



Telecom Regulatory Authority of India

The Indian Telecom Services
Performance Indicators July– September 2007

1st January 2008

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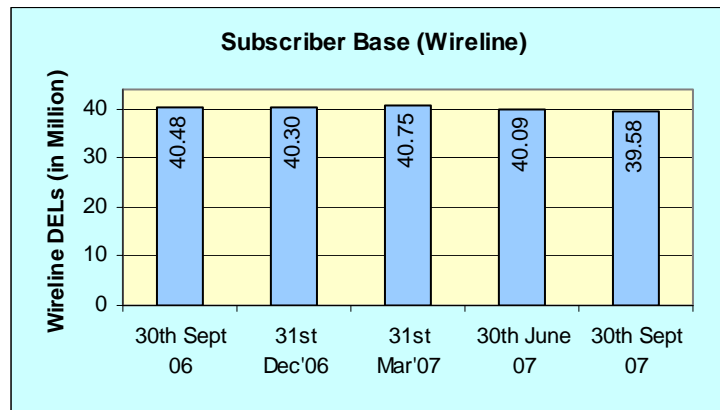
INTRODUCTION

- 1.1 This report presents the growth trends for the telecom services in India for the quarter ending **September 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 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). 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 or guptask61@gmail.com

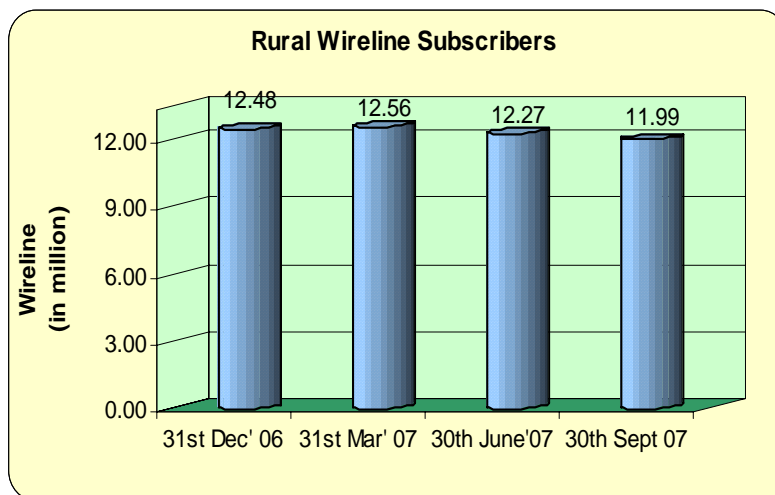
EXECUTIVE SUMMARY

A. Wireline Services

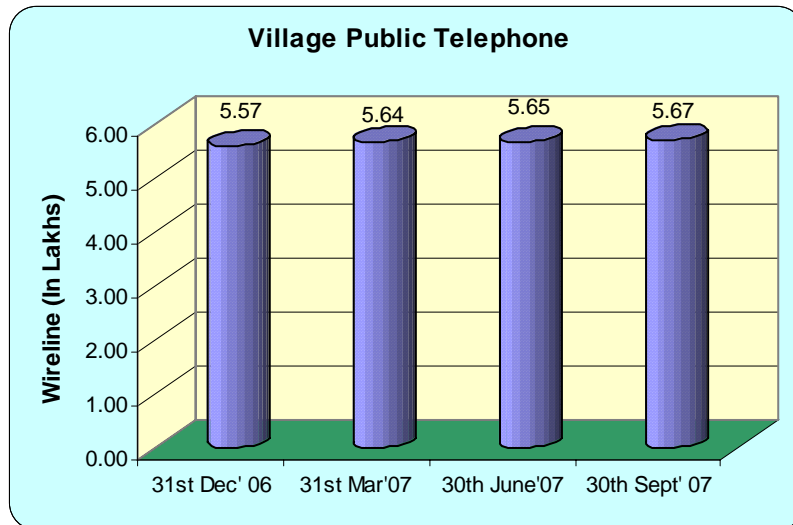
Wireline services subscriber base stood at 39.58 million in quarter ending September 2007 as compared to 40.09 million in quarter ending June 2007.



Rural Wireline Subscriber base stood at 11.99 million in quarter ending September 2007 as compared to 12.27 million in quarter ending June 2007.

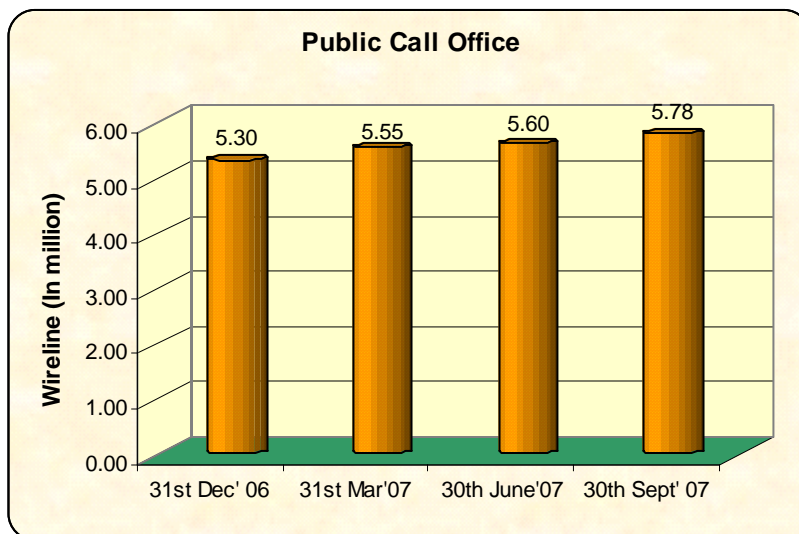


Number of VPTs has increased from 5.65 lakhs in quarter ending June 2007 to 5.67 lakhs in quarter ending September 2007.



NOTE: BSNL has modified its VPT figures for North East-I circle for QE June'07 from 7125 to 4572. Similarly, in Rajasthan circle in QE June'07, VPT was 39483, which has been changed to 34256. Consequent to these changes, the total figures of VPT for the QE June'07 has changed from 572997 to 565217 (-7780).

Numbers of Public Call Offices (PCOs) have increased from 5.60 million in quarter ending June 2007 to 5.78 million in quarter ending September 2007.

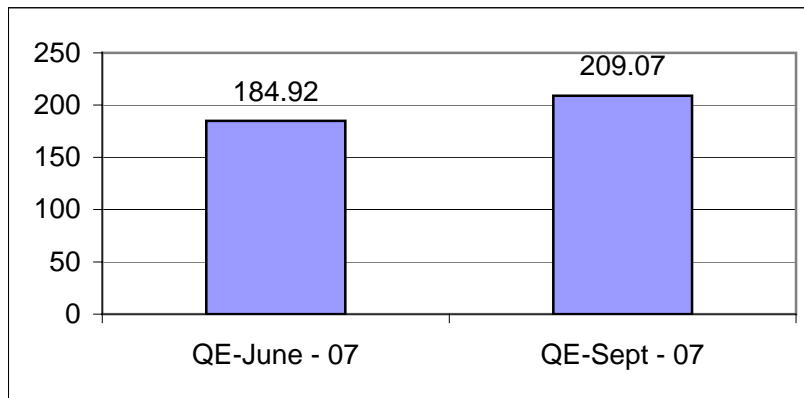


B. Wireless Services

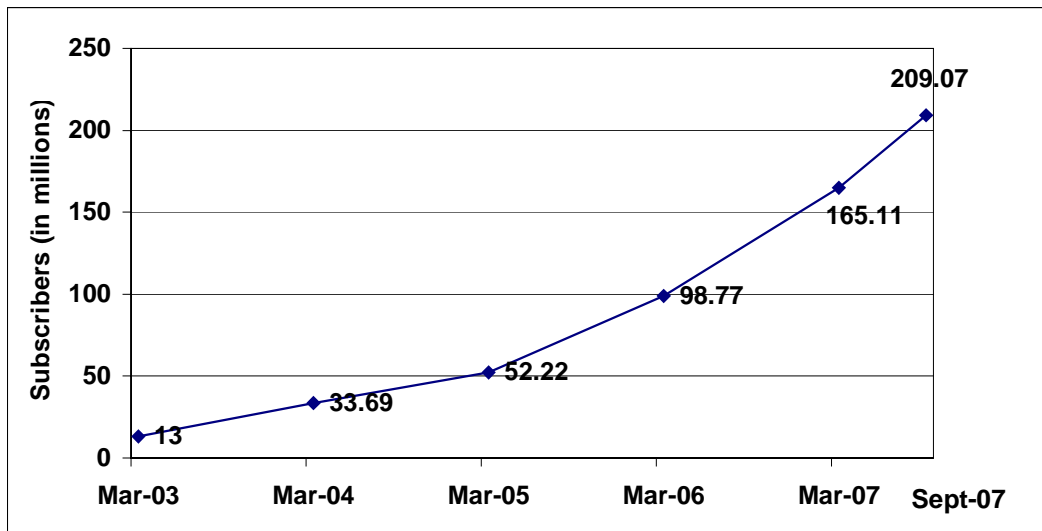
The Wireless Market has reached 209.07 million subscribers as on 30th September 2007 as against 184.92 million subscribers in the previous quarter. During this quarter 24.15 million subscribers were added.

(i) Subscriber Growth/Market Share

Wireless Subscribers

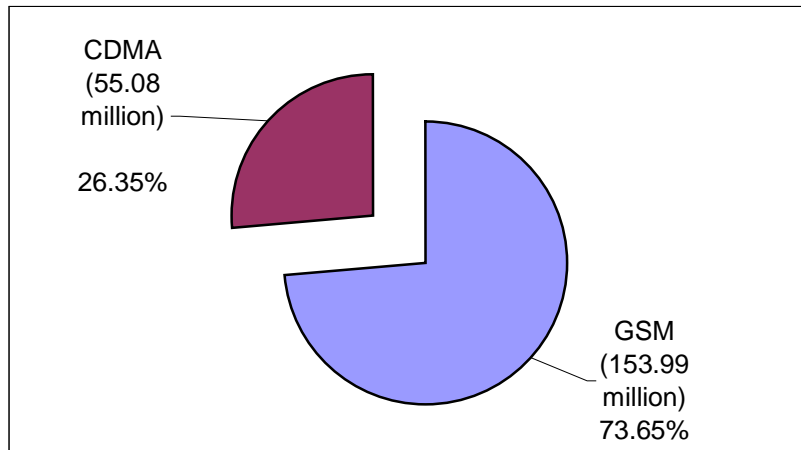


Total Subscriber Base (Wireless)



Technology-wise Wireless Market Share (QE September 2007)

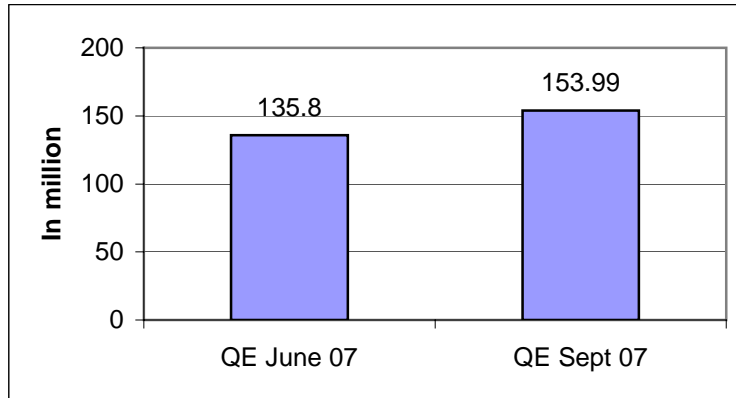
There are 153.99 million GSM subscribers (73.65%) and 55.08 million CDMA subscribers (26.35%) at the end of September 2007.



(ii) GSM

GSM segment has recorded 13.40% growth during the quarter ending September 2007 and reached to a subscriber base of 153.99 million.

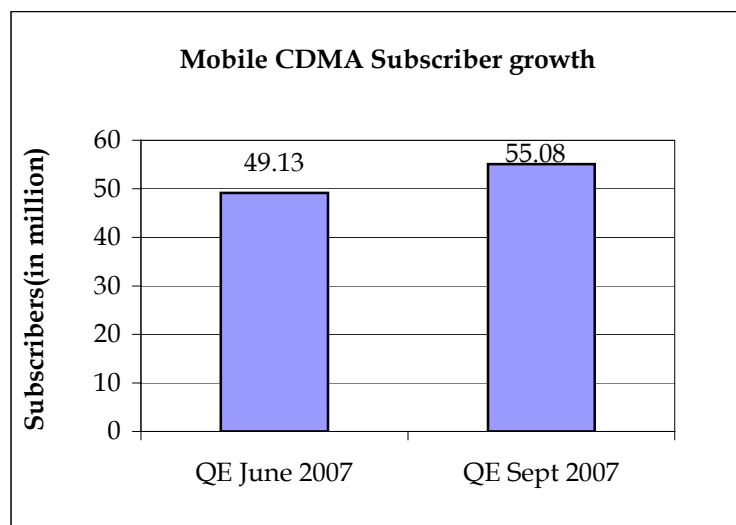
GSM Subscribers Growth (in million)



(iii) CDMA

CDMA subscriber base recorded a growth of 12.12% during the quarter ending September 2007 and reached to a subscriber base of 55.08 million.

CDMA Subscriber Growth

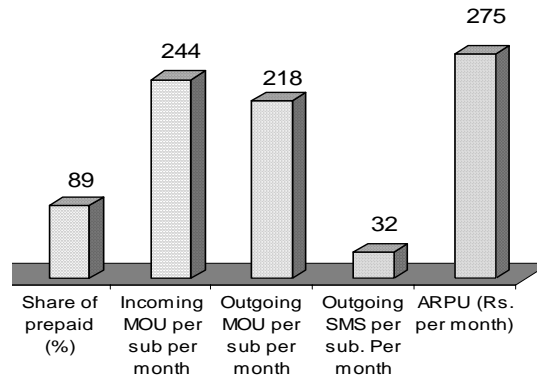


(v) Average Revenue Per User (ARPU), Minutes of Usage (MoU), etc.

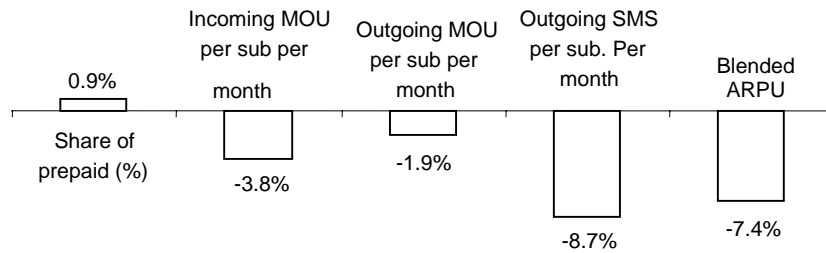
(a) GSM

- The All India blended ARPU per month has declined by 7.4% from Rs. 297 in June 2007 to Rs. 275 in September 2007.
- ARPU for postpaid service has shown a decline of 3.5% from Rs. 655 in June 2007 to Rs. 632 in September 2007. Decline for prepaid service has been 7.2% from Rs. 248 in June 2007 to Rs. 230 in September 2007.
- Contrary to the continuing trend observed in past quarters, MoU per subscriber has declined by 2.94% from 476 in June 2007 to 462 in September 2007.
- Both Outgoing and Incoming have shown a decrease. However, decline in Incoming MOUs (3.85%) has been more than that of Outgoing MOUs (1.91%).
- In Postpaid, total MOUs declined by 4.41% from 997 in June 2007 to 953 in September 2007 and prepaid MOU declined marginally by 0.74% from 404 in June 2007 to 401 in September 2007.
- As per the revenue reports furnished by the service providers, revenue, net of “pass through”, is about Rs. 11903 Crores in quarter ending September 2007 as against Rs. 11336 Crores in quarter ending June 2007, thereby showing a growth of approx. 5%..

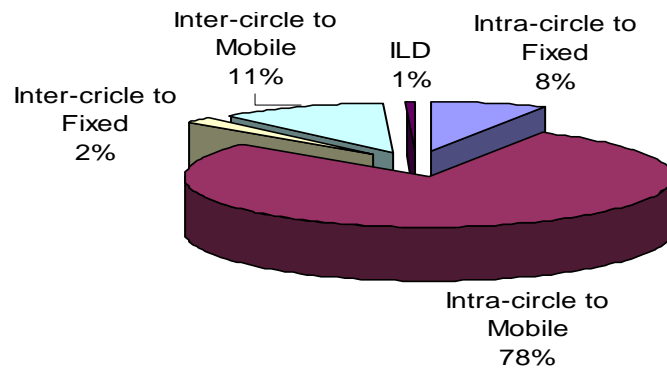
Key Indicators for GSM (QE September 2007)



Variation in Key Indicators over last quarter (in %)



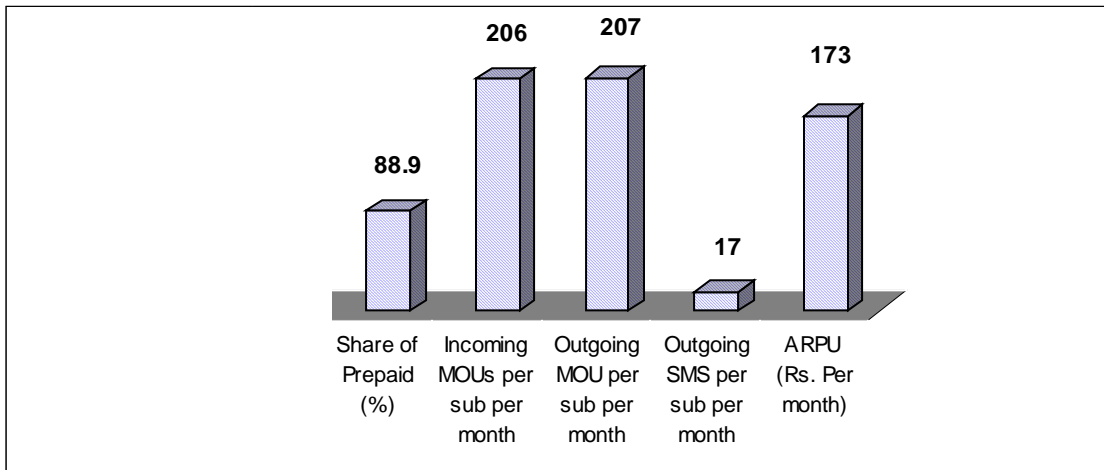
GSM Originated Traffic - distribution by terminating network



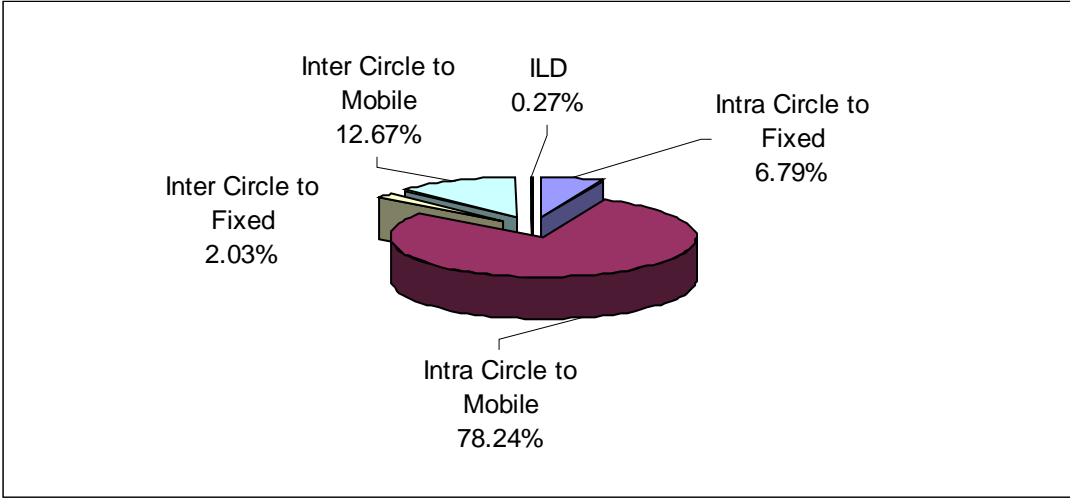
(b) CDMA

- All India blended ARPU (per month) for the quarter ending September 2007 is Rs. 173 as compared to Rs. 206 for the quarter ending June 2007.
- The lowest blended ARPU per month is in West Bengal (Rs.127) while the highest blended ARPU is in Mumbai (Rs. 274)
- Average MoU per subscriber per month for the quarter ending September 2007 is 413. The highest MoUs is recorded for Circle C at 495 per subscriber per month, which is about 20% higher than the All India figure at 413 per subscriber per month. The lowest MoUs have been seen in Circle A at 395, which is approx. 5% lower than the All India figure of 413 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. 2029.10 Crores for the quarter ending September 2007 which was 2110.54 Crores for the quarter ending June 2007.

Key Indicators for CDMA



CDMA originated Traffic – distribution by terminating network



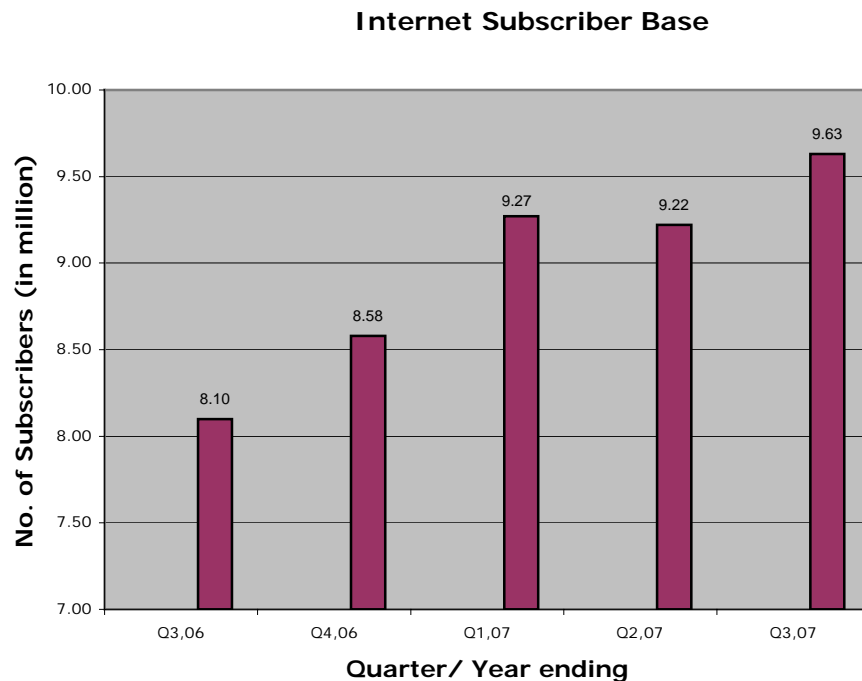
C. Internet Services

There are 9.63 million wireline Internet subscribers at the end of September 2007 as compared to 9.22 million at the end of June 2007 registering a growth of nearly 4.37%. The growth is positive as compared to a negative growth of 0.50% at the end of June 2007.

Besides above, there are 46.37 million wireless Internet subscribers at the end of September 2007 (accessing Internet through mobile handsets (GSM/ CDMA)).

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

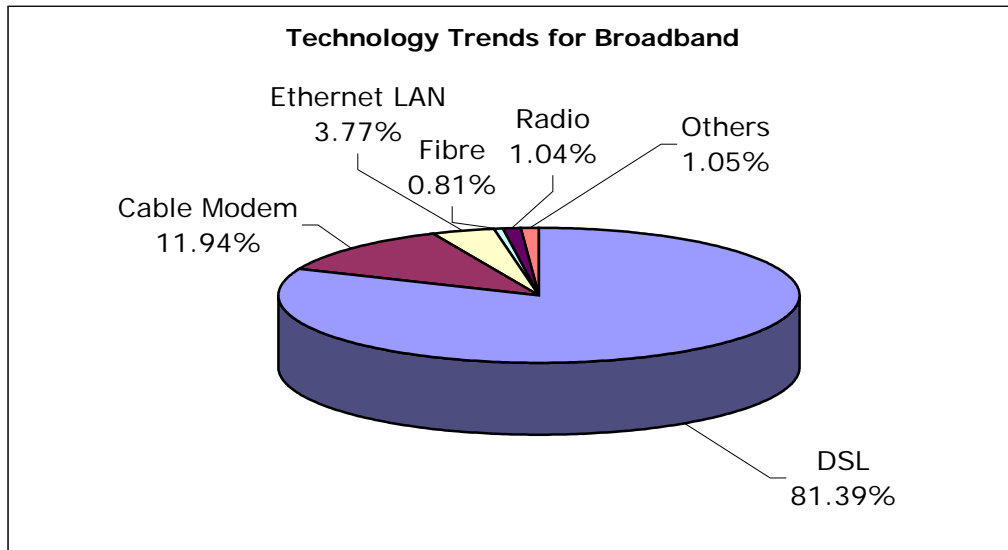
- i) **Internet Subscribers Growth** - There are 9.63 million wireline Internet Subscribers at the end of September 2007.



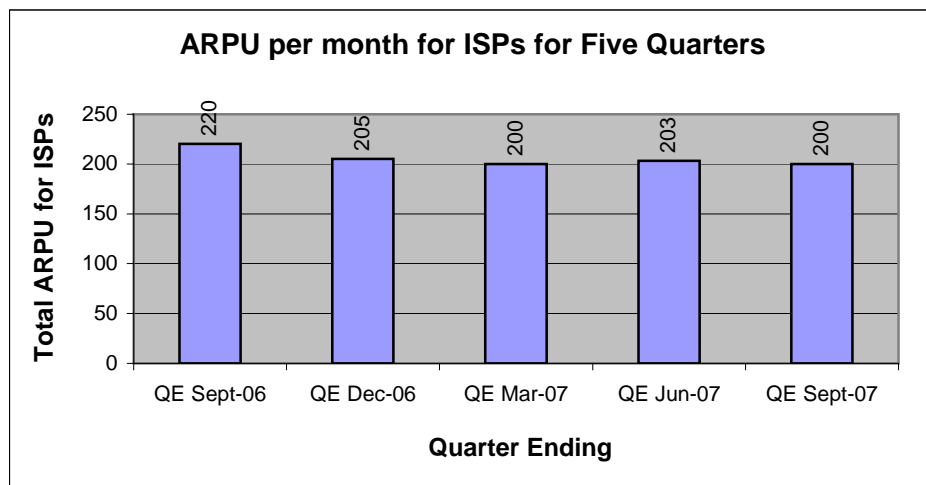
- ii) **Broadband Subscriber Growth** - The number of Broadband subscribers (with a download speed of 256

Kbps or more) was 2.67 million at the end of September 2007 as compared to 2.42 million at the end of June 2007. The growth rate of broadband subscribers in this quarter is 10.33%.

iii) Broadband Subscribers Share (Technology wise) – The number of Broadband subscribers (with a download speed of 256 Kbps or more) was 2.67 million at the end of September 2007. Out of these 2174401 are DSL based; 319010 Cable Modem; 100592 Ethernet LAN; 21688 Fibre; 27664 Radio customers and 28183 Others.



iv) ARPU – Average Revenue Per User per month for dialup Internet Subscribers is Rs. 200/- at the end of September 2007.



