



# **Telecom Regulatory Authority of India**

The Indian Telecom Services  
Performance Indicators October– December 2007

**April 2008**

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## INTRODUCTION

- 1.1 This report presents the growth trends for the telecom services in India for the quarter ending **December 2007**. This report provides a broad perspective on the Telecom Services to serve as a reference document for various stakeholders, research agencies and analysts. Under the Unified Access Service (UAS) Regime, the details of subscriber base under wireless services combine both GSM & CDMA (WLL(F) + WLL(M)) technologies. The Executive Summary of various Telecom Services has been given in the beginning followed by 'Quarterly Results at a Glance' showing the growth pattern of Wireline, Wireless, Internet and Broadband services. Chapter Five includes QoS performance analysis of various service providers. This report includes the performance of Cable TV, DTH & Radio Broadcast services in Chapter Six and Financial details of telecom service sector in Chapter Seven.
- 1.2 The report has been compiled on the basis of information received from various telecom service providers. TRAI collects performance-based data from various service providers on a quarterly basis to monitor the growth trend in the sector.
- 1.3 This performance indicator report is also available on the TRAI website ([www.trai.gov.in](http://www.trai.gov.in)). Any suggestions pertaining to this may please be addressed to S. K. Gupta, Advisor (CN), TRAI; Tel. +91-11-23217914, Fax. +91-11-23211998 and e-mail: [skgupta@traigov.in](mailto:skgupta@traigov.in) or [guptask61@gmail.com](mailto:guptask61@gmail.com)

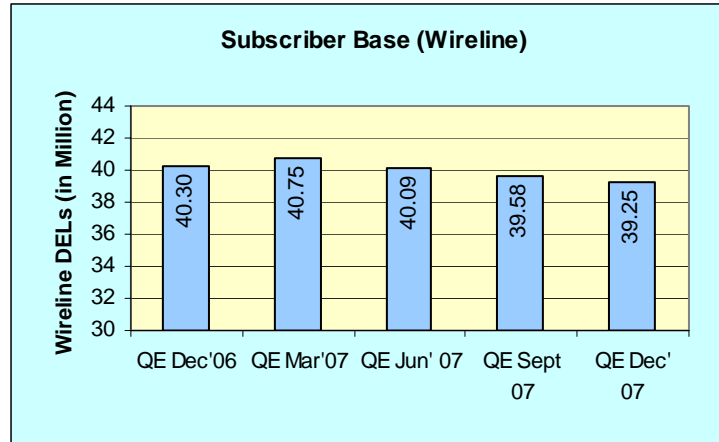
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# EXECUTIVE SUMMARY

## A. Wireline Services

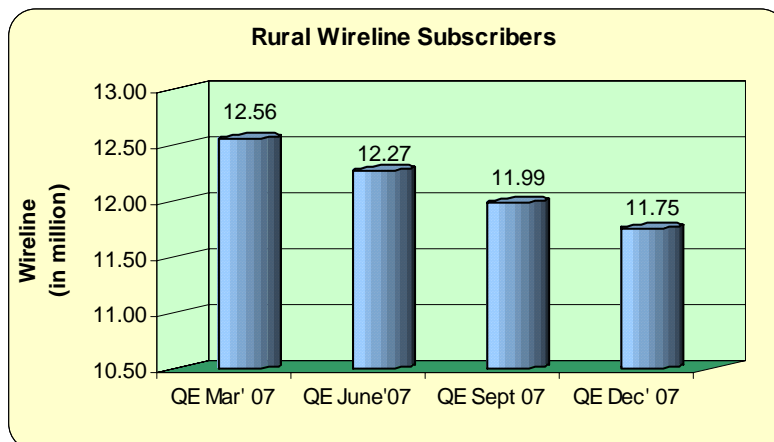
Wireline services subscriber base stood at 39.25 million in quarter ending December 2007 as compared to 39.58 million in quarter ending September 2007.

**Chart -I : Subscriber Base (Wireline)**



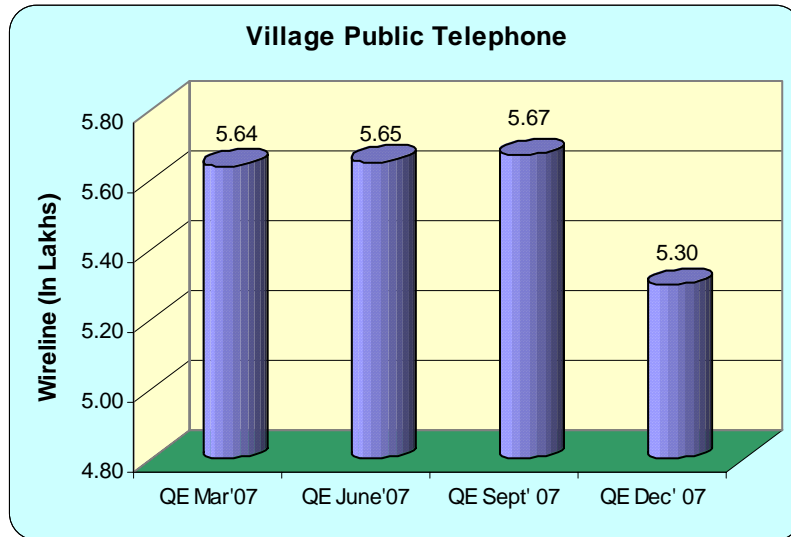
Rural Wireline Subscriber base stood at 11.75 million in quarter ending December 2007 as compared to 11.99 million in quarter ending September 2007.

**Chart- II : Rural Wireline Subscribers**



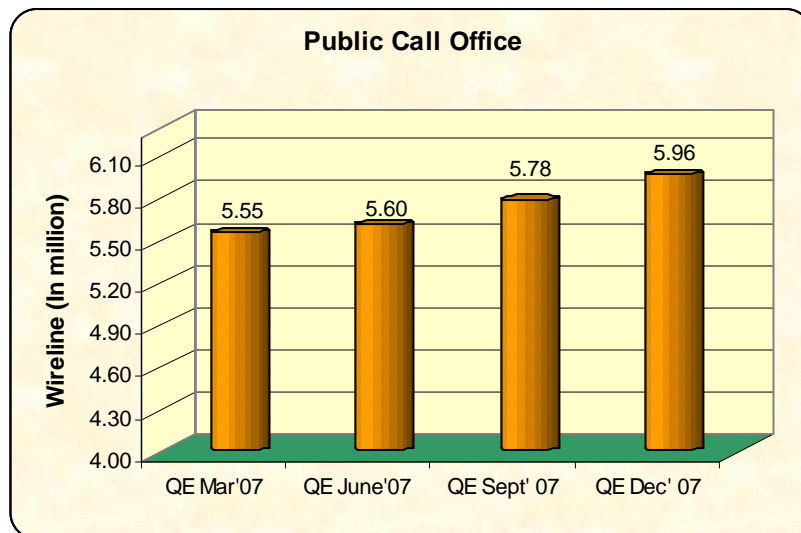
Due to reclassification of villages in Census 2001 the number of inhabited villages in India are 5,93,485 as compared to 6,07,491 villages as per Census 1991. This classification also resulted more than one VPTs in some of the revenue villages. Therefore number of Village Public Telephones (VPTs) are 5.30 lakhs in quarter ending December 2007.

**Chart -III : Village Public Telephone**



Number of Public Call Offices (PCOs) has increased from 5.78 million in quarter ending September 2007 to 5.96 million in quarter ending December 2007.

**Chart -IV : Public Call Office**

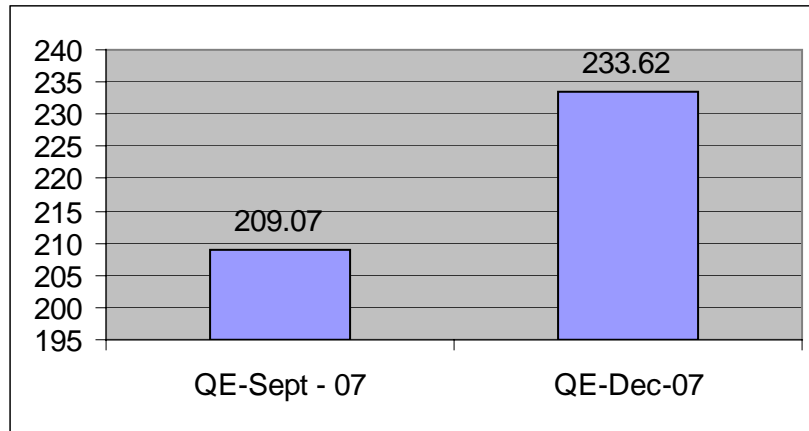


## B. Wireless Services

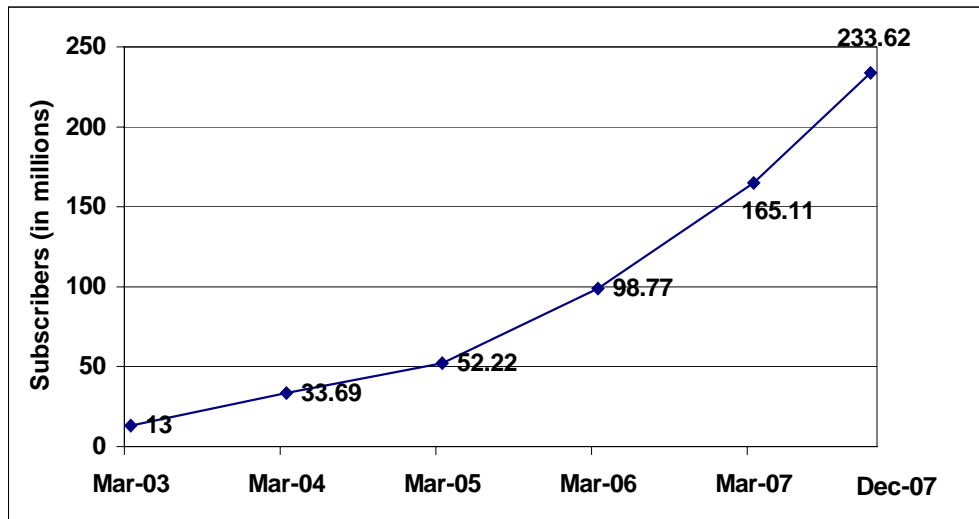
The Wireless Market has reached 233.62 million subscribers as on 31<sup>st</sup> December 2007 as against 209.07 million subscribers in the previous quarter. During this quarter 24.55 million subscribers were added.

### (i) Subscriber Growth/Market Share

**Chart -V : Wireless Subscribers**



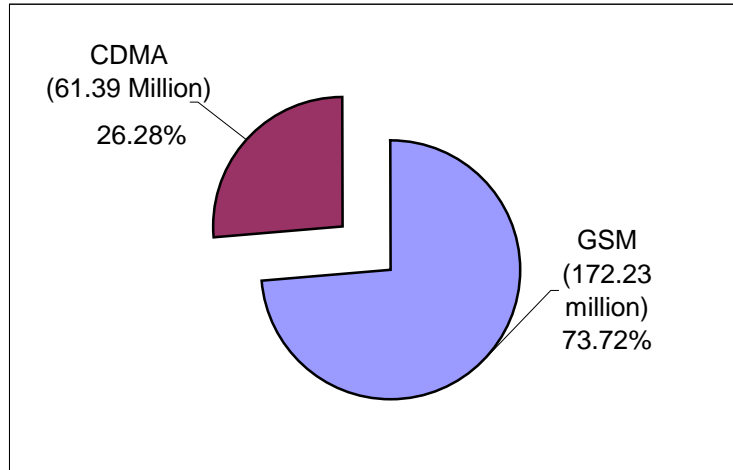
**Chart -VI: Total Subscriber Base (Wireless)**



### Technology-wise Wireless Market Share (QE December 2007)

There are 172.23 million GSM subscribers (73.72%) and 61.39 million CDMA subscribers (26.28%) at the end of December 2007.

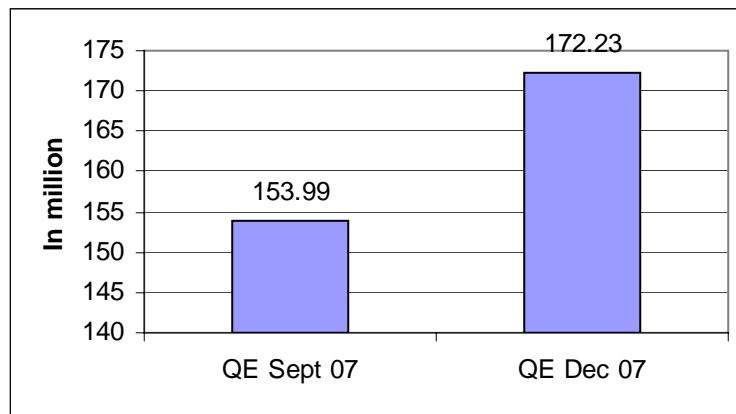
**Chart -VII : Technology wise Wireless Market Share**



### (ii) GSM

GSM segment has recorded 11.84% growth during the quarter ending December 2007 and reached to a subscriber base of 172.23 million.

**Chart -VIII : GSM Subscriber Growth (in million)**

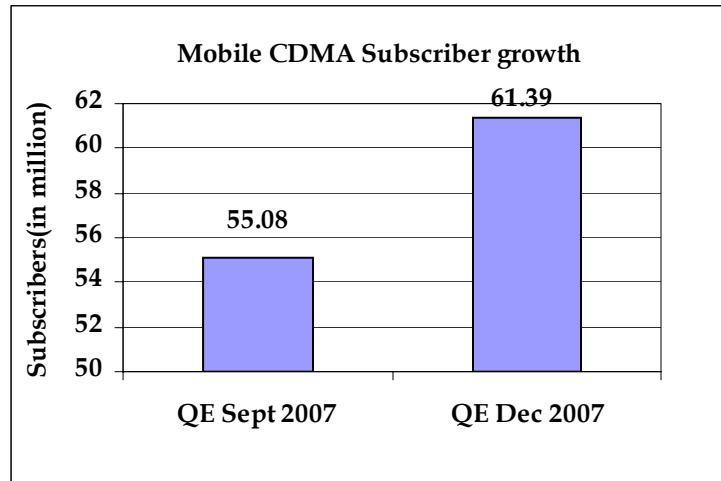




### (iii) CDMA

CDMA subscriber base recorded a growth of 11.44% during the quarter ending December 2007 and reached to a subscriber base of 61.39 million.

**Chart – IX : CDMA Subscriber Growth**

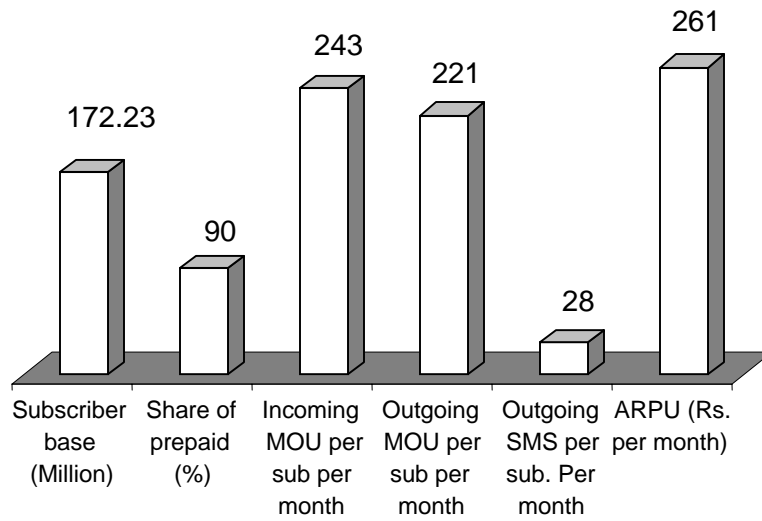


### (v) Average Revenue Per User (ARPU), Minutes of Usage (MoU), etc.

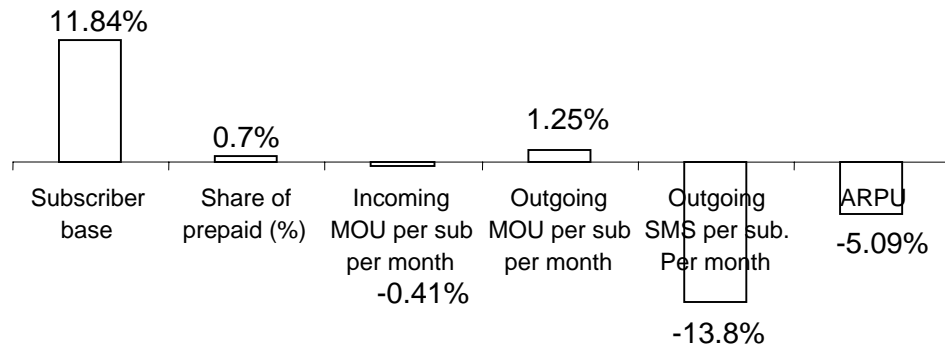
#### (a) GSM

- The All India blended ARPU (Average Revenue Per User) per month has declined by 5.09% from Rs. 275 in September 2007 to Rs. 261 in December 2007.
- ARPU for postpaid service has shown a decline of 0.63% from Rs. 632 in September 2007 to Rs. 628 in December 2007. Decline for prepaid service has been 4.78% from Rs. 230/- in September 2007 to Rs. 219/- in December 2007.
- MoU minutes per subscriber per month has increased by 0.46% from 462 minutes in September 2007 to 464 minutes in December 2007.
- Outgoing MOUs have shown an increase of 1.25%. However, decline in Incoming MOUs is 0.41%.
- In Postpaid, total MOUs increased from 953 minutes in September 2007 to 968 minutes in December 2007. Prepaid MOUs also increased from 401 minutes in September 2007 to 407 minutes in December 2007.
- As per the revenue reports furnished by the service providers, revenue, net of “pass through”, is about Rs. 12738 Crores in quarter ending December 2007 as against Rs. 11903 Crores in quarter ending September 2007, thereby showing a growth of approx. 7.01%.

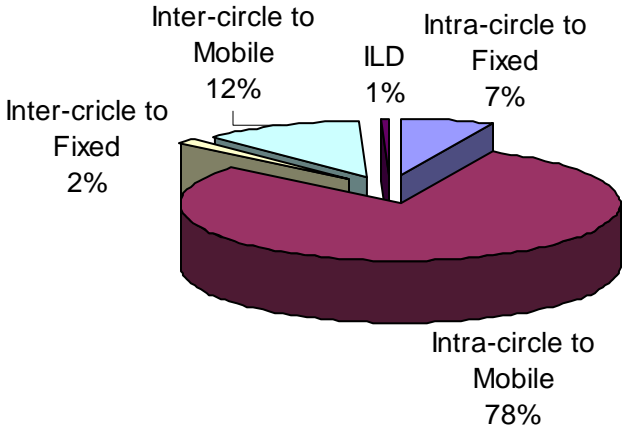
**Chart- X : Key Indicators for GSM**



**Chart -XI : Variation in Key Indicators over Last Quarter**



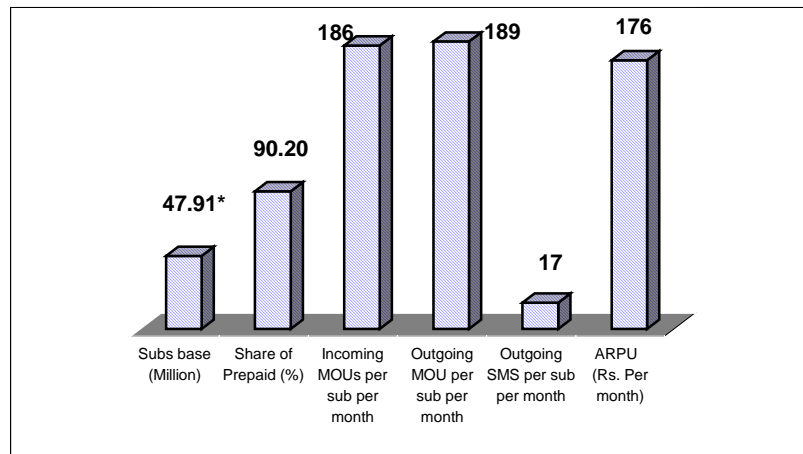
**Chart- XII : GSM Originated Traffic- distribution by terminating network**



## (b) CDMA (Full Mobility)

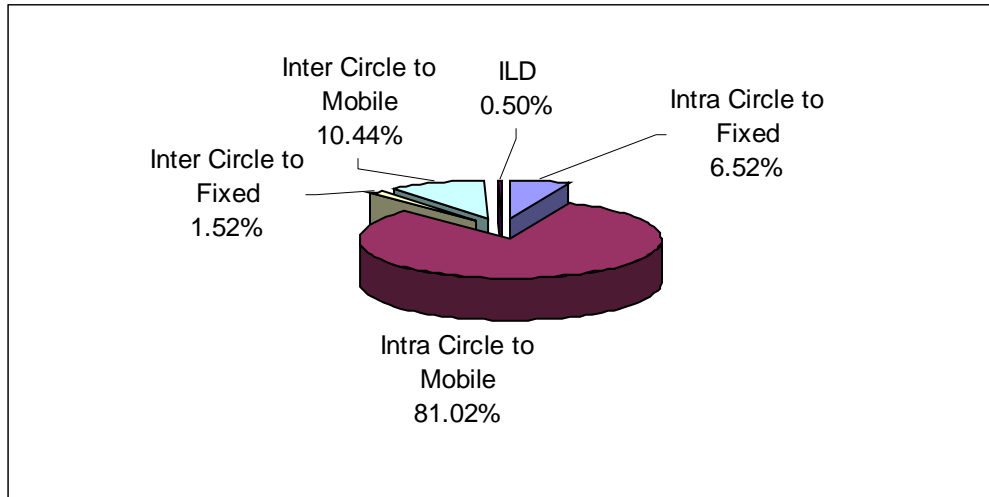
- All India blended ARPU (per month) for the quarter ending December 2007 is Rs. 176/- as compared to Rs. 173/- for the quarter ending September 2007.
- The lowest blended ARPU per month is in U P West (Rs.146/-) while the highest blended ARPU is in Mumbai (Rs. 276/-).
- Total Blended MoU per subscriber per month has shown a sharp decline from 413 minutes for the quarter ending September 2007 to 375 minutes for the quarter ending December 2007. The highest MoUs is recorded for C Circle at 469 minutes per subscriber per month, which is about 25% higher than the All India figure at 375 minutes per subscriber per month. The lowest MoUs have been seen in A Circle at 346 minutes per subscriber per month, which is approx. 8% lower than the All India figure of 375 minutes MoUs per subscriber per month.
- According to the revenue reports submitted by the service providers, revenue, net of “pass through”, from CDMA full mobility service is Rs. 2381.01 Crores for the quarter ending December 2007 which was 2029.10 Crores for the quarter ending September 2007.

**Chart – XIII : Key Indicators for CDMA**



\* Does not include WLL (F) & WLL (M) subscribers

**Chart – XIV : CDMA Originated Traffic- distribution by terminating network**



### **C. Internet Services**

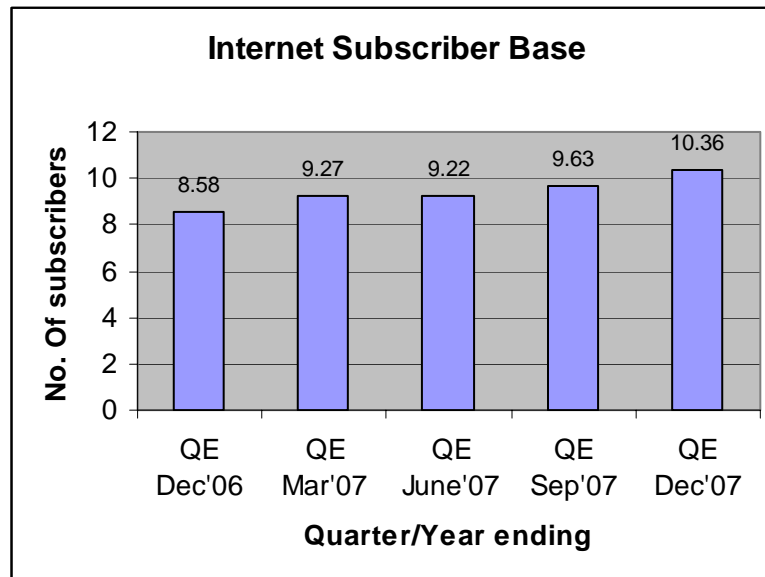
There are 10.36 million wireline Internet subscribers at the end of December 2007 as compared to 9.63 million at the end of September 2007 registering a growth of nearly 7.64%. The growth rate is higher as compared to a growth rate of 4.37% at the end of September 2007.

Besides above, there are 57.83 million wireless data subscribers at the end of December 2007 (capable of accessing data services including internet through mobile handsets (GSM/ CDMA)).

The key indicators for Internet Services are presented below through bar charts.

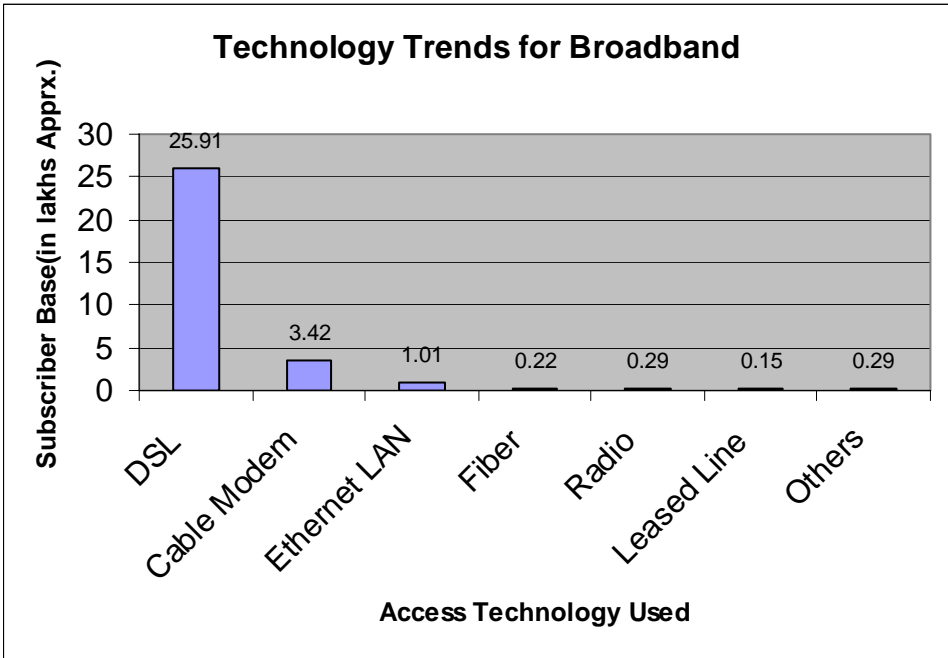
- i) **Internet Subscribers Growth** - There are 10.36 million wireline Internet Subscribers at the end of December 2007.

**Chart –XV : Internet Subscriber Base**



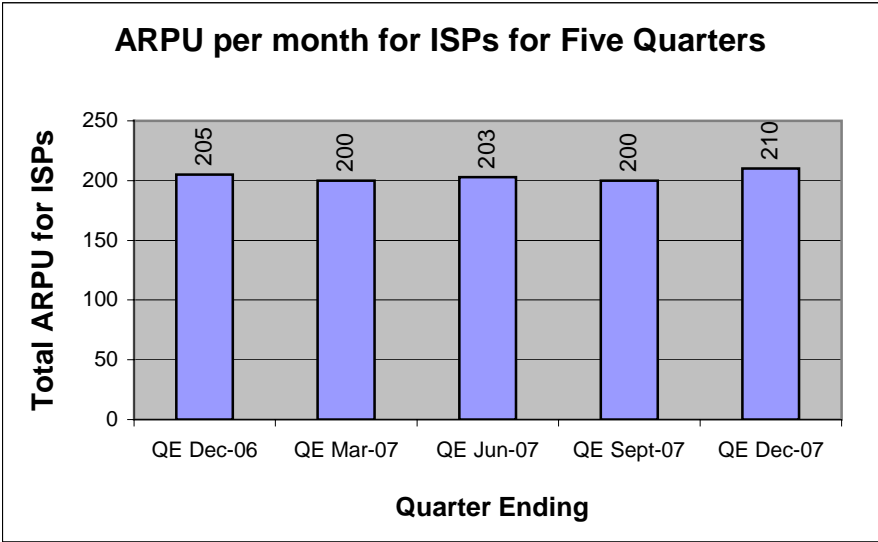
- ii) **Broadband Subscriber Growth** - The number of Broadband subscribers (with a download speed of 256 Kbps or more) was 3.13 million at the end of December 2007 as compared to 2.67 million at the end of September 2007. The growth rate of broadband subscribers in this quarter is 17.23%.
- iii) **Broadband Subscribers Share (Technology wise)** - Out of these 3.13 million broadband subscribers, 2.59 million are DSL based; 0.34 million Cable Modem; 0.10million Ethernet LAN; 0.022million Fibre; 0.029million Radio, Leased Line 0.015million and Others are 0.029million.

**Chart – XVI : Technology Trends for Broadband**



iv) **ARPU** – Average Revenue Per User per month for dialup Internet Subscribers is Rs. 210/- at the end of December 2007.

**Chart –XVII : ARPU per month for ISPs**



## D. Quality of Service QOS Performance

### (a) Wireline Services

In this quarter the performance of the Basic Service Providers have improved as compared to the previous quarter, in respect of parameters like Faults incidences, Faults repaired by next working day , Mean Time to Repair, Grade of Service, Metering & Billing credibility and Customer Care Services(relating to closure of telephone).

However, the performance of Basic Service Providers have deteriorated in this quarter, as compared to the previous quarter, in respect to parameters as Provision of Telephones , Call Completion Rate, Customer Care Services (Additional Facilities), %age of calls answered by operator (Voice to voice) and Time taken for refund of deposits after closures.

The summary of performance of the service providers who have not met the benchmarks in this quarter as compared to previous quarter is given in the table -1.

**Table 1: Summary of Performance of Service Providers**

Sr. No.	Parameters	Benchmark	No. of operators not meeting the benchmarks			
			Sept, 2007		Dec, 2007	
			Out of 78 In Nos	Out of 78 In %age	Out of 78 In Nos	Out of 78 In %age
1.	Provision of Telephones after registration of demand	100% within 7 Days	55	70.51%	57	73.08%
2	Fault incidences per 100 subs/month	<5%	36	46.15%	27	34.62%
3	Fault repaired by next working day	>90%	24	30.77%	16	20.51%
4	MTTR	<8Hrs	31	39.74%	27	34.62%
5	Grade of Service (Junction between local exchange)	2/1000	25	32.05%	1	1.28%
6	Call Completion Rate (in local network)	>55%	7	8.97%	9	11.54%
7	Metering & billing credibility - % of bills	<0.1%	11	14.10%	8	10.26%
8	Customer Care Service (95% of requests)					



(i)	Shifts	<3 Days	21	26.92%	21	26.92%
(ii)	Closures	<24 hrs.	19	24.36%	18	23.08%
(iii)	Additional Facilities	<24 hrs.	16	20.51%	17	21.79%
<b>9</b>	<b>Response time to the customer for assistance</b>					
(i)	%age of calls answered (electronically)					
	Within 20 sec = 80%	80%	1	1.28%	1	1.28%
	within 40 sec = 95%	95%	1	1.28%	1	1.28%
(ii)	%age of calls answered by operator (voice to voice)					
	Within 60 sec = 80%	80%	8	10.26%	9	11.54%
	within 90 sec = 95%	95%	15	19.23%	18	23.08%
10.	<b>Time taken for refund of deposits after closures</b>	100% within 60 days	14	17.95%	17	21.79%

### (b) Wireless Service

This report covers performance of 93 GSM Cellular Mobile Licensees and 44 CDMA service Licensees vis-à-vis the QoS benchmarks prescribed by TRAI. All Cellular Mobile Service Providers have achieved prescribed TRAI benchmark in respect of the following parameters:-

1. Call Drop Rate,
2. %age of calls answered (electronically) within 20 sec.
3. Period of all refunds/payment due to customers from the date of resolution of complaints.

The performance has improved in this quarter as compared to the previous quarter in respect of the parameter as %age of calls answered (voice to voice) within 60 sec.

