



## **Telecom Regulatory Authority of India**

### **The Indian Telecom Services Performance Indicators** April - June, 2016

New Delhi, India  
1<sup>st</sup> December, 2016

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## Snapshot

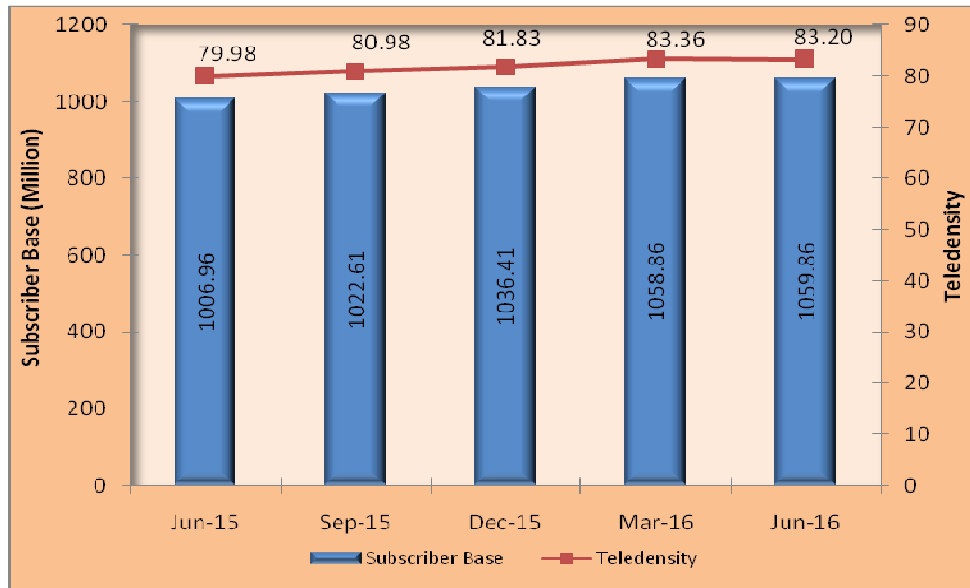
<b>(Data As on Q.E. 30<sup>th</sup> June, 2016)</b>	
<b>Telecom Subscribers (Wireless + Wireline)</b>	
Total Subscribers	1,059.86 Million
% change over the previous quarter	0.09%
Urban Subscribers	609.45 Million
Rural Subscribers	450.41 Million
Market share of Private Operators	89.54%
Market share of PSU Operators	10.46%
Teledensity	83.20
Urban Teledensity	153.22
Rural Teledensity	51.41
<b>Wireless Subscribers</b>	
Total Wireless Subscribers	1,035.12 Million
% change over the previous quarter	0.14%
Urban Subscribers	588.78 Million
Rural Subscribers	446.33 Million
GSM Subscribers	996.66 Million
CDMA Subscribers	38.46 Million
Market share of Private Operators	91.00%
Market share of PSU Operators	9.00%
Teledensity	81.26
Urban Teledensity	148.03
Rural Teledensity	50.95
<b>Wireline Subscribers</b>	
Total Wireline Subscribers	24.74 Million
% change over the previous quarter	-1.90%
Urban Subscribers	20.66 Million
Rural Subscribers	4.08 Million
Market share of Private Operators	28.53%
Market share of PSU Operators	71.47%
Teledensity	1.94
Urban Teledensity	5.20
Rural Teledensity	0.47
No. of Village Public Telephones (VPT)	5,86,774
No. of Public Call Office (PCO)	5,25,514
<b>Telecom Financial Data</b>	
Gross Revenue (GR) during the quarter	₹ 73,344 Crore
% change in GR over the previous quarter	7.33%
Adjusted Gross Revenue (AGR) during the quarter	₹ 53,383 Crore
% change in AGR over the previous quarter	10.34%
Share of Public sector undertakings in Access AGR	8.24%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 141

<b>Internet/Broadband Subscribers</b>	
Total Internet Subscribers	350.48 Million
% change over previous quarter	2.28%
Narrowband subscribers	188.42 Million
Broadband subscribers	162.06 Million
Wired Internet Subscribers	20.76 Million
Wireless Internet Subscribers	329.72 Million
Urban Internet Subscribers	236.77 Million
Rural Internet Subscribers	113.71 Million
Total Internet Subscribers per 100 population	27.51
Urban Internet Subscribers per 100 population	59.53
Rural Internet Subscribers per 100 population	12.98
<b>Broadcasting &amp; Cable Services</b>	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	892
Number of Pay TV Channels	275
Number of private FM Radio Stations	245
Number of Pay Subscribers Registered with Private DTH Operators	91.53 Million
Number of Pay Subscribers Active with Private DTH Operators	60.50 Million
Number of Community Radio Stations licenced (GOPA signed)	243
Number of Operational Community Radio Stations	196
Number of pay DTH Operators	6
Number of teleports permitted in India	90
<b>Revenue &amp; Usage Parameters</b>	
Monthly ARPU GSM Full Mobility Service	₹ 126
Monthly ARPU CDMA Full Mobility Service	₹ 99
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service	377 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	228 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	271 Million
<b>Data Usage of Mobile Users</b>	
Data Usage per subscriber per month - GSM	142.82 MB
Data Usage per subscriber per month - CDMA	413.40 MB
Data Usage per subscriber per month – Total(GSM+CDMA)	153.82 MB
Average outgo per MB data for GSM	₹ 0.20
Average outgo per MB data for CDMA	₹ 0.09

## Executive Summary

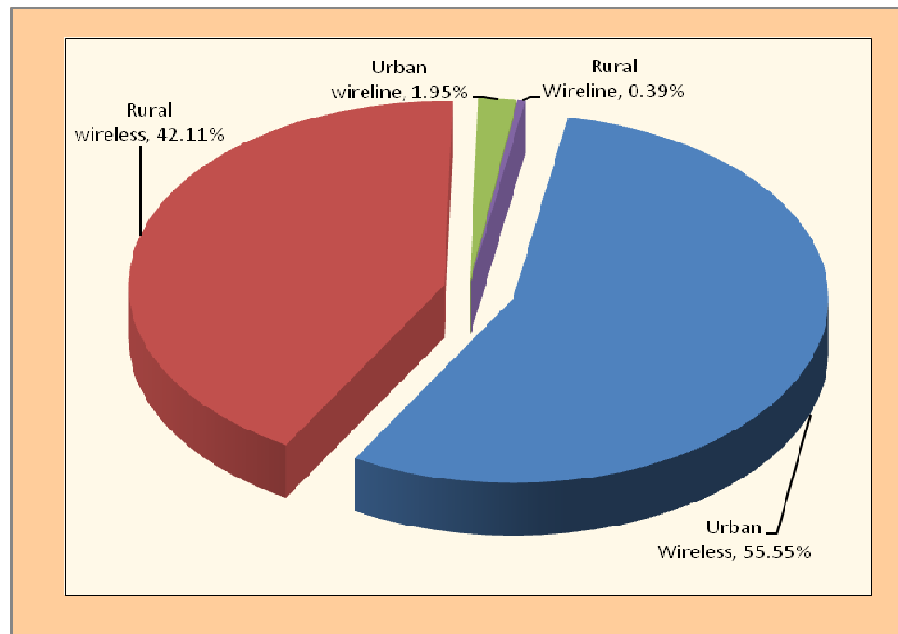
1. The number of telephone subscribers in India increased from 1,058.86 million at the end of Mar-16 to 1,059.86 million at the end of Jun-16, registering a growth of 0.09% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 5.25% over the same quarter of last year. The overall Teledensity in India declined from 83.36 as on 31<sup>st</sup> March, 2016 to 83.20 as on 30<sup>th</sup> June, 2016.

### Trends in Telephone subscribers and Teledensity in India



2. Subscription in Urban Areas declined from 609.69 million at the end of Mar-16 to 609.45 million at the end of Jun-16, and Urban Teledensity also declined from 154.01 to 153.22. However, Rural subscription increased from 449.17 million to 450.41 million and Rural Teledensity also increased from 51.37 to 51.41 during the same period.
3. Out of the total subscription, the share of Rural subscription increased from 42.42% at the end of Mar-16 to 42.50% at the end of Jun-16.

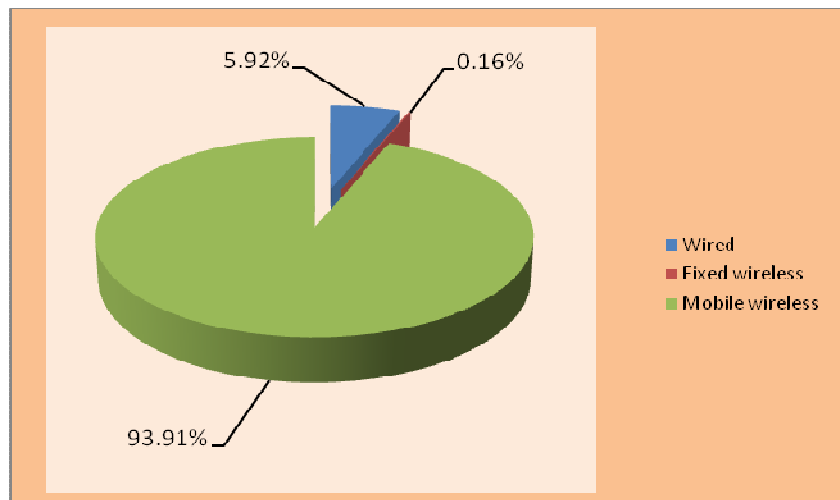
### **Composition of Telephone Subscribers**



4. With a net addition of 1.49 million subscribers during the quarter, total wireless (GSM+CDMA) subscriber base increased from 1,033.63 million at the end of Mar-16 to 1,035.12 million at the end of Jun-16, registering a growth rate of 0.14% over the previous quarter. The year-on-year (Y-O-Y) growth rate of wireless subscribers for Jun-16 is 5.54%.
5. Wireless Tele-density declined from 81.38 at the end of Mar-16 to 81.26 at the end of Jun-16.
6. Wireline subscriber base further declined from 25.22 million at the end of Mar-16 to 24.74 million at the end of Jun-16, registering a quarterly decline rate of 1.90%. The year-on-year (Y-O-Y) decline rate in wireline subscribers for Jun-16 is 5.38%.
7. Wireline Teledensity declined from 1.99 at the end of Mar-16 to 1.94 at the end of Jun-16.

8. Total number of Internet subscribers has increased from 342.65 million at the end of Mar-16 to 350.48 million at the end of Jun-16, registering a quarterly growth rate of 2.28%. Out of 350.48 million, Wired Internet subscribers are 20.76 million and Wireless Internet subscribers are 329.72 million.

**Composition of internet subscription**



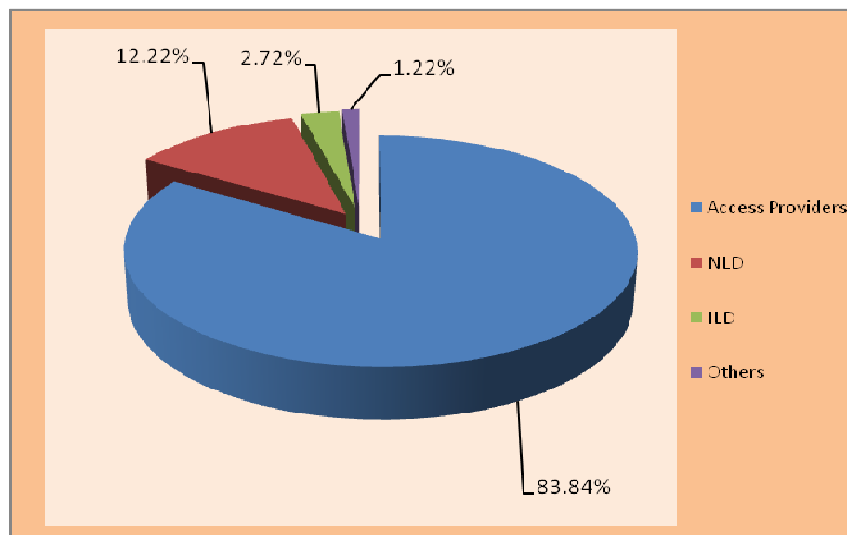
9. The Internet subscriber base of 350.48 million at the end of Jun-16 is comprised of Broadband Internet subscriber base of 162.06 million and Narrowband Internet subscriber base of 188.42 million.
10. The broadband Internet subscriber base grew by 8.22% from 149.75 million at the end of Mar-16 to 162.06 million at the end of Jun-16. On the other hand, the narrowband Internet subscriber base declined by 2.32% from 192.90 million at the end of Mar-16 to 188.42 million at the end of Jun-16.
11. Monthly Average Revenue Per User (ARPU) for GSM service increased by 0.96%, from ₹125 in QE Mar-16 to ₹126 in QE Jun-16. Monthly ARPU for GSM service grew by 0.09% on Y-O-Y in this quarter.