D. Quality of Service

QOS Performance

(a) Wireline Services

The Wireline Service Providers have improvement in respect of parameters of Provision of Telephones, Call Completion Rate, Shifts, %age of calls answered electronically within 40 second, Time taken for refunds of deposits as compared to the previous quarter.

However, the performance has deteriorated in this quarter, as compared to the previous quarter, in respect of Faults incidences, Faults repaired by next working day, Mean Time to Repair, Grade of Service, Metering & Billing credibility, Customer Care Services (Closures & Additional Facilities), %age of calls answered by operator (Voice to voice) within 60 sec and within 90 sec.

A comparison of performance of wireline service providers in meeting the key benchmarks is given below:

Sr. No.	Parameters	Benchmark	No. of operators not meeting the benchmarks			
			June, 2007		Sept, 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	62	79.49%	55	70.51%
2	Call Completion Rate (in local network)	>55%	17	21.79%	7	8.97%
(i)	Shifts	<3 Days	31	39.74%	21	26.92%
3	Response time to the customer for assistance %age of calls answered electronically within 40 sec = 95%	95%	3	3.85%	1	1.28%
4	Time taken for refund of deposits after closures	100% within 60 days	18	23.08%	14	17.95%

(b) Wireless Service

This report covers performance of 93 GSM operators and 44 CDMA service operators vis-à-vis the QoS benchmarks prescribed by TRAI.

All Cellular Mobile Service Providers have achieved prescribed TRAI benchmark in respect of the following six parameters:-

1. Accumulated down time of Community isolation
2. Call Set-Up Success Rate
3. Service Access Delay,
4. Call Drop Rate,
5. %age of calls answered (electronically) within 20 sec
6. 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 following parameters:-

1. TCH Congestion
2. %age of Connections with good voice quality
3. %age of calls answered (electronically) within 40 sec
4. Complaints per 100 bills issued

The performance has deteriorated in this quarter as compared to the previous quarter related to the following parameters:-

1. SDCCH/paging channel congestion
2. %Age of calls answered by operator (voice to voice); within 60 seconds
3. %Age of calls answered by operator (voice to voice); within 90 seconds.

The performance of the Cellular Mobile Service Providers is at same level as compared to the previous quarter in respect of the parameter of “%age of complaints resolved within 4 weeks”.

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

Sr. No.	Parameters	Bench-Marks	No. Of Operators Meeting The Benchmarks			
			Quarter Ending June, 2007		Quarter Ending Sept, 2007	
			Out Of 135 (Nos.)	Out Of 135 (%)	Out Of 135 (Nos.)	Out Of 135 (%)
1	Accumulated down time of Community isolation	<24 hrs	134	99.26%	135	100%
2	Call Set-Up Success Rate (Within Licensee's Own network)	>95%	134	99.26%	135	100%
3	Service access delay	<15 Sec	135	100%	135	100%
4	Call drop rate	<3.0%	135	100%	135	100%
5	Response time to the customer for assistance %age of calls answered (electronically) within 20 seconds = 80%	80%	135	100%	135	100%
6	Period of all Refunds/Payment due to Customers from the date of resolution of complaints As In (9) above	<4 Weeks	135	100%	135	100%

(c) Broadband Service

Broadband Regulations came into force with effect from 1st Jan 2007. There are 72 broadband service providers having subscriber base of 2.67 million subscribers. Out of 72 Broadband Service Providers only 13 Service Providers are having subscriber base more than 10,000 subscribers and these 13 Service Providers share 98.3% of total subscriber base in this quarter. This report covers performance of these 13 broadband service providers vis-à-vis the QoS benchmarks prescribed by TRAI.

ii) Quarterly Results at a Glance

Performance Indicators of Telecom Services for QE SEPTEMBER 2007

A. Growth of Wireline & Wireless Services:-

	QE Sept 2006	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	%age growth over Sep 2006 (12 months)	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)
1) Subscriber's Base (in million)									
i) Wireline	40.48	40.30	40.75	40.09	39.58	-2.22	-1.79	-2.87	-1.27
ii) Wireless	129.54	149.62	165.11	184.92	209.07	61.39	39.73	26.62	13.06
Gross Total	170.02	189.92	205.86	225.01	248.65	46.25	30.92	20.79	10.51
2) Traffic (MOU) (minutes of use/ sub/month)									
Wireless									
i) GSM	425	454	471	476	462	8.71	1.76	-1.91	-2.94
ii) CDMA	413	424	471	462	413	0.00	-2.59	-12.31	-10.61
3) ARPU (Rs./sub/ month)									
Wireless									
i) GSM	337	316	298	297	275	-18.40	-12.97	-7.72	-7.41
ii) CDMA	215	196	202	206	173	-19.53	-11.73	-14.36	-16.02
4) Teledensity									
Population in million (Estimated)	1103	1107	1129	1133	1137				
i) Wireline	3.67	3.64	3.61	3.54	3.48	-5.15	-4.38	-3.55	-1.62
ii) Wireless	11.74	13.52	14.62	16.32	18.39	56.57	36.05	25.73	12.66
Gross Total	15.41	17.16	18.23	19.86	21.87	41.87	27.47	19.94	10.12

B. Growth of Internet & Broadband Services:-

	QE Sept 2006	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	%age growth over Sep 2006 (12 months)	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)
1) Subscriber's Base (in million)									
i) Internet	8.10	8.58	9.27	9.22	9.63	18.95	12.24	3.88	4.45
ii) Wireless Internet *			31.30	38.02	46.37			48.15	21.96
ii) Broadband Connections (>=256 Kbps download speed)	1.82	2.05	2.34	2.42	2.67	46.70	30.24	14.15	10.24
2) Minutes of Use (Dialup Internet) (MOU/ subs/month)									
	185	190	180	195	200	8.11	5.26	11.11	2.56
3) ARPU (Dialup Internet) (Rs/sub/mon)									
	220	205	200	203	206	-6.36	0.49	3.00	1.48

* Accessing 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 Sept 2006	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	%age growth over Sep 2006 (12 months)	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)
BSNL	33.97	33.58	33.74	32.91	32.22	-5.15	-4.05	-4.51	-2.10
MTNL	3.71	3.69	3.73	3.67	3.63	-2.16	-1.63	-2.55	-1.09
Bharti	1.63	1.74	1.87	1.97	2.08	27.61	19.54	11.15	5.58
Reliance	0.39	0.49	0.57	0.64	0.70	79.49	42.86	23.24	9.37
Tata/Hughes	0.46	0.48	0.53	0.58	0.63	36.96	31.25	19.54	8.62
HFCL	0.17	0.17	0.17	0.16	0.16	-5.88	-5.88	-4.76	0.00
Shyam	0.15	0.15	0.15	0.16	0.16	6.67	6.67	3.90	0.00
Total	40.48	40.30	40.75	40.09	39.58	-2.22	-1.79	-2.88	-1.27

(II) Wireless Subscriber Base (in Million)

Service Providers	QE Sept 2006	QE Dec 2006	QE Mar 2007	QE Jun 2007	QE Sep 2007	%age growth over Sep 2006 (12 months)	%age growth over Dec 2006 (9 months)	%age growth over Mar 2007 (6 months)	%age growth over Jun 2007 (3 months)
Bharti	27.06	31.97	37.14	42.70	48.88	80.64	52.87	31.61	14.45
Reliance	25.98	29.98	28.01	31.88	36.32	39.80	21.13	29.67	13.94
Vodafone	20.36	23.31	26.44	30.75	35.66	75.15	52.98	34.87	15.95
BSNL	23.70	26.60	30.98	32.05	34.13	44.01	28.31	10.17	6.48
Tata Tele	12.38	14.45	16.02	17.32	19.50	57.51	34.95	21.72	12.53
Idea	10.36	12.44	14.01	16.13	18.67	80.21	50.08	33.23	15.78
Aircel	3.80	4.51	5.51	6.77	8.04	111.58	78.27	45.92	18.67
Spice	2.20	2.45	2.73	3.17	3.48	58.18	42.04	27.47	9.82
MTNL	2.43	2.60	2.94	2.81	2.99	23.05	15.00	1.70	6.72
BPL	1.05	1.06	1.07	1.09	1.15	9.52	8.49	7.18	6.01
HFCL	0.15	0.15	0.15	0.15	0.15	0.00	0.00	0.00	1.61
Shyam	0.08	0.09	0.10	0.10	0.10	25.00	11.11	0.00	2.26
Total	129.54	149.62	165.11	184.92	209.07	61.39	39.74	26.63	13.06

NOTE: %age 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 5 licensed private operators in addition to incumbents BSNL and MTNL as on 30th September 2007. List of Wireline Service providers along with their areas of operation is given in Table 1 below:

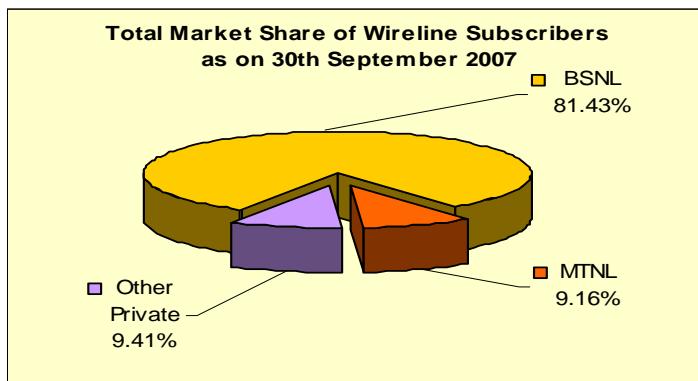
Table 1

Sl. No.	Name of the Service Provider	Area of Operation
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

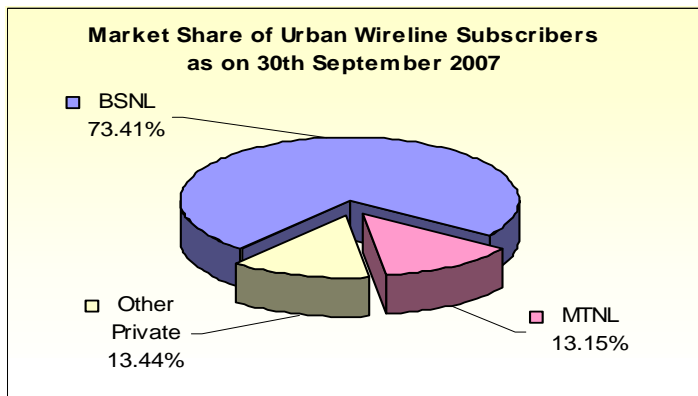
1.1.2 Market Share of Wireline subscriber base.

The total subscriber base of Wireline services stood at 39.58 million as on 30th September 2007. The incumbents BSNL and MTNL have 81.43% and 9.16% market share respectively, while all the five private operators together have 9.41% share. The total Urban wireline subscribers are 27.59 million and Rural wireline subscribers are 11.99 million. The market share of Total DELs, Urban DELs and Rural DELs is shown in the chart below:

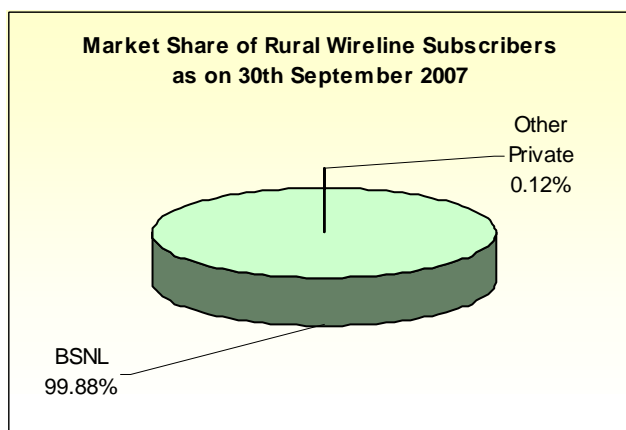
A. Distribution of Market share of Urban + Rural Wireline subscriber



B. Distribution of Market share of Urban Wireline subscriber

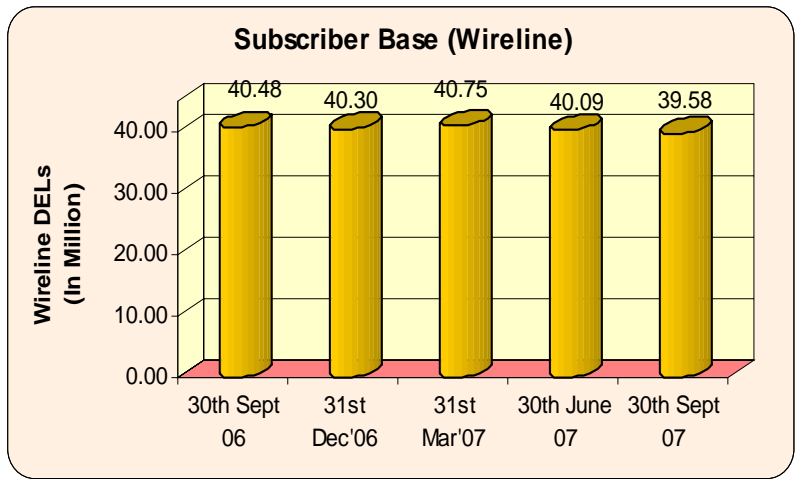


C. Distribution of Market share of Rural Wireline subscriber



1.1.3 Subscriber Base of Wireline for last five quarters

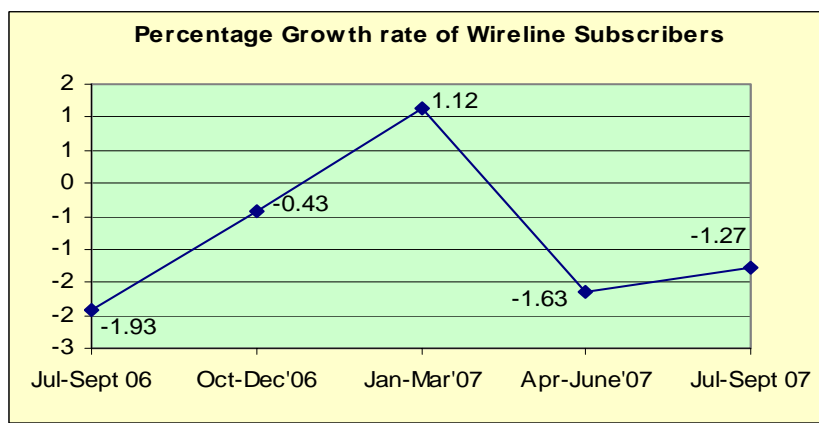
The subscriber base of the Wireline service sector for last five quarters is depicted below:



1.1.4 Growth of Wireline services

The Wireline subscribers are decreasing continuously in last three quarters of 2007. The Wireline subscriber base registered a decrease of 510,917 lines for the quarter ending September 2007. The net number of wireline subscriber has decreased to 39.58 million from 40.09 million as on 30th September 2007. The percentage decrease in subscriber base during the quarter is approx. 1.27%.

During the quarter ending 30th September 2007, most of the private service providers have reported increase in their wireline subscriber base. These are M/s Bharti Airtel Ltd. from 1.97 million to 2.08 million, M/s Tata Teleservices Ltd. (TTL) (including Maharashtra) from 0.58 million to 0.63 million and M/s Reliance Communications Ltd. (RCL) from 0.64 million to 0.70 million. The reduction in the subscriber base of Wireline for the quarter ending September 2007 has been reported by M/s BSNL from 32.91 million to 32.22 million and M/s MTNL from 3.67 million to 3.63 million.

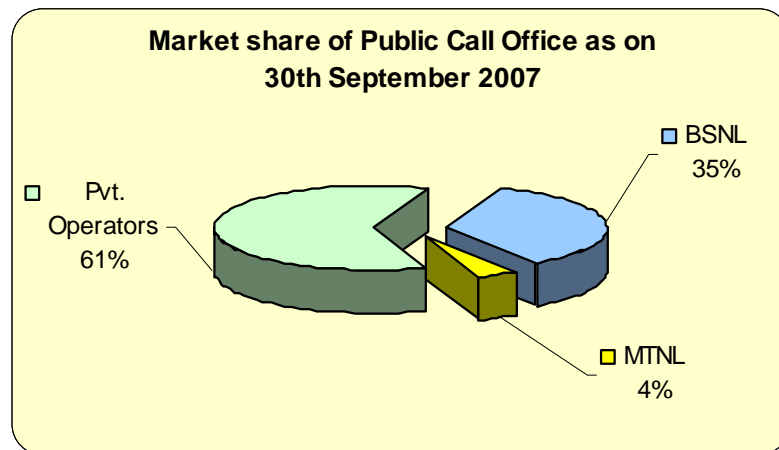


1.2 Other Performance Indicators: -

1.2.1 Public Call Offices:

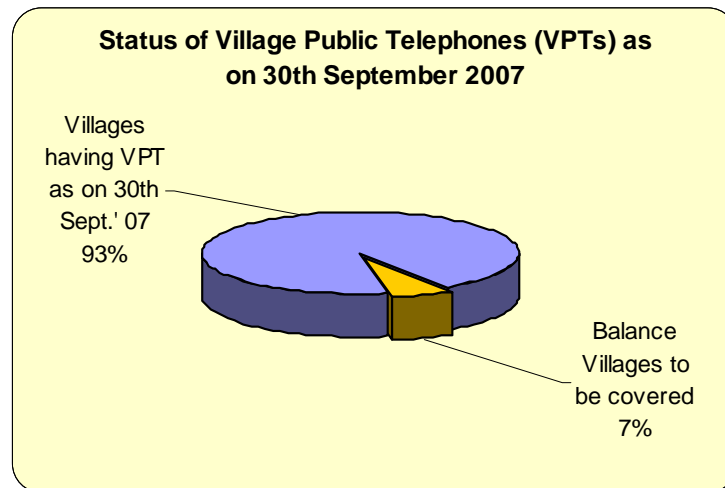
During the current quarter 1,81,506 new PCOs have been added. Total number of PCOs in the country as on 30th September 2007 is 5.78 million. The share of BSNL is 2.04 million i.e. 35% of the total PCOs. The share of MTNL and other private operators combined is 0.25 million (4%) and 3.50 million (61%) 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.



1.2.2 Village Public Telephones (VPT):

There are 6,07,491 villages in India. During the previous quarter ending 30th June 2007 there were 5,65,217 VPTs in the country whereas by the end of this quarter i.e. 30th September 2007, the total number of VPTs have increased to 5,67,397. Thus 2180 VPTs have been added during the current quarter. BSNL has added 1,524 VPTs during the quarter. All the five private operators together added of 656 VPTs during this quarter. The total number of villages left uncovered, are 40,094 as on 30th September 2007. The status of VPT's is depicted in the chart below: -



NOTE: BSNL has modified its VPT figures for North East-I circle for QE June'07 from 7125 to **4572**. Similarly, in Rajasthan circle in QE June'07, VPT was 39483, which has been changed to **34256**. Consequent to these changes, the total figures of VPT for the QE June'07 has changed from 572997 to **565217 (-7780)**.

Circle-wise and Operator-wise details of village public telephones as on 30th September 2007 and achievement during the quarter are available in Table 1.3.

CHAPTER TWO PERFORMANCE OF WIRELESS SERVICES

Subscriber Base reached 209 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)		All India except NE & AS
	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	
5	Vodafone	All India (except MP) (22)	MP	UP-W, 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

Note: 1. Reliance Telecom for all his circles has applied for Unified Licence.

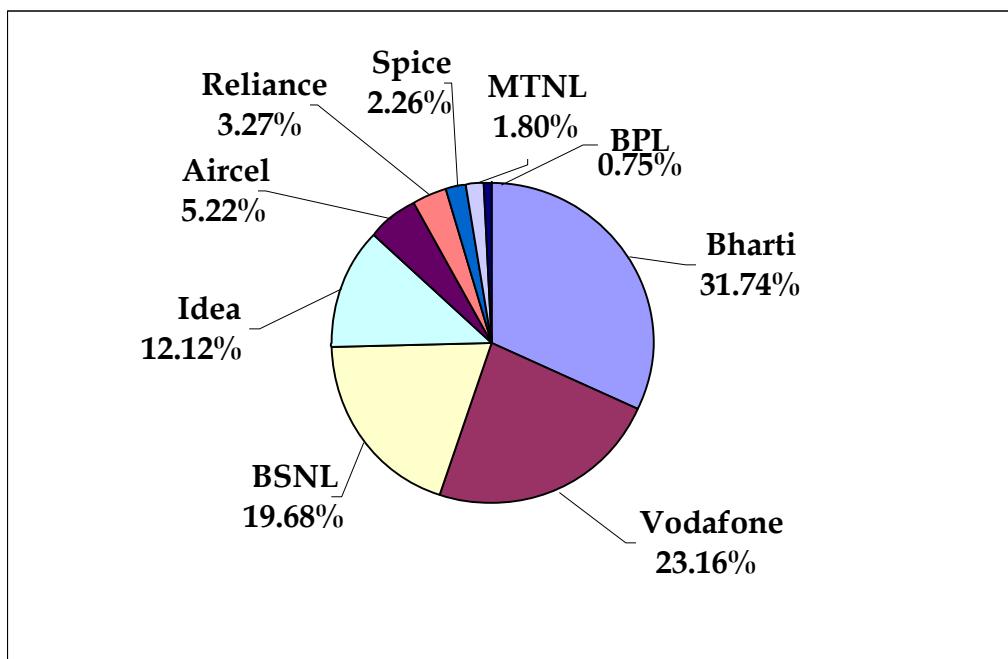
Circle-wise details of subscribers of Wireless, Wireline & Unified Access Service providers for the quarter ending September 2007 are given at Annex 2.1.

2.2 Growth of Subscribers Base: -

2.2.1 GSM

- The GSM subscribers' base has reached 153.99 million in the quarter ending September 2007 as against 135.79 million at the end of previous quarter. The growth during this quarter is approx. 13.40%.
- M/s Bharti with 48.88-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 35.66 million, 30.30 million and 18.67 million respectively.
- The subscriber base of top four operators viz. Bharti, BSNL, Vodafone & Idea is around 87% of the total GSM subscribers base.
- Private operators account for 79% GSM subscribers while public sector operators (BSNL & MTNL) have only 21% subscribers.

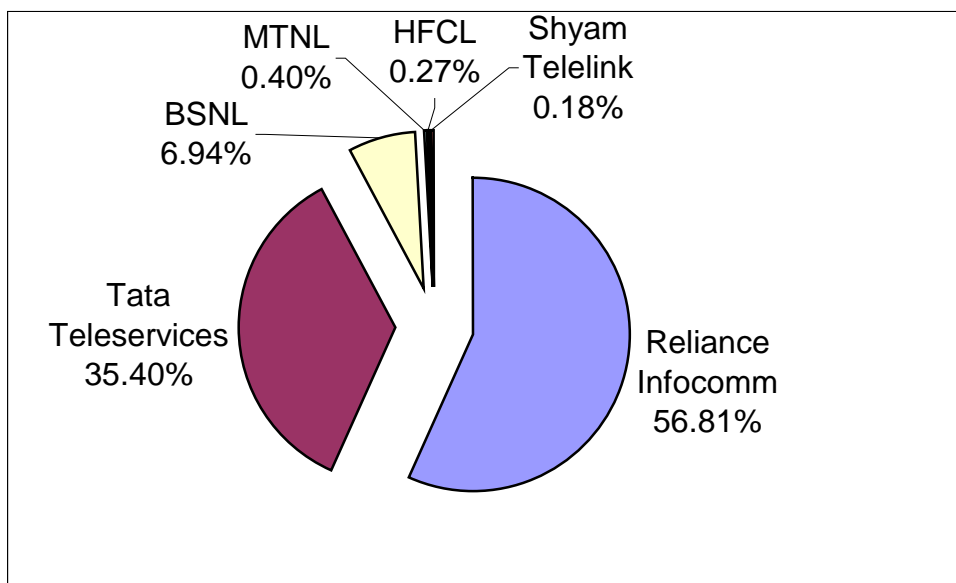
**Operator-wise Market Share of GSM service providers
as on 30th September 2007**



2.2.2 CDMA

- The CDMA Subscribers Base has reached 55.08 million during the quarter ending September 2007 as against 49.13 million at the end of June 2007. The growth during this quarter is 12.12% as against 10.05% for the previous quarter.
- M/s Reliance remains the largest CDMA mobile operator with a subscriber base of 31.29 million followed by M/s Tata Teleservices and M/s BSNL with a subscriber base of 19.50 million and 3.82 million respectively. M/s BSNL in Kolkata & Haryana has registered a negative subscriber growth.

Operator-wise Market Share of CDMA Wireless as on 30 September 2007



2.2.3 Wireless Subscriber Base

At the end of September 2007, the Wireless (Mobile and WLL (F)) market has reached 209.07 million subscriber mark as against 184.92 million subscribers in the previous quarter.

2.2.4 Addition in Subscribers Base

During this quarter 24.15 million subscribers were added. The total subscriber base of 209.07 million comprises of 74% GSM mobile (153.99 million) & 26% CDMA Mobile (55.08 million). The growth rate recorded in this quarter is 13.06% as against 12% in the previous quarter.

