



# **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)

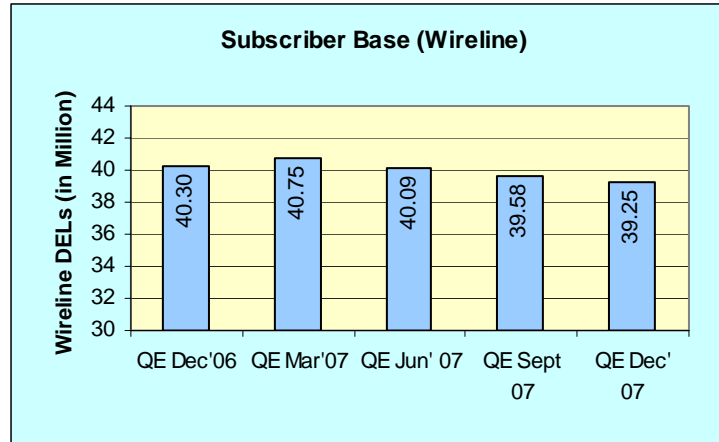
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# EXECUTIVE SUMMARY

## A. Wireline Services

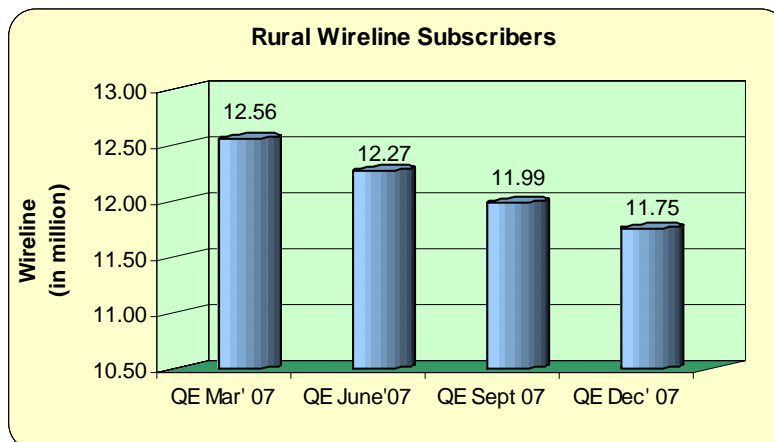
Wireline services subscriber base stood at 39.25 million in quarter ending December 2007 as compared to 39.58 million in quarter ending September 2007.

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



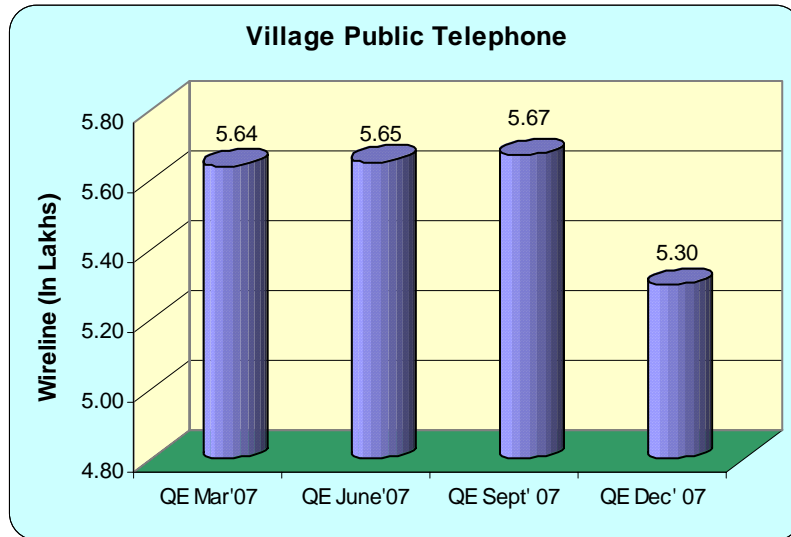
Rural Wireline Subscriber base stood at 11.75 million in quarter ending December 2007 as compared to 11.99 million in quarter ending September 2007.

**Chart- II : Rural Wireline Subscribers**



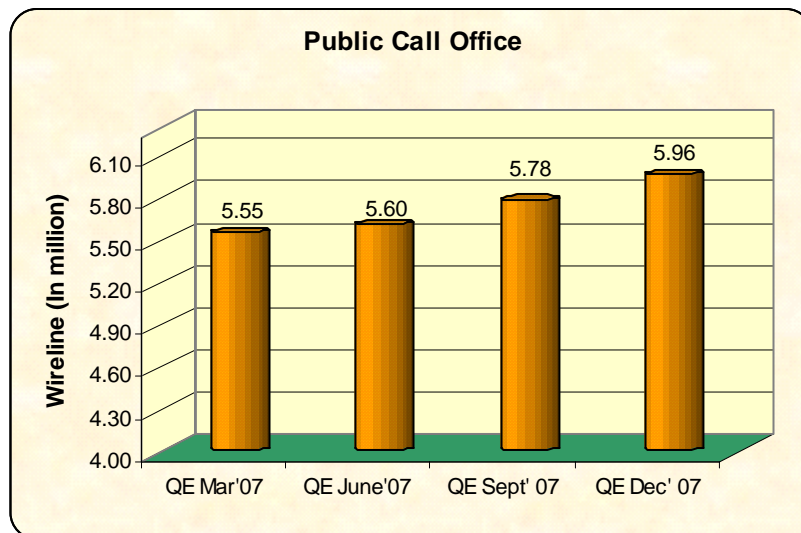
Due to reclassification of villages in Census 2001 the number of inhabited villages in India are 5,93,485 as compared to 6,07,491 villages as per Census 1991. This classification also resulted more than one VPTs in some of the revenue villages. Therefore number of Village Public Telephones (VPTs) are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