12. Prepaid ARPU for GSM service per month increased from ₹107 in QE Mar-16 to ₹108 in QE Jun-16, and Postpaid ARPU per month increased from ₹488 in QE Mar-16 to ₹495 in QE Jun-16.
13. On an all India average, the overall MOU per subscriber per month for GSM service declined by 1.07% from 381 for QE Mar-16 to 377 in QE Jun-16.
14. Prepaid MOU per subscriber for GSM service declined from 356 in QE Mar-16 to 351 in QE Jun-16, and postpaid MOU declined from 892 in QE Mar-16 to 889 in QE Jun-16.
15. Monthly ARPU for CDMA full mobility service declined by 4.86%, from ₹103.50 in QE Mar-16 to ₹98.51 in QE Jun-16. Monthly ARPU for CDMA full mobility service declined by 7.95% on Y-O-Y basis in this quarter.
16. The total MOU per subscriber per month for CDMA full mobility service declined by 12.54%, from 260 in QE Mar-16 to 228 in QE Jun-16. The outgoing MOUs declined from 150 in QE Mar-16 to 130 in QE Jun-16, and incoming MOUs also declined from 110 in QE Mar-16 to 98 in QE Jun-16.
17. Gross Revenue (GR) and Adjusted Gross Revenue (AGR) of Telecom Service Sector for the QE Jun-16 has been ₹73,344 Crore and ₹53,383 Crore respectively. GR and AGR increased by 7.33% and 10.34% respectively in QE Jun-16 as compared to previous quarter.
18. The year-on-year (Y-O-Y) growth in GR and AGR over the same quarter in last year has been 12.79% and 13.26% respectively.

19. Pass-through charges increased from ₹19,956 Crore in Q.E. Mar-16 to ₹19,961 in Q.E. Jun-16. The quarterly and the year-on-year (Y-O-Y) growth rates of pass-through charges for QE Jun-16 are 0.03% and 11.54% respectively.
20. The License Fee increased from ₹3,872 Crore for the QE Mar-16 to ₹4,314 Crore for the QE Jun-16. The quarterly and the year-on-year (Y-O-Y) growth rates of license fee are 11.43% and 14.05% respectively in this quarter.
21. Access services contributed 83.84% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee and Spectrum Usage Charges(SUC) increased by 9.20%, 12.21%, 13.55% and 12.42% respectively whereas, Pass Through Charges declined by 0.67% in QE Jun-16.
22. Monthly Average Revenue per User (ARPU) for Access Services based on AGR increased from ₹126.91 in QE Mar-16 to ₹140.88 in QE Jun-16.

**Composition of Adjusted Gross Revenue**



23. The performance of 2G wireless service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given as below:

<b>Parameters showing improvement in QoS</b>	<b>Parameters showing deterioration in QoS</b>
<ul style="list-style-type: none"> <li>• Worst affected BTSs due to downtime</li> <li>• Call Set-up Success Rate (within licensee's own network)</li> <li>• TCH Congestion</li> <li>• Call Drop Rate</li> <li>• Worst affected cells having more than 3% TCH drop (call drop) rate</li> <li>• Connections with good voice quality</li> <li>• Metering and billing credibility – Prepaid</li> <li>• Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints</li> <li>• %age of calls answered by the operators (voice to voice) within 90 sec</li> </ul>	<ul style="list-style-type: none"> <li>• Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)</li> <li>• Accessibility of call centre/customer care</li> <li>• %age requests for Termination/ Closure of service complied within 7 days</li> <li>• Time taken for refund of deposits after closures</li> </ul>

24. The performance of 3G wireless service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given below:

<b>Parameters showing improvement in QoS</b>	<b>Parameters showing deterioration in QoS</b>
<ul style="list-style-type: none"> <li>• Worst affected BTSs and Node-B's due to downtime (%age)</li> <li>• Call Set-up Success Rate (within licensee's own network)</li> <li>• SDCCH/Paging Channel and RRC Congestion (%age)</li> <li>• TCH and Circuit Switched RAB Congestion (%age)</li> <li>• Call Drop and and Circuit Switched Voice Drop Rate (%age)</li> <li>• Worst affected cells having more than 3% TCH drop (call drop) rate and Circuit Switched Voice Drop Rate:-CBBH</li> </ul>	<ul style="list-style-type: none"> <li>• Connections with good voice quality and Circuit Switched Voice Quality (CSV Quality)</li> <li>• Point of Interconnection (POI) Congestion</li> </ul>

25. The performance of wireline service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given below:

<b>Parameters showing improvement in QoS</b>	<b>Parameters showing deterioration in QoS</b>
<ul style="list-style-type: none"> <li>• Termination/ Closure of service 100% within 7 days</li> </ul>	<ul style="list-style-type: none"> <li>• Resolution of billing/ charging/ credit &amp; validity complaints (98% within 4 weeks)</li> <li>• %age of calls answered by the operators (voice to voice) within 90 sec</li> </ul>

26. A total number of 892 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking, as on 30<sup>th</sup> June, 2016.

27. As reported by broadcasters, there were 275 pay channels at the quarter ending of June, 2016 as compared to 263 pay channels for the previous quarter. During the quarter, as per the reporting, sixteen new pay channels were commenced and four Pay channels were converted to FTA channels.
28. Since introduction in the year 2003, Indian DTH services have displayed a phenomenal growth. DTH has attained a registered subscriber base of around 91.53 million (including 60.50 million active subscribers). As on June 2016, there are 6 pay DTH service providers catering to this subscriber base. This is besides the viewership of the free DTH services of Doordarshan.
29. Apart from the Radio Stations operated by All India Radio, Prasar Bharati – a public broadcaster, there are 245 operational private FM Radio stations and 84 existing cities with operational FM radio channels as on 30<sup>th</sup> June, 2016. This is as per the information available on the website of MIB.
30. As per data received from MIB, as on 30<sup>th</sup> June, 2016, out of the 243 community radio licenses issued so far, 196 stations are operational.

## Trends at a Glance

### A. Access Service (Wireline + Wireless)

	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	QE Jun 2016	%age change over Jun-2015	%age change over Sep-2015	%age change over Dec-2015	%age change over Mar-2016
						(12 months)	(9 months)	(6 months)	(3 months)
<b>1) Subscriber Base (in million)</b>									
Wireline	26.15	25.95	25.52	25.22	24.74	-5.38%	-4.66%	-3.03%	-1.90%
Wireless	980.81	996.66	1010.89	1033.63	1035.12	5.54%	3.86%	2.40%	0.14%
<b>Total</b>	<b>1006.96</b>	<b>1022.61</b>	<b>1036.41</b>	<b>1058.86</b>	<b>1059.86</b>	<b>5.25%</b>	<b>3.64%</b>	<b>2.26%</b>	<b>0.09%</b>
Rural	422.75	423.61	435.75	449.17	450.41	6.54%	6.33%	3.36%	0.28%
Urban	584.21	599.01	600.66	609.69	609.45	4.32%	1.74%	1.46%	-0.04%
<b>2) Teledensity</b>									
Wireline	2.08	2.06	2.01	1.99	1.94	-6.48%	-5.49%	-3.59%	-2.19%
Wireless	77.90	78.93	79.82	81.38	81.26	4.31%	2.95%	1.80%	-0.14%
<b>Total</b>	<b>79.98</b>	<b>80.98</b>	<b>81.83</b>	<b>83.36</b>	<b>83.20</b>	<b>4.03%</b>	<b>2.74%</b>	<b>1.67%</b>	<b>-0.19%</b>
Rural	48.66	48.66	49.94	51.37	51.41	5.65%	5.66%	2.94%	0.07%
Urban	149.70	152.76	152.45	154.01	153.22	2.36%	0.31%	0.51%	-0.51%
<b>3) Service Provider wise Subscribers Base (in Million)</b>									
Bharti	234.11	238.74	246.89	254.90	259.47	10.83%	8.68%	5.10%	1.79%
Vodafone	185.47	188.26	193.69	198.04	199.49	7.56%	5.97%	2.99%	0.74%
Idea	162.08	166.56	171.91	175.07	176.23	8.73%	5.81%	2.51%	0.66%
Reliance	111.08	111.55	102.05	103.58	103.74	11.20%	8.81%	6.25%	2.61%
BSNL	93.29	95.34	97.64	101.11	99.88	-10.08%	-10.46%	-2.13%	-3.57%
Aircel	83.05	84.00	85.63	87.09	88.93	7.09%	5.88%	3.86%	2.12%
Tata	63.26	63.73	62.43	61.82	61.10	-3.41%	-4.12%	-2.13%	-1.16%
Telenor	48.13	47.78	50.70	52.45	53.09	10.31%	11.10%	4.71%	1.21%
Sistema	8.75	8.42	8.06	7.75	7.65	-12.66%	-9.18%	-5.19%	-1.34%
Videocon	7.61	7.90	6.96	6.56	7.07	-0.13%	-0.76%	-0.81%	0.13%
MTNL	7.08	7.13	7.13	7.06	3.19	5.09%	-0.29%	-3.24%	-6.62%
Quadrant	3.04	3.20	3.30	3.42	0.00	-	-	-	-
<b>Total</b>	<b>1006.96</b>	<b>1022.61</b>	<b>1036.41</b>	<b>1058.86</b>	<b>1059.86</b>	<b>5.25%</b>	<b>3.64%</b>	<b>2.26%</b>	<b>0.09%</b>

## B. Internet Services

	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	QE Jun 2016	%age change over Jun-2015	%age change over Sep-2015	%age change over Dec-2015	%age change over Mar-2016
						(12 months)	(9 months)	(6 months)	(3 months)
<b>1) Subscriber's Base (in million)</b>									
<b>A. Wired Internet Subscribers</b>	19.21	19.60	19.98	20.44	20.76	8.10%	5.90%	3.92%	1.55%
<b>B. Wireless Internet Subscribers</b>	300.22	305.35	311.69	322.21	329.72	9.83%	7.98%	5.79%	2.33%
i. Mobile Wireless (Mobile & Dongle)	299.73	304.85	311.16	321.66	329.14	9.81%	7.97%	5.78%	2.33%
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.48	0.49	0.52	0.55	0.58	19.06%	16.32%	9.69%	4.14%
<b>Total Internet Subscribers</b>	<b>319.42</b>	<b>324.95</b>	<b>331.66</b>	<b>342.65</b>	<b>350.48</b>	<b>9.72%</b>	<b>7.86%</b>	<b>5.67%</b>	<b>2.28%</b>
<b>2) No. of Internet Subs per 100 Population</b>	25.37	25.73	26.19	26.98	27.51	8.44%	6.91%	5.06%	1.99%

## C. Usage and Revenue for Full Mobility Services

<b>1. Traffic (MOU) (minutes of use/subscriber/month)</b>									
i) GSM	388	374	376	381	377	-3.05%	0.61%	0.26%	-1.07%
ii) CDMA	263	256	252	260	228	-13.43%	-11.21%	-9.51%	-12.42%
<b>2) ARPU (Rs./sub/ month)</b>									
i) GSM	125.93	122.17	122.71	124.85	126.05	0.09%	3.17%	2.72%	0.96%
ii) CDMA	107.02	106.21	103.33	103.54	98.51	-7.95%	-7.25%	-4.66%	-4.86%

## D. Telecom Financial Data

	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	QE Jun 2016	%age change over Jun-2015	%age change over Sep-2015	%age change over Dec-2015	%age change over Mar-2016
						(12 months)	(9 months)	(6 months)	(3 months)
<b>1. Telecom Sector</b>									
i) Gross Revenue (₹ in Crores)	65030.31	64996.42	65347.09	68335.39	73344.66	12.79%	12.84%	12.24%	7.33%
ii) Adjusted Gross Revenue (₹ in Crores)	47134.27	46256.85	46086.66	48379.00	53383.55	13.26%	15.41%	15.83%	10.34%
<b>2. Access Services</b>									
Adjusted Gross Revenue (₹ in Crores)	38578.39	37882.13	38293.56	39885.55	44754.11	16.01%	18.14%	16.87%	12.21%
ARPU per month (AGR/ Average subscribers/3)	128.45	124.68	123.77	126.91	140.88	9.68%	12.99%	13.83%	11.01%

## **Introduction**

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending June, 2016. It provides a broad perspective on the Telecom Services to serve as a reference document for various stakeholders, research agencies and analysts. Chapter-1 depicts the growth pattern, in terms of Subscriber base and Tele-density of Wireline, Wireless, Internet and Value Added Services (VAS). Chapter-2 covers the key revenue and usage parameters. Chapter-3 gives the financial and accounting data. Chapter-4 covers performance of various telecom service providers in terms of QoS. The information relating to Cable TV, DTH & Radio Broadcast services is provided in Chapter-5.