2.2.5 Company wise Market Share

- a) As on 30th September 2007, the total subscriber base of 209.07 million comprises of 165.09 million urban subscribers and 43.98 rural subscribers. The Subscriber Base of different wireless operators alongwith their rural subscriber base is given in Table 2.1

The top six Wireless operators on the basis of market share are: -

Sl.	Operator (With number of Operating Circle)	Subscribers Base	Market Share (%)
1	Bharti Group(23)	48.88	23.38
2	Reliance Group(23)	36.32	17.37
3	Vodafone/Hutchison (16)	35.66	17.06
4	BSNL(21)	34.13	16.32
5	Tata (20)	19.50	9.32
6	Idea Group(11)	18.67	8.93
7	Others	15.91	7.62
	Total	209.07	100.00

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

- b) Distribution of Subscriber base and market share of Wireless services as on September 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 decline by 7.4% from Rs. 297 in June 2007 to Rs. 275 in September 2007.
- ARPU for postpaid service has shown a decline of 3.5% from Rs. 655 in June-07 to Rs. 632 in September 2007. Decline for prepaid service has been 7.2% from Rs. 248 in June 2007 to Rs. 230 in September 2007.
- As per the revenue reports furnished by the service providers, revenue, net of “pass through”, is about Rs. 11903 Crores in the quarter ending September 2007 as against Rs. 11336 Crores in the quarter ending June 2007, thereby showing a growth of approx. 5%.

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%

* Net of pass through

\$ Data excludes revenue from FWP services

ARPU (Rs. per month during the quarter)

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	600	231	274
Circle B	551	216	238
Circle C	584	252	282
Metro	732	249	353
All India	632	230	275
All private SPs	690	231	279
BSNL/MTNL	477	227	261

Across all circle categories, growth in subscriber base has been much higher as compared to Revenue. This also reflects fall in ARPU.

Composition of Revenue (%)

Item	Jun-07	Sep-07
Rental Revenue	22.5%	23.2%
Revenue from Call charges (usage)	55.8%	53.9%
Revenue from Roaming#	8.3%\$	9.0%
Revenue from SMS	4.9%	5.2%
Other Revenues *	8.5%	8.8%

Notes:

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

\$ 1. Prepaid outroaming revenue has not been given separately by Bharti. This has been clubbed with call revenue.

2. Revenue arising out of National roaming service and International roaming services are clubbed. It is, therefore, difficult to conclude anything categorical on the trend of roaming contribution to total revenue.

2.3.2 Usage Pattern

- Contrary to the trend observed in past, MOU per subscriber has declined by 2.94% from 476 in June 2007 to 462 in September 2007.
- Both Outgoing and Incoming MOU have shown a decrease. However, decline in Incoming MOUs (3.85%) has been more than that of Outgoing MOUs (1.91%).
- In Postpaid, total MOUs declined by 4.41% from 997 in June 2007 to 953 in September 2007 and prepaid MOUs declined marginally by 0.74% from 404 in June 2007 to 401 in September 2007.
- The marginal increase in prepaid outgoing usage (from 182 to 183 minutes) has been overshadowed by the 3 minutes decrease in incoming usage. In postpaid both outgoing and incoming usage has declined by 14 & 10 minutes respectively.
- 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 approx. 11% from 36 in June 2007 to 32 in September 2007.

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. 1.11 in June 2007 to Rs. 1.04 in September 2007.

2.4 CDMA

2.4.1 ARPU (Average Revenue Per User per month)

- All India blended ARPU (per month) for the quarter ending September 2007 is Rs. 173 as compared to Rs. 206 for the quarter ending June 2007.
- The lowest blended ARPU per month is in West Bengal (Rs.127) while the highest blended ARPU is in Mumbai (Rs. 274)
- According to the revenue reports submitted by the service providers for the quarter ending September 2007, revenue, net of “pass through”, from CDMA full mobility service is Rs. 2029.10 crores which was 2110.54 crores in the quarter ending June 2007 registering a negative 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 3.26 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 (2.48 times) and highest in Metro (3.49 times).

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

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	411	133	166
Circle B	388	125	149
Circle C	405	163	178
Metro	548	157	222
All India	450	138	173

Composition of Revenue (%)

Item	June-07	Sep-07
Rental Revenue	20.7%	17.9%
Revenue from Call Charges (usage)	61.4%	61.9%
Revenue from SMS	1.9%	2.0%
Roaming Revenue	6.4%	6.8%
Other Revenues*	9.6%	11.5%

* Includes revenue from other value added services, installation etc.

2.4.2 Usage Pattern (Minutes of Usage)

- Average MoU per subscriber per month for the quarter ending September 2007 is 413 as compared to 462 minutes in June 2007.
- The highest MoUs is recorded for Circle C at 495 per subscriber per month, which is about 20% higher than the All India figure at 413 per subscriber per month.
- The lowest MoUs have been seen in Circle A at 395, which is approx. 5% lower than the All India figure of 413 MoUs per subscriber per month.
- The ratio of incoming – outgoing traffic is 51:49 in the quarter ending June 2007 as against 49.9:50.1 reported for the quarter ending September 2007.
- The highest number of SMS per subscriber is recorded in Metro (21 per subscriber per month), which is 18% higher than the all India average of 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. 0.71 in September 2007 as against Rs. 0.85 in June 2007.

CHAPTER THREE

PERFORMANCE OF INTERNET SERVICES

3.1 Service Providers & Subscribers Base: -

There are 9.63 million wireline Internet subscribers at the end of September 2007 as compared to 9.22 million at the end of June 2007 registering a growth of nearly 4.37%.

Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of nearly 4.42 million Internet subscribers against 4.07 million at the end of last quarter. Mahanagar Telephone Nigam Limited (MTNL) has retained second position with a subscriber's base of nearly 1.81 million. M/s Sify Limited is third with subscriber base of 0.71 million (Ref. Table 3.1).

Besides above, there are 46.37 million wireless Internet subscribers at the end of September 2007 (accessing Internet through mobile handset (GSM/ CDMA)).

3.2 Internet Telephony: -

As per the new license agreement issued by DOT in October 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 providers with or without 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 129.43 million as compared to 112.26 million for the last quarter registering an increase of 15.29% over the previous quarter.

3.3 Market Share: -

The growth trend indicates a slight increase in the market share of PSU owned ISPs vis-à-vis private operators. During the quarter private ISPs have only 35.35% market share as against 36.88% market share in the preceding quarter. The PSU owned ISPs market share has increased from 63.12% to 64.65% at the end of September 2007.

The market share of top 5 ISPs is as under:

Sl.	ISP	Subs. base	Share in %
1.	Bharat Sanchar Nigam Ltd.	4415577	45.86
2.	Mahanagar Telephone Nigam Ltd.	1808143	18.78
3.	Sify Ltd.	709155	7.37
4.	Bharti Airtel Ltd. (Bharti Televentures Ltd.)	706776	7.34
5.	Reliance Communications Infrastructure Limited	604208	6.28

Among PSU owned ISPs; M/s BSNL has shown an increase of 8.53% in the subscriber base and have 45.86% share of total subscriber base. MTNL is at second position and have a market share of 18.78%.

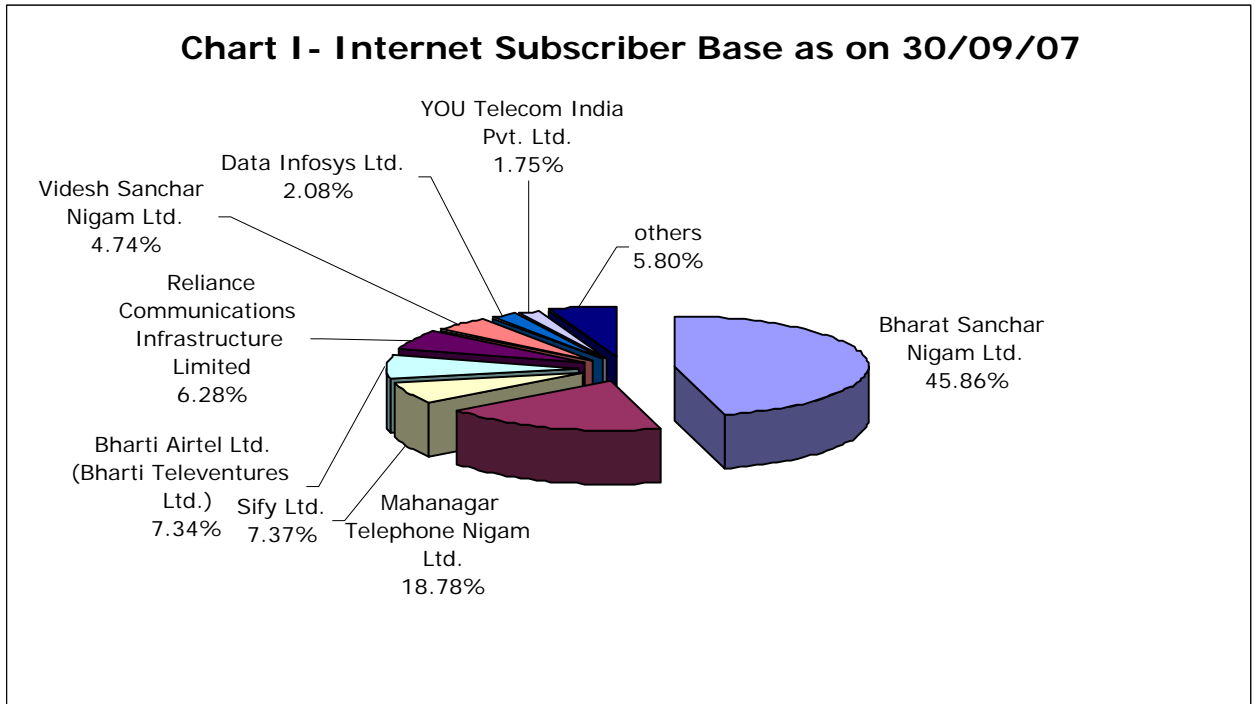
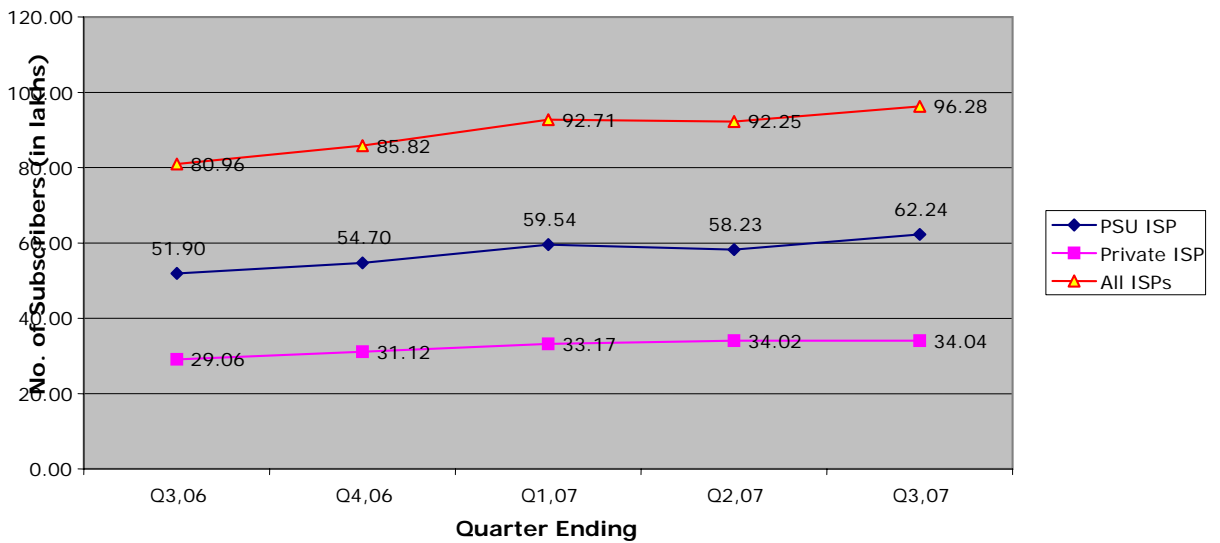


Chart II - Growth Trends-I



3.4 Leased Lines Connectivity:

The numbers of Internet Leased Line connections are 20925 at the end of September 2007 as compared to 20983 at the end of June 2007 registering a slight decrease of 0.28%

3.5 Broadband Connectivity (>=256 Kbps):

The number of Broadband subscribers (with a download speed of 256 Kbps or more) was 2.67 million at the end of September 2007. Out of these 2174401 are DSL based; 319010 Cable Modem; 100592 Ethernet LAN; 21688 Fibre; 27664 Radio customers and 28183 Others. The growth rate of broadband subscribers in this quarter is 10.33%.

3.6 Minutes of Use (MoU) per subscriber for Dialup Internet access:

The average minutes of usage per subscriber/ month for dialup subscribers was approximately 206 minutes at the end of September 2007 as compared to 195 minutes at the end of June 2007.

3.7 Average Revenue Per User (ARPU) for ISPs:

The average revenue per user (ARPU) per month for dialup Internet usage was Rs 200/- at the end of September 2007 as compared to Rs. 203 at the end of June 2007 a minute negative growth of 1.48%.

3.8 International connectivity:

The bandwidth owned by various IGSP for their ISP operations and Internet Leased lines is reported to be 40 GB for downlinking and 39 GB for uplinking at the end of September 2007 as compared to 32 GB for downlinking and 31 GB for uplinking at the end of June 2007.

CHAPTER FOUR

PERFORMANCE OF VALUE ADDED SERVICES

4.1 Public Mobile Radio Trunk Service (PMRTS): -

- The subscriber base of Public Mobile Radio Trunk Service (PMRTS) increased from 32226 in June, 2007 to 33663 in Sept, 2007 registering a growth of 4.46%.
- Delhi, Bangalore, Mumbai and Chennai together account for 70.15% of market share of total subscribers. Operative area Delhi leads the tally with the market share of 9466 subscribers followed by Bangalore, Mumbai and Chennai with the market share of 6514, 4267 and 3366 subscribers respectively.
- M/s Arvind Mills Limited leads the tally of subscribers with a subscriber base of 10288 followed by Procall and Quick Calls India Pvt. Ltd. with a subscriber base of 9291 and 4359 respectively. There is no change in the subscriber base for the PMRTS operator namely M/s Container Movement Transport Pvt Ltd and India Satcom Limited. M/s Aryadoot Transport, Jet-Aiu, Arya Offshore, German Express, United Liner Agencies and Bhilwara Telenet have registered a negative growth rate in their subscriber base. M/s Procall has registered the highest growth rate of 12.97% in their subscriber base in this quarter.

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

NOTE: United Liner Agencies of India (Pvt) Ltd figure for quarter ending June 2007 has been modified from 705 to 1885 based on their report

4.2 VSAT services: -

- VSAT services are being provided by 8 VSAT Service Providers.
- 2690 new subscribers were added during the quarter. The total number of subscribers increased from 62662 in June, 2007 to 65352 in September, 2007, registering a growth of 4.29% as against the growth of 3.04% in quarter ending June, 2007.
- M/s Hughes communications Limited remained the market leader with 22416 VSAT subscribers followed by HCL Ltd. with 21339, Bharti Airtel Limited Bangalore with 9450 and M/s Bharti Broadband Limited with 4963 VSAT subscribers respectively.
- M/s Hughes Communications Limited added the maximum number of new connections (1279) with a percentage growth of 6.05%.
- M/s Tatanet Services has the highest growth of 14.77% in this quarter.
- M/s GNFC is having a negative growth of 80% in this quarter. The subscriber base of M/s GNFC has decreased from 5 in June, 2007 to only 1 in September, 2007.

The number of subscribers of each service providers along with the Market Share in terms of Percentage of Subscribers as on 30th September 2007 is given in Table 4.2.

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 September 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			
			June, 2007		Sept, 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	62	79.49%	55	70.51%
2	Fault incidences per 100 subs/month	<5	24	30.77%	36	46.15%
3	Fault repaired by next working day	>90%	22	28.21%	24	30.77%
4	MTTR	<8Hrs	28	35.90%	31	39.74%
5	Grade of Service (Junction between local exchange)	2/1000	19	24.36%	25	32.05%
6	Call Completion Rate (in local network)	>55%	17	21.79%	7	8.97%
7	Metering & billing credibility - % of bills	<0.1%	10	12.82%	11	14.10%
8	Customer Care Service (95% of requests)					
(i)	Shifts	<3 Days	31	39.74%	21	26.92%
(ii)	Closures	<24 hrs.	18	23.08%	19	24.36%
(iii)	Additional Facilities	<24 hrs.	14	17.95%	16	20.51%
9	Response time to the customer for assistance					
(i)	%age of calls answered (electronically)					
	Within 20 sec = 80%	80%	1	1.28%	1	1.28%
	within 40 sec = 95%	95%	3	3.85%	1	1.28%
(ii)	%age of calls answered by operator (voice to voice)					
	Within 60 sec = 80%	80%	4	5.13%	8	10.26%
	within 90 sec = 95%	95%	14	17.95%	15	19.23%
10.	Time taken for refund of deposits after closures	100% within 60 days	18	23.08%	14	17.95%

The parameter wise performance is given as under:

Parameters	Benchmarks	Service Providers not meeting the benchmarks
Provision of Telephones after registration of demand	100% within 7 Days	BSNL = AP (95.29), MH (88.31%), Raj (98.10%), A&N (96.16%), Assam (78.85%), Chennai (99.51%), Jharkhand (98.48%), Kerala (96.54%), Kolkatta (99.51%), NE-I (69.27%), UP-E (99.19%), UP-W (76.53%), Uttranchal (98.37%) MTNL = Delhi (95.70%), Mumbai (69.92%) Reliance = All Circles except (Tamilnadu, Haryana and UP-E) Bharti = All circles Tata = All circles HFCL = Punjab (99.15%) Shyam = Rajasthan (97.90%)
Fault incidences per 100 subs/month	<5	BSNL = All circles except AP, TN, A&N, Chennai, Jharkhand, Kolkatta, MP and NE-II MTNL = Delhi (7.00), Mumbai (9.59) Bharti = AP (5.13), MP (6.00), UP-E (6.70), UP-W (7.01)
Fault repaired by next working day	>90%	BSNL = AP (88.94%), Bihar (78.71%), Gujarat (88.25%), Chhattisgarh (85.01%), MH (89.89%), Punjab (88.90%), Raj (89.89%), Karnataka (56.29%), Assam (80.21%), HP (89.30%), Jharkhand (87.29%), J & K (88.54%), KR (85.53%), NE-I (88.46%), West Bengal (86.60%) MTNL = Mumbai (79.58%), Delhi (85.15%) Tata - AP (85.68%), Delhi (5.58%), Gujarat (81.91%), Punjab (60.23%) Reliance = MH (83.33%)
MTTR	<8Hrs	BSNL = AP (12.20), Bihar (10.20), Gujarat (12.30), Chhattisgarh (12.10), Maharashtra (9.30), Punjab (13.90), Raj (8.30), KTK (12.70), Assanm (11.30), Chennai (9.70), Jharkhand (11.10), Kerala (17.40), Kolkatta (8.90), NE - I (28.20), NE- II (10.30), UP -W (8.20), WB (11.30) MTNL = Mumbai (24.64) Bharti = Delhi (8.63 hrs), Punjab (10.10 hrs), Raj (9.90 hrs), Haryana (9.90 hrs.), Kolkatta (14.10 hrs.), UP-E (10.91 hrs.), UP-W (11.51 hrs) Tata = AP (13.50), Delhi (19.94), Gujarat (9.70),
Grade of Service (Junction between local exchange)	2/1000	Reliance = All circles except Delhi, Kerala, Kolkatta and Mumbai Bharti = MP (0.133), Raj (0.0256), HR (0.0667)
Call Completion Rate (in local network)	>55%	BSNL = MH (53.00%), Rajasthan (51.00%) A&N (47.00%), HP (7.50%), Jharkhand (52.00%), J&K (51.00%) MTNL = Delhi (49.23%) Bharti = AP (53.30%), Delhi (52.69%), MP (48.12%), Punjab (52.00%), Raj (52.00%), Tamil Nadu (54.60%), Haryana (51.00%), KTK (52.00%) UP-E (45.60%), UP - W (4.85%) Reliance = Data not provided by the service provider
Metering & billing credibility - % of bills	<0.1%	BSNL = Only 14 circles out of 26, M/s BSNL have meeting the benchmark and 12 circles among the 26 service areas has not reported their performance in this Quarter. Reliance = Bihar (0.102%), Kolkatta (0.103%) Bharti = AP (0.507%) TN (0.122%), Kerala (0.355%), Tata = Delhi (0.194%), Gujarat (0.393%), Maharashtra (0.131%), Mumbai (0.369%), HFCL = Punjab (0.13%)

Customer Care Service (95% of requests)		
Shifts	<3 Days	<p>BSNL = Andhra Pradesh (70.99%), Gujarat (50.44%), Chhattisgarh (89.38), MP (86.92%), Maharashtra (57.42%), Raj (91.44%), Chennai (77.79%), Jharkhand (81.59%), Kerala (73.03%), Kolkatta (76.79%), NE-I (11.53%), UP-W (52.11%)</p> <p>MTNL = Delhi (82.41%), Mumbai (33.80%)</p> <p>Reliance = MP (46.59%), KR (84.85%), Mumbai (60.68%)</p> <p>Bharti = All circles except Delhi, GJ, MP, MH, Raj, TN and Haryana.</p> <p>Tata = AP (60.98%), DL (80.00), GJ (80.27%), MH (80.61%), Punjab (53.85%), Mumbai (84.79%)</p>
Closures	<24 hrs.	<p>BSNL = Bihar (93.22%), Maharashtra (93.37%), Assam (79.82%), NE - I (80.26%), Uttranchal (89.73%)</p> <p>MTNL = Mumbai (63.03%)</p> <p>Bharti = All Circles except Gujarat, MP, MH, & Mumbai</p> <p>Tata = Maharashtra (79.20%)</p>
Additional Facilities	<24 hrs.	<p>BSNL = Andhra Pradesh (59.07%), Bihar (78.87%), MH (88.07%), Raj (93.31%), Assam (64.97%), HP (94.76%), Kerala (92.49%), NE-I (91.76%)</p> <p>MTNL = Mumbai (70.16%)</p> <p>Bharti = MP (94.79%)</p> <p>Tata = Delhi (72.24%), Gujarat (94.13%), Maharashtra (83.59%), Mumbai (92.35%)</p>
Response time to the customer for assistance		
%age of calls answered electronically		
Within 20 sec = 80%	80%	BSNL - Uttranchal (58.07%)
Within 40 sec = 95%	95%	BSNL - Uttranchal (75.10%) MTNL = Mumbai (94.22%) Tata = Kolkatta (93.00%),
%age of calls answered by operator (voice to voice)		
Within 60 sec = 80%	80%	BSNL = PB (79.33%), Kerala (74.92%), Uttranchal (79.00%) Tata = Maharashtra (74.00)
within 90 sec = 95%	95%	BSNL = PB 90.00%), Uttranchal (86.33%) MTNL = Mumbai (88.51%) Bharti = UP-W (87.18%) Tata = All circles except (Bihar, Punjab, HR)
Time taken for refund of deposits after closures	100% within 60 days	Bharti = All circles MTNL = Mumbai (91.49%) Tata = Tamilnadu (92.00%), Mumbai (99.61%),

5.2 Quality of Service performance of Wireless Service Providers for quarter ending 30th September 2007: -

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 in meeting the benchmark in this quarter is given in the table below:

Sr. No.	Parameters	Bench-Marks	No. Of Operators Meeting The Benchmarks			
			Quarter Ending June, 2007		Quarter Ending Sept, 2007	
			Out Of 135 (Nos.)	Out Of 135 (%)	Out Of 135 (Nos.)	Out Of 135 (%)
1	Accumulated down time of Community isolation	<24 hrs	134	99.26%	135	100%
2	Call Set-Up Success Rate (Within Licensee's Own network)	>95%	134	99.26%	135	100%
3	Service access delay	<15 Sec	135	100%	135	100%
4	Blocked call rate (i) SDCCH/paging channel congestion	<1%	133	98.52%	131	97.04%
	(ii) TCH Congestion	<2%	125	92.59%	129	95.56%
5	Call drop rate	<3.0%	135	100%	135	100%
6	%age of Connections with good voice quality	>95%	130	96.30%	134	99.26%
7	Response time to the customer for assistance %age of calls answered (electronically) within 20 seconds = 80%	80%	135	100%	135	100%
	%Age of calls answered (electronically) within 40 seconds = 95%	95%	133	98.52%	134	99.26%
	%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	80%	109	80.74%	97	71.85%
	%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	95%	82	60.74%	81	60.00%
8	Complaints per 100 bills issued	<0.1%	129	95.56%	133	98.52%
9	% Of complaints resolved with 4 weeks	100%	133	98.52%	133	98.52%
10	Period of all Refunds/Payment due to Customers from the date of resolution of complaints As In (9) above	<4 Weeks	135	100%	135	100%

The parameter wise performance is given as under:

Parameters		Service Providers Not Meeting The Benchmarks
Accumulated down time of Community isolation	<24 hrs	All the Operators meeting this Benchmark
Call Set-Up Success Rate (Within Licensee's Own network)	>95%	All the Operators meeting this Benchmark
Service Access Delay	<15 sec.	All the Operators meeting this Benchmark
Blocked call rate (i) SDCCH/paging channel congestion	<1%	Averaged figures - MTNL - Mumbai (1.40%) – CDMA Service Bharti Airtel – Rajasthan (1.70%), Bihar (3.50%) RTL - Assam (1.07%)
(ii) TCH Congestion	<2%	Averaged figures - BSNL - Andhra Pradesh (2.70%) Reliance Telecom – Madhya Pradesh (2.27%), Himachal Pradesh (2.27%), Assam (3.86%), North East (2.78%) Bharti Airtel - Rajasthan (2.30%), Bihar (3.37%)
Call Drop Rate	<3%	All the Operators meeting this Benchmark
%age of Connections with good voice quality	>95%	Aircel Cellular – TN (93.53%)
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%)
%Age of calls answered by operator (voice to voice); within 60 seconds = 80%	80%	BSNL - Maharashtra (68.00%), AP (79.37%), Kerala (63.65%), UP –W (77.66%), UP-E (79.01%), Raj (55.30%), MP (68.00%) HP (46.00%) Reliance Comm - Gujarat (69.53%), Andhra Pradesh (78.21%), Karnataka (65.04%), Punjab (65.28%), Haryana (65.28%), UP-W (39.97%), UP-E (39.97%), Rajasthan (46.64%), Madhya Pradesh (60.82%), West Bengal (51.14%), Himachal Pradesh (65.28%), Bihar (54.14%), Orissa (60.82%), Delhi (79.36%), Mumbai (79.25%), Kolkata (51.14%) Vodafone Essar - UP -W (75.24%) Dishnet - West Bengal (64.28%), Bihar (49.14%), Assam (53.62%) Tata Tele - Maharashtra (76.00%), AP (51.30%), Karnataka (79.50%), Tamilnadu (77.00%), Kerala (72.60%), West Bengal (70.30%), Mumbai (66.90%), Chennai (77.00%) Kolkata (73.60%) Aircel - TN (69.0%)
%Age of calls answered by operator (voice to voice); within 90 seconds = 95%	95%	BSNL – Maharashtra (75.00%), AP (85.86%), Karnataka (93.43%), Kerala (68.65%), UP –W (90.00%), UP-E (86.13%), Raj (68.30%), MP (75.00%), HP – (60.90%), Kolkatta (91.30%) MTNL - Delhi (91.40%) – GSM Service Bharti Airtel - Kerala (90.60%), HR (94.95) Reliance Comm - Maharashtra (89.67%), Gujarat (76.96%), Andhra Pradesh (85.47%), Karnataka (71.42%), Tamilnadu (83.50%), Kerala (92.07%), Punjab (77.79%), Haryana (77.79%), UP-W (42.18%), UP-E (42.18%), Rajasthan (51.26%), Madhya Pradesh (71.68%), West Bengal (57.70%), Himachal Pradesh (77.79%), Bihar (57.70%), Orissa (71.68%), Delhi (84.07%), Mumbai (87.03%), Chennai (83.50%), Kolkata (57.70%) RTL - Bihar (80.00%) Idea - Gujarat (90.70%)

		Vodafone Essar - UP -W (82.76%) Tata Tele - Maharashtra (81.30%), Gujarat (86.00%), AP (65.30%), Karnataka (85.50%), Tamilnadu (80.70%), Kerala (76.60%), Raj (87.30%), MP (87.40%), West Bengal (82.60%), Bihar (85.30%), Orissa (88.70%), Delhi (86.50%), Mumbai (68.20%), Chennai (80.70%) Kolkata (84.40%) Dishnet Wireless - West Bengal (64.28%), Bihar (49.14%), Assam (53.62%)
Complaints per 100 bills issued	<0.1%	Bharti Airtel - NE (0.11%) Vodafone - West Bengal (0.36%)
% Of complaints resolved within 4 weeks	100%	MTNL – Delhi (97.33%) – CDMA Service BSNL - Bihar (99.78%)
Period of all Refunds/Payment due to Customers from the date of resolution of complaints	<4 Weeks	All the Operators meeting this Benchmark

5.2.2 Details of Quality of service:

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 30th September 2007: -

5.3.1 Annex 5.3 indicates the Quality of Service achieved by Top 20 ISPs during the quarter: It is observed that most of the ISPs were able to meet the benchmarks, barring few cases.