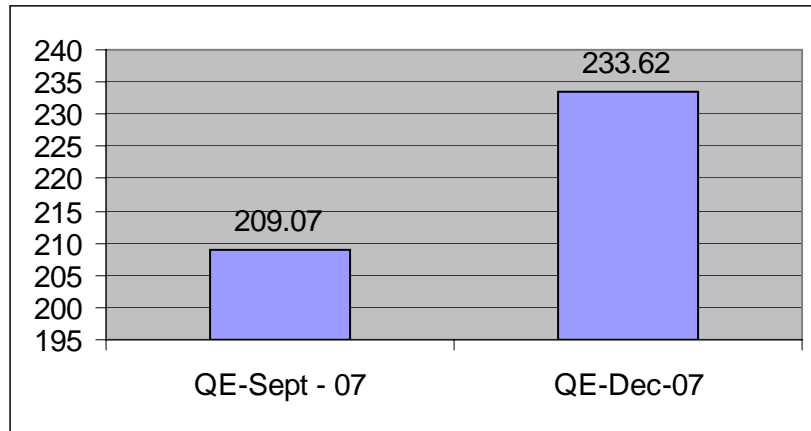


## B. Wireless Services

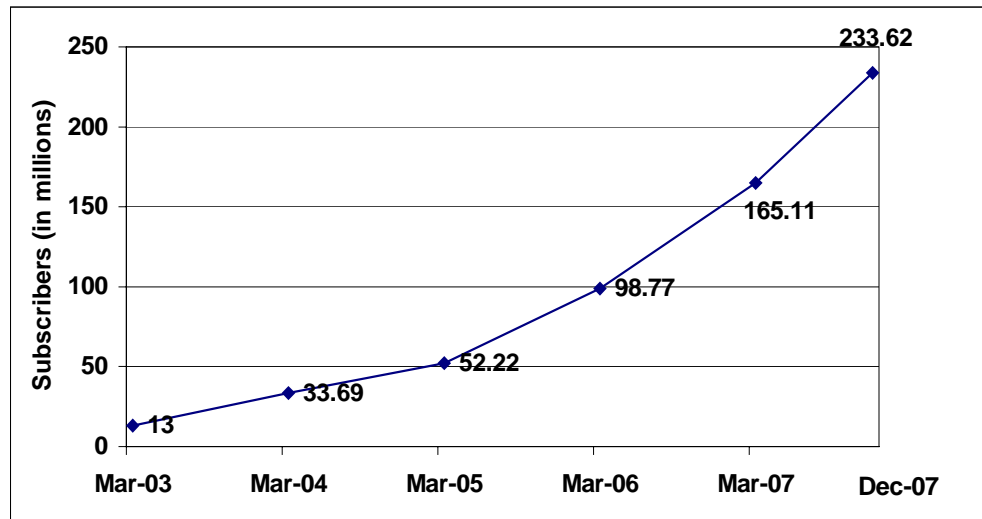
The Wireless Market has reached 233.62 million subscribers as on 31<sup>st</sup> December 2007 as against 209.07 million subscribers in the previous quarter. During this quarter 24.55 million subscribers were added.

### (i) Subscriber Growth/Market Share

**Chart -V : Wireless Subscribers**



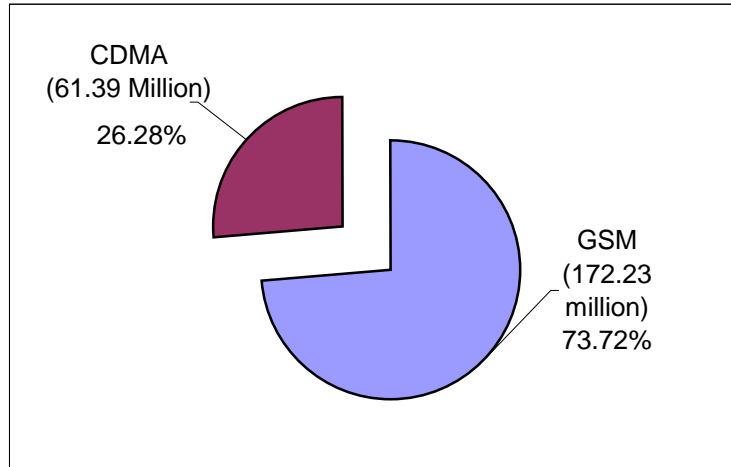
**Chart -VI: Total Subscriber Base (Wireless)**



### 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.

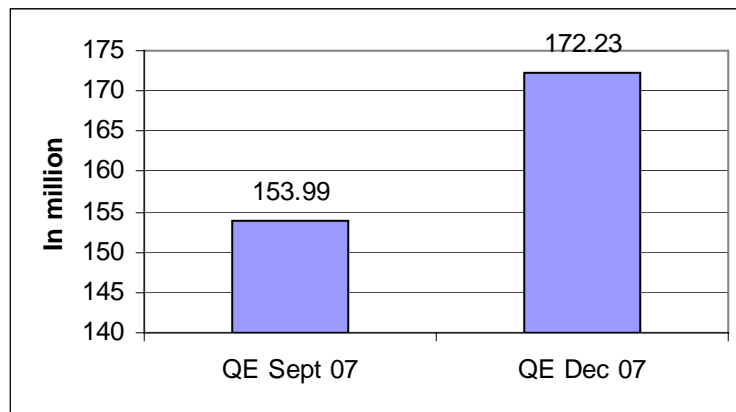
**Chart -VII : Technology wise Wireless Market Share**



### (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)**

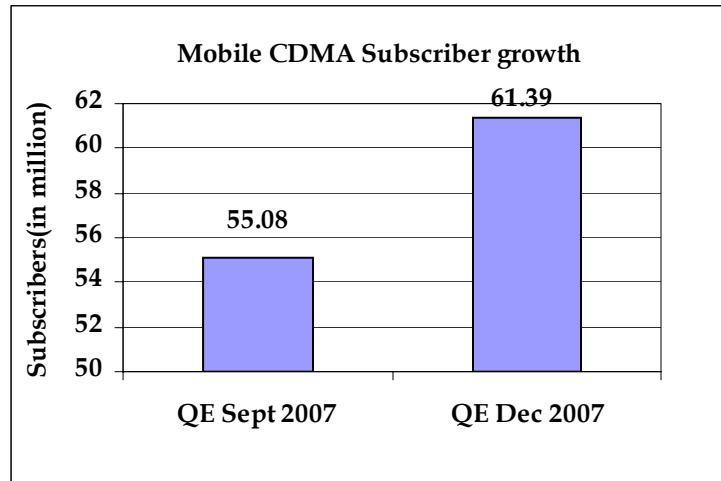




### (iii) CDMA

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**

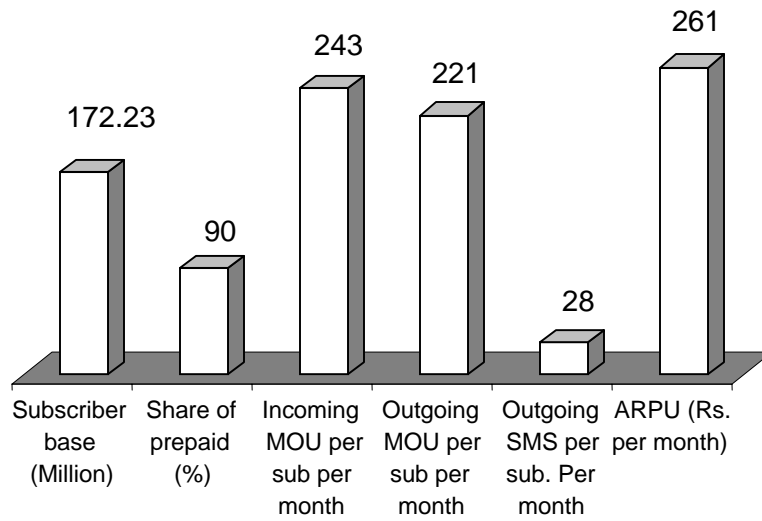


### (v) Average Revenue Per User (ARPU), Minutes of Usage (MoU), etc.

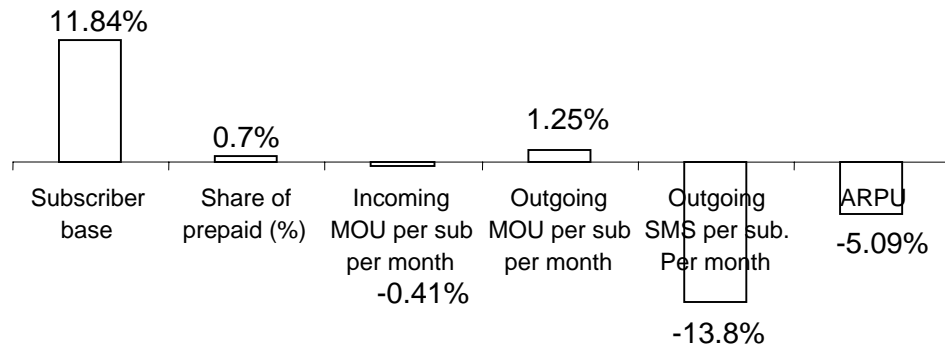
#### (a) GSM

- 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%.