2. The Report has been prepared based on the information furnished by the Service Providers. It is also available on TRAI's website ([www.trai.gov.in](http://www.trai.gov.in)). Any suggestion pertaining to this report may please be addressed to Advisor (F&EA), TRAI on Tel. +91-11-23230752, Fax. +91-11-23236650 and e-mail: [advfea1@trai.gov.in](mailto:advfea1@trai.gov.in).



# **Chapter 1 :**

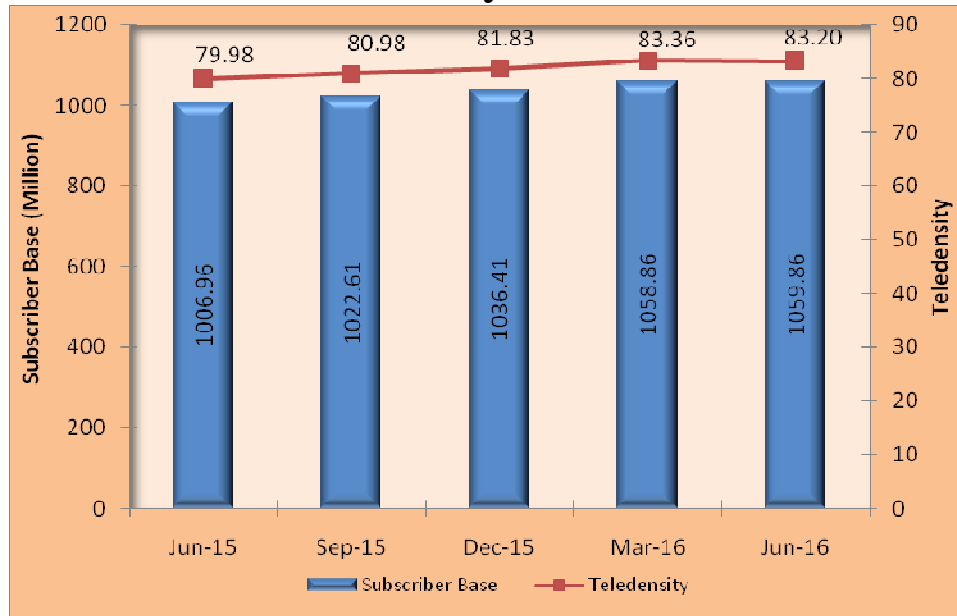
# **Subscription Data**

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- In this report, Tele-density is based on the population projections from census data published by the Office of Registrar General & Census Commissioner of India.

## Section A : Access Service - An Overview

1.1 The number of telephone subscribers in India increased from 1,058.86 million at the end of Mar-16 to 1,059.86 million at the end of Jun-16, registering a growth of 0.09% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 5.25% over the same quarter of last year. The overall Tele-density in India declined to 83.20 at the end of Jun-16 from 83.36 at the end of the previous quarter.

**Chart 1.1: Trends in Telephone Subscribers and Tele-density in India**

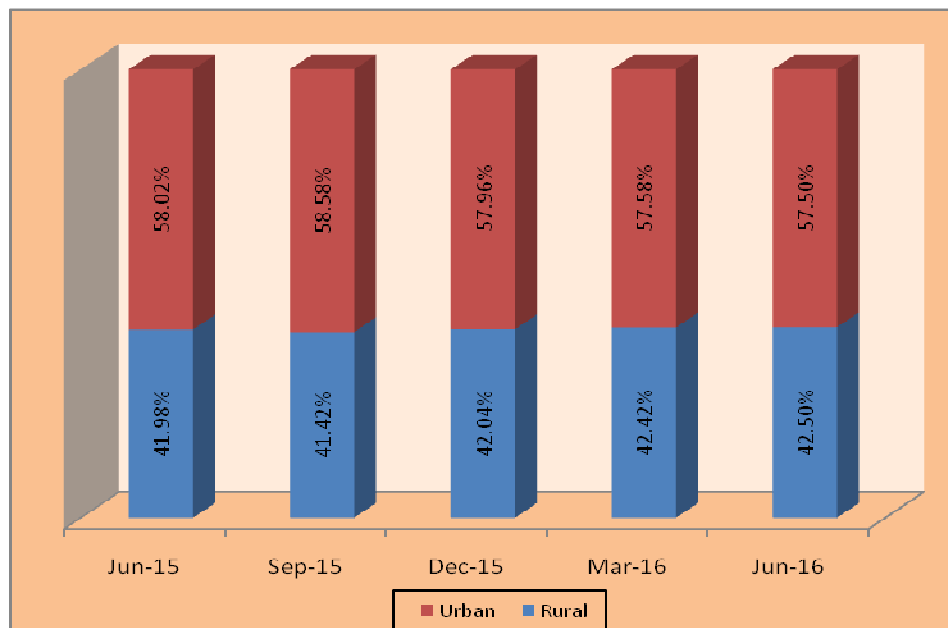


**Table 1.1: Subscriber Base & Teledensity - Rural & Urban**

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Jun-15	422.75	584.21	48.66	149.70
Sep-15	423.61	599.01	48.66	153.49
Dec-15	435.75	600.66	49.94	152.45
Mar-16	449.17	609.69	51.37	154.01
Jun-16	450.41	609.45	51.40	153.22

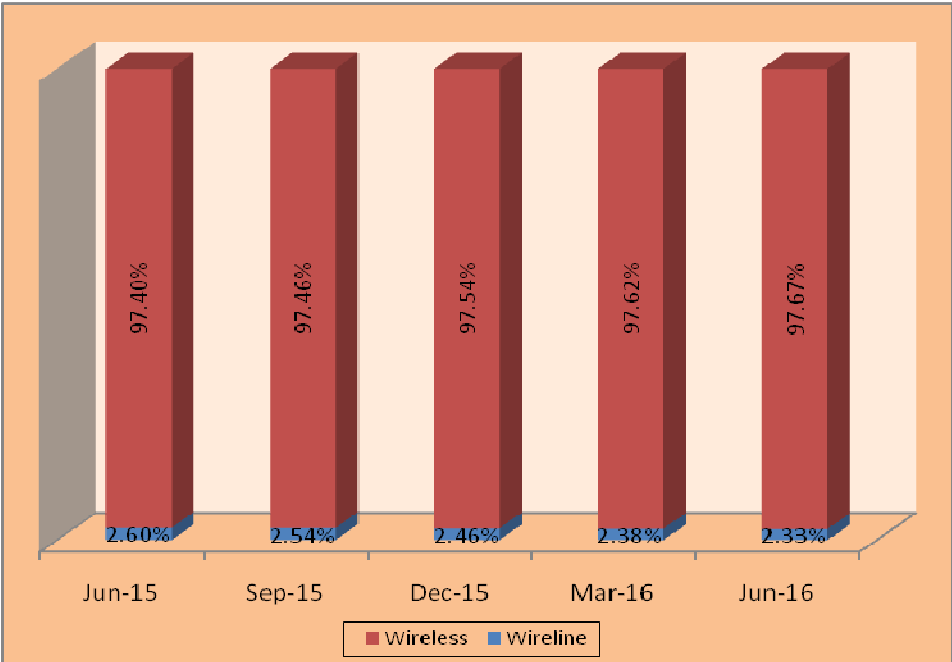
- 1.2 Subscription in Urban Areas slightly declined from 609.69 million at the end of Mar-16 to 609.45 million at the end of Jun-16, and the Urban Tele-density also declined from 154.01 to 153.22 during the quarter.
- 1.3 Rural subscription increased from 449.17 million to 450.41 million and the Rural Tele-density also increased from 51.37 to 51.40 during the quarter.
- 1.4 The year-on-year (Y-O-Y) growth rate of Rural and Urban Tele-density from Jun-15 to Jun-16 is 5.65% and 2.36% respectively.

**Chart 1.2: Market Share - Rural & Urban**

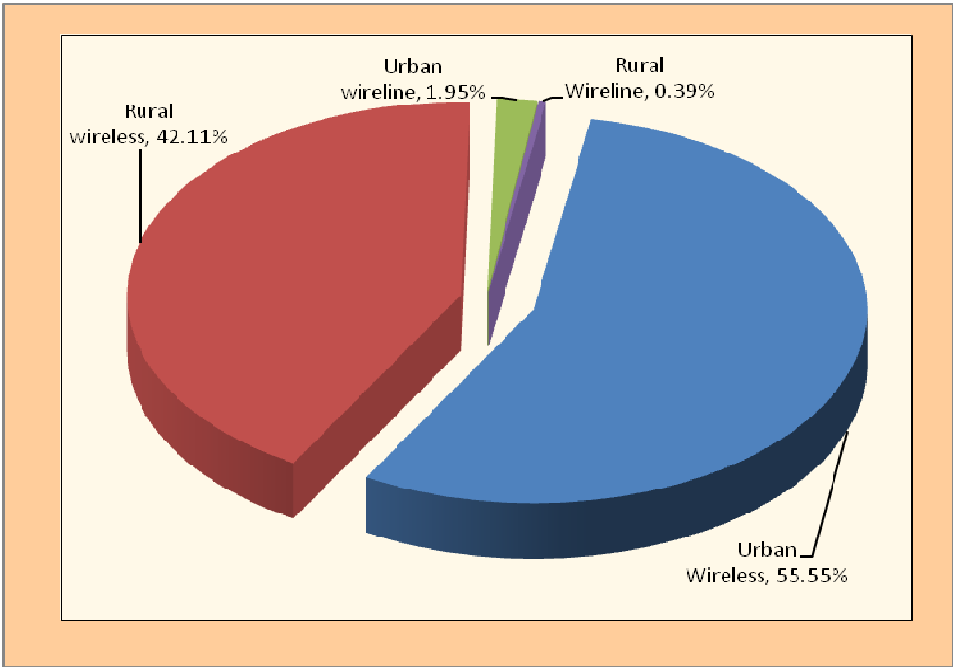


- 1.5 Share of rural areas in total subscription has increased from 42.42% at the end of Mar-16 to 42.50% at the end of Jun-16. The year-on-year (Y-O-Y) growth of the market share in the rural areas for Jun-16 is 1.23%.