5.3.2 The observations on QoS Benchmarks are as follows:

5.3.2.1 Service Activation Time:

All the ISPs have met the benchmark of 6 hrs.

5.3.2.2 Time to Access:

All the ISPs have met the benchmark except Bhart Airtel Ltd.

5.3.2.3 Probability of Accessing the ISP Node:

ISPs are required to maintain the parameter of 80% for the first attempt, 90% for the second attempt and 99% for the third attempt. All the ISPs are able to meet this benchmark.

5.3.2.4 ISP Node Unavailability:

ISP Nodes unavailability should not exceed 30 minutes in a month. Except Asianet Sattelite Communications Ltd. & VSNL, other ISPs are able to achieve this benchmark.

5.3.2.5 Grade of Service:

ISPs are required to maintain the Grade of Service on the link connecting PSTN node to the ISP node as 1 in 100. Two ISPs (VSNL and YOU Telecom India Pvt. Ltd.) have informed that the information regarding the above mentioned benchmark can not be provided as the BSO has not given the information to them.

5.3.2.6 Mean Time to Restore (MTTR) :

As per clause 1.9 Schedule 'C' of 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 Broadband Service Providers for quarter ending 30th September 2007: -

There are 72 broadband service providers having subscriber base of 2.67 million subscribers. Among these 72 broadband service providers 13 service providers (who are having subscriber base more than 10,000 broadband subscribers) have the total 2.62 million subscribers i.e. about 98% of total broadband subscriber base. This report covers performance of these 13 broadband service providers vis-à-vis the QoS benchmarks prescribed by TRAI. Broadband Regulations came into force with effect from 1st Jan 2007. Based on Quality of Service Parameters reported by Broadband Service Providers for the quarter ending September 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 Broadband service providers:

Sl. No.	Parameters	Benchmarks	Name of Service Provider not Meeting the Benchmark
1	Service Provisioning/ Activation Time	100% in =< 15 working days	MTNL - Delhi (68.24%), Mumbai (80.94%) Airtel - All Circles except Rajasthan and Kerala. VSNL - Central (99.00%), North (97.00%), South 1 (94.00%), South 2 (98.00%), South 3 (99.00%), South 4 (99.00%), West 1 (97.00%), West 2 (99.00%) Hathway - AP (97.00%), Chennai (97.00%), GJ (97.00%), MH (96.00%) Reliance – All India (75.00%) Asianet - All India (94.00%) HFCL - Punjab (99.75%) Beam Cable System – AP (98.00%)
2	Faults Repair/Restoration Time		
	% of faults repaired by next working day	>90%	MTNL - Delhi (73.77%), Mumbai (75.52%) VSNL - Central (82.00%), East (84.70%), North (76.80%), South 1 (80.40%), South 2 (80.60%), South 3 (64.40%), West 1 (78.00%), West 2 (82.70%) SIFY - All India (87.00%) Asianet - All India (78.00%) Tata - MH & Goa (78.27%)
	% of faults repaired within 3 working day	=>99%	MTNL - Delhi (94.21%), Mumbai (94.09%) Airtel – All circles except Gujarat (99.50%) and Rajasthan (99.12%) VSNL - Central (93.40%), East (94.30%), North (91.40%), South 1 (93.00%), South 2 (93.10%), South 3 (77.70%), West 1 (91.60%), West 2 (93.30%) Hathway - Chennai (97.00%), KTK (98.00%) SIFY - All India (94.00%) Asianet - All India (91.00%) Tata - MH & Goa (96.12%)
3	Billing Performance		

	%age of bills disputed	<2%	Airtel – Kerala (2.45%) VSNL - South 3 (3.86%)
	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	MTNL - Delhi (99.92%) Hathway - MH (99.00%) Asiannet - All India (94.00%) HFCL - Punjab (97.00%)
	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	BSNL – All India (99.40%) Airtel - AP (48.00%), Delhi (22.47%), Haryana (42.73%), KTK (92.00%), Kerala (92.00%), Kolkata (14.27%), MP (62.00%), MH (99.00%), PB (65.43%), Rajasthan (31.83%), TN (89.00%), UP-E (27.63%), UP-W (33.00%) Hathway - MH (99.00%) Asianet - All India (85.00%)
4	Response Time to the Customer for assistance		
	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	MTNL - Mumbai (39.55%)
	%age of calls answered by operator (voice to Voice) within 90 sec	>80%	All the service Providers have met this benchmark
5	Bandwidth utilisation/throughput		
	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)		Airtel - AP (3 Links), Delhi (5 Links), GJ (1 Link), KTK (3 Links), MH (3 Links), TN (5 Links). Sify - All India (34 Links).
	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)		BSNL - All India (1 Link) MTNL - Delhi (7 Links). Airtel – MP (1 Link) Reliance – All India (7 Links) Asianet - All India (1 Link)
	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG)	<90%	Airtel – Delhi (91.01%), MP (96.00%), UP-E (95.00%)
	Broadband Connection Speed available (download) from ISP node to user	>80%	All the service Providers have met this benchmark
6	Service Availability/Uptime (for all users) in %age	>90% Quarter Ending June 07 >98% w.e.f. Quarter Ending Sept.07	
	Service availability /uptime (for all users) in %age	>98%	MTNL – Mumbai (90.00%) VSNL – South 3 (97.42%)
7	Packet loss (for wired broadband access) in %age	<1%	Hathway - AP, Chennai, Delhi, Gujarat, MH, TN. Reported data 2% for all these circles. Tata – MH & Goa (1%)
8	Network latency (for wired broadband access)		
	User reference point at POP/ISP Gateway node to IGSP/NIXI	<120 ms	Airtel – Gujarat (154 ms), MH (154 ms), Mumbai (150 ms)
	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	<350 ms	Airtel – Gujarat (797ms), MH (797 ms), Mumbai (744 ms)

	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

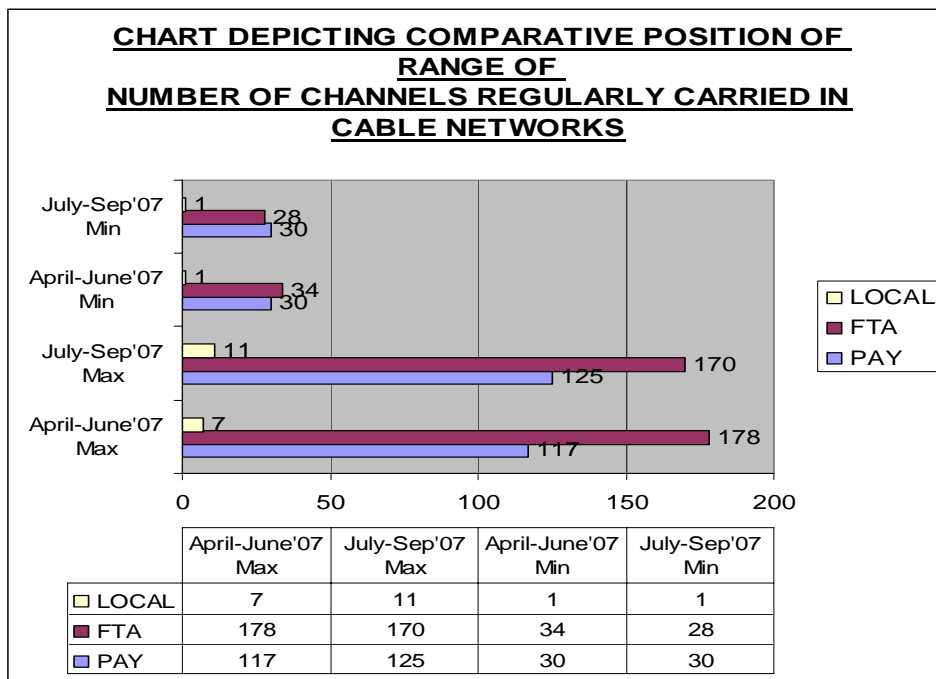
6.1 This chapter contains:

- a) Range of number of channels Pay, FTA, Local regularly carried on network at the end of quarter ending 30th June 2007 and 30th September 2007. Refer Table 6.1 (a) & 6.1(b).
- b) Details of new pay channels / FTA Channels converted into Pay Channels after 26.12.2003 are at Table 6.2. The table provides information on New introduced Pay Channels and Free to Air (FTA) channels converted into Pay Channels after 26.12.2003 and this indicates that there are 63 new pay channels/ converted FTA Channels to pay channels that have been launched since 26.12.2003. This is based on information reported by broadcasters in terms of clause 4 of the TRAI's Tariff Order of 1.10.2004 on broadcasting and cable services.
- c) Information on total Advertisement Revenue of FM Radio Stations is compiled in table 6.3.
- d) For details of number of applications received, number of Licenses issued for DTH service providers refer to Table 6.4.

6.2 Highlights

1.1 The figures of **Maximum and Minimum channels** are based on number of channels (analogue and /or digital) reported across different networks of different reporting service providers having different combinations of pay, FTA and Local channels. Therefore, the sum of number of pay / FTA/Local channels column will not add up to the figures in the total column.

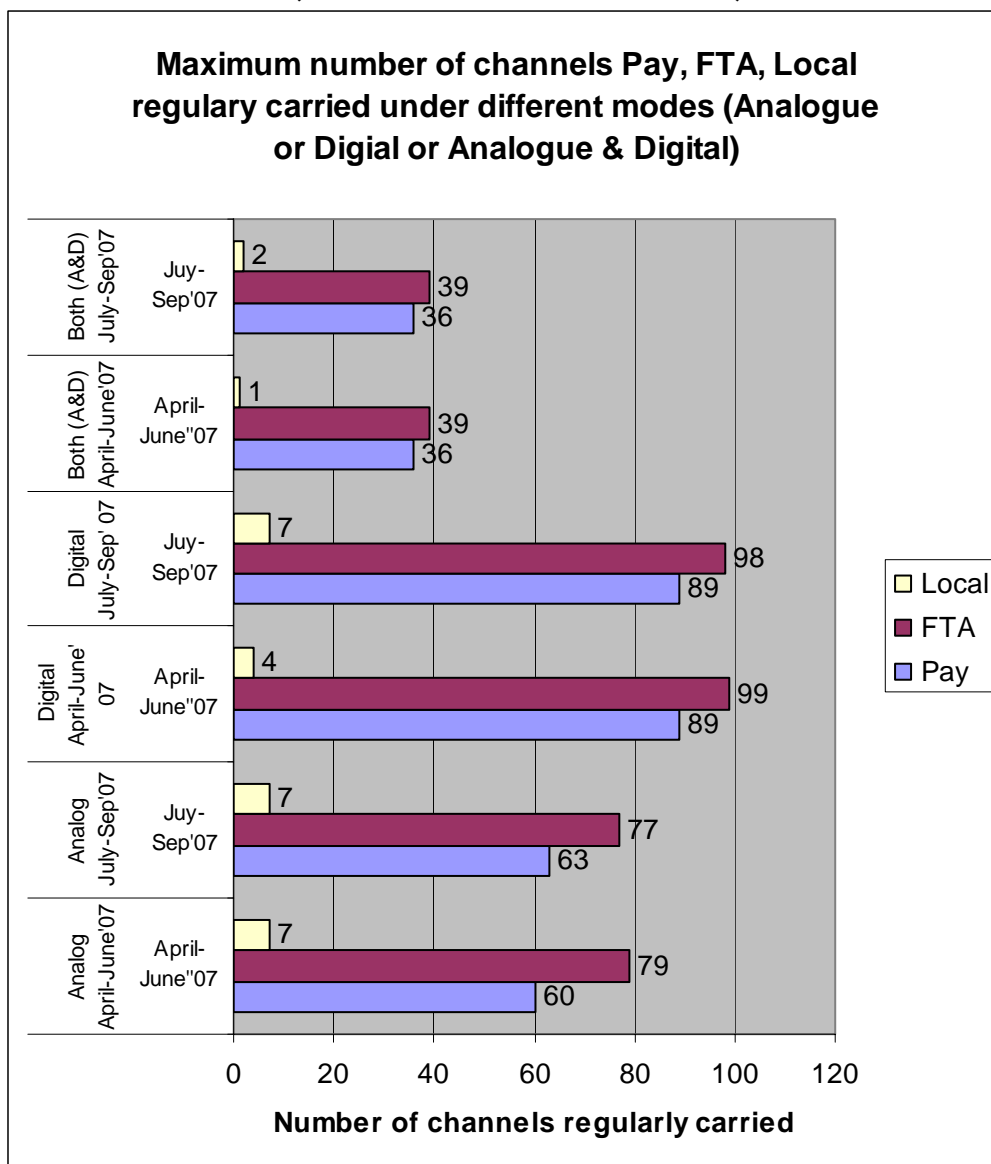
Chart No. 1



1.2 The figures of **Maximum and Minimum channels** are based on the number of channels (analogue and /or digital) reported across different networks of different reporting service providers having different combinations of pay, FTA and Local channels. Therefore, figures in various cells above across a particular row as a combination may not be indicative of size of networks etc.

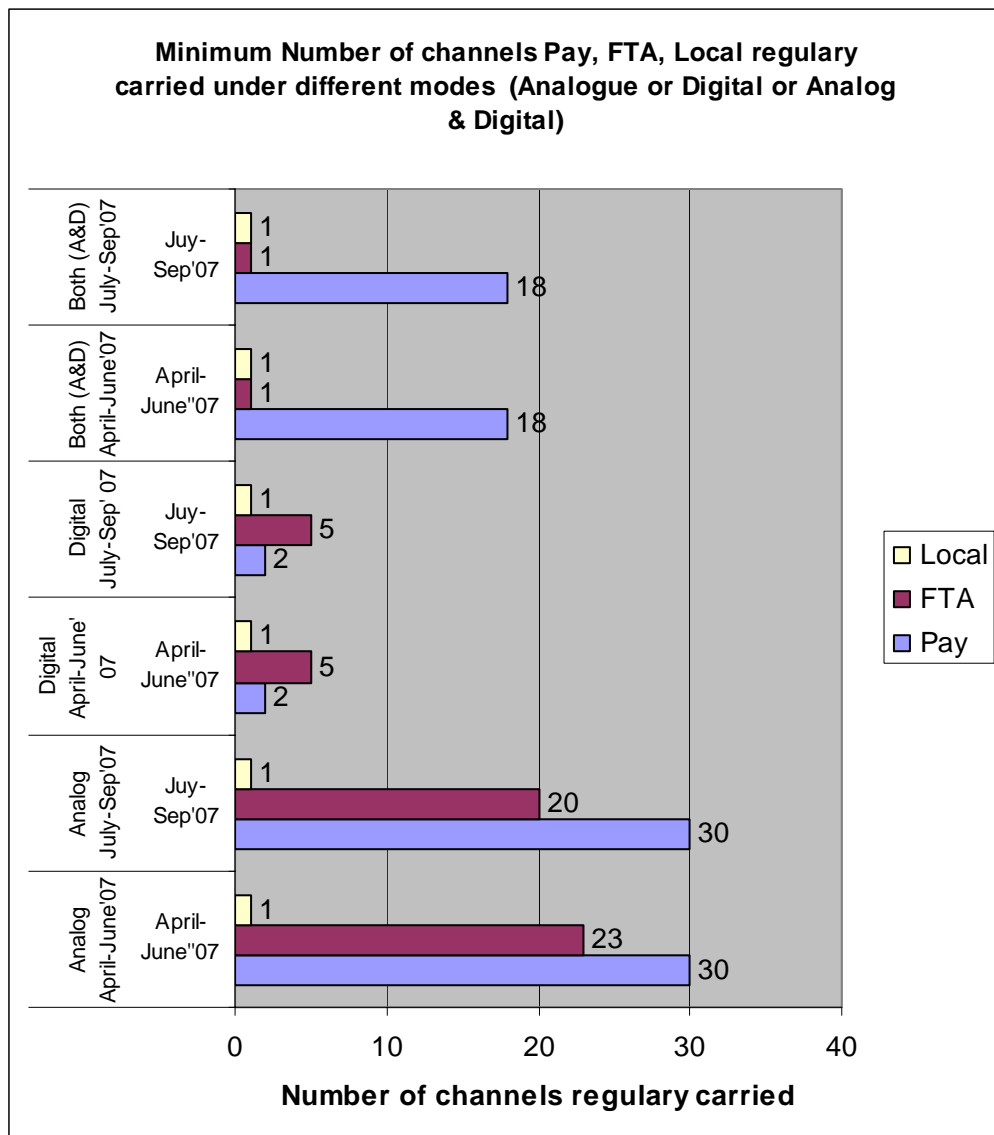
a)

Chart No. 2
(Maximum no. of channels)



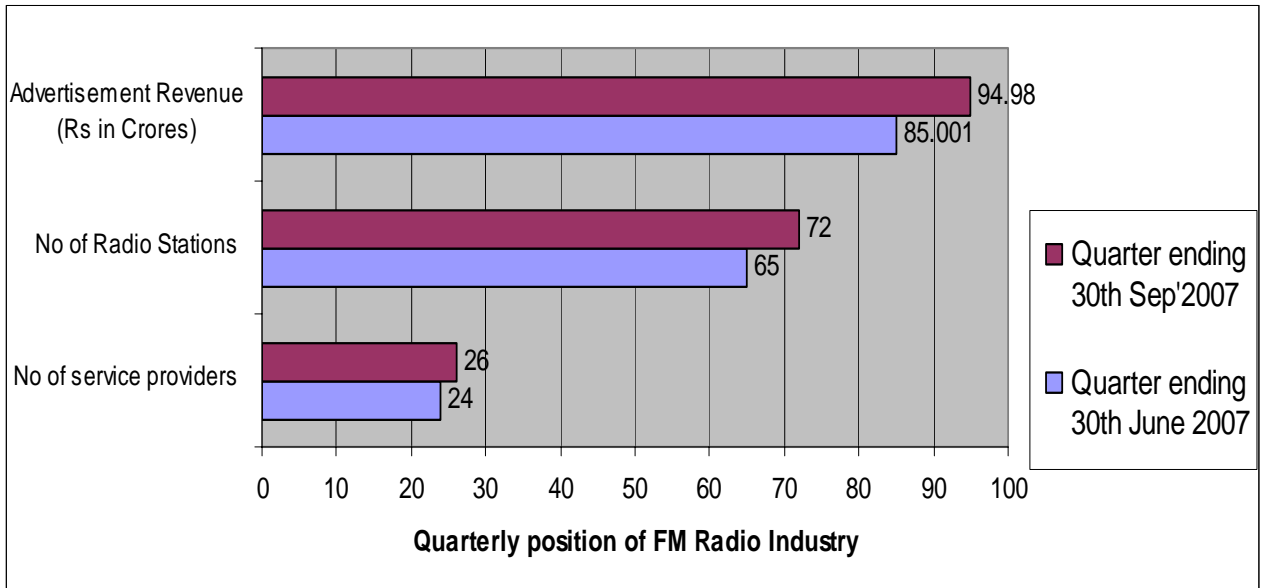
b)

**Chart No. 3
(Minimum no. of channels)**



1.3 The total Advertisement Revenue up to the quarter ending June' 07 of 24 FM Radio Service Providers and quarter ending Sep' 2007 of 26 FM Radio Service Providers who have given their reports is given in the chart below.

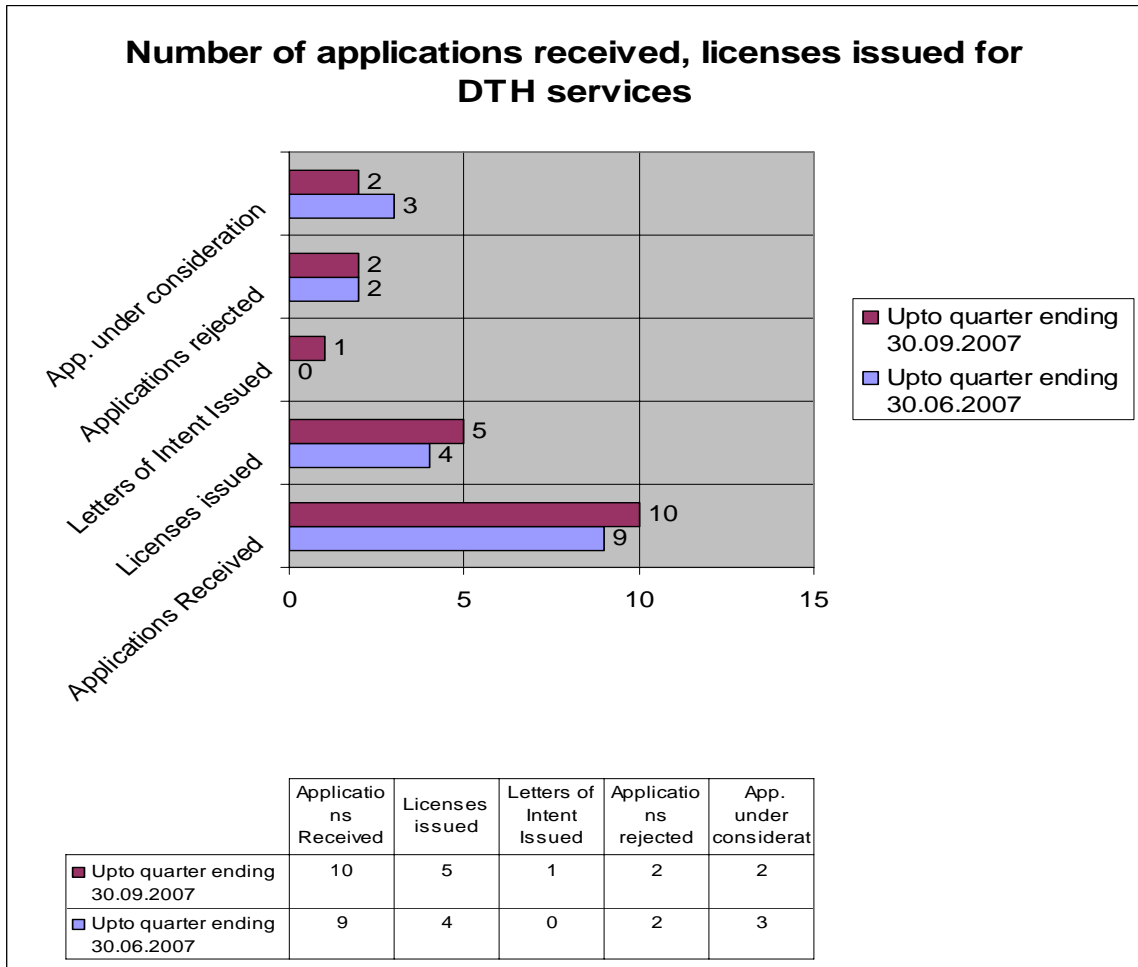
**Chart No. 4
The Total Advertisement Revenue**



1.4 Details of number of applications received, number of Licenses issued for DTH services are given in the chart below:-

Chart No. 5

Number of applications received, licenses issued for DTH services



	Applications Received	Licenses issued	Letters of Intent Issued	Applications rejected	App. under consideration
Upto quarter ending 30.09.2007	10	5	1	2	2
Upto quarter ending 30.06.2007	9	4	0	2	3

CHAPTER SEVEN

FINANCIAL DETAILS OF TELECOM SERVICE SECTOR

7.1 Revenue of Telecom Service Sector (F.Y. 2007-08):

- The Total revenue of the Telecom Services Sector for the Ist Quarter (April – June 2007) of 2007-08 was Rs. 28,972 Crore and for the IInd Quarter (July – September 2007) of 2007-08 was Rs.31,284 Crore thereby showing a growth of 8%.
- The total revenue of the public sector operators for the Ist and IInd Quarter of 2007-08 was Rs.9510 Crore and Rs.10717 Crore respectively, showing a growth of 11%.
- The revenue contribution from the public sector operators for the Ist & IInd Quarter was 33% & 34%.
- The total revenue contribution from the private sector operators for the Ist & IInd quarter of 2007-08 was Rs.19462 Crore and Rs.20,567 Crore respectively, showing a growth of 5%.
- The revenue contribution from the private sector operators for the Ist & IInd Quarter was 67% & 66% 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.24,854 Crore there by showing a growth of 8.69%.
- The AGR of the public sector operators for the Ist and IInd Quarter of 2007-08 was Rs.8,539 Crore and Rs.9,757 Crore respectively, showing a growth of 14%.
- The AGR share of public sector operators for the IInd Quarter of 2007-08 was 39% as against 37% in the Ist Quarter of 2007-08.
- The AGR contribution from the private sector operators for the Ist & IInd quarter of 2007-08 was Rs. 14,329 Crore and Rs. 15,097 Crore respectively, showing a growth of 5.42%.
- The AGR share of private sector operators for the IInd Quarter of 2007-08 was 61% as against 63%in the Ist Quarter of 2007-08.

