragraph 4.6)

Telecom District Manager, Banda under the Uttar Pradesh (East) Telecom Circle sanctioned nine project estimates for installation of nine C-DOT-256 exchanges for providing telephone connections to rural areas during August 1999 to March 2000. The exchanges were installed between December 1999 and March 2001 at a cost of Rs. 1.96 crore. These could not be fruitfully utilised due to non-availability of optical fibre cable equipment, control cards and underground cables and it was subsequently proposed to cover the area with WLL technology. Thus the basic objective of providing telephone connections could not be achieved resulting in wasteful expenditure of Rs. 1.96 crore.

(Paragraph 4.7)

The General Manager Telecom District, Uttar Pradesh (West) circle procured a plot at a cost of Rs. 76.72 lakh from Ghaziabad Development Authority in July 1997 for opening of a telephone exchange in Govindpuram, Ghaziabad. The exchange building was constructed at a cost of Rs. 67.95 lakh after delays at each stage, resulting in idle investment of Rs. 1.45 crore.

(Paragraph 4.8)

The Chief General Manager, Telecom, under the Bihar Circle during 2000 sanctioned the construction of three telephone exchanges which were yet to be commissioned due to a) secondary switching area (SSA) did not take over the building from the civil wing, b) project estimates were either not sanctioned or sanctioned belatedly. Thus improper planning and lack of synchronization between SSAs and the civil wing resulted in idle investment of Rs. 1.44 crore.

(Paragraph 4.9)

The Principal General Manager Patna under the Bihar Telecom Circle could not take possession of the plot till April 2003 though the payment was made in March 2000 for construction of telephone exchange at Transport Nagar, Patna due to non-identification of the location of the plot. This resulted in idle investment of Rs. 1.26 crore.

(Paragraph 4.10)

The corporate office of the Company placed three purchase orders (PO) (July 2001 to May 2004) and allotted 25 DLC systems to the Assam Telecom Circle as against the requirement of 11 DLC systems. Out of the 25 DLC systems received, only six systems were commissioned in four SSAs under the Circle. This resulted in idling of 19 DLC systems worth Rs 8.36 crore. Even in the case of the six DLC systems commissioned it was noticed that the average utilisation was only to the extent of 18 per cent as of September 2005.

(Paragraph 4.14)

To provide optical fibre connectivity to various telephone exchanges, high-density polyethylene (HDPE) pipes and optic fibre cables (OFC) were laid along 31 routes of seven SSAs under the Uttar Pradesh (East) and Gujarat Telecom circles, out of which 25 routes were completed during 2002-04 at an expenditure of Rs 3.31 crore but could not be commissioned till September 2005 due to a) coverage of the area by mobile or WLL services; b) non receipt of Synchronous Digital Hierarchy (SDH) equipment; and c) non completion of cable jointing. Thus, lack of proper planning and coordination led to blocking of funds of Rs. 3.31 crore.

(Paragraph 4.15)

The General Manager Telecommunications (GMT), Mangalore, received line and wire stores meant for overhead alignments valuing Rs. 3.11 crore based on the purchase orders placed by the Karnataka Circle. These stores were received by the Circle Telecom Stores Depot, Bangalore during 1998-99 to 2002-03 but were lying unutilized even after two years of their last receipt.

(Paragraph 4.16)

Ten SSAs under the Madhya Pradesh and Chhattisgarh circles, Electrical Division II under the Tamil Nadu Circle and seven SSAs under the Karnataka Circle had contracted electricity demands more than required and minimum demand charges on higher contracted demands continued to be paid (October 2005). This resulted in infructuous expenditure of Rs. 1.29 crore.

(Paragraph 4.17)

Power plants supplied by M/s Infinity were lying idle since January 2002 either from the dates of installation due to defects or became faulty after working for a few months in different exchanges of Andhra Pradesh, Orissa and Jharkhand circles. Thus, the procurement of power plants without taking into account the voltage fluctuations and other technical parameters of the areas in which these were to be installed resulted in their faulty performance and consequent unfruitful expenditure of Rs. 1.17 crore.

(Paragraph 4.18)

The Company invited open tenders during June 2003 for procurement of PIJF cables and issued authorisations to telecom circles for placement of purchase orders. The Company had not considered two per cent additional discount offered by the bidders for centralised payments although in the previous tender centralised payment was agreed to. This resulted in avoidable expenditure of Rs. 11.88 crore.

(Paragraph 4.21)

The Chief General Manager, Telecom Stores (CGMTS), Kolkata invited tenders for procurement of PLB HDPE pipes during 2001 to 2004. Based on the rates approved by the Stores Purchase Committees (SPCs), purchase orders were placed during October 2001 to February 2004. The basic rates fixed by CGMTS, Kolkata, for procurement of the PLB HDPE pipes were higher than those fixed by CGMT, Rajasthan Telecom Circle, during the same period. Thus, failure to compare the basic rates of PLB HDPE pipes with other circles resulted in avoidable extra expenditure of Rs. 1.76 crore.

(Paragraph 4.22)

MAHANAGAR TELEPHONE NIGAM LIMITED

The company invested surplus funds of Rs.100 crore in M/s. Indian Telephone Industries (ITI) which was incurring losses since 2001-02 in contravention of DPE guidelines. Dividend of Rs.17.50 crore for the years 2002-03 and 2003-2004 was also not paid by M/s ITI. Due to the imprudent investment, the Company lost interest of atleast Rs.1.31 crore.

(Paragraph 6.1)

The Delhi unit of the Company failed to utilize various plots purchased from Delhi Development Authority and Municipal Corporation of Delhi over 20 years for construction of staff quarters. This resulted in blocking of funds to tune of Rs. 24.24 crore besides loss of interest of Rs. 8.57 crore.

(Paragraph 6.2)

The Delhi unit of the Company during March 1992 purchased a land on lease from New Okhla Industrial Development Authority (NOIDA) for setting up a training centre and staff quarters at a total premium of Rs. 6.53 crore. No plan had been prepared to utilize the land till April 2005. This had resulted in avoidable infructuous expenditure of Rs. 10.96 crore.

(Paragraph 6.3)

The General Manager (East I) of the Mumbai unit failed to review the utilisation and surrender of excess accommodation of the rented buildings inspite of Corporate office instructions and incurred avoidable expenditure to the tune of Rs. 3.57 crore towards rent .

(Paragraph 6.4)

The Company's Board approved a project of a Fraud Management Control Centre (FMCC) in January 2000 to plug the leakage in revenue in Mumbai unit. The purchase orders were placed in March 2002 at a cost of Rs. 11.82 lakh on M/s Ectel Limited, Israel to design, supply, install, test, commission and make over the FMCC on turnkey basis to Mumbai unit. Due to delays at each stage the project had not been commissioned even after a lapse of five years resulting in idle investment of Rs. 5.23 crore.

(Paragraph 6.5)

The Company placed two purchase orders (POs)for supply of PIJF cables on M/s. Gujarat Telephone Cables Ltd.(GTCL) for supply of 65.2 km on the condition that in case of delays in supply, the Company reserved right to cancel/short close the POs and purchase the balance unsupplied quantities at the risk and cost of the defaulting supplier. M/s. GTCL supplied only 2.519 km of cables and the Company purchased similar cables at higher rates without invoking risk and cost clause on the defaulting vendor resulting in loss of Rs.1.12 crore.

(Paragraph 6.6)

ITI LIMITED

The Company obtained an advance purchase order from BSNL (December 2000) for supply of 900 KL digital local exchange equipment at a provisional price of Rs. 1978.84 per line. The final price was to be fixed after taking into consideration the terms and condition of 2001-02 tender. Audit observed that the Company delayed in filing differential claims which resulted in blockade of funds of Rs. 29.12 crore and loss of interest thereon of Rs. 4.36 crore.

(Paragraph 8.1)

The Company received (August 2002) purchase order from BSNL for supply of 60,000 lines of digital wireless access system at a price of Rs. 68.29 crore. BSNL advised (June 2000) the Company to

obtain validation certificate within seven months (i.e. January 2001) in order to be eligible to participate in tender process for supply of equipment under CorDect technology. The Company applied (March 2001) for Type Approval Certificate (TAC) to the regional Telecommunication Engineering Centre (TEC). Failure of the Company to initiate timely action and effectively pursue with TEC delayed the delivery resulting in recovery of LD of Rs 6.83 crore and penal interest of Rs. 1.06 crore on advance drawn.

(Paragraph 8.2)

Injudicious purchase of components for Digital Pair Gain Systems resulted in loss of Rs.1.45 crore on inventory written off and blocking of Rs. 93.44 lakh on unsold systems.

(Paragraph 8.3)

As per instructions (June 1976 and January 1997) of Department of Public Enterprises (DPE), any scheme introduced under the Bonus Act for payment of annual bonus linked with production or productivity in lieu of bonus based on profits payable under the Act, should be with the prior approval of the Government. Though the employees of the Company became ineligible to draw bonus as their salaries exceeded the limits prescribed under the Act, the Board of Directors of the Company approved in April 1999 and July 2000 Annual Performance Reward (APR) for these employees. This resulted in irregular payment of Rs. 23.14 crore for the year 1998-99 to 2001-02

(Paragraph 8.4)

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III. 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 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. BSNL is a 100% Govt. of India owned Public Sector Undertaking with an authorized capital of Rs. **17,500** crore, a paid up capital of Rs. **12,500** crore.

BSNL is a technology-oriented company and provides all types of telecom services namely telephone services on landline, WLL and mobile, leased circuits, Internet and long distance telecom service. The company has also been in the forefront of technology with 100% digital new technology switching network. The vast switching network for land lines comprises of **37,636** exchanges having a capacity of **473.67** lakh lines as on December 31, 2006. BSNL's nation-wide telecom network covers all District headquarters, Sub-Divisional headquarters, Tehsil headquarters and almost all the Block Headquarters. Out of **6.07** lakh villages in the country, **5.45** lakh villages have already been provided telephone facility by BSNL by the end of December 2006. It employs a work force of around 3.27 lakh.

VISION, MISSION AND OBJECTIVES

Vision

To become the largest telecom service provider in South East Asia.

Mission

- To provide world class State-of-the-art technology telecom services on demand at affordable price.
- To provide world class telecom infrastructure to develop the country's economy.

Objectives

- To be a lead telecom services provider.
- Build customers' confidence through quality and reliable service.
- Provide Bandwidth on demand.
- Contribute towards :
  - (i) National Plan Target of 250 million subscriber base for the country by December 2007.
  - (ii) Broadband customers base of 20 million in the country by 2010 as per Broadband Policy 2004.
  - (iii) Telephone in all villages.
  - (iv) Implementation of Triple play as a regular commercial proposition.

HIGHLIGHTS

- Bharat Sanchar Nigam Ltd. (BSNL) runs the telecom services all over the country except Delhi and Mumbai. It operates the telecom services through 24 telecom circles and 2 metro districts of Chennai and Kolkata.
- BSNL has largest telecom network in the country serving 601.78 lakh customers as on December 31, 2006.
- BSNL has provided village public telephones (VPTs) in 5.45 lakh villages, out of 6.07 lakh villages in the country by December 2006.
- BSNL has introduced cellular mobile service in its network. There are 236.19 lakh Mobile customers(GSM) as on December 31, 2006.
- BSNL has introduced Wireless telephones(CDMA) in its network. There are 29.82 lakh WLL customers as on December 31, 2006.
- The total number of rural DELs is 148.26 lakh (about 24.64 % of total DELs) as on December 31, 2006.
- BSNL is an Internet Service Provider (ISP) and provides a full range of Internet services for which it has established National Internet Backbone (NIB). BSNL has provided 30.50 lakh Internet connections in the country as on December 31, 2006.
- BSNL has been introduced Broadband services from January 2005 and have provided 8.41 lakh Broadband connections as on December 31, 2006.
- BSNL has introduced Intelligent network Service (IN) from 1998 and thus provides a range of services like India Telephone Calling Card (I.T.C.), VPN.
- Faults per 100 telephones per month have come down to 7.0 % during 2006 - 2007 up to December 31, 2006.
- BSNL had provided a total of 50.18 lakh telephone connections (Net) during 2006-07 (upto December 2006) inspite of disconnection of 110.43 lakh lines.

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 and Inventory) taken over by BSNL as on October 1, 2000 have been valued at Rs. 63,775 crore, which consist of equity of Rs. 5,000 crore, Preference equity of Rs. 7,500 crore, Government loan of Rs. 7,500 crore, loan from MTNL of Rs. 3,056 crore and Rs.40,719 crore as reserve.

BSNL is also a major operator for providing VPTs and rural connections, which are uneconomical but socially desirable and generally affect adversely the financial position of the company. In term of Government decision to compensate BSNL for undertaking uneconomical telephone connections, a package of financial measures has been considered during 2005-06. The package provided for reimbursement of 1/3rd of license fees (excluding USOF Levy) and spectrum fees paid by BSNL.

CMD BSNL Sh. A.K. Sinha receiving the Special Editor's Award for "Most Outstanding Transformation" at 9th Telecom Asia Awards at Phuket, Thailand.

BSNL National Awards 2006 on World Telecom Day 17 May, 2006 New Delhi

India's BSNL, SLT launch Rs. 1.8b submarine cable project

The revenue receipts of BSNL for 2005-06 was Rs. 40,177 crore, with a net profit of Rs. 8,940 crore. The net worth of the company as on March 31, 2006 is Rs. 80,756 crore.

TARIFF CHANGES

Cellular Services

In respect of Cellular services, BSNL has provided customer oriented tariff from the date of launch of service i.e. October 19, 2002. This was well accepted by the customers, which is reflected in steady increase in BSNL's cellular customer base. Based on competition, the Cellular tariff has been rationalized/reduced from time to time. New innovative schemes launched under Cellular services from April 1, 2006 are:

i) For corporate and non corporate customers zonal VPN/CUG has been offered with effect from July 1, 2006 with monthly VPN charges of Rs. 175/150/125 for group size of 3-25, 26-999 and >999 respectively under plan 325, Rs.100/75/50 for group size of 3-25, 26-999 and >999 respectively under plan 525.

ii) Tariff for MMS and GPRS services was revised with effect from May 15, 2006 under both Postpaid and Prepaid Cellular Services.

   a. Under this activation charges have been waived off.

   b. Monthly subscription charge has been reduced from Rs.199/349 to Rs.49/199under postpaid services.

   c. Download charges/kb has been reduced from Rs.0.10 to Rs.0.01under postpaid and to Rs.0.02 under prepaid.

iii) Reduced call charges @ 0.10 paisa from Cellular to any two BSNL Fixed/WLL/Cellular phones out of which one land line phone is mandatory within LSA has been introduced w.e.f July 16, 2006.

iv) A new postpaid Plan-725 under postpaid Cellular services has been introduced with effect from August 1, 2006 with unlimited free C2C intra circle own network calls and reduced intra/inter circle calls charges.

v) Tariff of different postpaid plans have been rationalized with effect from September 1, 2006. Under this revision massive reduction for intra circle call charges has been made. Free calls have been increased from worth Rs. 25/75/175 to Rs. 60/100/300 under plan-225/325/525 respectively.

vi) Activation charge under both post paid and prepaid services has been reduced from Rs.200 to Rs.100 with effect from September 15, 2006.

vii) In addition to the above a special plan "BSNL One India" was introduced under both Postpaid and Prepaid Cellular services w.e.f. March 1, 2006. Under postpaid One India plan with a monthly rental of Rs. 299/- a customer can call across the country with one rupee per minute. Under Prepaid One India Plan the customers can make calls across the country with one rupee per minute with a recharge voucher of Rs. 799/-.

Basic Services – (Fixed and WLL Services)

1. Since 1999, the telecom sector has witnessed major changes especially with regard to the tariff structure. As part of rationalization, the tariff for intra circle beyond 50 km has been fixed uniformly at @ Rs.1.20 per minute. Similarly inter circle calls beyond 50 kms are charged uniformly @ Rs.2.40 per minute.

2. As a measure of rationalization, BSNL has reduced the fixed monthly charged under general plan for exchange system capacity of more than 1,00,000 lines to Rs.180/- per month as against Rs. 250/- per month.

3. BSNL also offers alternative packages (combination of fixed amount gets discounted call rates) to all subscribers. In addition, a special package "Sulabh" was launched, with lower rental of Rs. 160/- but without free calls, which has been successful in customer retention and it has been further reduced to Rs. 120/- per month w.e.f. October 1, 2006. In addition to this BSNL has also rationalized all alternatives package by reducing fixed monthly charges, increasing free calls and reduction of unit rate with effect from January 1, 2006.

4. In addition to the above a special plan "BSNL One India" was introduced with a monthly rental of Rs.299/- with effect from March 1, 2006 under which a customer can call across the country with one rupee per minute. Subsequently under BSNL One India rental has been reduced to Rs.180/- with 50 free calls with effect from November 15, 2006.

