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MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY

(DEPARTMENT OF TELECOMMUNICATIONS)

ROLE AND FUNCTIONING OF TELECOM SERVICE PROVIDERS IN MOBILE TELEPHONY

[ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS CONTAINED IN FIFTEENTH REPORT (FIFTEENTH LOK SABHA) OF THE COMMITTEE ON ESTIMATES]

COMMITTEE ON ESTIMATES
(2012-2013)

TWENTIETH REPORT

FIFTEENTH LOK SABHA

LOK SABHA SECRETARIAT

NEW DELHI

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Presented to Lok Sabha on 23rd April, 2013

LOK SABHA SECRETARIAT
NEW DELHI

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4.	Ms. Rachna Saxena	-	Committee Officer

INTRODUCTION

I, the Chairman of Committee on Estimates (2012-13) having been authorized by the Committee to submit the Report on their behalf, present this Twentieth Report on action taken by the Government on the Recommendations contained in the Fifteenth Report (Fifteenth Lok Sabha) of the Committee on Estimates on the subject 'Role and Functioning of Telecom Service Providers in Mobile Telephony' pertaining to the Department of Telecommunications (Ministry of Communications and Information Technology).

2. The Fifteenth Report was presented to Lok Sabha on 26th April, 2012. Action Taken Notes on all the observations/recommendations, were received from Department of Telecommunications (Ministry of Communications and Information Technology) in respect of 15 Recommendations on 26th October, 2012, in respect of 3 Recommendations on 15th November, 2012, in respect of 2 Recommendations on 21st December, 2012 and in respect of 1 Recommendation on 28th February, 2013. The Draft action taken report was considered and adopted by the Committee at their sitting held on 13th March, 2013.

3. An analysis of the action taken by the Government on the recommendations contained in the Fifteenth Report of Committee on Estimates (Fifteenth Lok Sabha) is given in Appendix II.

New Delhi;
22 April, 2013
Vaisakha 2,1935 (Saka)

FRANCISCO SARDINHA,
Chairman,
Committee on Estimates

CHAPTER – I

REPORT

This Report of the Committee deals with the action taken by the Government on the Recommendations contained in the Fifteenth Report of the Committee on Estimates (Fifteenth Lok Sabha) on the subject 'Role and Functioning of Telecom Service Providers in Mobile Telephony' pertaining to the Department of Telecommunications (Ministry of Communication and Information Technology).

1.2 The Committee's Fifteenth Report (Fifteenth Lok Sabha) was presented to Lok Sabha on 26.04.2012. It contained 21 Recommendations/Observations excluding Para 7.1 which was a general observation. Action Taken Notes (ATNs) in respect of these Recommendations/Observations were received from the Department of Telecommunications (Ministry of Communications and Information Technology) in batches, first batch in respect of 15 Recommendations on 26th October, 2012, in respect of 3 Recommendations on 15th November, 2012, in respect of 2 Recommendations on 21st December, 2012 and in respect of 1 Recommendation on 28th February, 2013.

1.3 Replies to the Recommendations/Observations contained in the Report have broadly been categorized as under:-

(i) Recommendations/Observations which have been accepted by the Government:

Para Nos. 7.2, 7.4, 7.7, 7.8, 7.9, 7.10, 7.12, 7.13, 7.14, 7.16, 7.17, 7.18, 7.20, 7.21 and 7.22

(Chapter II)
Total = 15

(ii) Recommendation/Observation which the Committee do not desire to pursue in view of the Government's reply:

Para No. 7.15

(Chapter III)
Total = 1

(iii) Recommendations/Observations in respect of which Government's replies have not been accepted by the Committee:

Para Nos. 7.5, 7.6, 7.11 and 7.19

(Chapter IV)
Total = 4

(iv) Recommendation/Observation in respect of which final reply of the Government is still awaited:

Para Nos. 7.3

(Chapter V)
Total = 1

1.4 The Committee desire that final reply on Recommendation in Para No. 7.3 and response to the comments contained in Chapter – I of this Report should be furnished expeditiously.

1.5 The Committee will now deal with the action taken by the Government on some of the Recommendations in the succeeding paragraphs.

A. Arresting declining growth in wireline connectivity

Observation/Recommendation Para 7.2

1.6 The Committee had expressed concern over the decline in the percentage share of wireline connectivity and urged the Department to take measures to check the same while judging and assessing the comparative growth of wireline versus wireless connectivity in India with other countries like USA, UK and Australia, Canada and China. The Committee had desired to be apprised of the same.

1.7 In response, the Department has furnished details of the initiatives taken by BSNL to check the declining growth of wireline connectivity alongwith relevant data showing percentage growth rate of all operators and BSNL in wireless and wireline connections between 30th March, 2007 and 30th June, 2012. As regards the Committee's recommendations to study and assess the same in other countries, the Department has furnished the report of the study conducted by their Economic Research Unit to compare the growth of wireless versus wireline telephones in India vis-à-vis Australia, Canada, China, UK, USA, Bangladesh and Nepal during the period from 2000 to 2010, which concluded that the number of wireline telephone subscribers has been declining internationally.

1.8 The Committee had, *inter-alia*, recommended that timely and suitable measures should be taken to check the declining growth of wireline connectivity. The Committee are happy to note the initiatives taken by BSNL in this regard with the resultant reduction in the decline in the percentage growth rate of BSNL from -9.36 per cent as on 31st March, 2011 to – 3.37 per cent as on 31st June, 2012. The Committee hope that the pace of the initiatives taken by BSNL in wireline connections will be maintained in coming years and further decline in growth rate arrested to move towards positive growth.

B. Delay in implementation of projects

Observation/Recommendation Para 7.4

1.9 The Committee, in their Original Report, had emphasized that since adequate provision for rural telephony is Government's obligation, the Department should take all appropriate measures to bridge the gap between the urban and rural teledensity at the earliest. The Committee had also highlighted the need for improving the rural telecom infrastructure and equipment as well as good relationship between the rural telecom providers with local bodies. Besides, the Committee had urged that projects such as 'Digital Mandi for Indian Kisan' and 'Cellular Backhand for Rural Accesses'

developed by IIT, Kanpur and IIT, Bombay respectively should be implemented in the future projects/schemes carried out under the Universal Service Obligation Fund (USOF).

1.10 In response, the Department in its action taken reply dated 26th October, 2012 has furnished details about various USOF schemes to be implemented during the Twelfth Five Year Plan for expansion of rural telephony. With regard to the Committee's Recommendation to improve related telecom infrastructure, the Department has informed that the Cabinet approved the scheme on the National Optical Fibre Network (NOFN) on 25.10.2011, to connect all the 2,50,000 Gram Panchayats in the country by utilizing existing fibres of various PSUs *viz*. BSNL, Railtel and Power Grid as well as laying incremental fibre. Bids for laying of Optical Fibre Cable (OFC) were expected to be invited by September, 2012 and thereafter, the award of work for laying of cable would commence. Pilot experiments in one block each have been planned in Gram Panchayats of Goa, Vishakhapatnam, Ajmer and North Tripura districts.

With regard to the scheme for Optical Fibre Network Augmentation i.e. Creation and Management of Intra-District SDHQ-DHQ OFC Network in service area of Assam, the Department has apprised that the objective of the scheme is to provide sufficient back-haul capacity to integrate the voice and data traffic from the access network in the rural areas to their core network by strengthening the OFC network. The scheme envisaged to connect 354 locations in 21 districts of Assam within 18 months from the date of signing of the agreement i.e. 12.02.2010. As per the Department, about 190 nodes have since been installed.

For the Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East - I Telecom Circle Scheme, the Committee have been informed that the States of Meghalaya, Mizoram and Tripura have been taken up to connect 188 locations in 19 districts within 24 months. The agreement has been signed with Railtel on 16.01.2012.

Under the Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East - II Telecom Circle the Department has informed that the States of Arunachal Pradesh, Manipur and Nagaland have been taken up to connect 407 locations in 30 districts within 30 months for which the agreement has been signed with Railtel on 16.01.2012.

Regarding the suggestion of the Committee for maintenance of a good relationship between the Telecom Service Providers, local bodies and elected representatives of their area of operation, the Department has informed about a proposal being envisaged to set up field units of USOF establishment.

With regard to the Committee's recommendations for incorporating projects like 'Digital Mandi for Indian Kisan' developed by IIT, Kanpur and 'Cellular backhaul for rural accesses' developed by IIT, Bombay in future projects of USOF for rural telephony, the Department has informed that USOF follows open bidding process based on technology and vendor-neutral approach and USOF may suggest to the

concerned Telecom Service Providers about the projects. However implementation of the projects by the Service Providers would be driven by market dynamics.

1.11 The Committee had recommended that appropriate measures should be taken at the earliest to bridge the gap between the urban and rural tele density. Though as desired by the Committee, the Department of Telecommunications has initiated various steps to improve rural telephony and telecom infrastructure, the Committee are constrained to point out that the progress in implementation of the proposals has been very slow. The Committee in this connection note that though the Cabinet approval to National Optical Fibre Network project was accorded in October, 2011, the process of inviting bids started only in September, 2012, i.e. after eleven months. In the Scheme for Optical Fibre Network Augmentation in service areas of Assam, as against the target of 354 nodes to be installed by September, 2011, only 190 nodes were installed. The Committee desire that taking note of the lapses in the past, the Department of Telecommunications should address the problems, if any, in implementing its projects and ensure strict adherence to the identified timelines.

C. Wireless connectivity in villages

Observation/Recommendation Para 7.5

1.12 The Committee had, *inter-alia*, desired that the reasons for BSNL not making the expected progress in increasing the wireless connectivity in 37,184 uncovered villages be investigated and responsibility fixed.

1.13 In their response, the Department of Telecommunications has indicated the status of deployment of 3G and BWA network of BSNL and has stated that following the launch of the 3G service on 27.02.2009, 760 cities have been planned to be covered initially. As on 31.03.2012, 963 cities have been covered with 3G network, covering all DHQs, commercially important towns and tourist places with the 3G network having 19298 Node 'B'.

1.14 It appears that no investigation has been conducted nor any responsibility fixed on the question of BSNL not making the expected progress in increasing wireless connectivity in 37,184 villages, as recommended by the Committee. The Committee reiterate their earlier recommendation and desire that action taken on the matter be intimated to them.

D. Performance and quality of service in rural and remote areas

Observation/Recommendation Para 7.6

1.15 The Committee had *inter-alia* desired the Department to specifically ensure that all the Telecom Service Providers (TSPs) conform to the terms and conditions given in the license agreements for rollout obligations of 2G and 3G Spectrums so that the spectrum provided are effectively utilized for expansion of telecom services in rural and remote areas too. The Committee had also emphasized that the TSPs should continuously strive to leverage their quality of service to customers including those in rural and remote areas, to promote healthy competition and resultant better service. The Committee desired a status report on the same in the last 3 years.

1.16 The Department of Telecommunication in the action taken reply has stated that Telecom Regulatory Authority of India (TRAI) in accordance with the provisions under Section 11(i) (b) (v) of TRAI Act, 1997 (amended) has issued regulations on the quality of service standards for Basic Telephone Service (Wireless) and Cellular Mobile Telephone Service (CMTS). Elaborating further, the Department has informed that TRAI monitors the performance of service providers against the laid down benchmarks through quarterly Performance Monitoring Reports (PMRs) and monthly congestion reports submitted by the Service Providers. TRAI also undertakes audit and assessment of the quality of service through independent agencies. The Department also informed that as the performance of Service Providers are assessed for service area as a whole, no separate information for rural areas is available in these reports, except those relating to fault repair in rural and hilly areas for Basic Telephone Service (Wireline). The Committee have also been apprised that TRAI is in the process of implementing random real time monitoring of quality of service of Cellular Mobile Service which could provide separate information for rural and hilly areas. According to the Department, though there are cases of non-compliance with the benchmarks, the Service Providers are generally meeting the benchmarks for various quality of service parameters in different service areas. It has been stated that in the case of performance against the parameter '% Fault repaired within 5 days (for rural and hilly areas)', 21 licensees out of 88 licensees (service area –wise) for year 2010, 18 licensees out of 88 licensee (service area-wise) for the year 2011 and 17 licensees out of 88 licensees (service area-wise) for the year 2012 have not met the set benchmarks.

1.17 The Committee had desired the Department of Telecommunications to ensure that all the Telecom Service Providers conform to the terms and conditions of the License agreements and effectively utilize 2G and 3G spectrums for expansion of telecom services in rural and remote areas. Though the Government has not given any specific response to this point, the Committee hope that the Department has taken note of this recommendation and will ensure compliance.

1.18 As regards the percentage of fault repaired within 5 days in Basic Telephone Service in rural and hilly areas, the Department's reply has disclosed that during the last three years as many as 17 to 21 licensees out of 88 have not met the benchmarks set by TRAI. The record of quality of service in rural and remote areas has obviously been dismal. The Committee urge that difficulties, if any, in improving the quality of service in rural areas should be

looked into and remedial action taken expeditiously to ensure that benchmarks in this regard are met.

E. Expeditious setting up of NOFN

Observation/Recommendation Para 7.7

1.19 Regarding the matter of acquisition/renting of land or buildings, the Committee had, among other things, opined that complete responsibility should not be left on the service providers and desired that the Department should assess the problem in toto, take up the matter with competent authority, if needed and the Committee be informed of the position. The Committee had also recommended that the signing of tripartite agreements between, Government of India, State Governments and Implementing Agency for free Right of Way (ROW) and National Optical Fibre Network (NOFN) Scheme should be done expeditiously.

1.20 The Department, in its action taken reply has stated that with regard to signing of the tripartite agreement between the Government of India, State Governments and Implementing Agency for free Right of Way for setting up of NOFN, a meeting was held with all the State Governments on 29.03.2012 under the Chairmanship of the Hon'ble Minister of Communications and Information Technology to discuss the ROW issue. Letters have reportedly been written to State Governments by Hon'ble Minister of Communications and Information Technology and Secretary, Telecom for signing the tripartite agreement for free ROW. It has been stated further that some of the States have already given their consent and others are being pursued.

1.21 The Committee appreciate that considering the seriousness of the matter, a meeting was held at the level of the Minister of Communication and Information Technology which has yielded results. Some State Governments are stated to have given their consent for signing the Tripartite agreement between Government of India, State Governments and implementing agency for free Right of Way. The Committee believe that the matter will be pursued vigorously with the rest of the State Governments to ensure expeditious setting up of NOFN.

F. Findings of Empowered Committee; performance of BSNL

Observation/Recommendation Para 7.10; 7.12

1.22 The Committee had in Para 7.10 of the report, *inter-alia*, desired to be apprised of the findings and the implementation status of the Empowered Committee set up for the scheme on National Optical Fibre Network which has been especially planned to facilitate implementation of various e-Governance initiatives such as e-

health, e-banking, e-education, etc., thereby facilitating inclusive growth. The Committee in para 7.12 of the report had desired to be apprised of the progress made in improving the physical and financial performance of BSNL.

1.23 The Government's action taken reply does not contain any specific response to the aforesaid points. The Committee would await an explanation from the Department of Telecommunications as to why these issues have not been dealt with in their action taken reply. They would also expect a detailed response to those points within one month after presentation of the action taken report.

G. Government guidelines on the procurement of new equipment

Observation/Recommendation Para 7.11

1.24 The Committee, while analyzing the performance of various Telecom Service Providers in the network expansion, had noted with concern that although there has been a stupendous growth in the telecom sector in India in the last five years, the share of Public Telecom Service Providers had declined from 34.69 per cent at the end of 2007 to 14.42 per cent at the end of July, 2011.

1.25 It has *inter-alia* been stated in the action taken reply that one of the reasons for declining market share of MTNL vis-à-vis private players is that MTNL, being a Public Sector Company, has to follow the Govt. guidelines on the procurement for new equipment and expansion / up gradation of existing equipment. This result in multiplicity of vendor for the same kind of equipment leading to inter operability/integration issues thus resulting in delay in commencing. Further, since technology is changing very fast in the telecom sector and new applications/services are being developed very frequently, it is not possible for MTNL to induct the new developments due to absence of price reference in the tender.

1.26 It is not clear how the Government is citing its own guidelines as a reason for declining market share of Public Telecom Service Providers. If there are any restrictive aspects in its guidelines, it is for the Government to review the guidelines and make appropriate modifications. The Committee expect the Government to act on this issue immediately and the Committee be apprised of the outcome.

H. Radiation from Mobile Towers

Observations/Recommendations Para 7.19

1.27 While noting that there are 18,123 service providers who had not submitted self-certificates regarding compliance of radiation norms of mobile towers, the Committee had recommended that modifications for imposition of penalty for non submission of self certificates be finalized at the earliest.

1.28 In response, the Department of Telecommunications have stated that DoT is in the process of formulating detailed guidelines/instructions in case of EMR violations including the non-submission of self-certificates in time and also for non-provision of signage by telecom service providers.

1.29 The guidelines in case of EMR (Electro Magnetic Radiation) violations are stated to be in the process of formulation. The Committee desire that the guidelines should be formulated expeditiously and implemented without delay to ensure that EMR violations, having a bearing on human health, do not take place.

CHAPTER-II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Observation/Recommendation (Para No. 7.2)

As network expansion has been one of the thrust areas identified by Department of Telecommunications (DoT), the committee observed that the positive impact of the rapid growth in the telecom network has resulted in an overall growth of teledensity in the country. They note that the achievement has surpassed the targeted teledensity of 15 per cent by 2010, as per New Telecom Policy (NTP), 1999. Further, the target of 500 million connections by the end of December, 2010 was achieved by September, 2009 itself. However, the committee find that although the telecom sector in India has witnessed a stupendous growth during the last five years, yet the percentage share of wireline connectivity has declined sharply from 19.80 per cent during the year 2007 to a mere 3.53 per cent as on December, 2011. In total contrast, the percentage share of wireless telephone vis-à-vis the total connectivity in the country, which was 80.19 per cent in 2007, has shown a tremendous growth rate reaching 96.47 per cent at the end of December, 2011. In this backdrop, the committee is inclined to opine that both the Public & Private Sectors have not been focusing on the growth of wire line connections. The committee, therefore, strongly recommend the Department to take timely & suitable measures to check the declining growth of wireline connectivity, particularly in the light of the fact that in many of the advanced economies of the world, it has been accepted that broadband connectivity provides better output on a wireline connection & thus many of these countries are planning to improve their wireline connectivity. In this regard, the committee also urges the Department to study & assess at the earliest the comparative growth of wireline versus wireless connectivity in India vis-à-vis countries like U.S.A., U.K., Australia, Canada & China, & apprise the committee accordingly.

Reply of the Government

The comments of BSNL on the various observations/comments made by the Committee are given below:-

(a) Observation of the Committee: "The Committee, strongly recommends the Department to take timely & suitable measures to check the declining growth of wireline connectivity…."

ATN:

BSNL has taken following initiatives to check the declining growth of wireline connectivity:-

(i) Strengthening of sales and distribution channels for landline and broadband through Project Udaan.

(ii) Fortification of stable revenue streams through concerted focus on broadband;

a) Bundling computer with every broadband connections to remove major barriers in broadband adoption.

b) Targeting bulk Govt. business like providing high speed broadband connectivity to Universities and colleges, providing broadband connectivity to Rural Common Service Centre (CSCs) and also spreading broadband in rural areas with the support of USOF subsidy.

c) Offering various value added services (VAS) such as Games on Demand, Music on Demand, Video / Movies on Demand, Education on demand, content on health, religion etc.

(iii) Continuous improvement in customer care through Project smile.

(iv) Rigorous monitoring of Quality of Service (QoS) parameters to adhere to the benchmarks stipulated by TRAI.

(v) Modernization of telecom infrastructure such as TAXs & Local exchanges to Next Generation network (NGN), to optimise OPEX and offering new services to end customers

(vi) Repositioning fixed line network to deliver high speed broadband service on committed basis.

(vii) Repositioning PCOs as multi activity Telecom centres where customers along with making calls can also purchase various pre-paid products, use broadband (Cyber Cafes) and apply for various telecom services.

(viii) BSNL has initiated the process for upgradation of its C-DOT wireline telecom network to Next Generation Network in co-ordination with C-DOT. The upgradation is expected to reduce various operational issues related to maintenance of network by making the core network centralized and will also enable delivery of various Value Added Services such as Personalized Ring back Tone (PRBT), Instant Messaging etc.

(b) Observation of the Committee: "…the committee also urges the Department to study & assess at the earliest the comparative growth of wireline versus wireless connectivity…"

ATN:

The Comparative growth of Wireline versus Wireless connectivity in India for the last five years is given below:-

Sub: %age growth rate of All Operators & BSNL in telephone connections												
As on	Telephone connections (in million)						%age Growth Rate					
	Wireline		Wireless		Total		Wireline		Wireless		Total	
	All Optr.	BSNL	All Optr.	BSNL	All Optr.	BSNL	All Optr.	BSNL	All Optr.	BSNL	All Optr.	BSNL
31.03.2007	40.77	33.74	166.05	30.98	206.83	64.72	-1.90	-4.75	67.91	56.99	47.25	17.34
31.03.2008	39.42	31.55	260.74	40.79	300.15	72.34	-3.33	-6.48	57.02	31.63	45.12	11.77
31.03.2009	37.91	29.35	391.34	52.14	429.25	81.49	-3.83	-6.99	50.09	27.85	43.01	12.65
31.03.2010	36.94	27.83	584.41	69.45	621.35	97.28	-2.54	-5.17	49.33	33.19	44.75	19.38
31.03.2011	34.72	25.22	811.60	91.83	846.33	117.06	-6.00	-9.36	38.88	32.23	36.21	20.33
31.03.2012	32.15	22.47	920.10	98.51	952.25	120.98	-7.41	-10.93	13.37	7.27	12.52	3.35
30.06.2012	31.40	21.71	931.42	98.28	962.82	119.99	-2.34	-3.37	1.23	-0.24	1.11	-0.82

(c) Observation of the Committee: "*In this regard, the committee also urges the Department to study & assess at the earliest the comparative growth of wireline versus wireless connectivity in India vis-à-vis countries like U.S.A., U.K., Australia, Canada & China, & apprise the committee accordingly*."

ATN:

Reply as given by ERU wing of DoT :

The Economic Research Unit (ERU) of Department of Telecommunications has undertaken a study to compare the growth of wireline vs. wireless telephones in India vis-à-vis some of the other countries during the period from 2000 to 2010 based on the data obtained from the web-site of International Telecom Union (ITU). As per this study, it is concluded that the number of wireline telephone subscribers internationally have been declining. While internationally, the decline started after December 2006, the same happened in different countries at different points of time. In India, the decline started after December 2005. In countries like USA, UK, Canada and Australia, the decline started much earlier. In the case of Bangladesh, the number of wireline telephone subscribers continued to increase till December 2009. It is still increasing in Nepal. In general, the decline in wireline telephone subscribers started earlier in the case of developed countries compared to developing countries. Against this, the number of wireless telephone subscribers has been continuously increasing globally as well as in individual countries included in this study.

It is also observed that even though wireline subscribers are declining globally in countries like India, U.S.A., U.K., Australia, Canada and China, the number of internet subscribers are continuously increasing. Report of the study is enclosed at **Annexure -I.**

Observation/Recommendation (Para No. 7.4)

Provision of rural telephony is one of the significant focus areas that has been identified by DoT. In pursuance, the Department has taken up various initiatives through BSNL to improve the rural teledensity in the country. However, the Committee find that over the years it is the Private Telecom Service Providers who have played a major role in improving the much required fillip in these areas. The Committee find that the percentage share of Private Telecom Service Providers in providing rural wireless telephones has improved from 70.74 per cent in 2007 to 88.98 per cent at the end of December, 2011. Further, the Committee find that although the telecom sector has witnessed a tremendous growth in the last decade, the overall trend of growth in rural telecom development is far from even being proportionate. To cite the figures provided to the Committee, although the rural telephony has increased from 47.10 million subscribers at the end of March, 2007 to 315.39 million subscribers by the end of December, 2011, it is much less when compared to the growth witnessed in the urban areas. During the said period, the total number of urban subscribers has grown from 158.77 million to 611.16 million subscribers. The rural teledensity grew from 5.89 to 37.52 per cent from March, 2007 to December, 2011, whereas, the urban teledensity grew from 48.10 to 167.46 per cent during the said period. The Committee also note that as on December, 2011 States/Telecom Circles like Himachal Pradesh (74.91 per cent), Punjab (63.66 per cent), Kerala (56.63 per cent), Tamil Nadu (53.95 per cent), Haryana (53.65 per cent), Gujarat (50.86 per cent) have rural teledensity much higher than the National average of 37.52 per cent. However, States/Telecom Circles like Bihar (24.27 per

cent), Madhya Pradesh (25.46 per cent), Assam (28.21 per cent), Jammu & Kashmir (29.27 per cent), Orissa (32.91 per cent), Andhra Pradesh (36.45 per cent) have rural teledensity below the National average. The Committee particularly observe that there is very low percentage of teledensity in Chhattisgarh, Jharkhand, Uttarakhand and in North East States-II. There is also huge difference between the teledensity of North East-I (59.40 per cent) and North East-II (8.79 per cent).