Total Revenue of Telecom service Providers		
(Rs. in Crore)		
Particulars	Ist Quarter of 2007-08	IInd Quarter of 2007-08
Total Revenue	28,972	31,284
Share of public sector operators in total revenue	9,510	10,717
Share of private sector operators in total revenue	19,462	20,567
Contribution of public sector operators in total revenue	33%	34%
Contribution of private sector operators in total revenue	67%	66%
Total AGR	22,868	24,854
Share of public sector operators in total AGR	8,539	9,757
Share of private sector operators in total AGR	14,329	15,107
Contribution of public sector operators in total AGR	37%	39%
Contribution of private sector operators in total AGR	63%	61%

Source: Operators Unaudited Data

7.2 Foreign Direct Investment (FDI) in Telecom

Foreign Investment is a major source of funding in the Indian Telecom Industry. Attracting the Foreign Direct Investment is the top priority of the Government of India in the recent years. The year-wise statistics of FDI in the Telecom Industry and its share in total FDI inflow in India is given in the table below:

(Rs. in Crore)			
Year	Year-wise FDI Inflow		
	Total FDI Inflow	FDI Inflow in Telecom Sector	% of Telecom FDI to Total FDI
2003-04	12117	532	4.39%
2004-05	17138	588	3.43%
2005-06	24613	3023	12.28%
2006-07	70630	2355	3.33%
Apr. to June' 07	20228	3652	18.05%

Source: DIPP

The FDI inflow in telecom sector as percentage of FDI is increasing in 2007-08, which is a positive trend.

Table 1.1**Subscriber Base of Wireline Services**

Sl.	FSO	Area of Operation	30th June 2007			30th September 2007		
			Urban	Rural	Total	Urban	Rural	Total
1	BSNL	All India	20654169	12258190	32912359	20253365	11972897	32226262
2	MTNL	Delhi & Mumbai	3669172	0	3669172	3627092	0	3627092
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.	1972259	0	1972259	2075037	0	2075037
4	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Mumbai	314678	30	314708	338806	208	339014
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	261083	0	261083	290154	0	290154
6	HFCL Infotel Ltd	Punjab	164058	0	164058	161439	0	161439
7	Shyam Telelink Ltd	Rajasthan	142079	13095	155174	143697	14384	158081
8	Reliance Communication Ltd	AP, Bihar, Delhi, Gujarat, Haryana, HP, KN, Kerala, MP, MH, Mumbai, Orissa, Punjab, Rajasthan, TN Chennai UP(E), UP(W), West Bengal, Kolkata	638947	287	639234	699593	458	700051
Grand Total			27816445	12271602	40088047	27589183	11987947	39577130

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

S.No	Service Providers	Area of Operation	PCOs as on 30.06.07	PCOs as on 30.09.07	PCOs added during the quarter ending 30.09.07
1	BSNL	All India	2070994	2038812	-32182
2	MTNL	Delhi & Mumbai	258459	245100	-13359
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.	215602	211522	-4080
4	HFCL Infotel Ltd.	Punjab	42691	42376	-315
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	1308983	1394595	85612
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	1663413	1823915	160502
7	Shyam Telelink Ltd.	Rajasthan	40672	26000	-14672
TOTAL			5600814	5782320	181506

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

S.No	Service Providers	Area of Operation	VPTs as on 30.06.07	VPTs as on 30.09.07	Achievement during the Qtr. ending 30.09.07
1	BSNL	All India	553817	555341	1524
2	MTNL	Delhi & Mumbai	0	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	0
4	HFCL Infotel Ltd.	Punjab	373	339	-34
5	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Mumbai	2542	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	1360	1360	0
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	4115	0
8	Shyam Telelink Ltd.	Rajasthan	3010	3700	690
TOTAL			565217	567397	2180

NOTE: BSNL has modified its VPT figures for North East-I circle for QE June'07 from 7125 to **4572**. Similarly, in Rajasthan circle in QE June'07, VPT was 39483, which has been changed to **34256**. Consequent to these changes, the total figures of VPT for the QE June'07 has changed from 572997 to **565217 (-7780)**.

Table 2.1

Subscriber Base of Wireless Operators

Wireless Group (With number of Circle)	Subscribers Base as on Sept 07 (in Millions)	Rural Subscribers (in millions)	Percentage of rural subscribers	Market Share (in %age)	Technology used
Bharti (23)	48.88	9.80	20.05	23.38	GSM
Reliance (23)	36.32	6.11	16.83	17.37	GSM & CDMA
Vodafone/Hutchison(16)	35.66	9.73	27.29	17.06	GSM
BSNL (21)	34.13	10.87	31.86	16.32	GAM & CDMA
Tata (20)	19.50	1.04	5.33	9.32	CDMA
Idea (11)	18.67	3.74	20.05	8.93	GSM
Aircel (9)	8.04	2.28	33.73	3.85	GSM
Spice (2)	3.48	0.37	10.63	1.67	GSM
MTNL (2)	2.99	0.00	0	1.43	GSM & CDMA
BPL (1)	1.15	0.00	0	0.55	GSM
HFCL (1)	0.15	0.003	1.96	0.07	CDMA
Shyam (1)	0.10	0.001	0.55	0.05	CDMA
Total	209.07	43.98	21.03	100	GSM & CDMA

Market Share of Wireless Service Providers as on 30 September 2007

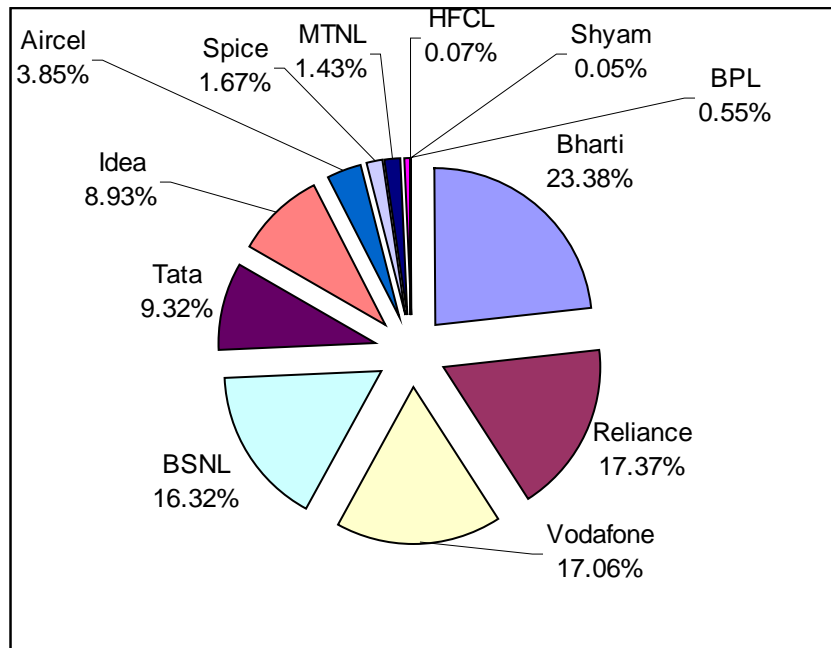


Table 2.2**Market Share of Wireless (GSM + CDMA) Operators**

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

GSM Group	No of Subscribers (in Millions)	Market Share (in %age)
Bharti	48.88	31.74
Vodafone	35.66	23.16
BSNL	30.30	19.68
Idea	18.67	12.12
Aircel	8.04	5.22
Reliance	5.04	3.27
Spice	3.48	2.26
MTNL	2.77	1.80
BPL	1.15	0.75
Total	153.99	100

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

Company Name	No of CDMA Subscribers (in Millions)	CDMA Market Share (in %age)
Reliance Infocomm	31.29	56.81
Tata Teleservices	19.50	35.40
BSNL	3.82	6.94
MTNL	0.22	0.40
HFCL	0.15	0.27
Shyam Telelink	0.10	0.18
Total	55.08	100

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:

Circle	No. of Subscribers	Market Share
Metros	37.71 million	18.04%
Circles 'A'	75.06 million	35.90%
Circles 'B'	75.78 million	36.25%
Circles 'C'	20.52 million	9.82%

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

Category	No. of Service Areas	Dec'06	Mar'07	Jun'07	Sept'07	% Growth in Sept'07
		Figures (in millions)				
Metros	4	30.2	31.63	34.06	37.71	10.72
A' Circle	5	53.5	58.93	65.92	75.06	13.86
B' Circle	8	52.45	58.81	66.63	75.78	13.73
C' Circle	6	13.48	15.74	18.31	20.52	12.07

Growth Trend of Wireless Subscribers

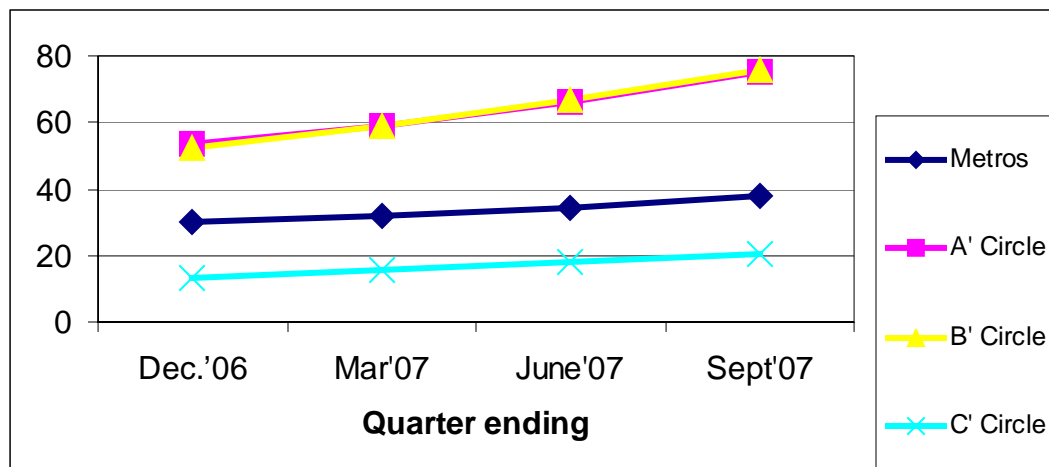


Table 3.1**Subscribers Base of Internet Services**

Sl.	Name of the Service Provider	Category	Geographical area of operation	Quarter ending Jun-07	Quarter ending Sep-07	% Growth
1	Bharat Sanchar Nigam Ltd.	A	All India	4068349	4415577	8.53
2	Mahanagar Telephone Nigam Ltd.	B	Delhi & Mumbai	1754168	1808143	3.08
3	Sify Ltd.	A	All India	828872	709155	-14.44
4	Bharti Airtel Ltd. (Bharti Televentures Ltd.)	A	All India	654995	706776	7.91
5	Reliance Communications Infrastructure Limited	A	All India	578421	604208	4.46
6	Videsh Sanchar Nigam Ltd.	A	All India	490601	456512	-6.95
7	Data Infosys Ltd.	A	All India	199937	199942	0.00
8	YOU Telecom India Pvt. Ltd.	A	All India	155655	168831	8.46
9	Hathway Cable & Datacom Pvt. Ltd.	A	All India	140636	160269	13.96
10	Asianet Satellite Communications Ltd.	B	Kerala	44534	49764	11.74
11	HCL Infinet Ltd.	A	All India	42101	42383	0.67
12	HFCL Infotel Ltd.	B	Punjab Telecom Circle	37625	40875	8.64
13	Punj Lloyd (Spectra Net Ltd.)	A	All India	22734	25918	14.01
14	Shyam Internet Services Ltd	B	Rajasthan	25085	25323	0.95
15	Beam Cable System Pvt. Ltd.	B	Hyderabad	18372	20656	12.43
16	Hughes Communications India Ltd.	A	All India	18315	19465	6.28
17	Vodafone Essar Gujarat Ltd. (Fascel Ltd.)	B	Gujarat	18001	18001	0.00
18	Ortel Communication Ltd.	B	Orissa	1024	16356	1497.27
19	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)	A	All India	13070	15926	21.85
20	Broadband Pacenet (I) Pvt. Ltd.	B	Mumbai	12496	13853	10.86
21	Alliance Broadband Services Pvt. Ltd.	B	Kolkata	8464	10046	18.69
22	VSNL Internet Services Ltd. (DIL Internet Ltd.(Primus Telecommunications))	A	All India	9345	9089	-2.74
23	West Bengal Electronics Industry Development Corp. Ltd.	B	Kolkata, WB	6624	8578	29.50
24	In2cable (I) Ltd.	A	All India	6135	7523	22.62
25	Trikon Electronics Pvt. Ltd.	B	Mumbai	5509	5678	3.07
26	Swiftmail Communications Ltd.	A	All India	4772	5471	14.65
27	Trak Online Net India Pvt.Ltd	A	All India	4924	4917	-0.14
28	WWW Communications Ltd.	B	Delhi	4530	4682	3.36
29	Pioneer Online Pvt. Ltd.*	B	Andhra Pradesh	4372	4372	0.00
30	Rajesh Multi Channel Pvt. Ltd.	B	Mumbai	3517	3532	0.43
31	Wire & Wireless (I) Ltd. (Siti Cable Network Ltd)	A	All India		3309	
32	Icenet.net Limited	B	Gujarat	11115	2885	-74.04
33	HCL Comnet Systems & Services Ltd.	A	All India	2648	2648	0.00
34	Spacenet Internet Services Pvt Ltd	B	Delhi		2604	
35	Geocity Network Solutions Pvt. Ltd.	B	Delhi	2179	2157	-1.01
36	Hathway Bhawani Cabletel & Datacom Pvt.	B	Mumbai	1930	2098	8.70

	Ltd.					
37	Value Healthcare Ltd.	B	Mumbai	2266	1994	-12.00
38	Digital2Virtual ISP Pvt. Ltd.*	B	Gujarat	1764	1764	0.00
39	Bhupati Hotels Pvt. Ltd.	C	Visakhapatnam	1382	1372	-0.72
40	CJM Consultancy Services (P) Ltd.	B	Delhi	788	1351	71.45
41	Kelnet Communication Services Pvt. Ltd	C	Trivandrum		1207	
42	Cable Combine Communication Pvt. Ltd.	C	Siliguri SSA		1087	
43	Sab Industires Ltd. (Sab Infotech)	B,C	Punjab, Karnal, Ambala	1079	1087	0.74
44	Broadlane Networks Pvt. Ltd.	C	Dombivli, Maharashtra	957	1078	12.64
45	n-Logue Communications Pvt. Ltd.*	A	All India	1061	1061	0.00
46	ERNET India	A	All India	924	1006	8.87
47	Space Online Ltd.	B	Gujarat	1068	971	-9.08
48	Tulip IT Services Ltd.	A	All India		843	
49	Blazenet Ltd.*	B	Gujarat	834	834	0.00
50	Sanchar Telenetwork Pvt. Ltd.	C	Bhavnagar SSA	786	768	-2.29
51	IOL Broadband Ltd. (India Online)	B	Mumbai	745	750	0.67
52	Gomti Cable Network Pvt. Ltd.	C	Lucknow SSA		665	
53	Dishnet Wireless Ltd.*	A	All India	611	611	0.00
54	ISP Solutions India Pvt. Ltd.	C	Coimbatore SSA	588	593	0.85
55	Southern Online Bio Tech Ltd.	B	Andhra Pradesh	562	585	4.09
56	iPath India Pvt. Ltd.	C	Ernakulam SSA	684	581	-15.06
57	Software Technology Park of India (STPI)	A	All India		564	
58	Bohra Pratisthan Pvt. Ltd.	C	Udaipur SSA		486	
59	Quest Consultancy Pvt. Ltd.	C	Valsad SSA		477	
60	NetMagic Solutions(P) Ltd.	B	Mumbai	409	434	6.11
61	Speed Online.net Pvt. Ltd.	C	Rajkot		421	
62	North East Dataa Network Pvt Ltd	B	Karnataka		380	
63	Myguru Online ltd.	B	Andhra Pradesh	2894	364	-87.42
64	Rida Communication Pvt. Ltd.	C	Aligarh SSA	382	359	-6.02
65	Micky Online Pvt Ltd.	C	Moradabad	400	350	-12.50
66	F/X Wireless Technology Solutions Pvt Ltd	B	Mumbai		332	
67	Bhiwani Communications Pvt. Ltd.	C	Rohtak	258	313	21.32
68	Multinet (Udaipur) Pvt. Ltd.	C	Udaipur SSA		304	
69	Ankhnet Informations Pvt. Ltd.	B	Mumbai		275	
70	DeIDSL Internet Pvt. Ltd.	B&C	Gurgaon, Delhi	233	240	3.00
71	Rainbow Communications (India) Pvt Ltd	C	Salem SSA		233	
72	Quick Online Pvt. Ltd.	C	Ghaziabad SSA		203	
73	Eastern Teleservices Pvt Ltd	C	Jamshedpur SSA		202	
74	Pacific Internet India Pvt. Ltd.	A	All India	199	201	1.01
75	Verizon Communications India Pvt. Ltd. (Worldcom Communications)	A	All India	189	190	0.53
76	Karuturi Networks Ltd.*	B	Karnataka	187	187	0.00
77	Kerala State Electronics Development Corp. Ltd. (Keltron)	C	Thiruvananthapuram	6	185	2983.33
78	Vainavi Industries Ltd. (MAC Info Pvt. Ltd.)	B	Andhra Pradesh	180	180	0.00
79	Mynet Services India Pvt. Ltd.	C	Tamil Nadu SSA	147	165	12.24
80	BT Global Communications India Pvt. Ltd. (i2i Enterprise Ltd.)	A	All India	163	164	0.61
81	Primenet Global Ltd.	A	All India	179	161	-10.06
82	Descon Ltd.	B&C	Kolkata &	137	137	0.00

			Burdwan District			
83	Nihar Internet Services Pvt Ltd	C	Ghaziabad		134	
84	Atria Convergence Technologies Pvt. Ltd.	B	Karnataka	205	133	-35.12
85	R.S. Broadband Service Pvt Ltd	B	Tamil Nadu SSA		131	
86	Aksh Optifibre Ltd. (Aksh Broadband Ltd.)	C	Jaipur		123	
87	Aeroway Networks Pvt Ltd	C	Mysore SSA		121	
88	Guj Info Petro Ltd. (GIPL)*	A	Gujarat	108	108	0.00
89	Reach Network India Pvt. Ltd.	A	All India	128	104	-18.75
90	Online Media Solutions Ltd.*	B	Andhra Pradesh	100	100	
91	Amber Online Services Ltd.*	B	Andhra Pradesh	92	92	0.00
92	City Online Services Ltd.*	B	Andhra Pradesh & Karnataka	90	90	0.00
93	Mylai Karpagambal Information Systems (P) Ltd.	B	Chennai		89	
94	Tarang Communications Pvt. Ltd.	C	Guwahati SSA		88	
95	Gateway Systems (I) Ltd.	A	All India	103	87	-15.53
96	Estel Communications Pvt. Ltd.	A	All India	76	76	0.00
97	Manipal Software Pvt. Ltd.	A	All India		76	
98	ISP Services (India) Pvt. Ltd.	C	Trichy		60	
99	Konark Infocomm Pvt Ltd	C	Ghaziabad SSA		57	
100	Harisree Cable Net Pvt. Ltd.	C	Kanpur SSA	64	54	-15.63
101	CJ Online Pvt. Ltd.	C	Ghaziabad	80	50	-37.50
102	Adya Tech One Services Pvt Ltd	C	Ghaziabad SSA		49	
103	Nextgen Communications Ltd (RPG Infotech Ltd. (Sprint RPG India))*	A	All India	49	49	0.00
104	Eronet Broadband Service India Pvt. Ltd.	C	Erode		48	
105	Bhaskar Multinet Ltd.*	C	Jaipur	42	42	0.00
106	Swastik Netvision Telecom P. Ltd.	B	Gujarat	46	42	-8.70
107	Nettlinx Ltd.	B	Andhra Pradesh	28	34	21.43
108	Conjoinix Technologies Pvt Ltd	C	J&K, Chandigarh	28	31	10.71
109	Rajesh Patel Net Services Pvt Ltd	C	Indore		31	
110	STN Communication & Advertising Pvt Ltd.	C	Guwahati		30	
111	L&T Finance Ltd. (L&T Netcom Ltd.)	A	All India	25	25	0.00
112	Maple PC & Peripherals Pvt Ltd	C	Jamshedpur SSA		24	
113	Nelco Ltd.	A	All India	22	23	4.55
114	PBC Ventures (Chemical & Metallurgical Design Co. Ltd.)	B	Delhi		18	
115	United Villages Networks Pvt Ltd	C	Bhuvaneshwar		18	
116	Direct Internet Ltd.	B&C	Delhi, Gurgaon, Noida	19	16	-15.79
117	Centre for Development of Advanced Computing, C-DAC	C	Ghaziabad SSA	14	14	0.00
118	Virtela India Pvt. Ltd.	B&C	Mumbai, Bangalore, Gurgaon	17	13	-23.53
119	Power Grid Corporation of India Ltd.	A	All India		10	
120	My Own Infotech Pvt. Ltd.	C	Surat SSA		9	
121	GTL Ltd.	A	All India	8	8	0.00
122	Pulse Telesystems Pvt. Ltd.	B	Chennai		6	
123	Tata Internet Services Ltd.	A	All India	54	6	-88.89
124	Pan India Network Infravest Pvt. Ltd. (Cyquator Technologies Ltd.)	B	Mumbai, Navi Mumbai	5	5	0.00
125	ABT Ltd.	C	Coimbatore SSA	4	4	0.00

126	Godrej Infotech Ltd.	B	Mumbai	4	4	0.00
127	Manipal Ecommerce Ltd.	B	Karnataka	4	4	0.00
128	Compucom (I) Pvt. Ltd.	C	Jaipur	2	2	0.00
129	Opto Network Pvt. Ltd.	C	SSA Ghaziabad	14	1	-92.86
130	Apna Telelink Ltd.	C	Jalandhar		0	
131	Gujarat State Petroleum Corporation Ltd. (GSPC)	B	Gujarat		0	
132	Gujrat Narmada Valley Fertilizer Co. Ltd. (GNFC)	A	All India	4	0	-100.00
133	Spectrum Softech Solutions Pvt. Ltd.	C	Ernakulam SSA	0	0	
134	VSNL Broadband Ltd.	A	All India	0	0	
	Total			9224555	9627576	4.37

* ISP has not submitted report at the end of September 2007. Its data for previous quarter has been retained

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

Sr. No.	Name of the Service Provider	Subscriber Base as on 30.06.2007	Subscriber Base as on 30.09.2007	%age Growth in Subscribers	%age in Market Share
1	Aryadoot Transport Pvt Limited	1556	1536	-1.29	4.56
2	Jet-Aiu Skyline Transport Pvt Ltd.	455	440	-3.30	1.31
3	Container Movement (Bombay) Transport Pvt Ltd.	5	5	0.00	0.01
4	Arya Offshore Services Pvt Ltd.	1279	1241	-2.97	3.69
5	German Express Shipping Agency (India) Pvt Ltd. (Hapag Llyod)	884	854	-3.39	2.54
6	United Liner Agencies of India (Pvt) Ltd	1885	1786	-5.25	5.31
7	Procall Limited	8224	9291	12.97	27.60
8	The Arvind Mills Ltd.	9957	10288	3.32	30.56
9	Smartalk Pvt Limited	2195	2326	5.97	6.91
10	QuickCall	4174	4359	4.43	12.95
11	Bhilwara Telenet Services Pvt Limited	1323	1248	-5.67	3.71
12	India Satcom Ltd.	289	289	0.00	0.86
	Total	32226	33663	4.46	100.00

NOTE: United Liner Agencies of India (Pvt) Ltd figure for quarter ending June 2007 has been modified from 705 to 1885

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

Sr. No.	Name of Service Provider	Quarter ending		%age growth rate	%age Market Share
		June, 2007	Sept, 2007		
1	Hughes Communications Ltd.	21137	22416	6.05	34.30
2	HCL Comnet	20776	21339	2.71	32.65
3	Bharti Airtel Limited, Bangalore	9352	9450	1.05	14.46
4	Bharti Broadband	4860	4963	2.12	7.59
5	Essel Shyam	2414	2464	2.07	3.77
6	Tatanet Services	4069	4670	14.77	7.15
7	ITI	49	49	0.00	0.07
8	GNFC	5	1	-80.00	~0.00
	Total	62662	65352	4.29	100.00

Table 6.1(a)

**Range (Minimum and Maximum) of number of channels
Pay, FTA, Local regularly carried on the network as at the
end of quarter ending 30th June 2007 and
30th September 2007**

Range	Pay channels		FTA channels		Local Channels		Total	
	April -June'07	July -Sep'07	April -June'07	July -Sep'07	April -June'07	July -Sep'07	April -June'07	July -Sep'07
Maximum	117	118	178	170	7	11	265	263
Minimum	30	30	34	28	1	1	71	71
No of Agencies / Service Providers Reporting							7	7
The digital service on the basis of reporting MSOs are offered in the cities of Delhi, Mumbai, Pune, Bangalore, Chennai and Kolkata								
Note: The figures of maximum and minimum are based on the number of channels (analogue and /or digital) reported across different networks of different reporting service providers having different combinations of pay, FTA and Local channels. Therefore, the sum of number of pay / FTA/Local channels column will not add up to the figures in the total column.								