Rural Tariff

In November 2003, TRAI had forborne (left it to competition) all telephone tariffs except rural tariffs. BSNL is the major provider of basic services in rural areas. It provides access to telephone service at a price, which is much below the cost of Rs. 361/- per month calculated by TRAI on average basis. The cost provision to rural subscribers is much higher. For rural subscribers, BSNL provides additional concession as below:

a) Rental of Rs. 50/- (minimum) to Rs. 150/- (maximum) against the TRAI prescribed ceiling of Rs. 70/- to Rs. 280/-.

b) Exchange System capacity for purposes of calculation of rental is considered as that which existed on August 15, 1998 (mostly single exchange) rather than the combined capacity of all the exchanges in 'Local area' (SDCA) as prescribed by TRAI.

c) 75 free calls per month are provided against 50 calls prescribed by TRAI.

INTERNET/ BROADBAND SERVICE

(Achievement during April – December 2006)

Provided Internet connections	**4,27,766**
Provided Broadband Connections (Data One)	**2,54,889**
Provided Internet Leased Line Connections	**91**

- DataOne service is operational in 708 cities in India.
- The CLI Internet service is operational all over the country.

The Broadband service of BSNL is very popular and the demand has been outpacing supply ever since its inception. BSNL plans to expand Broadband connectivity by 6 Million ports covering 900 cities of the country during 2006-08.

Further, the following achievement for the period January - March 2007 has been targeted.

- Dial-up Internet connection : 1,00,000
- DataOne (Broadband) Connection : 75,000
- No. of new cities to be added DataOne services : 50
- Internet leased line customers : 30

INTELLIGENT NETWORK

With the commissioning of 5 new technology IN Platforms (4 General purposes and one mass calling) IN Service are available throughout the country. Various IN services being offered are ITC (Prepaid Calling Card), ACC (Account Card Calling), FPH (Free Phone), UAN (Universal Access Number), PRC (Premium Rate Calling), Voice VPN (Virtual Private Network), UPN (Universal Personal Number) and Tele-voting and Fixed line Pre-Paid (FLPP) Service.

No. of IN PCOs Provided	1,759
Provided Post Paid "IN" Customers	167
Value of ITC (VCC) Cards sold	Rs. 95 crore

- Televoting service is provided by BSNL's mass calling IN platform at Hyderabad to programs such as 'Indian Idol', "Kaun Banega Crorepati" (KBC)", "Sa re ga ma" etc. Total number of Votes registered on all such programs during the period April – December 2006 was 3.92 crore with a cumulative total calls of worth Rs. 39.69 crore.
- Fixed Line Pre-Paid (FLPP) telephony service for PCOs has been commercially launched on July 31, 2006 in Kolkata, West Bengal and Gujarat. The commercial launch of this service has already taken place from September 15, 2006 onward across India. After the successful launch of FLPP PCO service, "FLPP General" service on Post paid telephone connections has been launched from 3rd week of January 2007.

The following is the anticipated achievement for the period January – March 2007.

- Sale of ITC (VCC) Cards : Rs. 90 crore (Approx.)
- Opening of IN PCOs Connections : 350
- Opening of Post Paid 'IN' Customers : 200
- Opening No. of FLPP PCOs : 600

- **New Telephone connections:-** 50.18 lakh telephones have been provided from April- December 2006 thus bringing the total number of DELs to 601.78 lakh as on December 31, 2006.

- **Public Call Offices:-** A total number of 11, 76,469 Local PCOs, 8, 86,541 STD PCOs, 29,138 NH PCOs are working as on December 31, 2006.

- **Cellular Mobile:-** 64.55 lakh cellular connections have been provided during the period April–December 2006 bringing the total Celludar Mobile subscribers base to 236.19 lakh as on December 31, 2006.

- **WLL:-** BSNL has provided 4.09 lakh WLL telephones during the period April–December, 2006 thus bringing the total number of DELs to 29.82 lakh as on December 31, 2006

- **TAX (TRUNK AUTOMATIC EXCHANGE):-** 385 Kilo Circuits have been added in the TAX during the period April– December, 2006 bringing the TAX capacity as on December 31, 2006 to 7,032 Kilo Circuits lines.

- **RURAL TELEPHONY: -** 9,932 Village Public Telephones (VPTs) were provided during the period April– December 2006 in the rural areas against a target of 20,000 Village Public Telephones (VPTs). Thus the number of villages having VPTs is 5, 45,066 as on December 31, 2006.

- Technologies such as Wireless in Local Loop (WLL) and Satellite based telephones are planned to cover remote and inaccessible villages.

TELEGRAPH SERVICES

- There are 107 Central Telegraph Offices (CTOs), 854 Telegraph Offices (TOs), 716 Telecom Centres and 11,628 Combined Posts and Telegraph Offices as on September 30, 2006.

- **Telegraph Network Modernization:** - *There* are 352 message switching systems in the Telegraph Network. The details are as follow:-

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

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

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

Particulars of Booked Telegrams and Revenue and Bureau FAX and Revenue during the year 2005-06.

(As on March 31, 2006)

S. No.	Items	Number	Revenue (in crore of Rupees)
1.	Telegram booked	1,13,92,487	Rs. 21.58
2.	Bureau Fax booked	7,15,469	Rs. 1.26

- **Transmission/ Reception of TELEGRAM - Through Internet**

The transmission / reception of telegram on Internet is working in Tumkur, Mysore and Bangalore SSAs of Karnataka Circle from December 2003 on live traffic. Tamil Nadu Circle has also been permitted for the same and the Project has been extended to three more stations in Tamil Nadu Circle.

PHONOGRAM AND FRANCHISING OF TELEGRAPH SERVICES

The Phonogram Service on level 1,585 has been extended to all the circles. The Franchising of Telegraph Services in parallel to Combined Offices has been implemented in 14 Circles listed below :-

Status of Franchising of Telegraph Services as on September 30, 2006

S. No.	Name of the Circle	No. of Telegraph Services Franchisees	S. No.	Name of the Circle	No. of Telegraph Services Franchisees
1	A.P.	315	8	Orissa	235
2	Haryana	17	9	Punjab	4
3	J & K	5	10	Rajasthan	1
4	Karnataka	3	11	Tamil Nadu	713
5	Kerala	6	12	U.P.(East)	13
6	M.P.	7	13	U.P.(West)	28
7	Maharashtra	42	14	West Bengal	12
				TOTAL	**1,401**

COMPUTERIZATION AND INFORMATION TECHNOLOGY

- Integrated packages for Telephone Revenue Billing and Accounting, Commercial, Fault Repair Service and Directory Enquiry are being implemented in all the Secondary Switching Areas (SSAs) of BSNL. 276 SSAs out of total 335 SSAs have already implemented integrated packages.
- BSNL is in the process of introducing Call Data Record Based Customer Care and Convergent Billing System for which tender is under evaluation.
- Inter Operator Billing and Accounting System (IOBAS) has been implemented.
- In addition to already working call centers for mobile services, PSTN Call Centers are being set up in all the circles to provide 24 x 7 services to the PSTN customers of BSNL. 172 SSAs out of total 335 SSAs are being covered by this service.

- Automatic Cheque Collection Machines for acceptance of telephone bill payments have been installed at various places.
- Acceptance of payments for various services through internet using credit / debit cards has also been introduced.
- Wide Area Networks (WANs) have been set up in various circles and SSAs.

TELECOM FACTORIES

- The telecom are in-house manufacturing units of BSNL and are located at Kolkata, Gopalpur, Kharagpur, Jabalpur, Bhillai, Richhai and Mumbai. They are presently engaged in production of Pay Phones, Mini Pillars, CT Bo, DP Box, Line Jack Unit, OFC Accessories, FDMS, Towers, SS Drop wire and Joining Kits etc. In the changed telecom scenario, Telecom Factories are venturing in to new technology areas to support BSNL as manufacturing-cum-service support organization. TF Richhai and Gopalpur have received ISO 9001:2000 Certification during 2005-06 and this all Telecom Factories except Telephone Factory Kharagpur are now ISO 9001:2000 certified.

Physical Performance of Telecom Factories (upto December 2006)

Product	Total			Expected Dispatch by March , 07
	Target 2006-07	Supply	% age	
Buttinski Telephone	40,000	20,080	50	40,000
Coin Box Telephone	5,000	589	12	5,000
CT Box 100 Pr.	1,30,000	81,730	63	1,30,000
DP Box 5/10/20 Pr.	22,00,000	10,71,673	49	22,00,000
Line Jack unit	30,00,000	17,55,605	59	30,00,000
SS Drop Wire (Kms.)	3,50,000	64,934	19	3,50,000
Tower	5,250	1,707	33	4,270
Mini Pillar /	30,000	15,855	53	30,000
MPJ Box	4,000	1,531	38	4,000
OFC Accessories				
Splice Closure	75,000	14,541	19	75,000
OFTB	15,000	5,054	34	15,000
FDT	6000	3,246	54	6,000
Pig Tail	1,25,000	63,638	51	1,25,000
Patch Cord	75,000	18,489	25	75,000
Tool Kit	500	277	55	500
FC-PC Adaptor	20,000	41,048	205	42,000
IPM	25,00,000	14,19,718	57	25,00,000
IN PCO	9,000	6,182	69	9,000
FDMS	10,000	1,770	18	10,000
Jointing Kits	10,00,000	76,929	8	3,00,000
CT Block 100/64 Pr (MDF)	12,500	11,745	94	1,200
SIM Card	50,00,000	5,75,000	14	40,00,000

Financial Performance of Telecom Factories (upto December 2006)

(Rs. in crore)

Factory	Target 2006-07	Achievement 2006-07 (April-December 2006)		Expected Achievement by March 2007
		Value	% age	
Kolkata	77	34.73	45	77
Gopalpur	89	30.50	34	89
Kharagpur	32	07.78	24	32
Jabalpur	130	47.33	36	130
Bhillai	49	13.68	28	49
Richhai	33	11.63	35	33
Mumbai	146	48.91	34	146
TOTAL	556	194.56	35	556

- Service Support Centres (SSCs) for repair of C-DOT / E - 10 B Cards and other products of factories are functional at Kolkata, Lucknow, Mumbai, Jabalpur, Bhilai, Jaipur, Bangalore and Vijaywada.
- The manufacturing facilities for SIM Card with an annual capacity of around 5 Million per annum on single shift basis have been commissioned at TF Mumbai and regular supply of SIM Card is expected from October 2006.
- The proposal of setting up Joint Venture for manufacturing CDMA HHT/FWTs is under consideration. Also efforts are on to add new products like 5 Pair PIJF Cable, ADSL Modems etc.

INTERNATIONAL RELATION

In order to upgrade the knowledge and skill of BSNL officers and to make them have first hand information on latest development in the world. 49 officers were sent abroad for various training/ seminar/workshop/validation of GSM equipments etc. In addition, approximately 50 officers are likely to be deputed during January - March 2007.

DEVELOPMENT OF TELECOMMUNICATION FACILITIES IN SELECTED AREAS

Special Component Plans

Annual Plan of BSNL pay special emphasis on accelerated growth and early implementation of telecommunication facilities under Special Component Plans in (1) North Eastern Region (2)Tribal sub-plan areas and (3)National Capital Region Plan. The details are given below:

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

(a) Teledensity : Status of number of telephone connections and the teledensity State/Circle wise as on December 31, 2006 are given in the following table:

Telephone per 100 populations (as on December 31, 2006)

Sl. No	Name of State	Population as per Census 2001	Telephone as on December 31, 2006 (Wired+WLL+CMTS)	Teledensity as on December 31, 2006
1.	Assam	2,66,38,407	10,75,537	4.04
2	Meghalaya	23,06,069	1,22,569	5.32
3	Mizoram	8,91,058	99,229	11.14
4	Tripura	31,91,168	1,45,737	4.57
	NE-1	63,88,295	3,67,535	5.75
5.	Arunachal Pradesh	10,91,117	1,26,373	11.58
6	Manipur	23,88,634	1,10,341	4.62
7.	Nagaland	19,88,636	1,48,003	7.44
	NE-2	54,68,387	3,84,717	7.04
8.	Sikkim	5,40,493	1,03,014	19.06
9.	NE Region	3,90,35,582	19,30,803	4.95
10.	BSNL	99,68,64,187	6,01,77,380	6.04

Thus from above table it is observed that the teledensity of states of Sikkim, Arunachal Pradesh, Mizoram and Nagaland is higher than the All India BSNL average. However the teledensity of NE region as a whole is slightly lower than All India average.

(b) Network Status:- The status of telecom facilities as on December 31, 2006 in each of the state of North East Region is shown in the following table:

Sl. No	Name of State	Telephone Exchange	Total Capacity	Total DELs	Waiting List	VPTs	DHQ with Telephone facility	SDHQ with NSD/ ISD
1	Assam	598	13,01,098	10,75,537	14,781	21,599	26	57
2	Meghalaya	87	1,81,735	1,22,569	85	2,886	7	15
3	Mizoram	69	1,25,156	99,229	341	619	8	17
4	Tripura	87	2,01,208	1,45,737	10,965	846	4	17
	NE-1	243	5,11,099	3,67,535	11,391	4,351	19	49
5	Arunachal Pradesh	104	1,60,027	1,26,373	70	920	15	38
6	Manipur	55	1,35,905	1,10,341	2,288	1,676	9	28
7	Nagaland	60	1,76,220	1,48,003	13,138	1,045	11	8
	NE-2	219	4,72,152	3,84,717	15,496	3,641	35	74
8	Sikkim	47	1,26,202	1,03,014	0	366	4	9
	NE Region	1,107	24,10,551	19,30,803	41,668	29,957	84	162

(c) **Development Status :-** Target and achievement for the year 2006-07 for the North - East Region are as follows :

Item	2006-07	
	Target	Achievement upto December 31, 2006
Net Switching Capacity (Lines) (Fixed + WLL + CMTS)	5,09,750	2,45,184
DELs (Nos.) (Fixed WLL + CMS)	1,58,700	2,61,926
VPTs (Nos.)	3,725	2,918
UHF / Microwave (Rkms)	-	8.49
OFC (Rkms.)	1,250	299.46

TRIBAL SUB PLAN

The Tribal Sub Plan (TSP) is a part of the 10th Five Year Plan for providing telecom facilities in the tribal areas. For a balance and faster development of telecom facilities in tribal areas, these areas are treated as special focus areas. The main objectives of the Tribal Sub Plan areas are (i) to provide the telephone facility on demand in tribal areas (ii) to provide NSD facility to all exchanges in tribal areas and (iii) to provide public telephone in all tribal villages.

Tribal areas fall in the states of Andaman and Nicobar, Andhra Pradesh, Assam, Chattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, NE-I, NE-II Orissa Rajasthan Tamilnadu Uttaranchal U P (East) and U P (West)

Targets and achievements for the year 2006-07 under Tribal-sub-plan (TSP) are as follows:-

Sl. No.	Items	Target for 2006-07	Achievement upto December 31, 2006
1.	Telephone exchanges (Nos.)	16	-10
2.	Switching Capacity (lines.)	18,04,948	8,18,617
3.	DELs (Nos)	14,48,696	5,67,629
4.	VPTs (Nos)	9,423	-20,232
5.	OFC(RKMs)	3,119	-610
6.	Satellite Stations (Nos.)	11	-59

NATIONAL CAPITAL REGION (NCR)

In order to decongest the National Capital (Delhi) (i.e to reduce the population pressure on it) National Capital Region comprising of 8 Delhi Metropolitan Area towns, 13 priority towns and 5 counter magnet towns spreading to 5 States surrounding the National Capital is being given special attention for the development of infrastructure facilities including the telecom facilities in these towns.

During 2006-07, BSNL has provided 71,353 (upto December 31, 2006) Direct Exchange Lines in the region.

During the 10th plan period efforts are being made to improve the telecom facilities of NCR and to introduce various value added services to make it at par with Delhi, as demanded by the NCR

Planning Board. It is also aimed to make the telephone available on demand in the entire NCR region at the earliest.

STAFF STRENGTH

There were 3,26,948 Employee working in BSNL as on March 31, 2006. Out of these, there were 59,120 Schedule Caste, 16,482 Schedule Tribes, 1978 Ex-servicemen and 40,596 women employees. Group wise details are given in Table - 5 of the Statistical Supplement.