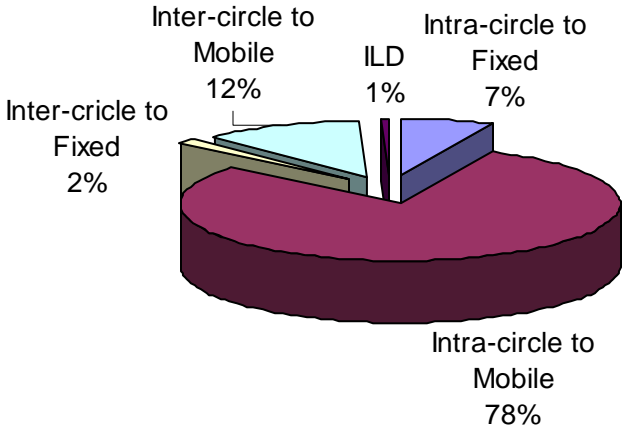
**Chart- X : Key Indicators for GSM**



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



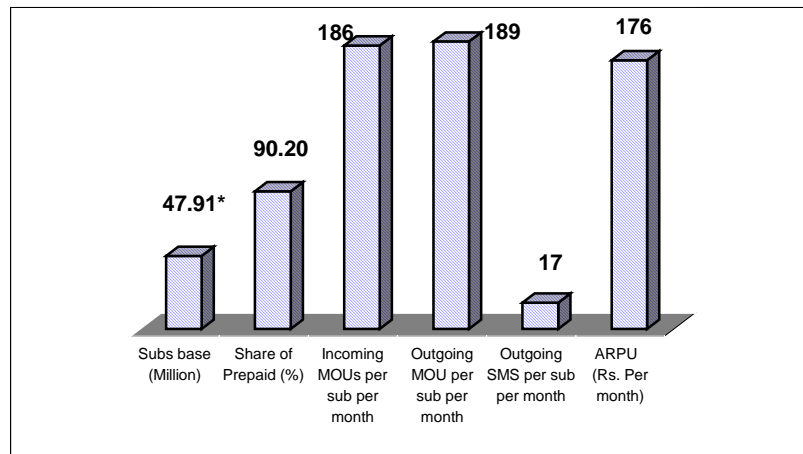
**Chart- XII : GSM Originated Traffic- distribution by terminating network**



## (b) CDMA (Full Mobility)

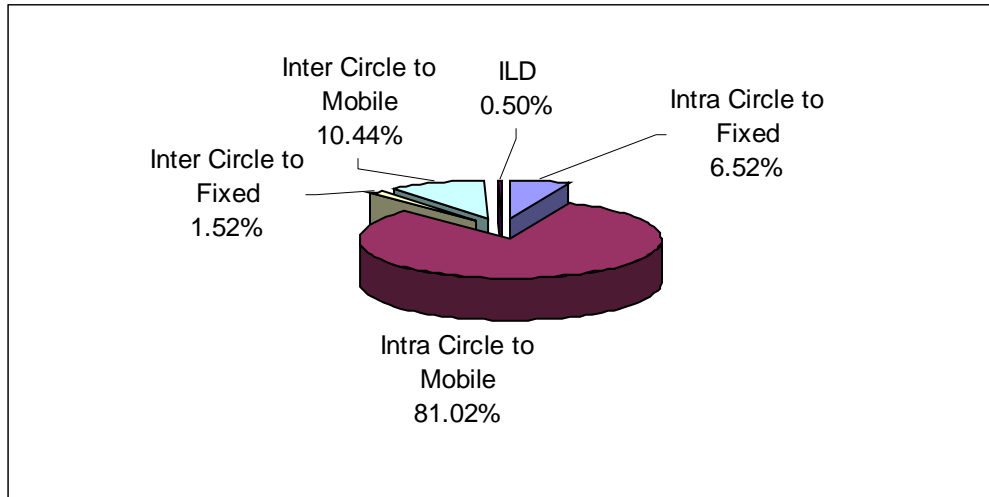
- All India blended ARPU (per month) for the quarter ending December 2007 is Rs. 176/- as compared to Rs. 173/- for the quarter ending September 2007.
- The lowest blended ARPU per month is in U P West (Rs.146/-) while the highest blended ARPU is in Mumbai (Rs. 276/-).
- Total Blended MoU per subscriber 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**

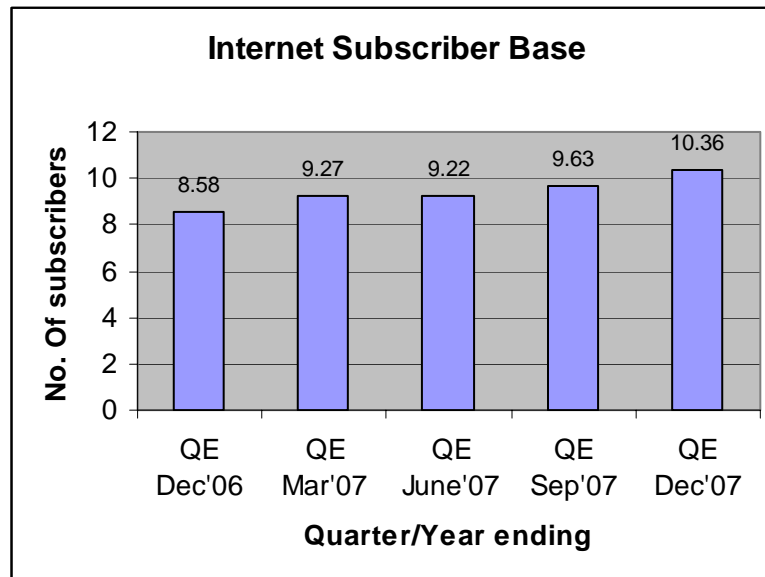
There are 10.36 million wireline Internet subscribers at the end of December 2007 as compared to 9.63 million at the end of September 2007 registering a growth of nearly 7.64%. The growth rate is higher as compared to a growth rate of 4.37% at the end of September 2007.

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.