The reasons advanced by the Department before the Committee for the rural telephony falling way behind the impressive growth of urban telephony, include targeted areas being diversely located leading to no financial viability of the network expansion in these areas, very low Average Revenue Per User (ARPU), high CAPEX (Capital Expenditure) and OPEX (Operational Expenditure) for development of telecom infrastructure, non-connectivity of these areas by roads leading to problems in developing the telecom infrastructure, irregular availability of electricity connections, lack of backhaul connectivity, problem relating to the Right of Way (RoW) and other permissions from State Government Agencies, falling of infrastructure site/areas in forest land/tribal land and their related clearance problem, disturbed / extremist / insurgency affected areas leading to law and order problems, incomplete or inconsistent revenue record of the land resulting in delay in conversion of land from agricultural to commercial, acquiring of land and signing of lease deeds and its registration thereof etc. The Committee are sad to learn that the growth of rural telephony is severely affected by these factors. According to the Committee, many of the reasons advanced by the Department are by themselves sufficient justification for putting in more earnest efforts for removing the disparities in rural telephony in these areas. Since the difficulties have been identified, the Committee recommend the Department to address each of the identified problems in a time bound manner and inform the Committee accordingly. In view of the fact that rural areas have immense economic potential, it has to be tapped suitably by the various service providers. Moreover, adequate provision of rural telephony is Government's obligation and thus the onus to make available supporting infrastructure squarely lies with them. In this regard, the Committee recommend the Department to take all the appropriate measures, for overcoming the impediments and giving an impetus to rural telephony so that the network expansion in these areas is achieved and the urban-rural divide is bridged.

The Committee further recommend that the need of the hour is not only improving the rural teledensity but also the related telecom infrastructure , better quality of telephone cables, setting up of infrastructure for introduction of telemedicine in rural areas with special attention to the six category 'C' States. The Committee are of the strong opinion that the various service providers need to maintain a good relationship with the Local Bodies and elected representative of their areas of operation, so that locally felt needs of the people are addressed adequately by them while carrying out the various projects/schemes under the Universal Service Obligation Fund.

In this connection, the Committee, note that the Draft National Telecom Policy, 2011 has envisaged an enhancement of rural teledensity from the current level of around 35 to 60 per cent by the year 2017 and 100 per cent by 2020. In this regard, the Committee would like to be apprised of the specific measures envisaged by the

Department to ensure that the set targets are achieved as per the stipulated time-line. Further, the Committee recommend that projects such as 'Digital Mandi for Indian Kisan' developed by IIT Kanpur and 'Cellular backhaul for rural accesses' developed by IIT Bombay, which are ready for commercialization, should be implemented and maintained by the Department so that the applicability of these projects can be incorporated in the present and future projects of the schemes/projects carried out under the Universal Service Obligation Fund.

Reply of the Government

(A) Financial support is being provided by USOF for provision of various telecom services in rural & remote areas of the country under various schemes. The Committee has recommended that the need of the hour is not only improving the tele-density but also the related telecom infrastructure. In this context, USOF has launched the following schemes to be implemented in the 12th Five Year Plan:

(i) National Optical Fibre Network (NOFN): The optical fiber has predominantly reached state capitals, Districts and blocks at present. National Optical Fibre Network (NOFN) is planned to connect all the 2,50,000 Gram Panchayats in the country through optical fibre utilizing existing fibers of PSUs viz. BSNL, RailTel and Power Grid and laying incremental fiber wherever necessary. Size of the incremental network is Approx. 0.5 Million Km. Dark fibre network thus created will be lit by appropriate technology thus creating sufficient bandwidth at GPs level. Non-discriminatory access to the network will be provided to all the telecom service providers. These access operators like mobile operators, Internet Service Providers (ISPs), Cable TV operators, content providers etc. can launch various services in rural areas. Various services for e-health, e-education and e-governance etc. will be provided. The project will be funded by USOF and initial estimated cost of project is Rs.20,000 Crore in 2 years. The project will be executed by a Special Purpose Vehicle (SPV) i.e. Bharat Broadband Network Limited (BBNL), which has been incorporated on 25.02.2012.

Present Status: The NOFN Project has been approved by the Cabinet on 25.10.2011. Technical Advisory Committee (TAC) constituted to recommend technology and architecture of the proposed network has submitted its report on 15.03.2012. Meeting of Advisory Body chaired by Hon'ble MOC&IT with the participants from the industry, other ministries held on 29.03.2012. A meeting also held with all the State governments on 29.03.2012 under the chairmanship of Hon'ble MOC&IT to discuss the Right of Way (RoW) issue. Bids for laying of optical fibre cable are expected to be invited by September 2012 and award of work for laying of fibre would commence thereafter. Pilot experiments in one block each are planned in Gram Panchayats of Goa, Vishakhapatnam, Ajmer and North Tripura districts.

(ii) Creation of Intra-District SDHQ-DHQ OFC Network

a) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in service area of ASSAM

This Scheme has been launched to provide sufficient back-haul capacity to integrate the voice and data traffic from the access network in the rural areas to their core network by strengthening the OFC network. This scheme considers OFC Network augmentation between the blocks' HQ and Districts' HQ to begin with.

USOF, through this Scheme, shall provide subsidy support for augmentation, creation and management of intra-district SDHQ-DHQ OFC Network on the condition that it will be shared with other Telecom Operators at the rates prescribed in the Agreement. This OFC scheme would connect 354 locations in 21 districts of Assam within 18 months from date of signing of the agreement. Agreement has been signed with BSNL on 12.02.2010 in this respect with a subsidy quote of Rs.98.89 Crore. The Agreement shall be valid for a period of seven years from the date of signing of the agreement.

At least 70% of the subsidized bandwidth capacity, created under the scheme, shall be shared with the licensed service providers in the area of ASSAM at a rate not more than 26.22% of the current TRAI ceiling tariffs. About 190 nodes have been installed so far (Out of 354).

b) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East - I Telecom Circle

The states of Meghalaya, Mizoram & Tripura have been taken up in this scheme for OFC Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network. This OFC scheme would connect 188 locations in 19 districts within 24 months from date of signing of the agreement. Agreement has been signed with Railtel on 16.01.2012 in this respect with a subsidy quote of Rs.89.50 Crore. The Agreement shall be valid for a period of eight years from the date of signing of the agreement.

At least 70% of the subsidized bandwidth capacity, created under the scheme, shall be shared with the licensed service providers at a rate not more than 12% of the current TRAI ceiling tariffs.

c) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East - II Telecom Circle

The states of Arunachal Pradesh, Manipur & Nagaland have been taken up in this scheme for OFC Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network. This OFC scheme would connect 407 locations in 30 districts within 30 months from date of signing of the agreement. Agreement has been signed with Railtel on 16.01.2012 in this respect with a subsidy quote of Rs.298.50 Crore. The Agreement shall be valid for a period of eight years from the date of signing of the agreement.

At least 70% of the subsidized bandwidth capacity, created under the scheme, shall be shared with the licensed service providers at a rate not more than 27% of the current TRAI ceiling tariffs.

(B) Regarding recommendation of the Committee that various service providers, who are implementing schemes under USOF, should maintain a good relationship with the local bodies and elected representatives of their area of operation, it is mentioned that for having first-hand experience of local requirements and monitoring of USOF schemes, a proposal is being envisaged to set up field units of USOF establishment. This will also strengthen the proper liaison of USOF with the local bodies and elected representative of the people.

(C) Regarding recommendation of the Committee to implement and maintain projects like ‘Digital Mandi for Indian Kisan’ developed by IIT Kanpur and ‘Cellular backhaul for rural accesses’ developed by IIT Bombay so that the applicability of these projects can be incorporated in the present and future projects carried out

under USOF, it is mentioned that USOF follows open bidding process based on technology neutral and vendor-neutral approach in its schemes. USOF may suggest to the concerned Service Providers about the projects recommended by the Committee. However, implementation of the same by the Service Providers would be driven by market dynamics.

(D). The National Telecom Policy-2012 has been approved by the Cabinet on 31.05.2012 which include inter-alia as under;

i. Increase rural teledensity from the current level of around 39 to 70 by the year 2017 and 100 by 2020.

ii. Provide high speed and high quality broadband access to all village panchayats through a combination of technologies by the year 2014 and progressively to all villages and habitations by 2020.

iii. Simplify the licensing framework to further extend converged high quality services across the nation including rural and remote areas. This will not cover content regulation.

iv. To lay special emphasis on providing reliable and affordable broadband access to rural and remote areas by appropriate combination of optical fibre, wireless, VSAT and other technologies. Optical fibre network will be initially laid up to the village panchayat level by funding from the Universal Service Obligation Fund (USOF). Extension of optical fibre connectivity from village panchayats to be taken up progressively to all villages and habitations. Access to this Optical Fibre Network will be open, non-discriminatory and technology neutral.

v. Provide appropriate incentives for rural rollout.

vi. To undertake periodic review of methodology adopted for utilising USO fund and benchmarking the same against the best practices followed in other countries.

vii. To provide continued support from USO fund for telecom services, including converged communication services in commercially unviable rural and remote areas.

viii. NTP-2012 has the vision *Broadband on Demand* and envisages leveraging telecom infrastructure to enable all citizens and businesses, both in rural and urban areas, to participate in the Internet and web economy thereby ensuing equitable and inclusive development across the nation.

ix. Recognize telecom as Infrastructure Sector to realize true potential of ICT for development.

x. Address the Right of Way (RoW) issues in setting up of telecom infrastructure.

xi. To recognise telecom, including broadband connectivity as a basic necessity like education and health and work towards ‘Right to Broadband’.

xii. To emphasize the active role of both private sector and Government including the State Governments and Local bodies to enable the growth of telecom infrastructure necessary for meeting the telecommunication demand of the country and leveraging USOF where appropriate.

xiii. To strengthen the regulator for ensuring compliance of the prescribed performance standards and Quality of Service (QoS) parameters by the Telecom Service Providers.

DDsG and above level officers under DoT have been requested to initiate necessary action to implement the provisions contained in NTP-2012.

(E). Initiatives taken by BSNL in this regard are given below:

BSNL is committed to inclusive growth of telecom services so as to ensure that the benefits of telecom services are available to the rural citizens of the country. The key initiatives taken / planned to be taken by BSNL with regard to rural area telephony are given below:

i. During the 12th Five Year Plan (2012-13 to 2016-17), BSNL plans to provide 64.90 million Mobile Connections, a good percentage of which shall be provided in rural areas.

ii. BSNL has initiated process for upgradation of its C-DoT wireline telecom network to Next Generation Network in co-ordination with C-DoT. The upgradation is expected to reduce various operational issues related to maintenance of network by making the core network centralized and will also enable delivery of various Value Added Services.

iii. Opening new sales channel in rural areas.

iv. Implementing agreement with Postal Department to increase rural reach.

v. Offering highly affordable services to cater all segment of society, specifically in rural areas.

vi. BSNL is the major stakeholder in the Special Purpose Vehicle (SPV) constituted to oversee and implement the Government's initiative of providing high speed and high quality broadband access to 2.5 Lacs Village Panchyats through Optical Fibre.

Observation/Recommendation (Para No. 7.7)

Difficulties in getting the Right of Way (RoW) and other permissions from State Government Agencies have been cited as constraints in increasing the network expansion in rural and remote areas. The Committee note that as per the existing policy of the Government, Wireless Planning and Coordination Wing of Department of Telecommunications (DoT) issues clearance of sites for installation of mobile towers. This clearance is reportedly issued without prejudice to applicable bylaws,

rules and regulations of Local Bodies such as Municipal Corporation/Gram Panchayat etc. Accordingly, before installation of mobile towers, the Telecom Service Providers are required to obtain necessary permission from Local Bodies particularly the Gram Panchayat. In this regard, the Department have informed that as per terms and conditions of the Cellular Mobile Telephone Service (CMTS) and Unified Access Service (UAS) License and Infrastructure Provider-I (IP-I) registration, the responsibility of obtaining the Permission/Right of way for establishing towers lies with the Telecom Service Providers/IP-I companies and thus, DoT does not maintain any record of the same. Accordingly, the copies of permission from Local Bodies for setting up of mobile towers was not available with DoT. In this regard, the Committee, recommend that either the Department should maintain a record for obtaining such permissions or it should have a mechanism to coordinate with the service providers so that such records could be scanned or produced, whenever required.

With regard to the compensation to land owner whose land is used for setting up of telecom towers, the Committee note that acquisition/renting of land or building for the purpose of installation of mobile tower is carried out by a mutual commercial agreement between land/building owner and the Telecom Service Providers. The Department's contention that the responsibility to deal with issues of Right of Way and the compensation to land owners on whose land mobile tower has been installed lies completely with the Telecom Service Providers/ Infrastructure Provider-I (IP-I) companies is not acceptable to the Committee. Even if this is the case, the Committee are of the opinion that it is imperative on the part of the Government to ensure that such provisions do not hinder the network expansion. The Committee are of the opinion that the complete onus/ responsibility should not be left only on the Service Providers. In this regard, the Committee emphasize that the Department should assess the problem in toto, take up the matter with the Competent Authority, if needed, and inform the Committee accordingly. Besides, the Committee recommend that the signing of the tripartite agreement between Government of India, State Governments and Implementing Agency for free Right of Way (RoW) for setting up of National Optical Fibre Network (NOFN) should be done expeditiously taking into account that the Department has already approved this project for providing connectivity to 2.5 lakh village panchayats with an estimated expenditure of approximately Rs. 20,000 crore. The Committee would await a specific response from the Department in this regard.

Reply of the Government

As suggested by the Hon'ble Committee, DoT shall coordinate with the telecom service providers so that the records related to permission from Local Bodies for setting up of mobile towers could be obtained, whenever required. Further, a guideline for issue of clearance for installation of mobile towers has been issued by DoT to all the State Governments. A copy is enclosed as **Annexure-II**.

With regard to the compensation to land owner whose land is used for setting up of telecom towers, it is to submit that whenever a grievance or complaint is received in

DoT, the matter is immediately taken up with the concerned Telecom Service Provider company or infrastructure provider company, as the case may be, for redressal.

With regard to signing of the tripartite agreement between Government of India (Department of Telecommunications), State Governments and Implementing agency for free Right of Way (RoW) for setting up of National Optical Fibre Network (NOFN), a meeting was held with all the State Governments on 29.03.2012 under the chairmanship of Hon'ble MOC&IT to discuss the RoW issue. Letters have been written to State Governments by Hon'ble MOC&IT and Secretary (Telecom) for signing the tripartite agreement for free RoW. Some of the States have already given their consent and others are being pursued.

Observation/Recommendation (Para No. 7.8)

With a view to improving telecom development in rural areas, the Government announced the Universal Service Support Policy on 27th March, 2002 under which a separate fund for providing access to telegraph services to people in the rural and remote areas was set up. The Committee note that various schemes / projects of USOF include provision of Village Public Telephone (VPTs), replacement of Multi Access Rural Radio (MARR) based on VPTs, Shared Mobile Infrastructure Scheme, Rural Broadband Scheme, Optical Fibre Network Augmentation Scheme, provision of Rural Community Phones (RCPs), provision of Rural household Direct Exchange Lines (RDELs) in specified Short Distance Charging Areas (SDCAs) and Operation and Maintenance of Village Public Telephones. Telecom Service Providers such as BSNL, Bharti Airtel, Reliance Communications, Reliance Telecom Ltd., Idea, Aircel and Vodafone are stated to be involved in the various activities carried out under USOF.

Further, the Committee note that the resources for implementation of Universal Service Obligation (USO) are raised through a Universal Service Levy (USL) which has presently been fixed at 5 per cent of the Adjusted Gross Revenue (AGR) of all Telecom Service Providers except the pure value added service providers like voice mail, e-mail service providers etc. The Committee note that since the inception of USOF till 2011-12, the total funds collected as USL till 31st December, 2011 is Rs. 40574.16 crore. Out of this, the total fund allocated and disbursed for Universal Service Obligation till December 2011 are Rs. 15121.44 crore and Rs. 15059.46 crore respectively. The Committee are disappointed as in terms of percentage, the funds allocated and disbursed are only 37.26 and 37.11 per cent respectively when compared to the total amount collected as USL. The Committee feel that the percentage is quite small, taking into account the need for a real thrust in the rural areas in terms of network expansion to bridge the 'digital divide' between rural and urban areas.

The Committee also note that States like Maharashtra (Rs. 1296.99 crore), Rajasthan (Rs. 769.70 crore), Madhya Pradesh (Rs. 764.50 crore), Andhra Pradesh

(Rs. 743.38 crore), Gujarat (Rs. 661.13 crore) and Karnataka (Rs. 620.99 crore) have got the major share of financial allocation from USOF. Other States like North East States (NE-I Rs. 82.80 crore, NE-II Rs. 64.49 crore), Jharkhand (Rs. 75.36 crore), Uttarakhand (Rs. 147.88 crore) and West Bengal (Rs. 163.75 crore) have got very less allocation from USOF. The Committee would like the Department to assess as to why the major share of funds under USOF have gone mostly to the developed States whereas poor States like North-East States, Jharkhand and Uttarakhand have got less share. The Committee would like the Department to have an assessment based on their observation and take necessary steps to increase the quantum of allocation to the States which are poor and require positive intervention on the part of the Government for their overall growth and development. The specific action taken in this regard may be intimated to the Committee.

The Committee wish to point out that improving the rural telecom network is an important ingredient for the welfare and development of rural India and has many advantages such as healthcare and other allied services in the time of urgency, timely information on business, price, market and demands, better coordination for delivery of administration and public services including health, education, information about employment, etc. Therefore, they recommend that the quantum of allocation for the various schemes/projects carried out under the Universal Service Obligation should be enhanced so that the basic objective of the Universal Service Support Policy to improve telecom development in rural areas is achieved in letter and spirit. The Committee also recommend that the monitoring mechanism of the performance of the schemes subsidized under USOF need to be further strengthened by the Department so that suitable deductions in the subsidy amount may be made in the case of Telecom Service Providers who do not conform to the terms and conditions of the agreements made under the Universal Service Support Policy. The Committee also recommend that the existing mechanisms such as regulation of Quality of Service (QoS) by TRAI, inspection of records by USOF Administrator or by the Designated Monitoring Agency, imposition of liquidated damages in case of not meeting the roll-out obligations within the specified period, sample verifications of the claims against installation of facilities by the offices of Controller of Communication Accounts (CCAs) etc. should be scrupulously followed.

Reply of the Government

(a) Regarding Committee's observation that funds allocated and disbursed are 37.26% and 37.11% respectively when compared to the total amount collected as Universal Service Levy, it is submitted that:

(i) Department of Telecommunications (DoT) has obtained the approval of Cabinet for implementation of a scheme called 'National Optical Fiber Network' (NOFN) for providing broadband connectivity to 2.5 lakh Gram Panchayats with an estimated cost of Rs.20,000 Crore. This is to be funded by USOF.

(ii) A scheme is being planned for provisioning of mobile services from 2199 locations in the Left Wing Extremism (LWE) affected areas, as identified by Ministry of Home Affairs, for which estimated subsidy support from USOF is about Rs.5,800 Crore.

Thus, the bulk of the accruals of USOF over the next few years would be utilized in financing and implementing the on-going and upcoming USOF schemes. This would lead to higher utilization of total amount collected as Universal Service Levy.

(b) Regarding Committee's recommendation to increase quantum of USO Fund allocation to the States which are poor and require positive intervention on part of the Government, it is hereby submitted that:

(i) There is no state-wise allocation of USO Fund for disbursement to various States. The disbursement of subsidy support from USOF is scheme-wise and it is spread over the whole country.

(ii) The amount of USOF support given to a Universal Service Providers/Infrastructure Providers for a scheme in different States depends on the nature and extent of services such as rural telephone connections, broadband connections and mobile infrastructure etc.

(iii) USOF is also providing subsidy support for some State-specific schemes e.g. 'Scheme for Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in service area of ASSAM' [subsidy outgo of Rs.98.89 Crore], ''Scheme for Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East-I Circle [subsidy outgo of Rs.89.50 Crore], and 'Scheme for Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East-II Circle [subsidy outgo of Rs.298.50 Crore].

(iv) Further, USOF is working on a specific scheme involving establishing 2199 mobile towers in the Left Wing Extremism (LWE) affected areas in Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Uttar Pradesh and West Bengal.

(v) Allocations to USOF are made by the Planning Commission and Ministry of Finance as part of DoT Budget on an annual basis. It is the endeavour of USOF to fully utilize annual allocation.

(c) Regarding Committee's observations on monitoring mechanism, it is submitted that:

(i) The observations of the Committee for further strengthening the monitoring mechanism have been noted by USOF establishment.

(ii) The existing mechanisms for monitoring the USOF schemes are being followed meticulously. Regulation of Quality of Service (QoS) of TRAI and inspection of records by the Controllers of Communication Accounts (CCA) are being carried out regularly. Liquidated damages are also being imposed wherever there is any shortfall in rollout within the specified period. An amount of Rs. 14.92 crore has so far been recovered on account of liquidated damages, under different schemes. Sample verifications of the claims against installation of facilities under various schemes are being carried out by the CCA offices. The sample size varies from scheme to scheme. The minimum

sample size is 5% whereas in case of Mobile Infrastructure Phase-I scheme, it is 100%.

(iii) Effective monitoring mechanism for the forthcoming USOF schemes will be evolved based on the experience gained from current schemes.

(d) As per TRAI Act 1997 (amended), TRAI monitors the performance of the service providers against the Quality of Service benchmarks laid down by TRAI, through the quarterly Performance Monitoring Reports (PMRs) and monthly congestion reports submitted by the service providers. TRAI periodically undertakes Audit and Objective Assessment of Quality of Service provided by Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service and Broadband Services through Independent Agencies. TRAI also undertakes assessment of customer perception of service through surveys by independent agencies. All these reports are published through TRAI website for information of general public/stakeholders.

Further, as per TRAI Act 1997, Telecom Regulatory Authority of India (TRAI) examined the compliance of 1st phase of rollout obligations of 145 'private telecom service providers' (TSPs) to whom Unified Access Services (UAS) licenses were issued from the year 2006 to year 2008 and sent its recommendations to Department of Telecom (DoT). On examination of the recommendations of the TRAI alongwith the data available with the DoT, it was found that, out of above referred TSPs, many of them had fulfilled their 1st phase of rollout obligations with certain delays. Liquidated Damaged (LD) against the Licensee who have not fulfilled their roll out obligation within the stipulated time period have been imposed as per license conditions wherever delay in compliance in roll out obligations were less than 52 weeks. Further wherever delay in compliance of 1st phase roll out were more than 52 weeks, in addition to imposition of maximum LD amount, show cause notices for termination of licences have also been issued to 35 Licensees. Many of the Licensees to whom LD demand notices were issued filed petitions before Hon'ble TDSAT. TDSAT delivered its judgment on 13.01.2012 in the matter and Department of Telecommunications has filed an appeal before the Hon'ble Supreme Court of India against the judgment dated 13.01.2012 of TDSAT. The matter is subjudice. Accordingly, it may be seen that process for monitoring of quality of service (QoS) and imposition of LD is being scrupulously followed.