TABLE -1

STATUS OF DIRECT EXCHANGE LINES AND TELEPHONE EXCHANGES

Sl. No.	CIRCLE/ STATES	Direct Exchange Lines as on March 31, 2006 (Fixed +WLL+ CMTSs)	Direct Exchange Lines December 31, 2006	No. of Telephone Exchanges as on March 31, 2006	No. of Telephone Exchanges as on December 31, 2006
1.	A & N	70,909	66,127	19	49
2.	A. P.	41,11,716	45,83,290	3,628	3,672
3.	ASSAM	9,44,305	10,75,368	598	598
4.	BIHAR	17,37,862	17,80,897	1,163	1,174
5.	CHHATISGARH	4,79,093	6,61,722	633	630
6.	GUJARAT	35,54,724	34,07,487	3,231	3,211
7.	HARYANA	16,64,656	17,56,703	1,116	1,172
8	H.P	7,37,759	8,47,765	970	980
9.	J & K	8,43,316	10,72,584	365	370
10.	JHARKAHND	8,73,612	9,40,712	457	469
11.	KARNATAKA	40,58,726	41,41,496	2,710	2,720
12.	KERALA	34,44,516	38,02,321	1,224	1,233
13.	M.P.	18,77,817	22,54,222	2,789	2,791
14.	MAHARASHTRA	32,98,812	38,35,925	4,949	4,952
15.	N.E. I	3,18,172	3,67,535	276	283
16.	N.E.-II	3,05,977	3,81,717	217	219
17.	ORISSA	11,37,305	15,33,710	1,150	1,150
18.	PUNJAB	22,81,712	25,03,877	1,554	1,553
19.	RAJASTHAN	30,72,326	35,01,597	2,317	2,342
20.	TAMILNADU	43,83,430	48,81,456	2,043	2,065
21.	UTTARANCHAL	6,88,104	42,29,483	453	2,298
22.	U.P.(E)	33,60,116	18,95,285	2,292	986
23.	U.P.(W)	18,64,895	7,96,712	976	453
24.	W.B.	20,19,736	22,04,120	1,371	1,378
25.	KOLKATA	18,18,343	19,50,873	550	552
26.	CHENNAI	16,11,036	17,01,396	331	336
	BSNL TOTAL	**5,51,59,175**	**6,01,77,380**	**37,442**	*37,636*

TABLE -2

STATUS OF RURAL TELEPHONES (DELs)

(As on December 31, 2006)

Sl.No.	NAME OF CIRCLE	Rural DELs as on March 31, 2006	Rural DELs as on December 31, 2006	%age of Rural DELs
1	A & N	22,204	16,266	73.26
2	A. P.	13,73,226	13,22,133	96.28
3	ASSAM	1,82,636	2,04,341	111.88
4	BIHAR	5,40,742	5,14,560	95.16
5	CHHATISGARH	92,437	1,00,611	108.84
6	GUJARAT	9,11,605	8,57,732	94.09
7	HARYANA	4,90,318	4,76,744	97.23
8	H.P.	4,17,857	4,12,785	98.79
9	J & K	73,103	86,225	117.95
10	JHARKAHND	1,30,017	1,28,749	99.02
11	KARNATAKA	9,50,464	9,14,604	95.92
12	KERALA	26,61,147	27,57,493	103.62
13	M.P.	3,84,512	4,31,062	112.11
14	MAHARASHTRA	16,43,375	16,38,856	99.73
15	N.E.-I	67,884	70,665	104.10
16	N.E.-II	58,315	61,742	105.88
17	ORISSA	3,79,954	3,85,711	101.52
18	PUNJAB	8,81,427	8,22,698	93.34
19	RAJASTHAN	7,97,469	7,94,413	99.62
20	TAMILNADU	10,06,448	11,15,419	110.83
21	UTTARANCHAL	1,24,312	5,88,197	473.16
22	U.P. (E)	5,62,248	2,25,024	40.02
23	U.P. (W)	2,39,508	1,28,626	53.70
24	W.B.	7,03,800	7,19,586	102.24
25	KOLKATA	0	0	0
26	CHENNAI	70,239	74,110	105.51
	BSNL TOTAL	**1,47,68,247**	**1,48,48,352**	**100.54**

TABLE -3

STATUS OF VILLAGE PUBLIC TELEPHONES (VPTs)

(As on December 31, 2006)

Sl. No.	TELECOM CIRCLE/METRO DISTRICTS	Total Village	Villages Covere by VPTs as on March 31, 2006	Villages Covered by VPTs as on December 31, 2006	% of Villages Covered
1.	A & N	201	198	198	98.51
2.	A. P.	29,460	23,826	23,930	81.23
3.	ASSAM	24,685	23,094	24,265	98.30
4.	BIHAR	41,077	38,475	38,475	93.67
5.	CHHATISGARH	19,720	46,376	16,933	85.87
6.	GUJARAT	18,125	13,343	14,208	78.39
7.	HARYANA	6,850	6,811	6,811	99.43
8.	H.P.	16,925	16,814	16,814	99.34
9.	J & K	6,764	5,095	5,572	82.38
10.	JHARKHAND	31,703	26,980	27,302	86.12
11.	KARNATAKA	27,066	27,066	27,066	100.00
12.	KERALA	1,468	1,468	1,468	100.00
13.	M.P.	51,806	45,078	46,966	90.66
14.	MAHARASHTRA	42,467	34,371	36,119	85.05
15.	N.E.-I	7,125	4,365	4,457	62.55
16.	N.E.-II	7,020	3,559	3,767	53.66
17.	ORISSA	46,989	40,753	40,778	86.78
18.	PUNJAB	12,687	12,687	12,687	100.00
19.	RAJASTHAN	39,483	29,771	31,561	79.94
20.	TAMILNADU	17,899	17,899	16,169	90.33
21.	UTTARANCHAL	15,610	12,088	12,773	81.83
22.	U.P. (E)	79,792	76,006	76,006	95.26
23.	U.P. (W)	23,604	21,268	21,268	90.10
24.	W.B.	38,337	37,306	37,306	97.31
25.	KOLKATA	437	437	437	100.00
26.	CHENNAI	1,730	1,730	1,730	100.00
	BSNL TOTAL	**6,07,300**	**5,35,134**	**5,45,066**	**89.50**

TABLE -4

TELEPHONE PER 100 POPULATION-URBAN/RURAL (TELE-DENSITY)

(As on December 31, 2006)

Sl. No.	CIRCLES/METRO DISTRICTS	TELE-DENSITY		
		Urban	Rural	Overall
1.	A & N	42.83	6.78	18.56
2.	A. P.	15.91	2.39	6.05
3.	ASSAM	25.70	0.88	4.04
4.	BIHAR	14.59	0.69	2.15
5.	CHHATISGARH	13.44	0.61	3.18
6.	GUJARAT	13.41	2.68	6.68
7.	HARYANA	20.93	3.18	8.33
8.	H.P.	73.12	7.53	13.95
9.	J & K	39.37	1.11	10.65
10.	JHARKHAND	13.56	0.62	3.30
11.	KARNATAKA	18.01	2.63	7.85
12.	KERALA	36.71	11.68	18.19
13.	M.P.	11.32	0.97	3.73
14.	MAHARASHTRA	16.75	2.91	7.16
15.	N.E.-I	20.66	1.43	5.75
16.	N.E.-II	28.18	1.43	7.04
17.	ORISSA	20.89	1.21	1.18
18.	PUNJAB	18.37	3.10	9.91
19.	RAJASTHAN	20.50	1.81	6.20
20.	TAMIL NADU	17.54	3.58	9.28
21.	UTTARANCHAL	30.78	3.57	9.40
22.	U.P. (E)	19.89	0.13	3.70
23.	U.P. (W)	10.31	1.66	3.67
24.	W.B.	15.91	1.24	3.26
25.	KOLKATA	14.76	-	14.76
26.	CHENNAI	25.33	1.82	16.21
	BSNL TOTAL	**17.71**	**2.00**	**6.04**

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III. 2. Mahanagar Telephone Nigam Limited

INTRODUCTION

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

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

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

PHYSICAL PERFORMANCE

Tele Services

In MTNL a variety of phone plus services have been made available 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 reminder system etc. Sustained efforts are being made to maintain a high level of various operational parameters such as STD and Local call completion rate. MTNL has taken several steps to improve its interface with the customers. Telephone Adalats and Open House Sessions are being held for effective communications with the customers. Quick customer service centres are running at all divisional offices for catering to the day-to-day needs of customers for accessories, phone plus services, STD barring/restoration, local shift of telephone, ISDN, Internet connections and IN services.

A total of 13,88,559 lines gross switching capacity and 7,70,945 DELs including WLL and GSM were added by the MTNL during 2005-06. During April-December 2006 additional 7,60,436 lines gross switching capacity and 4, 83,378 cellular connections have been added. During this period 3,73,358 Net DELs (including WLL and GSM) were added. Details of achievements are given in Annexure-I and II of this chapter.

Fault Rate

During 2006-07, the fault rate vis-à-vis of previous years is as shown below:

No. of faults/100 telephones/month

Units	2002-03	2003-04	2004-05	2005-06	2006-07 (April -December 06)
Delhi	18.71	15.10	11.13	8.8	8.27
Mumbai	9.79	10.44	9.00	11.56	11.41

The fault rate has come down consistently. The increase in fault rate in Mumbai during current year is mainly due to unprecedented rains in Mumbai.

Clearance of Waiting List

With sustained efforts and timely implementation of various projects, the waiting list is "NIL" in Delhi and Mumbai. MTNL is providing telephone on demand except in technically non-feasible areas.

NEW SERVICES AND COMPUTERISATION

Internet Services

The system was expanded by 10,000 ports.

Broad Band Network

Broadband based on ADSL2+ was started on copper line in a record period of time. The service has been found very popular with subscribers. MTNL subscribers base has gone to 3, 98,930 till December 2006. MTNL has launched IPTV service in Delhi and Mumbai in the month of October 2006 and with that has started offering triple play services (voice, high speed internet and IOTV) using the broadband with the launch of IPTV MTNL expects a substantial increase in subscribers base for fixed line.

New Projects

- **Managed Leased Line Network (MLLN)**
  - The system has been implemented in both Delhi and Mumbai Unit and has been found very useful by subscribers.
  - Implementation of SLA and customization of billing for MLLN circuits is in progress.
- **Internet International Bandwidth**

  Internet International Bandwidth of 810 Mb in Delhi and 850 Mb Mumbai has been procured. This is being constantly augmented to keep pace with demand.
- **Bandwidth Management Tools**

  The system has been implemented in Delhi and Mumbai.
- **Convergent Billing and CRM Project.**

PO had been issued for procurement of Convergent Billing and CRM Project and the same is under implementation. Factory Inspection/testing of server/networking equipment/ printer and software

The CMD, MTNL, Shri R.S.P. Sinha presenting interim dividend cheque of MTNL to the Union Minister for Communications and Information Technology, Shri Dayanidhi Maran in New Delhi on February 23, 2006

module have been completed. QA/Testing of UPS and inverter is under progress. SRS (System Requirement System) has been finalized. Delivery of Equipment of Phase-I at site is over and installation work is in progress.

- **Internet Security Service System**

  A draft tender document had been prepared for "Internet Security Service Provider" for various Internet customers (ADSL, ISDN, Broadband and dial up etc). The clarifications for the same are being prepared.

- **Intranet**

  Intranet for posting of circulars, office orders and general correspondence etc. for internal usage of MTNL officials has been developed.

- **GSM Cellular Mobile Services**

  Presently the total capacity has been increased to 1025K each in Delhi and Mumbai for GSM services.

  - **2G and 3G Services**

  Tender for expansion of GSM network in Delhi by adding 2 Million lines of 2Gand 3G GSM/ WCDMA technology had already been finalized and APO released on M/s Motorola. The order for similar expansion of Mumbai GSM network by adding 2 Million lines of 2G and 3G GSM/ WCDMA technology is placed on M/s ITI under reservation quota. MTNL has issued PO to ITI and Motorola for 750K lines each for GSM expansion in Mumbai and Delhi respectively in the month of October 2006. Orders for 3G equipment shall be released after spectrum of 3G services is available.

  - **Value Added Services in GSM**

  M/s ITI who are executing 2G/3G GSM project at Mumbai has been asked to provide CRBT in Mumbai GSM network by the end of January 2007.In Delhi's existing GSM network CRBT is available to postpaid subscribers in limited capacity. However order for CRBT system of approximately 800K capacity has been placed on M/s Motorola as a part of ongoing expansion order for 2G/3G GSM network in Delhi. As per PO equipment is supposed to be commissioned by April 2007, however, considering the importance and urgency we are targeting commissioning of CRBT system by January 2007 end.

  For implementation of Missed call alert in GSM Network each in Delhi and Mumbai, C-DOT has been asked to conduct a trial of the solution proposed by them. On successful conduct of the trial this service will be formally introduced in Delhi and Mumbai for GSM subscribers. Now the C-DOT has provided this system in Delhi network and the system is being evaluated for its adequacy and functionality.

  For providing various other Value Added Services viz. Instant Messaging, Content Delivery on Mobile etc. in GSM Network, a committee has been set up to look into the issues. The presentations by prospective vendors are in progress.

- **CDMA based Mobile Services**

The present capacity of CDMA N/W of approx 292K lines has been expanded by 800K lines(400K lines each in Delhi and Mumbai).The expansion of 400K lines each in Delhi & Mumbai is based on state of the art 20001X Technology that provides high-speed data with mobility.

- **Value Added Services in CDMA**

For providing high speed data services in CDMA Network, M/s Huawei has been asked to conduct trial of EV-DO in Delhi and Mumbai.

For launch of BREW (Binary Runtime Environment for Wireless application) enabled value added services in CDMA Network, a presentation was arranged jointly by Qualcomm and eMbience. Before having a formal agreement it was proposed to conduct a trial of BREW enabled services in CDMA Network. The trial is expected to be conducted during January 2007.

- **Setting up of Data Centre by MTNL-STPI Joint Venture**

The state-of-the-art Data Centre is proposed to be set up at STPI Bangalore by the Joint Venture Company of MTNL-STPI. It is proposed to provide exclusive Data center services, Messaging services, Business application services to the identified sectors of economic activity and thereby also popularizing the *.in domain* in the networked community across the world. The project will be implemented in three different phases.

In addition to the portal and free E-mail services, the revenue streams identified are hosted Messaging solutions for SME's, Family Mail Box, Web Hosting, Application Hosting, Enterprise Resource Planning (ERP) solutions, Portal Advertisements etc. through the portal.

- **Worldwide Interoperability for Microwave Access (Wi-Max)**

MTNL intends to provide Access Network (Wi-Max) for provisioning of High Speed fully mobile Broadband Internet services in MTNL's Service Area in Delhi and Mumbai by using latest technology certified by Wi-Max forum based on 802.16e standards. Following services/ features will be supported by the Wi-max network:-

i) Access to Internet; ii) VPN Clients; iii) QoS to individual subscribers; iv) Cell support Video Conferencing; v) IP Multicast; and vi) Back Haul to Wi-Fi and Wireless leased lines.

MTNL intends to provide these services on revenue share basis. For provisioning of the services an EOI had been floated. Based on the EOI and subsequent discussion held in pre-bid vendor conference, M/s SOMA networks has been allowed to deploy its Broadband Wireless Access System (Wi- Max) on trial basis in MTNL Delhi at 2 sites namely Kidwai Bhawan and CGO Complex to demonstrate the capabilities of its equipment. On the similar lines M/s C-DOT Alcatel Research Center Pvt Ltd are allowed to conduct trials in MTNL Mumbai at 2 BTS location namely Fountain and Prabhadevi Telephone Exchange Bldg.

- **Release of Spectrum from Defence**

For enabling Defence forces to release spectrum which is urgently required by DOT for launch of 3G Services in the country, it has been decided to provide them an alternate optical fibre network

on all India basis. The project is being implemented jointly by MTNL and BSNL, in consultation with DOT and Defence forces. MTNL is responsible for commissioning of Access Network in Delhi and Mumbai. The funding is being arranged by Department of Telecommunications.

- **Laying of Submarine Cable Project**

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

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

Presently, MTNL is in the process of finalizing various MoUs and landing party agreements with the distant party's en-route the cable system. The NIT for the supply and implementation of the cable system is likely to be issued in the last week of January 2007 and all stages of the project are planned to be completed by 3rd quarter of 2008.

JOINT VENTURE

- **NEPAL**

A Joint Venture company named United Telecom Ltd. (UTL) has been set up by a consortium of MTNL, VSNL and TCIL along with a local Nepalese company named Nepal Venture (P) Limited (NVPL). UTL has obtained license for operating the CDMA based basic services, NLD and ILD services in Nepal. Company has rolled out its CDMA based basic services already with a customer base of 50,000 as on March 31, 2006.

- **MAURITUS**

MTNL has set up its 100% subsidiary in Mauritius with the name Mahanagar Telephone Mauritius Limited (MTML). MTML obtained license to operate as 2nd operator to provide fixed/ mobile telephone services and ILD. MTML has so far invested INR 400 million in the company.