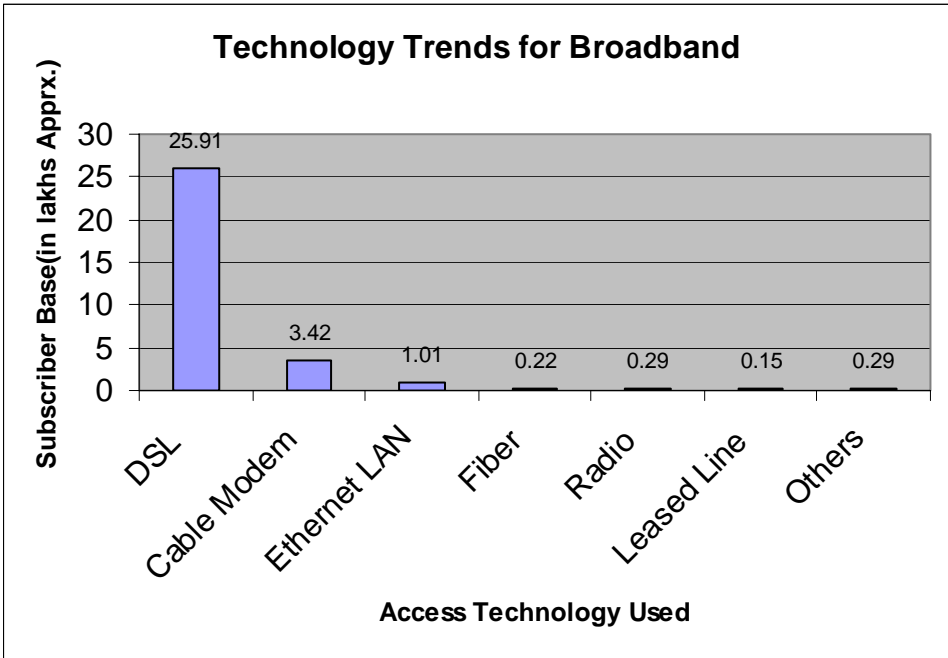
- i) **Internet Subscribers Growth** - There are 10.36 million wireline Internet Subscribers at the end of December 2007.

**Chart –XV : Internet Subscriber Base**



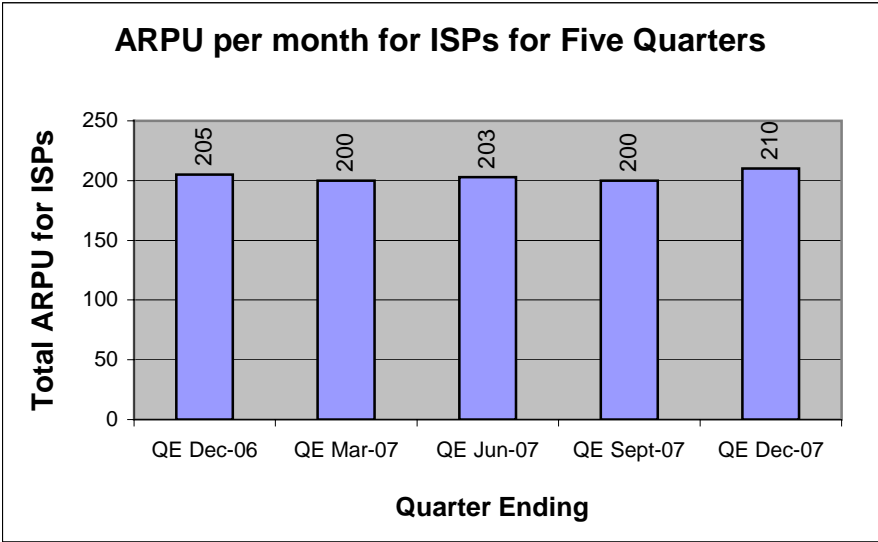
- ii) **Broadband Subscriber Growth** - The number of Broadband subscribers (with a download speed of 256 Kbps or more) was 3.13 million at the end of December 2007 as compared to 2.67 million at the end of September 2007. The growth rate of broadband subscribers in this quarter is 17.23%.
- iii) **Broadband 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	<b>Accumulated down time of Community isolation</b>	<b>&lt;24 hrs</b>	0	0.00%	1	0.74%
2	<b>Call Set-Up Success Rate (Within Licensee's Own network)</b>	<b>&gt;95%</b>	0	0.00%	1	0.74%
3	<b>Service access delay</b>	<b>&lt;15 Sec</b>	0	0.00%	2	1.48%
4	<b>Blocked call rate</b> (i) SDCCH/paging channel congestion	<b>&lt;1%</b>	4	2.96%	5	3.70%
	(ii) TCH Congestion	<b>&lt;2%</b>	6	4.44%	7	5.18%
5	<b>Call drop rate</b>	<b>&lt;3.0%</b>	0	0.00%	0	0.00%
6	<b>%age of Connections with good voice quality</b>	<b>&gt;95%</b>	1	0.74%	5	3.70%
7	<b>Response time to the customer for assistance</b> %age of calls answered (electronically) within 20 seconds = 80%	<b>80%</b>	0	0.00%	0	0.00%
(i)	%Age of calls answered (electronically) within 40 seconds = 95%	<b>95%</b>	1	0.74%	2	1.48%
(ii)	%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	<b>80%</b>	38	28.15%	29	21.46%
(iii)	%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	<b>95%</b>	54	40.00%	61	45.80%
8	<b>Complaints per 100 bills issued</b>	<b>&lt;0.1%</b>	2	1.48%	2	1.48%
9	<b>% Of complaints resolved with 4 weeks</b>	<b>100%</b>	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: -

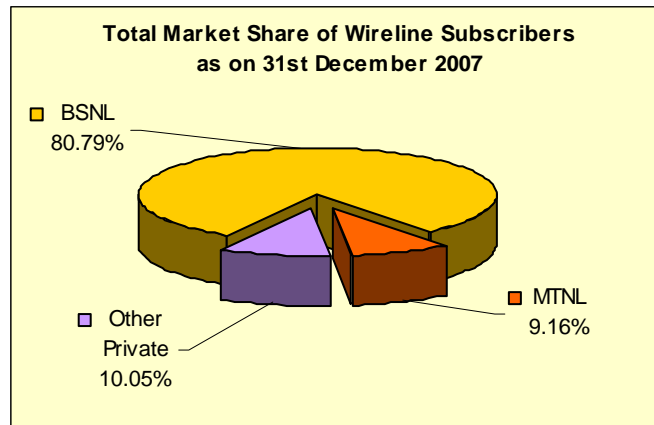
1.1.1 The Wireline services were provided by 6 licensed private operators in addition to incumbents BSNL and MTNL as on 31<sup>st</sup> December 2007. List of Wireline Service providers along with their areas of operation is given in the following Table.

<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

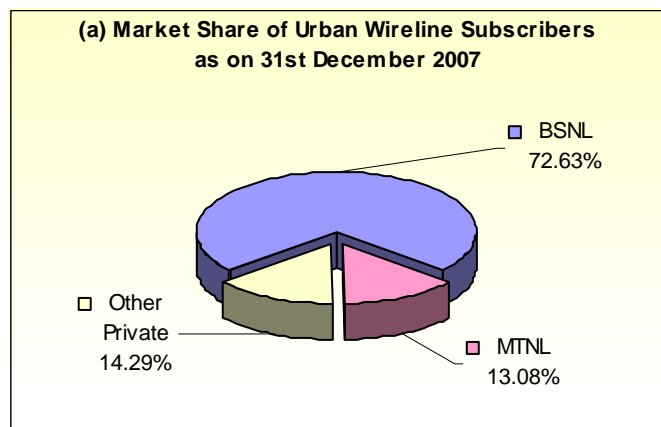
### 1.1.2 Market Share of Wireline subscriber base.