The performance has deteriorated in this quarter as compared to the previous quarter related to the parameters as Accumulated down time of Community isolation, Call Set-Up Success Rate (Within Licensee's Own network), Service access Delay, Blocked Call rate (SDCCH/paging channel congestion and TCH congestion) , %age of Connections with good voice quality and Response time to the customer for assistance (i) %age of calls answered (electronically) within 40 seconds = 95% (ii) %Age of calls answered by operator (voice to voice); within 90 seconds=95%

The performance of the Cellular Mobile Service Providers is at same level as compared to the previous quarter in respect of the

parameter of Call Drop Rate, Response time to the customer for assistance (%age of calls answered (electronically) within 20 seconds = 80%), Complaints per 100 bills issued, %age of complaints resolved within 4 weeks and Period of all refunds/payment due to customers from the date of resolution of complaints.

The comparative statement of the key parameters is given in the following table:-

Sr.No.	Parameters	Bench-Marks	No. Of Operators Not Meeting The Benchmarks			
			Quarter Ending Sept, 2007		Quarter Ending Dec. 2007	
			Out Of 135 (Nos.)	Out Of 135 (%)	Out Of 135 (Nos.)	Out Of 135 (%)
1	Accumulated down time of Community isolation	<24 hrs	0	0.00%	1	0.74%
2	Call Set-Up Success Rate (Within Licensee's Own network)	>95%	0	0.00%	1	0.74%
3	Service access delay	<15 Sec	0	0.00%	2	1.48%
4	Blocked call rate (i) SDCCH/paging channel congestion	<1%	4	2.96%	5	3.70%
	(ii) TCH Congestion	<2%	6	4.44%	7	5.18%
5	Call drop rate	<3.0%	0	0.00%	0	0.00%
6	%age of Connections with good voice quality	>95%	1	0.74%	5	3.70%
7	Response time to the customer for assistance %age of calls answered (electronically) within 20 seconds = 80%	80%	0	0.00%	0	0.00%
(i)	%Age of calls answered (electronically) within 40 seconds = 95%	95%	1	0.74%	2	1.48%
(ii)	%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	80%	38	28.15%	29	21.46%
(iii)	%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	95%	54	40.00%	61	45.80%
8	Complaints per 100 bills issued	<0.1%	2	1.48%	2	1.48%
9	% Of complaints resolved with 4 weeks	100%	2	1.48%	2	1.48%

10	Period of all Refunds/Payment due to Customers from the date of resolution of complaints As In (9) above	<4 Weeks	0	0.00%	0	0.00%
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### (c) Broadband Service

Broadband Regulations came into force with effect from 1<sup>st</sup> Jan 2007. Total number of the Internet Service Providers providing broadband service were 72 in last quarter ending September, 2007. No new service provider is added in this quarter

Out of 72 Internet Service Providers providing broadband service only 14 Service Providers are having subscriber base more than 10,000 subscribers and these 14 Service providers share 98.56% of total subscriber base in this quarter. The total number of Broadband Subscribers of these 14 Service Providers have increased from 2626377 to 3100720 by adding 4,74,343 (18.06%) subscribers in the quarter ending December, 2007. This report covers performance of 13 Internet Service Providers providing broadband service vis-à-vis the QoS benchmarks prescribed by TRAI (as one service provider has recently crossed the 10,000 subscriber mark and will submit QoS parameters from next quarter).

### E. Broadcasting and Cable Services

- Based on the data received from various Multi System Operators (MSOs) across the country, the maximum number of Free-to-Air (FTA) and Pay Channels being carried by any one of the cable networks are 103 and 95 respectively. However, there are 106 pay channels as reported by 15 broadcasters/their distributors at the Quarter ending December, 07.
- Apart from All India Radio, there were 177 FM Radio station in operation as on December 31, 2007. In the quarter ending December 31, 2007, fifty five (55) private FM radio stations came into operations.
- One DTH license was issued in this quarter to M/s Bharat Business Channel Limited. Now, apart from free to air DTH service of Doordarshan, there are 6 private DTH licensees. Out of these 6 licensees, only 3 licensees are offering pay DTH services to the customers as on 31.12.2007, while others are in the process of rolling out their services.
- 28 community radio stations are in operation out of 47 licensees at the end of this quarter.
- In regard to cable TV network in CAS notified areas upto quarter ending December 2007, there are 501706 Set Top Boxes (STBs) installed in Delhi, Mumbai and Kolkata. In Chennai, around 71000 set top boxes are in operation.

## F. QUARTERLY RESULTS AT A GLANCE

### Performance Indicators of Telecom Services for QE DECEMBER 2007

#### A. Growth of Wireline & Wireless Services:-

	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	QE Dec 2007	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)	%age growth over Sep 2007 (3 months)
<b>1) Subscriber's Base (in million)</b>									
i) Wireline	40.30	40.75	40.09	39.58	39.25	-2.61	-3.68	-2.10	-0.83
ii) Wireless	149.62	165.11	184.92	209.07	233.62	56.14	41.49	26.34	11.74
<b>Gross Total</b>	<b>189.92</b>	<b>205.86</b>	<b>225.01</b>	<b>248.65</b>	<b>272.87</b>	<b>43.68</b>	<b>32.55</b>	<b>21.27</b>	<b>9.74</b>
<b>2) Traffic (MOU) (minutes of use/ sub/month)</b>									
Wireless									
i) GSM	454	471	476	462	464	2.20	-1.49	-2.52	0.43
ii) CDMA	424	471	462	413	375	-11.56	-20.38	-18.83	-9.20
<b>3) ARPU (Rs./sub/ month)</b>									
Wireless									
i) GSM	316	298	297	275	261	-17.41	-12.42	-12.12	-5.09
ii) CDMA	196	202	206	173	176	-10.20	-12.87	-14.56	1.73
<b>4) Teledensity</b>									
Population in million (Estimated)	1107	1129	1133	1137	1143				
i) Wireline	3.64	3.61	3.54	3.48	3.43	-5.67	-4.86	-2.95	-1.35
ii) Wireless	13.52	14.62	16.32	18.39	20.44	51.21	39.75	25.22	11.15
<b>Gross Total</b>	<b>17.16</b>	<b>18.23</b>	<b>19.86</b>	<b>21.87</b>	<b>23.87</b>	<b>39.14</b>	<b>30.92</b>	<b>20.20</b>	<b>9.16</b>

**B. Growth of Internet & Broadband Services:-**

	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	QE Dec 2007	%age growth over Dec 2006 (9 month s)	%age growth over Mar 2007 (6 months )	%age growth over Jun 2007 (3 months)	%age growth over Sep 2007 (3 months)
<b>1) Subscriber's Base (in million)</b>									
i) Internet	8.58	9.27	9.22	9.63	10.36	20.75	11.76	12.36	7.58
ii) Wireless Data Services including Internet *		31.30	38.02	46.37	57.83		84.76	52.10	24.71
ii) <b>Broadband Connections</b> (>=256 Kbps download speed)	2.05	2.34	2.42	2.67	3.13	52.68	33.82	29.23	17.23
<b>2) Minutes of Use (Dialup Internet) (MOU/ subs/month)</b>	190	180	195	206	210	10.53	16.67	7.69	1.94
<b>3) ARPU (Dialup Internet) (Rs/subs/month)</b>	205	200	203	200	210	2.44	5.00	3.45	5.00

\* Capable of Accessing data services including Internet through wireless (GSM & CDMA) networks

**C. Performance of service providers during the quarter:-**

**(I) Wireline Subscribers Base(in Million)**

1) Wireline Service Providers	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	QE Dec 2007	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)	%age growth over Sep 2007 (3 months)
BSNL	33.58	33.74	32.91	32.22	31.71	-5.57	-6.02	-3.65	-1.58
MTNL	3.69	3.73	3.67	3.63	3.60	-2.44	-3.36	-1.91	-0.83
Bharti	1.74	1.87	1.97	2.08	2.18	25.29	16.50	10.66	4.81
Reliance	0.49	0.57	0.64	0.70	0.78	59.18	37.32	21.88	11.43
Tata/Hughes	0.48	0.53	0.58	0.63	0.67	39.58	27.13	15.52	6.35
HFCL	0.17	0.17	0.16	0.16	0.15	-11.76	-10.71	-6.25	-6.25
Shyam	0.15	0.15	0.16	0.16	0.16	6.67	3.90	0.00	0.00
<b>Total</b>	<b>40.30</b>	<b>40.75</b>	<b>40.09</b>	<b>39.58</b>	<b>39.25</b>	<b>-2.61</b>	<b>-3.69</b>	<b>-2.10</b>	<b>-0.83</b>

**(II) Wireless Subscribers Base (in millions)**

Service Providers	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	QE Dec 2007	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)	%age growth over Sep 2007 (3 months)
Bharti	31.97	37.14	42.70	48.88	55.16	72.52	48.52	14.45	14.45
Reliance	29.98	28.01	31.88	36.32	40.96	36.61	46.23	13.94	13.94
Vodafone	23.31	26.44	30.75	35.66	39.86	71.00	50.76	15.95	15.95
BSNL	26.60	30.98	32.05	34.13	36.81	38.38	18.82	6.48	6.48
Tata Tele	14.45	16.02	17.32	19.50	21.74	50.45	35.71	12.53	12.53
Idea	12.44	14.01	16.13	18.67	21.05	69.21	50.22	15.78	15.78
Aircel	4.51	5.51	6.77	8.04	9.43	109.09	71.14	18.67	18.67
Spice	2.45	2.73	3.17	3.48	3.80	55.10	39.19	9.82	9.82
MTNL	2.60	2.94	2.81	2.99	3.20	23.08	8.84	6.72	6.72
BPL	1.06	1.07	1.09	1.15	1.24	16.98	15.56	6.01	6.01
HFCL	0.15	0.15	0.15	0.15	0.25	66.67	66.67	1.61	1.61
Shyam	0.09	0.10	0.10	0.10	0.10	11.11	0.00	2.26	2.26
<b>Total</b>	<b>149.62</b>	<b>165.11</b>	<b>184.92</b>	<b>209.07</b>	<b>233.62</b>	<b>56.14</b>	<b>41.49</b>	<b>26.34</b>	<b>11.74</b>

**NOTE :** % Growth figures are calculated by rounding the actual figures to nearest million. These may vary with values given in the subsequent chapters of this report.

## CHAPTER ONE

### PERFORMANCE OF WIRELINE SERVICES

#### 1.1 Subscribers Base: -

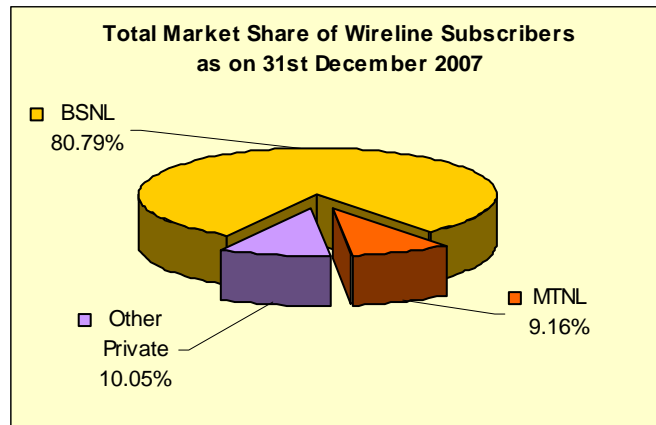
1.1.1 The Wireline services were provided by 6 licensed private operators in addition to incumbents BSNL and MTNL as on 31<sup>st</sup> December 2007. List of Wireline Service providers along with their areas of operation is given in the following Table.

<b>Sl. No.</b>	<b>Name of the Service Provider</b>	<b>Area of Operation</b>
1	BSNL	All India except Delhi & Mumbai
2	MTNL	Delhi & Mumbai
3	Bharti Airtel Ltd	Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh, Maharashtra, Mumbai, Punjab, Rajasthan, Tamil Nadu(included Chennai circle), UP-East, UP-West (including Uttaranchal) and West Bengal.
4	Tata Teleservices (Maharashtra) Ltd.	Maharashtra, Mumbai
5	Tata Teleservices Ltd.	Andhra Pradesh, Bihar, Chennai, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh, Orissa, Punjab, Rajasthan, Tamil Nadu, UP(E), UP(W) including Uttaranchal and West Bengal
6	HFCL Infotel Ltd	Punjab
7	Shyam Telelink Ltd	Rajasthan
8	Reliance Communications Ltd.	Andhra Pradesh, Bihar, Chennai, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata Madhya Pradesh, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu, UP (E), UP (W) and West Bengal

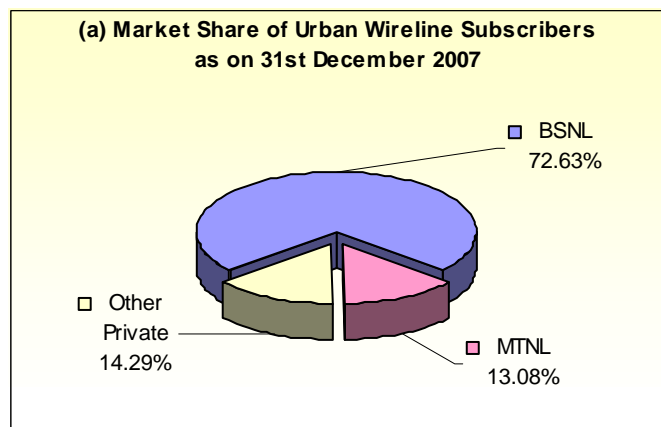
### 1.1.2 Market Share of Wireline subscriber base.

The total subscriber base of Wireline services stood at 39.25 million as on 31<sup>st</sup> December 2007. The incumbents BSNL and MTNL have 80.79% and 9.16% market share respectively in the subscriber base, while all the six private operators together have 10.05% share. The market share of total Wireline segment is shown in the chart below:

**Figure 1.1: Distribution of Market share of Urban + Rural Wireline subscriber**

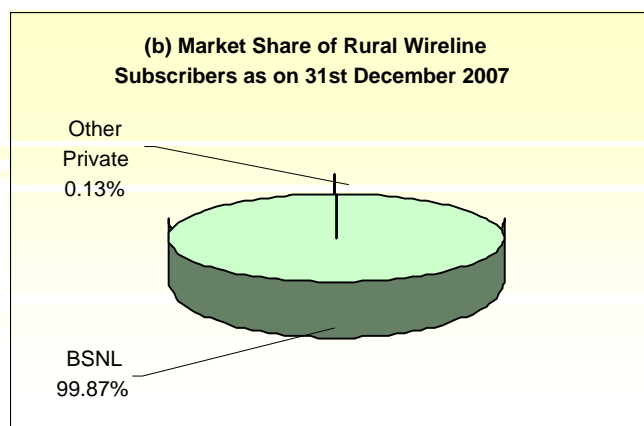


**Figure 1.2 : Distribution of Market share of Urban Wireline subscriber**





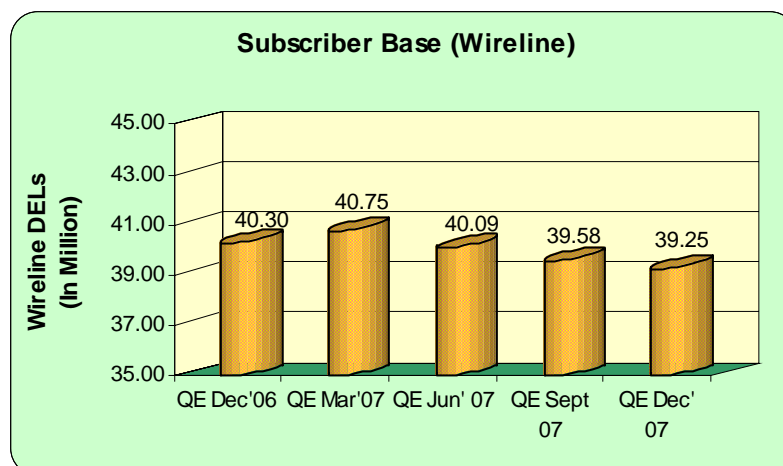
**Figure 1.3 : Distribution of Market share of Rural Wireline subscriber**



### 1.1.3 Subscriber Base of Wireline for last five quarters

The subscriber base of the Wireline service sector for last five quarters is depicted below:

**Figure 1.4: The subscriber base of the Wireline service sector for last five quarter**

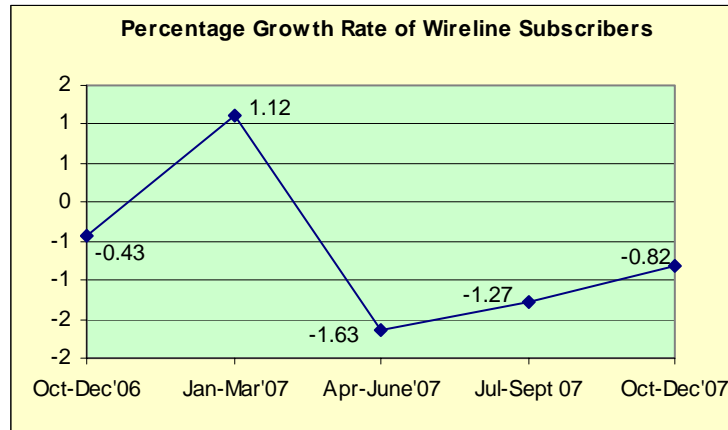


### 1.1.4 Status of Wireline services

The Wireline subscribers are decreasing continuously in last four quarters of 2007. The Wireline subscriber base registered a decrease of 324,759 lines during the quarters from October 2007 to December 2007. The net number of wireline subscriber has decreased to 3,92,52,371 from 3,95,77,130 as on 31<sup>st</sup> December 2007. The overall percentage of decrease in subscriber base during the quarter is 0.82%.

During the quarter ending 31<sup>st</sup> December 2007, some service providers have increased their respective wireline subscriber base such as M/s Bharti Airtel Ltd. from 20,75,037 to 21,78,175(+103,138), M/s Tata Teleservices Ltd. (TTL) (including TT(M)L) from 629,168 to 672,425 (+43,257), M/s Shyam Telelink Ltd. from 1,58,081 to 1,58,782 (+701) and M/s Reliance Communications Ltd. (RCL) from 7,00,051 to 780,974 (+80,923). The reduction in the subscriber base of Wireline during the quarter ending December 2007 reported by M/s BSNL from 3,22,26,262 to 3,17,11,219 (-5,15,043) , M/s MTNL from 36,27,092 to 35,97,029 (-30,063) and M/s HFCL Infotel Ltd. from 1,61,439 to 1,53,767 (-7,672).

**Figure 1.5 : Percentage Growth Rate of Wireline Subscribers**



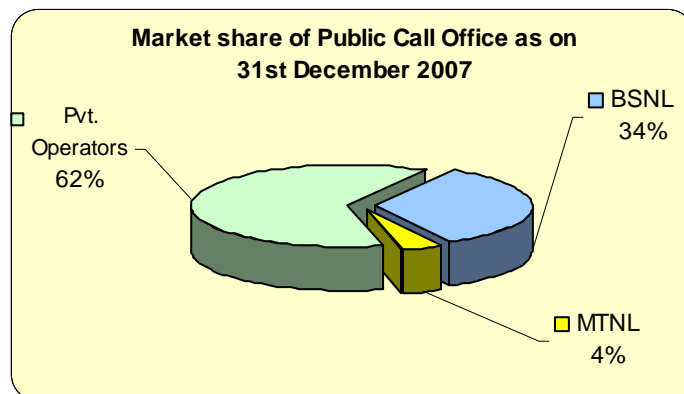
**1.2 Other Performance Indicators: -**

**1.2.1 Public Call Offices:**

During the current quarter 1,79,701 new PCOs have been added. Total number of PCOs in the country as on 31<sup>st</sup> December 2007 is 59,62,021. The share of BSNL is 20,19,453 i.e. 34% of the total PCOs. The share of MTNL and other private operators combined is 2,42,388 (4%) and 37,00,180 (62%) respectively.

Operator-wise (BSNL/MTNL/Other Private Operators) market share of PCO is depicted below. Operator-wise details of PCOs is available in Table 1.2.

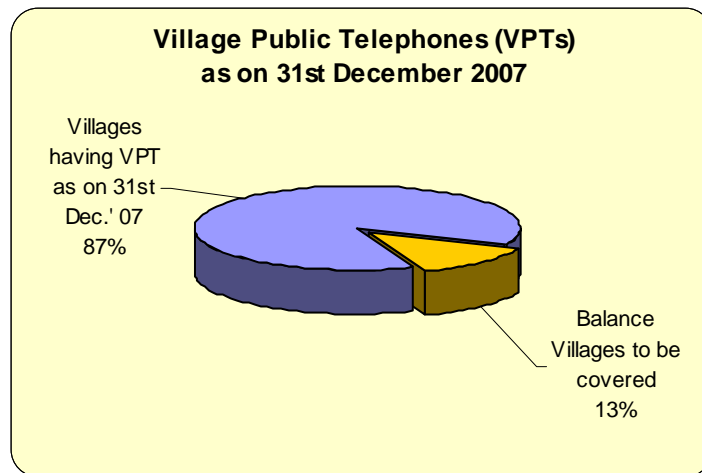
**Figure 1.6 : Market Share of Public Call Office as on 31.12.2007**



### 1.2.2 Village Public Telephones (VPT):

During the previous quarter ending 30th September 2007 there were 5,67,397 VPTs, which was reported by service providers taking the number of villages as 6,07,491 as per Census 1991. Whereas in this quarter i.e. 31st December 2007, the service providers have taken the number of villages as 5,93,485 as reclassified in Census 2001. This classification also resulted more than one VPTs in some of the revenue villages. The total number of VPTs reported by service providers are 5,30,127 for the quarter ending 31st December 2007. The status of VPT's is depicted in the chart below: -

**Figure 1.7 : Village Public Telephones as on 31.12.2007**



Circle-wise and Operator-wise details of village public telephones as on 31<sup>st</sup> December 2007 and addition/deletion during the quarter are available in Table 1.3.

\*\*\*\*\*

## CHAPTER TWO PERFORMANCE OF WIRELESS SERVICES

Wireless Subscriber Base reached 233.62 million

### PART A

**2.1 Details of service providers:** - The list of all the Wireless service providers along with their licensed service areas is as under: -

Sl.	Service Provider	Area for which licensed with No.	Area for which not licensed	UASL Service Licensed
1	BSNL/MTNL	All India (23)		
2	Bharti	All India (23)		All India except NE
3	Aircel Group	All India (23)		All India except Chennai & TN
4	Reliance Group	All India (23)		
	Reliance Infocomm	All India (except Assam & NE) (21)	Assam & NE	All India except NE & AS
	Reliance Telecom	Kolkata, MP, WB, HP, Bihar, Orissa, Assam & NE (8)	Delhi, Mumbai, Chennai, MH, Gujarat, AP, KTK, TN, Kerala, PB, Haryana, UP (W), UP (E), Rajasthan & J&K	MP, WB, HP, Bihar, Orissa, Assam & NE (7)
5	Vodafone	All India (23)		UP-W, MP, WB, HP, Bihar, Orissa, Assam, NE, J&K
6	Tata Teleservices	All India (except AS, NE & J&K) (20)	AS, NE & J&K	All India except (AS, NE & J&K)
7	IDEA	Delhi, Mumbai, MH, Guj, AP, KR, HR, UP-W, UP-E, Raj, MP, HP & Bihar (13)	Chennai, Kolkata, KTK, TN, Punjab, WB, Orissa, Assam, NE & J&K	Mumbai, Bihar
8	Spice Communications	KTK, Punjab (2)	All India except (KTK, Punjab)	KTK, Punjab
9	BPL	Mumbai (1)	All India except (Mumbai)	--
10	HFCL	Punjab (1)	All India except Punjab	Punjab
11	Shyam Telelink	Rajasthan (1)	All India except Rajasthan	Rajasthan

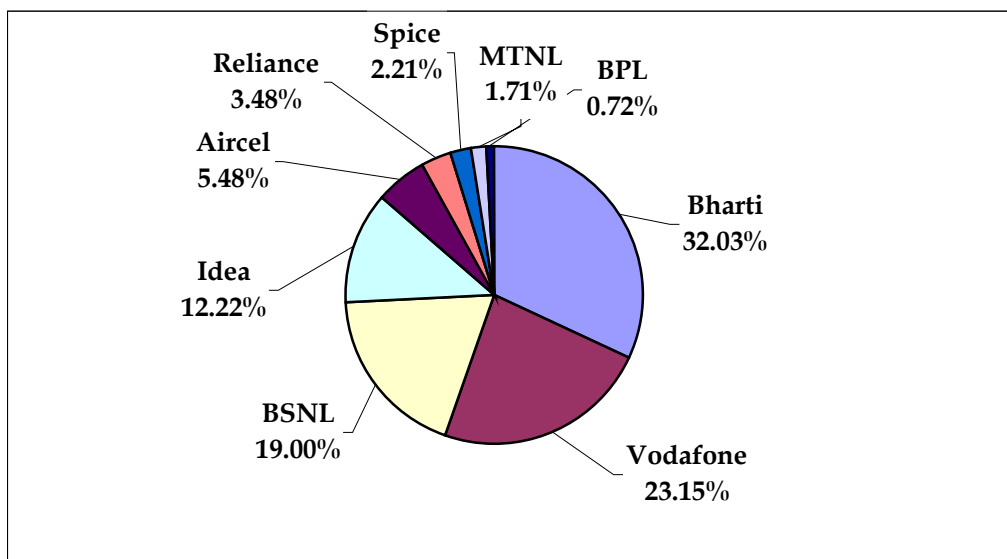
Circle-wise details of subscribers of Wireless, Wireline & Unified Access Service providers for the quarter ending December 2007 are given at Annex 2.1.

## 2.2 Growth of Subscribers Base: -

### 2.2.1 GSM

The GSM subscribers' base has reached 172.23 million in the quarter ending December 2007 as against 153.99 million at the end of the previous quarter. The quarterly growth for this quarter is 11.84%. M/s Bharti with 55.16 million subscriber base remains the largest GSM mobile operator followed by M/s Vodafone, M/s BSNL and M/s Idea with subscribers base of 39.86 million, 32.72 million and 21.05 million respectively. M/s BSNL in J&K, M/s Idea in Haryana, M/s Vodafone in UP (E) and M/s Dishnet in Orissa has registered a negative subscriber growth. The market share of different GSM operators is given below:

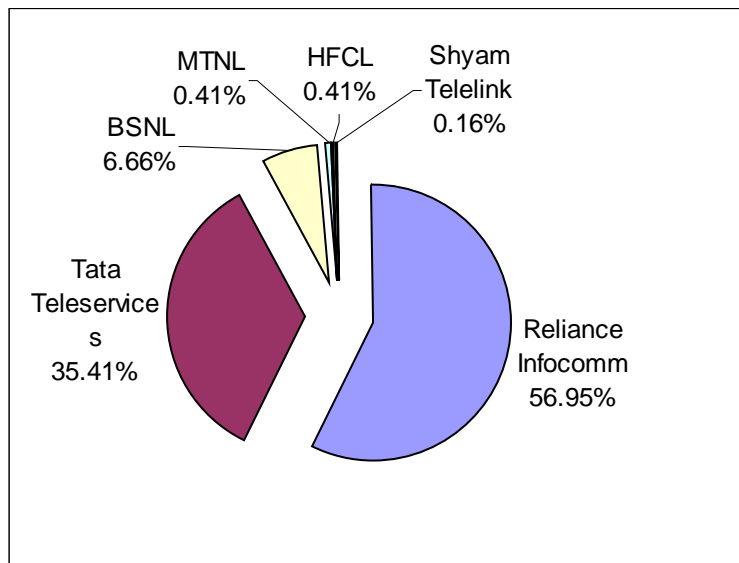
**Figure 2.1 : Operator-wise Market Share of GSM service providers as on 31st December 2007**



### 2.2.2 CDMA

- The CDMA Subscribers Base has reached 61.39 million during the quarter ending December 2007 as against 55.08 million at the end of September 2007. The quarterly growth in this quarter is 11.44% as against 12.12% for the previous quarter. M/s Reliance remains the largest CDMA mobile operator followed by M/s Tata Teleservices and M/s BSNL with subscribers base of 34.96 million, 21.74 million and 4.09 million respectively. M/s BSNL in Kolkata, Maharashtra & Punjab has registered a negative subscriber growth.

**Figure 2.2: Operator-wise Market Share of CDMA Wireless as on 31st December 2007**



### 2.2.3 Wireless Subscriber Base

At the end of December 2007, the Wireless (Mobile and WLL (F)) market has reached 233.62 million subscriber mark as against 209.07 million subscribers in the previous quarter.

### 2.2.4 Addition in Subscribers Base

During this quarter 24.55 million subscribers were added. The total subscriber base of 233.62 million comprises of 172.23 million GSM mobile (73.72%) & 61.39 million CDMA Mobile (26.28%). The growth rate recorded in this quarter is 11.74% as against 13.06% in the previous quarter.

## 2.2.5 Company wise Market Share

- a) M/s Bharti has maintained its 1<sup>st</sup> position with a wireless subscriber base of 55.16 million. It has market share of 23.61% wireless subscriber base. M/s Reliance is on 2<sup>nd</sup> position & M/s Vodafone is at 3<sup>rd</sup> position with wireless subscribers base of 40.96 million & 39.86 million respectively with market share of 17.53% & 17.06% at the end of this quarter.
- b) The top Six Wireless operators on the basis of market share are given below: -

<b>SLNO</b>	<b>Wireless Group (with number of Circle)</b>	<b>Subscribers Base as on Year ending Dec 07 (in Millions)</b>	<b>Market Share</b>
<b>1</b>	<b>Bharti (23)</b>	55.16	23.61%
<b>2</b>	<b>Reliance (23)</b>	40.96	17.53%
<b>3</b>	<b>Vodafone (16)</b>	39.86	17.06%
<b>4</b>	<b>BSNL(21)</b>	36.81	15.75%
<b>5</b>	<b>Tata (20)</b>	21.74	9.31%
<b>6</b>	<b>Idea (11)</b>	21.05	9.01%
<b>7</b>	<b>Others</b>	18.02	7.72%
	<b>Total</b>	233.62	100%

The details of operator-wise subscribers of GSM and CDMA are given in Table 2.2.

- c) Distribution of Subscriber base and market share of Wireless services as on December 2007 among Metros, Circles A to C is given in Table 2.3.

## PART B : ARPU and MoU

### 2.3 GSM

#### 2.3.1 Average Revenue Per User (ARPU)

- The All India blended ARPU per month has declined by 5.09% from Rs. 275/- in September 2007 to Rs. 261/- in December 2007.
- ARPU for postpaid service has shown a decline of 0.63% from Rs. 632/- in September 2007 to Rs. 628/- in December 2007. Decline for prepaid service has been 4.78% from Rs. 230/- in September 2007 to Rs. 219/- in December 2007.
- As per the revenue reports furnished by the service providers, revenue, net of “pass through”, is about Rs. 12738 Crores in quarter ending December 2007 as against Rs. 11903 Crores in quarter ending September 2007, thereby showing a growth of approx. 7.01%.

#### Growth in Revenue of GSM Service Providers

Period	Revenue* (Rs. in Crores)	Quarterly rate of growth
Jan-07 to Mar-07	10040	8.4%
Apr-07 to June-07	11336	12.9%
July-07 to Sept-07\$	11903	5.0%
Oct-07 to Dec-07\$	12738	7.0%

\* Net of pass through

\$ Data excludes revenue from FWP services

#### ARPU (Rs. per month during the quarter)

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	618	208	249
Circle B	532	213	232
Circle C	569	244	269
<b>Metro</b>	714	248	346
All India	<b>628</b>	<b>219</b>	<b>261</b>
<b>All private SPs</b>	697	223	267
<b>BSNL/MTNL</b>	441	207	238



### Composition of Revenue (%)

Item	Sep-07	Dec-07
Rental Revenue	23.2%	21.3%
Revenue from Call charges (usage)	53.9%	56.1%
Revenue from Roaming	9.0%	9.8%
Revenue from SMS	5.2%	4.6%
Other Revenues *	8.8%	8.2%

Notes:

\* Other revenue includes revenue from other value added services, installation etc.