The ILD services were started by MTML on June 24, 2005. Mahanagar Telephone Mauritius Limited (MTML) has launched mobile services in Mauritius w.e.f. December 15, 2006 under brand name "MOKOZE". With this, now MTML offers full fledged telecom services i.e. CDMA based fixed service, Mobile service and ILD service. In a short span of one year MTML has achieved a customer base of 20,000 in Mauritius.

MEETING COMPETITION

To meet the challenge of competition, the Company has taken various initiatives, which include re-structuring at operational level as well as broad basing the service portfolio being offered by the

company. As the company has only basic and cellular service license the emphasis has been placed on addition of value added services. The Company has commercially launched broadband services in the year 2005. Also Digital Certification services are available from year 2004. A number of customer friendly initiatives, which broadly include web-based solutions, SMS and call center-based solution, have been incorporated to enhance customer care.

The company has created new divisions like Marketing, Sales, Corporate Sale/Customer Support, for marketing its products and prepared aggressive marketing plan to meet out competitors effectively.

MTNL has modernized its network to reduce fault rate and provide new services. Company is continuously providing value added service on PSTN and mobile network at affordable rates for its customers. The Company has devised lot of schemes for payment of bills to suit various types of customers.

FINANCIAL PERFORMANCE

MTNL has achieved a financial turnover of Rs. 6,060.998 crore, as compared to the previous year's turnover of Rs. 6,084.103 crore. Despite a downward revision of tariff charges based on regulatory rules and regulation during the year, the company has registered a profit of Rs. 671.358 crore before tax as against Rs. 1,215.667 crore for the previous financial year. The net profit of the company was Rs. 580.292 crore for the financial year as against Rs. 938.979 crore for the previous financial year.

MTNL's net worth increased to Rs.11,236.77 crore, an increase of 2.68 % over the previous year's net worth of Rs. 10,943.83 crore.

DIVIDEND

During the period of (April – December 2006), MTNL has earned a financial turnover of Rs. 3,751.74 crore with a net profit of Rs. 452.21 crore (unaudited). MTNL paid dividend @40% on the paid-up share capital of Rs. 630 crore for the financial year (2005-06).

- **Subsidiary Companies**

MTNL has two wholly owned subsidiaries viz. Millennium Telecom Ltd. (MTL) and Mahanagar Telephone Mauritius Ltd (MTML). MTML has been registered in Mauritius on November 14, 2003 to provide public switched telecom services, public land mobile services and international long distance services. The company has already started its services from June 2005.

- **Capital Expenditure on Technology**

During the year 2005-06, MTNL has spent an amount of Rs. 685.47 crore as against Rs. 1038.48 crore in the previous year on capital expenditure. This was achieved entirely through internal resource generation.

MANPOWER

The total employees of MTNL were 48,993 as on September 30, 2006 belonging to different categories. Of the total employees, the numbers of employees belonging to Scheduled Caste are 9,043,

which constitute 18.46% of the total employees. The total number of employees belonging to Scheduled Tribe is 1661, which is 3.39% of total employees. The number of women employees in different category was 9,832. Group-wise details are given in the following table:

(As on September 30, 2006)

Group	Sanctioned Strength	Total Working Strength	Women Employees	Persons with disabilities	SC		ST	
					Nos.	%	Nos.	%
A	1,397	1,218	40	0	221	18.14	39	3.20
B	9,510	5,435	538	4	769	14.15	131	2.41
C	30,851	29,269	7,808	178	5,074	17.34	526	1.80
D	13,021	12,992	1,446	42	2,979	22.93	965	7.43
DRM	0	79	0	0	0	0.0	0	0.0
TOTAL	54,779	48,993	9,832	224	9,043	18.46	1661	3.39

ANNEXURE –I

DEVELOPMENT TARGETS/ACHIEVEMENTS – DELHI

	Targets (MOU) 2005-06	Achievements 2005-06	Targets (MOU) 2006-07	Achievements 2006-07 (Dec 2006)	Anticipated (Jan-March 2007)
A. SWITCHING					
i. Gross Capacity (In 000' lines)	*	678.074	*	227.69	200.000
ii. Scrapping (In 000' lines)	*	196.194	*	62.65	25.000
iii. Net Capacity (In 000' lines)$	400	481.880	800	165.04	1750.000
iv. DELs (In 000' lines)$	380		500		
Gross		756.213		429.345	225.000
Net		370.045		161.048	125.000
v. TAX/Tandem (In 000' lines)	26	Nil/Nil	32	Nil	-
B. SUBSCRIBER EXTERNAL PLANT					
i. Cable Laying (In LCKM)	*	5.34858	*	1.56648	1.00000
ii. Ducting (In Kms.)	*	Nil	*	Nil	-
C. TRANSMISSION (NAME OF SYSTEM)					
a) SDH System	*		*		
i. STM-16		33		10	-
ii. STM-4		33		8	-
iii. ADM-1/STM-1		25		77	-
D. OPTICAL FIBRE CABLE (in Route Kms.)	*	611.688	*	361.187	Target Already achieved
D. OPTICAL FIBRE CABLE (in Fibre KMS.)	7250	19840.008	9000	13311.617	
E. ISDN	*	140	*	61	-
F. WAITING LIST		Nil		Nil	-
G. NEW REGISTRATION		709773		405.081	-
H. PCOs	700		800		
a) Local		-2482		-3806	-
b) STD		-2220		-2339	-
I. Broadband Subscribers	250K	97.9330	-	81163	50000
J.Internet Connections	87.5K	73095	100K	33210	18000

$ Including (Fixed lines,WLL(Mobility)andGSM)
*Targets are not specified in MOU Document

ANNEXURE –II

DEVELOPMENT TARGETS/ACHIEVEMENTS - MUMBAI

	Targets (MOU) 2005-06	Achiev-ements 2005-06	Targets (MOU) 2006-07	Achiev-ements 2006-07 (Dec. 2006)	Antici-pated (Jan-March 2007)
A. SWITCHING					
i. Gross Capacity (In 000' lines)	*	710.485	*	532.746	200.000
ii. Scrapping (In 000' lines)	*	107.408	*	42.401	25.000
iii. Net Capacity (In 000' lines)$	400	603.077	800	490.345	1750.000
iv. DELs (In 000' lines)$	380		500		
Gross		777.633		540.281	225.000
Net		400.9		212.310	125.000
v. TAX/Tandem (In 000' lines)	26	6000/8520	32	Nil/Nil	-
B. SUBSCRIBER EXTERNAL PLANT					
I. Cable Laying (In LCKM)	*	2.35632	*	3.25958	1.00000
ii. Ducting (In Kms.)	*	1.682	*	0	-
C. TRANSMISSION (NAME OF SYSTEM)					
a) PDH OF System	*		*		
i. 8 Mbps		Nil		4	-
ii. 34 Mbps OF System		374		9	-
b) SDH System	*		*		
i. STM-16		237		9	-
ii. STM-4		95		9	-
iii. ADM-1/STM-1		158		71	-
iv. TMs-1		1342		-	-
D. OPTICAL FIBRE CABLE (in Route Kms)	*	369.465	*	512.817	Target Already achieved
D. OPTICAL FIBRE CABLE (in Fibre KMS.)	7250	10232.928	9000	15886.184	
E. ISDN	*	1351	*	1129	-
F. WAITING LIST		Nil		Nil	-
G. NEW REGISTRATION		163558		161993	-
H. PCOs	700		800		
a) Local		5653		-7702	-
b) STD		-1686		-3276	-
I. Broadband Subscribers	250K	106648	-	105832	-
J. Internet Connections	87.5K	110869	100K	51439	-

*Targets are not specified in MOU document

$ Including(Fixed lines,WLL(Mobility) andGSM)

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III. 3. ITI Limited

INTRODUCTION

ITI Limited is India's pioneering venture in the field of telecommunications since 1948. With state-of-the-art manufacturing facilities spread across six locations and a countrywide network of marketing / service outlets, the Company offers a complete range of telecom products and total solutions covering the whole spectrum of Switching, Transmission, Access and Subscriber Premises equipment. In tune with the technology trend, ITI has embarked on manufacture of mobile infrastructure equipment based on both GSM (Global System for Mobile) and CDMA (Code Division Multiple Access) technologies. ITI has also acquired the technology for manufacture of broadband infra equipment and next generation network equipment based on IP technology. ITI has a dedicated Network Systems Unit for carrying out installation and commissioning of equipments, as well as for undertaking turnkey projects and providing value added services. ITI has aptly earned recognition as Top Turnkey Services Company in Indian Telecom for the last four years.

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

By deploying its rich telecom expertise and vast infrastructure, the Company is consolidating its diversification into IT and IT-enabled services, acquiring a competitive edge in the convergence market. ITI's competency in the WAN (wide area networking) segment is reflected through two major projects commissioned successfully for BSNL: Countrywide MLLN (Managed Leased Line Network) and SSTP (Standalone Signal Transfer Point). ITI is one of the agencies selected for preparation of National ID cards. The Company has struck strategic alliance with BSNL for building a 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.

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 customized solutions to various customers.

CAPITAL STRUCTURE

The Authorized Share Capital of the Company as on March 31, 2006 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, 2006 is 92.87%.

MANUFACTURING PLANTS

Plant Location	Products Manufactured
BANGALORE PLANT	WLL CDMA -Intra, CDMA IFWT, OCB -CSN, C -DOT Products, AN RAX, SATCOM, Antenna and Microwave equipment 15GHz for GSM Project, Telephone Instruments for Defence and Other Defence Equipment.
MANKAPUR PLANT	GSM-BTS, OCB-CSN, Banking Mechanization
RAE BARELI PLANT	GSM-BTS, SMPS, Roof Top Tower, Shelter
NAINI PLANT	STM-1, 4, 16 and 64, DLC -Narrow Band, DWDM, Telephone Instruments, OPTIMUX, DDF
PALAKKAD PLANT	NGN, IP TAX, SSTP, OCB -283 CORE, TAX / TANDEM, MLLN, SIM CARDS
SRINAGAR PLANT	Telephone Instruments

HIGHLIGHTS OF PERFORMANCE DURING APRIL - DECEMBER 2006

- ASCON-III project completed.
- GSM -3 Million Lines supply and Installation and Commissioning under progress.
- GSM - Rs.281.52 crore value worth equipments and BTS supplied.
- WLL - INFRA Order worth Rs.401.26 crore received. Rs.51.92 crore Equipment value worth supplied and expected to complete by March 2007.
- Turnkey Projects- Value worth equipment / Services of Rs.180.06 crore completed.
- OCB 283 Digital TAX / TANDEM equipment of 282.5 KC supplied.
- OCB 283 CORE equipment of 83.65 KL supplied.
- CDMA-WLL IFWT Terminals of 76.8 K Nos. supplied.
- DWDM- 26 Systems supplied.

- STMs- Value of equipment worth Rs.10.35 crore supplied.
- SIM Card orders value worth Rs.6.11 crore supplied.
- GSM-2 Million lines order received in September 2006 from BSNL is expected to be complete by July 2007.
- GSM - Export order worth value of Rs.27.4 crore received for supply of 600 BTS etc. from M/s ALCATEL is expected to be complete by March 2007.

PHYSICAL PERFORMANCE FOR 2004-2005, 2005-2006 AND 2006-2007

[Rs. In crore.]

Major Products	Acctg. Unit	2004-05	2005-06	2006-07 Apr.06-Sept. 06 (Provl.)	2006-07 Oct.06-Dec.06 (Provl.)	Anticipated Achievement 2006-07 Jan- March 07 (Provl.)
OCB-283 LOCAL / CSN	Rs. Cr.	64.22	32.92	21.53	2.19	-
OCB-283 TAX / TANDEM	Rs. Cr.	77.94	85.15	23.29	18.88	10.0
C-DOT PRODUCTS and SPARES	Rs. Cr.	57.8	34.68	4.68	3.75	20.0
OPTIC FIBRE SDH/PDH	Rs. Cr.	25.25	62.35	0.43	10.35	75.0
DEFENCE, MUX and SATELITE EQUIPMENT	Rs. Cr.	10.49	31.92	9.32	2.53	9.33
DWDM	Rs. Cr.	3.33	32.32	3.83	8.49	5.79
TELEPHONES	Rs. Cr.	7.52	7.89	1.82	0.87	3.1
WLL – CDMA INFRA	Rs. Cr	114.23	228.58	-	51.92	349.34
IFWT TML	Rs. Cr.	63.54	107.11	0.86	18.51	66.42
CorDECT	Rs. Cr	73.35	-	-	-	-
GSM –INFRA (NETWORKING)	Rs. Cr.	305.57	267.26	119.0	72.09	370.0
GSM – BTS, RTT, SHELTER, POWER PLANT	Rs. Cr.	-	203.82	85.17	5.26	95.0
DLC/ WiMax	Rs. Cr	30.70	22.70	-	-	-
SIM CARDS	Rs. Cr.	29.13	28.66	2.19	3.92	8.4
MLLN	Rs. Cr.	0.42	51.13	-	1.16	180.0
IP TAX / SSTP	Rs. Cr.	-	20.44	0.84	-	60.2
SMPS	Rs. Cr.	12.3	19.95	3.43	2.29	8.0
SOLUTION BUSINESS / AMC etc	Rs. Cr.	31.8	50.06	101.42	78.64	140.0
TURNKEY PROJECT / SERVICES BUSINESS	Rs. Cr.	410.28	373.80			
ED	Rs. Cr.	71.14	88.64	377.81	280.85	1400.58
TOTAL [Incl.ED]	Rs. Cr.	1389.01	1749.38			

INDUCTION OF NEW TECHNOLOGIES

Induction of technologies by ITI for enhancing its manufacturing capabilities is as under:

(i) **Manufacture of GSM equipment in technical collaboration with Alcatel, France:** Manufacturing capacities of Base Transceiver Station (BTS) for 3 million per annum each at Mankapur (UP) and

Rae Bareli (UP) have been created and commenced operations on July 7, 2005 and November 9, 2005 respectively. The manufacture of Accessories for GSM such as tower, shelter, antenna and power plants has commenced at Rae Bareli. Manufacture of NODE-B equipments for GSM-3G is planned at Rae Bareli.

(ii) **Manufacture of Code Division Multiple Access (CDMA) Equipment:** The Company is exploring source for transfer of technology for manufacturing of CDMA equipment. Meanwhile, ITI has been supplying such equipment from ZTE to BSNL with a little value addition.

(iii) **IP Switch (Next Generation Network/Soft switch):** ITI has signed ToT agreement with M/s Tekelec of USA on September 1, 2004. The Company proposes to manufacture this equipment from SKD stage at its manufacturing unit at Palakkad.

(iv) **SDH (New Generation Optical fibre equipment) / DWDM:** ITI has signed a ToT agreement with M/s TEJAS, Bangalore in May 2004 for manufacturing of SDH equipments at Naini. The manufacturing of racks, shelters and wiring has already commenced. For DWDM (Dense Wave Division Multiplexing) equipment, ITI has an existing relationship with M/s ZTE, China and is already manufacturing at Naini Plant.

(v) **ADSL (Asymmetric Digital Subscriber Loop) :** ITI has finalized a ToT agreement with M/s Alcatel Shanghai Bell, China on September 12, 2005 for manufacture of ADSL-DSLAM systems. The production capacity would be 1.5 million lines per year. The project would be implemented with an overall Capital Outlay of Rs. 24 crore. The Project envisages a life period of five years.

(vi) **Integrated Fixed Wireless Terminals (IFWT) :** To start component level manufacturing, ITI has approached Qualcomm for exploring the possibility of getting license for the CDMA chipset. Qualcomm and ITI are in the process of negotiation for setting up manufacture of IFWTs.

FUTURE TECHNOLOGIES PLANNED

(i) **G-PON (Gigabit Passive Optical Network):** ITI is having plans to manufacturing G-PON equipments and technology partner is in place. ITI has participated in the recent EOI (Expression of Interest) by BSNL.

(ii) **WI-MAX / WI-MAX-CPEs: (World-wide Interoperability for Microwave Access):** WI-MAX offers wireless broadband Internet access to residence and business at relatively low cost. This technology will be particularly beneficial to rural area also and other locations where broadband access is not currently available. It is expected that the business would develop from the year 2007-08. Discussions have been initiated with CARC (C-DoT Alcatel Research Center), Chennai and Alcatel for TOT for WI MAX CPEs and Networks.

(iii) **CSN LGW (Line Gateway):** Deliberation are being held with Alcatel and BSNL modifications to be done on the existing Digital Subscriber Access Systems (CSNs) of OCB 283 TDM Switches for migration to the futuristic IP Based NGN Environment by converting them to Media Access Gateways [Class 5] to work with any compatible Soft switches as Line Gateway equipment. The proposed modification is being referred to as CSN LGW and BSNL has already been informed about this prospective Business Proposal.