Table 6.1 (b)

**Minimum and Maximum of number of channels Pay, FTA,
Local regularly carried under different modes (Analogue or
Digital or Simulcast) during quarter ending
30th September 2007**

Mode	Range	Pay Channels		FTA Channels		Local Channels	
		April- June'07	July Sep'07	April- June'07	July Sep'07	April- June'07	July Sep'07
Analogue	Max	60	63	79	77	7	7
	Min	30	30	23	20	1	1
Digital	Max	89	89	99	98	4	7
	Min	2	2	5	5	1	1
Analogue cum Digital (simulcast)	Max	36	36	39	39	2	2
	Min	18	18	1	1	1	1

Note: The figures of maximum and minimum are based on the number o of channels (analogue and /or digital) reported across different networks of different reporting service providers having different combinations of pay, FTA and Local channels. Therefore, figures in various cells above across a particular row as a combination may not be indicative of the size of the networks etc.

Table 6.2

Information on New Pay Channels and Free to Air (FTA) channels converted into Pay Channels after 26.12.2003

Information on New Pay Channels

S.No	Name of the Channel	Name of Broadcaster /Distributor	New Pay Channel
1	ZOOM	Bennett, Coleman & Co	New Pay Channel
2	Hangama TV	Star India P Ltd	New Pay channel
3	Animax India	Set Discovery P Ltd	New Pay channel
4	Discovery – Travel & Living	Set Discovery P Ltd	New Pay channel
5	Star One	Star India P Ltd	New Pay channel
6	VH 1	M/s Set Discovery Private Limited	New Pay channel
7	Pogo \$	Zee Turner Ltd	New Pay channel
8	ESPN Plus	ESPN Software India Private Limited	New Pay channel
9	Toon Disney	Star India P Ltd	New Pay channel
10	Disney Channel	Star India P Ltd	New Pay channel
11	Zee Action (Action Cinema)	Zee Turner Ltd	New Pay channel
12	Zee Premier (Premier Cinema)	Zee Turner Ltd	New Pay channel
13	Zee Classic (Classic Cinema)	Zee Turner Ltd	New Pay channel
14	Zee Select (MX)	Zee Turner Ltd	New Pay channel
15	Awaaz	Zee Turner Ltd	New Pay channel
16	Zee Business News	Zee Turner Ltd	New Pay channel
17	Channel [V] International	Star India P Ltd	New Pay channel
18	NDTV Profit	Set Discovery P Ltd	New Pay Channel
19	ZEE SPORTS	ZEE Turner Ltd	New pay Channel
20	Adithya Music\$	M/s Channel Plus	New Pay Channel
21	Teja News \$	M/s Channel Plus	New Pay Channel
22	Times Now\$	M/s Times Global Broadcasting Company Ltd	New pay channel

23	SET PIX	M/s Set Discovery Private Limited	New Pay Channel
24	NEO Sports	M/s Nimbus Sports Broadcast Private Limited	New Pay Channel
25	NEO Sports Plus	M/s Nimbus Sports Broadcast Private Limited	New Pay Channel
26	TCN Turner Classic Movies	M/s Turner International India Pvt Ltd	New Pay Channel
27	Boomerang	M/s Turner International India Pvt Ltd	New Pay Channel
28	MAA TV	M/s MAA Television Limited	New Pay Channel

- Note:-
1. The distribution of Nick, Ten Sports and HBO changed hands and were pay channels as on 26.12.03.
 2. In respect of S.No's 11-14, the names in brackets are the new names
 3. \$ Not as Pay channels in Chennai

Information on FTA channels

S.No	Name of the Channel	Name of Broadcaster /Distributor	FTA Channel turned Pay
1	UDAYA TV	Sun Network	FTA to Pay Channel
2	Ushe TV	Sun Network	FTA to Pay Channel
3	Udaya News	Sun Network	FTA to Pay Channel
4	MTV	Set Discovery P Ltd	FTA to Pay Channel
5	NDTV 24X7	Set Discovery P Ltd	FTA to Pay Channel
6	SAB TV	Set Discovery P Ltd	FTA to Pay Channel
7	ETV \$	Ms Ushodaya Enterprises Limited	FTA to Pay Channel
8	ETV 2 \$	Ms Ushodaya Enterprises Limited	FTA to Pay Channel
9	DAN Cinema	M/s Dan Television Private Limited	FTA to Pay Channel
10	DAN Music	M/s Dan Television Private Limited	FTA to Pay Channel
11	DAN Tamil OZHI	M/s Dan Television Private Limited	FTA to Pay Channel
12	EURO News	M/s Dan Television Private Limited	FTA to Pay Channel
13	TRACE TV	M/s Dan Television Private Limited	FTA to Pay Channel
14	BBC World	M/s BBC Worldwide India Private Limited	FTA to Pay Channel
15	Zee Kanada	M/s Zee Turner Limited	FTA to Pay Channel
16	Zee Telegue	M/s Zee Turner Limited	FTA to Pay Channel

17	Play TV	M/s Zee Turner Limited	FTA to Pay Channel
18	ETC Punjabi	M/s Zee Turner Limited	FTA to Pay Channel
19	ETC	M/s Zee Turner Limited	FTA to Pay Channel
20	Zee Music	M/s Zee Turner Limited	FTA to Pay Channel
21	Zee Jagran	M/s Zee Turner Limited	FTA to Pay Channel
22	Zee Smile	M/s Zee Turner Limited	FTA to Pay Channel
23	24 Ghante	M/s Zee Turner Limited	FTA to Pay Channel
24	Sahara One	M/s Sahara India TV Network	FTA to Pay Channel
25	Filmy	M/s Sahara India TV Network	FTA to Pay Channel
26	CNN IBN	Distributed by M/s Zee Turner Ltd	FTA to Pay Channel
27	SUN TV	M/s Sun TV Limited	FTA to Pay Channel
28	Udaya Movies	M/s Udaya TV Private Limited	FTA to Pay Channel
29	Udaya Vathegalu	M/s Udaya TV Private Limited	FTA to Pay Channel
30	Gemini Music	M/s Gemini TV Private Limited	FTA to Pay Channel

- Note:-
1. The distribution of Nick, Ten Sports and HBO changed hands and were pay channels as on 26.12.03.
 2. \$ Not as Pay channels in Chennai

Table 6.3**Total Advertisement Revenue**

	Quarter ending 30th June' 2007	Quarter ending 30th Sep' 2007
No of service providers Reporting	24	26
No of Radio Stations Reported for the quarter	65	72
Revenue from Advertisements / Air Time Sales (Rs Crores)	85.001	94.98

Source: FM Radio Service Providers

Table 6.4

Number of Applications received / Letters of Intent issued / Licenses Issued in respect of DTH Service Provider

	Up to 30.06.2007	Up to 30.09.2007
Total No. of Applications Received	9	10
No of Licenses issued	4	5
No of Letters of Intent Issued	NIL	1
No of Applications rejected	2	2
No of Applications under consideration	3	2

Source: Ministry of Information & Broadcasting

Table 6.5**List of Broadcasters of pay channels**

S.No	Name of the broadcaster
1	M/s Set Discovery Private Limited
2	M/s Zee Turner Limited
3	M/s ESPN Software India Private Limited
4	M/s B4U Television Network
5	M/s BBC World India Private Limited
6	M/s Star India Private Limited
7	M/s Sun TV Network Limited
8	M/s Raj Television Limited
9	M/s Ushodaya Enterprises
10	M/s Zoom
11	M/s Sahara One Media & Entertainment Limited
12	M/s MAA Television Limited
13	M/s Nimbus Sports Broadcast Limited

Table 6.7

List of Multi System Operators approved for CAS notified areas of Delhi, Kolkata, Mumbai and Chennai alongwith their service areas

S.No	Name of the MSO	Area of operation
1	M/s Barasat Cable TV Network Pvt Limited	Kolkata
2	M/s CableComm Services Private Ltd	Kolkata
3	M/s Hathway Cable & Datacom Pvt Ltd	Mumbai, Delhi, Chennai
4	M/s Home Cable Entertainment India Pvt Ltd	Mumbai
5	M/s Home Cable Network Pvt Ltd	New Delhi
6	M/s Howrah Cable Network Private Limited	Kolkata
7	M/s Indian Cable Net Company Ltd	Kolkata
8	M/s IndusInd Media & Communication Ltd	Mumbai, Delhi
9	M/s JPR Channel	Mumbai
10	M/s Kailash Cable Network Private Limited	Kolkata
11	M/s Kal Cables Private Limited	Chennai
12	M/s Kolkata Cable & Broadband Pariseva Ltd	Kolkata
13	M/s Manthan Broadband Services Pvt Limited	Kolkata
14	M/s Sanjay Cable Network Private Limited	New Delhi
15	M/s Satellite Cable TV Network	Mumbai
16	M/s Satellite Channels Private Limited	New Delhi
17	M/s Silver Line Broadband Services Pvt Ltd	Kolkata
18	M/s Siti Cable Network Limited	New Delhi, Mumbai, Kolkata
19	M/s Spectra Net Limited	New Delhi
20	M/s Sristi Cable TV Network Limited	Kolkata
21	M/s Star Broadband Service (India) Pvt Ltd	New Delhi
22	M/s Channel – III	Mumbai
23	M/s Advance Multisystem Broadband Communication Private Limited	Kolkata
24	M/s SCOD Networking Private Limited	Mumbai
25	M/s Seven Star Communications	New Delhi
26	M/s Live Satellite	Mumbai
27	Hathway Space Vision	Mumbai

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.	
Chennai		Idea Cellular	
	Aircel	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
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.	
		Aditya Birla Telecom Ltd.	
Orissa	BSNL	Reliance Infocomm	BSNL
	Reliance Telecom	Tata Teleservices	
		Bharti Airtel Ltd.	
		Dishnet Wireless Ltd.	
		Essar Spacetel Pvt. Ltd.	
Assam	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.	

Annex 2.2

Usage Pattern for GSM

Table a: MoU & 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	530	486	1015	55	179	231	409	47
Circle B	559	400	958	44	192	210	403	16
Circle C	491	426	918	35	185	215	400	10
Metro	445	448	892	58	165	214	379	38
All India	504	449	953	52	183	219	401	30

BLENDED [Postpaid + Prepaid]

Circle	O/G MOU	I/C MOU	Total MOU	O/G SMS
Circle A	217	259	476	48
Circle B	217	223	440	18
Circle C	212	234	446	12
Metro	226	265	490	43
All India	218	244	462	32

Table b: Composition of outgoing minutes of use

Circle	Local (Intra-circle)	NLD (Inter-circle)	ILD
Circle A	89.44%	10.08%	0.47%
Circle B	88.70%	10.73%	0.57%
Circle C	85.46%	14.14%	0.40%
Metro	76.56%	22.57%	0.87%
All India	86.48%	12.95%	0.57%

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

Circle	To Fixed	To Mobile		
		On-net	Off-net	Total
Circle A	8%	49%	43%	92%
Circle B	10%	58%	32%	90%
Circle C	9%	65%	26%	91%
Metro	9%	45%	46%	91%
All India	9%	53%	38%	91%

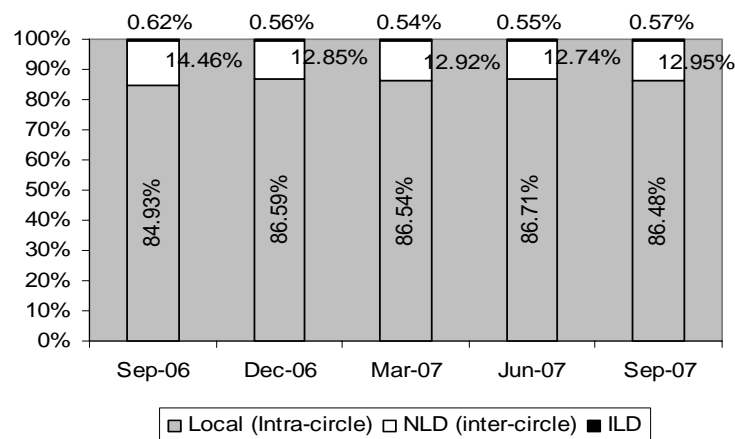
Table d: Composition of outgoing NLD (inter-circle) minutes of use

Circle	To Fixed	To Mobile
Circle A	15%	85%
Circle B	12%	88%
Circle C	14%	86%
Metro	13%	87%
All India	13%	87%

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

Circle	To Fixed	To Mobile
Circle A	9%	91%
Circle B	10%	90%
Circle C	10%	90%
Metro	10%	90%
All India	9%	91%

Chart: Composition of outgoing MoUs



Annex 2.3

Usage Pattern – CDMA

Table a: MoU & 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	481	339	820	24	142	197	339	20
Circle B	534	276	810	18	187	194	381	12
Circle C	641	244	885	10	245	226	471	7
Metro	534	301	835	23	145	174	319	20
All India	519	305	825	21	166	193	359	16

Circle	Blended			
	O/G MOU	I/C MOU	Total MOU	O/G SMS
Circle A	182	214	395	20
Circle B	218	201	419	13
Circle C	268	227	495	7
Metro	210	195	405	21
All India	207	206	413	17

Table b: Composition of outgoing minutes of use

Circle	Local (Intra-circle)	NLD (Inter-Circle)	ILD
Circle A	86.1%	13.7%	0.2%
Circle B	87.8%	11.8%	0.4%
Circle C	82.1%	17.8%	0.1%
Metro	80.2%	19.6%	0.2%
All India	85.0%	14.7%	0.3%

Table c: Outgoing MoUs per subscriber per month

Circle	Local (Intra-circle)	NLD (Inter-Circle)	ILD
Circle A	157	25	0.38
Circle B	191	26	0.87
Circle C	220	48	0.19
Metro	168	41	0.42
All India	176	30	0.55

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

Circle	To Fixed	To Mobile	To Own Network (Mobile)
Circle A	9%	91%	53%
Circle B	7%	93%	71%
Circle C	6%	94%	63%
Metro	9%	91%	68%
All India	8%	92%	64%

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

Circle	To Fixed	To Mobile
Circle A	2%	98%
Circle B	1%	99%
Circle C	6%	94%
Metro	1%	99%
All India	2%	98%

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

Circle	To Fixed	To Mobile
Circle A	8%	92%
Circle B	10%	90%
Circle C	10%	90%
Metro	6%	94%
All India	9%	91%

Annex 2.4

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

[Rs. Per min]

	Postpaid	Prepaid	Blended
Circle A	1.00	1.03	1.02
Circle B	0.83	0.95	0.93
Circle C	1.08	1.17	1.15
Metros	1.21	1.23	1.22
All India	1.03	1.04	1.04

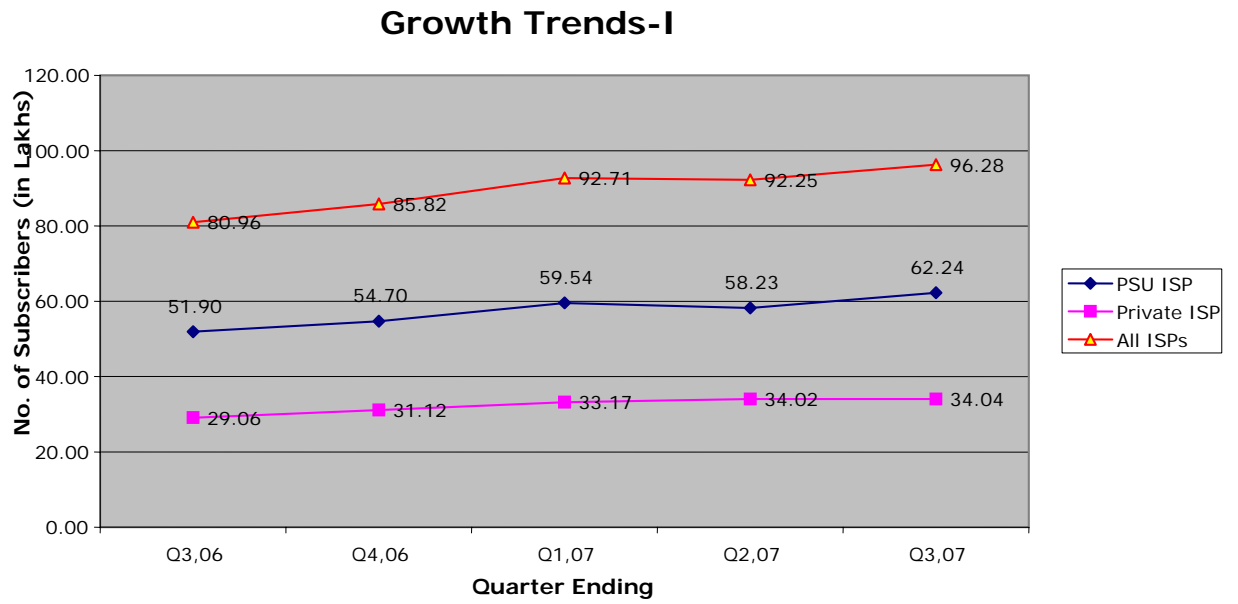
Annex 2.5

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

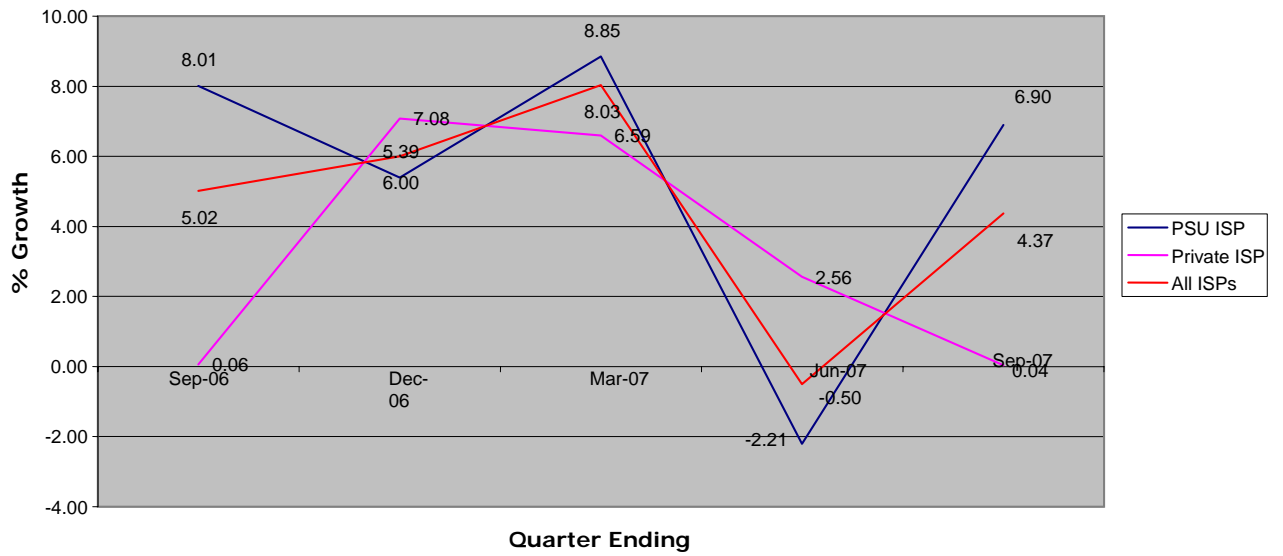
Category	[Rs. Per min]		
	Prepaid	Postpaid	Blended
Category - A	0.71	0.84	0.75
Category - B	0.56	0.74	0.60
Category - C	0.57	0.73	0.60
Metro	0.86	0.97	0.91
All India	0.66	0.85	0.71

Annex 3.1

Growth Pattern of Internet Subscribers



Growth Trends-II



Annex 3.2

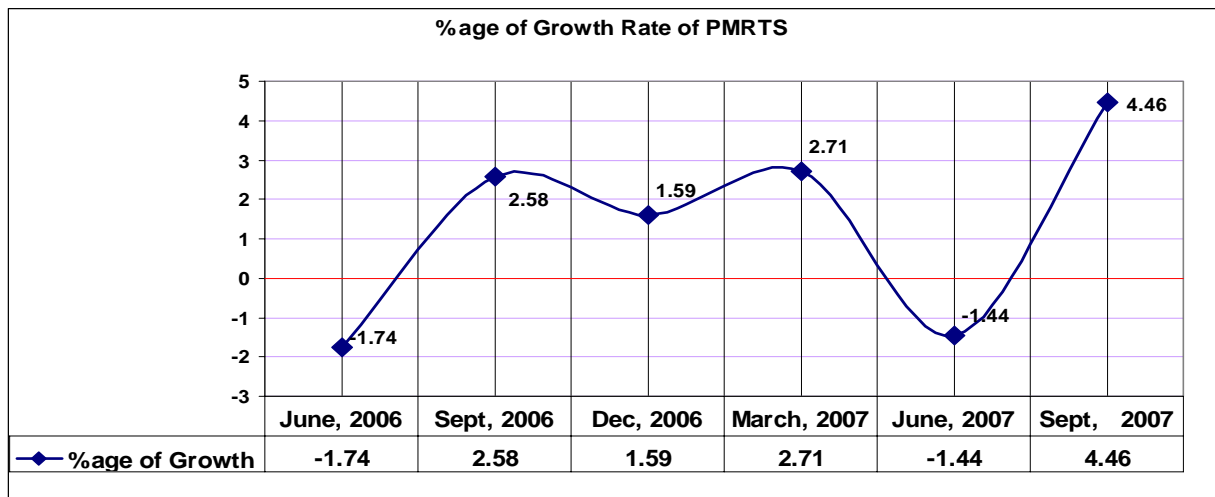
List of Internet Service Providers (ISPs) reporting Internet Telephony services

S. No.	Name of ISP
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 September 2007. Its data for previous quarter has been retained

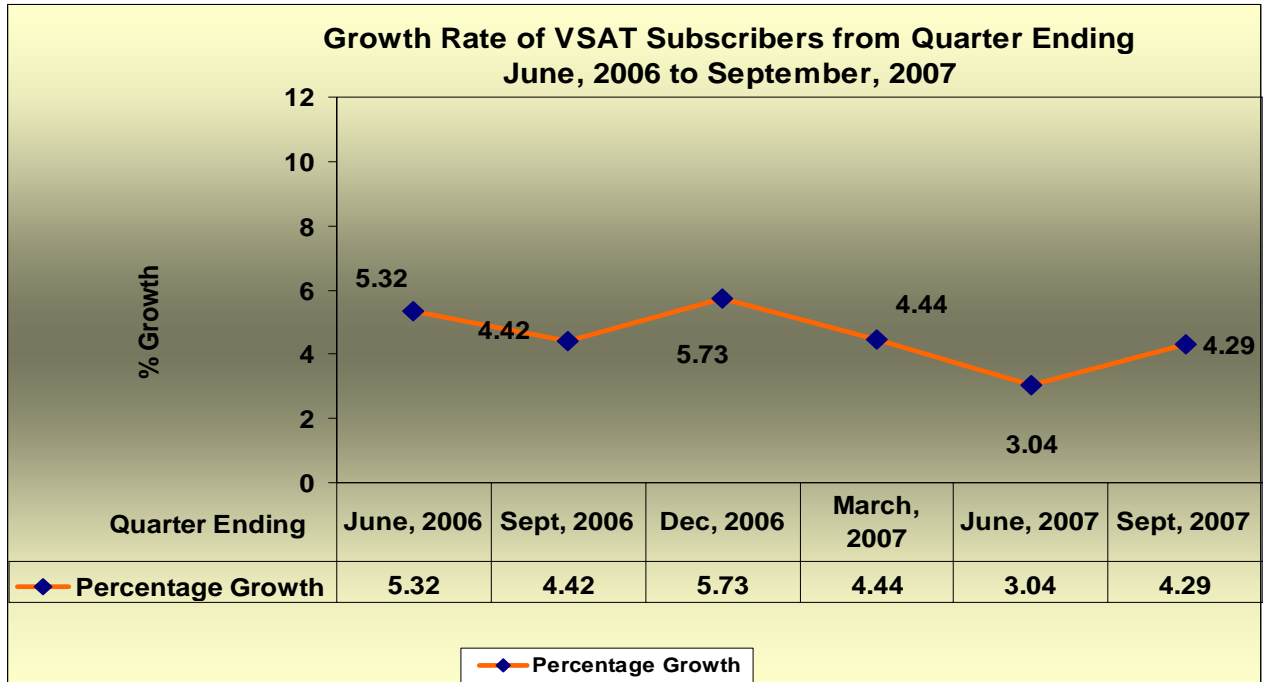
Annex 4.1

Growth Rate of PMRTS subscribers



Annex 4.2

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 (MTTR)	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			
			100% in < 7days	<5	>90%	For faults pending > 3 days to >15 days	<8 hrs	a) Junction between local exchange (2/1000)	>55%	<0.1%	100% within 60 days	95% of requests			%age of calls answered (electronically)		%age of calls answered by operator (voice to voice)	
												< 3 days	< 24 hours	< 24 hours	Within 20 sec = 80%	within 40 sec = 95%	Within 60 sec = 80%	within 90 sec = 95%
1	ANDRA PRADESH	BSNL	83.66	4.20	88.58	0	NA	NA	61.00%	0.012	100.00%	70.09	95.31	66.48	100.00	100.00	94.33	96.03
		RELIANCE	97.21	3.81	100.00	48	4.46	0.0100	NA	0.068	100.00%	100.00	96.90	99.09	99.00	100.00	95.00	100.00
		BHARTI	93.97	4.88	95.68	32	1.81	0.0047	56.84%	0.946	47.57%	82.90	94.46	97.77	NA	NA	97.93	99.01
		TATA	97.93	2.70	85.04	186	8.30	0.0001	61.00%	0.026	100.00%	68.97	100.00	92.22	100.00	100.00	51.00	65.00
2	BIHAR	BSNL	100.00	5.91	73.94	826	10.51	NA	NA	0.021	NA	100.00	95.00	91.00	NA	NA	NA	NA
		TATA	100.00	Nil	Nil	0	0.00	NA	58.57%	Nil	NA	Nil	Nil	Nil	97.00	100.00	82.00	85.00
		RELIANCE	100.00	Nil	Nil	0	0.00	0.1500	NA	Nil	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00
3	DELHI	MTNL	99.67	7.39	89.51	27914	8.01	0.0000	48.14%	0.050	100.00%	87.21	97.79	97.94	99.00	100.00	91.08	100.00
		RELIANCE	23.02	0.85	100.00	17	5.51	0.0100	NA	0.091	100.00%	100.00	96.42	98.38	99.00	100.00	95.00	100.00
		BHARTI	99.53	6.00	94.85	1162	12.00	0.0000	59.79%	0.010	24.99%	96.85	81.30	91.52	NA	NA	93.43	98.46
		TATA	100.00	13.60	19.39	2517	7.85	0.0001	60.70%	0.069	NA	98.96	100.00	96.46	100.00	100.00	82.00	86.00
4	GUJARAT	BSNL	95.57	7.90	92.44	359	12.10	NA	63.00%	0.085	100.00%	97.00	98.00	95.00	100.00	100.00	99.82	99.82
		RELIANCE	95.81	5.51	100.00	57	5.40	0.1100	NA	0.089	100.00%	100.00	96.17	98.50	99.00	100.00	95.00	100.00
		BHARTI	99.21	4.30	96.60	16	2.67	0.0272	58.87%	0.151	100.00%	96.08	99.49	99.44	NA	NA	94.71	96.41
		TATA	100.00	14.01	81.76	280	18.70	0.0000	55.25%	0.028	NA	97.37	87.07	100.00	100.00	100.00	81.00	86.00
5	CHATTISGARH	BSNL	96.31	9.50	79.66	0	14.90	NA	64.00%	0.010	100.00%	88.90	78.00	57.10	100.00	100.00	90.00	95.00
6	MP	BSNL	100.00	4.40	95.65	123	5.80	NA	66.00%	0.033	100.00%	100.00	NA	100.00	90.00	95.00	99.00	99.90
		RELIANCE	84.01	3.26	100.00	7	4.40	0.0400	NA	0.047	100.00%	100.00	NA	NA	99.00	100.00	95.00	100.00
		BHARTI	95.35	6.00	96.47	3368	7.37	0.5360	57.12%	0.018	61.74%	92.87	99.04	94.94	100.00	100.00	95.33	100.00
7	MAHARASHTRA	BSNL	87.25	8.50	87.82	297	10.50	NA	53.00%	0.037	100.00%	56.00	91.00	95.00	100.00	100.00	100.00	100.00
		RELIANCE	85.34	0.14	100.00	15	5.24	0.2300	NA	0.077	100.00%	100.00	94.84	98.05	99.00	100.00	95.00	100.00
		BHARTI	100.00	3.00	96.71	21	2.91	0.0004	57.80%	0.222	99.00%	93.75	98.80	99.50	NA	NA	95.38	96.93
		TATA	90.03	2.10	93.36	0	NA	0.0020	57.70%	0.116	100.00%	81.46	84.60	88.40	100.00	100.00	76.00	81.00