#### **2.3.2 Usage Pattern**

- MOU per subscriber has increased by 0.46% from 462 minutes in September 2007 to 464 minutes in December 2007.
- Incoming MOU continues to show declining trend from 244 minutes in Sep-07 to 243 minutes in Dec-07. This decline is only on account of decline in Incoming MOUs for postpaid service. Prepaid service has however shown an increase in incoming usage from 219 minutes in Sep-07 to 221minutes in Dec-07.
- Outgoing MOU has increased by 1.25% from 218 minutes in Sep-07 to 221minutes in Dec-07.
- Both for postpaid and prepaid, Metros continue to have lowest outgoing MOU per subscriber as compared to other circle categories.
- Overall ratio of incoming-outgoing MOUs has been 53:47 for GSM services. For postpaid, ratio of incoming-outgoing minutes is 47:53 and for prepaid segment, it is 54:46.
- Outgoing SMS per subscriber continued to decline. Rate of decline has been 13.8% from 32 in Sep-07 to 28 in Dec-07.  
Detailed data is given in Annex. 2.2.

#### **2.3.3 Average Subscriber outgo (rental + call charges) per minute**

The tariff plans are of bundled nature and the trade-off is generally between monthly fixed charges and Variable (call) charges. Annex 2.4 indicates the average outgo per outgoing minute i.e. Rental revenue + Airtime revenue per outgoing minute.

- All India average outgo per minute has declined from Rs. 1.04 in Sept-07 to Rs. 0.99 in Dec-07.

## 2.4 CDMA ( Full Mobility Service)

### 2.4.1 ARPU (Average Revenue Per User per month)

- All India blended ARPU (per month) for the quarter ending December 2007 is Rs. 176/- as compared to Rs. 173/- for the quarter ending September 2007.
- The lowest blended ARPU per month is in U P West (Rs.146/-) while the highest blended ARPU is in Mumbai (Rs. 276/-).
- According to the revenue reports submitted by the service providers for the quarter ending December 2007, revenue, net of “pass through”, from CDMA full mobility service is Rs. 2379.97 crores which was 2029.10 crores in the quarter ending September 2007 registering a 17% growth.
- The huge difference between postpaid and prepaid ARPU noticed in the previous quarter continued to remain valid for this quarter as well. Postpaid ARPU has been 3.56 times that of prepaid ARPU, which perhaps, could be attributed to declining importance of processing fee on recharge coupon/ voucher purchased by prepaid subscribers. The gap is lowest in Circle C (2.56 times) and highest in Circle A (3.78 times).

#### ARPU (Rs. per month during the quarter) – CDMA

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	489	129	166
Circle B	411	135	157
Circle C	408	160	173
Metro	588	157	224
<b>All India</b>	<b>499</b>	<b>140</b>	<b>176</b>

#### Composition of Revenue (%)

Item	Sep-2007	Dec-2007
Rental Revenue	17.9%	27.6%
Revenue from Call Charges (usage)	61.9%	58.6%
Revenue from SMS	2.0%	1.9%
Roaming Revenue	6.8%	4.5%
Other Revenues*	11.5%	7.5%

\* Includes revenue from other value added services, installations etc.

## 2.4.2 Usage Pattern (Minutes of Usage)

- Two trends are visible in the traffic pattern: One; the total MOU per subscriber/ month has shown sharp decline from 413 minutes (Q.E September 2007) to 375 minutes (Q.E December 2007). Second, the O/G MOU per subs/ month has also declined (i.e. by 18 minutes) in the current quarter as compared to previous quarter.
- ARPU has increased from Rs. 173/- (Q.E September 2007) to Rs. 176/- (Q.E December 2007) for the CDMA operators by 1.7%.
- The highest MOUs are recorded for Circle C at **469/-** per subscriber per month, which is **25 %** higher than the all India figure at **375/-** per subscriber per month.
- The lowest MOUs have been seen in Circle A at **346 minutes**, which is 8% lower than the all India figure at **375 MOUs** per subscriber per month.
- The ratio of incoming – outgoing traffic was **49.9:50.1** in the quarter ending September-2007 as against **49.8:50.2** reported for the quarter ending December-2007.
- The highest number of SMS per subscriber is recorded in **Metro (24 per subscriber per month)**, which is 42% higher than the all India at **17 SMS** per subscriber per month.

Detailed data is given in Annex 2.3

## 2.4.3 Average Subscriber Outgo (rental + call charges) Per Minute

Average Subscriber Outgo per minute (Rental Revenue + Airtime Revenue per outgoing minute) is given in Annex. 2.4.

The All India Average Subscriber Outgo per minute is Rs. 0.84/- in December 2007 as against Rs. 0.71/- in September 2007 is given in Annex 2.5.

\*\*\*\*\*

## CHAPTER THREE

### PERFORMANCE OF INTERNET SERVICES

#### 3.1 Service Providers & Subscribers Base: -

There are 10.36 million Wireline Internet subscribers at the end of December 2007 as compared to 9.63 million at the end of September 2007 registering a growth of 7.64%. The growth rate is higher as compared to growth rate of 4.37% at the end of September 2007.

Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of nearly 4.99 million Internet subscribers against 4.42 million at the end of last quarter. Mahanagar Telephone Nigam Limited (MTNL) has retained second position with a subscriber's base of nearly 1.85 million. M/s Bharti Airtel Limited is third with subscriber base of 0.75 million (Ref. Table 3.1).

Besides above, there are 57.83 million wireless subscribers at the end of December 2007 (capable of accessing data services including Internet through mobile handset (GSM/ CDMA)).

#### 3.2 Internet Telephony: -

As per the new guidelines for grant of license for operating Internet Services issued by DOT in August 2007, no separate category of Internet Telephony Service Providers (ITSPs) has been envisaged. The broad term used will be Internet Service Provider (ISPs) for all the Internet service including Internet Telephony services.

Around 32 ISPs submitted their Internet Telephony reports to TRAI, the list of which is enclosed at Annex 3.2. Total minutes of the use (MoU) for Internet Telephony during the quarter were 121.30 million minutes as compared to 129.43 million minutes for the last quarter registering a decrease of 6.28% over the previous quarter.

#### 3.3 Market Share: -

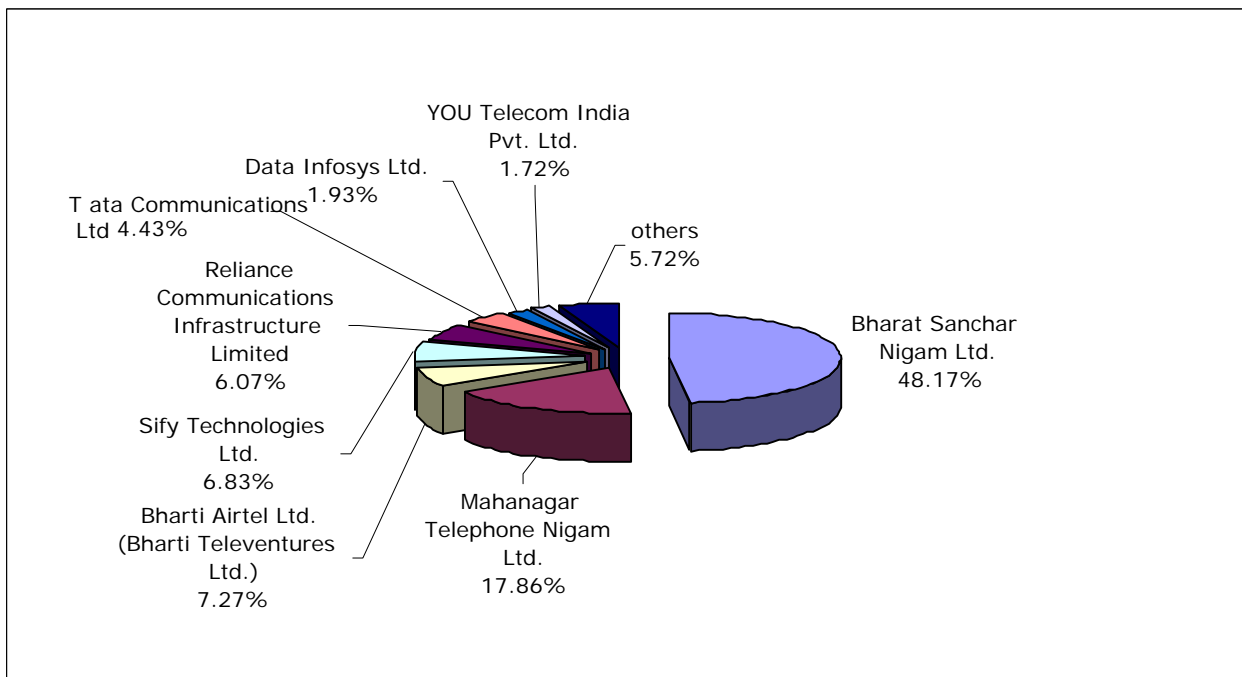
The growth trend of Wireline Internet Subscribers indicate a slight increase in the market share of PSU owned ISPs vis-à-vis private operators. During the quarter private ISPs have only 33.96% market share as against 35.35% market share in the preceding quarter. The PSU owned ISPs market share has increased from 64.65% to 66.04% at the end of December 2007.

The market share of top 5 ISPs is as under:

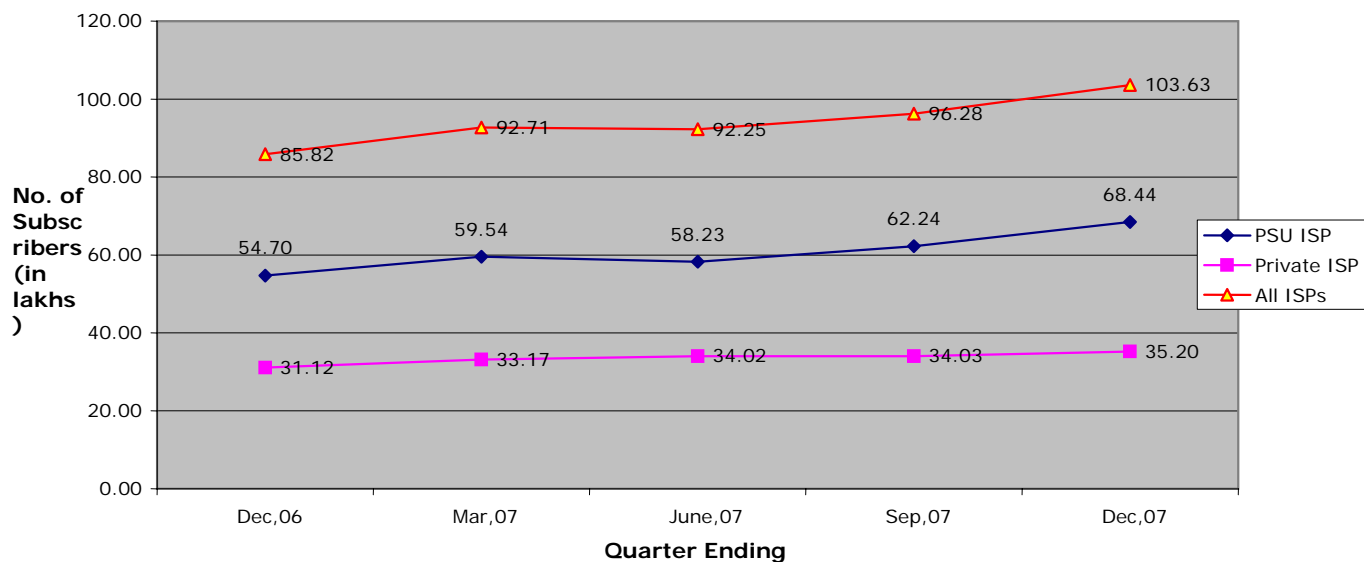
Sl.	ISP	Subs. base	Share in %
1)	Bharat Sanchar Nigam Ltd.	4992485	48.17
2)	Mahanagar Telephone Nigam Ltd.	1851291	17.86
3)	Bharti Airtel Ltd. (Bharti Televentures Ltd.)	753754	7.27
4)	Sify Technologies Ltd.	707609	6.83
5)	Reliance Communications Infrastructure Limited	628832	6.07

Among PSU owned ISPs; M/s BSNL has shown an increase of 5.04% in the subscriber base and have 48.17% share of total wireline subscriber base. MTNL is at second position and have a market share of 17.86%.

**Figure 3.1: Internet Subscriber Base as on 31.12.2007**

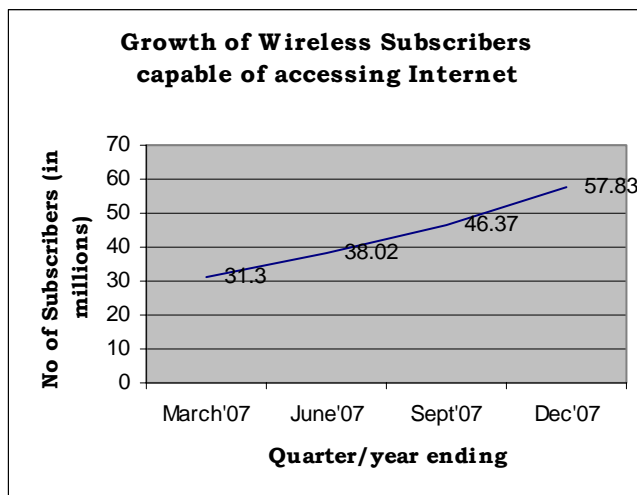


**Figure 3.2 : Growth Trends of Wireline Internet Subscribers-I**



The growth trend of Wireless Subscribers capable of accessing data services including internet through their mobile handsets is shown below:

**Figure 3.3 : Growth of Wireless Subscribers Capable of Accessing Data Services/ Internet**



This segment has been showing an increasing trend during the year 2007. These subscribers are using mobile handsets which are having "Internet enabled" feature and they are potential broadband subscribers with the deployment of advanced wireless technologies such as 3G and WiMAX.

### 3.4 Leased Lines Connectivity:

The numbers of Internet Leased Line connections are 21858 at the end of December 2007 as compared to 20925 at the end of September 2007 registering a growth of 4.46%

### 3.5 Broadband Connectivity (>=256 Kbps):

The number of Broadband subscribers (with a download speed of 256 Kbps or more) was 3.13 million at the end of December 2007. Out of these 2590773 are DSL based; 342348 Cable Modem; 100705 Ethernet LAN; 22473 Fibre; 28697 Radio customers; Leased Line 14632 and 28621 Others.

### 3.6 Company wise market share:

The Top 10 Internet Service Providers providing broadband service on the basis of market share are:-

Sl.No	ISPs Offering Broadband Services	Subscribers Base	Share in %
1	Bharat Sanchar Nigam Ltd.	1454000	46.22
2	Mahanagar Telephone Nigam Ltd.	514058	16.34
3	Bharti Airtel Ltd.	414835	13.19
4	Tata Communications	191002	6.07
5	Hathway Cable & Datacom Pvt. Ltd.	149491	4.75
6	You Telecom India Pvt lLtd	135991	4.32
7	Sify Limited	63683	2.02
8	Reliance Comm. Infra. Ltd.	55812	1.77

9	Asianet Satellite Communication Limited	35438	1.13
10	HFCL Infotel Ltd	21088	0.67
	<b>Sub Total</b>	<b>3035398</b>	<b>96.88%</b>
	<b>Others</b>	<b>97813</b>	<b>3.12%</b>
	<b>TOTAL</b>	<b>3133211</b>	<b>100%</b>

### **3.7 Minutes of Use (MoU) per subscriber for Dialup Internet access:**

The average minutes of usage per subscriber/ month for dialup subscribers was approximately 210 minutes at the end of December 2007 as compared to 206 minutes at the end of September 2007.

### **3.8 Average Revenue Per User (ARPU) for ISPs:**

The average revenue per user (ARPU) per month for dialup Internet usage was Rs 210/- at the end of December 2007 as compared to Rs. 200/- at the end of September 2007 having a growth of 5%.

### **3.9 International connectivity:**

The bandwidth owned by various IGSP for their ISP operations and Internet Leased lines is reported to be 42 GB for downlinking and 41 GB for uplinking at the end of December 2007 as compared to 40 GB for downlinking and 39 GB for uplinking at the end of September 2007.

\*\*\*\*\*

## CHAPTER FOUR

### PERFORMANCE OF VALUE ADDED SERVICES

#### 4.1 Public Mobile Radio Trunk Service (PMRTS): -

The subscriber base of PMRTS increased from 33663 in Sept, 2007 to 34825 in December, 2007 registering a growth rate of **3.45%**.

Delhi, Bangalore, Mumbai and Chennai together account for **70.64%** of market share of the total subscribers. Operative area Delhi leads the tally with the market share of 9793 subscribers followed by Bangalore, Mumbai and Chennai with the market share of 6585, 4542 and 3682 subscribers respectively.

M/s Arvind Mills Limited leads the tally of subscribers with a subscriber base of 10833 followed by Procall and Quick Calls India Pvt. Ltd. with a subscriber base of 9141 and 4578 respectively. The subscribers base of other PMRTS service providers is M/s Smarttalk (2507), M/s United Liner(1975), M/s Aryadoot Transport(1574), M/s Bhilwara Telenet (1322), M/s German Express(935) & Jety-Aiu (456) M/s Container Movement Transport Pvt Ltd.

M/s India Satcom Limited and M/s Procal have registered a negative growth rate in their subscriber base. The highest negative growth rate in this quarter is reported by M/s India Satcom Limited which is 37.72% of their subscriber base .

The subscriber base of service providers of PMRTS is given in Table 4.1.

**NOTE:** M/s Bhilwara Net Services (Delhi region) has not submitted their report in this quarter.

#### 4.2 VSAT services: -

- VSAT services are being provided by 8 VSAT Service Providers.
- In this quarter, there was an addition of 2057 new subscribers. The total number of subscribers increased from 65352 in Sept, 2007 to 67409 in December, 2007, registering a growth of **3.15%** as against the growth rate of 4.29% in quarter ended Sept, 2007.
- M/s Hughes communications Limited and HCL Ltd are the market leaders with subscribers base 22416 and 22416 both followed by Bharti Airtel Limited, Bangalore with 10019 and M/s Bharti Broadband Limited with 5155 VSAT subscribers respectively.
- M/s Hughes Communications Limited has not submitted **their subscriber base for quarter ending December 2007. Therefore, the subscriber base has taken from the previous quarter for analysis of the report.**
- M/s Bharti Airtel Limited, Bangalore has the highest growth rate of **6.02%** in this quarter.
- M/s ITI has shown negative growth of 6.12% in this quarter with decreased in subscribers base from 49 in Sept, 2007 to 46 in December, 2007.

The number of subscribers of each service providers along with the Market Share in terms of Percentage of Subscribers as on 31st December 2007 is given in Table 4.2.



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## CHAPTER FIVE

### QUALITY OF SERVICE (QoS) PERFORMANCE

#### 5.1 Quality of Service performance of Wireline Service Operators:

Based on Quality of Service Parameters reported by all the Wireline Service Operators for the quarter ending December 2007, the information on QoS performance is attached to this report at Annex 5.1.

The summary of status of the service providers who have not met the benchmarks in this quarter as compared to previous quarter is given in the Table below:

Sr. No.	Parameters	Benchmark	No. of operators not meeting the benchmarks			
			Sept, 2007		Dec, 2007	
			Out of 78 In Nos	Out of 78 In %age	Out of 78 In Nos	Out of 78 In %age
1.	<b>Provision of Telephones after registration of demand</b>	100% within 7 Days	55	70.51%	57	73.08%
2	<b>Fault incidences per 100 subs/month</b>	<5%	36	46.15%	27	34.62%
3	<b>Fault repaired by next working day</b>	>90%	24	30.77%	16	20.51%
4	<b>MTTR</b>	<8Hrs	31	39.74%	27	34.62%
5	<b>Grade of Service (Junction between local exchange)</b>	2/1000	25	32.05%	1	1.28%
6	<b>Call Completion Rate (in local network)</b>	>55%	7	8.97%	9	11.54%
7	<b>Metering &amp; billing credibility - % of bills</b>	<0.1%	11	14.10%	8	10.26%
8	<b>Customer Care Service (95% of requests)</b>					
(i)	Shifts	<3 Days	21	26.92%	21	26.92%
(ii)	Closures	<24 hrs.	19	24.36%	18	23.08%
(iii)	Additional Facilities	<24 hrs.	16	20.51%	17	21.79%
9	<b>Response time to the customer for assistance</b>					
(i)	%age of calls answered (electronically)					
	Within 20 sec = 80%	80%	1	1.28%	1	1.28%
	within 40 sec = 95%	95%	1	1.28%	1	1.28%
(ii)	%age of calls answered by operator (voice to voice)					
	Within 60 sec = 80%	80%	8	10.26%	9	11.54%
	within 90 sec = 95%	95%	15	19.23%	18	23.08%
10.	<b>Time taken for refund of deposits after closures</b>	100% within 60 days	14	17.95%	17	21.79%

The parameter wise performance is given as under:

Parameters	Benchmarks	Service Providers not meeting the benchmarks
<b>Provision of Telephones after registration of demand</b>	<b>100% within 7 Days</b>	<p><b>BSNL</b> = AP (86.48), GJ (97.11%), Chhatisgarh (78.27), MH (87.46), Punjab (99.35), Raj (99.28%), A&amp;N (92.83%), Assam (92.02%), Chennai (99.64%), Jharkhand (98.18%), Kerala (97.99%), Kolkata (99.65%), NE-I (68.05%), Orissa (77.56%), UP-E (98.94%), UP-W (97.48%), Uttaranchal (96.28%)</p> <p><b>MTNL</b> = Delhi (99.55%), Mumbai (86.44%)</p> <p><b>Reliance</b> = Bihar (45.71%), Delhi (17.74%), Gujarat (74.16%), Maharashtra (50.83%), Punjab (81.25%), Rajasthan (65.65%), Tamilnadu (92.74%), Haryana (37.99%), Karnataka (35.97%), Chennai (52.00%), HP (0.29%), Kerala (47.22%), Kolkata (50.05%), Mumbai (11.96%), Orissa (0.51%), UP-E (68.49%), West Bengal (45.03%)</p> <p><b>Bharti</b> = All circles except Haryana, Kerala</p> <p><b>Tata</b> = AP (86.94%) Delhi (99.24%) ,MH (80%) , KTK (98.33%), Mumbai (99.37%), Gujarat (99.19%)</p> <p><b>HFCL</b> = Punjab (98.48%)</p> <p><b>Shyam</b> = Rajasthan (98.1%)</p>
<b>Fault incidences per 100 subs/month</b>	<b>&lt;5%</b>	<p><b>BSNL</b> = All circles except AP, MP, TN, A&amp;N, Jharkhand, Kolkata, Orissa, Chennai and NE-I</p> <p><b>MTNL</b> = Delhi (5.89), Mumbai (7.84)</p> <p><b>Bharti</b> = AP (5.21), Haryana (5.27), MP (5.98), TN (6.18), UP-E (7.42), UP-W (7.21)</p> <p><b>Reliance</b> = UP -E (9.38)</p> <p><b>TATA</b> = Gujarat (6.20)</p>
<b>Fault repaired by next working day</b>	<b>&gt;90%</b>	<p><b>BSNL</b> = Bihar (77.20%), Chhattisgarh (79.82%), MH (87.57%), Punjab (89.96%), A &amp; N (86.26%), Assam (66.51%), HP (88.23%), Jharkhand (84.30%), J &amp; K (84.58%), KR (84.00%), Kolkata (89.93%), NE-II (88.69%) West Bengal (84.27%)</p> <p><b>MTNL</b> = Mumbai (85.61%)</p> <p><b>TATA</b>= Punjab (74.55%), Haryana (86.96%)</p>
<b>MTTR</b>	<b>&lt;8Hrs</b>	<p><b>BSNL</b> = All circles except MP, RJ, TN, HR, KTK, A&amp;N, Assam, Orissa HP, J&amp;K, UP-E, UP-W and Uttaranchal</p> <p><b>MTNL</b> = Mumbai (17.61 hrs.)</p> <p><b>Bharti</b> = Delhi (10.10 hrs), Punjab (11.00 hrs), Raj (10.10 hrs), TN (10.63 hrs.), Haryana (12.20 hrs.), Kolkata (10.90 hrs.), UP-E (11.30 hrs.), UP-W (12.90 hrs)</p> <p><b>Tata</b> = Delhi (12.90 hrs.), PB (32.79 hrs.) Haryana (24.93 hrs.), KTK (11.90 hrs.), Chennai (21.10 hrs.)</p>
<b>Call Completion Rate</b>	<b>&gt;55%</b>	<b>BSNL</b> = MH (52.93%), Rajasthan (53.25%) A&N

<b>(in local network)</b>		(44.88%), Jharkhand (52.55%), J&K (52.25%) <b>MTNL</b> = Delhi (49.50%) <b>Bharti</b> = MH (48.79%), Raj (53.00%), UP-W (54.58%)
<b>Metering &amp; billing credibility - % of bills</b>	<b>&lt;0.1%</b>	<b>Bharti</b> = AP (0.425%), TN (0.12%), KTK (0.209%), Kerala (0.579%), Mumbai (0.223%). <b>Tata</b> = Maharashtra (0.135%), Kolkata (0.227%), Mumbai (0.119%)
<b>Customer Care Service (95% of requests)</b>		
Shifts	<b>&lt;3 Days</b>	<b>BSNL</b> = Andhra Pradesh (76.00%), Maharashtra (79.80%), Chennai (81.05%), Kerala (91.00%), NE-I (89.00%), Orissa (67.00%), UP-W (91.50%) and Uttaranchal (90.00%) <b>MTNL</b> = Delhi (90.19%), Mumbai (70.06%) <b>Bharti</b> = AP (89.89%), KTK (90.35%), Kolkata (93.53%), Mumbai (91.78%) <b>Tata</b> = AP (82.23%), Delhi (94.12%), Gujarat (83.29%), MH (55.33%), KTK (37.50%), Chennai (72.50%), Mumbai (83.11%)
Closures	<b>&lt;24 hrs.</b>	<b>BSNL</b> = AP (80.52%), Bihar (86.00%), Chattisgarh (88.00%), Maharashtra (87.00%), Assam (93.009%), HP - (92.40%), NE - I (93.90%) <b>MTNL</b> = Mumbai (90.62%) <b>Reliance</b> = MH (94.84%) <b>Bharti</b> = Punjab (76.83%), Raj (74.07%), Kolkata (74.40%), UP-E (77.59%), UP-W (79.61%), Haryana (74.04%) <b>Tata</b> = Delhi (72.41%), Gujarat (64%), KTK (94.82%)
Additional Facilities	<b>&lt;24 hrs.</b>	<b>BSNL</b> = Andhra Pradesh (58.22%), Bihar (88.00%), Gujarat (83.60%), Chhatisgarh (90.00%), Maharashtra (83.00%) Assam (83.00%), Kerala (91.00%), NE-I (83.00%), UP-W (86.90%) <b>MTNL</b> = Delhi (93.84%), Mumbai (86.07%) <b>Bharti</b> = Delhi (91.10%), KTK (82.94%) <b>Tata</b> = MH (90.82%), KTK (94.82%), Kolkata (94.44%)
<b>Response time to the customer for assistance</b>		
%age of calls answered electronically		
Within 20 sec = 80%	<b>80%</b>	<b>BSNL</b> - Uttranchal (41.41%)
Within 40 sec = 95%	<b>95%</b>	<b>BSNL</b> - Uttranchal (70.74%)
%age of calls answered by operator (voice to voice)		
Within 60 sec = 80%	<b>80%</b>	<b>BSNL</b> - Uttranchal (64.67%) <b>Tata</b> = AP (65%), Bihar (66%), Gujarat (70%), TN (55%), KTK (55%), Chennai (60%), Kerala (55%),

		Kolkata (65%)
Within 90 sec = 95%	<b>95%</b>	<p><b>BSNL</b> = Uttaranchal (84.67%)</p> <p><b>MTNL</b> = Mumbai (85.53%)</p> <p><b>Bharti</b> = Gujarat (88.43%), MH (91.47%), KTK (89.13%), Mumbai (93.18%)</p> <p><b>Tata</b> = AP (72%), Bihar (70%), Gujarat (75%), MH (92%), PB (86%), TN (59%), HR (84%), KTK (61%), Chennai (64%), Kerala (59%), Kolkata (70%), Mumbai (87.60%)</p>
<b>Time taken for refund of deposits after closures</b>	<b>100% within 60 days</b>	<p><b>BSNL</b> = AP (60%)</p> <p><b>Bharti</b> = AP (93.48%), Delhi (80%), MP (95.97%), MH (99%), Punjab (92%), Rajasthan (85%), TN (92.28%), HR (82%), KTK (95.51%), Kerala (90.48%), Kolkata (80%), Mumbai (92%), UP-E (41%), UP-W (49%), Gujarat (97.33%)</p> <p><b>MTNL</b> = Mumbai (99.31%)</p>

## 5.2 Quality of Service performance of Wireless Service Providers for quarter ending 31<sup>st</sup> December 2007: -

5.2.1 This report covers performance of 93 GSM and 44 CDMA service operators vis-à-vis the QoS benchmarks prescribed by TRAI. The summary of performance of service providers not meeting the benchmark as compared to previous quarter is given in the table below:

Sr.No.	Parameters	Bench-Marks	No. Of Operators Not Meeting The Benchmarks			
			Quarter Ending Sept, 2007		Quarter Ending Dec. 2007	
			Out Of 135 (Nos.)	Out Of 135 (%)	Out Of 135 (Nos.)	Out Of 135 (%)
1	Accumulated down time of Community isolation	<24 hrs	0	0.00%	1	0.74%
2	Call Set-Up Success Rate (Within Licensee's Own network)	>95%	0	0.00%	1	0.74%
3	Service access delay	<15 Sec	0	0.00%	2	1.48%
4	Blocked call rate (i) SDCCH/paging channel congestion	<1%	4	2.96%	5	3.70%
	(ii) TCH Congestion	<2%	6	4.44%	7	5.18%
5	Call drop rate	<3.0%	0	0.00%	0	0.00%
6	%age of Connections with good voice quality	>95%	1	0.74%	5	3.70%
7	Response time to the customer for assistance %age of calls answered (electronically) within 20 seconds = 80%	80%	0	0.00%	0	0.00%
(i)	%Age of calls answered (electronically) within 40 seconds = 95%	95%	1	0.74%	2	1.48%
(ii)	%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	80%	38	28.15%	29	21.46%
(iii)	%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	95%	54	40.00%	61	45.80%
8	Complaints per 100 bills issued	<0.1%	2	1.48%	2	1.48%
9	% Of complaints resolved with 4 weeks	100%	2	1.48%	2	1.48%
10	Period of all Refunds/Payment due to Customers from the date of resolution of complaints As In (9) above	<4 Weeks	0	0.00%	0	0.00%

The parameter wise performance is given as under:

<b>Parameters</b>		<b>Service Providers Not Meeting The Benchmarks</b>
Accumulated down time of Community isolation	<24 hrs	Reliance Telecom – Orissa(39.28 hrs)
Call Set-Up Success Rate (Within Licensee’s Own network)	>95%	Reliance Telecom- Assam (92.00%) Bharti Airtel – WB (93.57%)
Service Access Delay	<15 sec.	Bharti Airtel – UP-E (15.90),MP(17.96)
Blocked call rate (i) SDCCH/paging channel congestion	<1%	MTNL - Mumbai (1.61%) – CDMA Service Bharti Airtel – Rajasthan (1.80%), Bihar (6.09%) RTL - Assam (1.13%),NE(1.14%)
(ii) TCH Congestion	<2%	BSNL - Andhra Pradesh (2.55%) Reliance Telecom –Himachal Pradesh (2.03%), Assam (4.17%), North East (3.50%) Bharti Airtel - Rajasthan (3.07%), Bihar (4.13%),AP(2.22%)
Call Drop Rate	<3%	All the Operators meeting this Benchmark
%age of Connections with good voice quality	>95%	Bharti Airtel – KTK (94.03%), HR(94.18%),Raj(92.27%), WB(92.54%) Reliance Telcom- Assam(92.00%),
Response time to the customer for assistance %age of calls answered (electronically) within 20 seconds = 80%	80%	All the Operators meeting this Benchmark
%Age of calls answered (electronically) within 40 seconds = 95%	95%	BSNL - Punjab (94.00%),UP-E (94.00%)
%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	80%	BSNL - Maharashtra (69.82%), AP (72.00%), KTK (76.29%), Kerala (76.00%), UP-E (71.00%), Raj (39.60%), MP (68.84%) HP (42.70%) Chennai (77.00%) Bharti Airtel- Guj (51.80%),KTK(76.70%),Kerala (78.00%), Raj (67.00%),WB(67.60%),Orissa (73.00%),Kolkata (78.20%). Reliance Comm - Tamil Nadu(78.10%), Chennai(78.10%) Tata Tele - Raj (69.50%),MP(65.90%), West Bengal (64.30%), Bihar (66.50%), Chennai (60.10%) Kolkata (65.40%),Guj (70.00%),AP (64.60%),KTK (55.50%),TN (55.40%),KR (54.70%).
%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	95%	BSNL – Maharashtra (75.30%), AP (78.00%), Karnataka (83.60%), Kerala (82.00%), UP-E (86.13%), Raj (50.00%), MP (74.38%), HP – (57.40%), Assam (91.00%) Chennai (86.00%) Kolkata (91.40%) Bharti Airtel - Guj.(61.30%), KTK(86.00%), Kerala (84.00%), UP-W(91.00%),UP-E(92.00%), Raj (76.90%), MP(94.00%),WB(72.10%), Bihar (90.00%), Orissa (79.00%), Assam(93.00%) NE(94.00%), Mumbai (90.00%), Kolkata(81.10%) Reliance Comm - Maharashtra (94.91%), Gujarat (92.83%), Andhra Pradesh (93.53%), Karnataka (86.00%), Tamilnadu (83.88%), Punjab (90.68%), UP-W (94.56%), UP-E (94.56%), West Bengal (90.65%), Himachal Pradesh (90.68%), Bihar (90.65%), Mumbai (90.65%), Chennai (83.88%), Kolkata (90.65%) Vodafone Essar - Delhi (91.63%) Tata Tele - HR (84.40%), UP-W(91.90%), UP-E (87.20%) Raj (75.30%), MP (70.40%), West Bengal (68.00%), Bihar (69.90%), Orissa (84.20%), Mumbai (87.60%), Chennai (63.80%) Kolkata (69.60%),MH (92.30%),Guj (75.20%), AP (72.00%), KTK(60.50%), TN (49.20%), KR(58.60%),PB (85.90%)/ Dishnet Wireless - WB (89.90%), Assam (84.00%), Bihar (87.00%).
Complaints per 100 bills issued	<0.1%	Bharti Airtel – Bihar(0.200%)

		Vodafone - <b>Chennai (0.500%)</b>
% Of complaints resolved within 4 weeks	100%	MTNL – <b>Delhi (98.67%)</b> – <b>CDMA Service</b> Tata Tele - <b>Mumbai (99.80%)</b>
Period of all Refunds/Payment due to Customers from the date of resolution of complaints	<4 Weeks	All the Operators meeting this Benchmark

Some of the Service Providers are having problems in achieving the benchmarks in respect of parameters (i) %age of calls answered by operator (voice to voice); within 60 seconds (ii) %Age of calls answered by operator (voice to voice); within 90 seconds.