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**

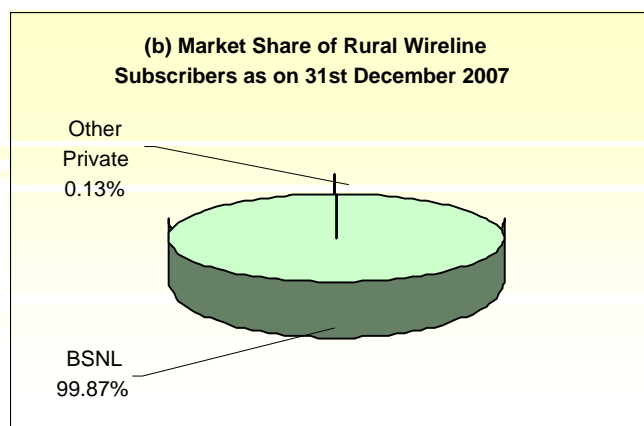


**Figure 1.2 : Distribution of Market share of Urban Wireline subscriber**





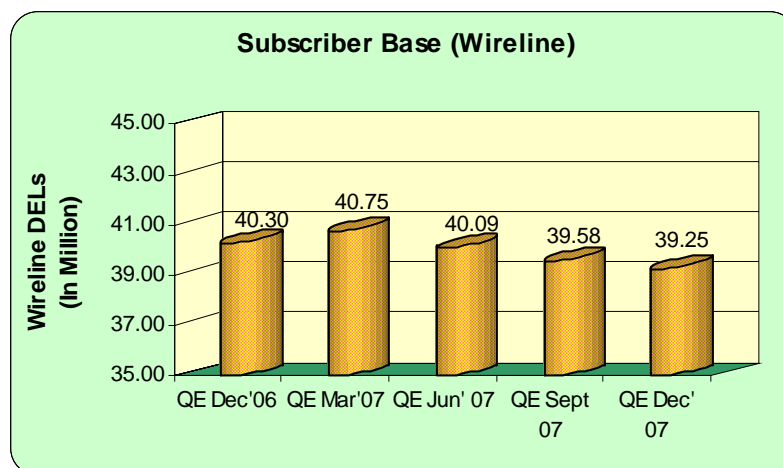
**Figure 1.3 : Distribution of Market share of Rural Wireline subscriber**



### 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**

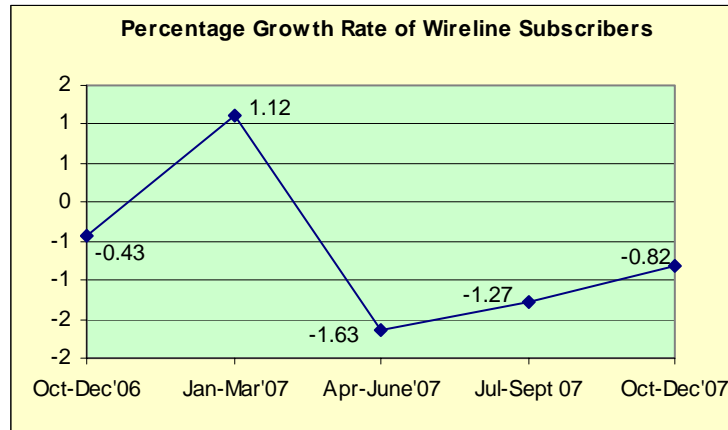


### 1.1.4 Status of Wireline services

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**



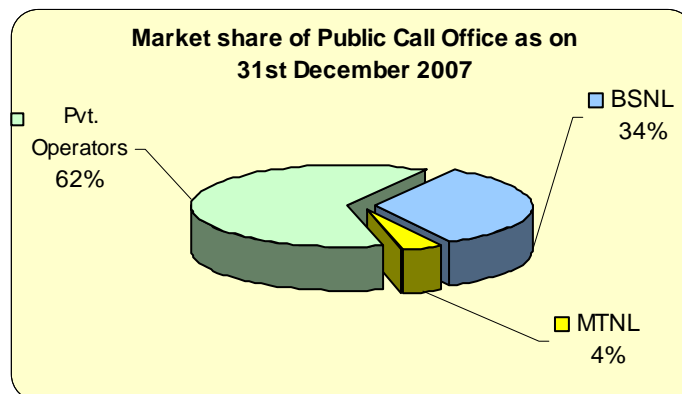
## 1.2 Other Performance Indicators: -

### 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.

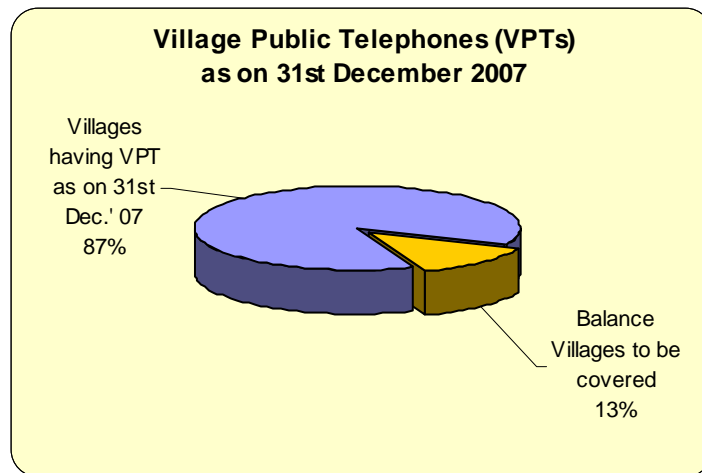
**Figure 1.6 : Market Share of Public Call Office as on 31.12.2007**



### 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

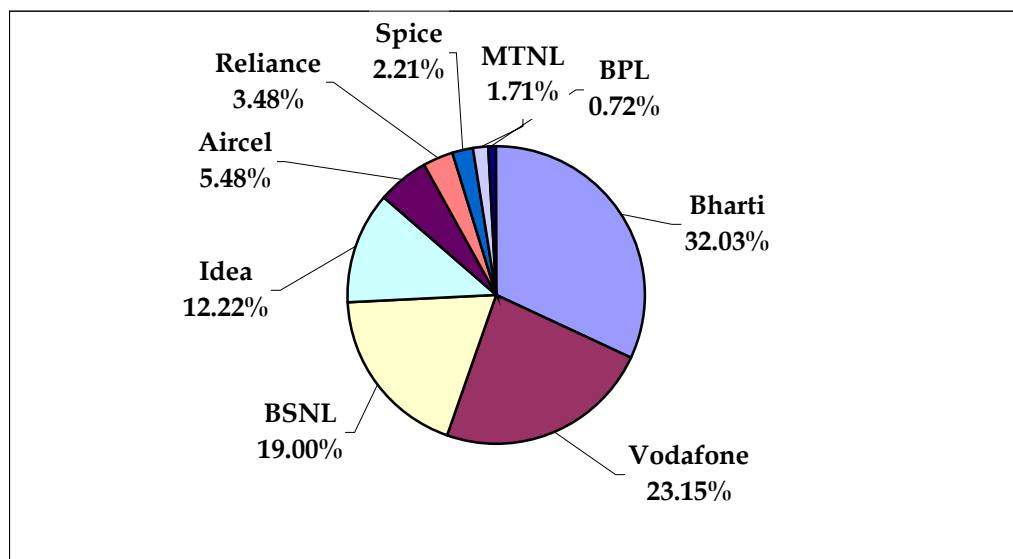
Circle-wise details of subscribers of Wireless, Wireline & Unified Access Service providers for the quarter ending December 2007 are given at Annex 2.1.