**Chart 1.3: Composition of Access subscription - Wireline & Wireless**



**Chart 1.4: Composition of Rural-Urban Telephone Subscribers at the end of the quarter**



**Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base**

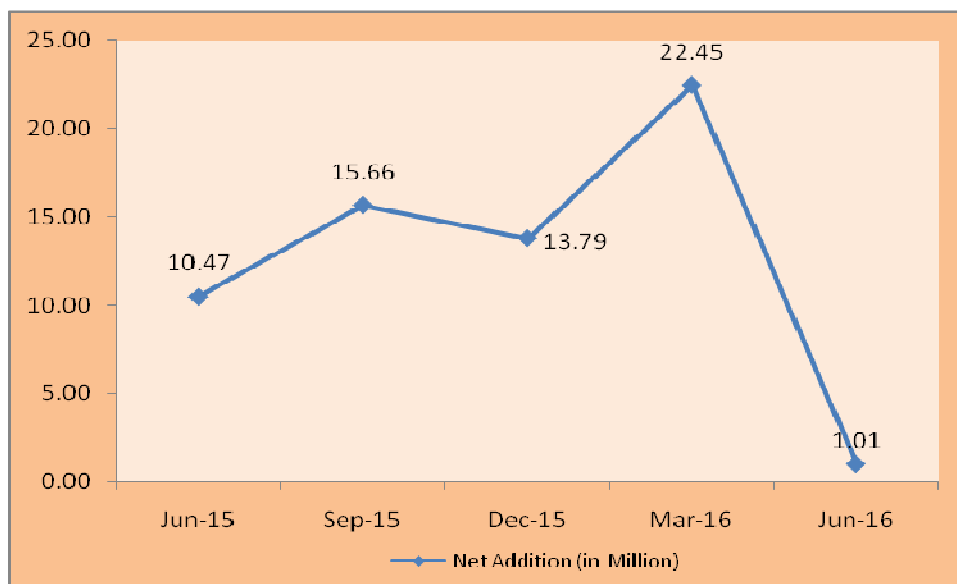
Service Area	Subscribers (million)			
	Mar-16	Jun-16	Net Additions	Rate of Growth (%)
Andhra Pradesh	76.39	75.00	-1.39	-1.82
Assam	18.69	19.36	0.67	3.59
Bihar	74.78	76.27	1.49	1.99
Delhi	50.42	50.41	0.00	-0.01
Gujarat	63.67	63.03	-0.64	-1.01
Haryana	23.62	21.67	-1.96	-8.29
Himachal Pradesh	9.05	9.20	0.15	1.67
Jammu & Kashmir	9.94	10.15	0.21	2.14
Karnataka	63.59	63.96	0.37	0.58
Kerala	36.59	37.03	0.44	1.20
Madhya Pradesh	66.67	63.99	-2.68	-4.01
Maharashtra	86.09	86.21	0.13	0.15
Mumbai	34.84	34.65	-0.19	-0.53
North East	11.11	11.45	0.35	3.12
Orissa	29.37	30.15	0.78	2.67
Punjab	32.80	32.91	0.10	0.31
Rajasthan	60.83	61.37	0.54	0.88
T.N. (incl. Chennai)	83.98	83.95	-0.03	-0.04
U.P.(E)	92.74	94.49	1.75	1.89
U.P.(W)	58.01	58.09	0.08	0.14
Kolkata	25.93	26.17	0.24	0.92
West Bengal	49.75	50.33	0.59	1.18
<b>All India</b>	<b>1,058.86</b>	<b>1,059.86</b>	<b>1.01</b>	<b>0.09</b>

1.6 During the quarter, Assam service area has recorded the highest growth rate of 3.59% followed by North-East service area (3.12%). Haryana service areas showed maximum decline rate (8.29%) in subscriber base during the quarter ending Jun-16.

**Table 1.3: Service Area wise Rural-Urban Subscribers – Jun-16**

Service Area	Subscribers (million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	75.00	32.58	42.42	43.44
Assam	19.36	12.24	7.13	63.20
Bihar	76.27	43.62	32.65	57.20
Delhi	50.41	-	50.41	-
Gujarat	63.03	24.49	38.54	38.85
Haryana	21.67	10.35	11.32	47.75
Himachal Pradesh	9.20	6.09	3.11	66.16
Jammu & Kashmir	10.15	5.27	4.89	51.88
Karnataka	63.96	20.38	43.58	31.86
Kerala	37.03	16.72	20.31	45.16
Madhya Pradesh	63.99	30.75	33.24	48.06
Maharashtra	86.21	39.97	46.25	46.36
Mumbai	34.65	-	34.65	-
North East	11.45	5.90	5.56	51.48
Orissa	30.15	17.78	12.37	58.96
Punjab	32.91	12.50	20.40	37.99
Rajasthan	61.37	32.10	29.27	52.31
T.N. (incl. Chennai)	83.95	24.20	59.75	28.83
U.P.(E)	94.49	48.07	46.42	50.88
U.P.(W)	58.09	27.73	30.36	47.73
Kolkata	26.17	-	26.17	-
West Bengal	50.33	34.69	15.64	68.92
<b>All India</b>	<b>1,059.86</b>	<b>450.41</b>	<b>609.45</b>	<b>42.50</b>

**Chart 1.5: Trend of Net Addition in Telephone Subscription**



1.7 The net addition in telephone subscribers is 1.01 million in QE Jun-16 as against the net addition of 22.45 million in QE Mar-16.

**Table 1.4 : Service Area wise Teledensity**

Service Area	As on 31 <sup>st</sup> March, 2016			As on 30 <sup>th</sup> June, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	51.35	176.81	86.39	51.04	171.38	84.66
Assam	43.20	132.36	57.55	44.82	135.40	59.46
Bihar	36.41	166.15	54.31	36.65	171.21	55.23
Delhi	-	-	236.30	-	-	234.60
Gujarat	67.35	145.38	100.05	66.14	143.83	98.76
Haryana	64.90	122.89	85.88	58.83	112.97	78.48
H.P.	94.71	373.65	127.41	96.94	371.96	129.29
J&K	57.79	137.33	79.97	58.66	140.32	81.48
Karnataka	52.95	178.84	101.88	53.36	178.88	102.25
Kerala	62.23	220.32	102.27	62.50	223.90	103.36
Madhya Pradesh	41.48	124.28	64.18	40.68	116.13	61.40
Maharashtra*	65.43	134.67	98.98	64.81	134.47	98.63
Mumbai*						
North East	53.29	157.72	79.57	56.34	157.40	81.84
Orissa	49.55	159.75	69.09	50.77	163.42	70.80

Service Area	As on 31 <sup>st</sup> March, 2016			As on 30 <sup>th</sup> June, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Punjab	71.95	149.77	106.09	72.03	149.53	106.14
Rajasthan	58.21	161.99	83.30	57.78	165.14	83.75
T.N. (incl Chennai)	84.97	140.35	118.12	85.22	139.61	117.91
U.P.(E)*	42.20	145.41	65.83	42.78	145.70	66.37
U.P.(W)*						
Kolkata*	53.42	145.33	79.82	53.92	146.48	80.52
W.B.*						
<b>All India</b>	<b>51.37</b>	<b>154.01</b>	<b>83.36</b>	<b>51.41</b>	<b>153.22</b>	<b>83.20</b>

\* Population data/projections are available state-wise only.

Notes:

1. Tele-density figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. Delhi Service area, apart from the State of Delhi, includes wireless subscribers of the areas served by the local exchanges of Ghaziabad & Noida (in UP) and Gurgaon & Faridabad (in Haryana).

1.8 Himachal Pradesh service area has the highest Rural Tele-density of 96.94, followed by Tamil Nadu service area (85.22). Bihar service area continues to have the lowest Rural Tele-density of 36.65.

**Table 1.5 : Growth/Decline in Subscriber base**

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Mar-16 (%)	Market Share in QE Jun-16 (%)
	Mar-16	Jun-16	Net Additions			
Bharti	254.90	259.47	4.57	1.79	24.07	24.48
Vodafone	198.04	199.49	1.46	0.74	18.70	18.82
IDEA	175.07	176.23	1.16	0.66	16.53	16.63
BSNL	101.11	103.74	2.64	2.61	9.55	9.79
Reliance Comm. Group	103.58	99.88	-3.69	-3.57	9.78	9.42
Aircel	87.09	88.93	1.85	2.12	8.22	8.39
Tata	61.82	61.10	-0.72	-1.16	5.84	5.77
Telenor	52.45	53.09	0.64	1.21	4.95	5.01
Sistema	7.75	7.65	-0.10	-1.34	0.73	0.72



Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Mar-16 (%)	Market Share in QE Jun-16 (%)
	Mar-16	Jun-16	Net Additions			
MTNL	7.06	7.07	0.01	0.13	0.67	0.67
Quadrant	3.42	3.19	-0.23	-6.62	0.32	0.30
Videocon	6.56	0.00	-6.56	-	0.62	-
<b>Total</b>	<b>1058.86</b>	<b>1059.86</b>	<b>1.01</b>	<b>0.09</b>	<b>100</b>	<b>100</b>

1.9 Bharti Airtel is the leading service provider in access segment in terms of number of subscribers. During the quarter, Bharti Airtel recorded the highest net addition of 4.57 million subscribers followed by BSNL (2.64 million). M/s Videocon has stopped their commercial wireless telecom service.

**Table 1.6 : Market Share of the service providers in total rural subscriber base – Q.E. Jun-16**

Service Provider	No. of Total Subscribers (in millions)	No. of Rural Subscribers (in millions)	Percentage of Rural subscribers	Market share of Rural subscribers (%)
Bharti	259.47	124.88	48.13	27.73
Vodafone	199.49	106.51	53.39	23.65
IDEA	176.23	97.02	55.05	21.54
BSNL	103.74	33.66	32.45	7.47
Aircel	88.93	30.69	34.51	6.81
Reliance Comm. Group	99.88	23.99	24.01	5.33
Telenor	53.09	16.06	30.25	3.57
Tata	61.10	15.85	25.94	3.52
Sistema	7.65	1.62	21.17	0.36
Quadrant	3.19	0.13	3.97	0.03
MTNL	7.07	-	0.00	0.00
<b>Total</b>	<b>1,059.86</b>	<b>450.41</b>	<b>42.50</b>	<b>100</b>

1.10 IDEA continues to remain the service provider with highest proportion of rural subscribers (55.05%), followed by Vodafone (53.39%) to their total subscribers.

## Section B : Wireless Service

**Table 1.7: List of Cellular Mobile (GSM & CDMA) Service Providers currently providing service [As on 30<sup>th</sup> June, 2016]**

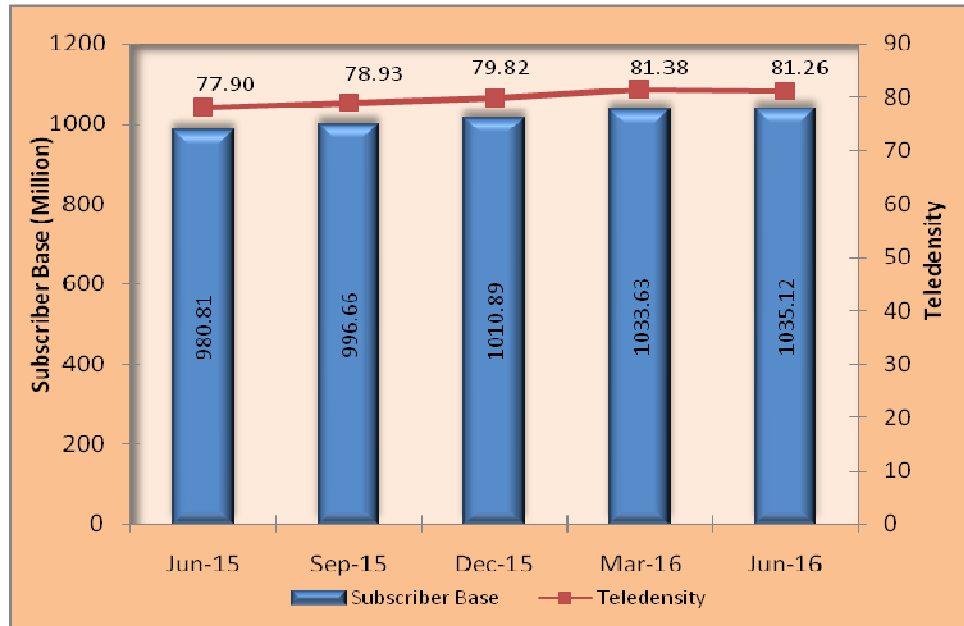
Sl.No.	Service Provider	Area of Operation
1	Bharti	All India
2	Aircel Group	All India
3	Reliance Communications	All India (except Assam & NE)
4	Reliance Telecom Ltd	Kolkata, MP, WB, HP, Bihar, Orissa, Assam & NE
5	Vodafone	All India
6	Tata Teleservices	All India except Assam, NE & J&K
7	IDEA	All India
8	Sistema Shyam Telelink	Delhi, Kolkata, Gujarat, Karnataka, Tamil Nadu (incl. Chennai), Kerala, UP(W), Rajasthan & W.B.
9	BSNL	All India (except Delhi & Mumbai)
10	MTNL	Delhi & Mumbai
11	Quadrant	Punjab
12	Telenor Communications (India) Pvt. Ltd.	MH, Gujarat, AP, UP(W), UP(E), Bihar

1.11 Complete list of licensed Cellular (GSM & CDMA) Service providers as on 30<sup>th</sup> June, 2016 is at Annexure -1.1.