### 5.2.2 Details of Quality of Service Parameters :

Detail of performance related to Network Performance, Customer help line and billing complaints are available at Annex 5.2.



### **5.3 Quality of Service Performance of Internet Service Providers for quarter ending 31<sup>st</sup> December 2007: -**

**5.3.1** Annex 5.3 indicates the Quality of Service achieved by the ISPs during the quarter.

#### **5.3.2 The observations on QoS Benchmarks are as follows:**

##### **5.3.2.1 Service Activation Time (6 hrs):**

All the ISPs have met the benchmark of 6 hrs.

##### **5.3.2.2 Time to Access ( 30 sec ) :**

Only M/s Bharti Airtel Ltd has not met this benchmark in this Quarter.

##### **5.3.2.3 Probability of Accessing the ISP Node**

All the Internet Service Providers have met this benchmark of 80% for first attempt, 90% for the second attempt and 99% for the third attempt in this quarter.

##### **5.3.2.4 ISP Node Unavailability ( 30 min):**

Only M/s Asia net Satellite Communications has not met this parameter.

##### **5.3.2.5 Grade of Service ( 1 in 100):**

ISPs are required to maintain the Grade of Service on the link connecting PSTN node to the ISP node as 1 in 100. M/s YOU Telecom India Pvt. Ltd and VSNL have informed that information not provided by M/s BSNL. M/s Shyam Internet Services Ltd has not met the benchmark in this quarter.

##### **5.3.2.6 Mean Time to Restore (MTTR) ( 3 days):**

As per clause 25.2 of new ISP license, ISPs are required to rectify 90% of faults resulting due to subscriber complaints within 24 hours and 99% within three days. All the ISPs have been rectifying the fault within stipulated period of three days.

## 5.4 Quality of Service Performance of Internet Service Providers providing broadband service for quarter ending 31<sup>st</sup> December 2007: -

There are 72 Internet Service Providers providing broadband service having subscriber base of 3.13 million subscribers. Among these 72 Internet Service Providers providing broadband service 14 service providers (who are having subscriber base more than 10,000 broadband subscribers) have the total 3.10 million subscribers i.e. about 98.56% of total broadband subscriber base. This report covers performance of these 13 Internet Service Providers providing broadband service vis-à-vis the QoS benchmarks prescribed by TRAI (as one service provider has recently crossed the 10,000 subscriber mark and will submit QoS parameters from next quarter).

Broadband Regulations came into force with effect from 1<sup>st</sup> Jan 2007. Based on Quality of Service Parameters reported by Internet Service Providers providing broadband service for the quarter ending December 2007, the information on QoS performance is attached to this report as Annex 5.4.

Following table indicates the status of non-compliance in respect of QoS benchmarks for Internet Service Providers providing broadband service:

Sl. No.	Parameters	Benchmarks	Name of Service Provider not Meeting the Benchmark
1	<b>Service Provisioning/ Activation Time</b>	100% in =< 15 working days	<p><b>BSNL:-</b> Bihar(94.00%), Chhattisgarh (96.00%), HR (94.00%), HP(90.00%), J&amp;K(73.30%), Jharkhand (99.56%) ,KTK (21.00%),KR (58.74%),MH (52.47%), NE-II(95.75%),Orissa (52.46%),TN (74.00%), UPE(99.98%), UPW(96.00%), Uttaranchal (30.00%) ,WB(44.44%).</p> <p><b>MTNL:-</b> Delhi (70.26%) ,Mumbai(70.35%).</p> <p><b>Bharti Airtel:-</b> AP(99.19%), Guj(99.60%), KTK(99.19%), MP&amp;CG(98.30%), MH(98.50%), Mumbai (99.80%) &amp; TN(95.34%).</p> <p><b>VSNL(New Tata Communications Ltd):-</b>South3 (99.00%),West1(99.00%).</p> <p><b>Hathway:-</b> Guj(98.00%),MH(91.00%).</p> <p><b>Reliance :-</b> All India (68.00%).</p> <p><b>Beam Cable System Pvt Ltd.:</b> AP(99.40%)</p>
2	<b>Faults Repair /Restoration Time</b>		
	% of faults repaired by next working day	>90%	<p><b>BSNL:-</b> NE-II(82.43%), Orissa(42.00%), Raj(63.00%),WB(60.00%).</p> <p><b>MTNL:-</b> Delhi (81.21%), Mumbai(72.55%).</p> <p><b>VSNL(New Tata Communications Ltd):-</b> East(88.00%),North(88.00%),South1(83.00%),South3(80.00%),West1(79.00%), West 2(78.00%).</p> <p><b>Asianet :-</b> All India (88.00%)</p>

	% of faults repaired within 3 working day	=>99%	<b>BSNL:-</b> Bihar(98.00%), Chennai(10.00%), Jharkhand(98.20%), Orissa(92.00%), Raj(90.00%, WB(40.00%) <b>MTNL:-</b> Delhi(96.58%), Mumbai(91.78%) <b>Bharti Airtel:-</b> AP(95.93%), KTK(95.93%), MP &CG(98.90%), Mumbai(98.70%), TN(98.44%). <b>VSNL(now Tata Comm. Ltd.):</b> - Central Region(98.00%), East(97.00%), North(95.00%), South I (94.00%), South 2(97.00%), South 3(92.00%), West I (92.00%), West 2(91.00%). <b>Hathway:-</b> Chennai(96.93%)
<b>3</b>	<b>Billing Performance</b>		
	%age of bills disputed	<2%	<b>VSNL(now Tata Comm. Ltd.):</b> - South 3(2.51%)
	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	<b>BSNL:-</b> AP(96.20%), Bihar(94.66%), Jharkhand(99.78%), Kolkata(99.30%), MH(99.77%), TN(98.33%) <b>MTNL:-</b> Delhi(99.90%) <b>VSNL(now Tata Comm. Ltd.):</b> - South 1(99.29%), South 2(98.15%), South 3(99.29%), West 1(99.16%), West 2(98.61%) <b>HFCL Infotel Ltd :-</b> Punjab(96.00%)
	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	<b>BSNL:-</b> AP(99.90%), Guj(99.00%) <b>Bharti Airtel:-</b> Delhi(78.00%), Guj(97.00%), HR(80.00%), Kolkata(94.00%), MP & CG(98.00%), MH(98.00%), Punjab(95.00%), Raj(87.00%), UP East(47.00%, UP West (61.00%) <b>VSNL(now Tata Comm. Ltd.):</b> - Central Region(23.00%), East(25.66%), North(71.0%), South 4(28.66%), West 1(80.66%) <b>Hathway:-</b> Chennai(99.33%), Guj(0.00%), KTK(98.67%), MH(99.23%) <b>You Telecom India Pvt. Ltd:-</b> All India(93.88%), AP(81.71%), KTK(84.82%), MH(99.49%), TN(97.26%) <b>Asianet :-</b> All India(97.00%)
<b>4</b>	<b>Response Time to the Customer for assistance</b>		
	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	<b>BSNL:-</b> Guj(59.00%), KTK(43.00%) <b>MTNL:-</b> Mumbai(36.25%)
	%age of calls answered by operator (voice to Voice) within 90 sec	>80%	<b>BSNL:-</b> Guj(14.00%), J&K(23.40%), KTK(49.00%), MH(72.48%),WB(10.00%) <b>MTNL:-</b> Mumbai(43.10%)
<b>5</b>	<b>Bandwidth utilisation/throughput</b>		
	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)		<b>Bharti Airtel:-</b> AP(7 Links), Delhi(4 Links), Guj(1 Link), HR(1 Link), KTK(12 Links), MH(3 Links), TN(9 Links) <b>Siffy:-</b> All India(17.33 Links)
	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)		<b>BSNL:-</b> Chennai(8 Links) <b>MTNL:-</b> Delhi(2 Links), Mumbai (1 Link) <b>Bharti Airtel:-</b> Delhi (1 Link), MP & CG(1 Link), UP West(1 Link) <b>Reliance:-</b> All India(7 Links) <b>Asianet :-</b> All India(2 Links)
	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG)	<90%	<b>Bharti Airtel :-</b> Delhi( 91.00%), MP & CG(94.33%) <b>Ortel:-</b> Orissa(94.00%)
	Broadband Connection Speed available (download) from ISP node to user	>80%	<b>BSNL:-</b> AP(0.00%), Assam(0.00%), Jharkhand(66.86%), MH(73.65%)

<b>6</b>	<b>Service Availability/Uptime (for all users) in %age</b>	>90% Quarter Ending June 07 >98% w.e.f. Quarter Ending Sept.07	
	Service availability /uptime (for all users) in %age	>98%	<b>BSNL:-</b> AP(96.68%), Assam(97.00%), HP(96.60%), J&K(90.00%), Jharkhand(97.20%), MP(96.30%), North East 1(93.30%) <b>VSNL(now Tata Comm. Ltd.):-</b> South 3(97.82%), West 1 (97.61%) <b>Tata Teleservices Maharashtra Ltd. :-</b> MH & Goa(92.00%)
<b>7</b>	<b>Packet loss (for wired broadband access) in %age</b>	<1%	<b>BSNL:-</b> AP(2.83%), <b>Hathway:-</b> HR(2.00%),UP(2.00%)
<b>8</b>	<b>Network latency (for wired broadband access)</b>		
	User reference point at POP/ISP Gateway node to IGSP/NIXI	<120 ms	<b>BSNL:-</b> AP(158.70) <b>Bharti Airtel:-</b> Guj(135.00), KR(141.00)
	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	<350 ms	<b>Bharti Airtel:-</b> AP(536.00), Guj(640.00), KTK(536.00), KR(835.00), TN(779.00)
	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)	<800 ms	The parameter is applicable only for Asianet who has met this benchmark.

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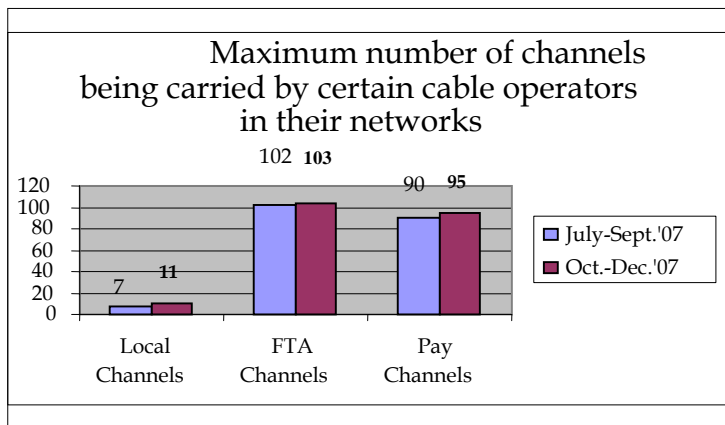
## CHAPTER SIX

### PERFORMANCE OF CABLE TV, DTH AND RADIO BROADCASTING SERVICES

#### 6.1 Cable TV Services

The following figure depicts the maximum number of FTA channels, Pay channels and local channels being carried in their network by the MSOs across the country. This figure is based on the reports received from some of the major service providers regarding the number of channels carried in analogue and/or in digital form reported across different networks of these service providers having different combinations of pay, FTA and Local channels in their network.

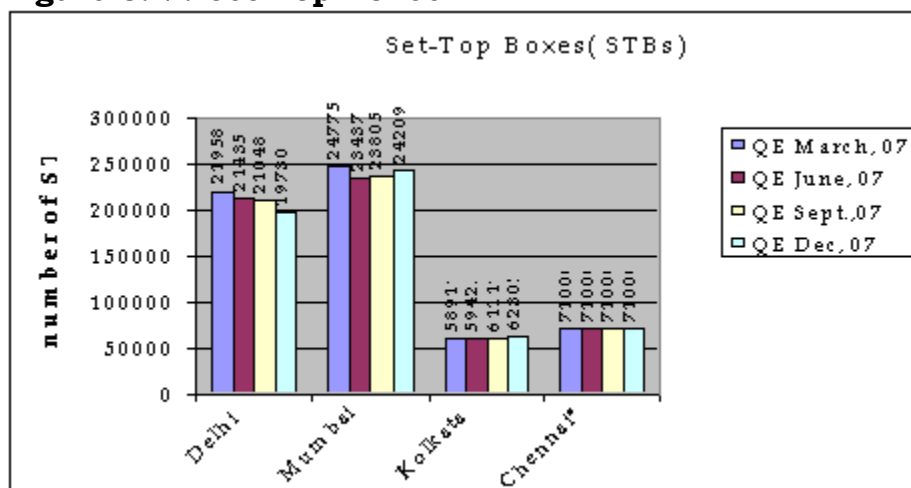
**Figure 6.1 : Maximum Number of Channels**



**6.2** The maximum number of Free-to-Air (FTA) and Pay Channels reportedly being carried in the cable networks are 103 and 95 respectively in this quarter. However, these numbers relate to different networks and hence cannot be added for arriving at the total number of channels.

**6.3** At the end of December, 2007, there are 501706 number of set-top box (STB) installed in CAS notified area of Delhi, Mumbai and Kolkata. In Chennai, there are around 71000 STBs in place. The following Figure shows the city-wise status of STB installation at these four places.

**Figure 6.2 : Set Top Boxes**



\* The data regarding Chennai is approximate.

## Satellite TV Channels

**6.4** Apart from introduction of 3 new pay channels, 4 Free to Air (FTA) channels were converted into pay channels during this quarter. At the end of December, 2007, there are reportedly 106 pay channels in existence. These 106 channels are being distributed by 15 broadcasters or their distributors. The list of pay channel broadcasters/distributors alongwith their pay channels is placed at Table 6.1.

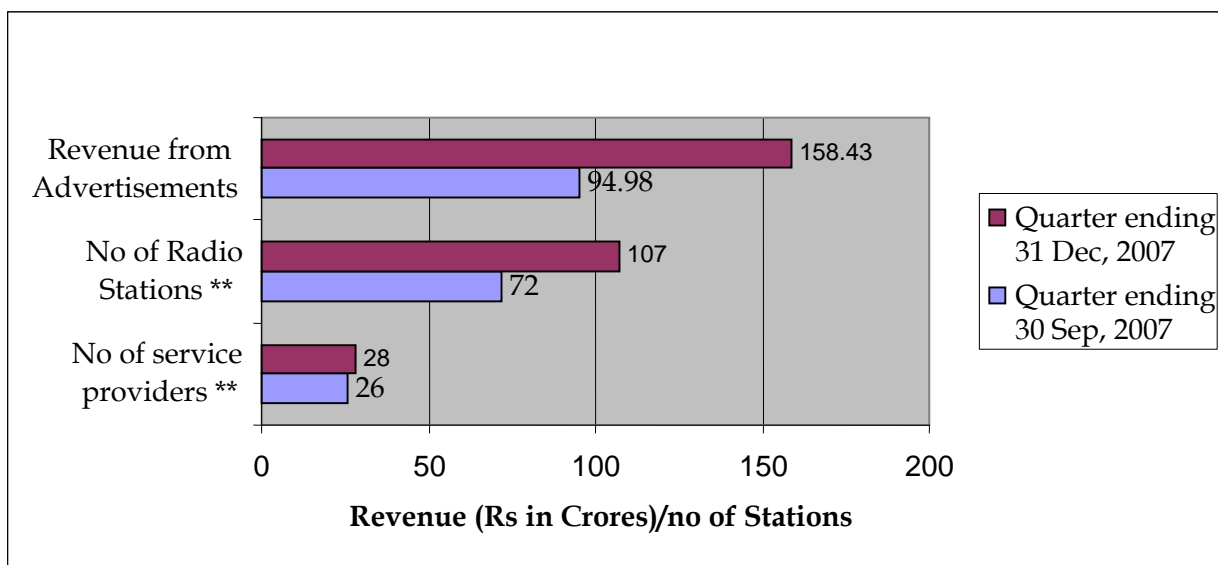
**6.5** The list of new pay channels introduced after 26.12.2003 and list of FTA channels converted into pay channels after 26.12.2003 are also placed at Table 6.2 and Table 6.3 respectively.

## FM Radio Services

**6.6** In this quarter, 55 private FM Radio Stations came into operation. Apart from the FM Radio stations of All India radio, there are 177 private FM Radio stations in operation across the country as on December 31, 2007. The list of these stations is attached as Table 6.4.

**6.7** The total Advertisement Revenue up to the quarter ending September' 07 in respect of 26 FM Radio Service Providers and quarter ending Dec' 2007 in respect of 28 FM Radio Service Providers who have given their reports is given in the figure below. However, the details do not pertain to the same set of service providers.

**Figure 6.3 : Comparative Position of Revenue of FM Radio Station**



\*\*\* Some of the service providers have not reported the advertisement revenue details.

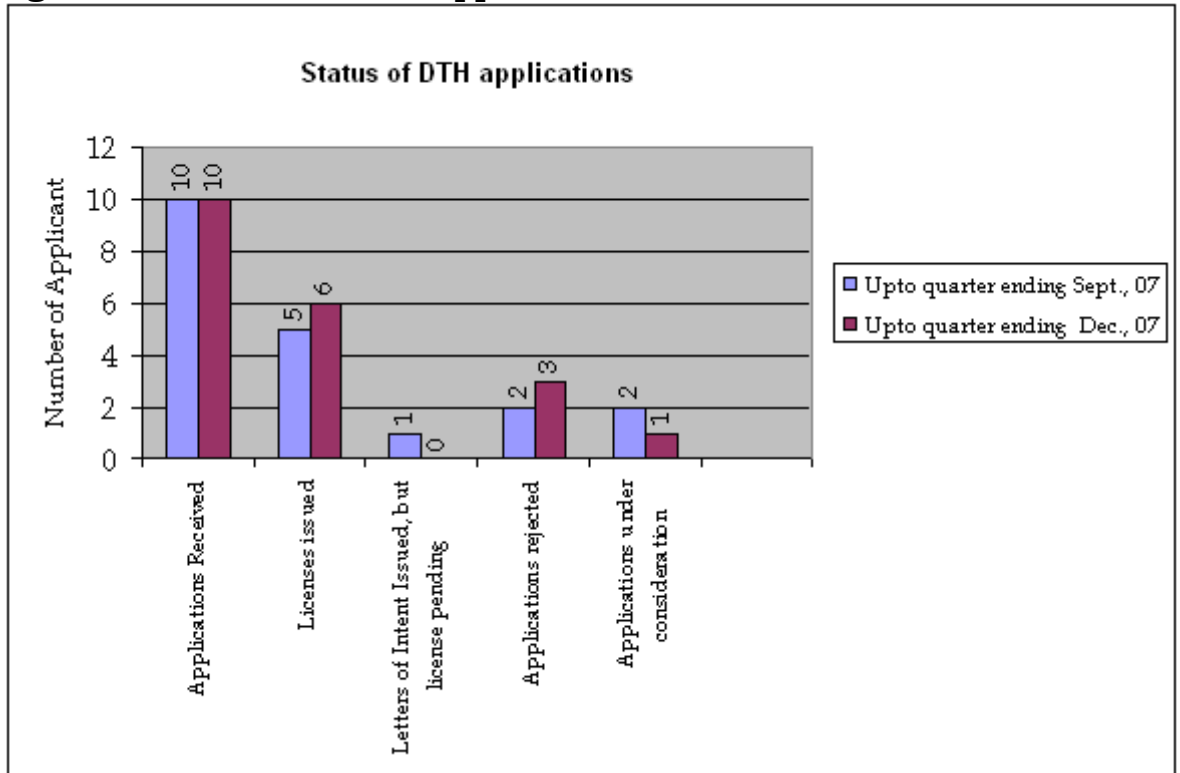
## Community Radio

**6.8** There are 28 community radio stations in operation at the end of December 2007. 47 licenses have been issued up to December 31, 2007. The status of applications for community radio station licenses received in Ministry of Information and Broadcasting up to the end of December 2007 is placed at Table 6.5.

## DTH Services

**6.9** One DTH license was issued in this quarter to M/s Bharat Business Channel Limited. Now, apart for free to air DTH service of Doordarshan, there are 6 private DTH licensees. The status of application received by Ministry of Information and Broadcasting for DTH services is shown in the following figure.

**Figure 6.4: Status of DTH Applications**



**6.10** Out of these 6 licensees, only 3 licensees are offering pay DTH services to the customers as on 31.12.2007. The list of DTH licensees is placed at Table 6.6.

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## CHAPTER SEVEN

### FINANCIAL DETAILS OF TELECOM SERVICE SECTOR

#### 7.1 Revenue of Telecom Service Sector for Quarter Oct-Dec2007(F.Y. 2007-08):

- The Total revenue of the Telecom Services Sector for the I<sup>st</sup> Quarter (April – June 2007) of 2007-08 was Rs. 28,972 Crore and for the II<sup>nd</sup> Quarter (July – September 2007) of 2007-08 was Rs.31,286 Crore thereby showing a growth of 8%. The total revenue for III<sup>rd</sup> Quarter (October-December 2007) of 2007-08 was Rs.33,055 Crores thereby showing a growth of 5.66%.
- The total revenue of the public sector operators for the I<sup>st</sup> and II<sup>nd</sup> Quarter of 2007-08 was Rs.9510 Crore and Rs.10717 Crore respectively, showing a growth of 11%. For the III<sup>rd</sup> Quarter of 2007-08 was Rs.10789 Crores showing a growth of 0.67%.
- The revenue contribution from the public sector operators for the Ist, IInd & III<sup>rd</sup> Quarter was 33%, 34% and 33%.
- The total revenue contribution from the private sector operators for the Ist & IInd quarter of 2007-08 was Rs.19462 Crore and Rs.20,569 Crore respectively, showing a growth of 5%. For the III<sup>rd</sup> Quarter of 2007-08 was Rs. 22,266 Crores showing a growth of 8.26%.
- The revenue contribution from the private sector operators for the Ist , IInd & III<sup>rd</sup> Quarter was 67% , 66% & 67% respectively.
- The AGR of the Telecom Services Sector for the Ist Quarter 2007-08 was Rs.22,868 Crore and for the IInd Quarter of 2007-08 was Rs.24,866 Crore there by showing a growth of 8.74%. For the III<sup>rd</sup> Quarter of 2007-08 was Rs.25,906 Crores thereby showing a growth of 4.18% respectively.
- The AGR of the public sector operators for the I<sup>st</sup> and II<sup>nd</sup> Quarter of 2007-08 was Rs.8,539 Crore and Rs.9,753 Crore respectively, showing a growth of 14.22%. For the III<sup>rd</sup> Quarter of 2007-08 was Rs.9,810 crores showing a growth of 0.58%.
- The AGR share of public sector operators for the II<sup>nd</sup> Quarter of 2007-08 was 35% as against 37% in the I<sup>st</sup> Quarter of 2007-08. For the III<sup>rd</sup> Quarter of 2007-08 was 38% respectively.
- The AGR contribution from the private sector operators for the Ist & IInd quarter of 2007-08 was Rs. 14,329 Crore and Rs. 15,113 Crore respectively, showing a growth of 5.47%. For the III<sup>rd</sup> Quarter of 2007-08 was Rs.16,095 crores showing a growth of 6.50%.

- The AGR share of private sector operators for the II<sup>nd</sup> Quarter of 2007-08 was 61% as against 63% in the I<sup>st</sup> Quarter of 2007-08. For the III<sup>rd</sup> Quarter of 2007-08 was 62%.

<b>Total Revenue of Telecom Service Providers</b>			
<b>(Rs. in Crore)</b>			
<b>Particulars</b>	<b>I<sup>st</sup> Quarter of 2007-08</b>	<b>II<sup>nd</sup> Quarter of 2007-08</b>	<b>III<sup>rd</sup> Quarter of 2007-08</b>
<b>Total Revenue</b>	<b>28,972</b>	<b>31,286</b>	<b>33,055</b>
Share of public sector operators in total revenue	9,510	10,717	10,789
Share of private sector operators in total revenue	19,462	20,569	22,266
Contribution of public sector operators in total revenue	33%	34%	33%
Contribution of private sector operators in total revenue	67%	66%	67%
<b>Total AGR</b>	<b>22,868</b>	<b>24,866</b>	<b>25,906</b>
Share of public sector operators in total AGR	8,539	9,753	9,810
Share of private sector operators in total AGR	14,329	15,113	16,095
Contribution of public sector operators in total AGR	37%	39%	38%
Contribution of private sector operators in total AGR	63%	61%	62%

Source: Un-audited figures submitted by the Operators.

Note: Access Service Providers, NLDos, ILDos, major ISPs and V-SAT operators

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**Table 1.1****Subscriber Base of Wireline Services as on 31st December 2007**

Sl. No.	FSO	Area of Operation	30th September 2007			31st December 2007		
			Urban	Rural	Total	Urban	Rural	Total
1	BSNL	All India	20253365	11972897	32226262	19973178	11738041	31711219
2	MTNL	Delhi & Mumbai	3627092	0	3627092	3597029	0	3597029
3	Bharti Airtel Ltd	Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh, Maharashtra, Mumbai, Punjab, Rajasthan, Tamilnadu (included Chennai circle), UP-East, UP-West (including Uttaranchal) and West Bengal.	2075037	0	2075037	2178175	0	2178175
4	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Mumbai	338806	208	339014	368537	182	368719
5	Tata Teleservices Ltd	AP, TN, Chennai, Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan, Punjab, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, U.P. (E), U.P (W) including Uttaranchal, West Bengal and Kolkata	290154	0	290154	303706	0	303706
6	HFCL Infotel Ltd	Punjab	161439	0	161439	153767	0	153767
7	Shyam Telelink Ltd	Rajasthan	143697	14384	158081	144184	14598	158782
8	Reliance Communication Ltd	AP, Bihar, Delhi, Gujarat, Haryana, HP, KN, Kerala, MP, MH, Mumbai, Orissa, Punjab, Rajasthan, TN Chennai UP(E), UP(W), WB, Kolkata	699593	458	700051	780526	448	780974
<b>Grand Total</b>			<b>27589183</b>	<b>11987947</b>	<b>39577130</b>	<b>27499102</b>	<b>11753269</b>	<b>39252371</b>

**Table 1.2****Details of Public Call Offices (PCO)**

<b>S.No</b>	<b>Service Providers</b>	<b>Area of Operation</b>	<b>PCOs as on 31.12.07</b>	<b>PCOs added during the quarter ending 31.12.07</b>
1	BSNL	All India	2019453	-19359
2	MTNL	Delhi & Mumbai	242388	-2712
3	Bharti Airtel Ltd.	Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh, Maharashtra, Mumbai, Punjab, Rajasthan, Tamilnadu (included Chennai circle), UP-East, UP-West (including Uttaranchal) and West Bengal.	204025	-7497
4	HFCL Infotel Ltd.	Punjab	40265	-2111
5	TATA Teleservices Ltd.	Maharashtra, Mumbai, AP, TN, Chennai, Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan, Punjab, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, U.P. (E), U.P (W) including Uttaranchal, West Bengal and Kolkata	1454953	60358
6	Reliance Communications Ltd.	Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan, Punjab, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, U.P(E), U.P (W) including Uttaranchal, West Bengal and Kolkata	1957384	133469
7	Shyam Telelink Ltd.	Rajasthan	43553	17553
	<b>TOTAL</b>		<b>5962021</b>	<b>179701</b>

**Table 1.3****Details of Village Public Telephones (VPT)**

<b>Sl. No</b>	<b>Service Providers</b>	<b>Area of Operation</b>	<b>VPTs as on 31.12.07</b>	<b>Achievement during the Qtr. ending 31.12.07</b>
1	BSNL	All India	518069	-37272
2	MTNL	Delhi & Mumbai	0	0
3	Bharti Airtel Ltd.	Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh, Maharashtra, Mumbai, Punjab, Rajasthan, Tamilnadu (included Chennai circle), UP-East, UP-West (including Uttaranchal) and West Bengal.	0	0
4	HFCL Infotel Ltd.	Punjab	317	-22
5	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Mumbai	2542	0
6	TATA Teleservices Ltd.	AP, TN, Chennai, Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan, Punjab, Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, U.P. (E), U.P (W) including Uttaranchal, West Bengal and Kolkata	2074	714
7	Reliance Communications Ltd.	AP,Bihar,Delhi,Gujarat,Haryana,HP, Karnataka, Kerala, MP, Maharashtra,Mumbai Orissa,Punjab, Rajasthan, TN, Chennai, UP(E), UP(W),West Bengal Kolkata	4115	0
8	Shyam Telelink Ltd.	Rajasthan	3010	-690
		<b>TOTAL</b>	<b>530127</b>	<b>-37270</b>

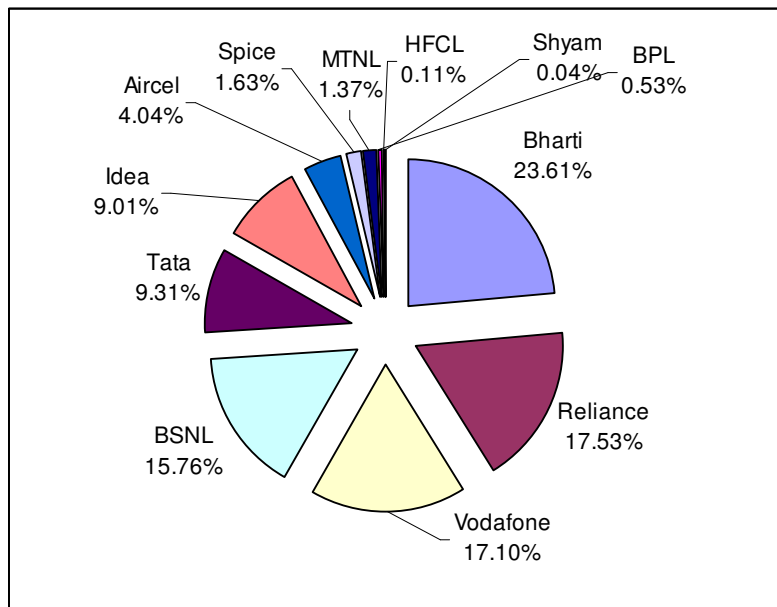
(Note: Till the quarter ending 30th September 2007, service providers were taking the number of villages as 6,07,491 as per Census 1991. Whereas in this quarter i.e. 31st December 2007, the service providers have taken the number of villages as 5,93,485 as reclassified in Census 2001. This classification also resulted more than one VPTs in one revenue village.).