Observation/Recommendation (Para No. 7.9)

Broadband connectivity is increasingly being seen as an integral driver of improved socio-economic performance. In this background, the Committee note that Broadband Policy was announced on 14 October, 2004 with a vision to provide Broadband connectivity to 20 million subscribers by the end of 2010. As per the DoT, the number of Broadband subscribers has increased from 6.8 million at the end of 31 August, 2009 to 13.35 million as on 31 December, 2011. This indicates that even after one year from the stipulated time-line, there are still 6.65 million Broadband subscribers left, who are yet to be provided the service. Further, as envisaged in the Broadband Policy, 2004, during the Eleventh Plan period (2007-2012), the Government had planned for Broadband coverage for all the Secondary and Higher

Secondary Schools, Public Health Centres and Gram Panchayats under the USOF. As per the status furnished by the Department, the Committee note that only 1.43 lakh Village Panchayats have been covered by the end of December, 2011 out of the total stipulated target of 2.5 lakh Village Panchayats to be covered by 2012. Besides, during the said period, 97005 Secondary Schools, 41864 Higher Secondary Schools and 17920 Primary Health Care Centers have been provided Broadband connectivity. The Committee feel that in a vast country like India, the achievement made by the Department in terms of Broadband connectivity during the Eleven Plan period leaves much to be desired. They, therefore, recommend that BSNL and MTNL, as well as other Private Telecom Service Providers must step up their efforts to provide adequate Broadband connectivity in rural and remote areas so that the target to provide 8,88,832 wire-line Broadband connections to individual users and Government Institutions and setting up of 28,672 kiosks by 2014 through BSNL is achieved as per stipulated time and cost. The Committee would like to have a status report on the matter at the action taken stage.

Reply of the Government

Regarding provisioning of 8,88,832 wire-line broadband connections in rural & remote areas of the country, it is submitted that USOF has signed an Agreement with BSNL on January 20, 2009 under the Rural Wireline Broadband Scheme to provide wire-line broadband connectivity to rural & remote areas by leveraging the existing rural exchanges infrastructure and copper wire-line network. The speed of each of the broadband connections shall be at least 512 kbps always on. Under this scheme, BSNL will provide 8,88,832 wire-line Broadband connections to individual users and Government Institutions and will set up 28,672 Kiosks over a period of 5-years, i.e. by 2014. The subsidy disbursement is for,

(i) Broadband connections, Customer Premises Equipment (CPE), Computer/Computing deices
(ii) Setting up of Kiosks for public access to broadband services.

The estimated subsidy outflow is Rs. 1,500 crore in 5 years' time that includes subsidy for 9 lakh broadband connections, CPEs, computers/computing devices and Kiosks.

As on 31.8.2012, a total of 3,91,245 broadband connections have been provided and 10076 kiosks have been set up in rural and remote areas.

Observation/Recommendation (Para No. 7.10)

The Committee note that out of the total of 12.65 million Broadband subscribers in the country at the end of 31 August, 2011, Maharashtra and Goa are in lead having 17.52 per cent Broadband subscribers in the country followed by Tamil Nadu (12.55

percent), Karnataka (10.10 per cent), Andhra Pradesh (9.85 per cent) and Delhi (7.98 per cent). The Committee are dismayed to note that States/Circles like Andaman & Nicobar Islands (0.04 per cent), Jammu and Kashmir (0.45 per cent) followed by North-East States viz. Meghalaya, Mizoram, Arunachal Pradesh, Manipur, Nagaland and Tripura (0.38 per cent), Himachal Pradesh (0.56 per cent) and Assam (0.64 per cent) have poor Broadband penetration. They have been apprised that the major constraints for this are non-availability of backhaul connectivity upto the villages, non-availability of content in vernacular languages and low affordability of Customer Premises Equipment (CPE). As far as the steps taken by the Department are concerned, the Committee have been informed that provision of Broadband connection through setting up of broadband access centres, tele-centres, kiosks, and other public access points and PCOs, connecting educational institutions to broadband networks, providing wireless internet services as primary aim of rural Broadband access, measure to make Cable Operators to provide Broadband service in rural areas and training of citizens to access and use Broadband through digital literacy Programs have been undertaken. The Committee while not being satisfied by these steps desire that momentum to have better Broadband connectivity should be enhanced by the Department so that the set targets are achieved particularly in above mentioned States where the Broadband penetration is poor. The matter needs immediate attention as one of the focus areas identified by the draft National Telecom Policy, 2011 is to recognize Telecom and Broadband connectivity as a basic necessity like education and health and work towards „Right to Broadband‟ . In this regard the Committee strongly recommend that the scheme of National Optical Fibre Network (NOFN) to make available Broadband connectivity upto Gram Panchayats by utilizing the existing optical fibres of BSNL, Railtel and Power Grid should be implemented expeditiously. The Committee also desire to be apprised about the findings and the implementation status of the Empowered Committee set up by the Department for the scheme of National Optical Fibre Network (NOFN) which has been especially planned to facilitate implementation of various e-Governance initiatives such as e-health, e-banking, e-education etc. thereby facilitating inclusive growth.

Reply of the Government

Some schemes to enhance better Broadband connectivity in Meghalaya, Mizoram, Arunachal Pradesh, Manipur, Nagaland, Tripura and Assam ect are given as below,

(i) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in service area of ASSAM

This OFC scheme would connect 354 locations in 21 districts of Assam within 18 months from date of signing of the agreement. Agreement has been signed with BSNL on 12.02.2010 in this respect with a subsidy quote of Rs. 98.89 Crore. The Agreement shall be valid for a period of seven years from the date of signing of the agreement.

(ii) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East-I Telecom Circle.

The states of Meghalaya, Mizoram & Tripura have been taken up in this scheme for OFC Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network. This OFC scheme would connect 188 locations in 19 districts within 24 months from date of signing of the agreement. Agreement has been signed with Railtel on 16.01.2012.

(iii) Optical Fibre Network Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network in North East-II Telecom Circle.

The states of Arunachal Pradesh, Manipur & Nagaland have been taken up in this scheme for OFC Augmentation, Creation and Management of Intra-District SDHQ-DHQ OFC Network. This OFC scheme would connect 407 locations in 30 districts within 30 months from date of signing of the agreement. Agreement has been signed with Railtel on 16.01.2012.

The optical fiber has predominantly reached state capitals, districts and blocks at present. National Optical Fibre Network (NOFN) is planned to connect all the 2,50,000 Gram panchayats in the country through optical fibre utilizing existing fibers of PSUs viz. BSNL, RailTel and Power Grid and laying incremental fiber wherever necessary. Non-discriminatory access to the network will be provided to all the telecom service providers. These access operators like mobile operators, Internet Service Providers (ISPs), Cable TV operators, content providers etc. can launch various services in rural areas. Various services such as e-health, e-education and e-governance etc. will be provided.

Regarding expeditious implementation of NOFN project, it is mentioned that for implementation of National Optical Fiber Network (NOFN) project, a Special Purpose Vehicle (SPV) namely Bharat Broadband Network Limited (BBNL) has been incorporated on 25.02.2012 under Indian Companies Act 1956. Pilot experiments completed in Gram Panchayats Vishakhapatnam, Ajmer and North Tripura. The pilots conducted by the 3 CPSUs in one block each as per following details:

S. No.	CPSU	Pilots to be conducted in			No. of GPs to be connected
		State	District	Block	
1	BSNL	Rajasthan	Ajmer	Arain	30
2	Railtel	Tripura	North Tripura	Panisagar	11
3	PGCIL	Andhra Pradesh	Vishakhapatnam	Paravada	17

Tripartite MoU has been signed on 26-10-2012, with 13 States viz. Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Jharkhand, Karnataka, Manipur, Mizoram, Rajasthan, Tripura, Uttar Pradesh, Uttarakhand and 3 Union Territories viz. Dadra & Nagar Haveli, Daman & Diu and Puducherry.

Observation/Recommendation (Para No. 7.12)

Recommendations of the Committee (Para 7.12): The Committee note that in pursuance of National Telecom Policy, 1999, BSNL was formed on 1 October, 2000 as a technology-oriented company providing telecom services namely telephone services on landline, Wireless in Local Loop (WLL) and Global System of Mobile (GSM), Broadband, Internet, leased circuits and long distance telecom Service. The Committee note that a on March, 2011 BSNL have provided 55.65 lakh WLL connections. However, the number of connections declined to 43.34 lakh at the end of 31 December, 2011. During the said period, internet connections also declined to 35.76 from 36.78 lakh connections. The Committee also note that BSNL earned a total revenue of Rs. 29.688 crore during the financial year 2010-11. However, due to intense competition and sharp decline in Average Revenue Per User (ARPU) the company had registered a substantial loss of Rs. 6,384 crore during the said period. The Committee were informed that various measures/initiatives have been taken by BSNL to increase the subscriber base in the wake of competition from the Private Telecom Service Providers, for instance sustained operational focus on customer care, service delivery, service assurance, revenue management and asset management, aggressive push on Data usage and value added services. In addition, steps like clear cut segregation of commercial activities from social obligation to ensure sustainable growth and progressive migration of BSNL's current network to Next Generation Network to ensure convergence, consolidation and seamless delivery of various services, enhancement in quality of service/ customer care through revamped call centres and improved network operations across critical parameters such as BTS availability, congestion, speedy redressal of complaints through call centres, special efforts for improving uptime of Mobile Network, replacement of poor batteries, efforts to bring the BTSs on ring etc. have also been taken. Committee appreciate the measures taken/proposed to be taken by BSNL. However, the Committee recommend at the same time that in the intense competitive environment in Telecom sector, it is high time BSNL should improve their physical and financial performance taking into account that in the recent years the company's revenue and market share have plunged into heavy losses due to intense competition in Indian telecommunications sector. The Committee would like to be apprised of the progress made in this regard.

The Committee also note that BSNL has not been able to procure any GSM equipment in the last four years thus affecting the quality of service provided by them as admitted by the CMD during the deliberations held by the Committee. In this regard, the Committee desire that BSNL should furnish a note to them explaining their position on non-procurement of GSM equipment in the last four years. The Committee also note that the tenders floated for procurement of equipment has also failed due to frivolous complaints and subsequently in 2011 the tender for procurement has again been floated on e-tender platform. The Committee would like the department to apprise the Committee of the latest position in this regard.

Reply of the Government

The comments of BSNL on the present status of tender of 15 Million GSM lines are as follows:-

Previous Mobile Tenders:

The last successful tender for procurement of GSM equipment was floated in year 2006 against which Advance Purchase orders were placed till 2008.

The tenders for procurement of 93 million lines for GSM equipment was floated by the four zones of BSNL on 01.05.2008 under Phase VI project. This tender was having provision for quantity variation upto **+ / -** 50 %. The procurement was proposed to be done in three phases for requirement of three to four years. In first phase capacity of 33 Mn lines was planned and the remaining two phases were to have capacity of about 30 Mn lines each. These capacities were planned based on BSNL Vision document envisaging to provide 3 Mn connections in each month to maintain reasonable market share at that time. Each tender was further divided into four parts

–Part I for 2G elements, Core and VAS elements
–Part II for 3G elements
–Part III for infrastructure items.
–Part IV for operation and billing sub-systems.

However, this tender was cancelled in early 2010 based on recommendations of Sam Pitroda Committee.

BSNL Board took decision to procure 5.5 million lines GSM equipment to meet the immediate requirement of the circles of North and East zones through a single composite tender for 5.5 million lines, only for 2G equipment along with associated infra and billing integration. This requirement was mainly to reduce congestion in the network including remote areas. The Board decided to invite bids from the bidders who had participated in Part-I and/or Part-II of Phase-VI tender in any of the zones as suggested by CVC. In view of the standing instructions relating to security guidelines from the Government, the Bids were called from only three vendors centrally for North and East zones. However, change in security guidelines compelled BSNL to call fresh bids from all the five vendors, who had participated in part I and/or part II of phase VI Tender as suggested by CVC, namely M/s Ericsson, M/s NSN, M/s Alcatel Lucent, M/s Huawei and M/s ZTE with existing tender document along with clarifications. Accordingly, the tender floated vide tender no. MM/NWP-GSM/062010/000391 dated 23.06.2010 was cancelled and new tender was floated by MM cell vide tender no. MM/NWP-GSM/082010/000395 dated 31.08.2010.

Only four out of five bidders participated in the Bid .M/s Ericsson did'nt participate in the bid. During the evaluation stage , M/s Ericsson represented that it had not

participated due to security related guidelines / requirements mentioned in the tender even though during pre bid stage, neither any clarifications were sought by the M/s Ericsson nor M/s Ericsson participated in the pre bid conference held on 13.09.2010 for this tender. However, all the clarifications were provided by BSNL to all the prospective bidders including M/s Ericsson. M/s Ericsson chose to represent a case to the Independent External Monitors (IEMs) against this tender, even though the vendor was not interested in the bidding. The IEMs recommended to re float the tender and the tender was cancelled.

Current Mobile Tender:

BSNL Board in its 133rd meeting held on 04/02/2011 decided for Procurement of 15 Million GSM lines Equipment. The tender was floated by BSNL on 14.07.2011 for Procurement of 14.37 Million GSM lines equipment for North, East and South zones. The procurement of 0.63 Million lines for West zone was to be done through RQ from M/s ITI. In the tender floated for North , East and South zones the bids were received on 02.12.2011, from following five bidders:

- M/s Ericsson India Ltd.
- M/s Alcatel-Lucent
- M/s ZTE Telecom India Pvt Ltd
- M/s Huawei Telecom India Pvt Ltd
- M/s Nokia Siemens Networks

The Financial bids of all the above mentioned bidders were opened on 04.02.2012.

L1 bidder was M/s ZTE Telecom India Pvt Ltd. Authorization for placement of PO has been issued to circles of North and South zones on 07.05.12. Purchase Order has already been placed by all the circles of North and South zones on L1 bidder. For East Zone, the offer was issued to L2, L3, L4 & L5 bidders for award of work at L1 prices which has since been declined by them. As per provision in the tender APO has been issued to L1 bidder on 24/08/2012, which has since been accepted by the bidder. The work for West Zone was kept reserved for M/s ITI under reservation quota. M/s ITI was asked to submit its bid against the RQ, but M/s ITI has still not submitted its bid.

Observation/Recommendation (Para No. 7.13)

The Committee note that Mahanagar Telephone Nigam Limited (MTNL)was formed on April, 01,1986 to assume responsibility as the principal Service Provider for control, management, operation of the telecommunication's networks in Delhi and Mumbai. While analyzing its performance, the Committee note that during 2011-12 (upto December,2011) a total of 2.83 lakh new internet connections were added by MTNL, taking the total connections to 91.52 lakh. The Committee note that in the wake of stiff competition from private service providers, MTNL has achieved a financial turnover of Rs.3,673.95 crore during the year 2010-11, as compared to the previous turnover of Rs.3656.10 crore. However, during the said period, it posted a loss of Rs.2801.91 crore too. During 2011-12 as on December 2011, it has again

incurred a loss of Rs.1714 crore. The outstanding arrears to be collected by MTNL as on December, 2011 was Rs.1,129.17 crore. Undoubtedly, the financial performance of MTNL needs improvement. The Committee, therefore emphasizes that MTNL should focus on broadband and enterprise business, new streams of revenue from sharing of resources with other service providers, introduction of new schemes to attract landline subscribers, more emphasis on adding GSM and broadband, flexible tariff policies and rationalization of expenditure to reduce administrative and operational cost to improve its financial performance. Besides, the Committee feel that although the outstanding arrears to be collected has slightly reduced from Rs.1188.62 crore at the end of March, 2008 to Rs.1129.17 at the end of March,2011, if the company is serious about recovery of outstanding arrears, it will have to come up with fresh and more effective initiatives on a priority basis, as the outstanding Rs.1129.17 crore is a huge liability, which if not liquidated urgently can have serious ramifications for a public Service provider like MTNL. The Committee, therefore, would like to know the progress made, if any in regard to the financial health of MTNL post-these initiatives and further plans to stay as the leading PSU in Delhi and Mumbai telephone circuits.

Reply of the Government

Delhi and Mumbai are the most competitive telecom licence service areas. In Delhi, there are 15 mobile operators (GSM+CDMA) and 4 basic operators whereas in Mumbai, there are 14 mobile operators (GSM+CDMA) and 4 basic operators. The subscriber base for the MTNL's various services for the past 5 years is as under:

	2007-08	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Total Wire-line Connections (including WLL fixed connections)	38,07,081	36,94,970	36,23,110	35,81,148	35,65,896
Total Wireless Connections including WLL mobile	34,02,767	43,60,748	49,67,660	53,61,827	57,24,231
Broadband Subscribers	570591	695500	815830	942317	1040191
Total	7780439	8751218	9406600	9885292	10330318

It is submitted that despite facing fierce competition, a growth of over 5% has been maintained in the overall subscriber base.

Even though there is continuous growth in MTNL's wireless subscriber base in absolute terms, there is decline in market share due to increase in competition & number of service provider in Delhi & Mumbai. With entry of new players, market share of existing operators get shared and market share of some of our competitors has also declined. MTNL gained market share in mobile from incumbent operators when it entered market.

Despite being a late entrant in the GSM segment, MTNL mobile subscriber base has grown to over 5.6 Million as on March 2012. It is further submitted that MTNL is making its best efforts to sustain the growth in its GSM Services despite facing fierce competition in its service areas where the tele-density is already well over 150%.

With regard to reduction in wire line percentage share, it is submitted that there is a general decline in the demand for the fixed lines telephone as there is a tendency to shift to mobile services because of its sheer convenience with regards to affordability and availability. This is worldwide trend that when liberalization takes place and monopoly is removed in telecom sector there is a churn in fixed line subscribers of incumbent operator.

MTNL has been continuously making its best efforts to arrest the surrender of land line connections. Steps have been taken to arrest & reverse the negative Growth in Landline Telephone Services. With the following concerted efforts, the negative growth has been brought under 0.5% and the positive growth is expected to be achieved in next 2 years:-

- Rollout of FTTH (Fibre to the Home) Services.
- Migration of TDM switching network to NGN / IP network progressively during 12th five year plan period. With the proposed migration, a host of value added services will be made available to landline subscriber also.

MTNL is giving major thrust on the expansion of capacity for GSM and Broadband to cater the further demand. Following actions are being taken to generate fresh demands by providing quality services, customer care & satisfaction, introduction of new services / schemes and innovative marketing strategies.

(i) Expansion / augmentation of existing 3G network to (High Speed Packet Access (HSPA+): At present MTNL's 3G network is HSDPA (High Speed Data Packet Access) with download speeds up to 3.6 Mbps and uploads speed upto 384 Kbps. After upgradation download speed upto 21.1 Mbps and upload speed upto 5.76 Mbps will be supported by the network.

(ii) Deployment of new technology state of art exchanges and Next Generation Networks (NGN)/ IP Multimedia Subsystem (IMS) : MTNL has planned to replace its TDM (Time Division Multiplexing) Fixed line switches with NGN / IMS switch in phased manner during 12th Five year plan. Introduction of NGN / IMS based services will not only help MTNL in saving Opex, space but also enable MTNL to offer all data / video centric services which are currently enjoyed by Mobile subscribers to the fixed line subscribers also ultimately leading to convergence of fixed and mobile services.

(iii) **To bring optical fiber near / to subscriber's premises by introducing FTTC (Fibre to the Curve) and reaching homes thereafter with FTTH (Fibre to the Home) on PON (Passive Optical Network) technology:** MTNL is adding optical fibre in its access network and is deploying FTTH based on GPON (Gigabit Passive Optical Network). This will enable MTNL to provide access to this latest technology to its' esteemed customers with very high bandwidth.

(iv) Expansion of broadband network to provide bandwidth on demand by deployment of ADSL (Asymmetric Digital Subscriber Line) / VDSL (Very High Data Rate Digital Subscriber Line) , MLDN (Managed Leased Data Network) / PON etc. Introduction of more broadband services such as video on demand, video conference for public.

(v) Expansion of high capacity IP-MPLS (IP Multiprotocol Label Switching) based backbone network to migrate to NGN (Next Generation Network) for establishing unified network for speech and data. Introduction of VOIP in the backbone and access network.

Further, MTNL is also targeting to increase its revenue as detailed below:

- Both Delhi and Mumbai units of MTNL are targeting to increase revenue upto 5% amounting to Rs. 150 Crs. (approx)
- Wireless Unit is targeting to increase revenue upto 15% amounting to Rs. 100 Crs. (approx)
- Land, Building & Enterprise Business is targeting to increase revenue by Rs. 100 Crs. (approx)
- In totality, increase in revenue will be around Rs. 350 Crs. (approx) which is 10% of total revenue.

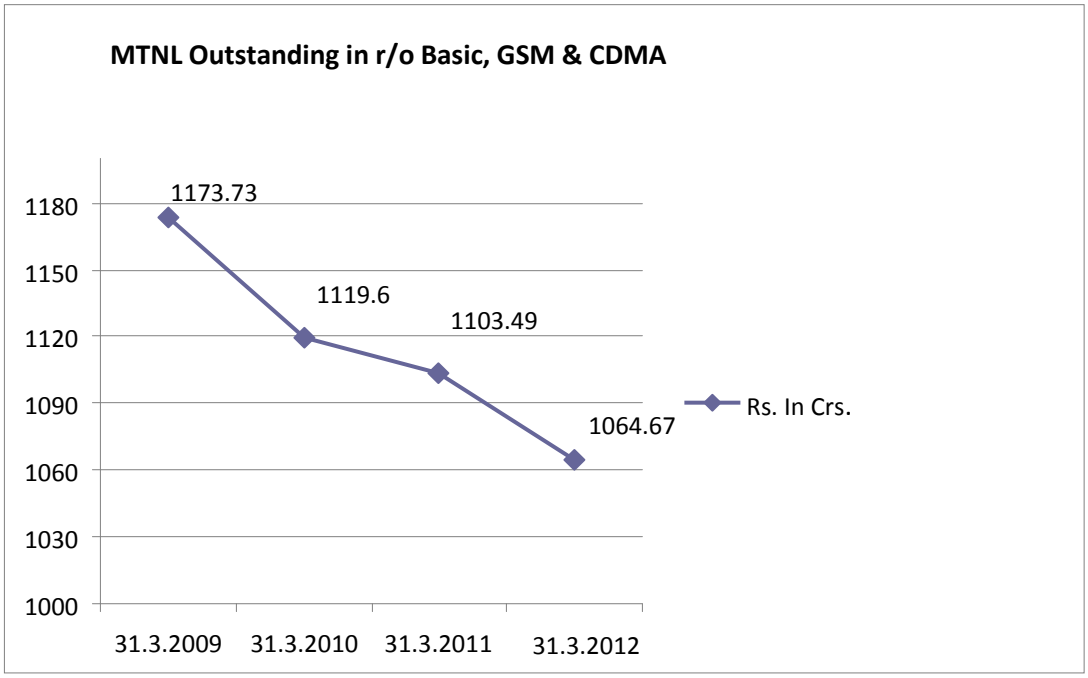
The administrative and operational cost during 2010-11 was Rs. 921.99 cores. This cost has been reduced to Rs. 819.34 crores during 2011-12.

It is submitted that the outstanding arrears of Rs. 1129.17 cr as on Dec. 2011 has been further reduced to Rs. 1064.67 cr as on 31.03.2012. Thus, there is a reduction of 5.71% over the period of one year. The total billing of MTNL, since its inception in 1986, is to the tune of Rs. 95998 cr (approx) and the accumulated outstanding arrear of Rs. 1064.67 cr, as on 31.03.2012, forms 1.11% of this total billed amount of MTNL.

MTNL has been consistently making sincere efforts for reduction in outstanding arrears which are as under:-

- Frequent revenue reviews held at various levels and strong monitoring of outstanding at corporate level.
- TR action plan is implemented whereby it is being ensured that all the bills are raised, issued, dispatched and delivered on time to recover the dues promptly.
- Credit control module has been introduced to keep a check on credit limit of the subscriber.
- Most recently launched two periodic amnesty schemes fetched fruitful results not only in terms of settlement of old outstanding but also restoration of old connections on the request of subscribers.
- Recovery agents are employed for making recoveries.

- Automated telephonic reminders followed by manual calls by concerned AO(TR) are being made to subscribers who defaults in making payments of their bills.



Further, MTNL now proposes to streamline the effort to reduce outstanding by monitoring the implementation of various steps including the following:

- Review of cases with outstanding greater than Rs.50000
- Customer wise listing of pending dues in respect of customers having more than one telephone.
- Review of outstanding against group bills.
- Adjustment of Security Deposits of closed cases.
- Review of DNP (Disconnected for Non Payment) cases i.e. disconnected numbers with more than one month outstanding.