## 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:

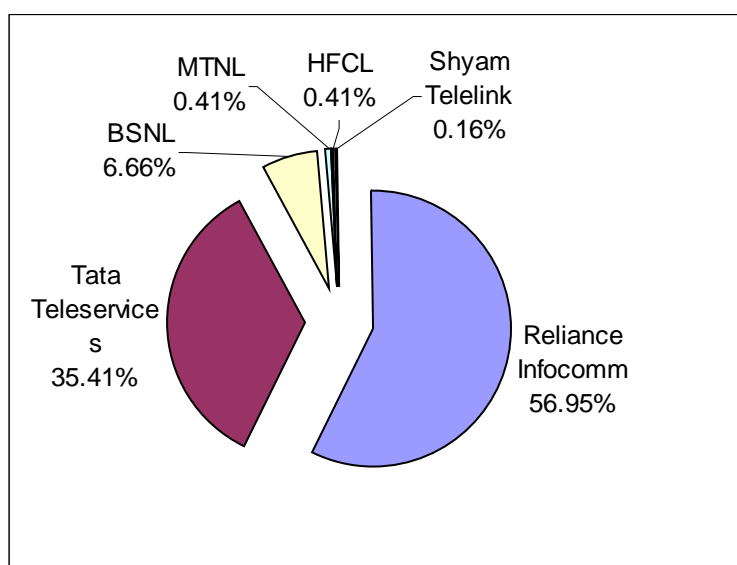
**Figure 2.1 : Operator-wise Market Share of GSM service providers as on 31st December 2007**



### 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: -

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

<b>Period</b>	<b>Revenue*</b> (Rs. in Crores)	<b>Quarterly rate of growth</b>
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)

<b>Circle</b>	<b>Postpaid</b>	<b>Prepaid</b>	<b>Blended ARPU</b>
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 221 minutes in Dec-07.
- Outgoing MOU has increased by 1.25% from 218 minutes in Sep-07 to 221 minutes 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: -

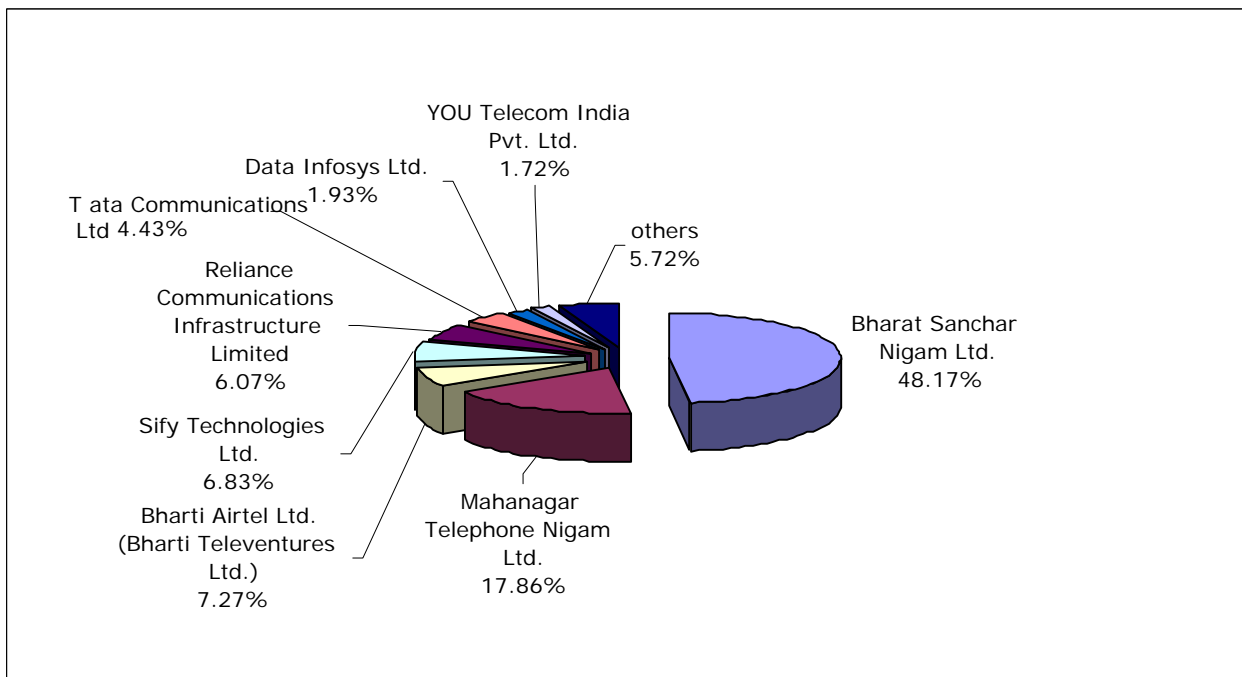
The growth trend of Wireline Internet Subscribers indicate a slight increase in the market share of PSU owned ISPs vis-à-vis private operators. During the quarter private ISPs have only 33.96% market share as against 35.35% market share in the preceding quarter. The PSU owned ISPs market share has increased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

The market share of top 5 ISPs is as under:

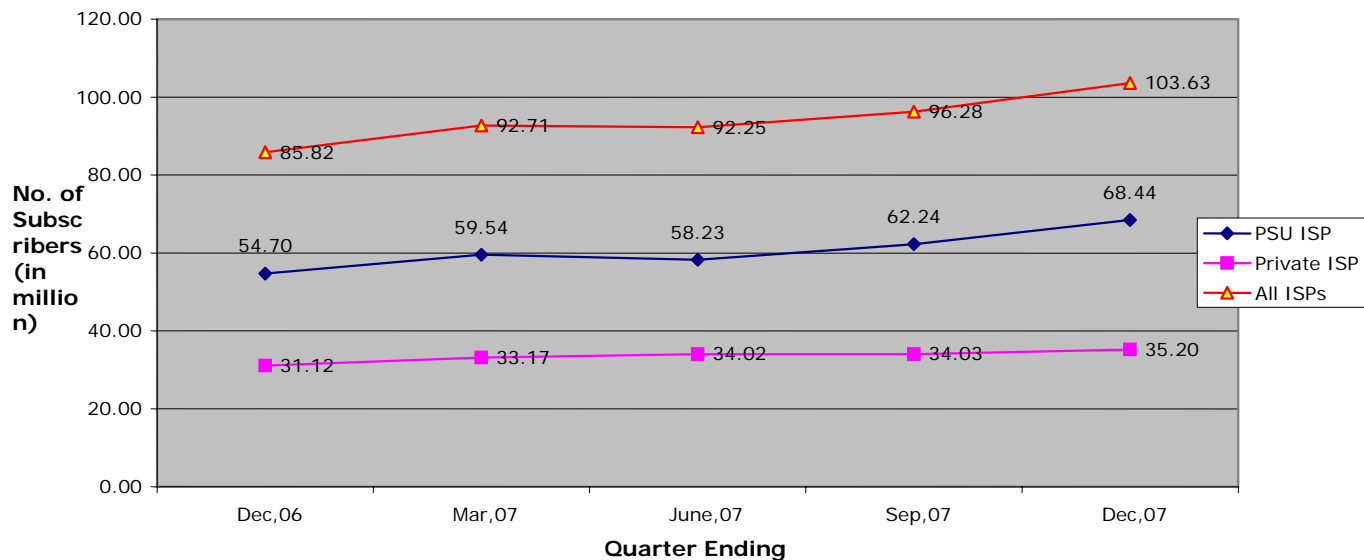
Sl.	ISP	Subs. base	Share in %
1)	Bharat Sanchar Nigam Ltd.	4992485	48.17
2)	Mahanagar Telephone Nigam Ltd.	1851291	17.86
3)	Bharti Airtel Ltd. (Bharti Televentures Ltd.)	753754	7.27
4)	Sify Technologies Ltd.	707609	6.83
5)	Reliance Communications Infrastructure Limited	628832	6.07

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**

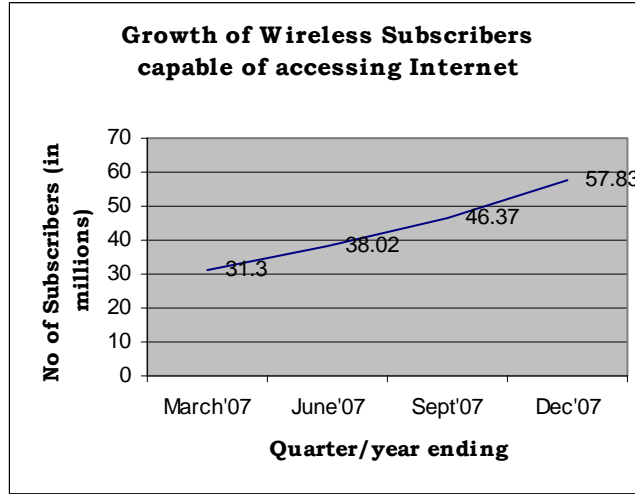


**Figure 3.2 : Growth Trends of Wireline Internet Subscribers-I**



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.

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## 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%	<p><b>BSNL:-</b> Bihar(98.00%), Chennai(10.00%), Jharkhand(98.20%), Orissa(92.00%), Raj(90.00%, WB(40.00%)</p> <p><b>MTNL:-</b> Delhi(96.58%), Mumbai(91.78%)</p> <p><b>Bharti Airtel:-</b> AP(95.93%), KTK(95.93%), MP &amp;CG(98.90%), Mumbai(98.70%), TN(98.44%).</p> <p><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%).</p> <p><b>Hathway:-</b> Chennai(96.93%)</p>
<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	<p><b>BSNL:-</b> AP(96.20%), Bihar(94.66%), Jharkhand(99.78%), Kolkata(99.30%), MH(99.77%), TN(98.33%)</p> <p><b>MTNL:-</b>Delhi(99.90%)</p> <p><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%)</p> <p><b>HFCL Infotel Ltd :-</b> Punjab(96.00%)</p>
	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	<p><b>BSNL:-</b> AP(99.90%), Guj(99.00%)</p> <p><b>Bharti Airtel:-</b> Delhi(78.00%), Guj(97.00%), HR(80.00%), Kolkata(94.00%), MP &amp; CG(98.00%), MH(98.00%), Punjab(95.00%), Raj(87.00%), UP East(47.00%, UP West (61.00%)</p> <p><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%)</p> <p><b>Hathway:-</b> Chennai(99.33%), Guj(0.00%), KTK(98.67%), MH(99.23%)</p> <p><b>You Telecom India Pvt. Ltd:-</b> All India(93.88%), AP(81.71%), KTK(84.82%), MH(99.49%), TN(97.26%)</p> <p><b>Asianet :-</b> All India(97.00%)</p>
<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%	<p><b>BSNL:-</b> Guj(59.00%), KTK(43.00%)</p> <p><b>MTNL:-</b> Mumbai(36.25%)</p>
	%age of calls answered by operator (voice to Voice) within 90 sec	>80%	<p><b>BSNL:-</b> Guj(14.00%), J&amp;K(23.40%), KTK(49.00%), MH(72.48%),WB(10.00%)</p> <p><b>MTNL:-</b> Mumbai(43.10%)</p>
<b>5</b>	<b>Bandwidth utilisation/throughput</b>		
	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)		<p><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)</p> <p><b>Siffy:-</b> All India(17.33 Links)</p>
	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)		<p><b>BSNL:-</b> Chennai(8 Links)</p> <p><b>MTNL:-</b> Delhi(2 Links), Mumbai (1 Link)</p> <p><b>Bharti Airtel:-</b> Delhi (1 Link), MP &amp; CG(1 Link), UP West(1 Link)</p> <p><b>Reliance:-</b> All India(7 Links)</p> <p><b>Asianet :-</b> All India(2 Links)</p>
	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG)	<90%	<p><b>Bharti Airtel :-</b> Delhi( 91.00%), MP &amp; CG(94.33%)</p> <p><b>Ortel:-</b> Orissa(94.00%)</p>
	Broadband Connection Speed available (download) from ISP node to user	>80%	<p><b>BSNL:-</b> AP(0.00%), Assam(0.00%), Jharkhand(66.86%), MH(73.65%)</p>

<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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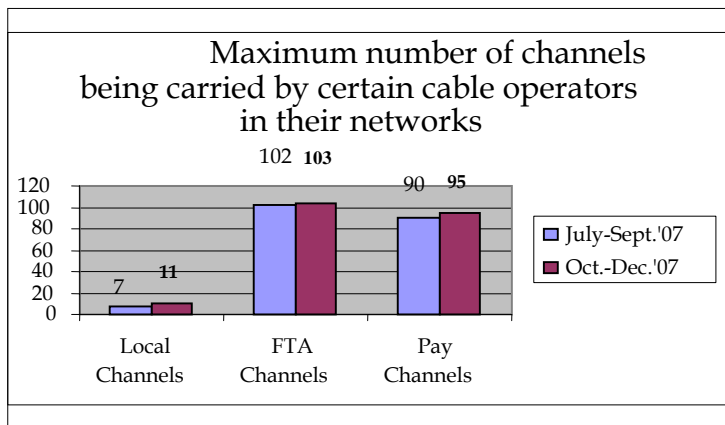
## CHAPTER SIX