1.12 Total Wireless (GSM+CDMA) subscriber base increased from 1,033.63 million at the end of Mar-16 to 1,035.12 million at the end of Jun-16, thereby showing a quarterly growth rate of 0.14%. During this quarter, net addition of 1.49 million subscribers was recorded. The year-on-year (Y-O-Y) growth of wireless subscribers is 5.54% for Q.E. Jun-16.

1.13 Wireless Teledensity declined from 81.38 at the end of Mar-16 to 81.26 at the end of Jun-16.

**Chart 1.6: Wireless Subscriber Base and Teledensity**



**Table 1.8: Wireless Subscriber Base & Teledensity - Rural & Urban**

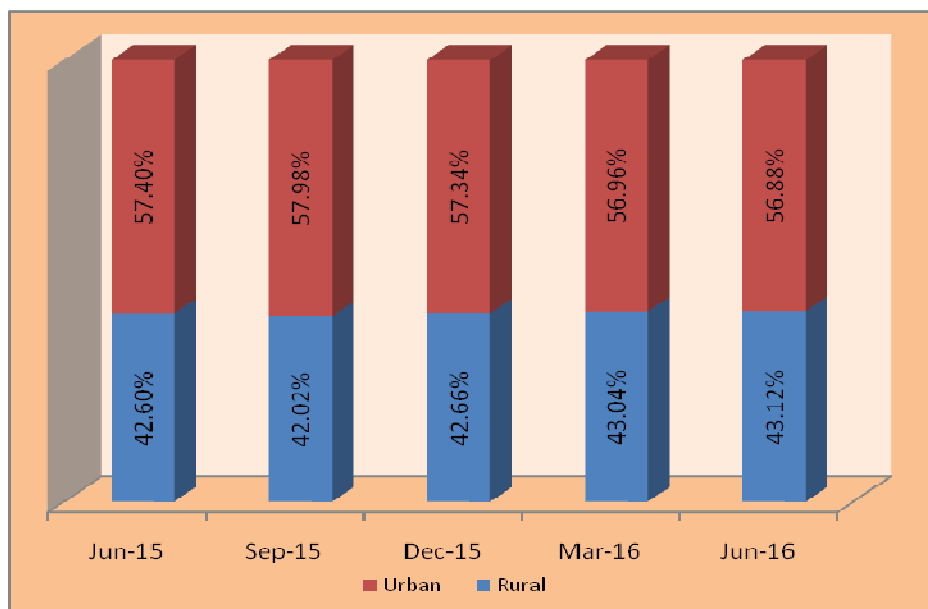
Quarter ending	Subscriber Base (million)		Tele-density	
	Rural	Urban	Rural	Urban
Jun-15	417.85	562.95	48.10	144.25
Sep-15	418.84	577.82	48.11	147.35
Dec-15	431.22	579.67	49.43	147.12
Mar-16	444.84	588.79	50.88	148.73
Jun-16	446.33	588.78	50.95	148.03

1.14 The Rural Wireless subscribers increased from 444.84 million at the end of Mar-16 to 446.33 million at the end of Jun-16, however the urban wireless subscribers slightly declined from 588.79 million to 588.78 million during the quarter.

1.15 Quarterly Growth rates of Rural and Urban wireless subscriptions are 0.33% and -0.001% respectively during the QE Jun-16.

1.16 The share of rural wireless subscription increased from 43.04% to 43.12% in total wireless subscription in this quarter.

**Chart 1.7: Wireless Market Share - Rural & Urban**



**Table 1.9: Growth in Wireless Subscriber base**

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Mar-16 (%)	Market Share Jun-16 (%)
	Mar-16	Jun-16	Net Additions			
Bharti	251.24	255.73	4.50	1.79	24.31	24.71
Vodafone	197.95	199.38	1.44	0.73	19.15	19.26
IDEA	175.07	176.23	1.16	0.66	16.94	17.03
Reliance Comm. Group	102.41	98.71	-3.70	-3.61	9.91	9.54
Tata	60.10	59.37	-0.72	-1.20	5.81	5.74
Aircel	87.09	88.93	1.85	2.12	8.43	8.59
Quadrant	3.16	2.93	-0.23	-7.28	0.31	0.28
Sistema	7.69	7.59	-0.10	-1.34	0.74	0.73
Telenor	52.45	53.09	0.64	1.21	5.07	5.13
BSNL	86.35	89.54	3.20	3.70	8.35	8.65
MTNL	3.56	3.59	0.03	0.83	0.34	0.35
Videocon	6.56	-	-6.56	-	0.64	-
<b>Total</b>	<b>1,033.63</b>	<b>1,035.12</b>	<b>1.49</b>	<b>0.14</b>	<b>100</b>	<b>100</b>

1.17 Bharti remains the leading service provider with 255.73 million wireless subscribers at the end of Jun-16, followed by Vodafone (199.38 million). M/s Videocon has stopped their commercial wireless service.

1.18 In terms of net additions during the quarter ending Jun-16, Bharti (4.50 million) has added the highest number of subscribers, followed by BSNL (3.20 million).

**Table 1.10: Service Area wise Wireless Subscriber base**

Service Area	Subscriber base (in million)			
	Mar-16	Jun-16	Net Additions	Rate of change (%)
Andhra Pradesh	74.65	73.33	-1.32	-1.77
Assam	18.53	19.21	0.67	3.64
Bihar	74.45	75.94	1.49	2.00
Delhi	47.24	47.23	-0.02	-0.03
Gujarat	62.26	61.67	-0.59	-0.95
Haryana	23.26	21.31	-1.95	-8.37
Himachal Pradesh	8.87	9.04	0.16	1.81
Jammu & Kashmir	9.81	10.02	0.22	2.20
Karnataka	61.33	61.72	0.38	0.62
Kerala	34.29	34.80	0.51	1.50
Madhya Pradesh	65.63	62.96	-2.67	-4.06
Maharashtra	84.10	84.30	0.20	0.24
Mumbai	31.80	31.63	-0.17	-0.54
North East	10.98	11.33	0.35	3.16
Orissa	29.06	29.86	0.80	2.75
Punjab	31.74	31.86	0.12	0.37
Rajasthan	60.04	60.59	0.55	0.91
T.N. (incl. Chennai)	81.34	81.38	0.04	0.05
U.P.(E)	92.24	93.99	1.76	1.90
U.P.(W)	57.58	57.68	0.09	0.16
Kolkata	25.02	25.29	0.27	1.07
West Bengal	49.38	49.98	0.60	1.21
<b>All India</b>	<b>1,033.63</b>	<b>1,035.12</b>	<b>1.49</b>	<b>0.14</b>

**Table 1.11: Service Area wise Wireless Rural-Urban Subscriber base**

Service Area	Subscriber base (in million) – Jun-16			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	73.33	32.25	41.08	43.97
Assam	19.21	12.21	7.00	63.57
Bihar	75.94	43.54	32.41	57.33
Delhi	47.23	-	47.23	-
Gujarat	61.67	24.28	37.39	39.38
Haryana	21.31	10.27	11.04	48.20
Himachal Pradesh	9.04	5.98	3.05	66.20
Jammu & Kashmir	10.02	5.25	4.77	52.38
Karnataka	61.72	20.17	41.54	32.69
Kerala	34.80	15.32	19.48	44.03
Madhya Pradesh	62.96	30.63	32.33	48.65
Maharashtra	84.30	39.61	44.69	46.99
Mumbai	31.63	-	31.63	-
North East	11.33	5.87	5.46	51.81
Orissa	29.86	17.71	12.15	59.32
Punjab	31.86	12.23	19.63	38.39
Rajasthan	60.59	31.96	28.63	52.75
T.N. (incl. Chennai)	81.38	23.82	57.56	29.27
U.P.(E)	93.99	48.00	45.99	51.07
U.P.(W)	57.68	27.68	29.99	48.00
Kolkata	25.29	-	25.29	-
West Bengal	49.98	34.54	15.44	69.10
<b>All India</b>	<b>1,035.12</b>	<b>446.33</b>	<b>588.78</b>	<b>43.12</b>

**Table 1.12 : Service Area wise Wireless Tele-density**

Service Area	As on 31 <sup>st</sup> March, 2016			As on 30 <sup>th</sup> June, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	50.77	171.28	84.43	50.51	165.98	82.78
Assam	43.09	129.84	57.06	44.71	132.94	58.97
Bihar	36.33	164.87	54.07	36.58	169.95	55.00
Delhi	-	-	221.43	-	-	219.78
Gujarat	66.74	140.94	97.84	65.59	139.51	96.63
Haryana	64.44	120.00	84.54	58.40	110.16	77.19
H.P.	92.93	366.45	125.00	95.30	364.98	127.01
J&K	57.59	134.06	78.91	58.47	137.13	80.45
Karnataka	52.39	170.42	98.26	52.83	170.51	98.66
Kerala	56.80	211.00	95.85	57.28	214.80	97.16
M.P.	41.31	121.08	63.18	40.52	112.95	60.41
Maharashtra*	64.82	126.84	94.86	64.24	126.77	94.60
Mumbai*						
North East	53.04	154.93	78.68	56.10	154.65	80.96
Orissa	49.34	156.66	68.37	50.58	160.43	70.11
Punjab	70.32	144.05	102.67	70.47	143.85	102.77
Rajasthan	57.95	158.36	82.22	57.53	161.56	82.69
Tamil Nadu (incl. Chennai)	83.53	135.11	114.41	83.89	134.48	114.30
U.P.(E)*	42.13	143.87	65.42	42.71	144.18	65.97
U.P.(W)*						
Kolkata*	53.18	141.23	78.48	53.69	142.52	79.22
West Bengal*						
<b>All India</b>	<b>50.88</b>	<b>148.73</b>	<b>81.38</b>	<b>50.95</b>	<b>148.03</b>	<b>81.26</b>

\* Population data/projections are available state-wise only.

Notes:

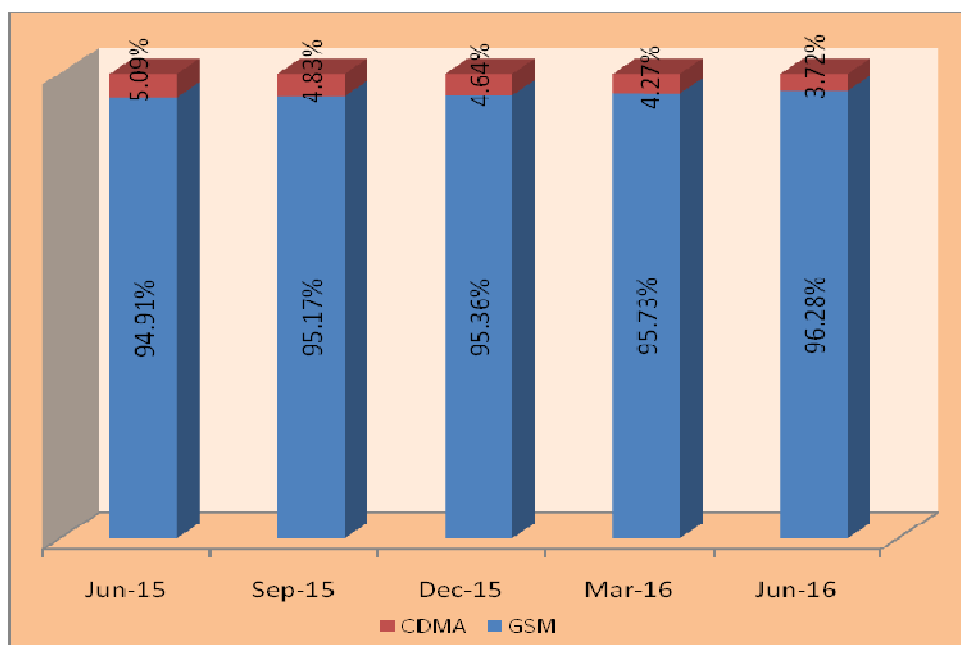
1. Teledensity figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. Delhi service area, apart from the State of Delhi, includes the areas served by the local exchanges of Ghaziabad & Noida (in UP) and Gurgaon & Faridabad (in Haryana).