Observation/Recommendation (Para No. 7.14)

The Committee note that the work related to issue of license to various telecom services and spectrum allocation is under the overall charge of the DoT, Ministry of Communications and Information Technology. The first phase of liberalization in Mobile telephone Service started with the issue of 2 (CMTS) Licenses in each of the four Metro Cities of Delhi, Mumbai, Kolkata and Chennai to 8 Private Companies in November, 1994. Subsequently, 34 Licenses for 18 Territorial Telecom Circles were issued to 14 Private Companies during 1995 to 1998. State owned public sector undertakings i.e. MTNL and BSNL were issued Licenses for provision of CMTS as third operators in the various parts of the Country. Further, 17 fresh Licenses were issued to private companies and 4 Cellular operators in September/October, 2001, one each in the four Metro Cities and 13 Telecom Circles. The Committee further find

that the Guidelines for the Unified Access Services License (UASL) for basic as well as cellular mobile services were announced by the Government on 11 November, 2003 and were issued on 14 December 2005. One of the important impacts of the initiative taken by the Government is the enhancement in Foreign Direct Investment from 49 to 74 per cent. The Committee note that as on 31 August, 2011, there are 277 Unified services and cellular mobile licenses in the country. As on December, 2011, 240 Unified Access Service (UAS), 2 Basic Service and 37 Cellular Mobile Service (CMTS) Licenses have been issued and permission for the usages of dual technology (both CDMA and GSM) under the same CMTS/UAS License has been granted to 8 companies.

In this connection, the Committee learn that 122 Unified Access Service Licenses issued in January, 2008 were recently cancelled by the Supreme Court. Some of the important reasons attributed by the Supreme Court for the cancellation of licenses were that the Court was of the view that although the State is the legal owner of the natural resources as a trustee of the people and is empowered to distribute the same, the process of distribution must be guided by the constitutional principles including the doctrine of equality and larger public good. Second reason cited by the Court was that if the method of auction had been adopted for grant of license, the country would have been enriched by many thousand crores. Thirdly, the recommendations made by TRAI were flawed in many respects and implementation thereof by DoT resulted in gross violation of the objective of National Telecom Policy, 1999 and the decision taken by the Council of Ministers on 31 October, 2003. The Committee also note that the Supreme Court had directed TRAI to make fresh recommendations for grant of license and allocation of spectrum in 2G band in 22 Service Areas by auction, as was done for allocation of spectrum in 3G band. The Union Government was directed to consider the recommendations of the TRAI and take appropriate decision within the next one month and the fresh license should be granted by auction. In this regard, the Committee have been informed by the DoT that TRAI issued a pre-consultation paper on allocation of spectrum in 2G band by auction for 22 service areas on 3 February, 2012, requesting all the stakeholders to furnish their comments by 15 February, 2012. Subsequently, on the basis of the comments / suggestions received from the stakeholders and as per the international practices, another written consultation paper was issued by TRAI on 7 March, 2012 seeking comments from various stakeholders by 21 March, 2012, and counter comments by 28 March, 2012 by TRAI. The Committee have also been informed that TRAI is likely to submit its recommendations by the end of April, 2012. The Committee are of the opinion that in the light of various issues raised by the Supreme Court regarding the cancellation of 122 Unified Access Service Licenses, having a transparent and equitable policy for allocation of spectrum is inevitable. Therefore, the Committee recommend that DoT needs to have a thorough analysis of various issues concerning allocation of Spectrum so that the Department may take them as guide post for the future allocation of Spectrum in the country. The Committee would like a note providing the latest position of the Government on the matter. They hope that by now TRAI must have finalized their recommendations after analyzing all the comments and suggestions forwarded by various stakeholders. The Committee would like to have a status report on the recommendations made by TRAI and the action taken by the Department , if any, on the same.

Reply of the Government

In pursuance to the Hon'ble Supreme Court judgment dated 02.02.2012, TRAI gave its recommendation dated 23.04.2012 and 12.05.2012 on Auction of Spectrum. These Recommendations were examined by a committee constituted by DoT. The Report of the DoT Committee was placed before the Telecom Commission. The Telecom Commission considered the Report of the DoT Committee on TRAI Recommendations on auction of spectrum dated 23.04.2012 and 12.05.2012 and provided its recommendations.

The issued related to the auction of spectrum in 1800 MHz and 800 MHz bands were placed before EGoM for further consideration. The EGoM has decided, among others, the eligibility criteria, objective of Spectrum, amount of spectrum, number of blocks, size of blocks, validity period of auctioned spectrum in 1800 MHz and 800 MHz bands, roll out obligations, terms of payment , etc. Further, based on the recommendations of the EGOM, the Cabinet decided the Reserve Price for these bands and the Spectrum User Charges.

Department issued the Information Memorandum on 27.08.2012. Further, Notice Inviting Applications has also been issued on 28.09.2012 for Auction of Spectrum in 1800 MHz and 800 MHz bands. The auction of spectrum in 1800 MHz band started on 12th November and completed on 14.11.2012.

Observation/Recommendation (Para No. 7.16)

The Committee note that in accordance with the license agreement, all the Access Service Licensees are required to roll out their services within prescribed time periods. As per clause of agreement, licensees are required to offer their services in the selected districts for cross- checking the quality/coverage and other parameters, prescribed by the DoT and termed as 'Service Testing' . Apart from this , the committee note that Telecom Enforcement Resource and Monitoring (TERM) Cells also compile data pertaining to roll out obligation for imposing Liquidated damages (LD) Charges on such Telecom Service Providers (TSPs) who do not comply to roll out obligation conditions. Further, as per terms and conditions of License Agreement of 2G spectrum, the licensee has an obligation of rolling out the service of the spectrum acquired by them within 52 weeks i.e. one year after the signing of the agreement. However, the Committee are disturbed to note that many of the Licensees have failed to roll out their services even after obtaining spectrum from the Government which is a limited and precious non-renewable resource. When probed by the Committee, the Department had informed about issue of Show cause notices for termination of licences to various companies who had failed on the roll out obligations of their services. In this regard, the Committee are of the opinion that Government should have suitable mechanism in place to ensure that the licensees

strictly follow the terms and conditions of the license agreements. The committee strongly feel that the defaulting licensees are adopting a delay tactics for roll-out of their services and thus are of the strong opinion that clear penalty provisions need to be included in the agreement with licensees in case they fail to roll out their services within stipulated time period of 52 weeks. The Department should take stringent action against the defaulter licensees by issuing show cause notice for cancellation of their licences and also impose the financial penalty clause so that the spectrum given to them are effectively utilized and managed.

Reply of the Government

For ensuring the compliance of terms and condition of the license agreements, at present following mechanisms are in place:
(i) As per TRAI Act 1997 (amended), one of the function of Telecom Regulatory Authority of India (TRAI) is to ensure compliance of terms and conditions of license.
(ii) Telecom Enforcement Resource and Monitoring (TERM) Cells have been established in all the Licensed service areas and one of the monitoring functions of TERM is checking of the compliance by the licensee in respect of the license conditions and any directions issued by the licensor in public interest.

Accordingly, with the existing mechanisms in place by which status report have been obtained by Ministry to monitor, analyze and detect cases of violation of rollout obligations. By this adopted mechanism, Ministry have acted to find out cases of non-achievement of rollout obligations and taken punitive action for imposition of Liquidated damages (LD) and issue of Show Cause Notices against those defaulters service providers (SPs) who had not fulfilled the roll out obligation within stipulated time frame as prescribed in the licence agreement.

Further, a review of the manpower requirement is going on to further strengthen the monitoring mechanism.

As regard to inclusion of clear penalty provision in the license agreement, it is to mention that provision for imposition of LD amount up to rupees 7 .00 crores for delay up to 52 weeks in meeting the roll out obligations and for delay beyond 52 weeks in addition to LD of rupees 7.00 cores, provision of termination of License exists in the license conditions.

Observation/Recommendation (Para No. 7.17)

As regards the use of 3G spectrum block for provisioning of Telecom Access Services as defined in the „Scope of the License‟ in the Schedule Condition 2 of the UAS License agreement, the Committee note that the licensee is authorized to use the same from the date of award of right to commercially use the 3G spectrum i.e. 01 September, 2010, till the validity of the UAS license agreement or for a period of 20 years from 01 September, 2010, whichever is earlier, subject to compliance with terms and conditions of the license agreement. Further, regarding the time period for

the roll-out obligation of 3G Spectrum, the Committee note that the licensee, to whom the 3G spectrum is assigned, is expected to provide required street level coverage using the 3G Spectrum in at least 90 per cent of the service area within five years of the „Effective Date‟ . The Committee also note that if the licensee does not achieve its roll-out obligations, it shall be allowed a further period of one year to do so by making a payment of 2.5 per cent of the Successful Bid Amount (i.e. spectrum acquisition price) per quarter or part thereof as liquidated damages. Further, the Committee note that if the licensee does not complete its roll-out obligations even within the extended period of one year, the 3G spectrum assignment shall be withdrawn. From the foregoing, the Committee infer that the total time period of five years given to the licensees for roll-out of services of 3G spectrum is simply too long. They feel that a licensee is prone to misuse such a long time period which results in the spectrum remaining idle with the service providers. The observation of the Committee can be corroborated by the fact that certain telecom service providers who had received license in 2010, are yet to start Broadband Wireless Access business. This is paradoxical given the fact that certain 3G service providers are struggling to grab subscribers. The Committee desire that the stipulation which allows a further period of one year for roll-out obligation, by making the payment of only 2.50 per cent of the successful bid amount per quarter or part thereof as liquidated damages, should be revisited as the amount prescribed is quite less, and thus may not act as an effective deterrent to the defaulters. The Committee firmly believe that had the Government put stringent roll-out obligations, many of the Telecom Service Providers would have by now launched their Broadband Wireless Access Services and enhanced their 3G reach. The Committee would like to point out that the Government policy on the roll-out obligation of 3G and BWA would have a major impact on the business and thus a weak policy would ultimately result in decrease in net profit of the Government. The Committee, therefore, would like the Department to look into the nitty gritty of the problems which may arise due to the provision of unnecessary long period for the roll-out obligation of 3G and BWA services. The Committee expect a precise and expeditious action by the Department in this regard, under intimation to them.

Reply of the Government

The observations of the committee regarding period of Roll-out obligation have been noted for action for future auction of 3G spectrum.

However, the Department has also taken necessary action and incorporated more stringent Roll out conditions in the NIA for the action in the 1800 MHz and 800 MHz band. As per the new Roll out obligation in the new 1800 MHz/ 800 MHz Spectrum, the licensee is required to complete Rollout in at least 10 %, 20% and 30 % of the Block Headquarters of the Licensed Service Area at the end of 3rd, 4th and 5th year respectively. The Roll out obligation conditions in NIA for auction of 1800 MHz/ 800 MHz spectrum is reproduced below.

“Roll Out Obligations for 1800 MHz/800 MHz bands:

2.1 The roll out obligations for spectrum in 1800 MHz and 800 MHz band to be allotted through auction, have been decided by the Government as per NIA dated 28.09.2012 for auction of spectrum in 1800 MHz and 800 MHz bands. However, as per Para 3.6.1(v) of this NIA dated 28.09.2012 which reads as under:

Para 3.6.1(v):

a) At least 10% of the Block Headquarters (BHQs) of the Licensed Service Area (LSA) shall be covered by the end of three years from the effective date of Licences or date of allotment of spectrum won in the auction process, whichever is later. Additional 10% of the Block Headquarters of the LSA shall be covered in each of two subsequent years i.e. at least 20% and 30% coverage of the block headquarters of the LSA has to be achieved at the end of 4th and 5th year respectively. The list of Block Headquarters (BHQs) and its ‘to the scale’ Map(s) will have to be obtained by the successful bidder from the respective State Governments/ Administrations/ local bodies. The boundary of the Block Headquarters will be as per map/ definition given by the State Government/ Administration/ Local Body concerned. In cases where District Headquarter/Town (DHQ/ town) happens to be BHQ also, that particular DHQ/ town or BHQ would be considered as part of compliance of any one phase of rollout obligation only, as per the choice of licensee.

b) Each milestone of the rollout obligations as mentioned in the clause (iv) and clause (v) (a) above, would be considered as separate phase of rollout obligations. Thus for a ‘New Entrant’, there will be five phases of rollout obligations and for the ‘Existing Licensee’ acquiring spectrum in this auction process, there will be three additional phases of rollout obligations.

c) Coverage of Block Headquarters would mean that at least 90% of the area bounded by the local body limits should get the required street level coverage by mandatory setting up of Base station(s) (for example a BTS / node B/ e-node B) in the Block Headquarters.

d) ‘Existing Licensee’ may offer coverage of Block Headquarters already achieved in accordance with stipulation in clause (v) (c) above as a part of compliance towards roll out obligation. However, testing of the coverage already achieved will be carried out by DoT as per prescribed test schedule/ procedure. The coverage of the BHQs as per the above mentioned rollout obligations will be over and above the DHQs/ towns covered as part of the existing rollout obligations mentioned in the UASL.

e) The choice of Block Headquarters to be covered and further expansion beyond 30% Block Headquarters shall lie with the Licensee depending on their business decision.

f) In case of existing licensees having spectrum in both the bands (i.e. 900/1800MHz Band and 800MHz Band), the roll out obligation shall be applicable in respect to the network deployed using the spectrum acquired through auction. Accordingly, the roll out already achieved shall be counted in the same spectrum band. The roll out obligation relates to frequency band in which the spectrum is acquired through

auction. For this purpose, 900MHz band and 1800MHz band will be treated as the same band.

g) While the obligations under clause (iv) above will have to be met by setting up owned infrastructure with sharing of passive infrastructure as presently permissible i.e. on the date of issue of this NIA, the 'New Entrants' and the 'Existing Licensee' will have the flexibility to meet the roll out obligation mentioned in clause (v) (a) & (c) through shared infrastructure to the extent permissible as per guidelines/ instructions applicable from time to time. However it may be noted that rollout obligations cannot be complied with using the Intra Service Area roaming arrangements.

h) In the case of Metro Service Area, there will be no obligation relating to Block Headquarters for the 'New Entrant' as well as 'Existing licensee'. However, the rollout obligations mentioned in clause (iv) above, which includes the rollout of the network in the Metro LSA's, as provided in the existing UAS license, will have to be fulfilled."

Observation/Recommendation (Para No. 7.18)

The Committee note that the Telecom Service Providers are required to obtain necessary permission from Local Bodies before setting up of mobile towers. However, obtaining the Right of Way (RoW) from Government Agencies/ Local Bodies for installation of tower is the responsibility of operator/ Infrastructure Provider-I providers. This policy is followed by Private and Public Telecom Service Providers both. However, the Committee have come across instances where permissions from Local Bodies were not taken for installation of telecom towers, leading to disconnection of service and resultant call drops. The Committee are of the opinion that the Department should ensure that all service providers follow the requisite specific regulations in letter and spirit.

The Committee further note that as per the Guidelines for setting up of telecom towers, the Telecom Service Providers are asked to avoid installation of Base Station Antennas within the premises of schools, hospitals and narrow lanes to reduce the risk caused by any natural disaster like an earthquake or wind storm. Beside, Access to Base Station Antenna sites should be prohibited for general public through suitable means such as wire fencing, locking of the door to the roof etc. Further, the access to tower site, even for the maintenance personnel, should be for a minimum period. Sign boards/ Warning Signs are to be erected at the entrance of Base Station Antenna sites too. The Committee desire the Department to ensure that these guidelines are followed stringently to avoid any risk to the residents of the areas where BTS tower sites are located.

The Committee have been informed that the Department had launched a scheme under Universal Service Obligation Fund to provide subsidy support for setting up and managing 7353 infrastructure sites/ towers in 500 districts spread over 27 States for provision of mobile services int he specified rural and remote areas, where there is no existing fixed wireless or mobile coverage. Villages or cluster of villages having population of 200 or more and not having mobile coverage are taken into consideration for installation or towers under this scheme. As per the

Department, at the end of December, 2011, 7296 towers out of the fixed target of installing 7863 towers had been installed. The Committee feel that installation of telecom towers, especially in rural and remote areas, is very important for the telecom network expansion in these areas. Therefore, the Committee recommend that the remaining 567 telecom towers be set up expeditiously and the Committee informed accordingly.

Reply of the Government

DoT has already issued instructions to the Telecom Service Providers, vide letter dated 8th April 2010, for implementation of radiation norms and compliance of test procedures including proper sinages at BTS towers and restrictive entry in the occupational zone of BTS as per Telecommunication Engineering Centre (TEC) specifications (copy is enclosed as **Annexure-II**I. TEC has issued the test procedure on the subject vide GR no. TEC/TP/EMF/001.01 SEP 2009 and supplement procedure vide addendum TEC Doc no. TEC/TP/EMF/001/01. SEP-2009 Issue 2; AUG 2010. As per the test procedure, the telecom service providers have to ensure the provision of proper signage showing prescribed warning for information of general public of the exclusion zones at the BTS site. The sign boards shall have the information, size, colour code, background for visibility and their placement as prescribed in test procedure. A site may be declared non-compliant due to improper signage or if signage is absent. TERM Cells of DoT are monitoring for compliance of these instructions.

Regarding setting up of pending towers under Shared Mobile Infrastructure Scheme of USOF, it is mentioned that 7307 out of the targeted 7353 towers i.e. about 99.37% towers have been set up till 31st May, 2012 under this scheme. Most of the remaining 46 towers are to be located in North East [30 in Manipur, 3 in Arunachal Pradesh, 3 in Nagaland]. The concerned Infrastructure Provider i.e. BSNL has reported that these sites are in geographically difficult area which are also insurgency prone (there had been total economic blockades in Manipur), there is poor transport infrastructure and natural hindrance like landslides and heavy rainfall etc. USOF is regularly pursuing with BSNL and other Service Providers to take their best efforts to commission these pending tower sites at the earliest.

Observation/Recommendation (Para No. 7.20)

The committee has been informed that on 24 August 2010, an Inter-Ministerial Committee (IMC) consisting of officers from DoT, Indian council of Medical Research (Ministry of Health & Family Welfare), Department of Biotechnology and Ministry of Environment & Forest was constituted to examine the effect of EMF Radiation from base station & mobile phones. The committee notes that the IMC, in its report, indicated that most of the laboratory studies were unable to find a direct link between exposure to radio frequency radiation and health & observed that the scientific studies as yet have not been able to confirm a cause-and-effect relationship between radio frequency radiation from mobile towers and health. The effect of emission from mobile towers is not known yet with certainty. Further, the IMC suggested certain

measures such as adoption of Specific absorption Rate (SAR) level for mobile handsets limited to 1.6Watt/Kg and lowering the BTS RF exposure limits to 1/10th of the existing prescribed limit. As the Department has endorsed the view point that so far scientific studies are not conclusive, the committee recommend that further studies be carried out to arrive as more authentic conclusions about the impact of radiations from mobile phones and mobile towers in the country. The committee would await the specific response from the Department in this regard.

Further the committee are dismayed to note that DoT has deferred the 1 April 2012, deadline to 1 September, 2012 for the implementation of the recommendations given by Inter-Ministerial committee on electromagnetic radiation being emitted from mobile towers. The committee would like to know the reasons from the Department for the postponement of the same. Besides, the committee is of the opinion that since ICNIRP guidelines adopted by India is intended to protect the public against short term gross heating effects and not pathological effects such as cancer, genetic damage and on birds and insects, the Department needs to have a thorough relook on the radiation norms as prescribed by ICNIRP. The Committee also recommends that the Department should provide incentive to Telecom Service Providers by allowing them access to carbon credit as in the proposed New Telecom Policy. At the same time the Government should look into the details on 'Green Telecom' by adopting the use of solar panels across the country.

Reply of the Government

- An Inter-ministerial Committee was constituted to examine the issues of EMF radiation from mobile towers and mobile phones including effects of EMF radiation on human health and committee has submitted its report. The recommendations of the committee have been accepted by the Government.

- As regard to further studies to be carried out to arrive at more authentic conclusions about the impact of radiations from mobile phones and mobile towers in the country, the Department has requested the Ministry of Health & welfare for conducting long term research related to health aspect of Electro-magnetic field radiation exposure from multiple antennas and associated technologies.
- To look into the concern of the stakeholders and have a detailed examination and its implication on the increase in the exclusion zone due to lowering of RF exposure limit to 1/10th of the existing limit and the impact on the area coverage of BTS towers of the existing networks, the Department has deferred the 1 April 2012, deadline to 1 September, 2012 for the implementation of the recommendations given by Inter-Ministerial committee on electromagnetic radiation being emitted from mobile towers.

- The TRAI recommendations on Green Energy applications have been approved by government and Department has issued following directives to

the licensees/ all ILD service providers to adopt measures to green the Telecom sector setting broad directions & goals:

(i) At least 50% of all rural towers and 20% of the urban towers are to be powered by hybrid power (Renewable Energy Technologies (RET) + Grid power) by 2015, while 75% of rural towers and 33% of urban towers are to be powered by hybrid power by 2020.

(ii) The Service providers to ensure that the total power consumption of each BTS will not exceed 500W by the year 2020.

- All service providers to evolve a carbon credit policy in line with carbon credit norms with an ultimate objective of achieving a maximum of 50% over the carbon footprint levels of the base year in rural areas and achieving a 66% over the carbon foot print levels of the base year in urban areas by the year 2020. The base year for calculating all existing carbon foot prints would be 2011, with an implementation period of one year and the first year of carbon reduction would be the year 2012.

- All service providers to declare the carbon foot prints of their network twice in a year. Further based on the details of footprints declared by all service providers, service providers should aim at carbon emission reduction targets for the mobile network at 5% by the year 2012-2013, 8% by the year 2014-2015, 12% by the year 2016-2017 and 17% by the year 2018-2019.

- DOT undertook 20 pilot projects using Green Energy (SPV & SPV-wind hybrid) in USOF phase – I sites in order to examine the feasibility & financial viability and also to take care of Environmental issues and arrive at green solutions for Indian Telecom sector with a focus of utilizing renewable power sources such as solar energy and wind energy, associated carbon emissions reduction, power saving, Energy efficiency and lowering the CAPEX & OPEX of mobile telecom networks. The renewable energy solar/solar-hybrid systems are found to be technically feasible and financially viable for mobile BTS towers. A considerable carbon reduction has been noticed by way of reduction in DG operating hours. Since the capital expenditure (CAPEX) is high the operators look at subsidies from the govt.

Observation/Recommendation (Para No. 7.21)

The Committee note that one of the major purpose of creation of TERM Cells is to curb the illegal telecom operation (not permitted under Indian Telegraph Act). The Committee have been informed about the existence of as many as 700 illegal operators since 2004. As per the DoT, the total notional loss to the country due to such illegal practice is approximately Rs. 770 Crores. According to DoT, more than

540 such illegal setups have been unearthed and raided till now with the help of Law Enforcement Agencies (LEAs) i.e. local police, CBI, DRI. These cases were stated to be handed over to the Law Enforcement Agencies for further action against the culprits. However, the Committee are surprised to note the fact cited by DoT that there is no set technical method/procedure to block/jam illegal messages/calls, as these setups use the network resources like a normal service provider. The Committee were informed that these setups can only be caught through continuous monitoring and the same is being done through TERM Cells.

The Committee are not convinced by the stand taken by the Department and would like them to explore use of technologies to intercept illegal calls/messages, including the one available with defence authorities. The situation warrants urgent attention taking into account the huge total notional loss of approximately Rs. 770 Crore, which otherwise could have been earned if the said calls were routed through the legal routs. The Committee, therefore, strongly recommend that the Department needs to be proactive to deal with the situation instead of showing laxity in the matter. They would like to be apprised of the measures taken to identify and punish such illegal operators.

Reply of the Government

In case of grey market setups the resources are taken by the culprits as a genuine subscriber, however mixing of international traffic (entered in India through internet) with mobile/ basic traffic (which is not permitted in India) is carried by the mischievous persons using these resources. Such restrictions are not there in many of the countries. Since the resources are being taken as a genuine subscriber and the traffic is also passing through the same network as used by a normal subscriber, blocking/ interception of such traffic is not feasible. However, it is noticed that in such type of cases the CLI (Caller Line Identification) displayed on the handset of the called number is different from the CLI which could have been displayed if the call would have come from legal route. In order to proactively identify any such illegal network and their locations regular analysis of data/ CDRs is being carried out by TERM Cells. Besides this following sources are also being relied upon for detecting and curbing the grey market activities.

- Public telephone no. 1800-110-420 of DOT.
- Complaint by any other means.
- Analyses of unusual traffic
- Social contacts.
- Already investigated/ under investigation cases.
- Security/Law enforcement Agencies.

When presence of any illegal network is suspected, a team of field officers rackies the area and once its presence is confirmed, raid is conducted with the help of concerned Law Enforcement Agency (LEA) on location of the network. While conducting raid the equipments being used in the setup are seized by the LEA. The culprits identified during raids are also taken into custody by LEA along with all the

evidences for further actions by them. The illegal setups caught so far stand closed and no setup out of these is working at present. Regarding present status of the cases TERM Cells are pursuing with the concerned Law Enforcement Agencies.