The Defence Minister Shri Pranab Mukherjee lighting the lamp to inaugurate the 'Mercury Thunder' Army Static Switched Communication Network Phase 3, in New Delhi on September 13, 2006

IMPORTANT ACTIVITIES / EVENTS

- The Mobile Communication Node developed by ITI for Indian Army.

  ASCON-III was inaugurated by the Hon'ble Defence Minister, Shri Pranab Mukherjee on September 13, 2006 at a glittering ceremony at Vigyan Bhawan, New Delhi. The ceremony was attended by Hon'ble Minister of State for Defence, Shri M.M.Pallam Raju and a large number of dignitaries from Defence, Public and Private sectors, including Chief of Army Staff, Chief of Air Staff, Secretary Telecom, Secretary Defence, CMD, ITI Ltd., and many others. Considered a milestone in Defence Communications, the achievement of ITI in establishing such a huge and complex network was lauded by all.

  The Network spread over Northern India and North East, has a high population of state-of-the-art ATM and ISDN Switches, Satellite Stations, MW Radio and Optical Network. The Mobile Nodes, Encryption and Network Management system also form integral part of the Network. The Project has been implemented by ITI on turnkey basis. The implementation of this network was a great challenge for ITI as it involved handling of state-of-art technologies and carrying out Installation and Commissioning in extremely adverse and hostile conditions. Be it life threatening insurgency or extreme hostile terrain, ITI was able to implement the Project in record time. The Network shall be maintained by ITI under warranty and then Annual Maintenance Contract (AMC) on the lines of ASCON-I and II which ITI is maintaining for over a decade.

- **PROGRESS OF GSM PROJECT**

  BSNL had given the PO for 4 Million Lines. 1 million Lines were completed in July 2005. Subsequently order of 3 Million Lines was given in July 2005 and as on date, ITI has successfully commissioned total NSS, IN and BSCs. About 2 Million Lines of RF capacity has also been generated and BSNL has released about 2.2 Million Lines connections. ITI expects to complete this order by May 2007.

  Subsequently, an order of 2 Million Lines has also been received in September 2006 is expected to be completed by July 2007.

  In addition to above, MTNL has given an order for 750 KL on October 7, 2006 for Mumbai for which the delivery period is one year, it will be our endeavour to complete the supplies by March 2007 and project as per schedule.

- MLLN Repair facility for STU-160 type Network Terminal Unit Modems opened at ITI Palakkad Plant.

- MLLN - Order value worth Rs.248 crore has been received and the Company has planned to execute during current year.

- SSTP- Order worth Rs.60 crore has been received and will be executed by March 2007.

- ITI has won the 2.5 million lines CDMA-WLL tender for Rs.539 crore floated by BSNL. Being L1 bidder, company has received order worth Rs. 328 crore which is under execution and supplies will be completed by March 2007.

- ITI has received order worth Rs.46 crore for supply of 750 BTS of CDMA WLL under USO funding. Supplies will be completed by March 2007.
- V 5.2 Upgradation of CDMA WLL order worth Rs.16 crore received. Supplies will be completed by March 2007.
- STM-1, 4, 16 and 64: Orders worth Rs.92 crore has been received and supplies under progress.
- ITI has entered an MOU with M/s ELTEK, SGS India for the supply of SMPS with updated specifications for future GSM requirements. MOU has also been signed with M/s TERACOM India, to meet the requirements of 12 Volts SMPS for IFWT / FWT.
- ITI has signed a MOU with M/s KYOCERA, Japan for field trial of Broadband Wireless Equipment iBURST for Always-on-Internet connectivity. This equipment as successfully installed for the trial test in BSNL network at Gurgaon.
- An agreement was signed with C-DOT India, for manufacture and supply of HIGH VOLTAGE PROTECTION (HVP) device and RS 232 Optical Interface (RoI) equipment. This module will provide high voltage protection to Subscriber Line Cards of C-DOT Systems.
- Technology alliance have been made for Customer Premises Equipment like CLIP phones and Digital Microwave Equipment (15 GHz and 18 GHz) for mobile communication application. Discussion are also on for finalizing technology alliances for ADSL2+CPE Modem for broadband applications.
- A 15-member delegation led by the Hon'ble Minister of Foreign of Affairs of Latvia, Dr Artis Pabricks visited to ITI Bangalore Plant.

EXPORTS

Exports for the year 2005-06 amounted to Rs.4.36 crore. During the year 2006-07 (April - December) equipment worth of Rs.0.36 crore have been supplied.

MANPOWER POSITION

Total strength of employees of the Company at the end of the year 2005-06 was 14,257 as compared to 14,635 at the end of previous year. A total of 410 employees have taken Voluntary Retirement during the year 2005-06. Manpower as on January 1, 2007 is 13,543 employees.

AWARDS

ITI has won the "Top Telecom Turnkey Company" Award in the 7th Annual Voice and Data 100 Awards 2006 regarded as the most prestigious recognition in Indian Telecom industry.

EXHIBITIONS

ITI participated in 14th Convergence India 2006 International Exhibition and Conference, New Delhi.

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III. 4. Telecommunications Consultants India Limited

INTRODUCTION

Telecommunications Consultants India Ltd. (TCIL) was incorporated as a wholly owned Government of India Company on March 10, 1978. The Company was set up with the objective of extending the wide ranging telecom expertise available with DOT 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 by successfully taking up and executing Wireless Networks and Information Technology projects and diversifying into other fields for which it has adequate competent man power.

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 continuing basis and maintain leadership.
- To diversity into Cyber Parks, Cyber Cities, Intelligent Buildings, Highways and Roads and other civil works.

CORE COMPETENCE

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

The Company has also entered into Basic and other 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.

GOVERNMENT 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 Government's investment in the Company as on date is only Rs. 30 lakh. The paid-up capital after 6 Bonus Issues in 1987-88, 1992-93, 1994-95, 1996-97, 2001-02 and 2002-03 stands at Rs. 28.80 crore. Company has been paying dividend from the very first full year of operations. Company has paid total dividend of over Rs. 164 crore so far to Government of India on an investment of only Rs. 30 lakh.

The networth of the Company as on March 31, 2006 was Rs. 396.65 crore.

OVERSEAS OPERATIONS

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

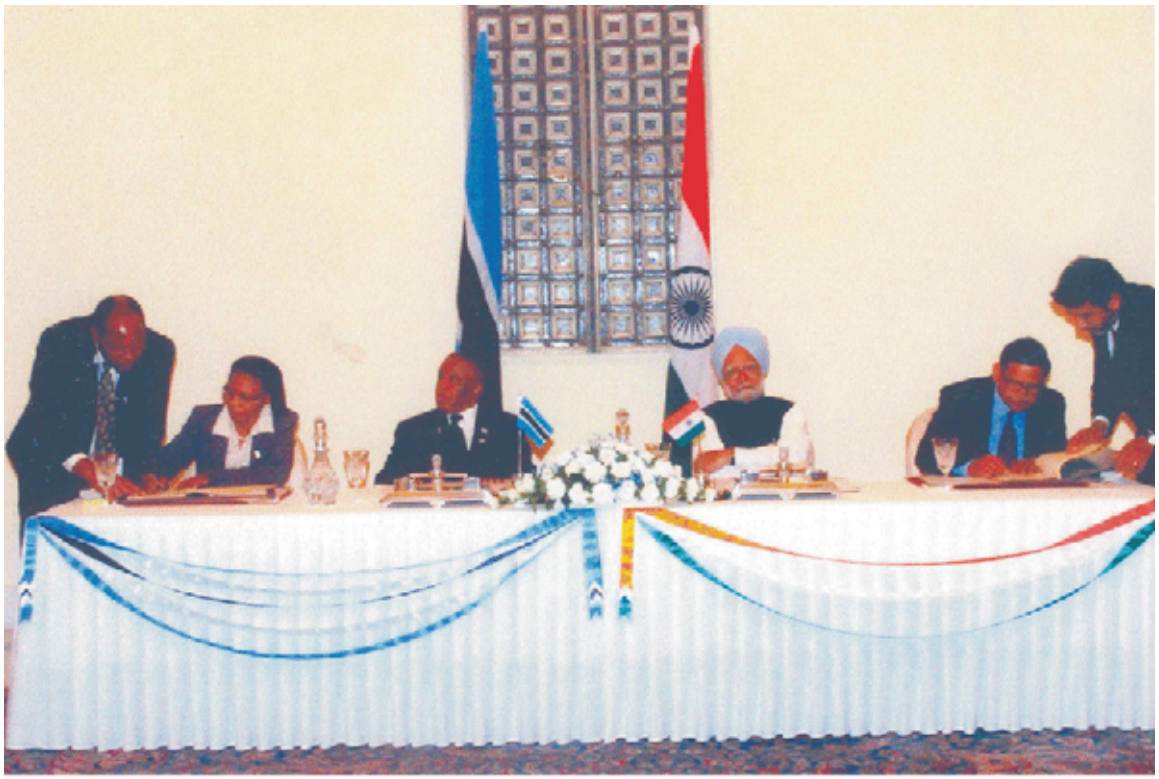
FINANCIAL PERFORMANCE - HIGHLIGHTS

(All figures in crore)

		2003-04 Actual	2004-05 Actual	2005-06 Actual	2006-07 RBE
Turnover	Rs.	544.43	449.14	483.50	564.85
Profit before tax	Rs.	50.77	13.68	17.40	1.69
Foreign Exchange repatriated to India	Rs.	69.01	47.39	22.02	15 crore
Networth	Rs.	410.11	395.85	396.65	397.66

PERFORMANCE HIGHLIGHTS: 2005 - 2006

- Foreign exchange repatriation of Rs. 22.02 crore.
- Networth of the Company has been increased to Rs. 396.65 crore in 2005-06 as against Rs. 395.85 crore in 2004-2005.
- TCIL's turnover of Rs. 483.50 crore during the year 2005-06 as against Rs.449.14 crore of last year.
- TCIL's profit before tax of Rs.17.40 crore during the year 2005-06 against previous year figure of Rs.13.68 crore.



Signing of MoU between Republic of Botswana and TCIL for the implementation of Pan African E-network project in the auspicious presence of Hon President of Republic of Botswana and Hon Prime Minister of India

Visit of H.E. President of Botswana to TCIL Bhawan

Smt. Sonia Gandhi Chairperson UPA acknowledging the contribution of TCIL for differently abled persons

Visit of Prof. Konare, Chairperson, African Union to TCIL to discuss the implementation of Pan African e-Network

- Company has been awarded a contract for construction of Roads in Assam by NHAI valued at Rs.166.72 crore.
- For the year 2005-06, company shall be adjudged 'Excellent' under MOU Evaluation criteria based on its audited results.
- Order booking during the year 2005-06 amounted to Rs. 769 crore as against target of Rs. 650 crore.
- TCIL made entry in new countries i.e. Senegal, Phillipines and Qatar.

The access network through wire line technology in the basic service sector has been continuously on the decline, while the wireless access services are proliferating across the globe. The resultant change over of the technology has affected the traditional wire line business of TCIL within the country, while shifting the company's business to wireless, Broad Band, Fibre based Technology and other hi tech solutions. Of late, Company margins have reduced due to shrinking of landline business world over and company's diversification to hi-tech areas of FTTH, Ship to Shore communication, IT and Wireless at very low margins to attract new business under stiff competition.

HIGHLIGHTS 2006-07

PROJECT EXPORTS

Project Exports during 2006-07 are likely to be over Rs. 272 crore (previous year Rs. 206.52 crore).

TURNOVER AND PROFIT

Turnover in 2006-07 is likely to be over Rs. 564 crore as against MOU target (Very good) of turnover of Rs. 730 crore.

THRUST ON HI-TECH PROEJCTS

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

INFORMATION TECHNOLOGY PROJECTS

With the change in telecom scenario, Company took a bold step and attempted to enter new areas and diversified its operations in the allied fields. Company has also revitalized and restructured the IT Division from software development to take part in IT and Networking Projects and made this as a thrust area of development. These initiatives have paid rich dividends and have pitch forked 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.

FINANCIAL PERFORMANCE FOR 2006-07

Financial Performance for the year 2006-07 is as under:

		MOU Target 2006-07 (Very Good)	April - December 2006	April - December 2005
Turnover	Rs./crore	730	254.44	315.28
Profit before tax	Rs./crore	12	(-)11.39	0.93
Foreign Exchange repatriated to India	Rs./crore	20	20.76	13.00

ORDER BOOKING

During the year 2006-07, till December 2006, Company has secured orders of Rs. 358.40 crore. The major orders booked during the year are as under:

- PAN Africa contract in 53 African countries valuing Rs. 228.46 crore (Out of total contract value of USD 117 Mn. (Rs.538.20 crore), part amount of Rs.309.74 crore was considered during the year 2005-06).
- GSM O&M contract in KSA valuing Rs. 17.87 crore.
- Supply, installation and testing of Optical Fiber Network Project in Kuwait valuing Rs. 3.25 crore.
- BOT Contract from PID for Gobindgarh - Nabha sector valuing Rs. 70.25 crore.
- Rural road projects valuing Rs. 58.85 crore.
- Contract for Kissan knowledge management center valuing Rs. 2.7 crore.
- Supply of secure voice and secure fax for Assam riffles valuing Rs. 1.52 crore.
- Supply and Installation of Networking project for Afghanistan Postal service valuing Rs.1.43 crore.
- Kissan Knowledge Management system for Ministry of Agriculture, Government of India for Rs. 2.99 crore.
- Supply of Indoor Power supply unit for GPON based FTTH equipment for MOC Kuwait for Rs. 1.76 crore.
- Construction of new Telecom Tower at Zauliyah Station, Oman valuing Rs. 2.15 crore.
- Optical fiber cable project in Jordan valuing Rs. 5.49 crore.

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 1.00 million with over 30% market share. During 2005-06, the company has achieved a turnover of Rs. 392.31 crore and profit of Rs. 82.90 crore. The Company has achieved a turnover of Rs. 434.70 crore and profit of Rs. 90.53 crore

(provisional) up to December 2006. TCIL investment in the JV has been increased from Rs. 53.27 crore to Rs. 90.77 crore in September 2006 with the JV's right issue at a premium of 100% over par.

Intelligent Communication Systems India Ltd. (ICSIL)

TCIL has a share-holding of 36% in this company valuing at Rs.36 lakh. Company has achieved a turnover of Rs. 32.77 crore during the year 2005-2006 and profit of Rs. 0.05 crore. Company has achieved a turnover of Rs. 3.14 crore (provisional) up to December 2006.

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. During 2005-2006, the company has achieved a turnover of Rs. 36.75 crore and profit of Rs. 2.47 crore. Company has achieved a turnover of Rs. 14.50 crore (provisional) up to December 2006.

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 projects in a number of countries including Ukraine, Malaysia, Zimbabwe and Bolivia. TBL is implementing Billing System and Customer Care packages in Malawi, Swaziland and in Nepal. During 2005-2006, the company has achieved a turnover of Rs. 1.95 crore.

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. During 2005-2006, the company has achieved a turnover of Rs. 21.71 crore and profit of Rs. 2.33 crore. TSCL has achieved a turnover of Rs. 17.25 crore (provisional) up to December 2006.

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. 20.82 crore during the year 2005-06. By September 2006, it had about 70,000 subscribers. The Company has achieved a turnover of Rs. 24.42 crore up to December 2006.