**Table 1.13 : Rural Wireless Subscriber base and Market Share**

<b>Service Provider</b>	<b>Total number of wireless Subscribers (in millions)</b>	<b>Rural Subscribers (in millions)</b>	<b>% of Rural subscribers in total</b>	<b>Market Share of Rural Subscribers (%)</b>
Bharti	255.73	124.88	48.83	27.98
Vodafone	199.38	106.51	53.42	23.86
IDEA	176.23	97.02	55.05	21.74
Aircel	88.93	30.69	34.51	6.88
BSNL	89.54	29.70	33.17	6.65
Reliance Comm. Group	98.71	23.98	24.30	5.37
Telenor	53.09	16.06	30.25	3.60
Tata	59.37	15.80	26.61	3.54
Sistema	7.59	1.61	21.19	0.36
Quadrant	2.93	0.07	2.35	0.02
MTNL	3.59	0.00	0.00	0.00
<b>Total</b>	<b>1,035.12</b>	<b>446.33</b>	<b>43.12</b>	<b>100</b>

1.19 Detailed table on service provider wise subscriber base in each service area is at Annexure-1.2.

**Chart 1.8: Share of Wireless Subscription: GSM vs CDMA**





1.20 At the end of Jun-16, GSM subscribers constituted 96.28% share of the wireless market as compare to 95.37% in previous quarter.

### **GSM Services**

1.21 The GSM subscribers increased from 989.54 million at the end of Mar-16 to 996.66 million at the end of Jun-16, showing a quarterly growth of 0.72%. Bharti with 255.73 million subscribers continues to be the largest GSM mobile operator, followed by Vodafone (199.38 million).

**Table 1.14 : Group-wise Market Share (in terms of subscription) within GSM Service**

<b>Service Provider</b>	<b>Mar-16</b>		<b>Jun-16</b>		
	<b>No of Subscribers (in millions)</b>	<b>Market Share (%)</b>	<b>No of Subscribers (in millions)</b>	<b>Market Share (%)</b>	<b>Net Additions (in million)</b>
Bharti	251.24	25.39	255.73	25.66	4.50
Vodafone	197.95	20.00	199.38	20.01	1.44
Idea	175.07	17.69	176.23	17.68	1.16
BSNL	85.20	8.61	88.60	8.89	3.41
Reliance Comm. Group	78.25	7.91	79.13	7.94	0.89
Aircel	87.09	8.80	88.93	8.92	1.85
Tata	49.01	4.95	49.02	4.92	0.01
Telenor	52.45	5.30	53.09	5.33	0.64
Videocon	6.56	0.66	0.00	0.00	-6.56
MTNL	3.56	0.36	3.59	0.36	0.03
Quadrant	3.16	0.32	2.93	0.29	-0.23
<b>Total</b>	<b>989.54</b>	<b>100</b>	<b>996.66</b>	<b>100</b>	<b>7.12</b>

1.22 There has been a net increase of 7.12 million GSM subscribers during the quarter ending Jun-16.

## **CDMA Services**

1.23 The CDMA subscriber base declined from 44.09 million at the end of Mar-16 to 38.46 million at the end of Jun-16, thereby showing a decline rate of 12.78%. Reliance Communications Group with 19.58 million subscribers continues to be the largest CDMA mobile operator.

**Table 1.15 : Market Share (in terms of subscription) within CDMA Service**

Service Provider	Mar-16		Jun-16		Net Addition/ Decline (in million)
	No of Subscribers (in million)	Market Share (%)	No of Subscribers (in million)	Market Share (%)	
Reliance Comm. Group	24.16	54.79	19.58	50.90	-4.58
Tata	11.09	25.15	10.35	26.92	-0.74
Sistema	7.69	17.44	7.59	19.73	-0.10
BSNL	1.15	2.61	0.94	2.44	-0.21
Quadrant	0.002	0.004	0.00	0.00	-0.002
<b>Total</b>	<b>44.09</b>	<b>100</b>	<b>38.46</b>	<b>100</b>	<b>-5.64</b>

*Note – M/s MTNL and Quadrant have closed their CDMA service.*

1.24 There has been a net decline of 5.64 million CDMA subscribers during the quarter ending Jun-16.

1.25 In terms of net additions during the quarter, all the service providers recorded decline in their CDMA subscriber base.

## Section C : Wireline Service

**Table 1.16 : Service Providers providing Wireline Service**

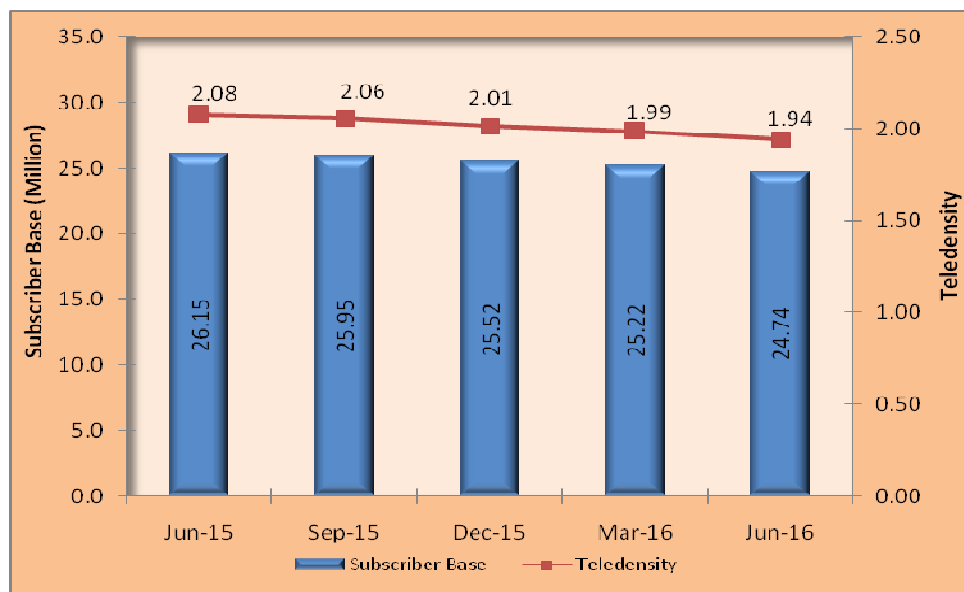
[As on 30<sup>th</sup> June, 2016]

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 (including Telangana), Delhi, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh (including Chhatisgarh), Maharashtra, Mumbai, Punjab, Tamil Nadu (including Chennai), Karnataka, Kerala, Kolkata, Rajasthan, UP(East) and UP(West)
4	Tata Teleservices Ltd. & Tata Teleservices (Mah) Ltd.	All India except N.E., Assam and J&K
5	Quadrant Televentures Ltd. (HFCL)	Punjab
6	Sistema Shyam Telelink Ltd.	Rajasthan
7	Reliance Communications Ltd.	All India except J&K, Assam & North-East
8	Vodafone	All India except J&K

1.26 Total Wireline subscriber base declined from 25.22 million at the end of Mar-16 to 24.74 million at the end of Jun-16 with quarterly declining rate of 1.90%. Overall Wireline Teledensity is 1.94 at the end of Jun-16 as against 1.99 of the previous quarter.

1.27 Rural subscriber base has shown decline of 5.60%, from 4.32 Million at the end of Mar-16 to 4.08 Million at the end of Jun-16. During the same period, Urban subscription also recorded decline of 1.14%, from 20.90 million to 20.66 million.

**Chart 1.9: Wireline Subscriber Base and Teledensity**



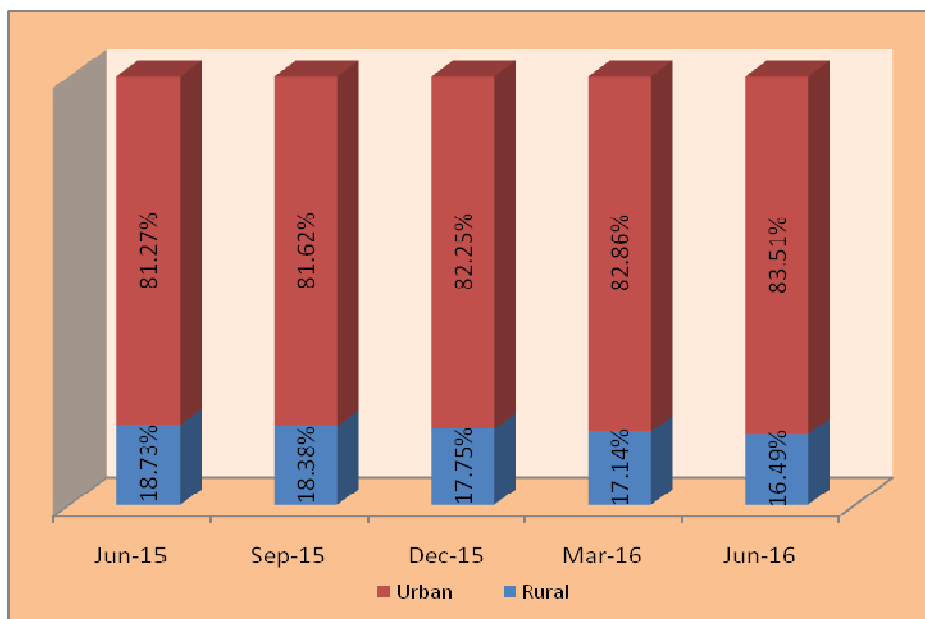
**Table 1.17 : Wireline Subscriber Base & Teledensity - Rural & Urban**

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Jun-15	4.90	21.25	0.56	5.45
Sep-15	4.77	21.18	0.55	5.40
Dec-15	4.53	20.99	0.52	5.33
Mar-16	4.32	20.90	0.49	5.28
Jun-16	4.08	20.66	0.47	5.20

**Table 1.18 : Service Provider wise Subscriber base (Rural - Urban)**

Service Provider	Subscriber Base (million) Jun-16			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	3.96	10.24	14.20	27.89
Bharti	--	3.73	3.73	--
MTNL	--	3.48	3.48	--
Tata	0.05	1.68	1.73	2.94
Reliance	0.002	1.17	1.17	0.14
Quadrant	0.06	0.20	0.26	22.45
Vodafone	--	0.11	0.11	--
Sistema	0.01	0.05	0.06	17.63
<b>Total</b>	<b>4.08</b>	<b>20.66</b>	<b>24.74</b>	<b>16.49</b>

**Chart 1.10: Composition of Wireline Subscriber base - Rural & Urban**



**Table 1.19 : Service Provider wise growth in Wireline Subscriber base**

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share-Mar-16 (%)	Market share-Jun-16 (%)
	Mar-16	Jun-16	Net Addition			
BSNL	14.76	14.20	-0.562	-3.80	58.52	57.39
Bharti	3.66	3.73	0.068	1.85	14.52	15.08
MTNL	3.50	3.48	-0.020	-0.58	13.89	14.08
Tata	1.72	1.73	0.007	0.39	6.83	6.99
Reliance	1.17	1.17	0.004	0.33	4.64	4.74
Quadrant	0.25	0.26	0.004	1.61	1.00	1.04
Vodafone	0.09	0.11	0.020	22.31	0.36	0.45
Sistema	0.06	0.06	-0.001	-1.72	0.23	0.23
<b>Total</b>	<b>25.22</b>	<b>24.74</b>	<b>-0.480</b>	<b>-1.90</b>	<b>100</b>	<b>100</b>

1.28 Detailed table on service provider wise subscriber base in each service area is at Annexure-1.3.

**Table 1.20: Service Area wise Wireline Subscriber base & Net Additions (in million)**

<b>Service Area</b>	<b>Mar-16</b>	<b>Jun-16</b>	<b>Net Additions</b>	<b>Rate of Change (%)</b>
Andhra Pradesh	1.74	1.67	-0.064	-3.67
Assam	0.16	0.16	-0.003	-1.64
Bihar	0.33	0.33	-0.005	-1.50
Delhi	3.17	3.18	0.013	0.41
Gujarat	1.41	1.36	-0.050	-3.55
Haryana	0.37	0.36	-0.012	-3.25
Himachal Pradesh	0.17	0.16	-0.010	-5.56
Jammu & Kashmir	0.13	0.13	-0.003	-2.31
Karnataka	2.26	2.24	-0.012	-0.54
Kerala	2.30	2.22	-0.074	-3.24
Madhya Pradesh	1.04	1.03	-0.010	-0.98
Maharashtra	1.99	1.91	-0.073	-3.67
Mumbai	3.04	3.03	-0.013	-0.43
North East	0.12	0.12	-0.001	-1.01
Orissa	0.31	0.29	-0.014	-4.55
Punjab	1.06	1.04	-0.016	-1.47
Rajasthan	0.79	0.78	-0.011	-1.43
T.N. (incl. Chennai)	2.64	2.57	-0.069	-2.61
U.P.(E)	0.50	0.50	-0.001	-0.16
U.P.(W)	0.43	0.42	-0.011	-2.48
Kolkata	0.91	0.88	-0.028	-3.03
W.B.	0.37	0.35	-0.015	-3.99
<b>All India</b>	<b>25.22</b>	<b>24.74</b>	<b>-0.480</b>	<b>-1.90</b>

1.29 Only Delhi service area showed positive growth in wireline subscriber base during QE Jun-16. All other service areas showed decline rate during the same period.