It has been observed that cases of illegal routing of international calls are on the decrease, since 2005-06. Some of the main reasons are strict monitoring by TERM Cells, increased public awareness and dropping of ISD call rates and ISD termination charges.

Observation/Recommendation (Para No. 7.22)

The Committee note that in order to increase the share of domestically manufactured electronic products which includes telecom equipment, the Government, by its notification dated 10 February, 2010, has laid down policy for providing preference to domestically manufactured electronic products, instead of those electronic products which have security implications for the country. They have also been informed that in order to address the security concerns related to telecom and telecom network, suitable Amendments have been issued on 31 May, 2011, for Access Service licenses and on 3 June, 2011, for other licenses, in consultation with the Ministry of Home Affairs and after due deliberations with the industry. The licensee shall induct only those network elements into his telecom network, which have been got tested as per relevant contemporary Indian or International Security Standards. While the Committee appreciate the steps taken by the Department to address the issue related to national security risk and import of telecom equipment, they recommend that the Department should take a cue from the recent investigation carried out by the United States House of Representatives' Permanent Select Committee on Intelligence which has gauged the level of threat to the United States and asked a detailed accounting of foreign made hardware / software on the service provider's network along with the information related to security incidence such as discovery of unauthorized electronic hardware of suspicious equipment capable of duplicating for redirecting data. The Committee further recommend that the Department must take cognizance of the situation before it reaches an alarming proportion through continuous use of imported equipment and should take initiative to have a proper mechanism to test the telecom equipment in the country taking into account that Chinese companies are India's biggest supplier of hardware and software which include the import of SIM card. The Committee also recommend that the Government should assess the vulnerability risk of national security due to the import of telecom equipment from U.S, Europe and Japan too. Further, the Committee recommend that the manufacturers / Importers should ensure that the indigenous / imported mobile equipment strictly conform to the Good Manufacturing Practices (GMPs) before entering the market so that safety measures are ensured to avoid any hazardous incidents such as bursting of mobile batteries or short circuits in mobile handsets.

The risk to national security emerging out of import of SIM cards carrying embedded software for mobile phone cannot also be ignored. The Committee recommend that

the Department should address all the issues relating to security risk due to the use of imported SIM cards taking into account the fact that security threat gets aggravated as a telecom company provides the encryption key to the manufacturing facilities outside India as a part of standard trade practice. Besides, the Committee would also like to look into the issue of fake and duplicate IMEI numbers so that the national security is not at stake. The Committee desire to be apprised of the measures taken to address various issues raised by them.

Reply of the Government

The security guidelines issued in the form of license agreement on 31st May, 2011, for Access Service Licenses and on 3rd June, 2011 for other licenses, are very comprehensive. These security guidelines encompass the various issues like responsibility for security of telecom network owned by operators, requirement of Network forensics, Network Hardening, Network penetration test, Risk assessment, compulsory testing of network elements before inducting into network, security audit of existing network, keeping record of supply chain, test results, audit trail of logs etc.

Supply chain arrangement: Similar to investigation report of United States House of Representatives' Permanent Select Committee on Intelligence, gauging the potential threats from malware/spyware residing inside the equipment supplied, licensees have been mandated to keep a record of supply chain of the products vide license amendment May/June 2011, as follows:

"Licensee cell keep a record of supply chain of the products (hardware/software). This should be taken from the manufacturer/vendor/supplier at the time of procurement of the products.

The licensee through suitable agreement clauses with vendor shall ensure that the Vendor/Supplier allow the Telecom Service Provider, Licensor/DoT and/or its designated agencies to inspect the hardware, software, design, development, manufacturing facility and supply chain and subject all software to a security/threat check any time during the supplies of equipment. The number of such visits will be limited to two in a Purchase Order. The expenditure for such visits for order valuing more than Rs 50 crore upto 40 man-days per visit shall be borne by the licensee directly or through vendor".

Telecom testing and Security certification: Vide license amendments May/June 2011, government has already mandated that the *"licensee shall induct only those network elements into his telecom network, which have been got tested as per relevant contemporary Indian or International Security Standards from any national /international recognized lab for the relevant standards until 31st March 2013. From 1st April 2013 the testing and security certification shall be got done only from authorized and certified agencies/labs in India".*

Further, a pilot lab has already been set up at Indian Institute of Science, Bangalore to develop the security standards, test procedures and test tools. The pilot lab will be scaled up to full fledged National lab for telecom testing & security certification which will accredit the labs for telecom testing and security certification based on the security standards, test procedures and test tools developed by it.

Non-genuine and Fake IMEI: With regard to this issue, instructions have been issued vide letter dated 27.11.2009 directing all the telecom service providers that calls from mobile handsets with any IMEI number which is not available in the latest updated IMEI database of GSMA or without IMEI or all 'Zero' as IMEI should not be processed and must be rejected with effect from 30.11.2009.

The Ministry of Commerce and Industry has issued a notification No14/2009-2014 dated 14th Oct' 2009 that import of 'Mobile Handsets' classified under ITC (HS) code '8517' without International Mobile Equipment Identity (IMEI) Number or with all zeroes IMEI is prohibited with immediate effect. In the same notification, import of CDMA mobile phones (classified under ITC(HS) '8517' without Electronic Eerial Number (ESN) / Mobile Equipment Identifier (MEID) or with all zeroes as ESN /MEID is prohibited with immediate effect.

Further, the issue of use of Non-genuine and duplicate IMEI in our mobile network has been acknowledged and a technical committee has been constituted to study and suggest the possible solutions to eliminate the use of Non-genuine and duplicate IMEI.

(i) <u>Action Taken:</u>

SIM Cards:

With a view to attain self sufficiency with regard to telecom equipment including SIM cards, following steps have been taken:

Department of Information Technology (DIT), vide Notification No. 8(78)/2010-IPHW dated 10th February 2012, has laid down the policy for providing preference to domestically manufactured electronic products, in procurement of those electronic products which have security implications for the country and in Government procurement for its own use and not with a view to commercial resale or with a view to use in the production of goods for commercial sale. The notification covers electronic as well s telecom products. For the implementation of above notification, this department has constituted a Committee under the Chairmanship of Advisor (T) to recommend telecom product or products having security implications for the country and other actions to be taken by this department for the implementation of various provisions mentioned in the notification. The Committee has given its recommendation on Government procurement and the same has been notified on 5th October 2012 **(Annexure-IV).** SIM cards being one of the telecom products having security implications will be covered under notification for security sensitive telecom products which is being worked out bt the Committee.

CHAPTER-III

RECOMMENDATION/ OBSERVATION WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLY

Observation/Recommendation (Para No. 7.15)

The Committee note that with regard to formulation of a new comprehensive and integrated 'Spectrum Act', the Government had constituted a Committee on 6 May, 2011. The said Committee was expected to submit its report on 30 September, 2011, after convening 3 meetings. However, during the deliberations with the DoT, it emerged that even after a lapse of six months from the date of submission of the report, the issue remains inconclusive. The Committee fail to understand reasons for the delay. They are of the opinion that the Department should take adequate steps to complete the formulation of a comprehensive and integrated Spectrum Act which would put in place a much required statutory mechanism for spectrum management and licensing in the country. With technological advancement in the field of telephony, the matter needs urgent attention to avoid ambiguity, confusion and poor management of an important national asset.

Reply of the Government

i) It may be mentioned that Vide OM No.30-32/2011-Admn-I dated 6th May, 2011, the Government constituted a committee for formulation of "Spectrum Act", under the Chairmanship of Hon'ble Justice Shivraj V. Patil (Former Judge of Supreme Court of India) consisting of four members and a Member Secretary. The committee was to submit its report by 30th September, 2011.

ii) Subsequently, the Chairman of the committee, Hon'ble Justice Shivraj V. Patil had informed that he will not be in a position to continue as Chairman of the Committee in the above said Committee for personal reasons.

iii) It is mentioned in this context that the draft National Telecom Policy (NTP) 2011 included "To enact a separate Spectrum Act which inter-alia deals with all issues connected with wireless (spectrum) licences and their terms and conditions including re-farming / withdrawal of allotted spectrum, spectrum pricing, cancellation or revocation of spectrum licence, exemptions on use of spectrum, spectrum sharing, spectrum trading etc.", which has not been approved by the Government in the final NTP 2012.

iv) It has been further decided that perhaps the matter need not be pursued further at this stage. The issue could be reviewed at an appropriate time later as and when considered necessary

CHAPTER-IV

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH GOVERNMENT'S REPLIES HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Observation/Recommendation (Para No. 7.5)

The Committee have learnt that presently there are 37,184 villages which aren't covered by any fixed, wireless or mobile telephone. To address the situation, as far as provision of fixed wireless or mobile coverage is concerned, the committee have been apprised about a proposal to launch a new scheme to facilitate creating infrastructure & provision of mobile communication services (including access & backhaul) in those villages which have hitherto not been covered by any service provider. In addition, there is another plan to cover the Left Wing Extremism (LWE) affected locations through a scheme under Universal Service Obligation Fund (USOF). In this regard, the committees note that the tender for this scheme was to be floated by 20 February, 2012 & the process of evaluation & signing of agreements with the successful bidders for provision of services was likely to be finalized by 31 May, 2012. The committee would like to be apprised of the status of the scheme at the action taken stage. In this context, the committee, however observed that in view of the declining percentage share of sole public telecom service provider, i.e. BSNL, in wireless connections in the last five years i.e. from 29.26 per cent at the end of March 2007 to 11.02 per cent at the end of December, 2011, all expectations now rest with the private service providers, who have made significant contribution in the expansion of rural wireless service from a percentage share of 70.74 at the end of March, 2007 to 88.98 per cent as on December, 2011. Nevertheless, the committee felt that the penetration of BSNL in remote & rural areas is still substantial & thus desires that BSNL should be made the principal service provider in the newly launched schemes for rural areas. They expect BSNL to live upto the expectations of the people & increase the momentum of their efforts to provide connectivity in these areas at all costs. Further, the committee are also of the opinion that since BSNL got the 3G spectrum & Broadband Wireless Access (BWA) in October 2009, which was one year ahead of the other service providers, they should have capitalized on the facility provided by the Government and should have by now made a better break-through in increasing the wireless connectivity in these 37,184 uncovered villages. The fact that this was not done is either complacency or callousness on the part of BSNL. The committee desire that the reasons for BSNL not making the desired progress in this these villages should be investigated & responsibility fixed in this regard. The committee, also recommends that the schemes to have mobile telephony in the uncovered villages & Left Wing Extremism (LWE) affected areas must be launched expeditiously without further delay & the committee apprised of the same.

Reply of the Government

The comments of BSNL on the various observations/comments made by the Committee are given below

(a) Observation of the Committee: "…another plan to cover the LWE affected locations through a scheme under USOF. ….tender for this scheme was to be floated by 20 February 2012 & the process of evaluation & signing of agreements with successful bidders for provision of agreements with the successful bidders for provision of services was likely to be finalized by 31 May 2012. The committee would like to be apprised of the status of the scheme at the action taken stage."

ATN:

Ministry of Home Affairs (MHA) has identified and conveyed to Department of Telecommunications (DoT) 2199 locations in 9 states which are affected by Left Wing Extremism (LWE) and do not currently have any coverage by any service provider.

These locations have been identified for installing towers and mobile equipment keeping in view the security and maintenance considerations. Mobile services shall be available for general public as well as security personnel around these locations. Out of these 2199 sites, BSNL has already installed Towers at 363 locations (3 in Andhra Pradesh, 351 in Chhattisgarh, 3 in Maharashtra and 6 in Madhya Pradesh).

It has been proposed to seek approval of the Cabinet to extend USOF Subsidy Support to Bharat Sanchar Nigam Limited (BSNL) on nomination basis, for providing & managing Mobile Services in Left Wing Extremism (LWE) affected areas. Draft Cabinet Note has been circulated to concerned Ministries. Department of Expenditure has recommended that the proposal be formulated for appraisal of the EFC (Expenditure Finance Committee). Planning Commission has suggested that "before giving the work to BSNL on nomination basis, it may be prudent to float a tender quickly and if no response is received then take up this work on nomination basis through BSNL". Meanwhile, Telecom Commission has desired detailed feasibility report (DFR) of the project. Ministry of Home Affairs has reiterated their concurrence to nominate BSNL for implementation of this project. The DFR has been submitted by BSNL.

(b) Observation of the Committee: "the committee, however observed that in view of the declining percentage share of sole public telecom service provider, i.e. BSNL, in wireless connections in the last five years i.e. from 29.26 per cent at the end of March 2007 to 11.02 per cent at the end of December, 2011, all expectations now rest with the private service providers, who have made significant contribution in the expansion of rural wireless service from a percentage share of 70.74 at the end of March, 2007 to 88.98 per cent as on December, 2011"

ATN:

The reasons for decline in market share is not attributed due to BSNL's less aggressive role in rural areas. It is predominantly because of:

(i) Stiff Competition in the Mobile Sector: The Mobile telephone market has become very competitive with an average 8-10 operators per Circle introducing very aggressive tariff plans and bringing innovative packages. With reduced ARPU, the margins of the operators have been severely impacted.

(ii) Fixed to Mobile substitution: The widespread availability of mobile services coupled with convenience of operation and affordable tariff has led to proliferation of mobile services. Fixed line subscribers are churning to avail wireless services either from BSNL or other private operators.

(iii) Delay in Capacity Augmentation: Private players reorient themselves to changing concision and procure equipment for providing services rapidly; that is often not possible for BSNL, which has to follow prescribed procedures. As a result BSNL faced major problem in its augmentation of GSM capacity

(c) Observation of the Committee:"Nevertheless, the committee felt that the penetration of BSNL in remote & rural areas is still substantial & thus desires that it should be made the principal service provider in the newly launched schemes for rural areas."

ATN:

BSNL is committed to fulfill social commitments of the country provided adequate compensation for its economic viability is made through USOF.

(d) Observation of the Committee:"….BSNL got the 3G spectrum & BWA in October 2009, …..capitalized on the facility provided by the govt. & should have by now made a better break-through in increasing the wireless connectivity in these 37,184 uncovered villages…..reasons for.. not making the desired progress in these villages….."

ATN:

The status of deployment of 3G & BWA Network of BSNL is indicated below:

a) Status of 3G Network:
BSNL was allotted the 3G spectrum on 11th August '08 & the service was launched on 27th February '09. In the first phase 760 cities/towns were planned to be covered & as on 31.03.2012, 963 cities have been covered with 3G network, covering all DHQs, commercially important towns & tourist places with the 3G network having 19298 Node 'B' presently. 3G services are presently not being planned in villages.

b) Status of BWA Network:
The BWA network was planned to provide broadband connectivity to one lakh Community Service Centres, a initiative by Department of Electronics and Information Technology. There is no such plans to provide wireless connectivity to all remaining uncovered villages through the aforesaid BWA deployment.

Observation/Recommendation (Para No. 7.6)

From the Telecom Service Provider-wise analysis of the mobile outreach in rural areas, the Committee note that Bharti Airtel has played a significant role in these areas. Out of the total wireless connections provided in the country, its percentage share is 23.62 per cent followed by BSNL (11.02 per cent), Vodafone Essar (18.71 per cent), Idea Mobile Communications (18.92 per cent), Reliance Telecom Ltd. (10.85 per cent) and Aircel (7.06 per cent) as on 31st December 2011. The Private Telecom Service Providers which are not operating in rural areas so far include Loop Mobile, Etisalat DB Telecom and Videocon. The Private Telecom Service Providers which are making a break through in the rural areas include Sistema Shyam Teleservices Ltd., HFCL Infotel Ltd., S.Tel, Uninor etc. In this regard the Committee desire the Department to specifically ensure that all the Telecom service Providers should ensure the conformity of the terms and conditions given in the license agreements for rollout obligations of 2G and 3G Spectrum so that the spectrum provided are effectively utilized for expansion of telecom services in rural and remote areas too. At the same time the quality of service provided by the various service providers should be satisfactory. Although a number of measures are reportedly being taken by them, the Committee desire that they should continuously strive to leverage their quality of service to costumers including those in rural and remote areas so that their is sustained and healthy competition amongst the various Telecom Service Providers in the country which will ultimately benefit the rural customers. The Committee would like to be furnished with a status report on the quality of service provided by various service providers in the rural areas in the last three years.

Reply of the Government

Telecom Regulatory Authority of India (TRAI) in accordance with the provisions under Section 11(i) (b) (v) of TRAI Act, 1997 (amended) , which mandate the TRAI to " lay down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of telecommunication service", has laid down the quality of service standards for Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service (CMTS) through Regulations issued from time to time. These regulations provide for network centric and customer centric parameters as well as parameters for assessing customer perception of service through survey. These parameters are for assessing the performance of service providers for service area as a whole. However, in the case of Basic Telephone Service (Wireline) there is a parameter '% Fault repaired within 5 days (For rural and hilly areas)' to assess the performance of operators in the repair of faults in rural and hilly areas.

TRAI monitors the performance of service providers against the laid down benchmarks through quarterly Performance Monitoring Reports (PMRs) and monthly congestion reports submitted by the service providers. TRAI also undertakes audit and assessment of quality of service through independent agencies. The customer perception of service is also assessed through periodic survey conducted by independent agencies. The quarterly PMRs, monthly congestion reports and the report of the audit survey agencies are published through press releases and though

TRAI website for information of stakeholders. Since the performance of service providers are assessed for service area as a whole, no separate information for rural areas is available in these reports, except those relating to fault repair in rural and hilly areas for Basic Telephone Service (Wireline). However, it may be mentioned that during audit and assessment of quality of service and assessment of customer perception of service through survey by Independent Agencies the exchanges covered in the audit include rural exchanges and also the customers from the rural areas are surveyed to assess their perception of service. TRAI is in the process of implementing random real time monitoring of quality of service of cellular mobile service and this could provide separate information for rural and hilly areas.

From these reports, it is seen though there are cases of non –compliance with the benchmarks, the service providers are generally meeting the benchmarks for various quality of service parameters in different service areas. In the case of CMTS, the non-compliance with benchmark is observed mostly in respect of the parameters (i) Worst affected cells having more than 3% TCH(call drop) rate, (ii) point of Interconnection Congestion, (iii) Percentage of calls answered by the operators and (iv) Termination/ Closure of service. In the case of Basic Telephone Service, the non-compliance with the benchmark is observed mostly in respect of the parameters (i) Fault Incidences and Repair, (ii) Response time to the customer for assistance and (iii) Termination and closure of service.

In the case of performance against the parameter '% Fault repaired within 5days (For rural and hilly areas)', it is seen that 21 licensees out of 88 licensees (service area –wise) for year 2010, 18 licensees out of 88 licensee (service area-wise) for the year 2011 and 17 licensee out of 88 licensees (service area-wise) for the year 2012 are not meeting the bench marks.

Observation/Recommendation (Para No. 7.11)

The Committee, while analyzing the performance of various Telecom Service providers in the network expansion, observe that as on December,2011, PSU`s i.e. BSNL and MTNL still have a large share of nearly 80.95 percent in the wire line segment. The Private Telecom Service Providers, on the other hand, have a share of 88.54 per cent in the wireless segment. As on December 2011, Bharati Group has the highest share of 19.65 per cent in the wire less segment followed by reliance group (16.79 per cent) and Vodafone Essar (16.53 per cent). In this segment the contribution of PSUs is to the tune of 11.46 per cent. Over all, Bharati Group with 19.32 per cent of the total telephones in the country has the largest share followed by reliance Group(16.33 per cent), Vodafone Group (15.95 percent) BSNL (12.93 per cent) and Idea group (11.48 per cent). As on December,2011, the Public telecom Service Providers witnessed an increase of 0.51 lakh phones whereas the Private telecom Service providers added 87.12 lakh phones in their kitty. During the period from April to December,2011, addition in the number of phone serviced by the Public Telecom Service Providers was 29.15 lakh as against 773.05 lakh by the Private Telecom Service Providers. Consequently, the share of Private telecom Service Providers in the number of telephones have gone up to 86.09 per cent (7976.31 lakh) in December,2011 while the share of Public Telecom Service Providers is pegged at

13.91 per cent (1289.17 lakh only) The committee are concerned to note that although there has been a stupendous growth in the telecom sector in India in the last five years, the share of Public Telecom Service providers has declined from 34.69 per cent at the end of 2007 to 14.42 per cent at the end of July,2011. The share of Private Telecom Service Providers on the other hand has phenomenally increased to 85.5.per cent. Such an increase on the part of the Private telecom Service providers has been mainly in the wireless segment, where MTNL and BSNL have lagged far behind. The Committee regret to note further that during the last five years; BSNL and MTNL had lost 16.64 per cent of their share in the telecom market. They feel that such a loss is a matter of serious concern and needs to be pondered over. The Committee also like to highlight the fact that actual service provider to the subscriber by both the PSUs particularly in semi-urban and rural areas, needs to be improved so that subscribers refrain from porting out of their network or subscribing to another connection from a different Service Provider. The Committee, therefore, recommend that BSNL and MTNL should focus on the technological up gradation and innovative marketing strategies to appropriately cater to the customer requirements so that their strategies to improve network expansion catches up to the Private Telecom Service Providers especially in wireless segment in the coming years. Such efforts on the part of the Telecom PSUs particularly BSNL should complement their social obligation of rural telephony. The Committee would like to be informed of the specific steps taken by BSNL and MTNL in this regard.

Reply of the Government

BSNL

The decline in the market share is not directly attributed to BSNL's less aggressive role in Indian telecom market. It is predominantly because of:

(i) Stiff Competition in the Mobile Sector: The Mobile telephone market has become very competitive with 8-10 operators per Circle, on an average, introducing very aggressive tariff plans and bringing innovative packages. With reduced ARPU, the margins of the operators have been severely impacted.

(ii) Fixed to Mobile substitution: The widespread availability of mobile services coupled with convenience of operation and affordable tariff has led to proliferation of mobile services. Fixed line subscribers are turning to wireless services either from BSNL or other private operators.

(iii) Delay in Capacity Augmentation: Private players reorient themselves to changing situation and procure equipment for providing services rapidly; that is often not possible for BSNL, which has to follow prescribed procedures. As a result BSNL has faced major problem in its augmentation of GSM capacity.

The steps initiated by BSNL to upgrade its telecom network are given below.

(i) **Upgradation of C-DOT wireline infrastructure:** In its drive to replace the entire circuit switched equipment/ digital telephone exchanges by IP enabled NGN equipments, BSNL is in process of replacing C-DOT exchanges with

NGN solution through its MAX-NG project. The migration shall result in reduction of operational cost, along with ease of induction of new VAS to the fixed line customers. Circles are also provided with UG PIJF cable & Caller Line Identification Phones (CLIP) to facilitate Enhanced Customer Satisfaction for our fixed line customers.

(ii) **Deployment of new technology state of art exchanges and Next Generation Networks (NGN)/ IP Multimedia Subsystem (IMS):** To upgrade its new technology wireline infrastructure, BSNL has initiated process for upgrading the network to IP enabled NGN equipments controlled by IP Multimedia Sub-system which will enable seamless delivery of bandwidth intensive service in a converged manner across fixed and mobile network.

(iii) **Augmentation of GSM Network:** BSNL has initiated process for augmentation of GSM network capacity by additional 15 Mn lines on countrywide basis based on the latest specification of 3GPP (3rd Generation Partnership Project).

The marketing strategies initiated by BSNL to appropriately cater to the customer requirement especially in wireless segment are indicated below.

(i) Aggressive Push on Data Usage and Value Added Services:
   a. Aggressively push smart devices bundled with 3G Data Plans as well as wireless broadband with 3G and EvDO data cards.
   b. Offering innovative new services in mobile such as m-financial services, m-health services and rural VAS etc

(ii) Ensuring competitive products for all customer segments.

(iii) Increasing number of Franchisees / Retailers and providing thrust on sale.
   a. Availability of products in organized retail stores, malls, neighborhood markets etc.
   b. Implementing agreement with Post department to increase rural reach

(iv) Sustained operational focus on service delivery and customer care:
   a. Payment of bills, Top up, Recharging are available on-line.
   b. Set up of outsourced SLA based call centres
   c. Special camp to interact with customers willing to port out for their retention by sorting out their problems
   d. Drive test carried out periodically to optimize the network.