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IV. *Statistical Supplement*

Table-1

Relative performance during March'04 - December'06

S.No.	Description		Position at the End of		Absolute Change (4-3)	Position at the End of		Absolute Change (7-6)
			March'04	March'05		March'06	December'06	
1	2		3	4	5	6	7	8
1	Fixed Phones (In Lakh)	Public	397.67	398.74	1.07	392.44	372.69	-19.75
		Private	11.53	15.50	3.97	9.82	30.54	20.72
		Total	**409.20**	**414.24**	**5.04**	**402.26**	**403.24**	**0.98**
2	Wireless Phones (GSM+CDMA*) (In Lakh)	Public	67.17	122.14	54.97	218.40	292.06	73.66
		Private	289.04	447.35	158.31	800.26	1203.92	403.66
		Total	**356.21**	**569.49**	**213.28**	**1018.66**	**1495.98**	**477.32**
3	Total Telephones		**765.41**	**983.73**	**218.32**	**1420.92**	**1899.22**	**478.30**
4	Teledensity		**7.08%**	**8.95%**	-	**12.74%**	**16.83%**	-
5	Switching Capacity (In Lakh)	Public	600.25	667.39	67.14	792.14	864.43	72.29
6	Waiting List - Fixed Phones [In Lakh]	Public	**17.91**	**16.21**	**-1.70**	**12.19**	**9.29**	**-2.90**
7	Village Public Telephones [VPTs] **		521468	530778	9310	547111	557043	9932
8	PCOs (In Lakh)	Public	17.59	21.51	3.92	23.84	23.54	-0.30
9	OFC Route kms	Public	445822	471199	25377	490437	509175	18738
10	TAX Lines (In Lakh)	Public	53.42	61.39	7.97	69.53	73.37	3.84
11	Rural Phones (Fixed+CDMA)	Public	12272117	13569084	1296967	14768247	14848352	80105

* CDMA:WLL(Fixed+Mobile)

**Private VPTs constant,due to UASL since10/2003.i.e.12665

Note: No. of CDMA (Total WLL) phones at the end of Dec.'06 are441.73065 (in lakh)

No. of Wireless phones (GSM+CDMA) at the Dec.'06 are 1495.98248 (in lakh)

Table-2

Telephone per 100 Population-Urban/Rural Teldensity As on 31st March & 31st December 2006

Sl. No.	Circles/States	Tele-Density						Total Telephones						% of Rural DELs to Overall DELs	
		Overall		Urban		Rural		Overall		Urban		Rural			
		2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06
1	ANDAMAN & NICOBAR	17.97	16.50	34.20	34.10	8.80	6.39	70909	66127	48705	49861	22204	16266	31.31%	24.60%
2	ANDHRA PRADESH	13.45	18.38	43.22	61.64	2.34	2.24	10825559	14921113	9452333	13598980	1373226	1322133	12.69%	8.86%
3	ASSAM	5.67	7.83	37.08	51.84	0.73	0.81	1648408	2301659	1465767	2097318	182636	204341	11.08%	8.88%
4	BIHAR	5.34	6.62	45.15	57.64	0.66	0.62	4856081	6095018	4315339	5580458	540742	514560	11.14%	8.44%
5	CHHATTISGARH	2.09	2.85	7.84	11.11	0.51	0.55	479093	661722	386656	561111	92437	100611	19.29%	15.20%
6	GUJARAT	16.98	22.78	39.51	54.44	2.69	2.52	9389773	12739903	8478168	11882171	911605	857732	9.71%	6.73%
7	HARYANA	14.47	20.60	39.38	58.44	3.10	2.99	3338749	4809747	2848431	4333008	490318	476744	14.69%	9.91%
8	HIMACHAL PRADESH	18.78	25.03	118.14	177.86	7.25	7.12	1207324	1621191	789467	1208406	417857	412785	34.61%	25.46%
9	JAMMU & KASHMIR	12.18	13.42	44.49	48.58	0.85	0.98	1417172	1596740	1344069	1512515	73103	86225	5.16%	5.39%
10	JHARKHAND	2.99	3.19	11.18	12.03	0.58	0.57	873612	940712	743595	811963	130017	128749	14.88%	13.69%
11	KARNATAKA	17.06	23.28	43.17	60.47	2.63	2.52	9585945	13193402	8632481	12278798	953464	914604	9.95%	6.93%
12	KERALA	25.54	31.73	68.40	91.69	10.65	10.95	8595938	10761465	5934791	8003972	2661147	2757493	30.96%	25.62%
13	MADHYA PRADESH	7.12	11.34	23.90	38.92	0.79	0.88	4765049	7691931	4380537	7260869	384512	431062	8.07%	5.60%
14	MAHARASHTRA	13.10	17.41	34.45	47.42	2.80	2.78	11409507	15284502	9766132	13645646	1643375	1638856	14.40%	10.72%
15	NORTH-EAST-I	8.11	13.20	30.45	51.72	1.29	1.34	556218	913740	488334	843075	67884	70665	12.20%	7.73%
16	NORTH-EAST-II	5.21	6.49	19.80	25.49	1.26	1.33	305977	384717	247662	322975	58315	61742	19.06%	16.05%
17	ORISSA	7.57	8.59	41.65	47.66	1.16	1.16	2959554	3386576	2579600	3000865	379954	385711	12.84%	11.39%
18	PUNJAB	27.61	34.93	63.57	82.54	5.29	4.92	7460391	9524982	6578964	8702284	881427	822698	11.81%	8.64%
19	RAJASTHAN	9.65	13.51	35.43	51.74	1.67	1.64	6035927	8558178	5238458	7763765	797469	794413	13.21%	9.28%
20	TAMIL NADU	14.70	20.34	29.99	41.83	2.99	3.35	8723597	12145086	7717149	11029667	1006448	1115419	11.54%	9.18%
21	UTTARANCHAL	7.46	8.54	22.72	26.42	1.84	1.89	688104	796712	563792	668086	124312	128626	18.07%	16.14%
22	UTTAR PRADESH - [E & W	6.87	9.83	30.09	43.80	0.56	0.55	12642505	18370100	11840749	17556879	801756	813221	6.34%	4.43%
23	WEST BENGAL	5.53	7.71	33.04	48.87	1.13	1.15	3976900	5391097	3273100	4671511	703800	719586	17.70%	12.87%
24	KOLKATTA	33.70	42.72	33.70	42.72	0.00	0.00	4880997	6271685	4880997	6271685	0	0	0.00%	0.00%
25	CHENNAI	61.08	77.73	60.08	76.69	0.00	0.00	4274523	5509204	4204284	5435094	70239	74110	1.64%	1.35%
26	DELHI	65.40	82.63	65.40	82.63	0.00	0.00	10533761	13617797	10533761	13617797	0	0	0.00%	0.00%
27	MUMBAI	56.73	63.91	56.73	63.91	0.00	0.00	10590461	12164741	10590461	12164741	0	0	0.00%	0.00%
	ALL-INDIA	12.74	16.83	39.45	53.34	1.86	1.86	142092029	189921847	127323782	175073495	14768247	14848352	10.39%	7.82%

*Including Public DELs, Pvt. DELs, CMPs and WLL (Fixed & Mobile).

Table-3

Number of Telephones (Fixed and Wireless)- As on 31st March & 31st December 2006

Sl. No.	Circles/States	Basic Phones = Fixed DELs						Wireless Phones(GSM+CDMA)						TOTAL TELEPHONES	
		TOTAL		PSUs' Operators		Private Operators		TOTAL		PSUs		Private Operators			
		2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06	2006	December'06
1	ANDAMAN & NICOBAR	38480	26569	38480	26569	0	*			10220	39558	0	0	48700	66127
2	ANDHRA PRADESH	3666916	2991776	3211775	2812448	455141	179328	3880281	11929337	866800	1770842	3013481	10158495	7547197	14921113
3	ASSAM	533442	502855	533442	502855	0	0	264850	1798804	159332	572513	105518	1226291	798292	2301659
4	BIHAR	1075364	955702	1041825	955016	33539	686	1034162	5139316	247432	825881	786730	4313435	2109526	6095018
5	CHHATTISGARH	328400	274781					76808	386941					405208	661722
6	GUJARAT	3104475	2398222					3833225	10341681					6937700	12739903
7	HARYANA	1307110	1036721					1151433	3773026					2458543	4809747
8	HIMACHAL PRADESH	495797	458118					339068	1163073					834865	1621191
9	JAMMU & KASHMIR	307566	293603					267409	1305137					574975	1598740
10	JHARKHAND	495462	443027					166287	497685					661749	940712
11	KARNATAKA	3215841	2835075					3554271	10358327					6770112	13193402
12	KERALA	3691943	3635476					2561429	7125989					6253372	10761465
13	MADHYA PRADESH	1671745	1568444					1749297	6123487					3421042	7691931
14	MAHARASHTRA	4444931	3839282					4174132	11445220					8619063	15284502
15	NORTH-EAST- I	216267	198624					76832	715116					293099	913740
16	NORTH-EAST- II	167263	150777					45247	233940					212510	384717
17	ORISSA	852821	762571					678243	2624005					1531064	3386576
18	PUNJAB	2343644	1888985					3508646	7635997					5852290	9524982
19	RAJASTHAN	2056174	1846290					1702026	6711888					3758200	8558178
20	TAMIL NADU	3291736	2719590					3400015	9425496					6691751	12145086
21	UTTARANCHAL	386728	344608					135026	452104					521754	796712
22	UTTAR PRADESH - [E]	1803782	1528355					2260972	9140366					4064754	10668721
23	UTTAR PRADESH - [W]	1350010	1044274					1911703	6657105					3261713	7701379
24	WEST BENGAL	1311651	1216810					819049	4374287					2130700	5591097
25	KOLKATTA	1486824	1427989					1897339	4843696					3384163	6271685
26	CHENNAI	1190577	1263222					2027504	4245982					3218081	5509204
27	DELHI	2405243	2195965					5554002	11421832					7959245	13617797
28	MUMBAI	2958124	2475888					5095393	9688853					8053517	12164741
	ALL- INDIA	46198316	40323599	41110865	37269392	5087451	3054207	52174869	149598248	10977568	29208774	41197301	120392474	98373185	189921847

*Including in the respective circle.

Table - 4

Number of Villages with Direct Access to Telecom Facilities

Sl. No.	Circles/States	No. of Villages	Villages covered with VPTs as on					PCOs as on (Local+STD+Highway)	
			Public		Private*	TOTAL VPTs			
			31.03.2006	31.12.2006	31.03.2006	31.03.2006	31.12.2006	31.03.2006	31.12.2006
1	Andaman & Nicobar	201	198	198	0	198	198	1154	1172
2	Andhra Pradesh	29460	23826	23930	1408	25234	25338	281281	271107
3	Assam	24685	23094	24265	0	23094	24265	24680	32651
4	Bihar	41077	38475	38475	0	38475	38475	63000	68886
5	Chhattisgarh	19720	16376	16933	0	16376	16933	9620	9290
6	Gujarat	18125	13343	14208	4114	17457	18322	147304	130964
7	Haryana	6850	6811	6811	0	6811	6811	35016	31340
8	Himachal Pradesh	16925	16814	16814	0	16814	16814	11371	11907
9	Jammu & Kashmir	6764	5095	5572	0	5095	5572	16505	15969
10	Jharkhand	31703	26980	27302	0	26980	27302	23287	23537
11	Karnataka	27066	27066	27066	0	27066	27066	262492	262213
12	Kerala	1468	1468	1468	0	1468	1468	116264	123133
13	Madhya Pradesh	51806	45078	46966	611	45689	47577	53449	51826
14	Maharashtra	42467	34371	36119	2643	37014	38762	311949	319514
15	North-East-I	7125	4365	4457	0	4365	4457	6035	7398
16	North-East-II	7020	3559	3767	0	3559	3767	6849	7240
17	Orissa	46989	40753	40778	0	40753	40778	30849	30653
18	Punjab	12687	11808	11808	879	12687	12687	41797	36724
19	Rajasthan	39483	29771	31561	3010	32781	34571	68937	67526
20	Tamil Nadu	17899	16169	16169	0	16169	16169	208357	212724
21	Uttaranchal	15610	12088	12773	0	12088	12773	14577	14285
22	Uttar Pradesh(E)	79792	76006	76006	0	76006	76006	104521	99591
23	Uttar Pradesh(W)	23604	21268	21268	0	21268	21268	57679	49704
24	West Bengal	38337	37306	37306	0	37306	37306	58221	63175
25	Kolkata	437	437	437	0	437	437	65404	61602
26	Chennai	NA	1730	1730	0	1730	1730	85956	88017
27	Delhi	191	191	191	0	191	191	97128	90983
28	Mumbai	NA	0	0	0	0	0	181913	170935
	All-India	607491	534446	544378	12665	547111	557043	2385595	2354066

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 31st March 2006

Group	No. of Employees			TOTAL EMPLOYEES	Scheduled Caste	% to Total Employees	Scheduled Tribe	% to Total Employees
	DOT*	BSNL	MTNL					
A	803	7600	1139	9542	1510	15.82%	455	4.77%
B	637	54257	5743	60637	8209	13.54%	2361	3.89%
C	534	213054	30749	244337	41516	16.99%	11142	4.56%
D	353	52037	13511	65901	13835	20.99%	3402	5.16%
Total	2327	326948	51142	380417	65070	17.10%	17360	4.56%

Group	TOTAL EMPLOYEES	Ex-servicemen (Abled)	% to Total Employees	Ex-servicemen (Disabled)	% to Total Employees	Women Employees	% to Total Employees
A	9542	2	0.02%	0	0.00%	402	4.21%
B	60637	141	0.23%	1	0.00%	7941	13.10%
C	244337	1495	0.61%	34	0.01%	34149	13.98%
D	65901	441	0.67%	4	0.01%	8815	13.38%
Total	380417	2079	0.55%	39	0.01%	51307	13.49%

** Data as reported by different administrative sections. Data as on 1st March 2006 as reported in the Demand-for-Grants for the year 2007-08 is 2159.*

Table - 6

Number of Disabled Employees (Including DOT, BSNL & MTNL) as on 31st March 2006

Class	Strength		Difference
	% of Sanctioned	Working	
Blindness of Low Vision	3789	38	3751
Hearing Impairment	3787	36	3751
Locomotors Disability or Cerebral Palsy	3791	362	3429
Total	11479	548	10931

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V. Graphs and Charts

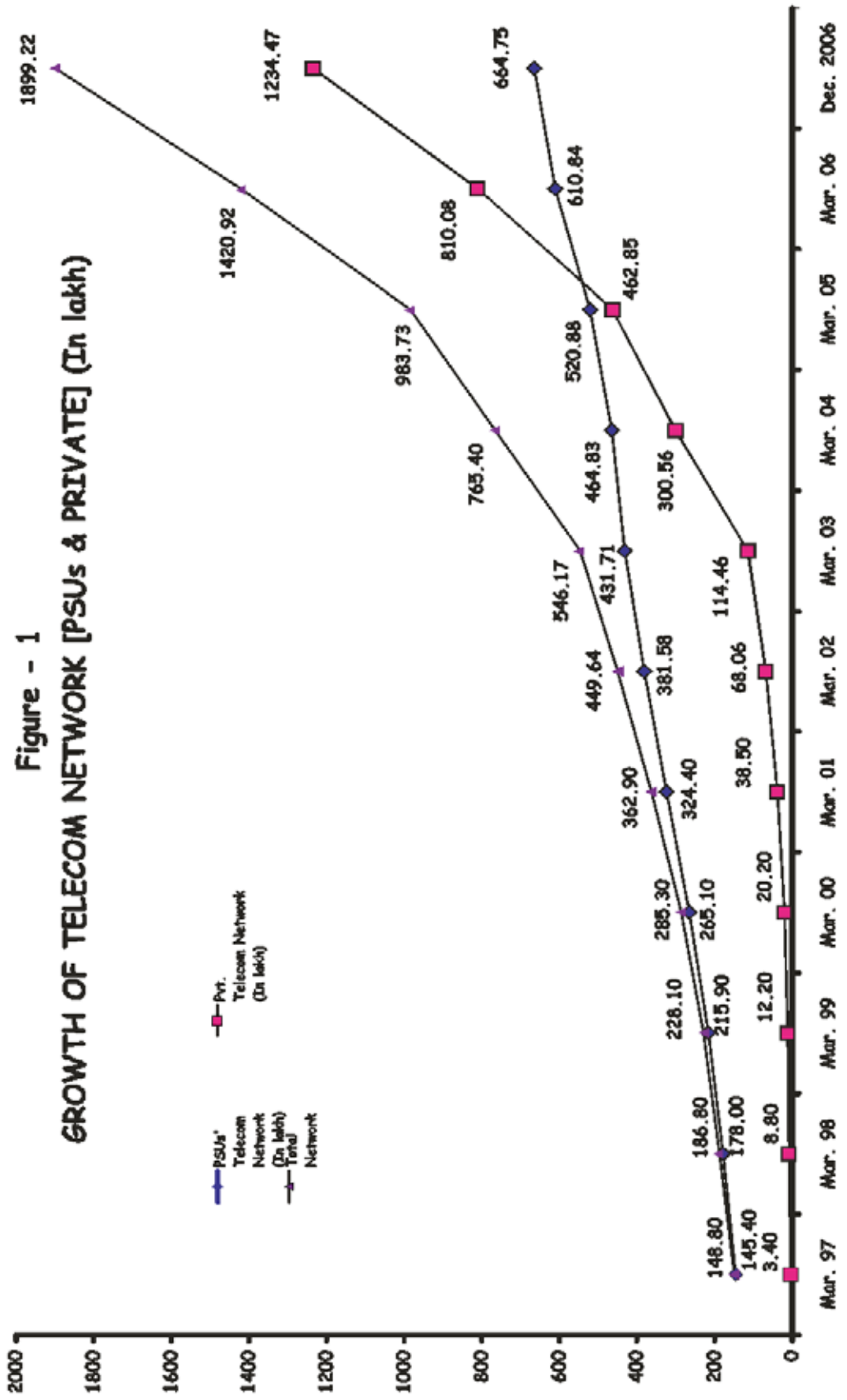
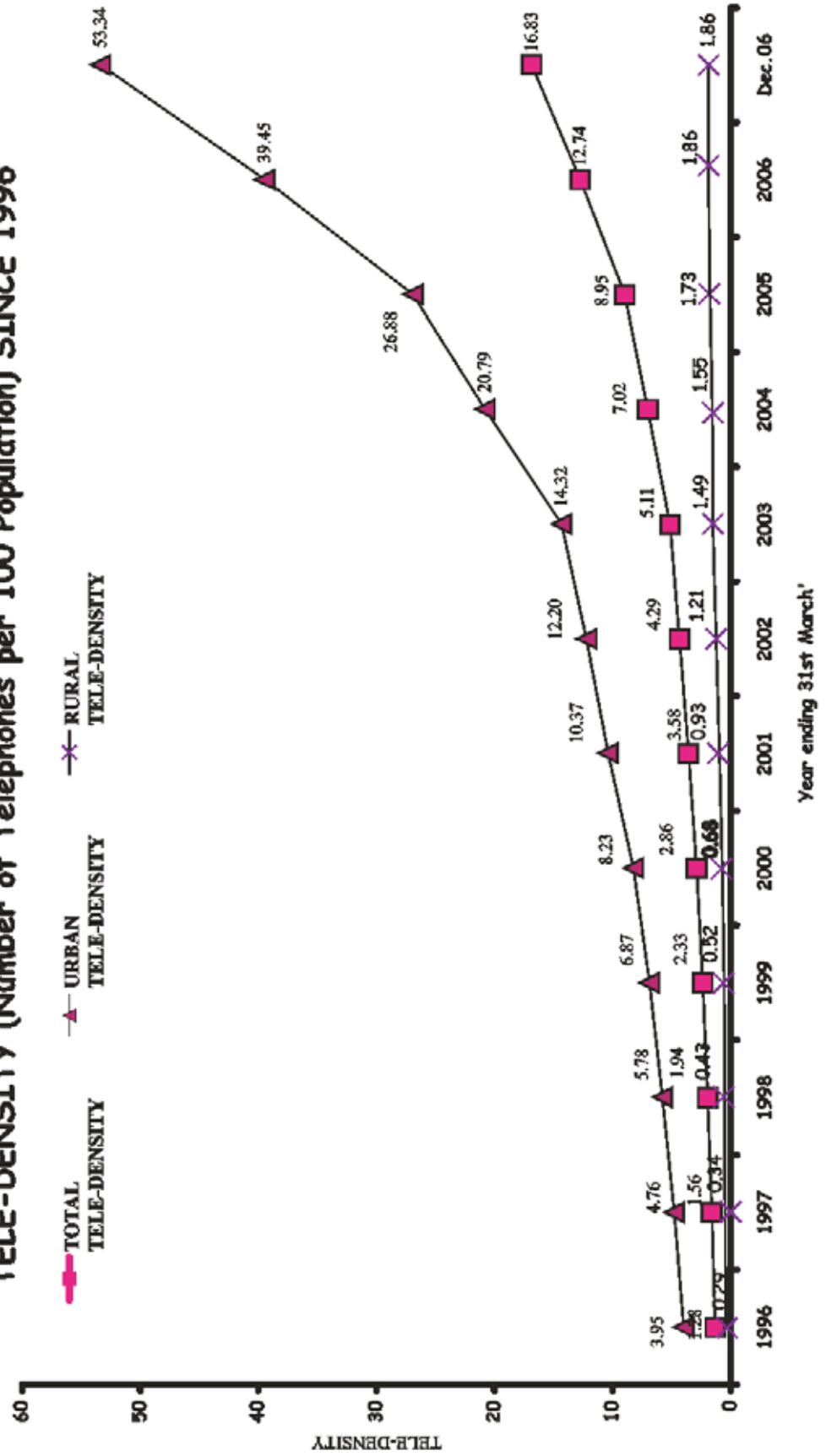