**Table 1.21: Service Area wise Wireline Rural-Urban Subscriber  
Base– Jun-16 (in million)**

<b>Service Area</b>	<b>Total Subscribers</b>	<b>Rural Subscribers</b>	<b>Urban Subscribers</b>	<b>% of Rural Subscribers</b>
Andhra Pradesh	1.67	0.34	1.34	20.10
Assam	0.16	0.03	0.13	18.14
Bihar	0.33	0.09	0.24	26.50
Delhi	3.18	0.00	3.18	0.00
Gujarat	1.36	0.20	1.16	14.88
Haryana	0.36	0.08	0.28	21.14
Himachal Pradesh	0.16	0.10	0.06	63.88
Jammu & Kashmir	0.13	0.02	0.11	13.31
Karnataka	2.24	0.20	2.04	9.04
Kerala	2.22	1.40	0.83	62.86
Madhya Pradesh	1.03	0.12	0.91	11.93
Maharashtra	1.91	0.36	1.55	18.79
Mumbai	3.03	0.00	3.03	0.00
North East	0.12	0.03	0.10	21.00
Orissa	0.29	0.07	0.23	22.64
Punjab	1.04	0.27	0.77	25.86
Rajasthan	0.78	0.14	0.64	18.04
T.N. (incl. Chennai)	2.57	0.38	2.19	14.65
U.P.(E)	0.50	0.07	0.43	14.79
U.P.(W)	0.42	0.04	0.37	10.42
Kolkata	0.88	0.00	0.88	0.00
W.B.	0.35	0.15	0.20	43.35
<b>All India</b>	<b>24.74</b>	<b>4.08</b>	<b>20.66</b>	<b>16.49</b>

**Table 1.22: Service Area wise Wireline Teledensity**

Service Area	As on 31 <sup>st</sup> March, 2016			As on 30 <sup>th</sup> June, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.58	5.53	1.96	0.53	5.40	1.89
Assam	0.11	2.51	0.49	0.10	2.46	0.48
Bihar	0.07	1.28	0.24	0.07	1.26	0.24
Delhi	-	-	14.86	-	-	14.82
Gujarat	0.61	4.44	2.21	0.55	4.32	2.13
Haryana	0.47	2.89	1.34	0.43	2.81	1.29
Himachal Pradesh	1.78	7.19	2.41	1.65	6.98	2.27
Jammu & Kashmir	0.20	3.27	1.06	0.19	3.19	1.03
Karnataka	0.56	8.42	3.61	0.53	8.37	3.59
Kerala	5.44	9.33	6.42	5.22	9.10	6.20
Madhya Pradesh	0.17	3.21	1.00	0.16	3.17	0.99
Maharashtra*	0.62	7.84	4.11	0.57	7.70	4.03
Mumbai*						
North East	0.25	2.79	0.89	0.25	2.75	0.88
Orissa	0.21	3.09	0.72	0.19	2.99	0.69
Punjab	1.63	5.72	3.43	1.56	5.67	3.37
Rajasthan	0.26	3.63	1.08	0.25	3.58	1.06
Tamil Nadu (incl. Chennai)	1.44	5.24	3.71	1.33	5.13	3.61
U.P.(E)*	0.07	1.55	0.41	0.07	1.52	0.40
U.P.(W)*						
Kolkata*	0.24	4.10	1.35	0.23	3.96	1.30
W.B.*						
<b>All India</b>	<b>0.49</b>	<b>5.28</b>	<b>1.99</b>	<b>0.47</b>	<b>5.20</b>	<b>1.94</b>

\* Population data/projections are available state-wise only

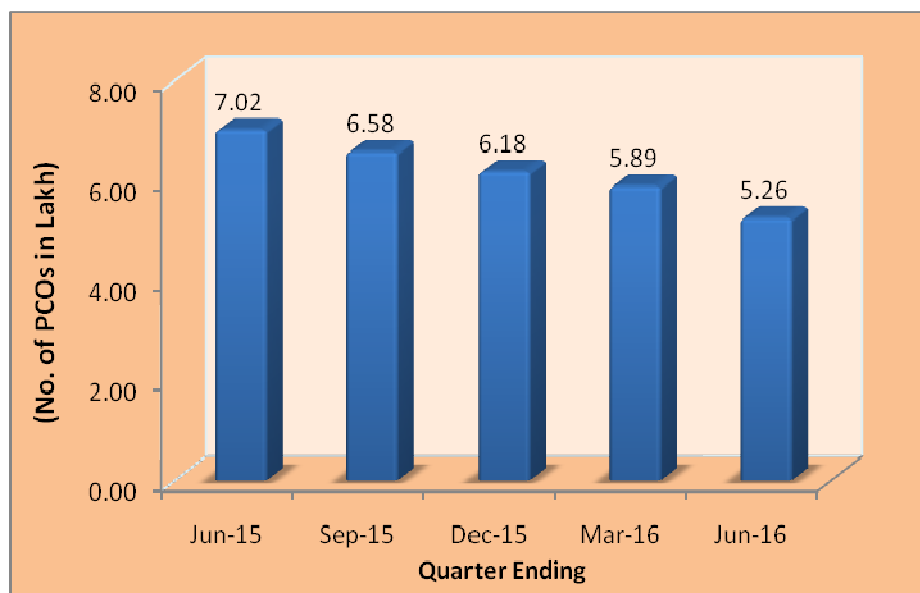
Note: Teledensity figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.



## Public Call Offices (PCO)

1.30 Total number of PCOs in the country declined from 5.89 lakh at the end of Mar-16 to 5.26 lakh at the end of Jun-16. Detailed table of service provider wise PCOs is available at Annexure -1.4.

**Chart 1.11: Trend of Number of PCOs**



**Table 1.23 : Rate of change & Market share of PCOs**

Service Provider	Mar-16	Jun-16	Rate of change (%)	Market share (%) (Jun-16)
BSNL	3.56	3.31	-7.08	62.92
MTNL	1.34	1.33	-1.08	25.23
Bharti	0.17	0.17	-4.23	3.17
Quadrant	0.02	0.02	-6.78	0.37
Sistema	0.10	0.10	-1.11	1.85
Tata	0.40	0.27	-32.20	5.12
Reliance	0.30	0.07	-76.48	1.35
<b>Total</b>	<b>5.89</b>	<b>5.26</b>	<b>-10.77</b>	<b>100</b>

1.31 Number of PCOs continued shows declining trend during the quarter ending Jun-16. This quarter has recorded a overall decline of 10.77%. The year-on-year (Y-O-Y) decline rate over the same quarter of the last year is 25.13%.

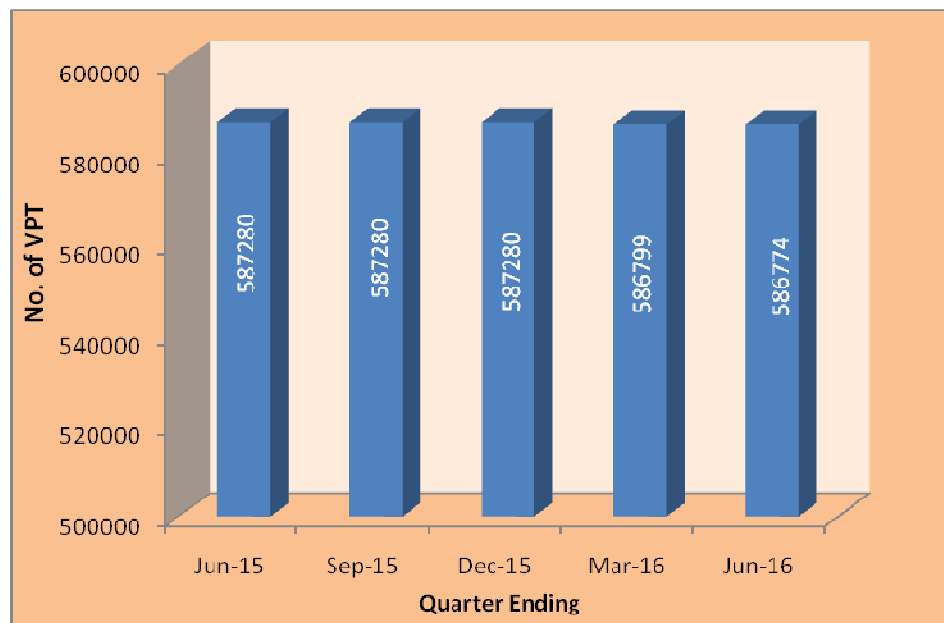
## Village Public Telephones (VPTs)

1.32 There are 5,93,731 inhabited villages in India as per census 2001. At the end of the quarter, 98.83% of the total inhabited villages in India have been connected by VPT.

1.33 Number of VPTs declined from 5,86,799 at the end of Mar-16 to 5,86,774 at the end of Jun-16 with a quarterly decline rate of 0.004%.

1.34 BSNL (5,82,482) has 99.26% market share of total VPTs followed by Sistema (3,010) with 0.51%. Detailed table of VPT is available at Annexure -1.5.

**Chart 1.12: Growth/decline Trend in VPTs**



## Section D: Internet Service

1.35 This section summarizes information submitted by 142 operators for the quarter ending Jun-16. **Part-I** consists of information of Internet service (both narrowband and broadband), **Part-II** consists of broadband service and **Part-III** covers narrowband service.

### **Part-I : Internet Service (broadband + narrowband)**

1.36 As per reports received from operators, total number of internet subscribers increased from 342.65 million at the end of Mar-16 to 350.48 million at the end of Jun-16 with quarterly growth rate of 2.28%.

1.37 Wired Internet subscribers increased from 20.44 million at the end of Mar-16 to 20.76 million at the end of Jun-16 with quarterly growth of 1.55%, and Wireless Internet subscribers increased from 322.21 million at the end of Mar-16 to 329.72 million at the end of Jun-16 with quarterly growth rate of 2.33%.

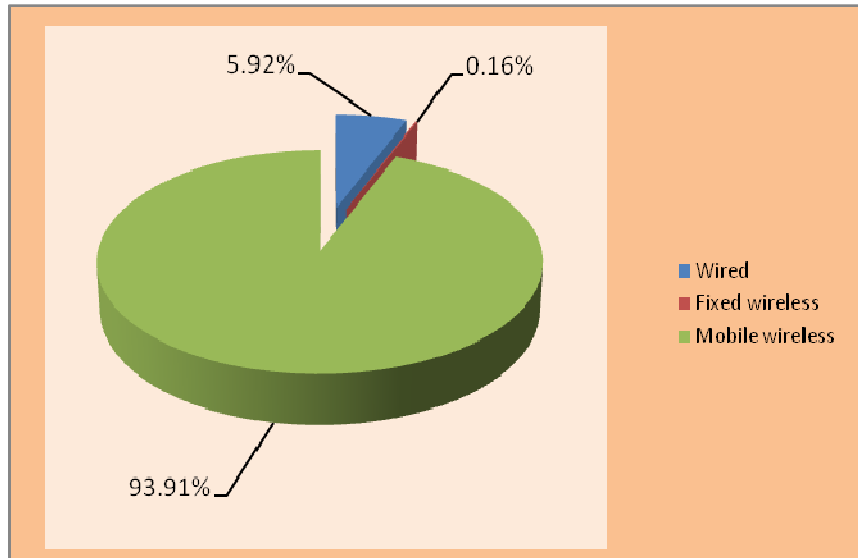
1.38 Number of Broadband subscribers increased from 149.75 million at the end of Mar-16 to 162.06 million at the end of Jun-16. The number of Narrowband subscribers declined from 192.90 million at the end of Mar-16 to 188.42 million at the end of Jun-16.