**Table 2.1**

**Subscriber Base of Wireless Operators**

Wireless Group (With number of Circle)	Subscribers Base as on Dec 07 (in Millions)	Rural Subscribers (in millions)	Percentage of rural subscribers	Market Share (in %age) Of Internet Subscribers	Technology used
<b>Bharti (23)</b>	55.16	13.31	24.13	23.61	GSM
<b>Reliance (23)</b>	40.96	7.46	18.22	17.53	GSM & CDMA
<b>Vodafone/Hutchison(16)</b>	39.96	11.38	28.55	17.10	GSM
<b>BSNL (21)</b>	36.81	11.63	31.59	15.76	GAM & CDMA
<b>Tata (20)</b>	21.74	1.05	4.83	9.31	CDMA
<b>Idea (11)</b>	21.05	4.45	21.12	9.01	GSM
<b>Aircel (9)</b>	9.43	2.82	29.88	4.04	GSM
<b>Spice (2)</b>	3.80	0.37	9.74	1.63	GSM
<b>MTNL (2)</b>	3.20	0.00	0	1.37	GSM & CDMA
<b>BPL (1)</b>	1.24	0.00	0	0.53	GSM
<b>HFCL (1)</b>	0.25	0.002	0.98	0.11	CDMA
<b>Shyam (1)</b>	0.10	0.001	0.54	0.04	CDMA
<b>Total</b>	<b>233.62</b>	<b>52.52</b>	<b>22.48</b>	<b>100</b>	

**Market Share of Wireless Service Providers as on 31<sup>st</sup> December 2007**



**Table 2.2****Market Share of Wireless (GSM + CDMA) Operators**

a) The market share of different GSM Service Providers is given below:

<b>GSM Group</b>	<b>No of Subscribers (in Millions)</b>	<b>Market Share (in %age)</b>
Bharti	55.16	32.03
Vodafone	39.86	23.14
BSNL	32.72	19.00
Idea	21.05	12.22
Aircel	9.43	5.48
Reliance	6.00	3.48
Spice	3.80	2.21
MTNL	2.95	1.71
BPL	1.24	0.72
<b>Total</b>	<b>172.23</b>	<b>100</b>

b) The market share of different CDMA Service Providers is given below:

<b>Company Name</b>	<b>No of CDMA Subscribers (in Millions)</b>	<b>CDMA Market Share (in %age)</b>
Reliance Infocomm	34.96	56.95
Tata Teleservices	21.74	35.41
BSNL	4.09	6.66
MTNL	0.25	0.41
HFCL	0.25	0.41
Shyam Telelink	0.10	0.16
<b>Total</b>	<b>61.39</b>	

**Table 2.3**

**Growth Pattern of Wireless Subscribers Base**

**Wireless Subscriber Base:**

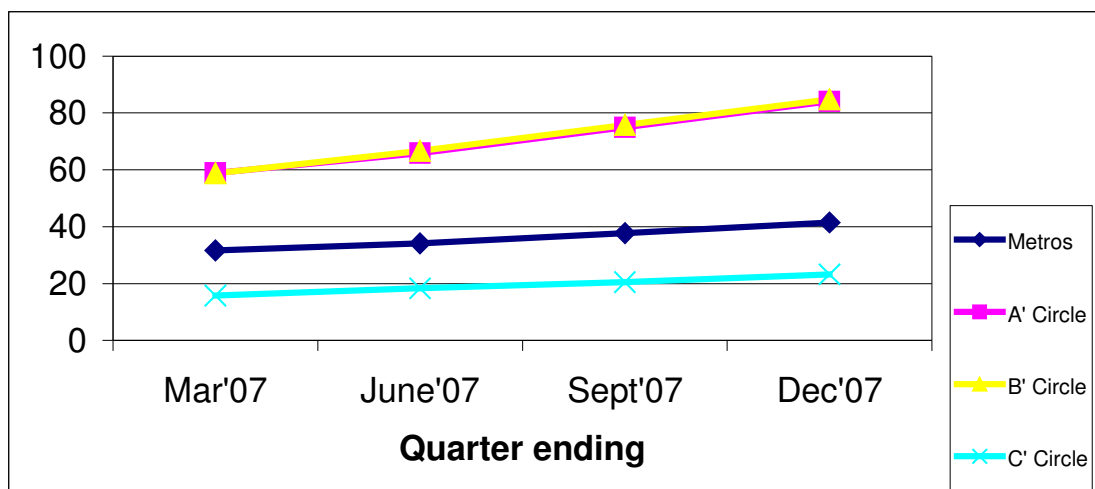
➤ The market share distribution among Metros & Circles A to C is given below:

<b>Circle</b>	<b>No. of Subscribers</b>	<b>Market Share</b>
Metros	41.47 million	17.75%
Circles 'A'	84.11 million	36.00%
Circles 'B'	84.80 million	36.30%
Circles 'C'	23.24 million	9.95%

➤ The details of subscriber base in various categories of service areas for the last four quarters are given below:

<b>Category</b>	<b>No. of Service Areas</b>	<b>Mar'07</b>	<b>June'07</b>	<b>Sept'07</b>	<b>Dec.'07</b>	<b>% Growth in Sept'07</b>
Figures (in millions)						
Metros	4	31.63	34.06	37.71	41.47	9.96
A' Circle	5	58.93	65.92	75.06	84.11	12.06
B' Circle	8	58.81	66.63	75.78	84.80	11.89
C' Circle	6	15.74	18.31	20.52	23.24	13.23

**Growth Trend of Wireless Subscribers**





**Table 3.1****Subscribers Base of Internet Services**

Sl.	Name of the Service Provider	Category	Geographical area of operation	Quarter ending Dec-07	Quarter ending Sep-07	% Growth
1	Bharat Sanchar Nigam Ltd.	A	All India	4992485	4415577	13.07
2	Mahanagar Telephone Nigam Ltd.	B	Delhi & Mumbai	1851291	1808143	2.39
3	Bharti Airtel Ltd. (Bharti Televentures Ltd.)	A	All India	753754	706776	6.65
4	Sify Technologies Ltd.	A	All India	707609	709155	-0.22
5	Reliance Communications Infrastructure Limited	A	All India	628832	604208	4.08
6	Tata Communications Ltd (Videsh Sanchar Nigam Ltd.)	A	All India	459430	456512	0.64
7	Data Infosys Ltd.	A	All India	199854	199942	-0.04
8	YOU Telecom India Pvt. Ltd.	A	All India	177810	168831	5.32
9	Hathway Cable & Datacom Pvt. Ltd.	A	All India	175671	160269	9.61
10	Asianet Satellite Communications Ltd.	B	Kerala	52428	49764	5.35
11	HFCL Infotel Ltd.	B	Punjab Telecom Circle	43689	40875	6.88
12	HCL Infinet Ltd.	A	All India	42490	42383	0.25
13	Punj Lloyd (Spectra Net Ltd.)	A	All India	28650	25918	10.54
14	Shyam Internet Services Ltd	B	Rajasthan	25465	25323	0.56
15	Beam Cable System Pvt. Ltd.	B	Hyderabad	22720	20656	9.99
16	Hughes Communications India Ltd.	A	All India	19891	19465	2.19
17	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)	A	All India	18945	15926	18.96
18	Vodafone Essar Gujarat Ltd. (Fascel Ltd.)	B	Gujarat	18001	18001	0.00
19	Ortel Communication Ltd.	B	Orissa	17860	16356	9.20
20	Broadband Pacenet India Pvt Ltd	B	Mumbai	12999	13853	-6.16
21	Alliance Broadband Services Pvt. Ltd.	B	Kolkata	11980	10046	19.25
22	VSNL Internet Services Ltd. (DIL Internet Ltd.(Primus Telecommunications))	A	All India	8368	9089	-7.93
23	In2cable (I) Ltd.	A	All India	8304	7523	10.38
24	West Bengal Electronics Industry Development Corp. Ltd.	B	Kolkata, WB	7917	8578	-7.71
25	Swiftmail Communications Ltd.	A	All India	6456	5471	18.00
26	Trikon Electronics Pvt. Ltd.	B	Mumbai	5881	5678	3.58
27	Ankhnet Informations Pvt. Ltd.	B	Mumbai	5816	275	2014.91
28	Trak Online Net India Pvt.Ltd	A	All India	4958	4917	0.83
29	WWW Communications Ltd.	B	Delhi	4155	4682	-11.26
30	Rajesh Multi Channel Pvt. Ltd.	B	Mumbai	3577	3532	1.27
31	Wire & Wireless (I) Ltd. (Siti Cable Network Ltd)	A	All India	3485	3309	5.32
32	HCL Comnet Systems & Services Ltd.	A	All India	3236	2648	22.21
33	Spacenet Internet Services Pvt Ltd	B	Delhi	3136	2604	20.43
34	Pioneer Online Pvt. Ltd.	B	Andhra Pradesh	2591		
35	Hathway Bhawani Cabletel & Datacom Pvt. Ltd.	B	Mumbai	2273	2098	8.34
36	Geocity Network Solutions Pvt. Ltd.	B	Delhi	2126	2157	-1.44
37	Bhupati Hotels Pvt. Ltd.	C	Visakhapatnam	1586	1372	15.60

38	Value Healthcare Ltd.	B	Mumbai	1527	1994	-23.42
39	Icenet.net Limited	B	Gujarat	1490	2885	-48.35
40	Star Broadband Services (I) Pvt Ltd	B	Delhi	1407		
41	CJM Consultancy Services Pvt. Ltd.	B	Delhi	1305	1351	-3.40
42	Kelnet Communication Services Pvt. Ltd	C	Trivandrum	1142	1207	-5.39
43	Digital2Virtual ISP Pvt. Ltd.	B	Gujarat	1125		
44	Cable Combine Communication Pvt. Ltd.	C	Siliguri SSA	1121	1087	3.13
45	Broadlane Networks Pvt. Ltd.	C	Dombivli, Maharashtra	1112	1078	3.15
46	Sab Industires Ltd. (Sab Infotech)	B,C	Punjab, Karnal, Ambala, Hisar	1019	1087	-6.26
47	ERNET India	A	All India	1016	1006	0.99
48	North East Dataa Network Pvt Ltd	B	Karnataka	1001	380	163.42
49	Dishnet Wireless Ltd.	A	All India	890		
50	Tulip IT Services Ltd.	A	All India	890	843	
51	BlazeNet Limited	B	Gujarat	834		
52	ISP Solutions India Pvt. Ltd.	C	Coimbatore SSA	743	593	25.30
53	Gomti Cable Network Pvt. Ltd.	C	Lucknow SSA	631	665	-5.11
54	Southern Online Bio Technologies Ltd.	B	Andhra Pradesh	621	585	6.15
55	Ice Network Private Limited	B	Bangalore	589		
56	Bohra Pratisthan Pvt. Ltd.	C	Udaipur SSA	528	486	8.64
57	Quest Consultancy Pvt. Ltd.	C	Valsad SSA	513	477	7.55
58	iPath India Pvt. Ltd.	C	Ernakulam SSA	502	581	-13.60
59	Speed Online.net Pvt. Ltd.	C	Rajkot	490	421	16.39
60	NetMagic Solutions(P) Ltd.	A	All India	464	434	6.91
61	Amber Online Services Ltd.	B	Andhra Pradesh	453		
62	F/X Wireless Technology Solutions Pvt Ltd	B	Mumbai	393	332	18.37
63	Bhiwani Communications Pvt. Ltd.	C	Rohtak	373	313	19.17
64	Rida Communication Pvt. Ltd.	C	Aligarh SSA	372	359	3.62
65	Micky Online Pvt Ltd.	C	Moradabad	350	350	0.00
66	Multinet (Udaipur) Pvt. Ltd.	C	Udaipur SSA	308	304	1.3157895
67	Khetan Cable Network (P) Ltd	C	Indore SSA	265		
68	Netcom Online Solutions India Pvt Ltd	B	Tamil Nadu	253		
69	Karuturi Networks Ltd.*	B	Karnataka	230		
70	Pacific Internet India Pvt. Ltd.	A	All India	208	201	3.48
71	Atria Convergence Technologies Pvt. Ltd.	B	Karnataka	202	133	51.88
72	Quick Online Pvt. Ltd.	C	Ghaziabad SSA	199	203	-1.97
73	Eastern Teleservices Pvt Ltd	C	Jamshedpur SSA	192	202	-4.95
74	Verizon Communications India Pvt. Ltd. (Worldcom Communications )	A	All India	192	190	
75	Kerala State Electronics Development Corp. Ltd. (Keltron)	C	Thiruvananthapuram	185	185	0.00
76	BT Global Communications India Pvt. Ltd. (i2i Enterprise Ltd.)	A	All India	169	164	
77	Mynet Services India Pvt. Ltd.	C	Tamil Nadu SSA	165	165	
78	Primenet Global Ltd.	A	All India	161	161	0.00
79	Vainavi Industries Ltd. (MAC Info Pvt. Ltd.)	B	Andhra Pradesh	150	180	-16.67
80	R.S. Broadband Service Pvt Ltd	B	Tamil Nadu SSA	144	131	

81	Descon Ltd.	B&C	Kolkata & Burdwan District	137	137	0.00
82	Harisree Cable Net Pvt. Ltd.	C	Kanpur SSA	119	54	
83	City Online Services Ltd.	B	Andhra Pradesh & Karnataka	106		
84	Guj Info Petro Ltd. (GIPL)	A	Gujarat	103		
85	DCT Networks Pvt Ltd (Manipal Software Pvt. Ltd.)	A	All India	91	76	19.74
86	Reach Network India Pvt. Ltd.	A	All India	83	104	-20.19
87	Estel Communications Pvt. Ltd.	A	All India	81	76	6.58
88	Readylink Internet Services Corai Pvt Ltd	C	Coimbatore SSA	79		
89	Mylai Karpagambal Information Systems (P) Ltd.	B	Chennai	76	89	-14.61
90	Shri Vinayagaa Internet Pvt Ltd	C	Madurai SSA	76		
91	Adya Tech One Services Pvt Ltd	C	Ghaziabad SSA	73	49	48.98
92	Gateway Systems (I) Ltd.	A	All India	71	87	-18.39
93	ISP Services (India) Pvt. Ltd.	C	Trichy	68	60	13.33
94	Konark Infocomm Pvt Ltd	C	Ghaziabad SSA	62	57	8.77
95	World Phone Internet Services Pvt LTd	A	All India	58		
96	Bharti Broadband Ltd	A	ALL INDIA	54		
97	Maple PC & Peripherals Pvt Ltd	C	Jamshedpur SSA	54	24	125.00
98	STN Communication & Advertising Pvt Ltd.	C	Guwahati	52	30	73.33
99	Netlinx Ltd.	B	Andhra Pradesh	47	34	38.24
100	Eronet Broadband Service India Pvt. Ltd.	C	Erode	37	48	-22.92
101	Swastik Netvision Telecom P. Ltd.	B	Gujarat	33	42	-21.43
102	Conjoinix Technologies Pvt Ltd	C	J&K, Chandigarh	31	31	0.00
103	CJ Online Pvt. Ltd.	C	Ghaziabad	28	50	-44.00
104	Global One India Pvt Ltd	A	All India	27		
105	Chemical And Metallurgical Design Co. Ltd	B	Delhi	23	18	27.78
106	Nelco Ltd	A	All India	23	23	
107	Online Media Solutions Ltd.	B	Andhra Pradesh	22		
108	L&T Finance Ltd. (L&T Netcom Ltd.)	A	All India	19	25	-24.00
109	Virtela India Pvt. Ltd.	B&C	Mumbai, Bangalore, Gurgaon	12	13	-7.69
110	Centre for Development of Advanced Computing, C-DAC	C	Ghaziabad SSA	11	14	-21.43
111	Direct Internet Ltd.	B&C	Delhi, Gurgaon, Noida	10	16	-37.50
112	Power Grid Corporation of India Ltd.	A	All India	10	10	
113	GTL Ltd.	A	All India	8	8	
114	Godrej Infotech Ltd.	B	Mumbai	7	4	75.00
115	Pulse Telesystems Pvt. Ltd.	B	Chennai	7	6	16.67
116	Tata Internet Services Ltd.	A	All India	6	6	
117	Pan India Network Infravest Pvt. Ltd. (Cyquator Technologies Ltd.)	B	Mumbai, Navi Mumbai	5	5	
118	ABT Ltd.	C	Coimbatore SSA	4	4	
119	Manipal Ecommerce Ltd.	B	Karnataka	3	4	-25.00
120	National Stock Exchange of India Ltd	A	ALL INDIA	3		

121	Compucom (I) Pvt. Ltd.	C	Jaipur	2	2	
122	Opto Network Pvt. Ltd.	C	SSA Ghaziabad	2	1	100.00
123	Aeroway Networks Pvt Ltd	C	Mysore SSA	0	121	-100.00
124	Apna Telelink Ltd.	C	Jalandhar	0	0	
125	Gujarat State Petroleum Corporation Ltd. (GSPC)	B	Gujarat	0	0	
126	Gujrat Narmada Valley Fertilizer Co. Ltd. (GNFC)	A	All India	0	0	
127	Spectrum Softech Solutions Pvt. Ltd.	C	Ernakulam SSA	0	0	
128	VSNL Broadband Ltd.	A	All India	0	13853	-100.00
	<b>TOTAL</b>			<b>10363466</b>	<b>9627576</b>	<b>7.64</b>

**Table 4.1****Subscriber Base of Public Mobile Radio Trunking Services (PMRTS)**

<b>Sr. No.</b>	<b>Name of the Service Provider</b>	<b>Subscriber Base as on 30.09.2007</b>	<b>Subscriber Base as on 31.12.2007</b>	<b>%age Growth in Subscribers</b>	<b>%age in Market Share</b>
1	Aryadoot Transport Pvt Limited	1536	1574	2.47	4.52
2	Jet-Aiu Skyline Transport Pvt Ltd.	440	456	3.64	1.31
3	Container Movement (Bombay) Transport Pvt Ltd.	5	5	0.00	0.01
4	Arya Offshore Services Pvt Ltd.	1241	1319	6.29	3.79
5	German Express Shipping Agency (India) Pvt Ltd. (Hapag Llyod)	854	935	9.48	2.68
6	United Liner Agencies of India (Pvt) Ltd	1786	1975	10.58	5.67
7	Procall Limited	9291	9141	-1.61	26.25
8	The Arvind Mills Ltd.	10288	10833	5.30	31.11
9	Smartalk Pvt Limited	2326	2507	7.78	7.20
10	QuickCall	4359	4578	5.02	13.15
11	Bhilwara Telenet Services Pvt Limited	1248	1322	5.93	3.80
12	India Satcom Ltd.	289	180	-37.72	0.52
	<b>Total</b>	<b>33663</b>	<b>34825</b>	<b>3.45</b>	<b>100.00</b>

**Table 4.2****Subscriber Base of VSAT Service Providers**

Sr. No.	Name of Service Provider	Quarter ending		%age growth rate	%age Market Share
		Sept, 2007	Dec, 2007		
1	<b>Hughes Communications Ltd.</b>	22416	*22416	0.00	33.25
2	<b>HCL Comnet</b>	21339	22416	5.05	33.25
3	<b>Bharti Airtel Limited, Bangalore</b>	9450	10019	6.02	14.86
4	<b>Bharti Broadband</b>	4963	5155	3.87	7.65
5	<b>Essel Shyam</b>	2464	2487	0.93	3.69
6	<b>Tatanet Services</b>	4670	4870	4.28	7.22
7	<b>ITI</b>	49	46	-6.12	0.07
8	<b>GNFC</b>	1	0	-100.00	0.00
	<b>Total</b>	<b>65352</b>	<b>67409</b>	<b>3.15</b>	<b>100.00</b>

**\*M/s Hughes Communications Ltd. has not submitted their subscriber base for quarter ter ending December 2007. Therefore, the subscriber base has taken from the previous quarter for analysis of the report.**

**Table 6.1****List of Broadcasters alongwith their pay channels**

<b>S.No</b>	<b>Name of the broadcaster</b>	<b>Name of Pay channels</b>
1	M/s Set Discovery Private Limited	SET, MAX, Discovery, Animal Planet, AXN, Animax, Discovery Travel and Living, SAB TV, SET PIX, MTV, NICK, VH1, NDTV 24X7, NDTV Profit, Ten Sports, Aaj Tak, Headlines Today, Tez
2	M/s Zee Turner Limited	Zee TV, Zee Cinema, Cartoon Network, Zee Marathi, CNBC TV 18, Zee News, CNN, Zee Café, Zee Studios, Zee Bangla, HBO, POGO CNN-IBN, CNBC Awaaz, Zee Business, Zee Classic, Zee Action Zee Premier, Zee Sports, Zee Telegu Zee Kannada, Play TV, ETC Punjabi, ETC, Zee Music, Zee Jagran, Zee Smile, 24 Ghante, 24 Taas, Zee Talkies, Zee Next
3	M/s ESPN Software India Private Limited	ESPN, Star Sports, Star Cricket
4	M/s B4U Television Network	B4U Movies
5	M/s BBC World India Private Limited	BBC World, BBC Entertainment Cbeebies
6	M/s Star India Private Limited	Star Plus, Star Gold, Star Movies Star World, Vijay TV, NGC, The History Channel, Channel (V), Star One, The Disney Channel, Toon Disney, Hungama, Times Now, Zoom
7	M/s Sun TV Network Limited	SUN TV, Gemini TV, Udaya TV K TV, Teja TV, Udaya Movies, Sun Music, Gemini Music, Sun News Gemini News, Udaya Varthegalu, Gemini Cable Vision, Adithya TV, Teja News, Ushe TV, Udaya News
8	M/s Raj Television Limited	Raj TV, Raj Digital Plus, Vissa
9	M/s Ushodaya Enterprises	ETV, ETV 2, ETV Bangla, ETV Marathi, ETV Kannada, ETV

		Gujrathi, ETV Oriya
10	M/s Sahara One Media & Entertainment Limited	Sahara One, Filmy, Firangi
11	M/s MAA Television Limited	MAA TV
12	M/s Nimbus Sports Broadcast Limited	NEO Sports Plus, NEO Sports
13	M/s INX Media Private Limited	9XM, 9X
14	M/s UTV Global Broadcasting Limited	Bindass, Bindass Movies, World Movies
15	M/s TV today Network Limited	Dilli Aaj Tak



**Table 6.2****List of new pay channels introduced after 26.12.2003**

S.No.	Name of the Channel	Name of Broadcaster /Distributor	Date of launching of channel
1	Pogo	Zee Turner Ltd	January 2004
2	Zee Action (Action Cinema)	Zee Turner Ltd	April 2004
3	Zee Premier (Premier Cinema)	Zee Turner Ltd	April 2004
4	Zee Classic (Classic Cinema)	Zee Turner Ltd	April 2004
5	Zee Select (MX)	Zee Turner Ltd	April 2004
6	Animax India	Set Discovery P Ltd	05.07.2004
7	Discovery – Travel & Living	Set Discovery P Ltd	16.08.2004
8	Hangama TV	Star India P Ltd	26.09.2004
9	ZOOM	Distributed by M/s Star India Private Limited	11.10.2004 (Informed)
10	Star One	Star India P Ltd	01.11.2004
11	VH 1	M/s Set Discovery Private Limited	December' 04
12	ESPN Plus	ESPN Software India Private Limited	15.12.2004
13	Toon Disney	Star India P Ltd	17.12.2004
14	Disney Channel	Star India P Ltd	17.12.2004
15	Awaaz	Zee Turner Ltd	01.01.2005
16	Zee Business News	Zee Turner Ltd	01.01.2005

17	Channel [V] International	Star India P Ltd	17.02.2005 (Informed)
18	NDTV Profit	Set Discovery P Ltd	01.04.2005
19	ZEE SPORTS	ZEE Turner Ltd	01.06.2005
20	SAB TV	Set Discovery P Ltd	01.06.2005
21	Adithya Music	M/s Sun TV Network Limited	01.12.2005
22	Teja News	M/s Sun TV Network Limited	01.12.2005
23	Times Now	Distributed by M/s Star India Private Limited	31.01.2006
24	SET PIX	M/s Set Discovery Private Limited	01.04.2006
25	NDTV 24X7	Set Discovery P Ltd	05.04.2006
26	Zee Kanada	M/s Zee Turner Limited	14.07.2006
27	Zee Telegue	M/s Zee Turner Limited	14.07.2006
28	Play TV	M/s Zee Turner Limited	14.07.2006
29	ETC Punjabi	M/s Zee Turner Limited	14.07.2006
30	ETC	M/s Zee Turner Limited	14.07.2006
31	Zee Music	M/s Zee Turner Limited	14.07.2006
32	Zee Jagran	M/s Zee Turner Limited	14.07.2006
33	Zee Smile	M/s Zee Turner Limited	14.07.2006
34	24 Ghante	M/s Zee Turner Limited	14.07.2006
35	NEO Sports	M/s Nimbus Sports Broadcast Private Limited	29.09.2006 Informed
36	NEO Sports Plus	M/s Nimbus Sports Broadcast Private Limited	29.09.2006 Informed

37	TCN Turner Classic Movies	M/s Turner International India Pvt Ltd	13.04.2007
38	Boomerang	M/s Turner International India Pvt Ltd	13.04.2007
39	MAA TV	M/s MAA Television Limited	
40	BBC Entertainment	M/s BBC World India Private Limited	15.06.2007
41	24 Taas	M/s Zee Turner Limited	11.06.2007
42	Zee Talkies	M/s Zee Turner Limited	11.06.2007
43	Star Cricket	M/s ESPN Software India Private Limited	22.06.2007
44	Bindass	M/s UTV Global Broadcasting Limited	01.08.2007
45	9XM	M/s INX Media Private Limited	12.09.2007
46	9X	M/s INX Media Private Limited	12.09.2007
47	Bindass Movies	M/s UTV Global Broadcasting Limited	24.09.2007
48	Zee Next	M/s Zee Turner Limited	19.11.2007
49	CBeebies (Kids)	M/s BBC World India Private Limited	15.11.2007

**Table 6.3****List of pay channels converted from FTA after 26.12.2003**

S.No.	Name of the Channel	Name of Broadcaster /Distributor	Date of conversion of channel from FTA to Pay.
1	MTV	Set Discovery Private Limited	01.05.2004
2	UDAYA TV	M/s Sun TV Network Limited	07.10.2004 (Informed)
3	Ushe TV	M/s Sun TV Network Limited	07.10.2004 (Informed)
4	Udaya News	M/s Sun TV Network Limited	07.10.2004 (Informed)
5	ETV	Ms Ushodaya Enterprises Limited	18.01.2006
6	ETV 2	Ms Ushodaya Enterprises Limited	18.01.2006
7	DAN Cinema	M/s Dan Television Private Limited	06.03.2006
8	DAN Music	M/s Dan Television Private Limited	06.03.2006
9	DAN Tamil OZHI	M/s Dan Television Private Limited	06.03.2006
10	EURO News	M/s Dan Television Private Limited	06.03.2006
11	TRACE TV	M/s Dan Television Private Limited	06.03.2006
12	BBC World	M/s BBC Worldwide India Private Limited	15.06.2006
13	CNN IBN	Distributed by M/s Zee Turner Ltd	15.08.2006
14	Sahara One	M/s Sahara India TV Network	01.09.2006
15	Filmy	M/s Sahara India TV Network	01.09.2006
16	ETV-Bangla	M/s Ushodaya Enterprises Ltd	09.11.2006
17	Udaya Movies	M/s Sun TV Network Limited	15.11.2006

18	Udaya Vathegalu	M/s Sun TV Network Limited	15.11.2006
19	Gemini Music	M/s Sun TV Network Limited	15.11.2006
20	Gemini News	M/s Sun TV Network Limited	15.11.2006
21	Gemini Cable Vision	M/s Sun TV Network Limited	15.11.2006
22	ETV-Kanada	M/s Ushodaya Enterprises Ltd	15.11.2006
23	SUN TV	M/s Sun TV Limited	02.12.2006
24	ETV-Oriya	M/s Ushodaya Enterprises Ltd	11.01.2007
25	ETV-Gujrathi	M/s Ushodaya Enterprises Ltd	15.03.2007
26	ETV-Marathi	M/s Ushodaya Enterprises Ltd	15.03.2007
27	Aaj Tak	M/s Set Discovery Private Limited	12.11.2007
28	Headline Today	M/s Set Discovery Private Limited	12.11.2007
29	Tez	M/s Set Discovery Private Limited	12.11.2007
30	Dilli Aaj Tak	M/s Today Network India Private Ltd	12.11.2007

**Table 6.4****List of operationalised private FM radio Station in India**

S.No	City	Name of the Company	Date of operationalisation
1	DELHI	CLEAR MEDIA	01.09.2006
2	DELHI	DIGITAL RADIO	29.04.2003
3	DELHI	E.N.I.L.	29.04.2003
4	DELHI	H.T. MUSIC	30.10.2006
5	DELHI	M.B.P.L.	29.04.2003
6	DELHI	RADIO MID-DAY	23.09.2006
7	DELHI	RADIO TODAY BROADCASTING LTD	28.05.2007
8	DELHI	ADLABS FILMS	24-09-2006
9	MUMBAI	ADLABS FILMS	14.11.2006
10	MUMBAI	DIGITAL RADIO	29.04.2002
11	MUMBAI	E.N.I.L.	23.04.2002
12	MUMBAI	H.T. MUSIC	15.01.2007
13	MUMBAI	M.B.P.L.	21.05.2002
14	MUMBAI	RADIO MID-DAY	29.04.2003
15	KOLKATA	ADLABS FILMS	21.10.2006
16	KOLKATA	RADIO TODAY BROADCASTING LTD	04.10.2007
17	KOLKATA	ANANDA OFFSET	28.02.2007
18	KOLKATA	DIGITAL RADIO	03.05.2003
19	KOLKATA	E.N.I.L.	03.05.2003
20	KOLKATA	HITZ FM	03.05.2003
21	KOLKATA	INDIA FM	03.05.2003
22	CHENNAI	ADLABS FILMS	27.09.2006
23	CHENNAI	E.N.I.L.	05.05.2003
24	CHENNAI	M.B.P.L.	10.07.2006
25	CHENNAI	MALAR PUBLICATIONS	02.10.2006
26	CHENNAI	NOBLE BROADCASTING	18.01.2007
27	CHENNAI	RADIO MID-DAY	10.01.2007
28	CHENNAI	SUN TV	05.05.2003
29	AGARTALA	POSITIVE RADIO	07.08.2007
30	AGRA	ADLABS FILMS	18.08.2007
31	AGRA	SHRI PURAN MULTIMEDIA	08.07.2007
32	AHMEDABAD	E.N.I.L.	10.12.2001
33	AHMEDABAD	M.B.P.L.	25.07.2007
34	AHMEDABAD	SYNERGY MEDIA	21.07.2007
35	AJMER	ADLABS FILMS	28/08/2007
36	AJMER	KUSHAL GLOBAL	12.09.2007