8	PUNJAB	BSNL	99.89	9.80	86.84	0	13.90	NA	67.00%	0.015	100.00%	99.00	100.00	100.00	100.00	100.00	88.00	97.33
		RELIANCE	76.03	5.24	100.00	26	4.86	0.0300	NA	0.080	100.00%	100.00	100.00	99.26	99.00	100.00	95.00	100.00
		BHARTI	98.41	5.00	95.78	56	13.00	0.0029	60.90%	0.030	63.13%	94.84	82.63	97.48	NA	NA	96.47	98.20
		TATA	100.00	0.80	76.47	0	43.90	0.0000	77.87%	Nil	NA	100.00	Nil	96.06	100.00	100.00	94.00	97.00
9	RAJASTHAN	BSNL	97.71	7.50	89.10	4297	8.50	NA	51.00%	0.021	100.00%	97.00	100.00	99.00	100.00	100.00	80.00	95.00
		RELIANCE	63.17	0.51	100.00	1	5.29	0.4100	NA	0.073	100.00%	100.00	97.56	99.30	99.00	100.00	95.00	100.00
		BHARTI	98.98	5.00	98.07	5	9.00	0.2400	50.17%	0.026	37.39%	98.46	79.85	96.09	NA	NA	96.47	87.20
		SHYAM	97.86	2.77	92.45	NA	5.03	0.0010	89.90%	0.090	100.00%	100.00	100.00	97.89	NA	NA	91.00	NA
10	TAMILNADU	BSNL	100.00	3.00	95.79	0	5.60	NA	76.00%	0.006	100.00%	100.00	100.00	100.00	99.57	99.57	99.59	99.61
		RELIANCE	100.00	1.25	100.00	1	4.90	0.0600	NA	0.015	100.00%	100.00	98.84	99.11	99.00	100.00	95.00	100.00
		BHARTI	98.73	4.96	99.56	193	7.68	0.0004	66.66%	0.569	89.00%	97.08	98.50	98.77	99.98	99.98	98.97	99.44
		TATA	100.00	0.30	100.00	0	7.68	NA	56.71%	Nil	NA	Nil	100.00	64.71	100.00	100.00	77.00	81.00
11	HARYANA	BSNL	100.00	5.80	94.93	243	7.60	NA	74.00%	0.080	100.00%	100.00	100.00	100.00	100.00	100.00	80.00	100.00
		RELIANCE	100.00	Nil	Nil	0	NA	0.0400	NA	0.000	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00
		TATA	Nil	Nil	Nil	0	NA	0.0000	100.00%	Nil	NA	Nil	Nil	Nil	100.00	100.00	92.00	96.00
		BHARTI	99.96	7.00	97.95	11	10.00	0.0023	62.80%	0.034	35.36%	100.00	82.69	94.34	NA	NA	96.47	98.20
12	KARNATAKA	BSNL	99.96	7.30	88.22	9969	10.70	NA	65.00%	0.027	100.00%	97.00	100.00	100.00	100.00	100.00	99.94	99.98
		RELIANCE	33.50	0.81	100.00	21	6.20	0.1200	NA	0.058	100.00%	100.00	95.70	99.09	99.00	100.00	95.00	100.00
		BHARTI	97.18	4.29	95.65	801	2.38	0.0017	55.69%	1.498	92.00%	67.62	99.98	92.78	97.98	98.82	85.76	92.02
		TATA	100.00	0.30	99.45	1	10.90	0.0000	84.62%	0.168	NA	37.50	94.82	94.82	100.00	100.00	79.00	86.00
13	A&N	BSNL	57.76	5.90	82.67	0	5.80	NA	48.00%	0.006	100.00%	100.00	100.00	100.00	NA	NA	NA	NA
14	ASSAM	BSNL	87.46	7.80	76.30	66	10.00	NA	55.00%	0.047	NA	100.00	93.29	82.00	97.00	99.00	90.67	96.67
15	CHENNAI	BSNL	99.53	3.40	93.19	1	9.30	NA	81.00%	0.010	100.00%	81.05	100.00	100.00	100.00	100.00	98.58	99.27
		RELIANCE	96.81	2.17	100.00	5	4.36	0.0600	NA	0.029	100.00%	100.00	97.32	99.21	99.00	100.00	95.00	100.00
		TATA	100.00	0.60	83.33	126	20.40	NA	56.95%	Nil	NA	100.00	100.00	85.27	100.00	100.00	77.00	81.00
16	H P	RELIANCE	12.09	Nil	Nil	0	Nil	1.0400	NA	0.000	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00
		BSNL	99.57	9.10	88.71	2233	7.60	NA	76.00%	0.011	100.00%	Nil	91.00	97.00	NA	NA	NA	NA
17	JHARKHAND	BSNL	95.90	5.20	87.29	118	12.60	NA	53.00%	0.080	NA	99.00	99.00	99.00	NA	NA	NA	NA
18	J & K	BSNL	NA	9.60	87.69	0	6.30	NA	52.00%	0.073	NA	Nil	99.00	98.00	NA	NA	NA	NA
19	KERALA	BSNL	100.00	9.20	81.08	2268	30.10	NA	70.00%	0.007	100.00%	90.00	88.00	99.00	100.00	100.00	81.83	100.00
		BHARTI	97.43	4.00	98.30	16	2.83	0.0002	66.94%	1.847	58.75%	100.00	99.80	95.89	NA	NA	96.52	98.54
		TATA	100.00	Nil	Nil	0	0.00	NA	58.08%	Nil	NA	100.00	Nil	96.06	100.00	100.00	73.00	77.00
		RELIANCE	35.86	0.77	100.00	1	6.87	0.0100	NA	0.008	100.00%	100.00	95.79	98.60	99.00	100.00	95.00	100.00

20	KOLKATA	BHARTI	98.81	7.00	92.28	112	14.00	0.0000	66.44%	0.077	8.23%	78.46	79.70	96.85	96.47	98.20	96.47	98.20
		RELIANCE	46.39	1.22	100.00	6	4.40	0.0000	NA	0.090	100.00%	100.00	96.19	98.33	99.00	100.00	95.00	100.00
		TATA	97.67	Nil	Nil	0	0.00	NA	70.00%	Nil	NA	Nil	Nil	100.00	100.00	100.00	74.00	84.00
		BSNL	97.48	6.00	88.69	12516	9.60	NA	61.00%	0.079	100.00%	95.99	98.07	99.22	100.00	100.00	100.00	100.00
21	MUMBAI	TATA	98.86	2.30	96.56	0	NA	0.0000	57.70%	0.164	100.00%	85.51	100.00	96.89	100.00	100.00	67.00	68.00
		BHARTI	97.67	3.00	94.50	84	2.83	0.0030	64.21%	0.246	100.00%	95.39	99.28	99.57	NA	NA	96.47	97.72
		RELIANCE	14.47	0.47	99.93	20	5.32	0.0000	NA	0.087	100.00%	100.00	95.62	97.85	99.00	100.00	95.00	100.00
		MTNL	98.60	13.09	75.87	209112	27.80	0.0000	55.25%	0.080	99.19%	46.32	71.52	78.75	100.00	100.00	82.34	84.96
22	NE-I	BSNL	65.91	5.60	90.67	0	30.10	NA	56.00%	0.010	100.00%	74.00	89.00	65.00	NA	NA	NA	NA
23	NE-II	BSNL	100.00	6.20	91.95	88462	10.00	NA	60.00%	0.010	100.00%	84.00	100.00	100.00	88.63	96.77	93.33	96.00
24	ORISSA	BSNL	100.00	5.60	92.94	88462	8.10	NA	57.00%	0.010	100.00%	100.00	99.00	94.00	100.00	100.00	100.00	100.00
		RELIANCE	12.21	Nil	NA	0	NA	0.0400	NA	0.000	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00
25	UP-E	BSNL	98.57	6.30	93.24	2525	6.60	NA	74.00%	NA	100.00%	96.00	97.00	100.00	100.00	100.00	99.93	99.67
		BHARTI	95.40	10.00	83.75	288	29.00	0.0000	61.87%	0.027	21.64%	72.19	82.95	96.56	NA	NA	96.47	98.20
		RELIANCE	87.20	7.74	100.00	25	4.42	0.6000	NA	0.091	100.00%	100.00	98.19	98.03	99.00	100.00	95.00	100.00
26	UP-W	BSNL	93.90	7.70	90.62	583	7.90	NA	66.00%	0.017	100.00%	95.11	98.77	98.96	100.00	100.00	92.00	97.67
		BHARTI	99.62	10.00	87.73	80	24.00	0.0000	60.12%	0.029	29.56%	82.21	82.57	96.23	NA	NA	96.47	87.20
		RELIANCE	100.00	Nil	Nil	0	Nil	0.2000	NA	0.000	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00
27	UTTRANCHAL	BSNL	98.67	7.00	92.66	0	8.10	NA	74.00%	NA	100.00%	97.00	NA	NA	79.33	81.33	80.00	95.00
28	WEST BENGAL	BSNL	100.00	6.20	85.75	538	10.60	NA	69.00%	0.032	100.00%	100.00	100.00	100.00	95.33	96.67	95.33	97.33
		RELIANCE	42.02	Nil	Nil	0	Nil	1.0900	NA	0.000	100.00%	Nil	Nil	Nil	99.00	100.00	95.00	100.00

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	
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		
	'A' Circle														
I	Maharashtra														
1	Vodafone Essar	1.40	99.85%	13.50	0.65%	1.36%	1.21%	97.71%	100.00%	100.00%	99.82%	100.00%	0.079%	100.00%	15 days
2	IDEA Cellular	1.30	98.91%	9.18	0.62%	0.73%	1.16%	99.11%	99.09%	99.18%	97.70%	98.00%	0.016%	100.00%	30 days
3	BSNL	0.00	98.70%	8.70	0.80%	1.40%	1.70%	96.90%	100.00%	100.00%	68.00%	75.00%	0.048%	100.00%	30 days
4	Bharti Airtel Limited	21.25	97.49%	11.11	0.77%	1.10%	0.01%	96.50%	100.00%	100.00%	98.63%	99.42%	0.010%	100.00%	30 days
5	Reliance Comm	0.38	99.50%	4.11	0.00%	0.00%	0.87%	99.07%	99.50%	99.50%	83.55%	89.67%	0.070%	100.00%	30 days
6	Tata Teleservices	9.01	98.21%	13.00	0.00%	0.62%	0.69%	96.36%	100.00%	100.00%	76.00%	81.30%	0.100%	100.00%	30 days
ii	Gujarat														
7	Vodafone Essar	17.24	98.27%	9.55	0.18%	0.84%	1.11%	95.58%	100.00%	100.00%	91.35%	98.32%	0.036%	100.00%	15 days
8	IDEA Cellular	4.16	98.91%	13.11	0.99%	0.53%	1.86%	98.57%	100.00%	100.00%	80.00%	90.70%	0.075%	100.00%	30 days
9	BSNL	9.00	99.40%	2.28	0.65%	1.84%	1.52%	97.00%	100.00%	100.00%	85.00%	96.00%	0.050%	100.00%	30 days
10	Bharti Airtel Limited	0.00	95.42%	13.20	0.68%	0.91%	0.01%	97.45%	100.00%	100.00%	96.51%	98.53%	0.060%	100.00%	30 days
11	Reliance Comm	0.44	99.45%	3.90	0.00%	0.00%	1.06%	99.61%	99.50%	99.50%	69.53%	76.96%	0.070%	100.00%	30 days
12	Tata Teleservices	10.37	98.82%	5.00	0.00%	0.01%	0.48%	98.21%	100.00%	100.00%	81.10%	86.00%	0.040%	100.00%	30 days

iii	Andhara Pradesh															
13	IDEA Cellular	0.00	99.98%	7.00	0.19%	1.07%	0.59%	99.43%	100.00%	100.00%	98.66%	99.00%	0.030%	100.00%	30 days	
14	Bharti Airtel Limited	17.01	97.01%	2.27	1.00%	1.61%	1.12%	98.31%	100.00%	100.00%	93.00%	95.00%	0.010%	100.00%	30 days	
15	BSNL	19.53	99.23%	7.07	0.51%	2.70%	1.71%	98.26%	99.90%	100.00%	79.37%	85.86%	0.010%	100.00%	01 day	
16	Vodafone Essar	18.34	97.16%	9.00	0.13%	0.23%	1.70%	98.00%	100.00%	100.00%	86.10%	95.89%	0.029%	100.00%	15 days	
17	Reliance Comm	0.38	99.60%	3.88	0.00%	0.00%	0.64%	99.31%	99.50%	99.50%	78.21%	85.47%	0.080%	100.00%	30 days	
18	Tata Teleservices	0.00	98.16%	6.90	0.00%	0.14%	0.59%	96.07%	100.00%	100.00%	51.30%	65.30%	0.050%	100.00%	30 days	
iv	Karnataka															
19	Bharti Airtel Limited	10.20	99.47%	5.50	0.72%	0.79%	0.02%	95.10%	100.00%	100.00%	90.47%	95.17%	0.000%	100.00%	30 days	
20	Spice Comm.	21.30	98.22%	8.34	0.62%	1.62%	1.10%	99.06%	100.00%	100.00%	94.20%	98.70%	0.019%	100.00%	30 days	
21	BSNL	7.22	97.85%	8.01	0.65%	1.82%	1.19%	97.67%	100.00%	100.00%	90.00%	93.43%	0.040%	100.00%	07 days	
22	Vodafone Essar	22.91	98.35%	10.24	0.11%	1.43%	1.62%	98.41%	100.00%	100.00%	90.46%	96.53%	0.096%	100.00%	15 days	
23	Reliance Comm	0.33	99.45%	3.99	0.00%	0.00%	0.57%	99.15%	99.50%	99.50%	65.04%	71.42%	0.090%	100.00%	30 days	
24	Tata Teleservices	15.33	98.05%	9.50	0.00%	0.07%	0.92%	98.47%	100.00%	100.00%	79.50%	85.50%	0.040%	100.00%	30 days	
v	Tamil Nadu															
25	Vodafone Essar	20.77	99.20%	12.36	0.27%	1.85%	1.45%	99.30%	100.00%	100.00%	89.28%	100.00%	0.077%	100.00%	15 days	
26	Aircel	13.11	98.59%	11.11	0.43%	1.29%	0.68%	93.53%	85.00%	100.00%	69.00%	93.00%	0.003%	100.00%	30 days	
27	BSNL	0.00	96.00%	10.00	0.90%	1.70%	1.00%	96.00%	100.00%	100.00%	93.00%	98.00%	0.000%	100.00%	Nil	
28	Bharti Airtel Limited	11.70	96.22%	3.22	0.70%	0.25%	0.99%	98.86%	100.00%	100.00%	93.76%	96.18%	0.080%	100.00%	30 days	
29	Reliance Comm	0.45	99.45%	3.96	0.00%	0.00%	0.78%	98.91%	99.50%	99.50%	80.00%	83.50%	0.080%	100.00%	30 days	
30	Tata Teleservices	11.19	99.77%	13.17	0.00%	0.23%	0.87%	95.96%	100.00%	100.00%	77.00%	80.70%	0.020%	100.00%	30 days	
	B' Circle															
vi	Kerala															
31	IDEA Cellular	22.23	99.65%	12.43	0.47%	0.85%	0.50%	98.03%	98.00%	100.00%	85.00%	96.00%	0.077%	100.00%	30 days	
32	Vodafone Essar	14.31	97.01%	14.04	0.94%	1.25%	1.89%	98.89%	100.00%	100.00%	96.13%	99.99%	0.005%	100.00%	15 days	
33	BSNL	23.13	99.60%	4.13	0.22%	1.74%	1.50%	98.20%	100.00%	100.00%	63.65%	68.65%	0.001%	100.00%	30 days	
34	Bharti Airtel Limited	23.13	99.50%	12.48	0.02%	0.13%	1.53%	98.57%	100.00%	100.00%	86.72%	90.60%	0.020%	100.00%	30 days	
35	Tata Teleservices	0.00	99.53%	9.94	0.00%	0.00%	0.59%	98.46%	100.00%	100.00%	72.60%	76.60%	0.040%	100.00%	30 days	
36	Reliance Comm	0.00	99.33%	3.77	0.00%	0.00%	0.73%	99.29%	99.50%	99.50%	87.58%	92.07%	0.040%	100.00%	30 days	
vii	Punjab															
37	Spice Comm.	16.44	98.68%	9.50	0.18%	1.05%	1.12%	96.82%	94.00%	98.00%	89.00%	96.30%	0.001%	100.00%	15 days	
38	HFCL - CDMA	4.50	97.17%	13.20	0.00%	0.00%	0.64%	98.25%	100.00%	100.00%	98.00%	98.00%	0.003%	100.00%	30 days	
39	Bharti Airtel Limited	13.15	99.35%	3.50	0.12%	0.22%	1.48%	98.46%	100.00%	100.00%	98.58%	99.54%	0.090%	100.00%	30 days	
40	Vodafone Essar	3.29	99.46%	10.00	0.05%	0.04%	1.44%	97.46%	96.36%	96.36%	98.36%	99.70%	0.034%	100.00%	15 days	
41	BSNL	1.06	96.80%	3.87	0.09%	1.53%	2.65%	99.60%	92.00%	94.00%	93.00%	95.00%	0.000%	100.00%	01 day	
42	Reliance Comm	0.16	99.40%	4.03	0.00%	0.00%	0.89%	99.23%	99.50%	99.50%	65.28%	77.79%	0.090%	100.00%	30 days	
43	Tata Teleservices	0.00	98.56%	5.00	0.00%	0.00%	1.05%	98.18%	100.00%	100.00%	94.30%	97.20%	0.050%	100.00%	30 days	
viii	Haryana															
44	IDEA Cellular	14.32	99.98%	9.40	0.36%	0.79%	1.38%	99.16%	100.00%	100.00%	93.00%	98.00%	0.087%	100.00%	30 days	
45	Vodafone Essar	3.50	99.95%	9.00	0.33%	0.66%	1.97%	96.74%	100.00%	100.00%	99.16%	99.66%	0.090%	100.00%	15 days	
46	BSNL	13.26	95.70%	4.10	0.80%	1.80%	2.80%	96.80%	100.00%	100.00%	80.00%	95.00%	0.010%	100.00%	30 days	
47	Bharti Airtel Limited	11.10	99.33%	2.90	0.26%	0.13%	1.08%	97.84%	100.00%	100.00%	91.16%	94.95%	0.020%	100.00%	30 days	
48	Reliance Comm	0.35	99.37%	4.11	0.00%	0.00%	1.19%	98.83%	99.50%	99.50%	65.28%	77.79%	0.080%	100.00%	30 days	
49	Tata Teleservices	3.53	98.23%	10.00	0.00%	0.02%	0.91%	99.23%	100.00%	100.00%	91.80%	96.30%	0.070%	100.00%	30 days	

ix	UP - W															
50	Vodafone Essar	0.00	99.84%	9.20	0.70%	1.79%	2.23%	99.32%	99.97%	99.98%	75.24%	82.76%	0.069%	100.00%	15 days	
51	IDEA Cellular	21.48	99.72%	11.84	0.72%	0.58%	1.32%	97.70%	100.00%	100.00%	85.00%	96.00%	0.048%	100.00%	30 days	
52	BSNL	0.00	99.00%	14.00	0.76%	1.82%	2.71%	98.30%	99.83%	99.95%	77.66%	90.00%	0.001%	100.00%	07 days	
53	Bharti Airtel Limited	21.82	97.03%	14.50	0.87%	1.14%	0.01%	97.82%	100.00%	100.00%	95.00%	97.00%	0.100%	100.00%	30 days	
54	Reliance Comm	0.44	99.64%	4.01	0.00%	0.00%	1.18%	98.83%	99.50%	99.50%	39.97%	42.18%	0.090%	100.00%	30 days	
55	Tata Teleservices	18.03	97.60%	14.09	0.00%	0.32%	1.34%	98.51%	100.00%	100.00%	95.10%	96.60%	0.070%	100.00%	30 days	
x	UP - E															
56	Bharti Airtel Limited	22.53	96.16%	14.60	0.77%	1.65%	0.02%	99.67%	100.00%	100.00%	93.84%	95.82%	0.030%	100.00%	30 days	
57	Vodafone Essar	0.00	96.45%	9.00	0.24%	1.84%	2.10%	97.00%	100.00%	100.00%	100.00%	100.00%	0.000%	100.00%	15 days	
58	IDEA Cellular	17.41	98.30%	12.00	0.19%	1.68%	1.21%	98.20%	100.00%	100.00%	96.00%	98.00%	0.089%	100.00%	30 days	
59	BSNL	21.00	98.00%	7.07	0.90%	1.80%	2.10%	98.26%	94.00%	99.80%	79.01%	86.13%	0.060%	100.00%	30 days	
60	Reliance Comm	0.34	99.57%	4.00	0.00%	0.00%	1.01%	99.34%	99.50%	99.50%	39.97%	42.18%	0.070%	100.00%	30 days	
61	Tata Teleservices	7.06	98.29%	9.27	0.00%	0.00%	1.33%	98.95%	100.00%	100.00%	94.90%	96.20%	0.090%	100.00%	30 days	
xi	Rajasthan															
62	Vodafone Essar	17.51	96.62%	9.67	0.88%	1.64%	1.40%	96.13%	97.69%	97.70%	95.83%	98.31%	0.097%	100.00%	15 days	
63	BSNL	22.28	97.20%	5.80	0.30%	1.30%	2.40%	97.20%	99.40%	99.80%	55.30%	68.30%	0.080%	100.00%	30 days	
64	IDEA Cellular	23.36	99.37%	4.23	0.58%	0.45%	1.60%	98.75%	N/Ap	N/Ap	95.00%	98.00%	0.090%	100.00%	30 days	
65	Bharti Airtel Limited	23.07	97.70%	9.00	1.70%	2.30%	1.51%	96.51%	100.00%	100.00%	98.91%	99.29%	0.010%	100.00%	30 days	
66	Reliance Comm	0.63	99.52%	3.95	0.00%	0.00%	0.97%	99.41%	99.50%	99.50%	46.64%	51.26%	0.080%	100.00%	30 days	
67	Tata Teleservices	6.13	98.10%	3.93	0.00%	0.28%	1.06%	98.03%	100.00%	100.00%	84.40%	87.30%	0.030%	100.00%	30 days	
68	Shyam Telelink Ltd	6.33	98.65%	6.00	0.50%	0.60%	0.84%	98.00%	94.00%	NA	91.30%	NA	0.090%	100.00%	30 days	
xii	Madhya Pradesh															
69	IDEA Cellular	20.14	98.52%	8.44	0.70%	1.07%	1.97%	99.08%	100.00%	100.00%	99.57%	99.89%	0.004%	100.00%	30 days	
70	Reliance Telecom	23.07	100.00%	7.60	0.38%	1.70%	1.44%	95.87%	100.00%	100.00%	97.00%	100.00%	0.010%	100.00%	01 day	
71	BSNL	1.16	97.68%	9.23	0.29%	1.39%	1.48%	96.88%	100.00%	100.00%	68.00%	75.00%	0.000%	100.00%	21 days	
72	Bharti Airtel Limited	23.50	97.58%	13.84	0.32%	0.68%	0.01%	98.40%	100.00%	100.00%	94.00%	96.00%	0.010%	100.00%	30 days	
73	Reliance Comm	0.38	99.55%	3.76	0.00%	0.00%	1.08%	99.15%	99.50%	99.50%	60.82%	71.68%	0.080%	100.00%	30 days	
74	Tata Teleservices	7.10	98.18%	9.00	0.00%	0.00%	0.75%	99.11%	100.00%	100.00%	84.20%	87.40%	0.050%	100.00%	30 days	
xiii	West Bengal															
75	Bharti Airtel Limited	0.00	96.74%	7.00	0.98%	1.92%	2.07%	98.59%	100.00%	100.00%	95.38%	97.09%	0.060%	100.00%	30 days	
76	Reliance Telecom	18.43	99.00%	8.35	0.57%	1.67%	1.42%	98.33%	100.00%	100.00%	100.00%	100.00%	0.000%	100.00%	01 day	
77	BSNL	0.00	98.36%	6.00	0.67%	1.67%	2.58%	98.64%	92.00%	98.00%	82.00%	96.00%	0.050%	100.00%	07 days	
78	Tata Teleservices	23.23	97.86%	9.40	0.00%	0.06%	1.25%	98.03%	90.60%	100.00%	70.30%	82.60%	0.040%	100.00%	30 days	
79	Reliance Comm	0.43	99.55%	3.92	0.00%	0.00%	1.18%	99.55%	99.50%	99.50%	51.14%	57.70%	0.030%	100.00%	30 days	
80	Vodafone Essar	0.00	99.96%	14.40	0.32%	0.59%	1.54%	96.80%	100.00%	100.00%	89.90%	97.07%	0.360%	100.00%	15 days	
81	Dishnet	0.00	98.70%	8.00	0.98%	0.92%	0.86%	99.40%	100.00%	100.00%	64.28%	64.28%	0.000%	100.00%	30 days	