Figure - 1
GROWTH OF TELECOM NETWORK [PSUs & PRIVATE] (In lakh)
PSUs' Telecom Network (In lakh)
Pvt. Telecom Network (In lakh)
Total Network
1899.22
1420.92
983.73
765.40
546.17
449.64
362.90
285.30
228.10
186.80
148.80
1234.47
810.08
520.88
464.83
431.71
381.58
324.40
265.10
215.90
178.00
145.40
664.75
610.84
462.85
300.56
114.46
68.06
38.50
20.20
12.20
8.80
3.40
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Mar. 97
Mar. 98
Mar. 99
Mar. 00
Mar. 01
Mar. 02
Mar. 03
Mar. 04
Mar. 05
Mar. 06
Dec. 2006

Figure - 2

TELE-DENSITY (Number of Telephones per 100 Population) SINCE 1996



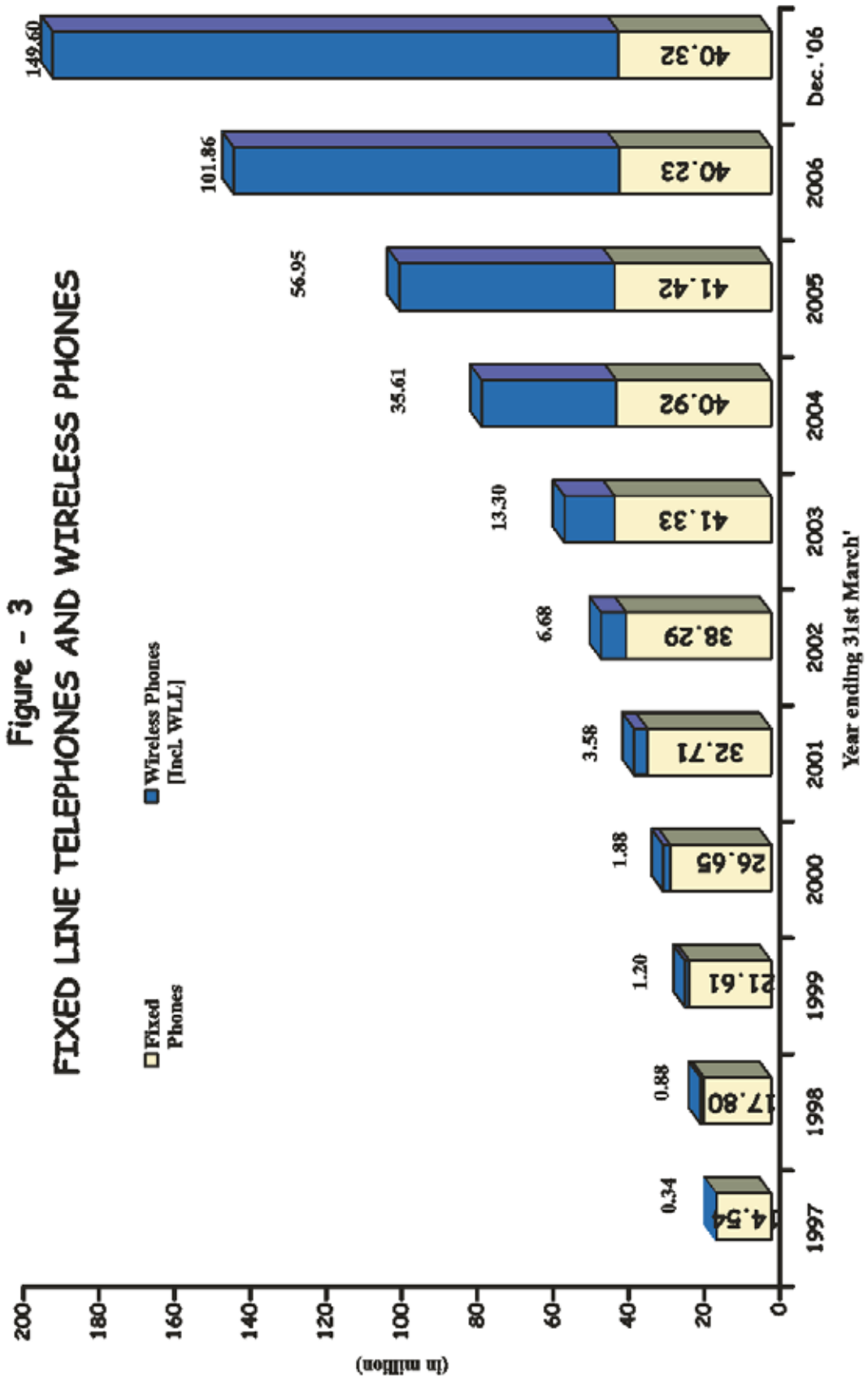


Figure - 3
FIXED LINE TELEPHONES AND WIRELESS PHONES
Fixed Phones
Wireless Phones [Incl. WLL]
(In million)
Year ending 31st March'
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Dec.'06
4.54
17.80
21.61
26.65
32.71
38.29
41.33
40.92
41.42
40.23
40.32
0.34
0.88
1.20
1.88
3.58
6.68
13.30
35.61
56.95
101.86
149.60
0
20
40
60
80
100
120
140
160
180
200

Figure - 4

DISTRIBUTION OF DIRECT EXCHANGE LINES (DELs)[Fixed+Wireless]

[PSUs+Pvt.] As on March 31, 2006

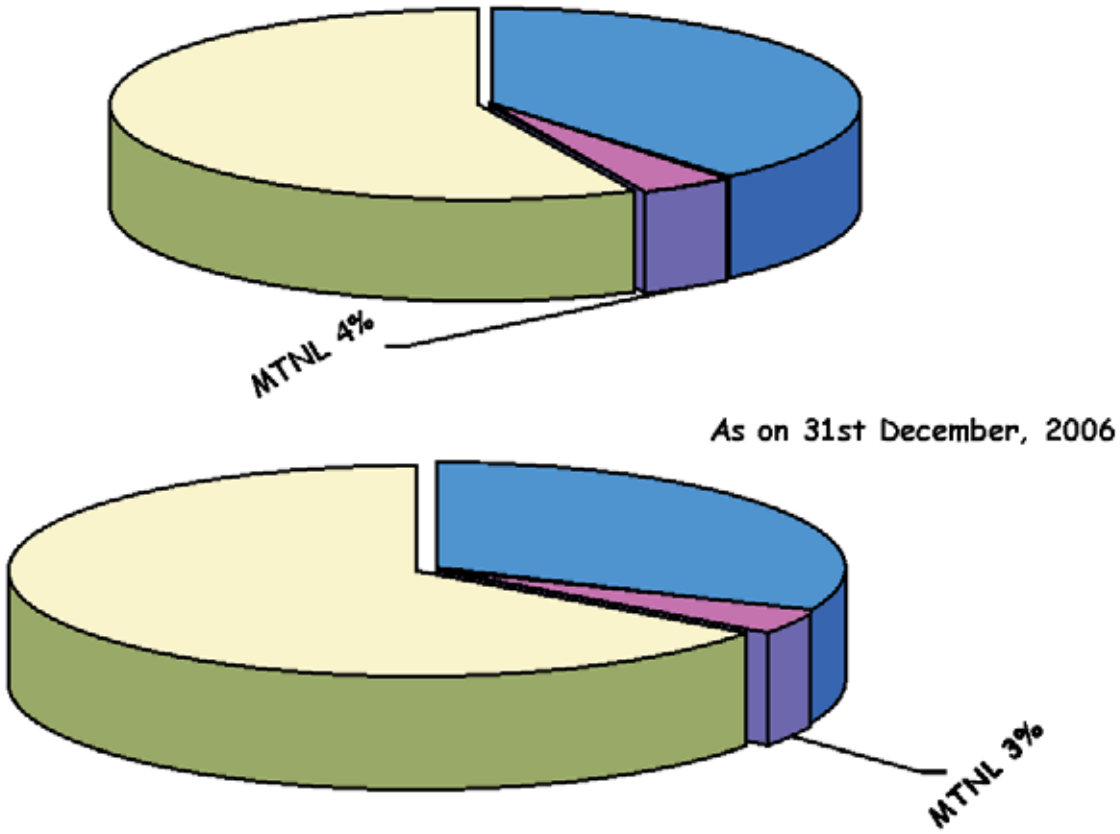
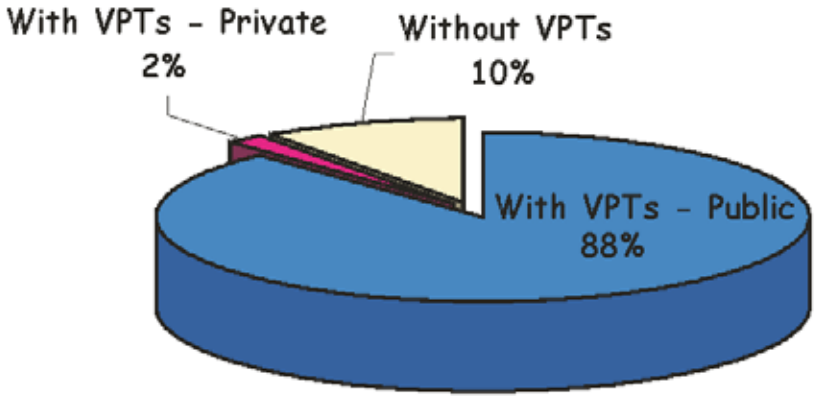
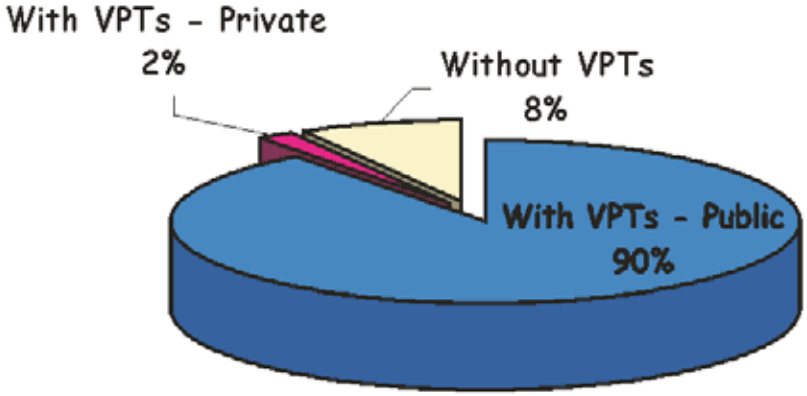


Figure - 5
COVERAGE OF VILLAGES BY VPTs
(AS ON MARCH 31, 2006)



AS ON DECEMBER 31, 2006



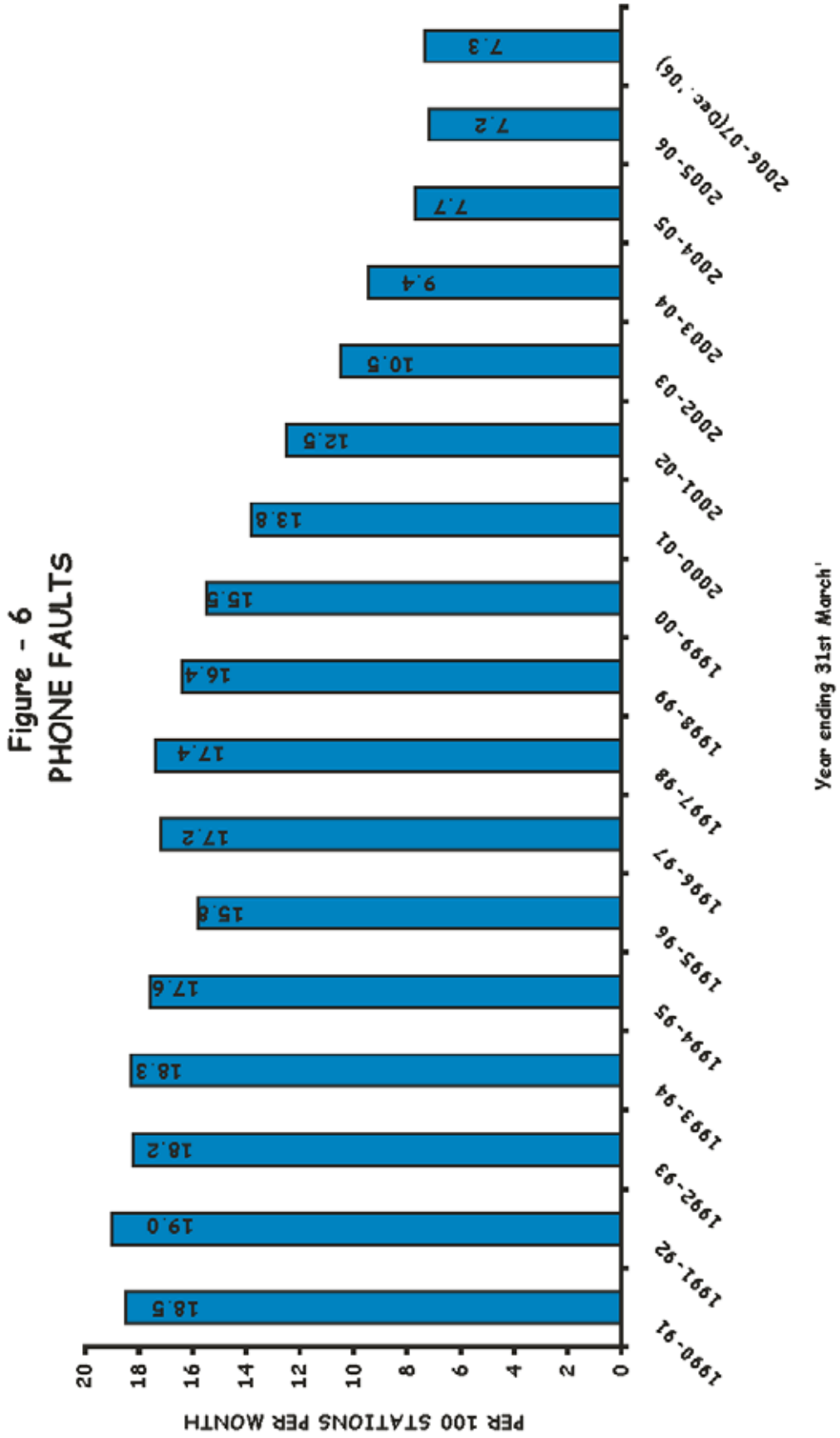


Figure - 6
PHONE FAULTS
PER 100 STATIONS PER MONTH
0
2
4
6
8
10
12
14
16
18
20
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07(Dec.'06)
18.5
19.0
18.2
18.3
17.6
15.8
17.2
17.4
16.4
15.5
13.8
12.5
10.5
9.4
7.7
7.2
7.3
Year ending 31st March'