MTNL

Delhi and Mumbai are the most competitive telecom licence service areas. In Delhi, there are 15 mobile operators (GSM+CDMA) and 4 basic operators whereas in Mumbai, there are 14 mobile operators (GSM+CDMA) and 4 basic operators. The subscriber base for the MTNL's various services for the past 5 years is as under:

	2007-08	2008-09	2009-10	2010-11	2011-12
Total Wire-line Connections (including WLL fixed connections)	38,07,081	36,94,970	36,23,110	35,81,148	35,65,896
Total Wireless Connections including WLL mobile	34,02,767	43,60,748	49,67,660	53,61,827	57,24,231
Broadband Subscribers	5,70,591	6,95,500	8,15,830	9,42,317	10,40,191
Total	77,80,439	87,51,218	94,06,600	98,85,292	1,03,30,318

It is submitted that despite facing fierce competition, a growth of over 5% has been maintained in the overall subscriber base.

Some of the reasons for declining market share of MTNL vis-a-vis private players are as under:

1. MTNL is operating telecom services only in two cities of Delhi and Mumbai and does not have a PAN India presence therefore it becomes difficult for MTNL to match the various service / tariff packages as can be done by a Pan India Operator.
2. MTNL is confined to Delhi and Mumbai and is not able to operate in Tier-II and Tire-III cities where maximum growth is taking place. This restriction on service area also impacts MTNL in another way. While it's competitors having Pan India presence can offer discount on calls to their network elsewhere in the country, MTNL cannot offer similar discounts being restricted to Delhi and Mumbai service areas.
3. Being a Public Sector Company, MTNL has to follow the Govt. guidelines on the procurement for new equipment and expansion / up gradation of existing equipment. This results in multiplicity of vendor for the same kind of equipment leading to inter operability/integrations issues thus resulting in delay in commencing. Further, since technology is changing very fast in the telecom sector and new applications / services are being developed very frequently, it

is not possible for MTNL to induct the new developments due to absence of price reference in the tender.

It is submitted that even though there is continuous growth in MTNL's wireless subscriber base in absolute terms, there is decline in market share due to increase in competition & number of service provider in Delhi & Mumbai. With entry of new players, market share of existing operators get shared and market share of some of our competitors has also declined. MTNL gained market share in mobile from incumbent operators when it entered market.

Despite being a late entrant in the GSM segment, MTNL mobile subscriber base has grown to over 5.6 Million as on March 2012. It is further submitted that MTNL is making its best efforts to sustain the growth in its GSM Services despite facing fierce competition in its service areas where the tele-density is already well over 150%.

With regard to reduction in Wired line percentage share, it is submitted that there is a general decline in the demand for the fixed lines telephone as there is a tendency to shift to mobile services because of its sheer convenience with regards to affordability and availability. This is worldwide trend that when liberalization takes place and monopoly is removed in telecom sector there is a churn in fixed line subscribers of incumbent operator.

MTNL has been continuously making its best efforts to arrest the surrender of land line connections. Steps have been taken to arrest & reverse the negative Growth in Landline Telephone Services. With the following concerted efforts, the negative growth has been brought under 0.5% and the positive growth is expected to be achieved in next 2 years:-

- Rollout of FTTH (Fibre to the Home) Services.
- Migration of TDM switching network to NGN / IP network progressively during 12th five year plan period. With the proposed migration, a host of value added services will be made available to landline subscriber also.

MTNL is giving major thrust on the expansion of capacity for GSM and Broadband to cater the further demand. Following actions are being taken to generate fresh demands by providing quality services, customer care & satisfaction, introduction of new services / schemes and innovative marketing strategies.

(i) Expansion / augmentation of existing 3G network to (High Speed Packet Access (HSPA+): At present MTNL's 3G network is HSDPA (High Speed Data Packet Access) with download speeds up to 3.6 Mbps and uploads speed upto 384 Kbps. After upgradation download speed upto 21.1 Mbps and upload speed upto 5.76 Mbps will be supported by the network.

(ii) Deployment of new technology state of art exchanges and Next Generation Networks (NGN)/ IP Multimedia Subsystem (IMS) : MTNL has planned to replace its TDM (Time Division Multiplexing) Fixed line switches with NGN / IMS switch in phased manner during 12th Five year plan. Introduction of NGN / IMS based services will not only help MTNL in saving Opex, space but also enable MTNL to offer all data / video centric services which are currently enjoyed by Mobile

subscribers to the fixed line subscribers also ultimately leading to convergence of fixed and mobile services.

(iii) **To bring optical fiber near / to subscriber's premises by introducing FTTC (Fibre to the Curve) and reaching homes thereafter with FTTH (Fibre to the Home) on PON (Passive Optical Network) technology:** MTNL is adding optical fibre in its access network and is deploying FTTH based on GPON (Gigabit Passive Optical Network). This will enable MTNL to provide access to this latest technology to its' esteemed customers with very high bandwidth.

(iv) Expansion of broadband network to provide bandwidth on demand by deployment of ADSL (Asymmetric Digital Subscriber Line) / VDSL (Very High Data Rate Digital Subscriber Line) , MLDN (Managed Leased Data Network) / PON etc. Introduction of more broadband services such as video on demand, video conference for public.

(v) Expansion of high capacity IP-MPLS (IP Multiprotocol Label Switching) based backbone network to migrate to NGN (Next Generation Network) for establishing unified network for speech and data. Introduction of VOIP in the backbone and access network.

As far as marketing strategies is concerned, MTNL has always been a pioneer in bringing new technologies and provides a bouquet of telecom services. To facilitate marketing of its services, MTNL has branded its services. MTNL has put into gear the network of marketing channels. Apart from its own Customer Service Centers, MTNL's Business Associates & Distributors for postpaid & pre-paid services have been established. They are backed by 24 hrs customer care. All forms of media, print, electronic, outdoor, internet, Direct Mailing, exhibitions, events, public relations etc. are being explored to have an integrated communications setup to address different segments of customers.

Observation/Recommendation (Para No. 7.19)

The Committee note that with the Increasing public concern against the harmful effects of Electromagnetic Force (EMF) radiation from mobile towers on human health, the Telecom Enforcement Resource & Monitoring (TERM) cells were entrusted with the work of cross checking the compliance of (EMF) radiation norms as prescribed by the Government in the year 2010. The Committee note that the specific procedures for the same along with testing fee have since been formulated by the Department. The Department, while deposing before the Committee, informed that Guidelines are in place as per the norms prescribed by International Commission on Non-lonizing Radiation Protection (ICNIRP) and accordingly directions in this regard were issued to mobile operators by inserting a clause in the Access Service Licenses through an amendment dated 4 November, 2008. According to the said clause, a licensee shall conduct audit and provide self certificates annually as per procedure prescribed by Telecommunication Engineering Centre (TEC) / or any other agency authorized by Licensor from time to time, for conforming to limits/levels for antennae (Base Station Emissions) for general public exposure as prescribed by ICNIRP. In this regard, DoT has directed all Cellular Mobile Telephone Service

(CMTS) Unified Service (UAS) licensees for compliance. Further, the Committee note that all new BTS sites should start radiating, only after the self certificate has been submitted to relevant TERM Cells.

The Committee have learnt that regarding the submission of self certificates by the Telecom Service Providers with regard to their BTS, operators were directed to submit self certificates against all BTSs by 31 March, 2011. However, self certification for compliance of radiation norms regarding 18123 BTSs are yet to be submitted by the various Telecom Service Providers to their respective Cells. The Committee would like that the Department should submit a list of those service providers to them who are yet to submit the requisite self certificates. They also recommend that all the Telecom Service Providers should be directed to expeditiously submit the self certification against all the remaining BTSs. The Committee also note that while there is a provision in the license agreement stating that if the self certificates are not submitted by a Telecom Service Provider, it should be treated as non compliance and the penalty prescribed will be imposed. However, the modalities of imposition of penalty for non submission of self certificates has not been finalized. The Committee strongly recommend that the Department should take earnest steps to finalize the modalities for imposition of penalty at the earliest.

The Committee have further been informed that as on 30 September, 2011, TERM Cells had carried out the testing of radiation levels for 7120 BTSs out of the total of 6,63,000 BTSs for which the telecom service providers had submitted the self-certification to their respective TERM Cells. Although it was found that the radiation levels of all the tested BTSs were in compliance with ICNIP prescribed levels, the Committee are disturbed to note that only 1.07 per cent out of the total self certified BTSs submitted by the various Telecom Servicer Providers were tested by the respective TERM Cells of DoT. The Committee feel that such a minuscule percentage for checking compliance of radiation norms by TERM Cells, may perhaps, fail to give the real picture. As the Department had also cited shortage of staff as one of the constraints faced by TERM Cells. The Committee, therefore, infer that these cells may not be willing to take additional load of work due to non-availability of adequate staff. They strongly recommend augmentation of staff in TERM Cells so as to take initiative to test more BTS by the TERM Cells. Only then a stringent check can be made on the Telecom Service Providers for compliance of the norms, especially when several organisations, research bodies, stakeholders and individuals all over the world have strong views on the harmful effects of Electromagnetic Force radiation emanating from mobile towers and other equipment.

Reply of the Government

Self-certificates are to be submitted by the Telecom Service Providers (TSPs) once in two years for their BTSs (Base Transceiver Stations). The previous cycle has ended on 31.03.2011 and the current cycle will end on 31.03.2013. At the end of previous cycle self certificates were pending against 18123 BTSs. The TSP wise breakup of pendency as on 31.03.2011 is as below:

Sl. No.	Name of TSP (Generalised)	Number of self certificate pending as on 31-03-2011
1	AIRCEL/DISHNET	1052
2	Airtel/BHL	1168
3	BSNL	11745
4	Etisalat/Allianz	0
5	IDEA/ABTL	639
6	Loop	5
7	MTNL	0
8	QTL/HFCL	0
9	Reliance	162
10	SPICE TELECOM	0
11	SSTL (MTS)	551
12	STEL	0
13	TTSL/TTML	733
14	Uninor	612
15	Videocon	847
16	Vodafone	609
	Grand Total	**18123**

As the current cycle will end on 31.03.2013 the TSPs have to submit the self-certificates against their BTSs by this date, thus the pendency will be finalized after 31.03.13, however, monitoring of self-certificate submission is being done on monthly basis and as per the latest data, TSPs have submitted 722759 self-certificates against 732944 BTSs till 31.07.2012. Total 31033 BTSs have been tested so far and none of the BTS has been found exceeding the radiation limits so far.

DoT is in the process of formulating detailed guidelines / instructions in case of EMR violations including the non-submission of self-certificates in time and also for non-provision of signage by Telecom Service Providers.

For strengthening of TERM Cells, a detailed analysis of works entrusted to TERM Cells including EMR testing and the staff required for each of the work has been carried out and the proposal is under consideration.

CHAPTER – V

RECOMMENDATION/ OBSERVATION IN RESPECT OF WHICH FINAL REPLY OF THE GOVERNMENT IS STILL AWAITED

Observation/Recommendation (Para No. 7.3)

The growth of teledensity indicates the level of telecom penetration in a country. The Committee observe that the teledensity in India which was 18.22 per cent at the end of March, 2007 has increased to 76.86 per cent as on December, 2011. The Committee are glad to note that States / Telecom Circles like Himachal Pradesh (118.64 per cent), Punjab (112.70 per cent), Kerala (107.24 per cent), Tamil Nadu (105.96 per cent), Karnataka (94.3 per cent), Gujarat (87.67 per cent), Haryana (85.80 per cent) and Andhra Pradesh (79.65 per cent) have registered a higher teledensity than the National average of 76.86 per cent. However, States / Telecom Circles like Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, North Eastern States, Orissa, Rajasthan, Uttar Pradesh and West Bengal have much lower teledensity when compared to the National average. The Committee, therefore, recommend that the Department should immediately assess the performance of both the Public and Private Sectors with a view to identify the bottlenecks in these areas and find out effective ways and means to incentivize Telecom Service Providers so as to give requisite impetus to improve the network expansion in these States / Telecom Circles. Only then, the targets spelt out in the thrust areas for the telecom growth would be achieved and the benefits of various telecom reforms and measures would reach uniformly throughout the country. With the advent of Universal Access Service License (UASL) regime, the Committee hope that the Department should at least now take prudent steps to mobilize Private Telecom Service Providers in these areas too, else the teledensity in the underperforming States / Telecom Circles will continue to remain dismal as ever. The Committee recommend that the Department should ensure inclusion of a provision in the license agreement with the Liscensees to have their offices in the areas they serve so as to receive the complaints of the public about any deficiency in service and see that any such complaints are redressed expeditiously, especially by the private service providers. The Committee also recommend that it should be mandatory for the private service providers to attend the Telecom Advisory Committee meetings to ensure better responsibility and accountability from them as their role is increasing day by day in the telecom sector.

The Committee, while noting the drive for a special audit of certain private service providers which are alleged to have failed to disclose their actual earnings to the Department, recommend that such audit should be carried out regularly to ascertain the exact income earned by the various service providers which would help the Government in fixing accountability for their wrong disclosure of income. Meanwhile, the Committee would like to be apprised of the outcome of the said special audit.

Reply of the Government

The requisite ATNs will be forwarded in due course.

New Delhi;
22 April, 2013
Vaisakha 2,1935 (Saka)

FRANCISCO SARDINHA,
Chairman,
Committee on Estimates

Annexure-I

COMPARATIVE GROWTH OF WIRELINE VERSES WIRELESS CONNECTIVITY IN INDIA AND COUNTRIES LIKE U.S.A., U.K., AUSTRALIA, CANADA AND CHINA*

Prior to introduction of wireless telephone services in India in the year 1995, it was basic wireline (also called landline / fixed telephone) telephone service which requires a pair of physical wire from telephone exchange upto the premises of the subscriber. Hence, it necessitates extensive laying of underground copper cable network which is time consuming and therefore expansion of wireline network also takes a lot of time. As a result, there was huge gap between demand and supply of the telephone connections. There was a time, when one had to wait for many years to get a telephone connection. On the other hand, the roll-out of wireless network is faster as it doesn't involve individual cable laying for each of the subscriber. With its portability, convenience and '*always connected*'' features wireless telephone proved very useful and became very popular and preference of masses. With the introduction of wireless telephones in 1995, the growth of telephones was accelerated and was phenomenal. The growth has been driven by the rapid adoption of wireless services in the country, the competitive landscape that has been promoted in the sector and the various policy initiatives undertaken by the Government over the last few years. With this, India became one of the fastest growing network in the world and it's now second largest telephone network (also second largest wireless network) in the world only after China.

In the following section, an attempt has been made to compare growth of wireline vs wireless telephones in India vis-a-vis some of the other countries during the period from year 2000 to 2010. All figures mentioned are at the end of December.

INDIA

Wireline- During the period 2000 to 2010, the number of wireline subscribers continued to increase upto the end of 2005 and started declining thereafter. The wireline subscribers which were 32.44 million at the end of 2000, increased to 50.18 million by the end of 2005. Thereafter, as a result of continuous decrease, the number declined to 35.09 million by the end of year 2010**.**

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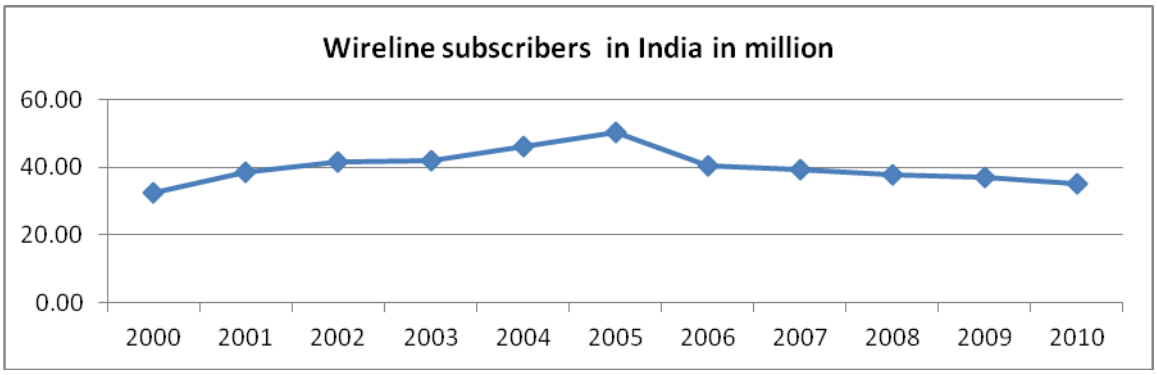
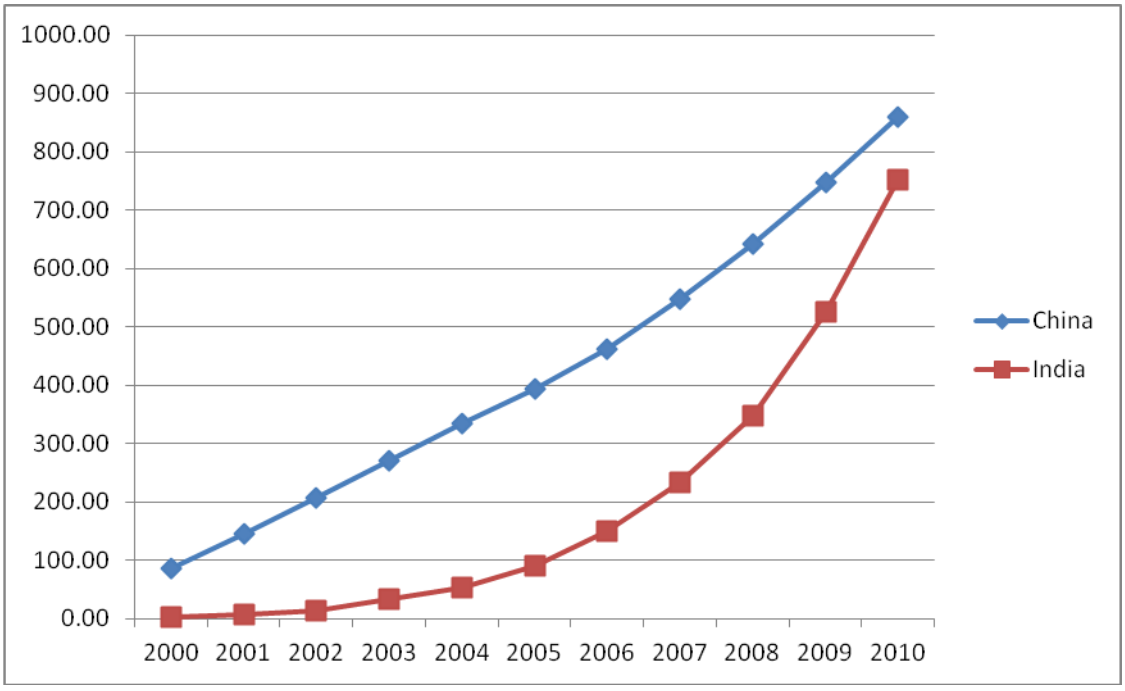
* Study undertaken by Economic Research Unit (ERU), Department of Telecommunication, Ministry of Communications & Information Technology.



Source: International Telecommunication Union (ITU).

Wireless- The mobile telephone service was introduced in the country in mid-nineties and it is continuously increasing since then. The increase was sharper after the year 2005. The number of wireless telephones which were 3.58 million at the end of 2000, increased to 90.14 million by the end of 2005. A total of 662.05 milion wireless telephones were added during the period 2005-2010, compared to the net additions of 86.56 million during the previous five years (i.e. 2000-2005), taking the total number of wireless telephones in India to 752.19 million by the end of 2010. By surpassing United States during the year 2008, India's wireless network became second largest in the world only after China. As is clearly visible from the following chart, it is growing at a faster pace and the gap between the size of the China and India's wireless network is reducing:

Wireless subscribers in million



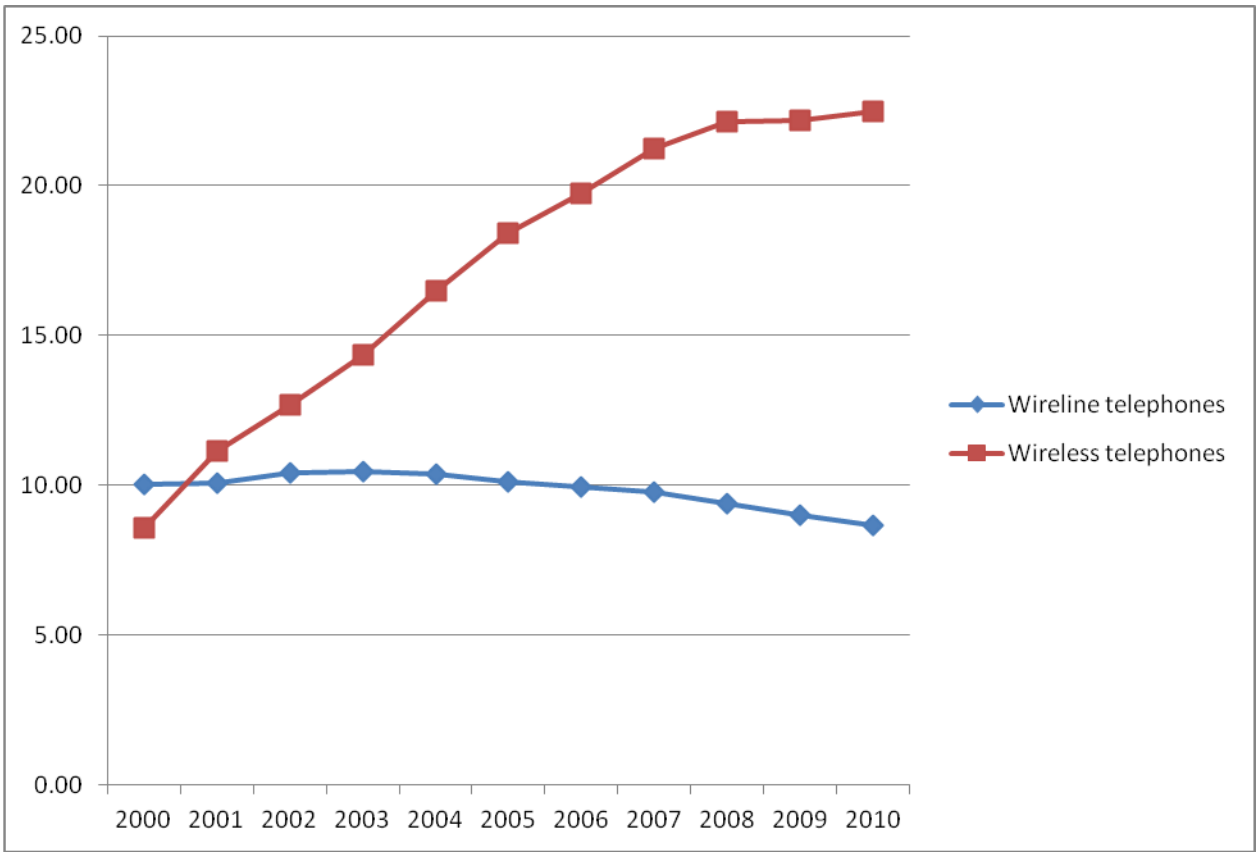
AUSTRALIA

Wireline- In Australia, the number of wireline subscribers continued to increase upto the end of 2003 and started declining thereafter. The wireline subscribers which were 10.46 million at the end of 2003, declined to 8.66 million by the end of year 2010 (Annexure).

Wireless- From the year 2000, the number of wireless subscribers continued to increase year after year. They grew rapidly between the year 2003 and 2007. Thereafter, the growth started slowing down. The number of wireless subscribers grew from 8.56 million at the end of 2000 to 14.35 million in 2003, 21.26 million in 2007 and 22.50 million by the end of year 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in Australia:

Subscribers in million (wireline vs wireless)



Source: ITU.