37	AJMER	SYNERGY MEDIA	31.08.2007
38	ALIGARH	ADLABS FILMS	08.12.2006
39	ALLAHABAD	ADLABS FILMS	29.10.2007
40	AMRITSAR	ADLABS FILMS	01.08.2007
41	AMRITSAR	SYNERGY MEDIA	27.07.2007
42	ASANSOL	ADLABS FILMS	29.06.2007
43	AURANGABAD	E.N.I.L.	24.07.2007
44	BANGALORE	ADLABS FILMS	09.10.2006
45	BANGALORE	E.N.I.L.	17.04.2006
46	BANGALORE	H.T. MUSIC	06.03.2007
47	BANGALORE	INDIA RADIO VENTURES	01.10.2006
48	BANGALORE	KAL RADIO	06.11.2006
49	BANGALORE	M.B.P.L.	10.06.2001
50	BANGALORE	RADIO MID-DAY	01.08.2006
51	BAREILY	ADLABS FILMS	30.03.2007
52	BAREILY	SHRI PURAN MULTIMEDIA	09.04.2007
53	BHOPAL	ADLABS FILMS	20.05.2007
54	BHOPAL	E.N.I.L.	26.05.2007
55	BHOPAL	SOUTH ASIA	06.11.2007
56	BHOPAL	SYNERGY MEDIA	26.05.2007
57	BHUBANESHWAR/ CUTTAK	ADLABS FILMS	14.04.2007
58	BHUBANESHWAR/ CUTTAK	EASTERN MEDIA	24.05.2007
59	BHUBANESHWAR/ CUTTAK	SOUTH ASIA	28.06.2007
60	BIKANER	ADLABS FILMS	19.01.2007
61	BILASPUR	SYNERGY MEDIA	27.09.2007
62	CHANDIGARH	ADLABS FILMS	12.02.2007
63	CHANDIGARH	SYNERGY MEDIA	19.02.2007
64	COIMBATORE	E.N.I.L.	03.11.2007
65	COIMBATORE	M.B.P.L.	12.11.2007
66	COIMBATORE	MALAR PUBLICATIONS	29.10.2007
67	COIMBATORE	SUN TV	07.03.2003
68	DHULE	B.A.G. INFOTAINMENT	15.08.2007
69	GORAKHPUR	SHRI PURAN MULTIMEDIA	03.06.2007
70	GUWAHATI	ADLABS FILMS	14.04.2007
71	GUWAHATI	POSITIVE RADIO	13.04.2007
72	GUWAHATI	PURVY BROADCASTING	09.10.2007
73	GWALIOR	ADLABS FILMS	06.08.2007
74	GWALIOR	GWALIOR FARMS	04.08.2007
75	GWALIOR	ITM SOFTWARE	07.09.2007
76	GWALIOR	SYNERGY MEDIA	06.08.2007
77	HISSAR	ADLABS FILMS	02.03.2007
78	HISSAR	B.A.G. INFOTAINMENT	18.06.2007

79	HISSAR	SHRI PURAN MULTIMEDIA	21.03.2007
80	HISSAR	SINGLA PROPERTY	17.03.2007
81	HYDERABAD	ADLABS FILMS	25.09.2006
82	HYDERABAD	E.N.I.L.	19.04.2006
83	HYDERABAD	KAL RADIO	06.11.2006
84	HYDERABAD	M.B.P.L.	30.05.2006
85	INDORE	ADLABS FILMS	03.08.2007
86	INDORE	E.N.I.L.	01.10.2001
87	INDORE	SOUTH ASIA	09.12.2007
88	INDORE	SYNERGY MEDIA	11.08.2007
89	JAIPUR	E.N.I.L.	17.04.2006
90	JAIPUR	M.B.P.L.	08.09.2006
91	JAIPUR	RAJASTHAN PATRIKA	15.08.2006
92	JAIPUR	SOUTH ASIA	06.11.2006
93	JAIPUR	SYNERGY MEDIA	28.05.2006
94	JALANDHAR	ADLABS FILMS	14.04.2007
95	JALANDHAR	E.N.I.L.	24.04.2007
96	JALANDHAR	SHRI PURAN MULTIMEDIA	14.04.2007
97	JALANDHAR	SYNERGY MEDIA	19.04.2007
98	JAMMU	ADLABS FILMS	07.12.2006
99	JAMSHED PUR	ADLABS FILMS	07.11.2007
100	JHANSI	ADLABS FILMS	19.01.2007
101	JODHPUR	ADLABS FILMS	14.12.2007
102	JODHPUR	KUSHAL GLOBAL	14.12.2007
103	JODHPUR	SYNERGY MEDIA	20.12.2007
104	KANNUR	MALAYALLA MANORAMA	30.12.2007
105	KANNUR	THE MATHRABHUMI	30.12.2007
106	KANPUR	ADLABS FILMS	14.06.2007
107	KANPUR	E.N.I.L.	16.06.2007
108	KARNAL	B.A.G. INFOTAINMENT	18.06.2007
109	KARNAL	SHRI PURAN MULTIMEDIA	02.04.2007
110	KHOZIKODE	KAL RADIO	07.12.2007
111	KHOZIKODE	MALAYALLA MANORAMA	29.11.2007
112	KOLHAPUR	E.N.I.L.	18.09.2007
113	KOLHAPUR	PUDHARI PUBLICATION	29.09.2007
114	LUCKNOW	E.N.I.L.	13.08.2007
115	LUCKNOW	M.B.P.L.	10.12.2001
116	LUCKNOW	SOUTH ASIA	06.11.2007
117	MADURAI	E.N.I.L.	28-09.2007
118	MADURAI	KAL RADIO	05.10.2007
119	MADURAI	MALAR PUBLICATIONS	01.10.2007
120	MANGALORE	ADLABS FILMS	24.11.2007
121	MANGALORE	E.N.I.L.	24.11.2007
122	MUZAFFARPUR	B.A.G. INFOTAINMENT	01.08.2007



123	MYSORE	ADLABS FILMS	14.10.2007
124	NAGPUR	E.N.I.L.	18.10.2007
125	NAGPUR	M.B.P.L.	21.10.2007
126	NAGPUR	SYNERGY MEDIA	21.10.2007
127	NASIK	E.N.I.L.	06.07.2007
128	PANAJI	ADLABS FILMS	22.05.2007
129	PANAJI	E.N.I.L.	22.05.2007
130	PANAJI	INDIA RADIO VENTURES	25.06.2007
131	PATIALA	ADLABS FILMS	01.08.2007
132	PATIALA	B.A.G. INFOTAINMENT	18.06.2007
133	PATNA	E.N.I.L.	02.04.2007
134	PONDICHERRY	ADLABS FILMS	01.12.2007
135	PONDICHERRY	KAL RADIO	20.12.2007
136	PONDICHERRY	MALAR PUBLICATIONS	22.12.2007
137	PUNE	E.N.I.L.	18.10.2002
138	RACHI	ADLABS FILMS	24.10.2007
139	RACHI	B.A.G. INFOTAINMENT	15.11.2007
140	RACHI	SHRI PURAN MULTIMEDIA	27.10.2007
141	RAJKOT	ADLABS FILMS	13.06.2007
142	RAJKOT	E.N.I.L.	13.06.2007
143	SHILONG	POSITIVE RADIO	16.10.2007
144	SHOLAPUR	ADLABS FILMS	08.11.2007
145	SHOLAPUR	M.B.P.L.	14.11.2007
146	SILIGURI	PCM CEMMENTS	14.11.2007
147	SILIGURI	SYNTECH INFORMATICS	24.11.2007
148	SRI-NAGAR	ADLABS FILMS	10.12.2006
149	SURAT	ADLABS FILMS	29.08.2007
150	SURAT	E.N.I.L.	21.08.2007
151	SURAT	M.B.P.L.	22.08.2007
152	SURAT	SYNERGY MEDIA	27.08.2007
153	THRISSUR	ASIANET COMMUNICATION	23.12.2007
154	THRISSUR	KAL RADIO	26.12.2007
155	THRISSUR	MALAYALLA MANORAMA	14.12.2007
156	THRISSUR	THE MATHRABHUMI	14.12.2007
157	TIRUNELVELI	MALAR PUBLICATIONS	13.10.2007
158	TIRUNELVELI	SUN TV	07.03.2003
159	TIRUPATI	ADLABS FILMS	01.08.2007
160	TIRUPATI	KAL RADIO	27.08.2007
161	TUTICORIN	KAL RADIO	05.10.2007
162	TUTICORIN	MALAR PUBLICATIONS	15.10.2007
163	UDAIPUR	ADLABS FILMS	03.08.2007
164	UDAIPUR	RAJASTHAN PATRIKA	27.08.2007
165	UDAIPUR	SYNERGY MEDIA	07.07.2007
166	VADODARA	ADLABS FILMS	05.06.2007
167	VADODARA	E.N.I.L.	05.06.2007

168	VADODARA	M.B.P.L.	11.06.2007
169	VARANASI	E.N.I.L.	14.07.2007
170	VARANASI	SHRI PURAN MULTIMEDIA	20.07.2007
171	VARANASI	SOUTH ASIA	29.12.2007
172	VIJAYWADA	E.N.I.L.	11.12.2007
173	VIJAYWADA	KAL RADIO	25.12.2007
174	VISHAKAPATNAM	ADLABS FILMS	27.10.2007
175	VISHAKAPATNAM	E.N.I.L.	26.10.2007
176	VISHAKAPATNAM	M.B.P.L.	29.10.2007
177	VISHAKAPATNAM	UDAYA TV	06.02.2003

**Table 6.5****Number of Applications received / Letters of Intent issued / Licenses Issued in respect of Community Radio Stations**

	<b>As on 31.12.2007</b>
Total No. of Applications Received	297
No of Licenses issued	47
No of Letters of Intend Issued	84
No of Applications rejected	11
No of stations operational	28

**Source:** *Ministry of Information & Broadcasting*

**Table 6.6**

**List of applicant who have been granted DTH Licenses**

1. Dish TV
2. Tata Sky Limited
3. Sun Direct TV Private Limited
4. Reliance Blue Magic Limited
5. Bharati Telemedia Limited
6. Bharat Business Channel Limited

## Annex 2.1

### **List of Wireless, Wireline & Unified Access Service Providers**

Circle	Operators		
	Wireless		Wireline
	Wireless	Unified	
Delhi	Vodafone	Reliance Infocomm	MTNL
	MTNL	Tata Teleservices	
	Idea Cellular	Bharti Airtel Ltd	
		Aircell Ltd.	
Mumbai	BPL	Reliance Infocomm	MTNL
	Vodafone	Tata Teleservices	
	MTNL	Bharti Airtel Ltd	
		Aircell Ltd.	
	Idea Cellular		
Chennai	Aircel	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
	Vodafone	Bharti Airtel Ltd	
Kolkata	Vodafone	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
	Reliable Internet Services Ltd.	Bharti Airtel Ltd	
		Dishnet Wireless Ltd.	
Maharashtra	Vodafone	Reliance Infocomm	BSNL
	Idea Cellular	Tata Teleservices	
	BSNL	Bharti Airtel Ltd	
		Aircell Ltd.	
Gujarat	Vodafone	Reliance Infocomm	BSNL
	Idea Cellular	Tata Teleservices	
	BSNL	Bharti Airtel Ltd	
		Aircell Ltd.	
Andhra Pradesh	Idea Cellular	Reliance Infocomm	BSNL
	Vodafone	Tata Teleservices	
	BSNL	Bharti Airtel Ltd.	
		Aircell Ltd.	
Karnataka	BSNL	Spice Communications	
	Vodafone	Reliance Infocomm	BSNL
		Tata Teleservices	
		Bharti Airtel Ltd.	
	Aircell Ltd.		
Tamilnadu	BPL	Reliance Infocomm	BSNL
	Aircel	Tata Teleservices	

	BSNL	Bharti Airtel Ltd	
Kerala	Idea Communications	Reliance Infocomm	BSNL
	Vodafone	Tata Teleservices	
	BSNL	Bharti Airtel Ltd	
		Dishnet Wireless Ltd.	
Punjab	BSNL	Reliance Infocomm	BSNL
	Vodafone	HFCL Infocom	
		Tata Teleservices	
		Bharti Airtel Ltd.	
		Spice Communications	
	Dishnet Wireless Ltd.		
Haryana	Idea Communications	Reliance Infocomm	BSNL
	Vodafone	Tata Teleservices	
	BSNL	Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
Uttar Pradesh(W)	Idea Communications	Reliance Infocomm	BSNL
	BSNL	Vodafone	
		Tata Teleservices	
		Bharti Airtel Ltd.	
	Dishnet Wireless Ltd.		
Uttar Pradesh(E)	Vodafone	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
	IDEA Telecommunications	Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
Rajasthan	Vodafone	Reliance Infocomm	BSNL
	Bharti Hexacom Ltd.	Tata Teleservices	
	BSNL	Shyam Telelink	
	IDEA Telecommunications		
Madhya Pradesh	Idea	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
	Reliance Telecom	Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
WB&A&N	BSNL	Reliance Infocomm	BSNL
	Reliance Telecom	Tata Teleservices	
		Bharti Airtel Ltd.	
		Huchinson Essar South Ltd.	
		Dishnet Wireless Ltd.	
Himachal Pradesh	BSNL	Reliance Infocomm	BSNL
	Reliance Telecom	Tata Teleservices	

	IDEA Telecommunications	Dishnet Wireless Ltd.	
		Bharti Airtel Ltd.	
		Essar Spacetel Pvt. Ltd.	
Bihar	BSNL	Reliance Infocomm	BSNL
	Reliance Telecom	Tata Teleservices	
		Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
		Essar Spacetel Pvt. Ltd.	
Orissa		Aditya Birla Telecom Ltd.	
	BSNL	Reliance Infocomm	BSNL
	Reliance Telecom	Tata Teleservices	
		Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
Assam		Essar Spacetel Pvt. Ltd.	
	BSNL	Dishnet Wireless Ltd.	BSNL
	Reliance Telecom	Bharti Airtel Ltd.	
		Essar Spacetel Pvt. Ltd.	
North East	Reliance Telecom	Dishnet Wireless Ltd.	BSNL
	BSNL	Essar Spacetel Pvt. Ltd.	
	Bharti Hexacom Ltd.		
Jammu & Kashmir	BSNL	Dishnet Wireless Ltd.	BSNL
		Bharti Airtel Ltd.	
		Reliance Infocomm	
		Essar Spacetel Pvt. Ltd.	

**Usage Pattern for GSM**

Table a: MoU &amp; SMS (per subscriber per month)

Circle	Postpaid				Prepaid			
	O/G MOU	I/C MOU	Total MOU	O/G SMS	O/G MOU	I/C MOU	Total MOU	O/G SMS
Circle A	544	471	1015	63	181	228	409	34
Circle B	583	405	988	49	197	216	413	16
Circle C	562	434	996	44	194	231	425	10
<b>Metro</b>	466	435	901	62	162	208	370	35
All India	<b>527</b>	<b>441</b>	<b>968</b>	<b>58</b>	<b>186</b>	<b>221</b>	<b>407</b>	<b>24</b>

## BLENDED [Postpaid + Prepaid]

Circle	O/G MOU	I/C MOU	Total MOU	O/G SMS
Circle A	218	252	470	36
Circle B	220	228	448	18
Circle C	222	247	469	13
<b>Metro</b>	227	256	482	41
All India	<b>221</b>	<b>243</b>	<b>464</b>	<b>28</b>

Table b: Composition of outgoing minutes of use

Circle	Local (Intra-circle)	NLD (Inter-circle)	ILD
	88.47%	11.05%	0.49%
Circle B	88.58%	10.87%	0.55%
Circle C	86.63%	13.09%	0.27%
<b>Metro</b>	76.26%	22.87%	0.86%
All India	<b>86.23%</b>	<b>13.22%</b>	<b>0.55%</b>



Table c: Composition of outgoing Local (Intra-circle) minutes of use

Circle	To Fixed	To Mobile		
		On-net	Off-net	Total
Circle A	8%	48%	44%	92%
Circle B	8%	59%	33%	92%
Circle C	9%	67%	24%	91%
<b>Metro</b>	8%	46%	46%	92%
All India	<b>8%</b>	<b>54%</b>	<b>38%</b>	<b>92%</b>

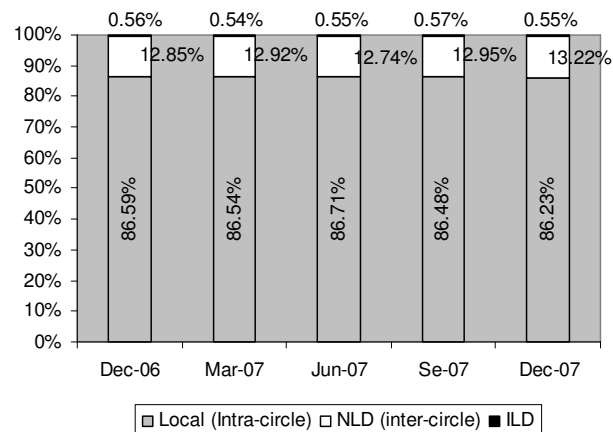
Table d: Composition of outgoing NLD (inter-circle) minutes of use

Circle	To Fixed	To Mobile
Circle A	12%	88%
Circle B	12%	88%
Circle C	14%	86%
<b>Metro</b>	12%	88%
All India	<b>12%</b>	<b>88%</b>

Table e: Composition of Total outgoing minutes of use (excl. ILD)

Circle	To Fixed	To Mobile
Circle A	8%	92%
Circle B	9%	91%
Circle C	10%	90%
<b>Metro</b>	9%	91%
All India	<b>9%</b>	<b>91%</b>

Chart: Composition of outgoing MoUs



**Usage Pattern – CDMA (Full Mobility)**

Table a: MoU &amp; SMS (per subscriber per month)

Circle	Postpaid				Prepaid			
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU	Outgoing SMS
Circle A	530	337	867	21	117	169	286	19
Circle B	545	286	831	19	167	170	337	12
Circle C	679	263	942	9	226	217	443	6
Metro	558	383	941	24	139	155	294	24
<b>All India</b>	<b>549</b>	<b>336</b>	<b>885</b>	<b>21</b>	<b>148</b>	<b>170</b>	<b>318</b>	<b>17</b>

Circle	Blended			
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing SMS
Circle A	159	186	345	19
Circle B	196	179	375	13
Circle C	250	219	469	6
Metro	204	190	394	24
<b>All India</b>	<b>189</b>	<b>186</b>	<b>375</b>	<b>17</b>

Table b: Composition of outgoing minutes of use

Circle	Local (Intra-circle)	NLD (Inter-Circle)	ILD
Circle A	90.2%	8.9%	0.9%
Circle B	89.5%	10.1%	0.5%
Circle C	89.5%	10.4%	0.1%
Metro	80.7%	19.1%	0.2%
<b>All India</b>	<b>87.5%</b>	<b>12.0%</b>	<b>0.5%</b>

Table c: Outgoing MoUs per subscriber per month

<b>Circle</b>	<b>Local (Intra-circle)</b>	<b>NLD (Inter-Circle)</b>	<b>ILD</b>
Circle A	144	14	1.4
Circle B	176	20	0.9
Circle C	224	26	0.2
Metro	164	39	0.4
<b>All India</b>	<b>165</b>	<b>22.6</b>	<b>0.9</b>

Table d: Composition of outgoing Local (Intra-circle) minutes of use based on terminating network.

<b>Circle</b>	<b>To Fixed</b>	<b>To Mobile</b>	<b>To Own Network (Mobile)</b>
Circle A	9%	91%	47%
Circle B	6%	94%	67%
Circle C	5%	95%	61%
Metro	8%	92%	62%
<b>All India</b>	<b>7%</b>	<b>93%</b>	<b>59%</b>

Table e: Composition of Outgoing NLD (Inter-Circle) minutes of use based on terminating network

<b>Circle</b>	<b>To Fixed</b>	<b>To Mobile</b>
Circle A	1%	99%
Circle B	1%	99%
Circle C	6%	94%
Metro	1%	99%
<b>All India</b>	<b>1%</b>	<b>99%</b>

Table f: Composition of Total outgoing minutes of use (excl. ILD) based on terminating network.

<b>Circle</b>	<b>To Fixed</b>	<b>To Mobile</b>
Circle A	10%	90%
Circle B	7%	93%
Circle C	6%	94%
Metro	9%	91%
<b>All India</b>	<b>8%</b>	<b>92%</b>

## Annex 2.4

### Average Subscriber Outgo (Rental + Call Charges) Per Minute (Rs. Per Minute) for GSM

(Rs. Per Min)

	Postpaid	Prepaid	Blended
Circle A	0.96	0.96	0.96
Circle B	0.78	0.93	0.90
Circle C	0.91	1.10	1.06
Metros	1.10	1.23	1.18
<b>All India</b>	<b>0.96</b>	<b>1.00</b>	<b>0.99</b>

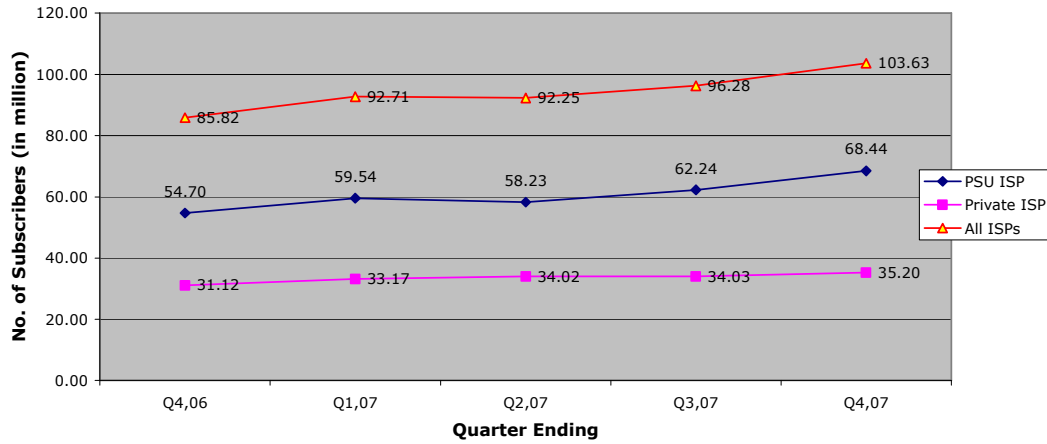
\* Outgo includes both Rental and call charges

**Average Subscriber Outgo (Rental + Call Charges) Per Minute**  
**(Rs. Per Minute) for CDMA (Full Mobility)**

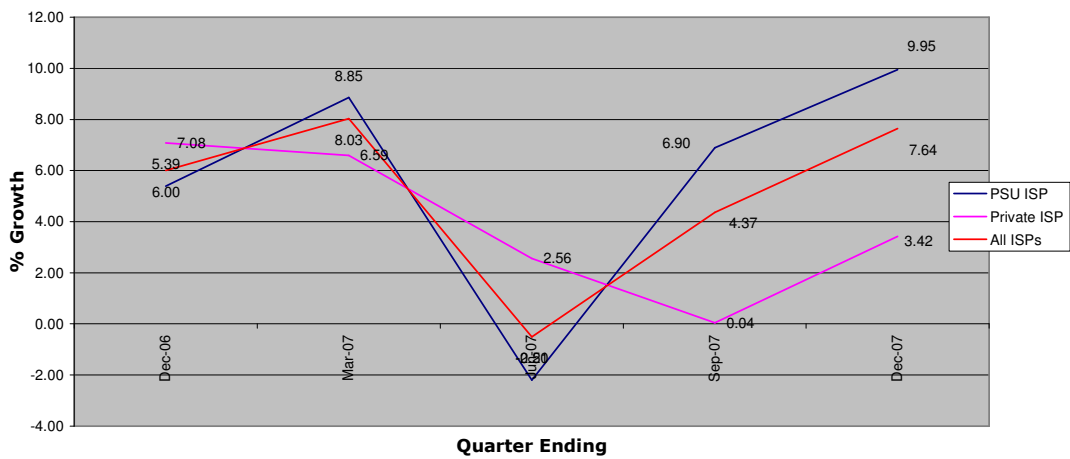
	<b>Prepaid</b>	<b>Postpaid</b>	<b>Blended</b>
<b>Category</b>	<b>Rent + call Revenue per Outgoing Minute</b>	<b>Rent + call Revenue per Outgoing Minute</b>	<b>Rent + call Revenue per Outgoing Minute</b>
Category - A	0.89	0.92	0.91
Category - B	0.79	0.73	0.74
Category - C	0.75	0.63	0.65
Metro	1.02	0.96	0.98
<b>All India</b>	<b>0.90</b>	<b>0.82</b>	<b>0.84</b>

**Growth Pattern of Internet Subscribers**

**Growth Trends-I**



**Growth Trends-II**



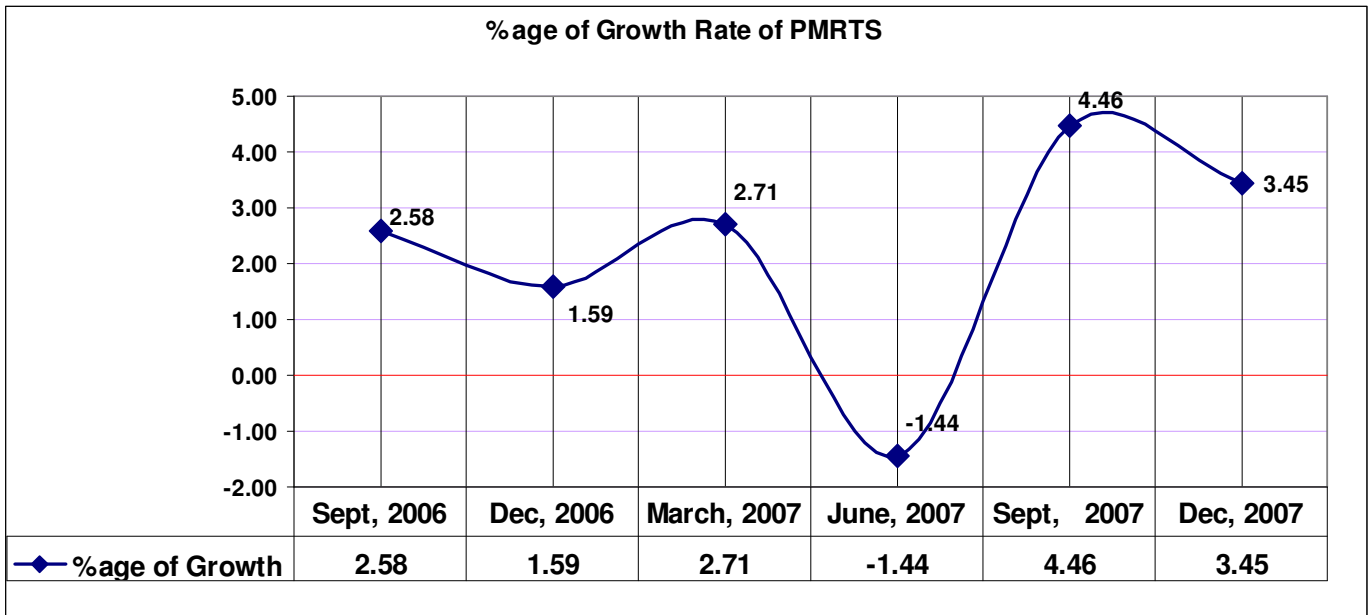
**List of Internet Service Providers (ISPs)**  
**reporting Internet Telephony services**

<b>S. No.</b>	<b>Name of ISP</b>
1	Apna Telelink Ltd.
2	Asianet Satellite Communications Ltd.
3	Bharti Airtel Ltd. (Bharti Televentures Ltd.)
4	Blazenet Ltd.
5	Broadband Pacenet (I) Pvt. Ltd.
6	City Online Services Ltd.
7	CJ Online Pvt. Ltd.
8	Data Infosys Ltd.
9	DelDSL Internet Pvt. Ltd.
10	Digital2Virtual ISP Pvt. Ltd.
11	Dishnet Wireless Ltd.
12	Estel Communications Pvt. Ltd.
13	HCL Infinet Ltd.
14	In2cable (I) Ltd.
15	Mahanagar Telephone Nigam Ltd.
16	Manipal Ecommerce Ltd.
17	My Own Infotech Pvt. Ltd.*
18	Mylai Karpagambal Information Systems (P) Ltd.
19	NetMagic Solutions(P) Ltd.
20	Nettlinx Ltd.
21	Opto Network Pvt. Ltd.
22	Pioneer Online Pvt. Ltd.
23	Pulse Telesystems Pvt. Ltd.
24	Sify Ltd.
25	Southern Online Bio Technologies Ltd.
26	Swastik Netvision Telecom P. Ltd.
27	Trak Online Net India Pvt.Ltd
28	Trikon Electronics Pvt. Ltd.
29	Value Healthcare Ltd.
30	Videsh Sanchar Nigam Ltd.
31	VSNL Internet Services Ltd. (Primus Telecommunications)
32	YOU Telecom India Pvt. Ltd.

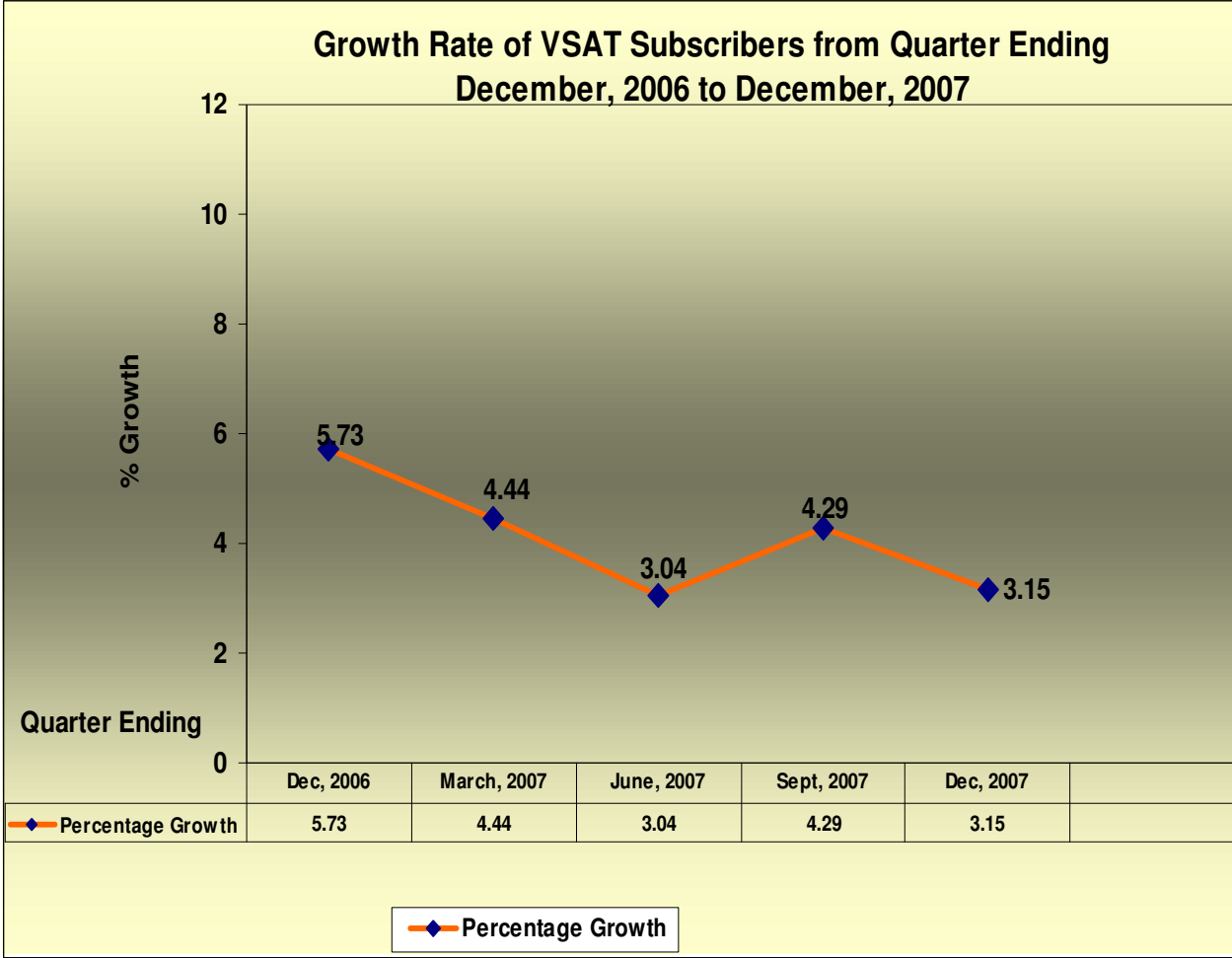
\* ISP has not submitted report at the end of December 2007.