Figure - 7

FOREIGN DIRECT INVESTMENT APPROVAL (AUGUST 1991 - NOVEMBER 2006)

(Rs. In Crore)

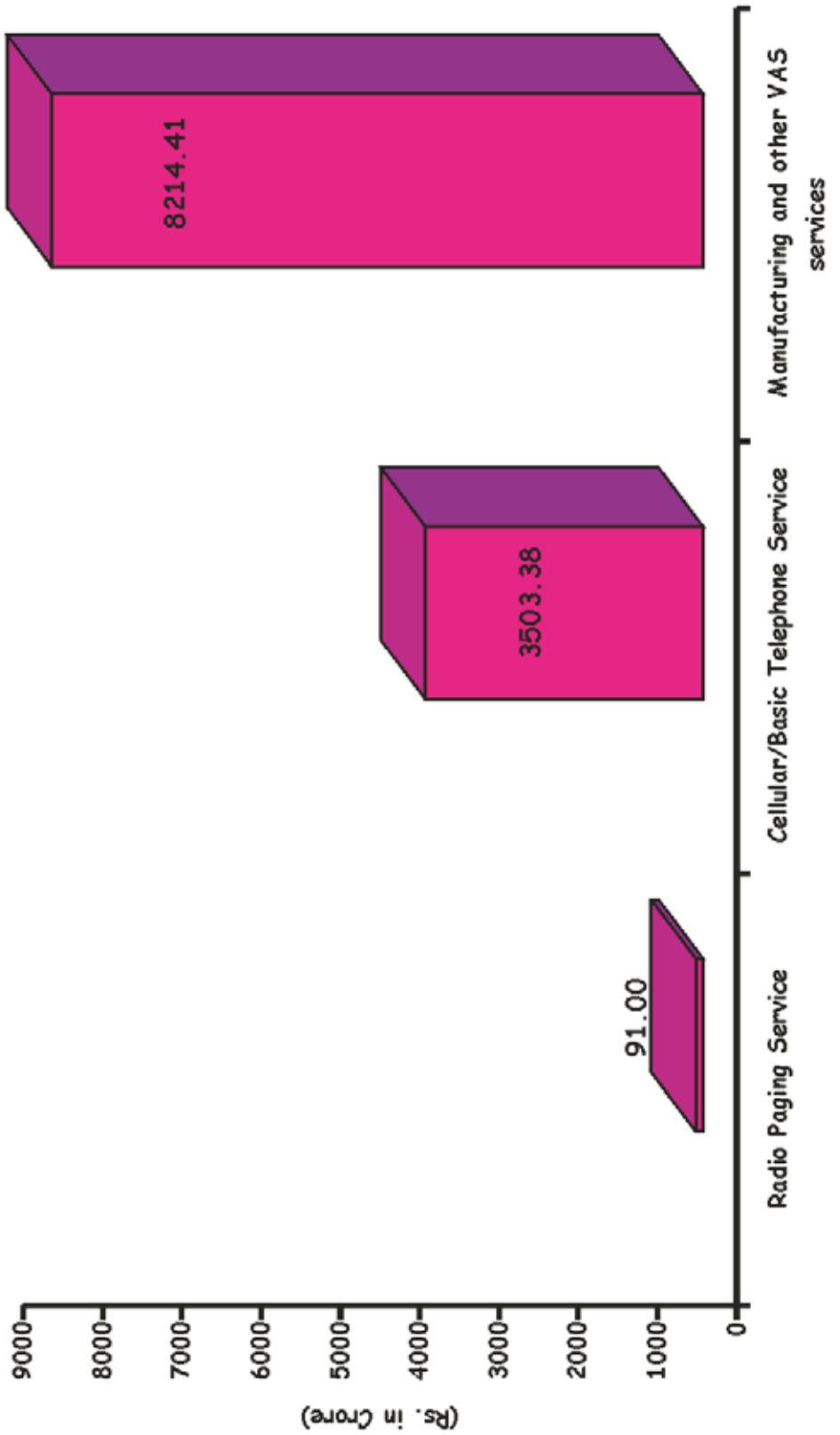


Figure-8
ACTUAL FDI INFLOW YEAR-WISE [AUG.1991 TO NOV.2006]

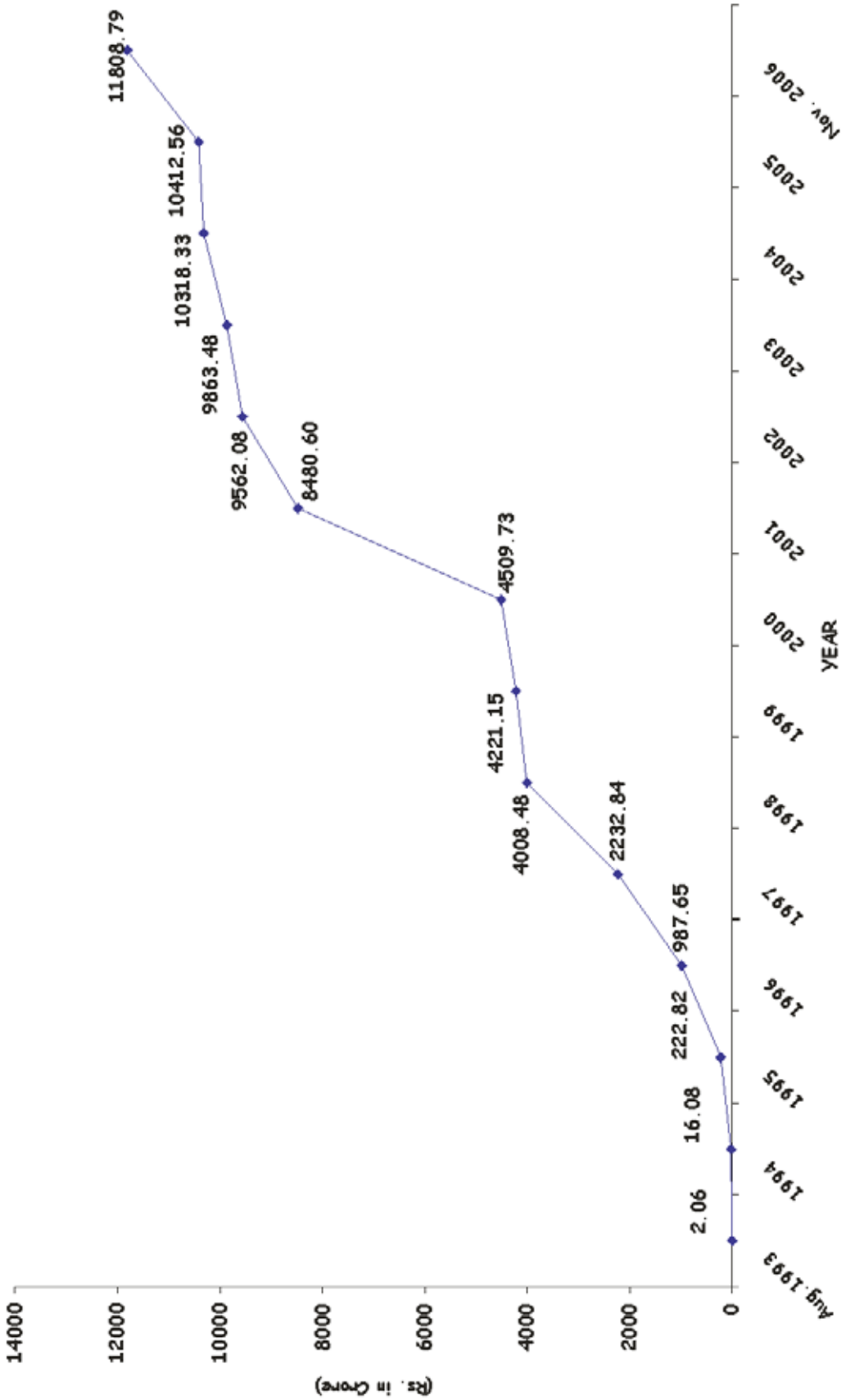
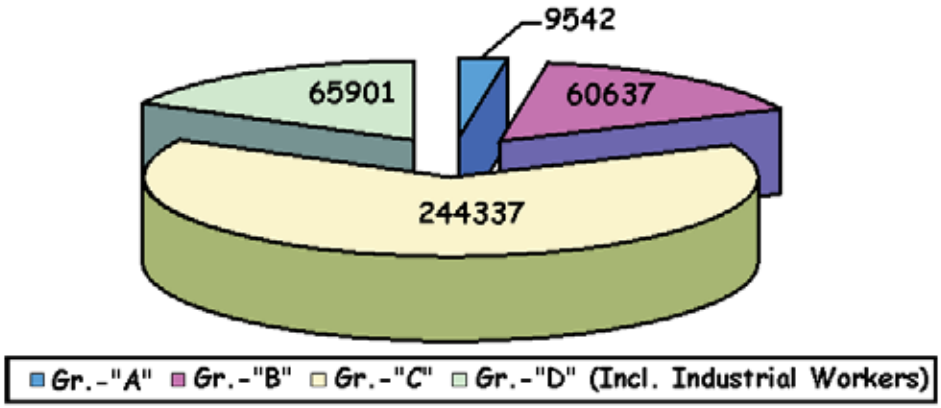
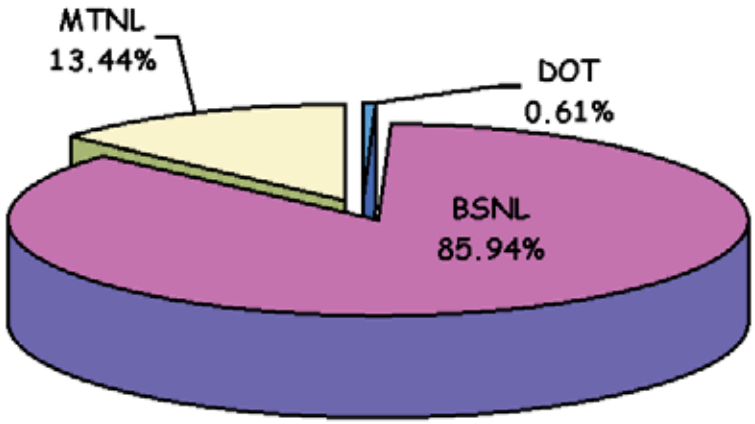


Figure - 9

DISTRIBUTION OF GROUP-WISE STAFF STRENGTH OF DOT, BSNL & MTNL (As on 31st March, 2006)



DISTRIBUTION OF MANPOWER (As on 31st March, 2006)



ACRONYMS

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

INSAT	Indian National Satellite
IRs	Interface Requirements
ISDN	Intigrated Services Digital Network
ISP	Internet Service Provider
ITU	International Telecommunication 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	Telecommunication 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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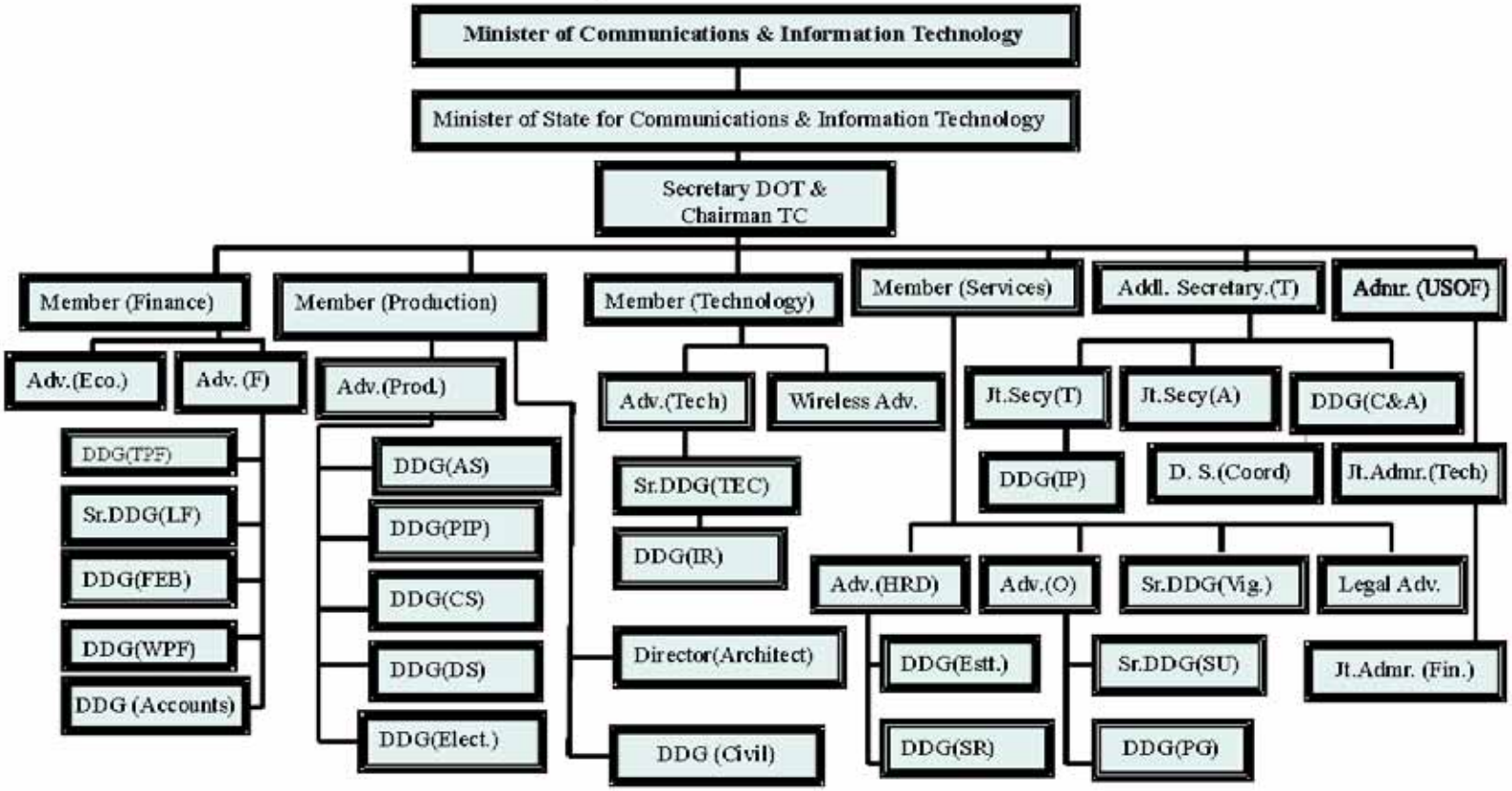
ORGANISATION CHART

Department of Telecommunications



LEGEND:

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

PIP: Private Investment Promotion
TEC: Telecom Engineering Centre
CS: Carrier Services
DS: Data Services
Prod.: Production

LF: Licensing Finance
SR: Staff Relations
IR: International Relations
SU: Service Unit
Jt. Secy. : Joint Secretary

Estt:Establishment
PG: Public Grievances
T: Telecom
IP : Investment Policy
Admr. : Administrator

FEB: Finance, Establishment & Budget
VIG: Vigilance
LA:Legal Adviser
DDG : Dy. Director General
O : Operations
HRD : Human Resource Development
USOF : Universal Service Obligation Fund


EXPERIE