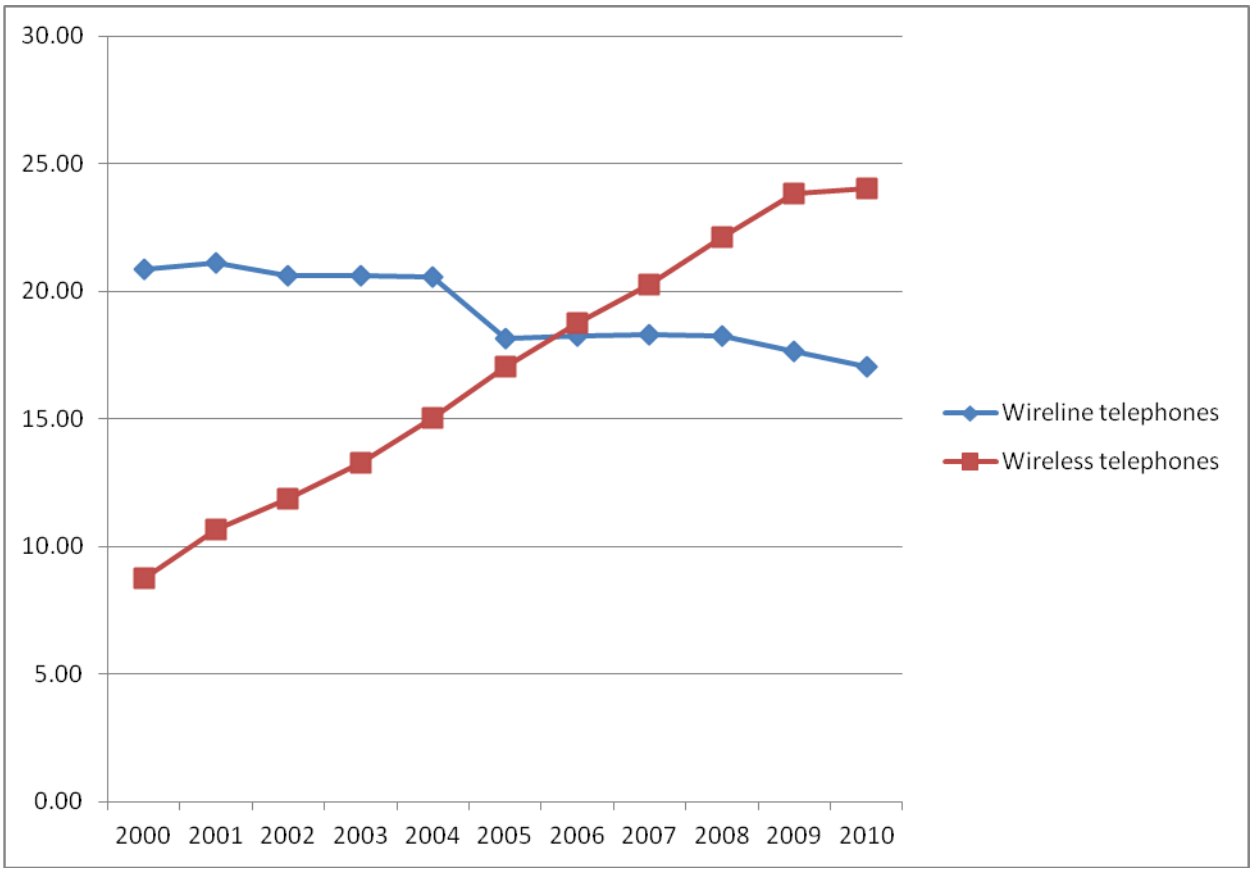
CANADA

Wireline- The number of wireline subscribers increased during the calender year 2001 and thereafter started declining. The decline was sharp during the calender year 2005 when the number of wireline subscribers decreased from 20.56 million to 18.15 million. The number of wireline subscribers further declined to 17.02 million by the end of 2010 (Annexure).

Wireless- The number of wireless subscribers increased year after year. They grew rapidly till the year 2009. Next year, the growth slowed down. The number of wireless subscribers grew from 8.73 million at the end of 2000 to 10.65 million in 2001, 23.81 million in 2009 and 24.04 million by the end of year 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in Canada:

Subscribers in million (wireline vs wireless)



Source: ITU.

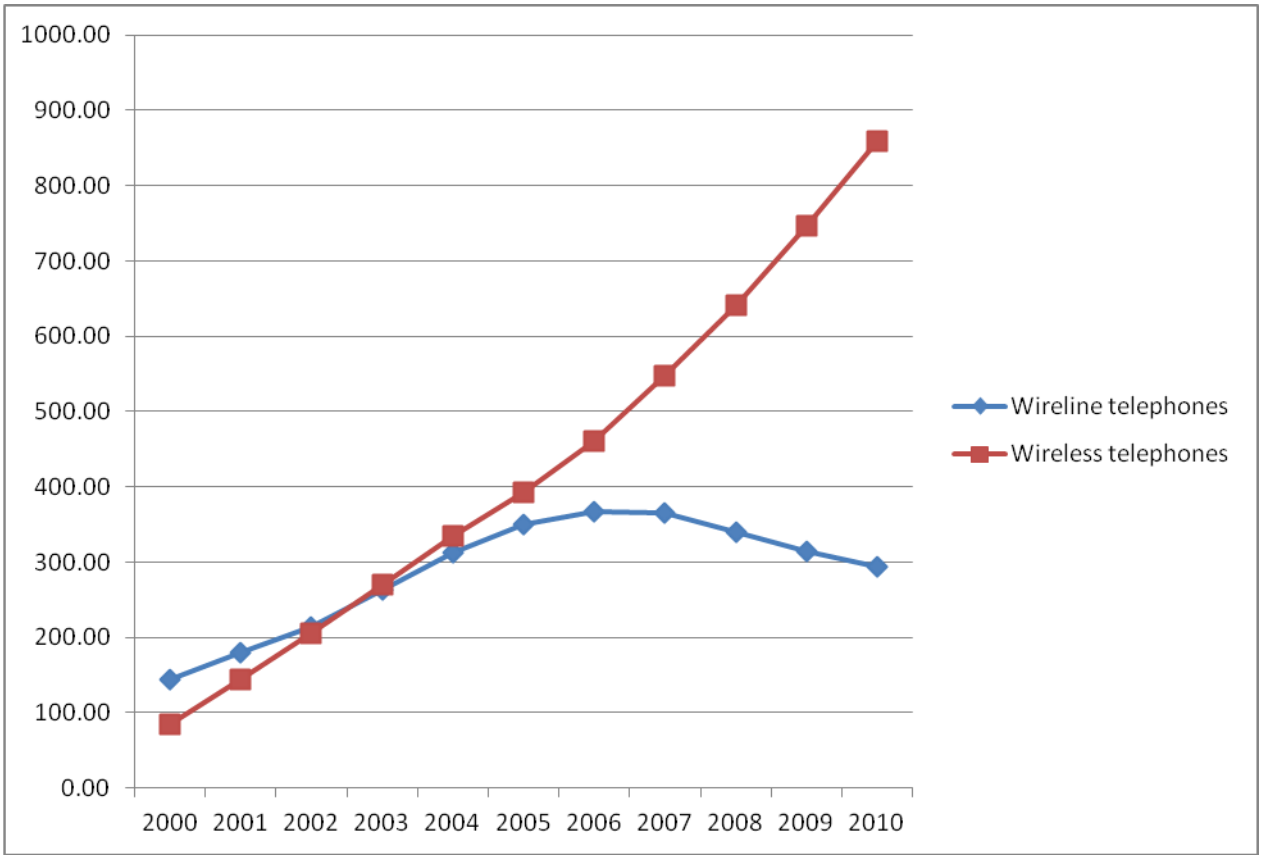
CHINA

Wireline- The number of wireline subscribers increased from 144.83 million at the end of year 2000 to 367.79 million by the end of year 2006 and thereafter started declining. The number of wireline subscribers which were 367.79 million at the end of 2006 declined to 294.38 million by the end of 2010 (Annexure).

Wireless- The number of wireless subscribers have been continuously increasing year after year. It is the largest wireless network in the world. The number of wireless subscribers which were 85.26 million at the end of 2000 increased to 859 million by the end of 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in China:

Subscribers in million (wireline vs wireless)



Source: ITU.

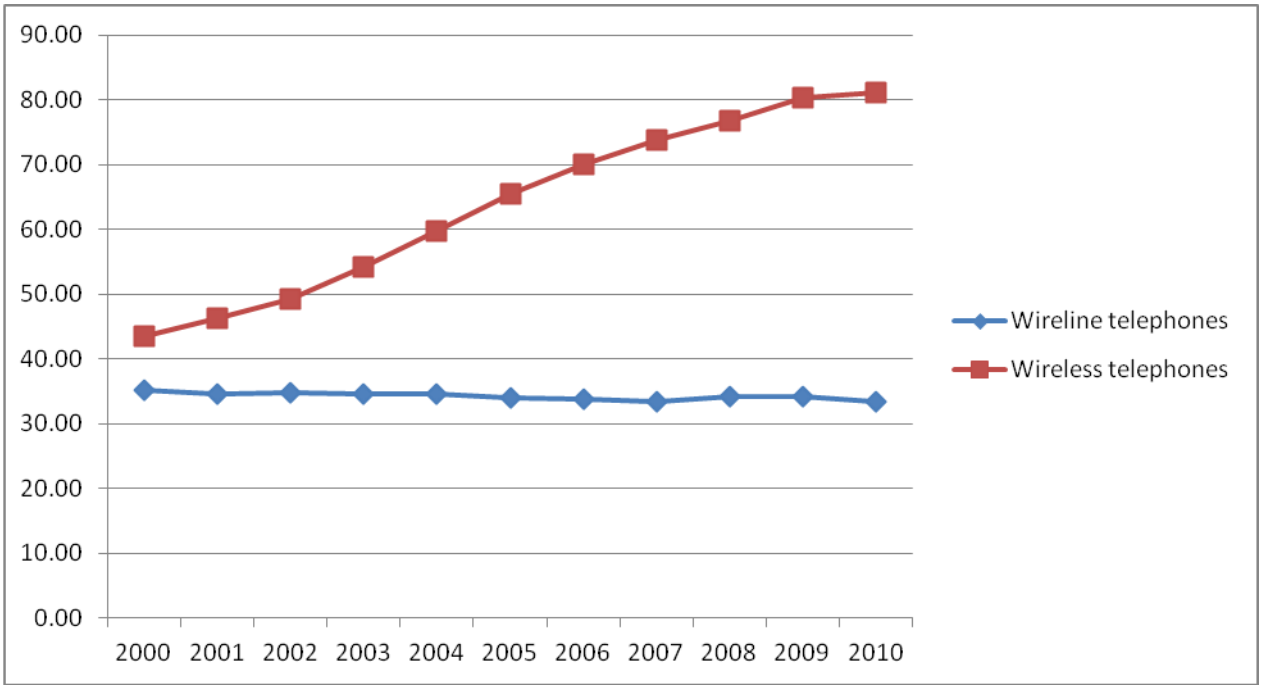
UNITED KINGDOM

Wireline- The number of wireline subscribers are gradually decreasing in UK. The number of wireline subscribers which were 35.23 million at the end of 2000 decreased to 33.39 million by the end of 2010.

Wireless- The number of wireless subscribers have been continuously increasing year after year. The number of wireless subscribers which were 43.45 million at the end of 2000 increased to 81.12 million by the end of 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in UK:

Subscribers in million (wireline vs wireless)



Source: ITU.

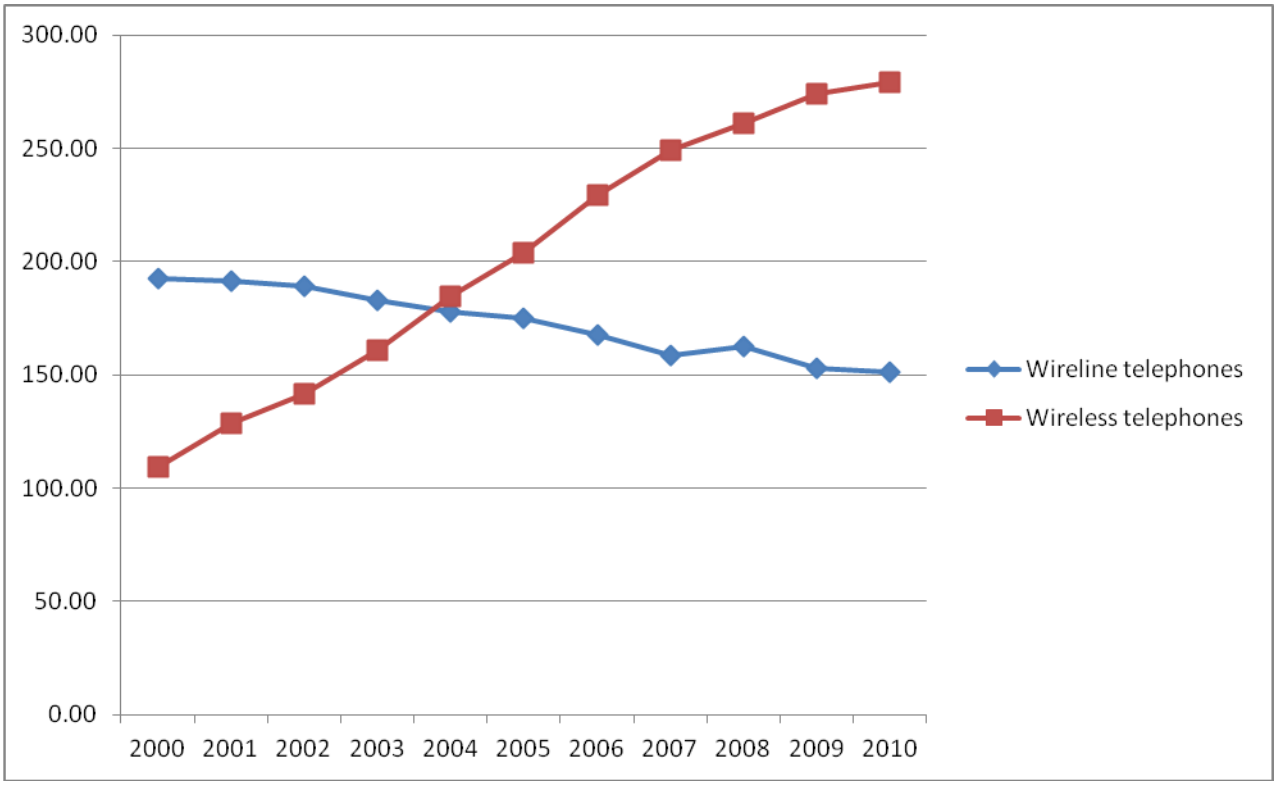
UNITED STATES OF AMERICA

Wireline- The number of wireline subscribers is continuously decreasing in USA except during the year 2008 when the number increased marginally. The number of wireline subscribers which were 192.51 million at the end of 2000 decreased to 151.17 million by the end of 2010.

Wireless- The number of wireless subscribers has been continuously increasing year after year. The number of wireless subscribers which were 109.48 million at the end of 2000 increased to 278.90 million by the end of 2010. A study by the Government of United States of America (USA) finds that a significant slice of American households now only use mobile phones and have abandoned landlines completely. Preliminary results from the July–December 2011 'National Health Interview Survey' in the USA indicate that the number of American homes with only wireless telephones continues to grow. More than 3 of every 10 American homes (34%) had only wireless telephones during the second half of 2011—an increase of close to 2.4 percentage points since the first half of 2011. In addition, nearly one of every six American homes (16%) received all or almost all calls on wireless telephones despite also having a landline telephone.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in USA:

Subscribers in million (wireline vs wireless)



Source: ITU.

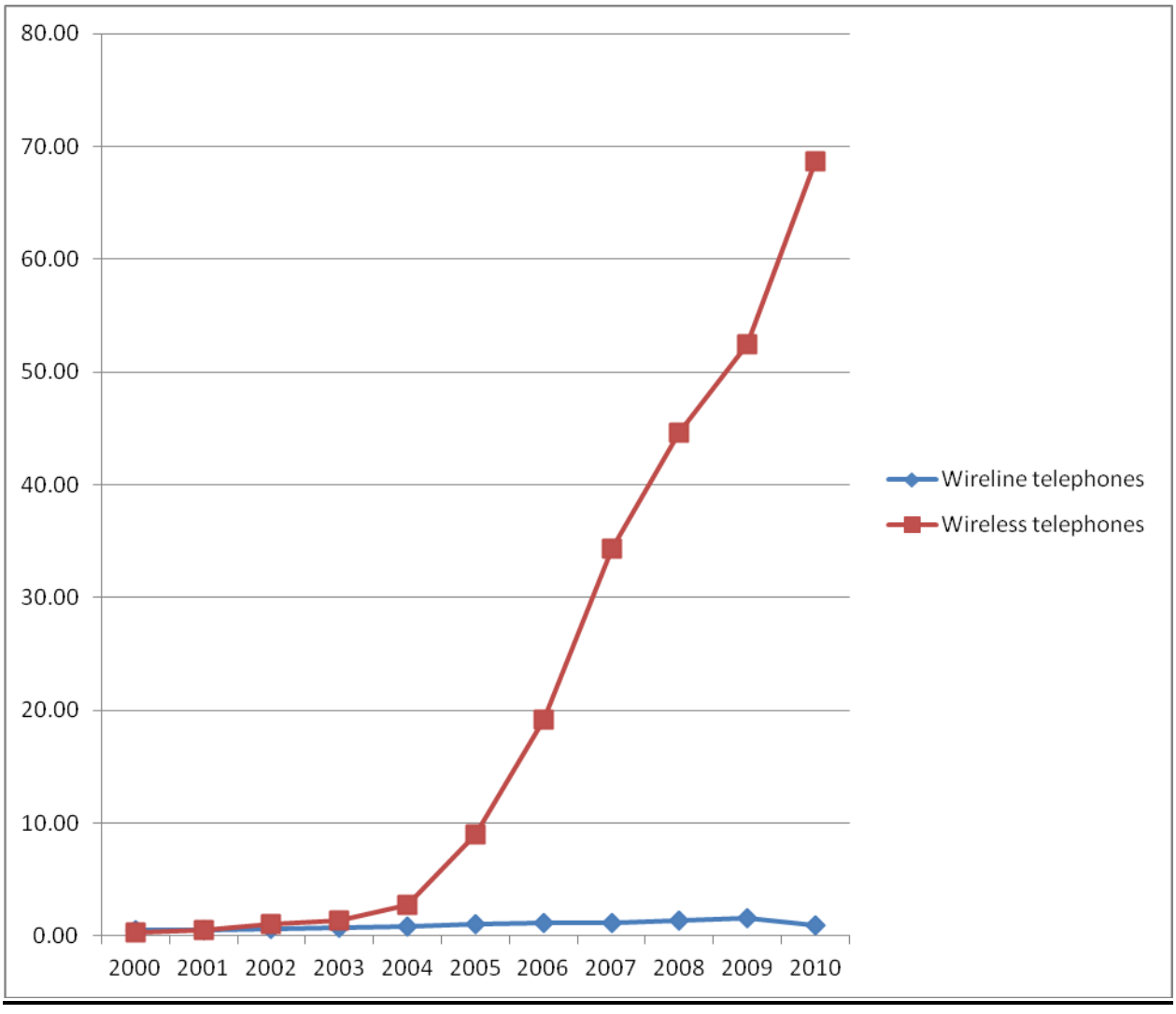
BANGLADESH

Wireline- The number of wireline subscribers in Bangladesh continued to increase till the end of year 2009 and next year, it declined. The number of wireline subscribers increased from 0.49 million at the end of 2000 to 1.52 million by the end of 2009 and declined to 0.90 million by the end of the year 2010.

Wireless- The number of wireless subscribers has been continuously increasing since 2000. The number of wireless subscribers which were 0.28 million at the end of 2000 increased to 68.65 million by the end of 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in Bangladesh:

Subscribers in million (wireline vs wireless)



Source: ITU.

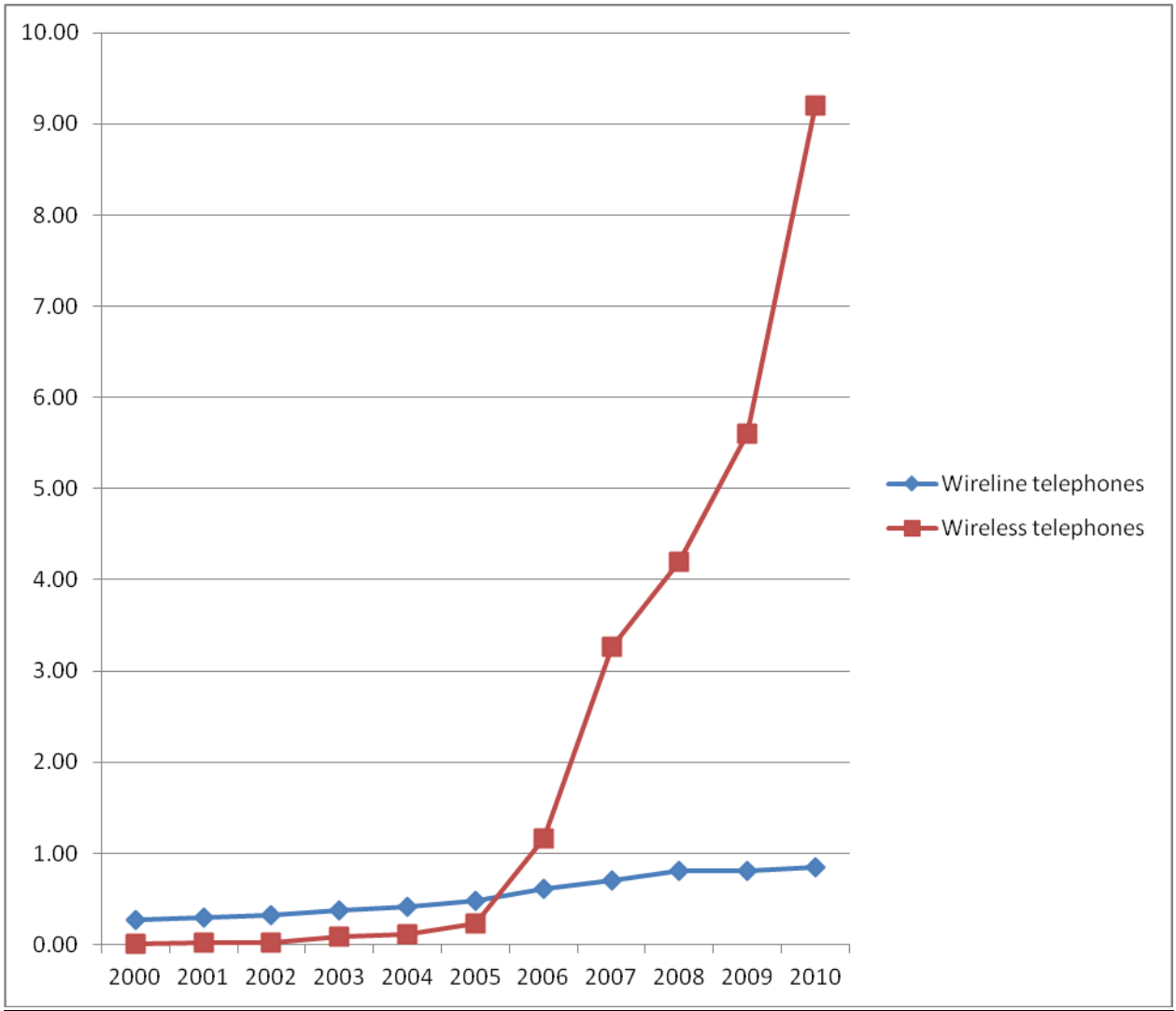
NEPAL

Wireline- The number of wireline subscribers in Nepal are continuously increasing. The number of wireline subscribers increased from 0.27 million at the end of 2000 to 0.84 million by the end of the year 2010.

Wireless- The number of wireless subscribers has also been continuously increasing since 2000. The number of wireless subscribers which were 0.01 million at the end of 2000 increased to 9.20 million by the end of 2010.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in Nepal:

Subscribers in million (wireline vs wireless)



Source: ITU.