### 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.

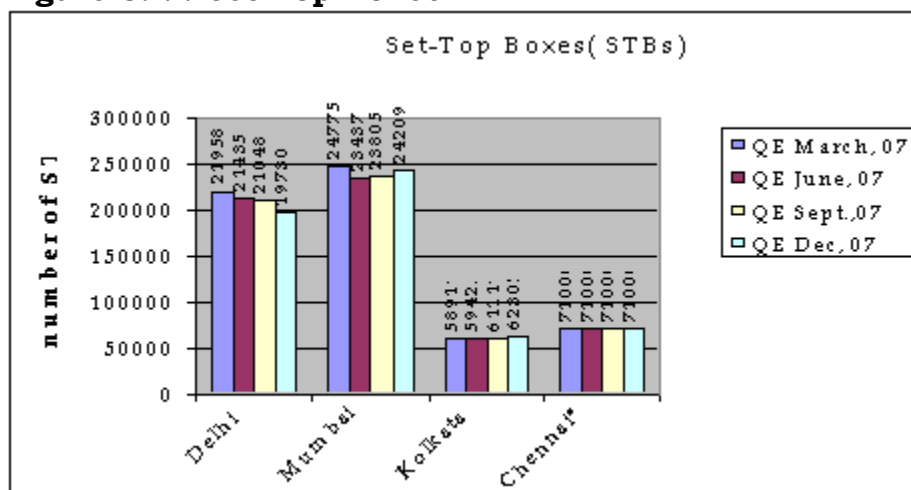
**Figure 6.1 : Maximum Number of Channels**



**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.

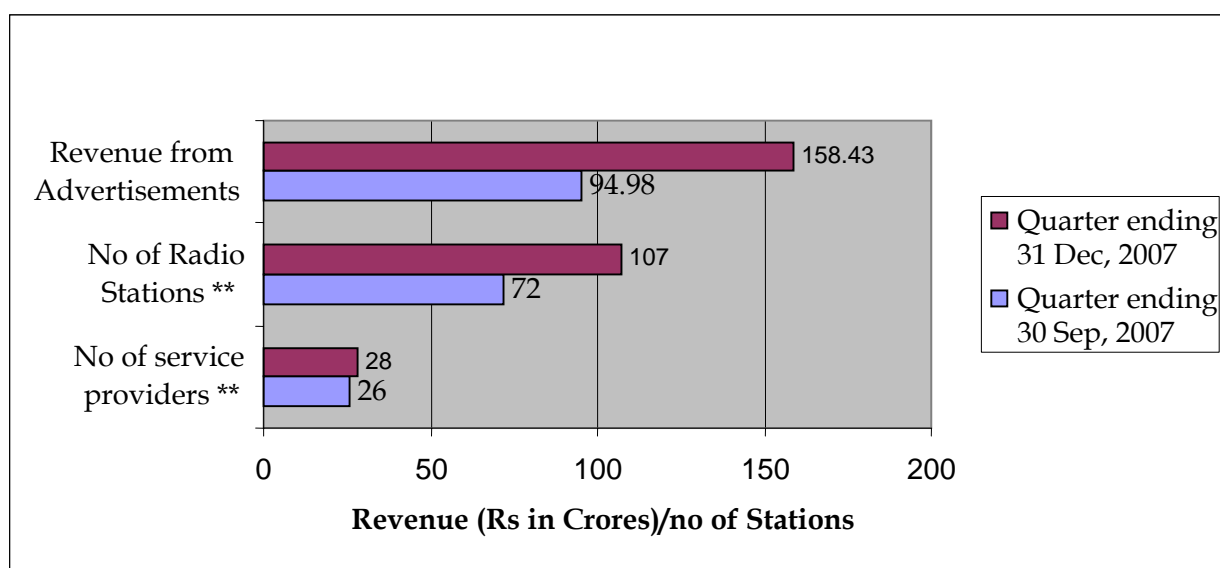
**6.5** The list of new pay channels introduced after 26.12.2003 and list of FTA channels converted into pay channels after 26.12.2003 are also placed at Table 6.2 and Table 6.3 respectively.

## 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.

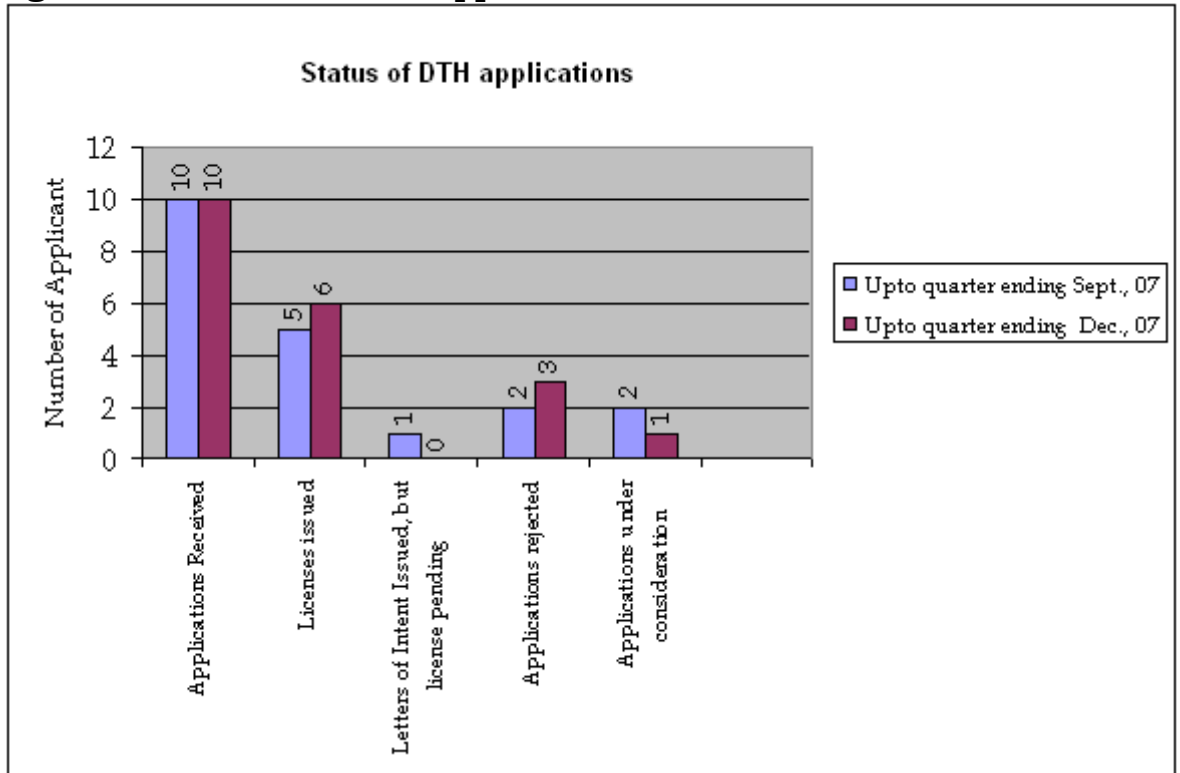
## Community Radio

**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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