**Growth Rate of PMRTS subscribers**



**Growth Rate of VSAT Subscribers**



## Annex 5.1

### Quality of Service (QOS) Performance for Wireline Services

Sl. No	Service Area	Service Providers	New connections after registration of demand	Fault incidences per 100 sub/month)	Fault repaired by next working day	Rent Rebate (Total no. of cases)	Mean Time to Repair (MTR)	Grade of service (calls per thousand)	Call completion rate in local network	Metering & billing credibility- % of bills disputed	Time taken for refund of deposits after closures	Shifts	Closures	Additional facility	Response Time to the Customer for Assistance			
															a) Junction between local exchange (2/1000)	95% of requests		
								100% in < 7days				<5	>90%	For faults pending > 3 days to >15 days	<8 hrs	>55%	<0.1%,	100% within 60 days
1	ANDHRA PRADESH	BSNL	86.48	3.60	92.25	0	12.60	NA	62.66%	0.000	60.00%	76.00	80.52	58.22	100.00	100.00	100.00	100.00
		RELIANCE	100.00	3.14	100.00	3	4.40	0.0000	NA	0.046	100.00%	96.35	98.18	98.50	98.00	99.00	97.30	99.00
		BHARTI	96.58	5.21	95.03	550	2.87	0.0019	58.42%	0.425	93.48%	89.89	99.25	95.98	100.00	100.00	95.77	97.25
		TATA	86.94	2.30	90.26	80	5.40	0.0010	80.90%	0.023	100.00%	82.23	100.00	97.56	100.00	100.00	65.00	72.00
2	BIHAR	BSNL	100.00	5.30	77.20	2240	9.60	NA	60.64%	0.021	100.00%	100.00	86.00	88.00	NA	NA	NA	NA

		<b>TATA</b>	100.0 0	Nil	Nil	0	0.00	0.0020	61.30 %	0.000	NA	Nil	Nil	100.0 0	100.0 0	100.0 0	66.00	70.00
		<b>RELIANCE</b>	45.71	Nil	Nil	0	0.00	0.0000	NA	0.000	Nil	Nil	Nil	Nil	98.00	99.00	97.30	99.00
3	<b>DELHI</b>	<b>MTNL</b>	99.55	5.89	94.94	17587	6.76	0.0000	49.50 %	0.060	100.00 %	90.19	96.29	93.84	99.00	100.0 0	89.83	98.83
		<b>RELIANCE</b>	17.74	1.37	100.00	5	4.52	0.0000	NA	0.074	100.00 %	100.0 0	97.26	98.54	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	99.56	4.51	95.36	1491	10.10	0.0010	61.00 %	0.000	80.00%	97.50	98.29	91.10	100.0 0	100.0 0	96.94	98.71
		<b>TATA</b>	99.24	2.60	94.96	13	12.90	0.0000	60.00 %	0.061	100.00 %	94.12	72.41	95.54	100.0 0	100.0 0	94.00	96.00
		<b>BSNL</b>	97.11	5.80	93.96	3701	8.20	NA	63.63 %	0.069	100.00 %	98.00	96.00	83.60	100.0 0	100.0 0	99.75	99.75
4	<b>GUJARAT</b>	<b>RELIANCE</b>	74.16	3.91	100.00	9	4.87	0.0000	NA	0.093	100.00 %	98.45	96.04	97.50	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	98.96	3.00	98.17	2	5.08	0.0001	58.90 %	0.037	97.33%	95.13	100.00	96.15	100.0 0	100.0 0	84.25	88.43
		<b>TATA</b>	99.19	6.20	98.57	31	7.20	0.0000	62.60 %	0.061	100.00 %	83.29	64.00	96.00	100.0 0	100.0 0	70.00	75.00
		<b>BSNL</b>	78.27	8.70	79.82	0	13.40	NA	63.54 %	0.057	100.00 %	97.00	88.00	90.00	NA	NA	NA	NA
6	<b>MP</b>	<b>BSNL</b>	100.0 0	4.10	95.70	144	5.90	NA	68.58 %	0.034	100.00 %	100.0 0	99.90	100.0 0	90.00	95.00	99.00	99.90
		<b>RELIANCE</b>	100.0 0	3.35	100.00	0	4.53	0.0000	NA	0.066	100.00 %	100.0 0	NA	NA	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	95.57	5.98	97.48	811	6.38	0.0010	59.00 %	0.027	95.97%	96.51	97.11	97.12	100.0 0	100.0 0	96.37	100.00
7	<b>MAHARASHTRA</b>	<b>BSNL</b>	87.46	7.30	87.57	163	9.89	NA	52.93 %	0.013	100.00 %	79.80	87.00	83.00	100.0 0	100.0 0	100.0 0	100.00
		<b>RELIANCE</b>	50.83	1.28	100.00	5	4.62	0.0000	NA	0.090	100.00 %	100.0 0	98.62	97.65	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	82.11	2.40	90.45	9	4.10	0.0012	48.79 %	0.071	99.00%	95.71	100.00	95.43	100.0 0	100.0 0	87.81	91.47
		<b>TATA</b>	80.00	2.13	93.52	0	6.97	0.0020	57.00 %	0.135	100.00 %	55.33	99.68	90.82	100.0 0	100.0 0	89.00	92.00
8	<b>PUNJAB</b>	<b>BSNL</b>	99.35	7.60	89.96	0	12.70	NA	66.34 %	0.013	100.00 %	98.00	100.00	99.80	100.0 0	100.0 0	100.0 0	100.00
		<b>RELIANCE</b>	81.25	3.93	100.00	7	3.98	0.0000	NA	0.052	100.00 %	100.0 0	99.26	99.50	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	99.57	3.12	95.42	58	11.00	0.0010	58.00 %	0.000	92.00%	97.59	76.83	98.10	100.0 0	100.0 0	96.94	98.71

		<b>TATA</b>	100.0 0	0.70	74.55	0	32.79	0.0000	76.80 %	Nil	NA	Nil	100.00	97.70	100.0 0	100.0 0	85.00	86.00
		<b>HFCL</b>	98.48	4.20	98.85	13	4.60	0.0001	55.90 %	0.085	100.00 %	97.93	100.00	99.93	NA	NA	96.00	98.00
9	<b>RAJASTHAN</b>	<b>BSNL</b>	99.28	6.20	93.68	536	7.60	NA	53.25 %	0.016	100.00 %	99.00	99.90	98.70	NA	NA	NA	95.00
		<b>RELIANCE</b>	65.65	1.33	100.00	0	3.88	0.0000	NA	0.091	100.00 %	100.0 0	97.96	99.30	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	97.18	3.72	96.66	11	10.10	0.0010	53.00 %	0.000	85.00%	97.86	74.07	99.45	100.0 0	100.0 0	96.94	98.71
		<b>SHYAM</b>	98.10	2.83	96.15	NA	5.03	0.0010	89.90 %	0.090	100.00 %	100.0 0	100.00	97.27	NA	NA	91.00	NA
		<b>TATA</b>	100.0 0	2.90	95.97	0	5.60	NA	75.00 %	0.010	100.00 %	100.0 0	100.00	100.0 0	98.94	98.94	99.89	99.90
10	<b>TAMILNADU</b>	<b>RELIANCE</b>	92.74	1.33	100.00	5	4.80	0.0000	NA	0.065	100.00 %	100.0 0	98.54	98.74	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	96.48	6.18	98.09	1035	10.63	0.0025	66.32 %	0.120	92.28%	95.26	99.01	98.92	100.0 0	100.0 0	97.88	99.13
		<b>TATA</b>	100.0 0	0.00	Nil	0	10.63	0.0000	89.70 %	Nil	NA	Nil	100.00	97.65	100.0 0	100.0 0	55.00	59.00
		<b>BSNL</b>	100.0 0	5.40	95.26	481	7.50	NA	73.92 %	0.006	100.00 %	100.0 0	100.00	100.0 0	100.0 0	100.0 0	100.0 0	100.00
11	<b>HARYANA</b>	<b>RELIANCE</b>	37.99	Nil	Nil	0	NA	0.0000	NA	0.000	100.00 %	Nil	Nil	Nil	98.00	99.00	97.30	99.00
		<b>TATA</b>	Nil	Nil	86.96	2	24.93	NA	99.60 %	Nil	NA	Nil	Nil	Nil	100.0 0	100.0 0	83.00	84.00
		<b>BHARTI</b>	100.0 0	5.27	94.27	34	12.20	0.0010	63.00 %	0.000	82.00%	96.23	74.04	97.95	100.0 0	100.0 0	96.94	98.71
		<b>BSNL</b>	100.0 0	6.00	91.66	8340	7.80	NA	64.78 %	0.034	100.00 %	100.0 0	100.00	100.0 0	100.0 0	100.0 0	99.92	99.98
12	<b>KARNATAKA</b>	<b>RELIANCE</b>	35.97	0.69	100.00	6	4.88	0.0000	NA	0.071	100.00 %	98.02	97.14	99.07	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	96.99	3.98	96.44	685	3.72	0.0011	56.02 %	0.209	95.51%	90.35	99.27	82.94	NA	NA	81.48	89.13
		<b>TATA</b>	98.33	0.10	98.91	1	11.90	0.0000	83.60 %	0.024	NA	37.50	94.82	94.82	100.0 0	100.0 0	55.00	61.00
13	<b>A&amp;N</b>	<b>BSNL</b>	92.83	4.70	86.26	0	5.30	NA	44.88 %	0.000	100.00 %	100.0 0	100.00	100.0 0	NA	NA	NA	NA
14	<b>ASSAM</b>	<b>BSNL</b>	92.02	8.20	66.51	0	7.60	NA	59.03 %	0.041	100.00 %	100.0 0	93.00	83.00	97.33	99.00	92.00	95.00
15	<b>CHENNAI</b>	<b>BSNL</b>	99.64	3.30	93.66	2	8.90	NA	80.52 %	0.007	100.00 %	81.05	100.00	100.0 0	100.0 0	100.0 0	98.07	99.07

		<b>RELIANCE</b>	52.00	1.68	100.00	0	4.73	0.0000	NA	0.000	100.00 %	96.67	97.56	94.78	98.00	99.00	97.30	99.00
		<b>TATA</b>	100.00	0.20	91.43	2	21.10	0.0000	87.60 %	Nil	NA	72.50	100.00	95.98	100.00	100.00	60.00	64.00
		<b>RELIANCE</b>	0.29	Nil	Nil	0	NA	0.0000	NA	0.000	100.00 %	Nil	Nil	Nil	98.00	99.00	97.30	99.00
16	<b>H P</b>	<b>BSNL</b>	100.00	8.90	88.23	2660	7.80	NA	66.63 %	0.009	100.00 %	Nil	92.40	97.00	NA	NA	NA	NA
17	<b>JHARKHAND</b>	<b>BSNL</b>	98.18	4.90	84.30	30	11.80	NA	52.55 %	0.070	100.00 %	96.00	97.80	99.00	NA	NA	NA	NA
18	<b>J &amp; K</b>	<b>BSNL</b>	NA	8.60	84.58	0	7.30	NA	52.25 %	0.056	100.00 %	Nil	99.90	97.50	NA	NA	NA	NA
		<b>BSNL</b>	97.99	8.20	84.00	1441	26.10	NA	69.78 %	0.007	100.00 %	91.00	97.60	91.00	100.00	100.00	100.00	100.00
		<b>BHARTI</b>	100.00	3.50	97.51	2	3.04	0.0011	55.64 %	0.579	90.48%	97.85	99.70	95.32	100.00	100.00	95.41	98.27
		<b>TATA</b>	100.00	Nil	Nil	0	0.00	NA	71.60 %	0.000	NA	Nil	Nil	Nil	100.00	100.00	55.00	59.00
		<b>RELIANCE</b>	47.22	1.05	100.00	0	4.66	0.0000	NA	0.026	100.00 %	100.00	96.22	97.18	98.00	99.00	97.30	99.00
		<b>BHARTI</b>	99.80	3.93	95.04	77	10.90	0.0010	69.00 %	0.000	80.00%	93.53	74.40	98.29	96.94	98.71	96.94	98.71
		<b>RELIANCE</b>	50.05	0.43	100.00	12	4.53	0.0000	NA	0.072	100.00 %	100.00	96.27	97.74	98.00	99.00	97.30	99.00
		<b>TATA</b>	100.00	Nil	Nil	0	0.00	0.0000	67.20 %	0.227	NA	Nil	100.00	94.44	100.00	100.00	65.00	70.00
		<b>BSNL</b>	99.65	3.87	89.93	11654	9.90	NA	61.23 %	0.065	100.00 %	95.99	98.07	99.22	100.00	100.00	100.00	100.00
		<b>TATA</b>	99.37	2.33	94.14	0	6.44	0.0000	57.00 %	0.119	100.00 %	83.11	100.00	97.10	100.00	100.00	83.78	87.60
		<b>BHARTI</b>	99.20	1.47	92.48	84	3.04	0.0017	61.00 %	0.223	92.00%	91.78	100.00	97.65	100.00	100.00	90.09	93.18
		<b>RELIANCE</b>	11.96	0.33	100.00	1	3.90	0.0000	NA	0.068	100.00 %	100.00	98.88	95.96	98.00	99.00	97.30	99.00
		<b>MTNL</b>	86.44	7.84	85.61	143403	17.61	0.0000	55.46 %	0.055	99.31%	70.06	90.62	86.07	100.00	100.00	82.96	85.53
22	<b>NE-I</b>	<b>BSNL</b>	68.05	4.60	90.60	3340	28.50	NA	56.62 %	0.020	100.00 %	89.00	93.90	83.00	NA	NA	NA	NA
23	<b>NE-II</b>	<b>BSNL</b>	100.00	5.50	88.69	135	9.90	NA	66.81 %	0.011	100.00 %	100.00	100.00	100.00	87.34	98.05	97.00	98.67
24	<b>ORISSA</b>	<b>BSNL</b>	77.56	5.00	92.94	2765	7.80	NA	62.10 %	0.013	100.00 %	67.00	99.80	95.00	100.00	100.00	100.00	100.00

		<b>RELIANCE</b>	0.51	Nil	NA	0	NA	0.0000	NA	0.000	100.00%	Nil	100.00	100.00	98.00	99.00	97.30	99.00
25	<b>UP-E</b>	<b>BSNL</b>	98.94	6.30	93.02	1795	6.60	NA	75.23%	0.001	100.00%	97.00	97.50	99.50	100.00	100.00	100.00	100.00
		<b>BHARTI</b>	94.66	7.42	94.43	80	11.30	0.0010	63.00%	0.000	41.00%	98.15	77.59	95.51	100.00	100.00	96.94	98.71
		<b>RELIANCE</b>	68.49	9.38	100.00	4	4.37	0.0000	NA	0.084	100.00%	100.00	97.65	99.11	98.00	99.00	97.30	99.00
26	<b>UP-W</b>	<b>BSNL</b>	97.48	7.23	91.51	359	7.50	NA	64.63%	0.018	100.00%	91.50	98.50	86.90	100.00	100.00	91.67	98.56
		<b>BHARTI</b>	98.67	7.21	92.66	70	12.90	0.0010	54.58%	0.014	49.00%	97.35	79.61	97.31	100.00	100.00	96.94	98.71
		<b>RELIANCE</b>	100.00	Nil	Nil	0	NA	0.0000	NA	0.000	100.00%	Nil	Nil	Nil	98.00	99.00	97.30	99.00
27	<b>UTTRANCHAL</b>	<b>BSNL</b>	96.28	6.60	91.69	36	7.10	NA	75.23%	0.001	100.00%	90.00	98.40	99.00	41.41	70.74	64.67	84.67
28	<b>WEST BENGAL</b>	<b>BSNL</b>	100.00	5.76	84.27	698	10.20	NA	73.17%	0.018	100.00%	100.00	99.80	100.00	94.67	98.00	93.33	96.33
		<b>RELIANCE</b>	45.03	Nil	NA	10	NA	0.0001	NA	0.000	100.00%	Nil	Nil	Nil	98.00	99.00	97.30	99.00

Operator not meeting the prescribed benchmark

NA = Data not available

**Annex 5.2**

**Quality of Service Performance for Wireless Services**

Sl. No.	Name of Licensees & Service area	Parameters														
		(A) Network Performance						(B) Customer help lines				(C) Billing Complaints				
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(i)				(i)	(ii)	(iii)		
		Accumulated down time of community isolation	Call Set-up Success Rate (within licensees own network)	Service Access Delay	Blocked Call Rate (Averaged over the quarter)	Call Drop Rate	%age of connections with good voice quality	Response time to the customer for assistance				Complaints per 100 bills issued	% of complaints resolved within 4 weeks	Period of all refunds/ payment due to customers from the date of resolution of complaints as in (ii) above		
Benchmarks																
		<24 hrs	>95%	Between 9 to 20 seconds depending upon number of paging attempts (Average of 100 calls = <15 sec)	SDCCH / Paging Channel Congestion <1%	TCH Congestion <2%	<3%	>95%	(I) %age of calls answered (electronically) within 20 seconds = 80%,	(I) %age of calls answered (electronically) within 40 seconds = 95%	(I) %age of calls answered by operator (voice to voice); within 60 seconds=80%,	(I) %age of calls answered by operator (voice to voice); within 90 seconds = 95%,	<0.1%	100%	<4 weeks	
	<b>'A' Circle</b>															
<b>I</b>	<b>Maharashtra</b>															
1	Vodafone Essar	1.26	99.94%	13.20	0.68%	1.62%	1.17%	97.81%	100.00%	100.00%	100.00%	100.00%	0.080%	100.00%	15 days	
2	IDEA Cellular	2.50	98.88%	9.22	0.71%	0.94%	1.22%	99.06%	99.09%	99.13%	98.31%	98.68%	0.018%	100.00%	30 days	
3	BSNL	0.00	98.77%	8.83	0.70%	1.70%	2.50%	98.25%	100.00%	100.00%	69.82%	75.30%	0.050%	100.00%	30 days	
4	Bharti Airtel Limited	21.08	97.26%	9.28	0.69%	1.36%	1.20%	97.80%	100.00%	N/Ap	90.10%	97.40%	0.020%	100.00%	30 days	



5	Reliance Comm	0.47	99.60%	4.02	0.00%	0.00%	0.93%	99.89%	99.50%	99.50%	91.90%	94.91%	0.090%	100.00%	30 days
6	Tata Teleservices	11.45	97.99%	12.00	0.00%	0.69%	0.76%	96.52%	100.00%	100.00%	89.30%	92.30%	0.090%	100.00%	30 days
<b>ii</b>	<b>Gujarat</b>														
7	Vodafone Essar	16.59	98.40%	9.46	0.20%	0.82%	1.02%	95.50%	100.00%	100.00%	91.36%	98.10%	0.050%	100.00%	15 days
8	IDEA Cellular	3.11	98.29%	13.24	0.87%	0.63%	2.03%	97.31%	100.00%	100.00%	93.00%	96.60%	0.075%	100.00%	30 days
9	BSNL	0.00	99.40%	2.20	0.51%	1.40%	1.49%	95.00%	100.00%	100.00%	81.00%	95.00%	0.020%	100.00%	NIL
10	Bharti Airtel Limited	16.50	95.40%	14.53	0.77%	0.89%	1.20%	97.31%	100.00%	N/Ap	51.80%	61.30%	0.070%	100.00%	30 days
11	Reliance Comm	0.14	99.52%	4.02	0.00%	0.00%	0.86%	99.75%	99.50%	99.50%	89.25%	92.83%	0.060%	100.00%	30 days
12	Tata Teleservices	0.50	98.86%	5.14	0.00%	0.02%	0.45%	97.46%	100.00%	100.00%	70.00%	75.20%	0.040%	100.00%	30 days
<b>iii</b>	<b>Andhra Pradesh</b>														
13	IDEA Cellular	1.49	99.83%	7.00	0.19%	1.33%	0.57%	99.49%	100.00%	100.00%	96.00%	98.00%	0.030%	100.00%	30 days
14	Bharti Airtel Limited	5.35	96.54%	2.19	0.70%	2.22%	1.60%	98.16%	100.00%	N/Ap	91.00%	96.00%	0.010%	100.00%	30 days
15	BSNL	22.08	99.10%	7.10	0.77%	2.55%	1.72%	98.50%	99.50%	99.00%	72.00%	78.00%	0.001%	100.00%	2 days
16	Vodafone Essar	19.05	96.78%	9.00	0.10%	0.17%	1.48%	98.00%	100.00%	100.00%	94.70%	96.10%	0.050%	100.00%	15 days
17	Reliance Comm	0.00	99.52%	4.13	0.00%	0.00%	0.61%	98.23%	99.50%	99.50%	90.33%	93.53%	0.090%	100.00%	30 days
18	Tata Teleservices	0.23	99.26%	5.66	0.00%	0.50%	0.44%	96.17%	100.00%	100.00%	64.60%	72.00%	0.030%	100.00%	30 days
<b>iv</b>	<b>Karnataka</b>														
19	Bharti Airtel Limited	9.80	99.50%	6.50	0.92%	0.93%	1.40%	94.03%	100.00%	N/Ap	76.70%	86.00%	0.000%	100.00%	30 days
20	Spice Comm.	20.77	99.37%	8.33	0.50%	1.52%	1.19%	99.07%	100.00%	100.00%	93.40%	98.10%	0.022%	100.00%	30 days
21	BSNL	5.63	97.40%	4.67	0.75%	2.00%	1.19%	97.67%	99.83%	99.83%	76.29%	83.60%	0.090%	100.00%	NIL
22	Vodafone Essar	23.19	98.49%	10.23	0.10%	1.41%	1.24%	98.43%	100.00%	100.00%	88.90%	96.40%	0.060%	100.00%	15 days
23	Reliance Comm	0.19	99.54%	4.05	0.00%	0.00%	0.59%	98.87%	99.50%	99.50%	81.12%	86.00%	0.090%	100.00%	30 days
24	Tata Teleservices	0.36	98.09%	5.06	0.00%	0.07%	0.93%	97.31%	100.00%	100.00%	55.50%	60.50%	0.040%	100.00%	30 days

<b>v</b>	<b>Tamil Nadu</b>														
25	Vodafone Essar	22.28	99.15%	9.84	0.26%	1.80%	1.50%	99.30%	100.00%	100.00%	94.53%	100.00%	0.050%	100.00%	15 days
26	Aircel	9.43	98.65%	11.14	0.04%	1.11%	0.64%	95.85%	100.00%	N/Ap	98.00%	99.60%	0.020%	100.00%	30 days
27	BSNL	0.00	95.51%	9.78	0.89%	1.84%	1.09%	96.44%	100.00%	100.00%	84.00%	95.00%	0.000%	100.00%	NIL
28	Bharti Airtel Limited	0.00	99.40%	4.35	0.65%	0.28%	1.10%	97.69%	99.00%	99.00%	90.60%	96.30%	0.040%	100.00%	30 days
29	Reliance Comm	0.17	99.38%	4.01	0.00%	0.00%	0.78%	99.31%	99.50%	99.50%	78.10%	83.88%	0.070%	100.00%	30 days
30	Tata Teleservices	0.29	99.76%	5.24	0.00%	0.23%	0.99%	98.14%	100.00%	100.00%	55.40%	59.20%	0.020%	100.00%	30 days
	<b>B' Circle</b>														
<b>vi</b>	<b>Kerala</b>														
31	IDEA Cellular	22.45	99.45%	12.90	0.49%	1.24%	0.42%	97.07%	98.00%	100.00%	91.00%	96.00%	0.078%	100.00%	30 days
32	Vodafone Essar	19.90	96.90%	11.64	0.71%	1.16%	1.66%	98.89%	100.00%	100.00%	89.03%	96.40%	0.060%	100.00%	15 days
33	BSNL	22.36	99.75%	4.32	0.26%	2.00%	1.26%	98.00%	100.00%	100.00%	76.00%	82.00%	0.001%	100.00%	30 days
34	Bharti Airtel Limited	23.70	99.55%	12.48	0.22%	0.17%	1.20%	98.57%	100.00%	N/Ap	78.00%	84.00%	0.090%	100.00%	30 days
35	Tata Teleservices	0.00	99.53%	4.45	0.00%	0.00%	0.53%	98.27%	100.00%	100.00%	54.70%	58.60%	0.030%	100.00%	30 days
36	Reliance Comm	0.19	99.23%	4.35	0.00%	0.00%	0.69%	99.61%	99.50%	99.50%	96.86%	98.43%	0.090%	100.00%	30 days
<b>vii</b>	<b>Punjab</b>														
37	Spice Comm.	4.61	98.28%	9.40	0.13%	0.66%	0.80%	96.85%	100.00%	100.00%	96.00%	96.00%	0.015%	100.00%	30 days
38	HFCL - CDMA	4.51	97.17%	13.30	0.00%	0.01%	0.64%	98.25%	100.00%	100.00%	98.00%	98.00%	0.000%	NR	30 days
39	Bharti Airtel Limited	13.47	99.29%	5.20	0.23%	0.36%	1.30%	95.32%	100.00%	N/Ap	98.30%	99.50%	0.090%	100.00%	30 days
40	Vodafone Essar	2.19	99.46%	10.00	0.03%	0.01%	1.35%	97.61%	98.20%	98.50%	96.96%	98.56%	0.030%	100.00%	15 days
41	BSNL	1.03	98.30%	3.76	0.08%	1.73%	2.79%	98.80%	92.00%	94.00%	93.00%	95.00%	0.000%	100.00%	NIL
42	Reliance Comm	0.18	99.57%	3.98	0.00%	0.00%	1.02%	99.21%	99.50%	99.50%	87.84%	90.68%	0.080%	100.00%	30 days
43	Tata Teleservices	0.00	98.34%	4.62	0.00%	0.00%	0.94%	97.99%	100.00%	100.00%	84.80%	85.90%	0.070%	100.00%	30 days
<b>viii</b>	<b>Haryana</b>														

44	IDEA Cellular	16.42	99.98%	9.30	0.37%	0.69%	1.50%	99.04%	100.00%	100.00%	91.00%	97.00%	0.060%	100.00%	30 days
45	Vodafone Essar	3.27	99.95%	9.00	0.16%	0.42%	1.64%	95.76%	100.00%	100.00%	98.26%	99.03%	0.090%	100.00%	15 days
46	BSNL	1.00	95.40%	4.10	0.80%	1.80%	2.80%	96.50%	100.00%	100.00%	80.00%	95.00%	0.010%	100.00%	30 days
47	Bharti Airtel Limited	11.38	99.16%	2.90	0.44%	0.36%	0.90%	94.18%	100.00%	N/Ap	98.20%	99.60%	0.020%	100.00%	30 days
48	Reliance Comm	0.52	99.44%	4.11	0.00%	0.00%	0.93%	99.31%	99.50%	99.50%	96.16%	97.61%	0.070%	100.00%	30 days
49	Tata Teleservices	0.20	98.37%	5.04	0.00%	0.06%	0.91%	98.85%	100.00%	100.00%	83.00%	84.40%	0.060%	100.00%	30 days
<b>ix</b>	<b>UP - W</b>														
50	Vodafone Essar	0.00	99.85%	9.10	0.77%	1.85%	2.01%	95.24%	99.93%	99.93%	98.06%	98.63%	0.040%	100.00%	15 days
51	IDEA Cellular	22.40	99.76%	11.91	0.84%	0.83%	1.21%	97.77%	100.00%	100.00%	85.00%	97.00%	0.070%	100.00%	30 days
52	BSNL	0.00	98.50%	14.25	0.81%	1.80%	2.25%	97.87%	99.04%	99.22%	80.00%	95.00%	0.001%	100.00%	1 day
53	Bharti Airtel Limited	22.91	97.32%	14.60	0.92%	0.73%	1.40%	96.12%	100.00%	N/Ap	89.00%	91.00%	0.020%	100.00%	30 days
54	Reliance Comm	0.00	99.53%	3.99	0.00%	0.00%	0.87%	99.26%	99.50%	99.50%	92.77%	94.56%	0.090%	100.00%	30 days
55	Tata Teleservices	0.43	97.50%	5.51	0.00%	0.56%	1.09%	99.86%	100.00%	100.00%	91.10%	91.90%	0.040%	100.00%	30 days
<b>x</b>	<b>UP - E</b>														
56	Bharti Airtel Limited	22.83	96.31%	15.90	0.88%	1.51%	2.10%	98.15%	100.00%	N/Ap	90.00%	92.00%	0.020%	100.00%	30 days
57	Vodafone Essar	0.00	96.99%	9.00	0.18%	1.27%	2.00%	97.05%	99.93%	99.97%	97.43%	99.77%	0.000%	100.00%	15 days
58	IDEA Cellular	10.08	99.18%	12.00	0.14%	0.89%	1.55%	96.90%	100.00%	100.00%	94.00%	97.00%	0.087%	100.00%	30 days
59	BSNL	22.00	98.00%	11.20	0.90%	1.80%	2.20%	98.00%	81.00%	94.00%	71.00%	86.13%	0.070%	100.00%	30 days
60	Reliance Comm	0.69	99.56%	4.12	0.00%	0.00%	0.84%	99.05%	99.50%	99.50%	92.77%	94.56%	0.090%	100.00%	30 days
61	Tata Teleservices	0.40	98.12%	5.04	0.00%	0.16%	1.13%	98.10%	100.00%	100.00%	86.80%	87.20%	0.030%	100.00%	30 days
<b>xi</b>	<b>Rajasthan</b>														
62	Vodafone Essar	21.36	95.09%	9.68	0.77%	1.06%	1.13%	95.98%	98.60%	98.60%	90.70%	97.66%	0.090%	100.00%	15 days
63	BSNL	22.47	97.52%	5.50	0.33%	1.45%	2.51%	97.54%	98.80%	99.20%	39.60%	50.00%	0.090%	100.00%	30 days
64	IDEA	23.37	98.84%	4.41	0.96%	0.46%	1.79%	98.90%	100.00%	N/Ap	94.11%	97.38%	0.080%	100.00%	30 days

	Cellular														
65	Bharti Airtel Limited	22.40	95.96%	9.00	1.80%	3.07%	1.20%	92.27%	100.00%	N/Ap	67.00%	76.90%	0.090%	100.00%	30 days
66	Reliance Comm	0.56	99.32%	4.02	0.00%	0.00%	0.89%	100.00%	99.50%	99.50%	95.64%	97.10%	0.090%	100.00%	30 days
67	Tata Teleservices	0.49	97.56%	5.53	0.00%	0.52%	0.98%	96.87%	100.00%	100.00%	69.50%	75.30%	0.020%	100.00%	30 days
68	Shyam Telelink Ltd	8.48	98.82%	6.00	0.50%	0.30%	0.54%	98.00%	NR**	NR**	89.00%	NR**	0.090%	100.00%	30 days
<b>xii</b>	<b>Madhya Pradesh</b>														
69	IDEA Cellular	21.31	97.68%	8.33	0.74%	1.27%	1.96%	97.74%	100.00%	100.00%	89.64%	95.30%	0.004%	100.00%	30 days
70	Reliance Telecom	23.00	100.00%	7.52	0.60%	1.49%	1.49%	96.00%	100.00%	100.00%	92.00%	100.00%	0.010%	100.00%	30 days
71	BSNL	7.31	97.86%	9.62	0.54%	1.40%	1.50%	97.53%	100.00%	100.00%	68.84%	74.38%	0.000%	100.00%	21 days
72	Bharti Airtel Limited	21.33	97.13%	17.96	0.42%	0.51%	1.30%	98.63%	100.00%	N/Ap	92.00%	94.00%	0.010%	100.00%	30 days
73	Reliance Comm	0.19	99.52%	4.14	0.00%	0.00%	1.07%	99.52%	99.50%	99.50%	94.59%	96.89%	0.090%	100.00%	30 days
74	Tata Teleservices	0.36	98.09%	4.82	0.00%	0.00%	0.82%	97.07%	100.00%	100.00%	65.90%	70.40%	0.030%	100.00%	30 days
<b>xiii</b>	<b>West Bengal</b>														
75	Bharti Airtel Limited	0.00	93.57%	8.00	0.81%	1.57%	2.50%	92.54%	100.00%	N/Ap	67.60%	72.10%	0.060%	100.00%	30 days
76	Reliance Telecom	14.05	99.00%	8.36	0.36%	1.43%	1.40%	97.00%	NR*	NR*	100.00%	100.00%	0.000%	100.00%	30 days
77	BSNL	0.00	97.00%	9.50	0.51%	1.48%	2.10%	98.00%	89.00%	97.00%	89.00%	98.10%	0.030%	100.00%	1 day
78	Tata Teleservices	0.45	97.94%	5.15	0.00%	0.04%	1.21%	97.44%	100.00%	100.00%	64.30%	68.00%	0.030%	100.00%	30 days
79	Reliance Comm	0.26	99.44%	4.06	0.00%	0.00%	1.04%	99.64%	99.50%	99.50%	88.42%	90.65%	0.020%	100.00%	30 days
80	Vodafone Essar	0.00	99.97%	14.30	0.14%	0.36%	1.50%	97.70%	100.00%	100.00%	87.60%	96.20%	0.090%	100.00%	15 days
81	Dishnet	0.00	98.93%	8.00	0.97%	0.97%	0.84%	99.23%	100.00%	100.00%	89.00%	89.00%	0.100%	100.00%	30 days
	<b>C' Circle</b>														
<b>xiv</b>	<b>Himachal Pradesh</b>														
82	Bharti Airtel Limited	7.45	99.88%	8.10	0.12%	0.31%	1.30%	96.53%	100.00%	N/Ap	95.50%	97.80%	0.050%	100.00%	30 days