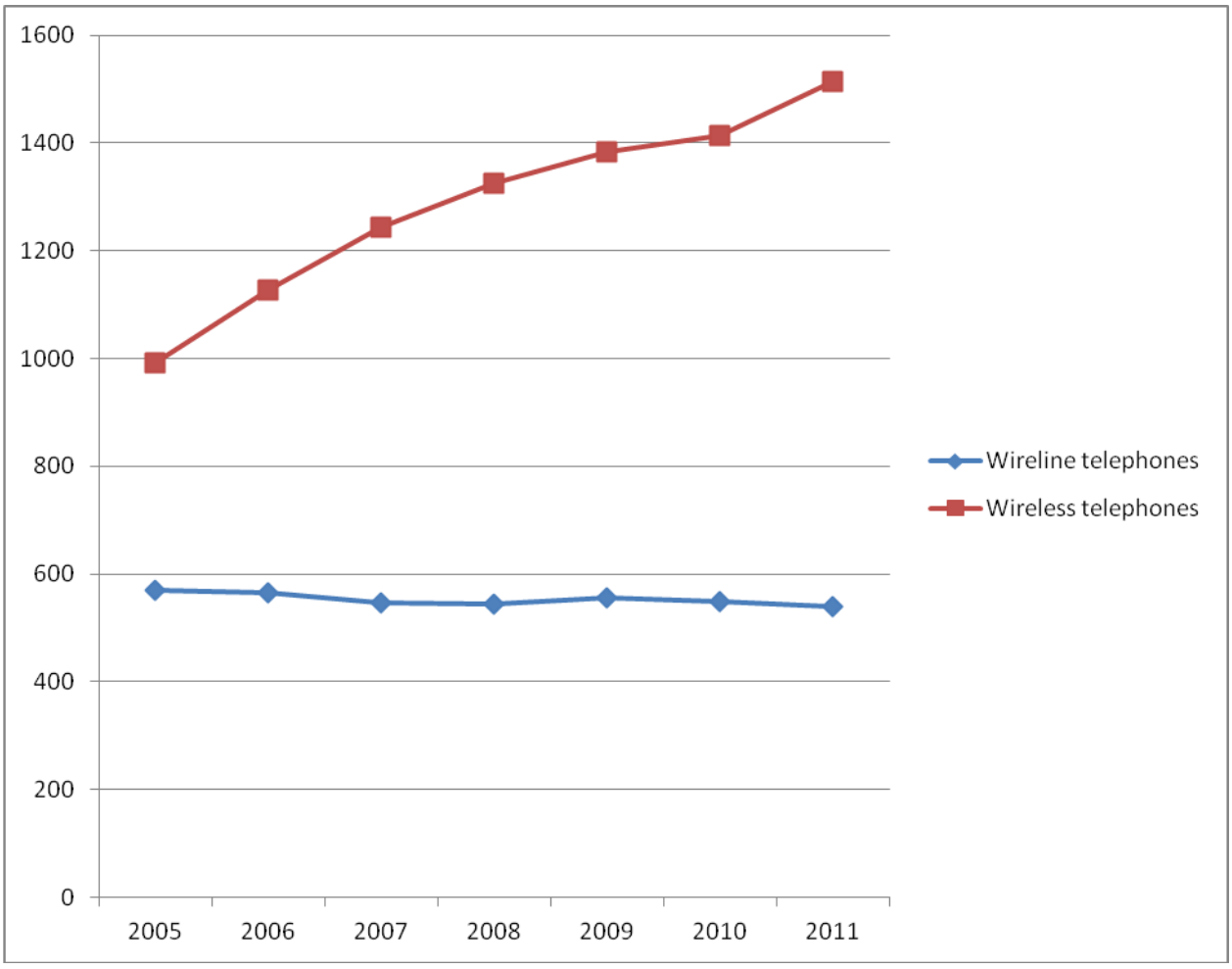
DEVELOPED COUNTRIES

Wireline- The number of wireline subscribers in developed countries has been continuously decreasing except during the year 2009 when the number increased. The number of wireline subscribers declined from 570 million at the end of 2005 to 544 million by the end of 2008, increased to 555 million at the end of 2009 and then declined to 539 million by the end of the year 2011.

Wireless- The number of wireless subscribers has been continuously increasing. The number of wireless subscribers which were 992 million at the end of 2005 increased to 1514 million by the end of 2011.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in developed countries:

Subscribers in million (wireline vs wireless)



Source: ITU.

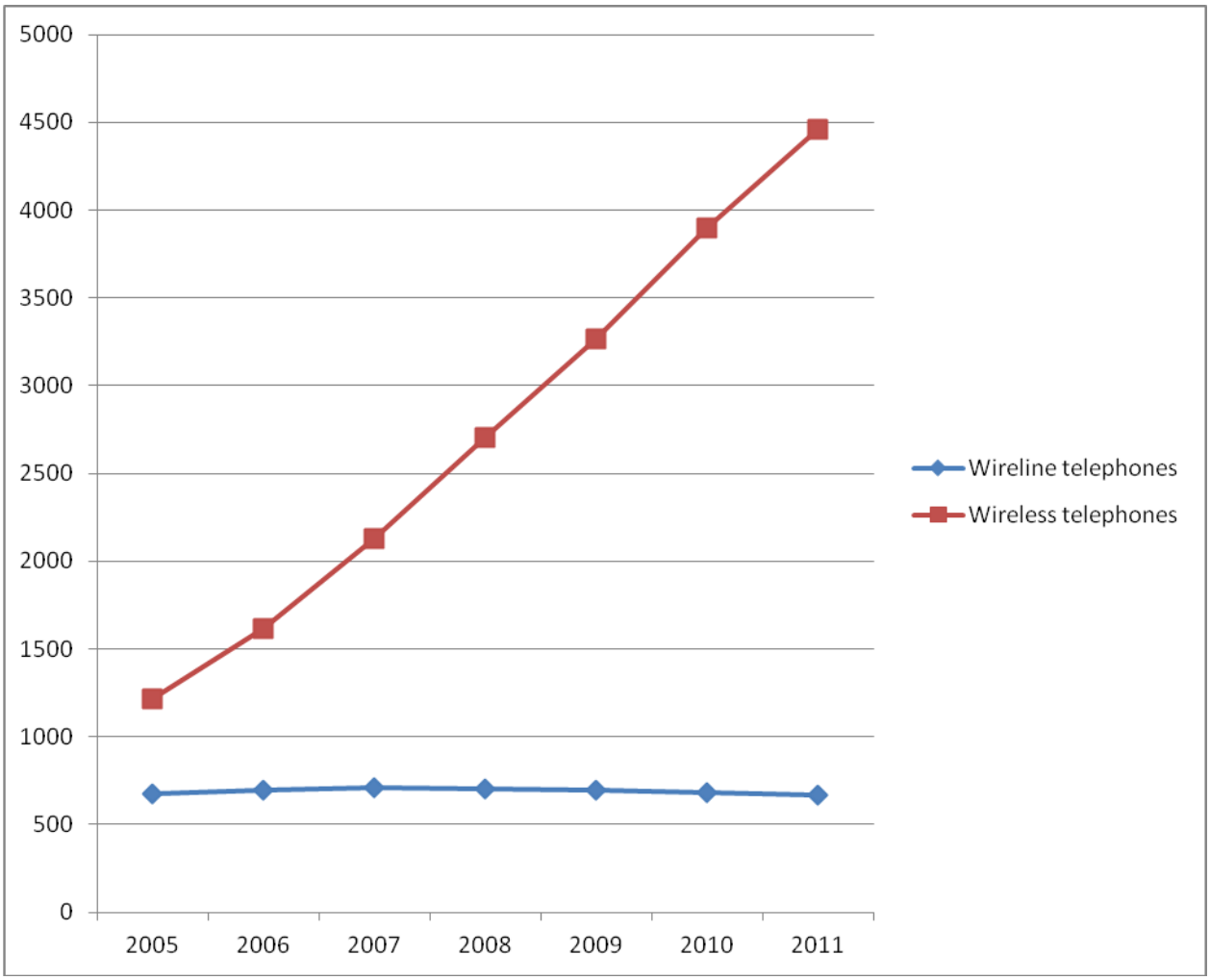
DEVELOPING COUNTRIES

Wireline- The number of wireline subscribers in developing countries continued to increase till the end of 2007 and thereafter started declining. The number of wireline subscribers increased from 673 million at the end of 2005 to 708 million by the end of 2007 and then declined to 665 million by the end of the year 2011.

Wireless- The number of wireless subscribers has been continuously increasing. The number of wireless subscribers which were 1215 million at the end of 2005 increased to 4457 million by the end of 2011.

The following chart shows the increase / decrease in the number of wireless and wireline telephones over the years in developing countries:

Subscribers in million (wireline vs wireless)



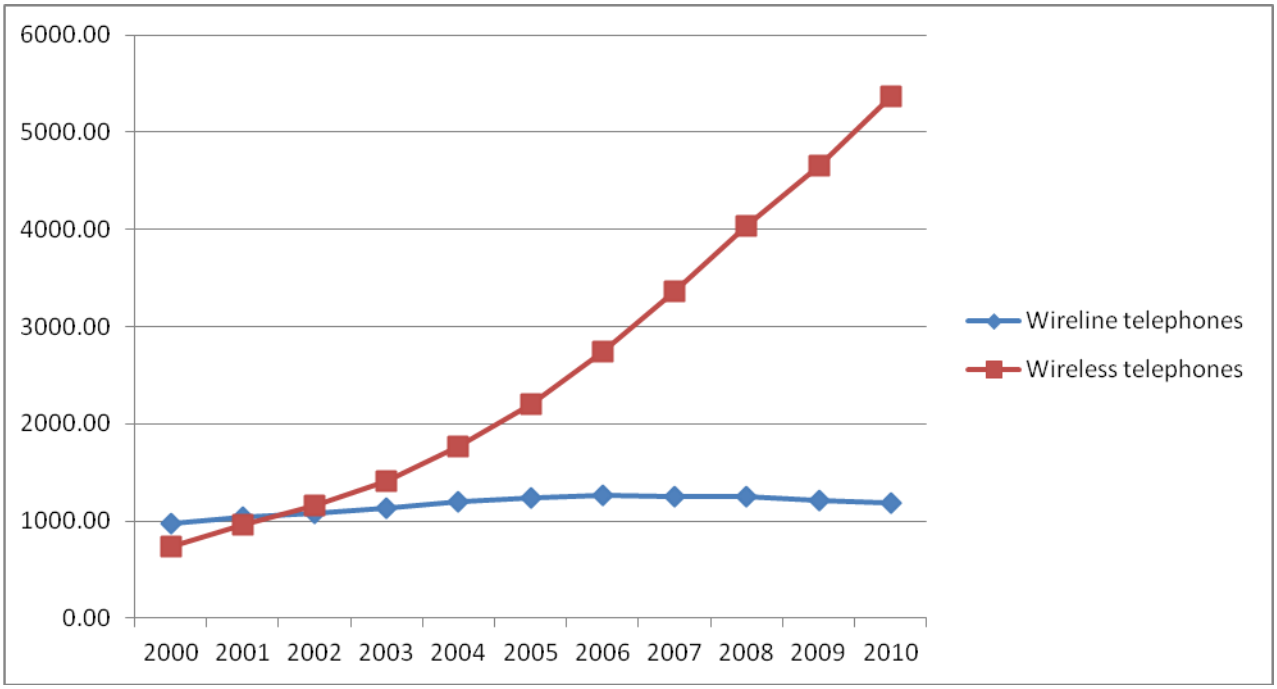
Source: ITU.

WORLD

Wireline- The number of wireline subscribers in the world as a whole, based on the information from 222 countries for whom the data is available on the web-site of ITU, continued to increase till the end of 2006 and thereafter it started declining. The number of wireline subscribers have been continuously declining after the year 2006. The number of wireline telephone subscribers in the world declined from 1261.07 million at the end of 2006 to 1188.36 million by the end of 2010.

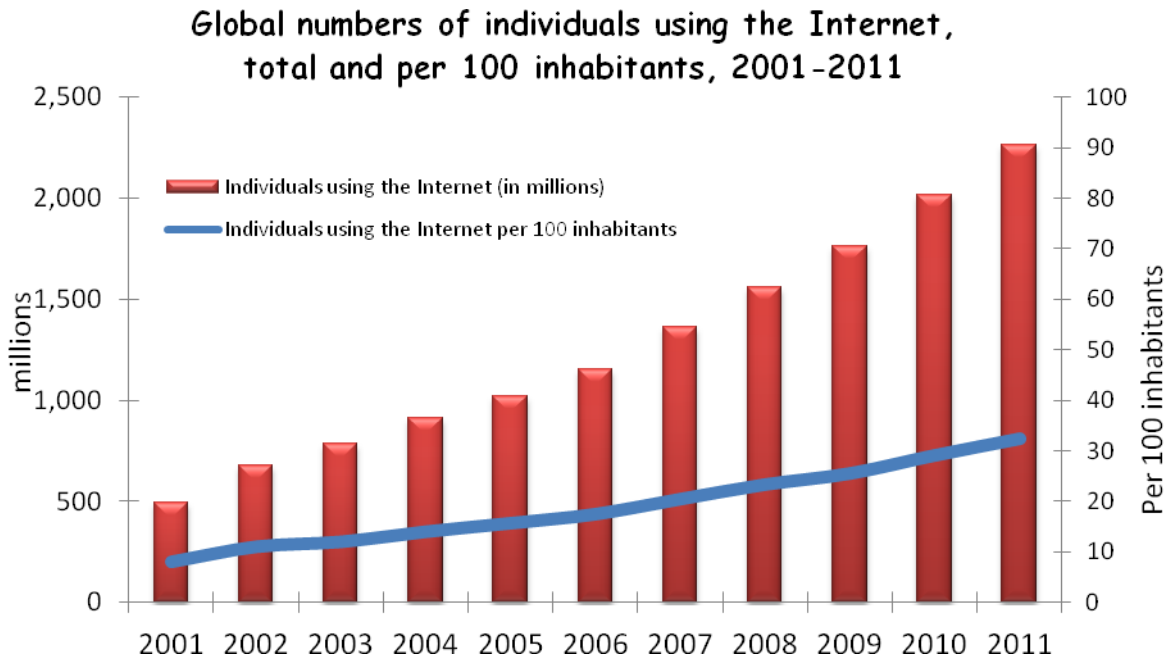
Wireless- The number of wireless subscribers in the world have continuously increased and as can be seen from the following chart, the increase was sharp after 2005. The number of wireless subscribers in the world which were 2206.80 million at the end of 2005 have increased to 5370.47 million by the end of 2010.

Subscribers in million (wireline vs wireless)



Source: ITU.

Internet / Broadband- As can be seen from the following chart, the number of internet subscribers and its penetration in the world are continuously increasing. The number of individuals using internet increased from 495 million in 2001 to 2265 million by the end of 2011. Similarly, the number of internet users per 100 inhabitants increased from 8 in 2001 to 33 by the end of 2011.



Source: ITU.

CONCLUSION

It is evident from the above that the number of wireline telephone subscribers in the world as a whole have been declining. While in the world as a whole, the decline started after December 2006, the same happened in different countries at different points of time. In India, the decline started after December 2005. In countries like USA, UK, Canada and Australia, the decline started much earlier. In the case of China, the decline started after December 2006. In the case of Bangladesh, the number of wireline telephone subscribers continued to increase till December 2009. It is still increasing in Nepal. In general, the decline in wireline telephone subscribers started earlier in the case of developed countries compared to developing countries. Against this, the number of wireless telephone subscribers has been continuously increasing in the world as a whole as well as in individual countries included in this study.

It is also observed that even though wireline subscribers are declining in the world and in the countries like India, U.S.A., U.K., Australia, Canada and China, the number of internet subscribers are continuously increasing.

ANNEXURE -II

GUIDELINES FOR ISSUE OF CLEARANCE FOR INSTALLATION OF MOBILE TOWERS

[Single Window Clearance can be provided to telecom service provider / infrastructure provider after following points are verified by the local body / State Government. This will ensure issuance of faster clearances]

1. Copy of Access Service License / IP Registration Certificate from Department of Telecommunications.

2. Copy of SACFA clearance for the said location issued by WPC Wing of Department of Telecom.

3. Other clearance at State / Local authority level:

I) Copy of clearance from Pollution Control Board for DG Sets.
i) Copy of clearance from Fire Safety Department, if applicable.
ii) Copy of clearance from State Environment & Forest Dept. where necessary.
iv) Copy of NOC from Building Owner.
iii) Nominal one time Administrative Fee as may be decided by the Local body to recover its costs on the issue of permission for installation of Tower.
vi) Electricity connection may be provided to BTS site on priority.

4. BTS Tower Details:

i) Data Sheet
   a. Name of Service/Infrastructure Provider
   b. Location
   c. Tower Reference:
      i) Height, ii) Weight iii) Ground/Roof Top, iv) Number of antennas planned on tower.

ii) Copy of structural stability certificate for ground based BTS.

OR

In case of roof top BTS towers, structural stability certificate for the building based on written approvals of authorized Chartered Structural Engineer (local bodies), Central Building Research Institute (CBRI), Roorkee or reputed Engineering College like IIT, NIIT etc.

iii) Avoid Base Station Antennas in narrow lanes (≤ 5 mt.)

iv) In respect of roof top towers with multiple antennas, the roof top usage desirable to be totally restricted.

v) In case of both ground based towers & roof top towers, there shall be no nearby buildings right in front of the antenna with height comparable to the lowest antenna on tower at a distance threshold as specified below:

S.No	Number of Multiple antennas	Building/Structure distance from the antenna (safe distance) (in mtrs)
1	2	35
2	4	45
3	6	55
4	8	65
5	10	70
6	12	75

5. Formation of State and District Telecom Committees.

Keeping public interest in view, there is a need of regular interactions between TERM Cell of DOT and State / District administration. Hence it is proposed to Set-up State and District Telecom Committees for review of all Telecom Infrastructure related issues at State/ District Level.

Note: All radiation related technical details are being dealt by TERM cell of DOT.

ANNEXURE -III

No: 800- 15/2010-VAS
Government of India
Ministry of Communication & IT
Department of Telecom
Access Services Cell
Sanchar Bhawan, Ashoka road New Delhi

Date: 8th April, 2010

To

All CMTS/ UAS Licensees

Sub: Instructions to Service Providers on implementation of radiation norms on EMF exposure by Base Transceiver Stations (BTSs)

This is with reference to conditions of the License Agreement amendment dated 4th November 2008, regarding implementation of ICNIRP guidelines regarding the emission by Base Transceiver Stations (BTSs) as below:

"Licensee shall conduct audit and provide self certificates annually as per procedure prescribed by Telecommunication Engineering Centre (TEC)/or any other agency authorized by Licensor from time to time for confirming to limits/levels for antennae (Base Station Emissions) for general public exposure as prescribed by International Commission on Non-Ionizing Radiation Protection (ICNIRP) from time to time. The present limits/levels are reproduced as detailed below:

Frequency Range	E-Field Strength (Volt/Meter (V/m))	H-Field Strength (Amp/Meter (A/m))	Power Density (Watt/Sq.Meter (W/Sq.m))
400MHz to 2000MHz	$1.375f^{½}$	$0.0037f^{½}$	f/200
2GHz to 300GHz	61	0.16	10

(f = frequency in MHz)

Note: The compliance in the form of Self Certificate shall commence six months after the date of issue of prescribed test procedure by TEC or any other agency authorized by Licensor."

2. TEC has since issued the test procedure No. TEC/TP/EMF/001/01.SEP-2009 which has been intimated to the Licensees vide letter dated 09.11.2009.

3. In view of the above, following instructions are issued for meeting the ICNIRP guidelines:

i. All existing BTSs should be ICNIRP guidelines compliant by 08.05.2010 as the TEC test procedure has been circulated on 09.11.2009. Therefore, all BTSs should be self certified as meeting the radiation norm. Self certification should be submitted to respective Telecom Enforcement Resource & Monitoring (TERM) Cells of DOT by 15.05.2010.

ii. All new BTS sites should start radiating only after self certificate has been submitted to relevant TERM Cells.

iii. The TERM Cell will test up to 10% of new BTS sites randomly at its discretion. Additionally, the BTS sites against which there are public complaints, shall also be tested by TERM Cell. The testing shall be done as per procedures prescribed by Telecom Engineering Center (TEC) from time to time.

iv. The cost of test for audit of EMF exposure from BTS shall be borne by the Mobile Service Operator, which shall be Rs. 10, 000 (Rs. Ten Thousands only) for one site/per Service Provider.

v. Tools and equipments for testing would be provided by the concerned Mobile Service Provider to the TERM cell.

vi. If a site fails to meet the EMR criterion, a penalty of Rs. 5 lakh shall be levied per BTS per service provider. Service providers must meet the criterion within one month of the report of TERM cell in such cases, after which the site will be shut down.

vii. The BTS site details would be hosted on Telecom Engineering Center (TEC) website on submission of self test and registration with TERM cell, giving the test result and mentioning that the BTS site is self certified by the service Providers. Nature of compliance will be mentioned against each BTS i.e. self certified, TERM certified and not certified. After the BTS site has been tested by TERM cell, status of the BTS site will be changed to be “TERM certified”.

viii. The service providers also have the option of getting all the BTS sites tested from TERM cell by paying the requisite fee. TERM cell will test such sites at their discretion depending upon the availability of resources with them. If they are not able to test such sites either the test fee shall not be accepted or will be refunded within a month’s time, if a commitment to test the site within next 6 months is not given.

4. The Mobile Service Providers are advised to adopt following ten best practices in regard to guidelines for public exposure of Electromagnetic Fields for Base Transceiver Stations:

i. Include ICNIRP compliance as recommended by the TEC in their planning exercise for radio base station.

ii. Assess all radio base stations for international (ICNIRP) compliance as recommended by the TEC for public exposure.
iii. Produce a programme for this compliance as recommended by the TEC for already existing sites also.
iv. Provide a database of information, which is available to the public on radio base stations.
v. Respond to complaints and enquiries about radio base stations, within ten working days.
vi. Financially support the Government's independent scientific research programme on mobile communications health issues.

vii. Develop clear standards and procedures on the issue after consultation with local communities and other stakeholders.
viii. Participate in pre-rollout and pre-application consultation with local planning authorities.
ix. Publish clear, transparent and accountable criteria and cross-industry agreement on site sharing, which should be updated and published regularly.
x. Establish professional development workshops on technological developments within telecommunications for public and other stake holders.

Sd-

(Vinod Kumar)
Director (AS-II)

Copy to:

1 Wireless Advisor, WPC Wing, DoT, New Delhi

2. Sr. DDG, TEC, DoT, New Delhi

3. Sr. DDG (WPF), DoT, New Delhi

4. DDG (Security-TERM))/ DDG (Security)/ DDG (LF), DoT, New Delhi

5. DDG (C&A) for posting on DOT website.

MINUTES OF EIGHTEENTH SITTING OF COMMITTEE ON ESTIMATES (2012-13)

The Committee sat on Wednesday, the 13th March, 2013 from 1600 hrs. to 1815 hrs. in Committee Room 'E', Parliament House Annexe, New Delhi.

PRESENT

Shri Francisco Sardinha - Chairman

MEMBERS

(2) Shri Khagen Das
(3) Dr. Sanjay Jaiswal
(4) Shri Bapi Raju Kanumuru
(5) Shri Chandrakant Khaire
(6) Dr. Thokchom Meinya
(7) Shri Sanjeev Ganesh Naik
(8) Smt. Yashodhara Raje Scindia
(9) Shri S. Semmalai
(10) Shri Ganesh Singh
(11) Shri Radha Mohan Singh
(12) Smt. Annu Tandon

SECRETARIAT

(1) Shri A. Louis Martin - Joint Secretary
(2) Smt. Anita B. Panda - Director
(3) Dr. Yumnam Arun Kumar - Deputy Secretary

2. At the outset, the Chairman welcomed the Members of the Committee to the sitting of the Committee.

3. Thereafter, the Committee took up for consideration the draft Action Taken Report on the Recommendations/Observations contained in the Fifteenth Report of the Committee on Estimates on the subject 'Role and Functioning of Telecom Service Providers in Mobile Telephony' pertaining to the Department of Telecommunications (Ministry of Communications and Information Technology). The Committee adopted the draft report without any modification and authorized the Chairman to finalize the same in light of any consequential changes, if any, arising out of the factual verification by the Department of Telecommunications (Ministry of Communications and Information Technology) and present the same to Lok Sabha.

4. *** *** *** ***

5. *** *** *** ***

6. *** *** *** ***

7. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

Appendix II

ANALYSIS OF THE ACTION TAKEN BY GOVERNMENT ON THE RECOMMENDATIONS CONTAINED IN THE FIFTEENTH REPORT OF THE COMMITTEE ON ESTIMATES (FIFTEENTH LOK SABHA)

(i)	Total number of recommendations/observations	21
(ii)	Recommendations/Observations which have been accepted by the Government Para Nos. 7.2, 7.4, 7.7, 7.8, 7.9, 7.10, 7.12, 7.13, 7.14, 7.16, 7.17, 7.18, 7.20, 7.21 and 7.22	15
	Percentage of total recommendations	71.43%
(iii)	Recommendation/Observation which the Committee do not desire to pursue in view of the Government's reply Para No. 7.15	1
	Percentage of total recommendations	4.76%
(iv)	Recommendations/Observations in respect of which Government's replies have not been accepted by the Committee Para Nos. 7.5, 7.6, 7.11 & 7.19	4
	Percentage of total recommendations	19.05%
(v)	Recommendation/Observation in respect of which final replies of Government is still awaited. Para No. 7.3	1
	Percentage of total recommendations	4.76%