	C' Circle															
xiv	Himachal Pradesh															
82	Bharti Airtel Limited	7.75	98.07%	3.75	0.16%	0.95%	1.56%	97.04%	100.00%	100.00%	98.60%	99.30%	0.060%	100.00%	30 days	
83	IDEA Cellular	8.37	99.54%	8.65	0.73%	0.84%	2.20%	98.20%	N/Ap	N/Ap	97.00%	100.00%	Nil	N/Ap	N/Ap	
84	Reliance Telecom	22.21	99.00%	6.21	0.47%	2.27%	1.41%	95.98%	N/Ap	N/Ap	85.00%	100.00%	Nil	N/Ap	N/Ap	
85	BSNL	0.00	97.20%	5.40	0.90%	1.90%	2.90%	97.30%	99.90%	99.90%	46.00%	60.90%	0.000%	100.00%	01 day	
86	Reliance Comm	0.63	99.77%	4.18	0.00%	0.00%	1.23%	99.28%	99.50%	99.50%	65.28%	77.79%	0.050%	100.00%	30 days	
87	Tata Teleservices	6.10	98.13%	12.00	0.00%	0.04%	0.71%	96.80%	100.00%	100.00%	93.10%	95.70%	0.080%	100.00%	30 days	
88	Dishnet	0.00	98.44%	8.00	0.97%	1.00%	0.86%	99.32%	100.00%	100.00%	100.00%	100.00%	NA	NA	NA	
xv	Bihar															
89	Reliance Telecom	18.70	97.00%	7.34	0.89%	1.96%	1.51%	95.83%	N/Ap	N/Ap	NA	80.00%	0.000%	N/Ap	N/Ap	
90	BSNL	22.00	98.80%	13.00	0.30%	0.80%	1.20%	98.00%	88.00%	96.00%	86.00%	95.00%	0.030%	99.78%	30 days	
91	Reliance Comm	0.43	99.67%	3.02	0.00%	0.00%	0.91%	97.87%	99.50%	99.50%	51.14%	57.70%	0.040%	100.00%	30 days	
92	Bharti Airtel Limited	0.00	97.08%	9.50	3.50%	3.37%	0.02%	97.76%	99.00%	99.00%	97.33%	98.25%	0.100%	100.00%	30 days	
93	Tata Teleservices	7.45	97.53%	11.46	0.00%	0.36%	1.16%	97.13%	96.90%	100.00%	81.70%	85.30%	0.040%	100.00%	30 days	
94	Dishnet	0.00	98.01%	8.00	0.80%	0.88%	0.78%	99.00%	100.00%	100.00%	49.14%	49.14%	Nil	N/Ap	N/Ap	
xvi	Orissa															
95	Reliance Telecom	20.31	99.17%	7.14	0.59%	1.86%	2.11%	98.12%	NA	NA	95.67%	100.00%	0.000%	100.00%	NA	
96	BSNL	7.00	97.30%	11.00	0.98%	1.97%	2.05%	98.00%	96.00%	97.00%	95.00%	97.00%	0.040%	100.00%	Nil	
97	Bharti Airtel Limited	0.00	98.01%	8.20	0.50%	1.58%	1.75%	98.11%	100.00%	100.00%	93.00%	96.00%	0.000%	100.00%	30 days	
98	Reliance Comm	0.45	99.22%	4.01	0.00%	0.00%	1.02%	99.76%	99.50%	99.50%	60.82%	71.68%	0.100%	100.00%	30 days	
99	Tata Teleservices	10.02	98.08%	12.63	0.00%	0.23%	1.09%	98.16%	95.90%	100.00%	85.40%	88.70%	0.020%	100.00%	30 days	
100	Dishnet	0.00	98.77%	8.00	0.96%	0.96%	0.73%	99.20%	100.00%	100.00%	95.00%	95.00%	0.015%	100.00%	30 days	
xvii	Assam															
101	Bharti Airtel Limited	2.25	98.10%	9.00	0.33%	0.76%	0.02%	98.54%	100.00%	100.00%	95.00%	100.00%	0.060%	100.00%	30 days	
102	BSNL	3.40	98.00%	11.00	0.80%	1.70%	2.70%	98.00%	94.00%	99.00%	81.00%	95.00%	0.060%	100.00%	30 days	
103	Reliance Telecom	19.96	97.80%	5.21	1.07%	3.86%	1.33%	95.20%	NA	NA	95.00%	95.00%	0.020%	100.00%	NA	
104	Dishnet	0.00	98.22%	8.00	0.81%	0.85%	0.75%	98.97%	100.00%	100.00%	53.62%	53.62%	0.001%	100.00%	30 days	
xviii	J & K															
105	BSNL	0.00	98.00%	12.00	0.97%	1.80%	2.40%	96.00%	82.00%	96.00%	82.00%	96.00%	0.050%	100.00%	27 days	
106	Bharti Airtel Limited	21.50	98.49%	4.30	0.66%	0.34%	1.63%	95.88%	99.00%	100.00%	98.39%	99.74%	0.060%	100.00%	30 days	
107	Dishnet	0.00	97.79%	8.00	0.97%	0.98%	0.64%	99.36%	100.00%	100.00%	97.77%	97.77%	0.009%	100.00%	NA	
xix	NE															
108	BSNL	10.00	96.00%	12.00	0.60%	1.10%	1.60%	97.00%	86.00%	96.00%	88.00%	96.00%	0.000%	100.00%	30 days	
109	Bharti Airtel Limited	1.16	98.34%	9.00	0.59%	0.91%	0.02%	98.29%	100.00%	100.00%	95.00%	100.00%	0.110%	100.00%	30 days	
110	Reliance Telecom	14.76	97.30%	7.52	0.96%	2.78%	1.98%	95.50%	N/Ap	N/Ap	80.00%	100.00%	0.000%	100.00%	NA	
111	Dishnet	0.00	98.49%	8.00	0.75%	0.79%	0.72%	98.96%	100.00%	100.00%	98.66%	98.66%	0.000%	100.00%	N/Ap	

METRO																
xx	Delhi															
112	Bharti Airtel Limited	0.00	98.74%	13.10	0.22%	0.16%	0.01%	97.32%	100.00%	100.00%	96.78%	98.31%	0.070%	100.00%	30 days	
113	Vodafone Essar	0.00	99.12%	7.48	0.01%	0.02%	0.87%	97.70%	98.74%	98.75%	83.65%	96.28%	0.008%	100.00%	15 days	
114	MTNL - GSM (i)	0.00	95.45%	14.80	0.25%	1.41%	2.37%	95.47%	92.67%	95.67%	86.00%	91.40%	0.090%	100.00%	30 days	
114	MTNL - CDMA (ii)	0.00	97.73%	NA	NA	0.09%	1.22%	NA	NA	NA	98.93%	99.28%	0.080%	97.33%	30 days	
115	IDEA Cellular	0.00	98.98%	9.00	0.05%	1.12%	0.83%	98.17%	100.00%	100.00%	92.00%	98.00%	0.051%	100.00%	30 days	
116	Tata Teleservices	0.00	97.90%	10.50	0.00%	0.06%	0.98%	95.53%	100.00%	100.00%	82.40%	86.50%	0.050%	100.00%	30 days	
117	Reliance Comm	0.00	99.45%	3.98	0.00%	0.00%	0.51%	98.97%	99.50%	99.50%	79.36%	84.07%	0.080%	100.00%	30 days	
xxi	Mumbai															
118	BPL Mobile	11.11	99.44%	11.03	0.67%	0.67%	1.48%	98.14%	83.14%	NA	85.23%	96.00%	0.070%	100.00%	30 days	
119	Vodafone Essar	0.00	95.30%	7.10	0.72%	1.56%	1.99%	95.26%	98.80%	98.58%	89.74%	96.31%	0.001%	100.00%	15 days	
120	MTNL - GSM (i)	0.00	96.46%	9.13	0.83%	1.79%	1.76%	96.35%	84.00%	97.00%	84.00%	96.00%	0.042%	100.00%	30 days	
120	MTNL - CDMA (ii)	0.00	97.68%	12.10	1.40%	0.09%	1.20%	96.25%	NA	NA	NA	NA	NA	NA	NA	
121	Bharti Airtel Limited	0.00	95.48%	3.34	0.43%	0.48%	1.18%	96.00%	100.00%	100.00%	98.38%	99.37%	0.010%	100.00%	30 days	
122	Reliance Comm	0.00	99.60%	4.09	0.00%	0.00%	0.82%	99.87%	99.50%	99.50%	79.25%	87.03%	0.070%	100.00%	30 days	
123	Tata Teleservices	0.00	98.46%	12.70	0.00%	0.56%	0.39%	97.54%	100.00%	100.00%	66.90%	68.20%	0.020%	100.00%	30 days	
xxii	Chennai															
124	Aircel Cellular Ltd	0.00	98.10%	13.80	0.33%	1.90%	0.59%	95.10%	95.00%	100.00%	85.00%	100.00%	0.100%	100.00%	30 days	
125	Vodafone Essar	0.00	99.61%	11.65	0.02%	0.96%	1.21%	99.55%	100.00%	100.00%	88.82%	96.69%	0.049%	100.00%	15 days	
126	BSNL	0.00	98.50%	10.00	0.65%	1.50%	0.30%	100.00%	100.00%	100.00%	97.00%	99.00%	0.010%	100.00%	30 days	
127	Reliance Comm	0.00	99.59%	3.86	0.00%	0.00%	0.78%	99.45%	99.50%	99.50%	80.00%	83.50%	0.090%	100.00%	30 days	
128	Tata Teleservices	0.00	99.74%	12.84	0.00%	0.00%	0.77%	98.26%	100.00%	100.00%	77.00%	80.70%	0.060%	100.00%	30 days	
129	Bharti Airtel Limited *															
xxiii	Kolkatta															
130	Bharti Airtel Limited	0.00	96.72%	7.00	0.60%	0.59%	0.97%	96.73%	100.00%	100.00%	94.24%	96.18%	0.070%	100.00%	30 days	
131	Vodafone Essar	0.00	99.93%	14.50	0.38%	1.37%	0.87%	97.99%	100.00%	100.00%	88.44%	96.34%	0.050%	100.00%	15 days	
132	BSNL	0.00	98.00%	9.10	0.86%	1.32%	0.76%	98.23%	95.83%	99.00%	81.30%	91.30%	0.041%	100.00%	30 days	
133	Reliable Internet. Ser.	0.00	99.33%	8.15	0.03%	0.08%	1.19%	98.13%	N/Ap	N/Ap	94.00%	100.00%	Nil	N/Ap	N/Ap	
134	Tata Teleservices	1.20	97.80%	9.17	0.00%	0.40%	0.64%	97.19%	92.00%	100.00%	73.60%	84.40%	0.020%	100.00%	30 days	
135	Reliance Comm	0.00	99.60%	3.99	0.00%	0.00%	0.68%	99.52%	99.50%	99.50%	51.14%	57.70%	0.090%	100.00%	30 days	
*																
Service Providers not meeting the benchmarks NA=Data not available 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	Service Accessibility			ISP Node unavailability			
				Time to Access	Probability of Accessing the ISP Node (in %)					
				1 st Attempt	2 nd Attempt	3 rd Attempt				
	TRAI Benchmarks		6 hrs	30 sec	80	90	99	30 min	1 : 100	3 days
1	Bharat Sanchar Nigam Ltd.		0-4 hrs	15-30 sec	90	98	99	Nil	1:100	0-4 hrs
2	MTNL	Delhi	Online	30 sec	99.67	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.)		5 min (online)	30-35 sec	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	**	Not provided by BSO	10-15 min
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 BSO	35 hrs
9	Hathway Cable & Data Pvt. Ltd.*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	Asianet Satellite Communications Ltd.		Immediate	10 sec	98	99	100	<1 Hr	1 in 500	1.5 hrs
11	HCL Inffinet Ltd.		3 min	24 sec	99.6	99.5	99.4	25 min	2:200	17-19 hrs
12	HFCL Infotel Ltd.		N.A.	30 sec	98	99	100	Nil	1 in 200	4.72 hrs
13	Punj Llyod (Spectra Net Ltd.)*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3 hrs
14	Shyam Internet Services Ltd.		5 min	20 sec	98.5	99.5	99.99	15 min	1%	1.5 hrs
15	Beam Cable System Pvt. Ltd.*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	4 hrs
16	Hughes Communications India Ltd.*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	148.5 min
17	Vodafone Essar Gujarat Ltd. (Fascel Ltd.)*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-
18	Ortel Communication Ltd.		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2 hrs
19	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)		Nil	25 sec	99	-	Nil	N.R.	1:1000	1 hr
20	Broadband Pacenet (I) Pvt. Ltd.*		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3 hrs

NOTE:

*are not providing Internet Access on Dial Up. The Internet Access is provided through Cable TV/OFC (Hathway Cable & Data Pvt. Ltd.), Mobile via WAP setup (Fascel Ltd), on VSAT (Hughes Communications), OFC (Spectra Net Ltd), and Cable TV (Beam cable, Broadband Pacenet (I) Pvt. Ltd.). These ISPs have been included in Top 20 on the basis of Total Number of Subscribers.

** VSNL has informed that out of 72 POP's across India, 22 POP's were down during the quarter for a period of 772.42 hours, % uptime 99.51%. There was also planned outage of 2 hrs. during the period which is not considered in POP downtime. VSNL has been asked to submit the explanation for this long interruption.

The parameters, which are below the benchmarks, are indicated in the bold and shaded. Information regarding QoS of ISP has been received from all top 20 ISPs. It is observed that most of the ISPs are able to meet the benchmarks, barring one or two cases.

Annex 5.4

Quality of Service Performance for Broadband Service Providers

Sl. No.	Service Operators	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) (Enclose MRTG) <90%	Broadband 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)
		1.2	2.2	2.3	2.4	3.3	3.4	3.5	4.2	4.3	5.2	5.4	5.7	5.8	6.3	7.0	8.1	8.2	8.3
		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	BSNL																		
	All India	100.00%	91.00%	99.00%	190	0.30%	100.00%	99.40%	80.91%	94.55%	0	1	55.58%	82.50%	99.93%	0.36%	49	219	N/Ap
2	MTNL																		
2.1	Delhi	68.24%	73.77%	94.21%	4538	0.09%	99.92%	100.00%	98.15%	98.96%	0	7	88.00%	95.00%	99.96%	1.00%	120	350	N/Ap
2.2	Mumbai	80.94%	75.52%	94.09%	0	0.04%	100.00%	NR	39.55%	NR	0	0	81.35%	80.00%	90.00%	1.00%	70	300	N/Ap
3	Bharti Airtel Ltd.																		
3.1	Andhra Pradesh	98.62%	98.57%	98.81%	32	1.26%	100.00%	48.00%	97.00%	99.00%	3	0	90.00%	94.67%	99.98%	0.00%	34	240	N/Ap
3.2	Delhi	99.83%	92.68%	97.11%	864	0.02%	NR	22.47%	78.48%	83.41%	5	0	88.00%	100.00%	99.95%	0.22%	20	76	N/Ap
3.3	Gujarat	99.80%	95.80%	99.50%	0	NR	100.00%	100.00%	92.00%	94.00%	1	N/Ap	N/Ap	99.00%	99.90%	0.00%	154	797	N/Ap
3.4	Haryana	99.50%	96.65%	97.51%	3	0.01%	NR	42.73%	83.72%	88.55%	0	0	70.00%	100.00%	100.00%	0.00%	57	68	N/Ap
3.5	Karnataka	98.40%	93.30%	96.60%	806	1.97%	100.00%	92.00%	78.00%	87.00%	3	0	87.00%	94.00%	99.99%	0.00%	26	270	N/Ap
3.6	Kerala	100.00%	97.43%	98.53%	26	2.45%	100.00%	59.00%	95.00%	98.00%	0	NR	61.00%	86.53%	99.99%	0.00%	47	260	N/Ap
3.7	Kolkata	98.98%	91.18%	94.17%	117	0.05%	NR	14.27%	83.72%	88.55%	0	0	74.86%	100.00%	99.56%	0.00%	63	128	N/Ap
3.8	Madhya Pradesh & CG	98.30%	93.10%	98.60%	28	NR	100.00%	62.00%	98.60%	100.00%	0	1	96.00%	98.67%	99.96%	0.00%	80	315	N/Ap
3.9	Maharashtra	95.75%	93.00%	98.00%	3	NR	100.00%	99.00%	93.00%	95.00%	3	NR	NR	99.00%	100.00%	0.00%	154	797	N/Ap
3.11	Mumbai	98.80%	92.30%	98.10%	6	NR	100.00%	100.00%	92.00%	94.00%	N/Ap	0	86.00%	99.00%	100.00%	0.00%	150	744	N/Ap
3.12	Punjab	99.49%	92.24%	97.35%	54	0.02%	NR	65.43%	83.72%	88.55%	0	0	70.00%	100.00%	99.99%	0.00%	32	32	N/Ap

3.13	Rajasthan	100.00%	97.49%	99.12%	11	0.01%	NR	31.83%	83.72%	88.55%	0	0	52.00%	100.00%	99.98%	0.00%	45	159	N/Ap
3.14	Tamilnadu	96.91%	96.70%	97.67%	193	0.72%	100.00%	89.00%	97.00%	99.00%	5	0	79.96%	87.64%	99.96%	0.00%	29	269	N/Ap
3.15	UP - East	99.77%	90.63%	95.76%	58	0.02%	NR	27.63%	83.72%	88.55%	0	0	95.00%	100.00%	99.91%	0.00%	50	60	N/Ap
3.16	UP - West	99.64%	95.18%	97.03%	7	0.01%	NR	33.00%	83.72%	88.55%	0	0	74.00%	100.00%	99.99%	0.00%	32	70	N/Ap
4	VSNL																		
4.1	Central Region	99.00%	82.00%	93.40%	71888	1.14%	100.00%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	99.60%	0.00%	49	247	N/Ap
4.2	East	100.00%	84.70%	94.30%		0.97%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	98.64%	0.00%	49	247	N/Ap
4.3	North	97.00%	76.80%	91.40%		1.98%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	98.08%	0.00%	49	247	N/Ap
4.4	South 1	99.00%	80.40%	93.00%		1.67%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	99.47%	0.00%	49	247	N/Ap
4.5	South 2	98.00%	80.60%	93.10%		1.49%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	99.63%	0.00%	49	247	N/Ap
4.6	South 3	99.00%	64.40%	77.70%		3.86%	100.00%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	97.42%	0.00%	49	247	N/Ap
4.7	South 4	99.00%	95.90%	99.60%		0.84%	100.00%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	99.69%	0.00%	49	247	N/Ap
4.8	West 1	97.00%	78.00%	91.60%		1.80%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	98.07%	0.00%	49	247	N/Ap
4.9	West 2	99.00%	82.70%	93.30%		1.65%	99.99%	100.00%	77.00%	82.00%	0	0	67.41%	83.00%	99.00%	0.00%	49	247	N/Ap
5	Hathway																		
5.1	Andhra Pradesh	97.00%	96.00%	99.00%	35	1.48%	100.00%	100.00%	85.00%	NR	DNF	DNF	DNF	85.00%	98.28%	2.00%	80	350	N/Ap
5.2	Chennai	97.00%	91.90%	97.00%	38	1.38%	100.00%	100.00%	85.00%	NR	DNF	DNF	DNF	85.00%	98.60%	2.00%	80	350	N/Ap
5.3	Delhi	100.00%	90.00%	99.00%	0	1.37%	100.00%	100.00%	85.00%	NR	DNF	DNF	DNF	85.00%	99.50%	2.00%	100	320	N/Ap
5.4	Gujarat	97.00%	92.00%	100.00%	NR	0.00%	N/Ap	N/Ap	68.30%	80.00%	DNF	NR	NR	85.00%	100.00%	2.00%	100	350	N/Ap
5.5	Haryana	100.00%	90.00%	99.00%	0	NR	NR	NR	85.00%	NR	NR	NR	NR	85.00%	99.50%	NR	100	320	N/Ap
5.6	Karnataka	100.00%	90.00%	98.00%	75	1.52%	100.00%	100.00%	85.00%	NR	DNF	DNF	DNF	85.00%	NR	NR	80	350	N/Ap
5.7	Maharashtra	96.00%	92.00%	99.00%	164	1.68%	99.00%	99.00%	70.00%	85.00%	DNF	DNF	DNF	85.00%	100.00%	2.00%	80	350	N/Ap
5.8	Punjab	100.00%	90.00%	99.00%	0	0.53%	100.00%	100.00%	70.00%	NR	NR	NR	NR	85.00%	NR	NR	100	320	N/Ap
5.9	Tamilnadu	100.00%	99.00%	100.00%	NR	N/Ap	N/Ap	N/Ap	85.00%	NR	NR	NR	NR	85.00%	99.27%	2.00%	100	320	N/Ap
5.10	Uttar Pradesh	100.00%	90.00%	99.00%	0	1.00%	100.00%	100.00%	85.00%	NR	NR	NR	NR	85.00%	NR	NR	100	320	N/Ap
6	YOU Telecom India Pvt. Ltd.																		
6.1	All India	100.00%	99.28%	99.79%	182	0.22%	100.00%	100.00%	N/Ap	N/Ap	0	0	78.86%	96.00%	98.30%	1.00%	40	300	N/Ap
6.2	Andhra Pradesh	100.00%	99.58%	99.69%	27	0.10%	100.00%	100.00%	N/Ap	N/Ap	0	0	76.08%	96.60%	98.30%	1.00%	40	300	N/Ap
6.3	Gujarat	100.00%	99.08%	99.70%	95	0.20%	100.00%	100.00%	N/Ap	N/Ap	0	0	80.15%	96.00%	98.20%	1.00%	40	300	N/Ap
6.4	Haryana	100.00%	99.87%	99.95%	0	0.30%	100.00%	100.00%	N/Ap	N/Ap	0	0	80.00%	96.30%	99.40%	1.00%	40	300	N/Ap
6.5	Karnataka	100.00%	99.72%	99.90%	4	0.10%	100.00%	100.00%	N/Ap	N/Ap	0	0	77.27%	95.60%	98.10%	1.00%	40	300	N/Ap
6.6	Maharashtra	100.00%	99.14%	99.81%	56	0.26%	100.00%	100.00%	N/Ap	N/Ap	0	0	79.00%	95.00%	98.20%	1.00%	40	300	N/Ap
6.7	Tamilnadu	100.00%	99.82%	99.95%	0	0.50%	100.00%	100.00%	N/Ap	N/Ap	0	0	77.27%	95.30%	99.10%	1.00%	40	300	N/Ap

7	SIFY																		
	All India	100.00%	87.00%	94.00%	108	0.00%	N/Ap	N/Ap	86.00%	94.00%	34	NR	79.00%	95.00%	100.00%	1.00%	45	300	N/Ap
8	Reliance																		
	All India	75.00%	95.00%	100.00%	0	0.50%	100.00%	100.00%	98.80%	99.20%	0	7	63.00%	NR	99.49%	0.14%	23	268	N/Ap
9	Asianet																		
	All India	94.00%	78.00%	91.00%	NR	2.00%	94.00%	85.00%	72.00%	84.00%	0	1	87.00%	90.00%	99.00%	1.00%	50	280	600
10	HFCL Infotel Lt.d																		
	Punjab	99.75%	99.86%	100.00%	0	1.63%	97.00%	100.00%	77.00%	83.00%	0	0	89.25%	100.00%	99.93%	0.00%	40	300	N/Ap
11	Beam Cable System Pvt. Ltd.																		
	Andhra Pradesh	98.00%	96.00%	99.00%	828	0.87%	100.00%	100.00%	67.00%	86.00%	0	0	75.00%	80.00%	100.00%	1.00%	100	300	N/Ap
12	Ortel																		
	Orissa	100.00%	90.30%	100.00%	0	0.14%	100.00%	100.00%	97.00%	98.00%	0	0	82.30%	DNF	99.80%	1.00%	40	150	N/Ap
13	Tata Teleservices (Maharashtra) Ltd.																		
	Maharashtra & Goa	100.00%	78.27%	96.12%	NR	0.45%	100.00%	NR	87.00%	86.60%	0	0	87.62%	90.00%	100.00%	1.00%	11	292	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																			