83	IDEA Cellular	2.50	99.21%	8.35	0.69%	0.38%	1.86%	98.50%	100.00%	N/Ap	95.00%	99.00%	0.000%	NA	30 days
84	Reliance Telecom	22.20	99.00%	6.39	0.66%	2.03%	1.58%	96.00%	NR*	NR*	83.58%	100.00%	0.000%	100.00%	30 days
85	BSNL	0.00	97.00%	5.30	0.80%	1.90%	2.50%	96.90%	98.50%	98.90%	42.70%	57.40%	NIL	100.00%	30 days
86	Reliance Comm	0.22	99.55%	4.04	0.00%	0.00%	0.91%	98.90%	99.50%	99.50%	87.84%	90.68%	0.040%	100.00%	30 days
87	Tata Teleservices	0.34	98.58%	5.36	0.34%	0.06%	0.56%	98.31%	100.00%	100.00%	94.90%	95.30%	0.030%	100.00%	30 days
88	Dishnet	0.00	98.47%	8.00	0.97%	0.99%	0.66%	99.13%	100.00%	100.00%	100.00%	100.00%	NIL	NIL	NIL
<b>xv</b>	<b>Bihar</b>														
89	Reliance Telecom	17.51	97.00%	7.28	0.94%	1.90%	1.43%	95.00%	NR*	NR*	96.00%	96.00%	0.000%	100.00%	30 days
90	BSNL	21.00	98.60%	12.00	0.30%	0.90%	1.10%	98.50%	89.00%	98.00%	88.00%	98.00%	NIL	100.00%	30 days
91	Reliance Comm	0.24	99.44%	4.13	0.00%	0.00%	0.81%	99.56%	99.50%	99.50%	88.42%	90.65%	0.080%	100.00%	30 days
92	Bharti Airtel Limited	0.00	96.86%	9.40	6.09%	4.13%	2.40%	96.93%	100.00%	NA	86.00%	90.00%	0.200%	100.00%	30 days
93	Tata Teleservices	0.53	97.70%	5.72	0.00%	0.27%	1.17%	97.46%	100.00%	100.00%	66.50%	69.90%	0.030%	100.00%	30 days
94	Dishnet	0.00	95.94%	8.00	0.86%	0.90%	0.82%	98.47%	100.00%	100.00%	87.00%	87.00%	NIL	NIL	NIL
<b>xvi</b>	<b>Orissa</b>														
95	Reliance Telecom	39.28	99.00%	7.17	0.91%	1.93%	1.62%	97.00%	NR*	NR*	95.67%	100.00%	0.000%	100.00%	30 days
96	BSNL	7.00	98.00%	11.00	0.98%	1.94%	2.14%	98.00%	94.00%	97.00%	93.00%	96.00%	0.030%	100.00%	NIL
97	Bharti Airtel Limited	0.00	98.29%	7.80	0.47%	1.11%	1.60%	98.11%	100.00%	N/Ap	73.00%	79.00%	0.000%	100.00%	30 days
98	Reliance Comm	0.00	99.25%	4.05	0.00%	0.00%	0.95%	99.92%	99.50%	99.50%	94.59%	96.89%	0.090%	100.00%	30 days
99	Tata Teleservices	0.36	98.05%	5.34	0.00%	0.29%	0.96%	97.08%	100.00%	100.00%	81.20%	84.20%	0.020%	100.00%	30 days
100	Dishnet	0.00	98.26%	8.00	0.98%	0.95%	0.71%	99.11%	100.00%	100.00%	95.00%	95.00%	0.030%	100.00%	30 days
<b>xvii</b>	<b>Assam</b>														
101	Bharti Airtel Limited	8.25	96.28%	9.00	0.24%	1.19%	1.40%	97.30%	100.00%	NA	91.00%	93.00%	0.020%	100.00%	30 days
102	BSNL	3.45	97.00%	12.00	0.60%	1.60%	2.80%	98.00%	98.00%	99.00%	82.00%	91.00%	0.070%	100.00%	30 days
103	Reliance Telecom	19.43	97.00%	7.75	1.13%	4.17%	1.24%	92.00%	NR*	NR*	91.00%	96.00%	0.020%	100.00%	30 days

104	Dishnet	0.00	98.36%	8.00	0.89%	0.81%	0.75%	98.89%	100.00%	100.00%	84.00%	84.00%	0.070%	100.00%	30 days
<b>xviii</b>	<b>J &amp; K</b>														
105	BSNL	0.00	98.00%	12.00	0.90%	1.80%	2.00%	98.00%	82.00%	97.00%	81.00%	96.00%	0.009%	100.00%	21 days
106	Bharti Airtel Limited	7.50	98.47%	4.30	0.61%	0.50%	1.60%	95.70%	90.00%	100.00%	94.80%	96.30%	0.070%	100.00%	30 days
107	Dishnet	0.00	97.16%	8.00	0.96%	0.97%	0.59%	99.13%	100.00%	100.00%	97.54%	97.54%	0.020%	100.00%	30 days
<b>xix</b>	<b>NE</b>														
108	BSNL	8.33	97.38%	13.00	0.97%	1.83%	2.57%	96.00%	89.67%	96.67%	89.33%	96.33%	0.090%	100.00%	30 days
109	Bharti Airtel Limited	3.15	96.84%	9.00	0.97%	1.57%	2.00%	96.41%	100.00%	N/Ap	92.00%	94.00%	0.020%	100.00%	30 days
110	Reliance Telecom	14.18	97.00%	7.62	1.14%	3.50%	2.16%	98.00%	NR*	NR*	81.30%	100.00%	0.007%	100.00%	30 days
111	Dishnet	0.00	98.60%	8.00	0.86%	0.83%	0.76%	98.90%	100.00%	100.00%	97.54%	97.54%	0.020%	100.00%	30 days
	<b>METRO</b>														
<b>xx</b>	<b>Delhi</b>														
112	Bharti Airtel Limited	0.00	98.80%	13.00	0.27%	0.16%	1.10%	95.87%	99.80%	99.89%	97.90%	99.00%	0.060%	100.00%	30 days
113	Vodafone Essar	0.00	99.01%	7.44	0.01%	0.02%	0.74%	97.84%	99.13%	99.50%	88.53%	91.63%	0.010%	100.00%	15 days
114	MTNL - GSM (i)	0.00	95.09%	8.90	0.12%	1.96%	1.49%	NA	NR	NR	NR	NR	0.090%	100.00%	30 days
114	MTNL - CDMA (ii)	0.00	97.33%	NR	NR	0.09%	1.16%	NR	NR	NR	98.62%	99.07%	0.090%	98.67%	NR
115	IDEA Cellular	0.00	98.98%	9.00	0.22%	0.88%	0.71%	98.48%	100.00%	100.00%	90.00%	98.00%	0.005%	100.00%	30 days
116	Tata Teleservices	0.00	98.42%	5.34	0.00%	0.05%	1.02%	96.80%	100.00%	100.00%	94.30%	95.80%	0.040%	100.00%	30 days
117	Reliance Comm	0.00	99.48%	4.16	0.00%	0.00%	0.48%	99.03%	99.50%	99.50%	93.92%	95.62%	0.090%	100.00%	30 days
<b>xxi</b>	<b>Mumbai</b>														
118	BPL Mobile	16.05	99.42%	11.18	0.72%	0.97%	1.45%	98.11%	87.05%	NR	85.68%	98.59%	0.060%	100.00%	30 days
119	Vodafone Essar	0.00	95.40%	8.90	0.77%	1.70%	2.01%	95.20%	97.76%	98.46%	95.53%	97.60%	0.000%	100.00%	15 days
120	MTNL - GSM (i)	0.00	96.55%	9.23	0.69%	1.32%	1.71%	96.38%	84.00%	97.00%	86.00%	96.00%	0.038%	100.00%	30 days
120	MTNL - CDMA (ii)	0.00	97.68%	2.19	1.61%	0.06%	1.18%	96.45%	NR	NR	NR	NR	NR	NR	NR
121	Bharti Airtel	0.00	95.01%	3.76	0.40%	0.46%	1.10%	100.00%	100.00%	N/Ap	86.00%	90.00%	0.020%	100.00%	30 days

	Limited														
122	Reliance Comm	0.00	99.53%	4.06	0.00%	0.00%	0.93%	99.27%	99.50%	99.50%	86.23%	90.65%	0.080%	100.00%	30 days
123	Tata Teleservices	0.00	98.31%	12.00	0.00%	0.58%	0.45%	97.48%	100.00%	100.00%	83.80%	87.60%	0.060%	99.80%	30 days
<b>xxii</b>	<b>Chennai</b>														
124	Aircel Cellular Ltd	NR	98.00%	10.85	0.10%	1.70%	0.52%	95.10%	95.00%	100.00%	85.00%	100.00%	0.100%	100.00%	30 days
125	Vodafone Essar	0.00	99.75%	8.22	0.07%	0.87%	1.10%	99.65%	100.00%	100.00%	94.53%	96.90%	0.500%	100.00%	15 days
126	BSNL	0.00	96.00%	12.20	0.20%	0.50%	1.10%	100.00%	100.00%	100.00%	77.00%	86.00%	0.000%	100.00%	30 days
127	Reliance Comm	0.00	99.44%	4.06	0.00%	0.00%	0.80%	99.20%	99.50%	99.50%	78.10%	83.88%	0.080%	100.00%	30 days
128	Tata Teleservices	0.00	99.87%	4.26	0.00%	0.00%	0.27%	98.86%	100.00%	100.00%	60.10%	63.80%	0.050%	100.00%	30 days
129	Bharti Airtel Limited *														
<b>xxiii</b>	<b>Kolkata</b>														
130	Bharti Airtel Limited	0.00	96.98%	7.00	0.30%	0.14%	0.90%	96.58%	100.00%	N/Ap	78.20%	81.10%	0.090%	100.00%	30 days
131	Vodafone Essar	0.00	99.96%	15.00	0.38%	1.38%	0.75%	97.80%	100.00%	100.00%	86.83%	95.20%	0.060%	100.00%	15 days
132	BSNL	0.00	98.26%	9.10	0.55%	1.17%	0.94%	99.17%	97.50%	99.00%	81.40%	91.40%	0.040%	100.00%	30 days
133	Reliance Telecom & (Reliable Internet. Ser.**)	0.00	99.00%	8.13	0.04%	0.03%	1.42%	97.00%	100.00%	100.00%	90.00%	100.00%	0.000%	100.000%	30 days
134	Tata Teleservices	0.00	98.75%	4.54	0.00%	0.16%	0.86%	98.25%	100.00%	100.00%	65.40%	69.60%	0.020%	100.00%	30 days
135	Reliance Comm	0.00	99.59%	4.06	0.00%	0.00%	0.64%	100.00%	99.50%	99.50%	88.42%	90.65%	0.080%	100.00%	30 days
	Service Providers not meeting the benchmarks NR=Data Not Reported N/Ap = Not Applicable, * The License of M/s Bharti Airtel Chennai has been merged with Tamilnadu Circle.														

## Annex 5.3

### Quality of Service Performance for ISPs

S. No.	Name of the Service Provider		Dial-up Access						GOS on the link Connecting to PSTN Node to ISP	Mean time to Restore of faults resulting as per subscriber complaints
			Service Activation time	Time to Access	Probability of Accessing the ISP Node (in %)			ISP Node unavailability		
					1 <sup>st</sup> Attempt	2 <sup>nd</sup> Attempt	3 <sup>rd</sup> Attempt			
	<b>TRAI Benchmarks</b>		<b>6 hrs</b>	<b>30 sec</b>	<b>80</b>	<b>90</b>	<b>99</b>	<b>30 min</b>	<b>1 : 100</b>	<b>3 days</b>
1	Bharat Sanchar Nigam Ltd.		0-4 hrs	15-30 sec	88	95	99	Nil	1:100	0-4 hrs
2	MTNL	Delhi	Online	30 sec	99.72	99.99	-	Nil	0.01	5 min
		Mumbai	Immediate	26 sec	100	-	-	-	0.005	15 min
3	Sify Ltd.		3 mins	30 sec	90	95	99	20 min	0.005	4 hrs
4	Bharti Airtel Ltd. (Bharti Televentures Ltd.)		online	<b>30-35 sec</b>	99.8	100	100	Nil	1:100	2 hrs
5	Reliance Communications Infrastructure Ltd.		Online	25 sec	98	100	-	-	-	<8 hrs
6	VSNL		2-4 hrs	30 sec	80	90	99	Nil	Not provided by BSO	3 days
7	Data Infosys Ltd.		2-3 min	20-25 sec	95	97	99	30 min	1:100	15 min
8	YOU Telecom India Pvt. Ltd. (BG Broadband)		2 min (Online)	20 sec	98	99	100	Nil	Not provided by BSNL	26 hrs
9	Asianet Satellite Communications Ltd.		Immediate	10 sec	98	99	100	<b>&lt;1 Hr</b>	1 in 200	10 hrs 05 min
10	HCL Infinet Ltd.		3 min	8-24 sec	99.6	99.5	99.4	24 min	1:100	17-19 hrs
11	HFCL Infotel Ltd.		N.A.	30 sec	98	99	100	Nil	1 in 500	4.85 hrs
12	Shyam Internet Services Ltd.		5 min	20 sec	98.5	99.5	99.99	15 min	1	1.5 hrs



## Annex 5.4

### Quality of Service Performance for Broadband Service Providers

Sl. No.	Service Operator s	Service Provisioning	Faults Repair		Billing Performance				Response Time to the Customer for assistance		Bandwidth utilisation/throughput					Packet Loss	Network latency (for wired broadband access)		
		%age of connections provided within 15 days of registration of demand	% of faults repaired by next working day (>90%)	% of faults repaired within 3 working day	Rent Rebate	%age of bills disputed	%age of billing complaints resolved within 4 weeks	%age of cases to whom refund of deposits is made within 60 days of closures	%age of calls answered by operator (Voice to voice) within 60 sec	%age of calls answered by operator (Voice to voice) within 90 sec	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	% International bandwidth utilization during peak hours (TCBH) (Enclosure MRTG) <90%	Broadband and Connection Speed available (download) from ISP node to user	Service availability /uptime (for all users) in %age	Packet loss (for wired broadband access) in %age	User reference point at POP/ISP Gateway node to IGSP/NIXI	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)
		100%	>90%	>99%	in nos.	<2%	100%	100% within 60 days	>60%	>80%	0	0	<90%	>80%	>98%	<1%	<120 ms	<350 ms	<800 ms
1	<b>BSNL</b>																		
1.1	Andhra Pradesh	100.00 %	97.29 %	99.78 %	7	0.39 %	96.20 %	99.90 %	88.57 %	89.50 %	0	0	0.00 %	0.00 %	96.68 %	2.83 %	159	NA	NA
1.2	Assam	100.00 %	92.00 %	100.00 %	0	0.00 %	100.00 %	100.00 %	90.33 %	99.33 %	0	0	0.00 %	0.00 %	97.00 %	0.00 %	NA	NA	NA
1.3	Bihar	94.00 %	90.00 %	98.00 %	11	0.96 %	94.66 %	100.00 %	94.00 %	98.00 %	NR	NR	NR	86.00 %	98.00 %	1.00 %	NA	NA	NA
1.4	Chhattisgarh	96.00 %	98.00 %	100.00 %	Nil	Nil	Nil	Nil	80.00 %	90.00 %	NR	NR	NR	NR	NR	NR	NR	NR	NR
1.5	Chennai	100.00 %	90.00 %	10.00 %	Nil	Nil	Nil	Nil	100.00 %	NR	NR	8	90.00 %	90.86 %	99.51 %	0.00 %	120	350	NR
1.6	Gujrat	100.00 %	93.00 %	99.00 %	110	0.38 %	100.00 %	99.00 %	59.00 %	14.00 %	Nil	DNF	DNF	DNF	100.00 %	0.00 %	DNF	DNF	DNF

1.7	Haryana	94.90%	97.10%	100.00%	Nil	0.24%	100.00%	100.00%	92.90%	100.00%	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF
1.8	Himachal Pradesh	90.00%	95.00%	99.80%	Nil	0.01%	100.00%	Nil	85.60%	96.00%	DNF	DNF	DNF	83.50%	96.60%	DNF	DNF	DNF	DNF
1.9	Jammu & Kashmir	73.30%	94.00%	100.00%	Nil	Nil	Nil	Nil	76.60%	23.40%	DNF	DNF	DNF	DNF	90.00%	DNF	DNF	DNF	DNF
1.10	Jharkhand	99.56%	90.60%	98.20%	Nil	0.03%	99.78%	100.00%	84.40%	95.00%	NA	NA	NA	66.86%	97.20%	0.05%	47.5	NA	NA
1.11	Karnataka	21.00%	97.00%	100.00%	292	0.17%	100.00%	100.00%	43.00%	49.00%	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF	DNF
1.12	Kerala	58.74%	95.79%	99.82%	Nil	0.05%	100.00%	100.00%	81.91%	91.19%	DNF	DNF	DNF	83.67%	99.85%	NR	56	NR	NR
1.13	Calcutta	NR	92.00%	99.10%	Nil	1.20%	99.30%	100.00%	75.00%	90.00%	NR	NR	NR	NR	NR	NR	NR	NR	NR
1.14	Maharashtra	52.47%	96.77%	100.00%	5	0.07%	99.77%	100.00%	94.52%	72.48%	NR	NR	NR	73.65%	99.49%	0.17%	27.8	245	527.33
1.15	Madhya Pradesh	100.00%	92.70%	100.00%	Nil	0.60%	100.00%	100.00%	88.37%	94.69%	NR	NR	NR	84.00%	96.30%	1.00%	NA	NA	NA
1.16	North East I	100.00%	95.50%	100.00%	Nil				85.20%	91.80%	NR	NR	NR	86.30%	93.30%	1.00%	23	NR	NR
1.17	North East II	95.75%	82.43%	99.00%	0	0.00%	100.00%	NR	60.00%	80.00%	NA	NA	NA	NA	98.00%	NR	NR	NR	NR
1.18	Orissa	52.46%	42.00%	92.00%	Nil	0.26%	Nil	Nil	NR	NR	NR	NR	NR	85.00%	99.50%	NR	NR	NR	NR
1.19	Punjab	100.00%	94.00%	100.00%	Nil	0.06%	100.00%	100.00%	81.00%	94.00%	NR	NR	NR	86.00%	NR	NR	NR	NR	NR
1.20	Rajasthan	100.00%	63.00%	90.00%	Nil	0.38%	100.00%	100.00%	82.00%	90.00%	NR	NR	NR	NR	99.90%	NR	NR	NR	NR
1.21	Tamil Nadu	74.00%	93.10%	100.00%	104	0.05%	98.33%	100.00%	85.94%	95.86%	NR	NR	NR	NR	99.85%	0.06%	24	NA	NA
1.22	UP- East	99.98%	99.00%	100.00%	Nil	0.08%	100.00%	100.00%	100.00%		NR	NR	NR	100.00%	99.70%	1.00%	120	350	800
1.23	UP-West	96.00%	95.00%	100.00%	Nil	0.08%	100.00%	100.00%	82.00%	95.00%	NR	NR	NR	85.00%	98.80%	Nil	NR	NR	NR
1.24	Uttaranchal	30.00%	95.00%	100.00%	2	0.00%	100.00%	100.00%	78.00%	90.00%	NA	NA	NA	84.00%	NA	0.10%	NA	NA	NA
1.25	West Bengal	44.44%	60.00%	40.00%	Nil	Nil			90.00%	10.00%	NR	NR	NR	NR	NR	NA	NR	NR	NR
<b>2</b>	<b>MTNL</b>																		
2.1	Delhi	70.26%	81.21%	96.58%	3749	0.17%	99.90%	100.00%	97.36%	97.69%	0	2	89.57%	95.00%	99.95%	DNF	DNF	DNF	N/Ap
2.2	Mumbai	70.35%	72.55%	91.78%	0	0.07%		NA	36.25%	43.10%	0	1	84.62%	80.00%	98.00%	1.00%	70	300	N/Ap

<b>3</b>	<b>Bharti Airtel Ltd.</b>																		
3.1	Andhra Pradesh	99.19%	94.70%	95.93%	NA	NA	NA	NA	93.67%	95.88%	7	0	84.25%	95.00%	99.97%	0.00%	86	536	N/Ap
3.2	Delhi	100.00%	96.00%	99.00%	1144	0.01%	100.00%	78.00%	92.55%	95.95%	4	1	91.00%	100.00%	99.96%	0.00%	19	61	N/Ap
3.3	Gujarat	99.60%	97.40%	99.60%	0	0.04%	100.00%	97.00%	94.00%	96.00%	1	N/Ap	N/Ap	99.00%	99.90%	0.00%	135	640	N/Ap
3.4	Haryana	100.00%	97.00%	99.00%	5	0.01%	100.00%	80.00%	91.49%	95.16%	1	0	78.00%	100.00%	99.98%	0.00%	44	74	N/Ap
3.5	Karnataka	99.19%	94.70%	95.93%	NA	NA	NA	NA	82.42%	90.31%	12	0	87.45%	94.00%	99.97%	0.00%	86	536	N/Ap
3.6	Kerala	100.00%	97.87%	100.00%	NA	NA	NA	NA	91.73%	96.34%	0	NA	2.17%	94.00%	99.99%	0.00%	141	835	N/Ap
3.7	Kolkata	100.00%	98.00%	99.00%	38	0.01%	100.00%	94.00%	91.49%	95.16%	0	0	63.00%	100.00%	99.79%	0.00%	73.33	146.67	N/Ap
3.8	Madhya Pradesh & CG	98.30%	94.40%	98.90%	811	0.03%	100.00%	98.00%	96.40%	100.00%	0	1	94.33%	98.67%	99.96%	0.00%	80	315	N/Ap
3.9	Maharashtra	98.50%	97.00%	99.00%	7	0.07%	100.00%	98.00%	96.00%	97.00%	3	NA	NA	99.00%	99.94%	0.00%	45	208	N/Ap
3.11	Mumbai	99.80%	94.00%	98.70%	10	0.22%	100.00%	100.00%	97.00%	98.00%	N/Ap	0	78.00%	99.00%	99.90%	0.00%	15	180.3	N/Ap
3.12	Punjab	100.00%	96.00%	99.00%	45	0.02%	100.00%	95.00%	91.49%	95.16%	0	0	78.00%	100.00%	99.93%	0.00%	52	73	N/Ap
3.13	Rajasthan	100.00%	98.00%	99.00%	6	0.00%	100.00%	87.00%	91.49%	95.16%	0	0	66.00%	100.00%	100.00%	0.00%	28	69	N/Ap
3.14	Tamilnadu	95.34%	97.16%	98.44%	NA	NA	NA	NA	93.82%	96.71%	9	0	81.61%	87.12%	99.98%	0.00%	71	779	N/Ap
3.15	UP - East	100.00%	97.00%	99.00%	59	0.01%	100.00%	47.00%	91.49%	95.16%	0	0	83.00%	100.00%	99.83%	0.00%	46	85	N/Ap
3.16	UP - West	100.00%	98.00%	99.00%	12	0.00%	100.00%	61.00%	91.49%	95.16%	0	1	85.00%	100.00%	99.92%	0.00%	33	78	N/Ap
<b>4</b>	<b>*VSNL(now Tata Communications Ltd.</b>																		
4.1	Central Region	100.00%	93.00%	98.00%	44352	0.78%	100.00%	23.00%	86.20%	89.57%	0	0	73.42%	80.00%	99.65%	0.00%	50	245	N/Ap
4.2	East	100.00%	88.00%	97.00%		0.69%	100.00%	25.66%	86.20%	89.57%	0	0	73.42%	80.00%	99.08%	0.00%	50	245	N/Ap
4.3	North	100.00%	88.00%	95.00%		1.22%	100.00%	71.00%	86.20%	89.57%	0	0	73.42%	80.00%	98.31%	0.00%	50	245	N/Ap

4.4	South 1	100.00 %	83.00 %	94.00 %		1.1 7%	99.29 %	153.00 %	86.20%	89.57 %	0	0	73.42 %	80.00 %	99.64 %	0.00%	50	245	N/Ap
4.5	South 2	100.00 %	91.00 %	97.00 %		0.9 7%	98.15 %	249.00 %	86.20%	89.57 %	0	0	73.42 %	80.00 %	99.63 %	0.00%	50	245	N/Ap
4.6	South 3	99.00%	80.00 %	92.00 %		2.5 1%	99.29 %	106.66 %	86.20%	89.57 %	0	0	73.42 %	80.00 %	97.82 %	0.00%	50	245	N/Ap
4.7	South 4	100.00 %	97.00 %	99.00 %		0.5 1%	100.0 0%	28.66%	86.20%	89.57 %	0	0	73.42 %	80.00 %	99.66 %	0.00%	50	245	N/Ap
4.8	West 1	99.00%	79.00 %	92.00 %		1.1 1%	99.16 %	80.66%	86.20%	89.57 %	0	0	73.42 %	80.00 %	97.61 %	0.00%	50	245	N/Ap
4.9	West 2	100.00 %	78.00 %	91.00 %		1.1 5%	98.61 %	121.00 %	86.20%	89.57 %	0	0	73.42 %	80.00 %	99.24 %	0.00%	50	245	N/Ap
<b>5</b>	<b>Hathway</b>																		
5.1	Andhra Pradesh	100.00 %	96.27 %	99.63 %	46	1.8 7%	100.0 0%	100.00 %	85.00%	NA	DNF	DNF	87.50 %	85.00 %	99.41 %	1.00%	80	350	N/Ap
5.2	Chennai	100.00 %	90.63 %	96.93 %	107	1.8 7%	100.0 0%	99.33%	85.00%	NA	DNF	DNF	87.50 %	85.00 %	98.83 %	1.00%	80	350	N/Ap
5.3	Delhi	100.00 %	90.00 %	99.00 %	0	1.7 0%	100.0 0%	100.00 %	85.00%	NA	DNF	DNF	87.50 %	85.00 %	99.00 %	1.00%	100	320	N/Ap
5.4	Gujarat	98.00%	90.00 %	99.00 %	16	0.0 0%	0.00%	0.00%	70.00%	85.00 %	DNF	NA	NA	85.00 %	99.25 %	1.00%	100	350	N/Ap
5.5	Haryana	100.00 %	90.00 %	99.00 %	0	0.0 0%	0.00%	100.00 %	85.00%	NA	NA	NA	NA	85.00 %	99.61 %	2.00%	100	320	N/Ap
5.6	Karnataka	NR	90.67 %	99.33 %	198	1.8 3%	100.0 0%	98.67%	85.00%	NA	DNF	DNF	87.50 %	85.00 %	98.65 %	1.00%	80	350	N/Ap
5.7	Maharashtra	91.00%	91.33 %	99.17 %	341	1.8 9%	100.0 0%	99.23%	70.00%	85.00 %	DNF	DNF	87.50 %	85.00 %	99.71 %	1.00%	80	350	N/Ap
5.8	Punjab	100.00 %	90.00 %	99.00 %	0	1.1 5%	100.0 0%	100.00 %	85.00%	NA	NA	NA	NA	85.00 %	99.26 %	1.00%	100	320	N/Ap
5.9	Tamilnadu	100.00 %	98.56 %	99.98 %	Nil	NR	NR	NR	85.00%	NR	NA	NA	NA	85.00 %	99.68 %	NR	100	320	N/Ap
5.10	Uttar Pradesh	100.00 %	90.00 %	99.00 %	0	1.6 2%	100.0 0%	100.00 %	85.00%	NA	DNF	NA	NA	85.00 %	99.26 %	2.00%	100	320	N/Ap
<b>6</b>	<b>YOU Telecom India Pvt. Ltd.</b>																		
	All India	100.00 %	99.73 %	99.94 %	15	0.1 1%	100.0 0%	93.88%	98.2	99.4	0	0	77.65 %	98.00 %	98.30 %	1.00%	40	300	N/Ap
6.1	Andhra Pradesh	100.00 %	99.88 %	99.95 %	2	0.0 3%	100.0 0%	81.71%	98.3	99.5	0	0	73.91 %	98.00 %	98.40 %	1.00%	40	300	N/Ap
6.2	Gujarat	100.00 %	99.61 %	99.89 %	11	0.1 2%	100.0 0%	100.00 %	98.2	99.4	0	0	78.47 %	98.00 %	98.40 %	1.00%	40	300	N/Ap

6.3	Haryana	100.00 %	100.00 %	100.00 %	0	0.06 %	100.00 %	100.00 %	97.8	99.2	0	0	75.00 %	98.00 %	98.50 %	1.00%	40	300	N/Ap
6.4	Karnataka	100.00 %	100.00 %	100.00 %	0	0.07 %	100.00 %	84.82%	100.0	100.0	0	0	76.92 %	98.00 %	98.10 %	1.00%	40	300	N/Ap
6.5	Maharashtra	100.00 %	99.80 %	99.97 %	2	0.13 %	100.00 %	99.49%	98.0	99.2	0	0	78.57 %	98.00 %	98.40 %	1.00%	40	300	N/Ap
6.6	Tamilnadu	100.00 %	99.66 %	100.00 %	0	0.20 %	100.00 %	97.26%	98.3	99.4	0	0	79.17 %	98.00 %	99.00 %	1.00%	40	300	N/Ap
<b>7</b>	<b>SIFY</b>																		
	All India	100.00 %	91.00 %	99.00 %	85	0.00 %	0.00%	0.00%	88.00%	98.00 %	17.33	Nil	85.00 %	95.00 %	100.00 %	1.00%	45	300	N/Ap
<b>8</b>	<b>Reliance</b>																		
	All India	68.00%	93.00 %	100.00 %	130	0.41 %	100.00 %	100.00 %	72.70%	86.70 %	0	7	69.00 %	85.00 %	99.47 %	0.54%	DNF	DNF	DNF
<b>9</b>	<b>Asianet</b>																		
<b>10</b>	All India	100.00 %	88.00 %	99.00 %	NR	1.29 %	100.00 %	97.00%	75.00%	85.00 %	0	2	87.00 %	90.00 %	99.00 %	1.00%	50	280	600
	<b>HFCL Infotel Lt.d</b>																		
	Punjab	100.00 %	99.50 %	100.00 %	0	0.78 %	96.00 %	100.00 %	83.00%	88.00 %	0	0	88.24 %	100.00 %	99.96 %	0.00%	40	300	N/Ap
<b>11</b>	<b>Beam Cable System Pvt. Ltd.</b>																		
	Andhra Pradesh	99.40%	96.00 %	99.00 %	0	0.99 %	100.00 %	NA	65.67%	82.67 %	0	0	80.00 %	80.00 %	99.00 %	1.00%	100	300	N/Ap
<b>12</b>	<b>Ortel</b>																		
	Orissa	100.00 %	90.30 %	100.00 %	0	0.16 %	100.00 %	100.00 %	97.50%	98.00 %	0	0	94.00 %	100.00 %	99.80 %	1.00%	40	150	N/Ap
<b>13</b>	<b>Tata Teleservices (Maharashtra) Ltd.</b>																		
	Maharashtra & Goa	100.00 %	90.00 %	99.00 %	NA	1.00 %	100.00 %	NA	85.00%	92.00 %	0	0	91.00 %	93.00 %	92.00 %	1.00%	11	295	N/Ap

Service Providers not meeting the Benchmark

DNF= Data not as per Format  
NR= Data not reported by the Service Provider  
N/Ap = Not Applicable