**Table 1.24: Trend of Internet subscriber base**

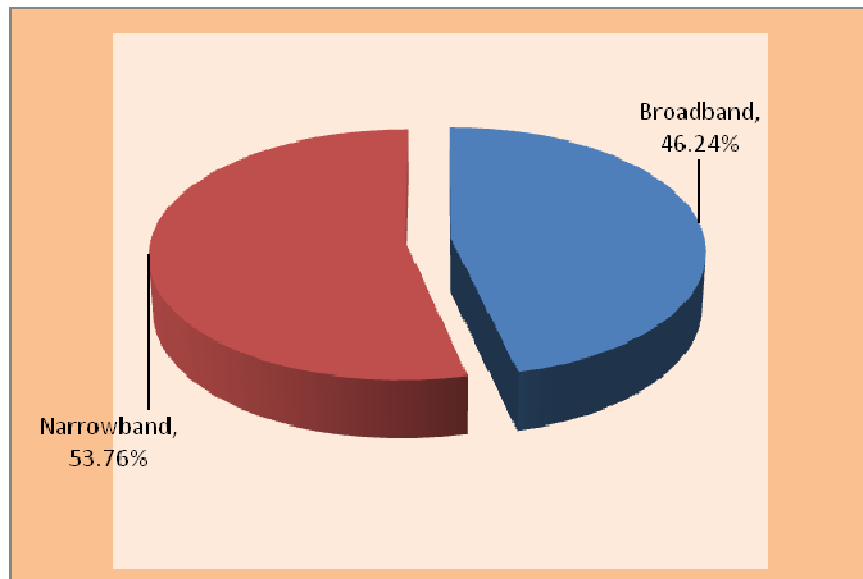
Segment	Mode of Access								Total Subscribers (in million)	
	Wired Subscribers (in million)		Wireless Subscribers (in million)							
			Fixed Wireless (Wi-Fi, Wi-Max, Radio & VSAT)		Mobile Wireless (Phone + Dongle)		Total Wireless			
	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16
Broadband	16.98	17.32	0.525	0.548	132.24	144.19	132.77	144.74	149.75	162.06
Narrowband	3.46	3.44	0.028	0.027	189.41	184.95	189.44	184.98	192.90	188.42
<b>Total</b>	<b>20.44</b>	<b>20.76</b>	<b>0.553</b>	<b>0.576</b>	<b>321.66</b>	<b>329.14</b>	<b>322.21</b>	<b>329.72</b>	<b>342.65</b>	<b>350.48</b>

1.39 The following charts present the composition of Internet Subscribers by mode of access and composition of Broadband & Narrowband subscription.

**Chart 1.13: Composition of Internet subscription**



**Chart 1.14 : Composition of Broadband & Narrowband subscription**



1.40 The urban/rural break up of internet subscribers are as per the following table.

**Table 1.25: Break up of Rural-Urban internet subscriber base**

[Subscribers in Millions]

Telecom Service Area	Narrowband (Jun-16)		Broadband (Jun-16)		Total Internet (Mar-16)		Total Internet (Jun-16)	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	5.87	7.87	3.73	8.39	9.13	15.73	9.60	16.26
Assam	2.43	1.29	0.88	2.12	3.21	3.54	3.31	3.41
Bihar	7.01	7.19	1.94	3.90	8.86	10.76	8.96	11.10
Delhi	0.47	7.94	0.47	12.55	0.93	19.66	0.93	20.49
Gujarat	3.97	7.19	2.18	8.38	6.06	15.04	6.15	15.57
Haryana	1.74	2.15	0.99	2.61	2.97	4.59	2.73	4.77
Himachal Pradesh	1.11	0.74	0.69	0.55	1.76	1.28	1.80	1.29
Jammu & Kashmir	1.25	1.01	0.57	0.71	1.83	1.79	1.83	1.72
Karnataka	3.44	6.20	1.99	10.93	5.54	17.09	5.44	17.12
Kerala	2.56	3.46	3.04	5.77	5.57	9.02	5.60	9.23
Kolkata	0.23	4.21	0.30	4.57	0.55	8.72	0.53	8.79
Madhya Pradesh	5.30	6.20	1.48	8.00	6.24	14.17	6.79	14.19
Maharashtra	6.44	8.80	3.55	11.57	9.76	19.72	9.99	20.37
Mumbai	0.16	6.32	0.10	9.22	0.28	15.37	0.26	15.54
North East	1.39	1.00	0.64	1.09	1.97	2.10	2.03	2.09
Orissa	3.06	2.17	0.79	2.39	3.37	4.93	3.85	4.57
Punjab	3.36	4.41	1.30	4.58	4.71	8.75	4.66	8.98
Rajasthan	5.25	6.54	1.75	4.23	7.01	10.25	7.01	10.77
Tamil Nadu	3.37	9.24	3.21	12.14	6.86	21.16	6.58	21.38
Uttar Pradesh(East)	9.59	7.60	2.13	4.68	11.21	11.27	11.72	12.27
Uttar Pradesh(West)	4.94	6.25	1.46	4.32	6.48	10.04	6.40	10.57
West Bengal	5.30	2.41	2.26	3.89	7.64	5.75	7.56	6.29
<b>Total</b>	<b>78.25</b>	<b>110.17</b>	<b>35.46</b>	<b>126.60</b>	<b>111.94</b>	<b>230.71</b>	<b>113.71</b>	<b>236.77</b>

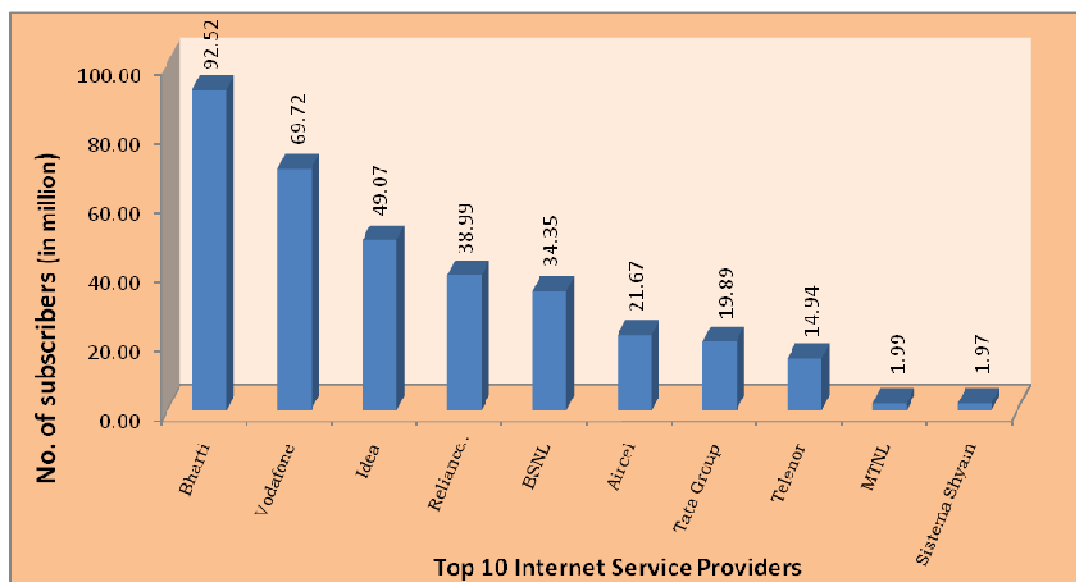
**Table 1.26: Internet Subscriber Base and Market Share of top 10 Service Providers – Jun-16**

S.No	ISP	No. of Subscribers	Share (%)
1	Bharti	92518854	26.40
2	Vodafone	69722586	19.89
3	Idea	49066826	14.00
4	Reliance Communication Group	38992433	11.13
5	BSNL	34350214	9.80
6	Aircel	21666406	6.18
7	Tata Group	19886032	5.67
8	Telenor	14937693	4.26
9	MTNL	1985056	0.57
10	Sistema Shyam	1967937	0.56
	<b>Total of Top 10 ISPs</b>	<b>345,094,037</b>	<b>98.46</b>
	Others	5,384,547	1.54
	<b>Grand Total</b>	<b>350,478,584</b>	<b>100</b>

1.41 Bharti holds the top position with 26.40% of market share of internet subscribers followed by Vodafone with 19.89%. Top 10 Service Providers together hold 98.46% of total internet subscriber base at the QE Jun-16. Detailed table of number of subscriber base of all the service providers is available at Annexure-1.6.

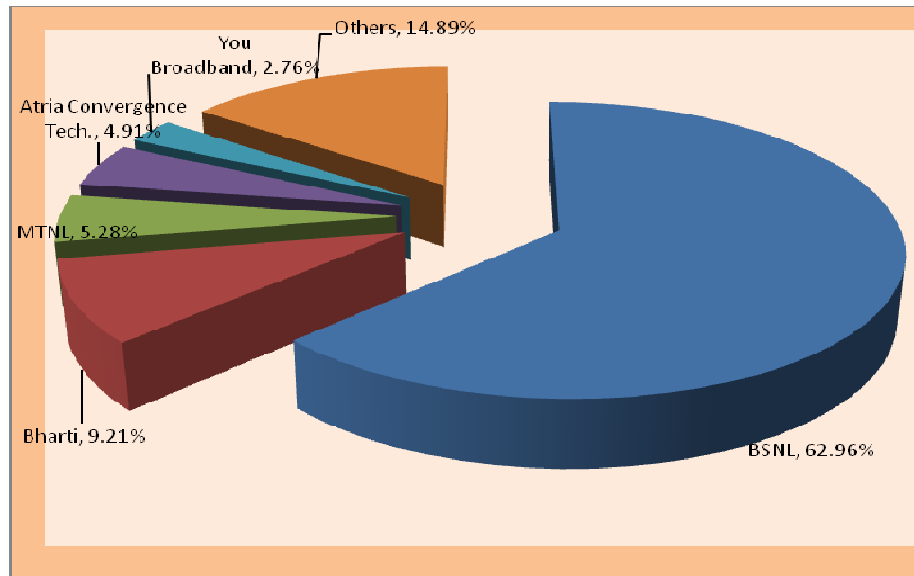
1.42 The following chart depicts the subscriber base of top ten ISPs in the QE Jun-16.

**Chart 1.15 : Subscriber base of top ten ISPs**



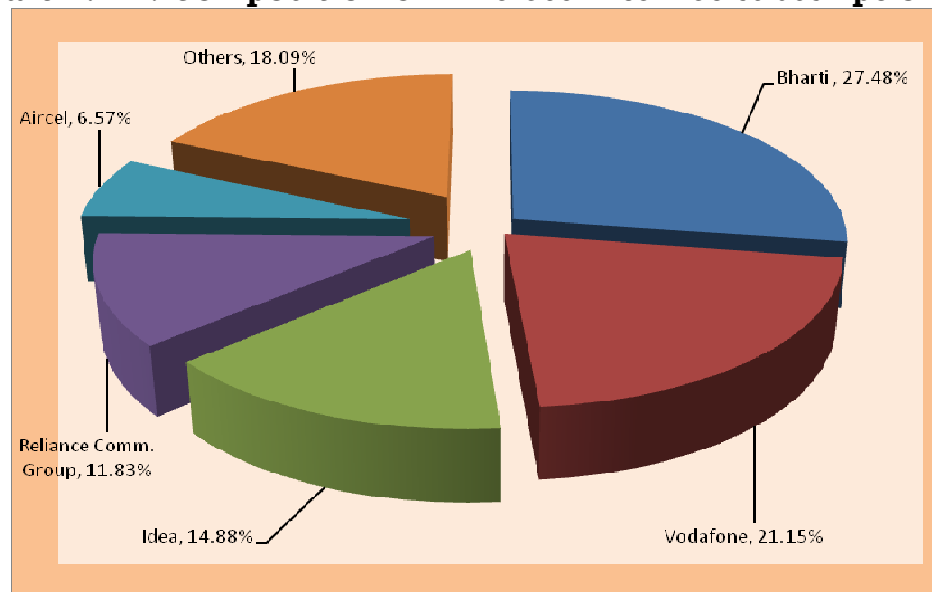
1.43 In wired internet segment, BSNL holds 62.96% market share with 13.07 million subscribers, followed by Bharti with 1.91 million subscribers. Total number of wired internet subscriber is 20.76 million at the end of Jun-16.

**Chart 1.16 : Composition of Wired Internet subscribers**

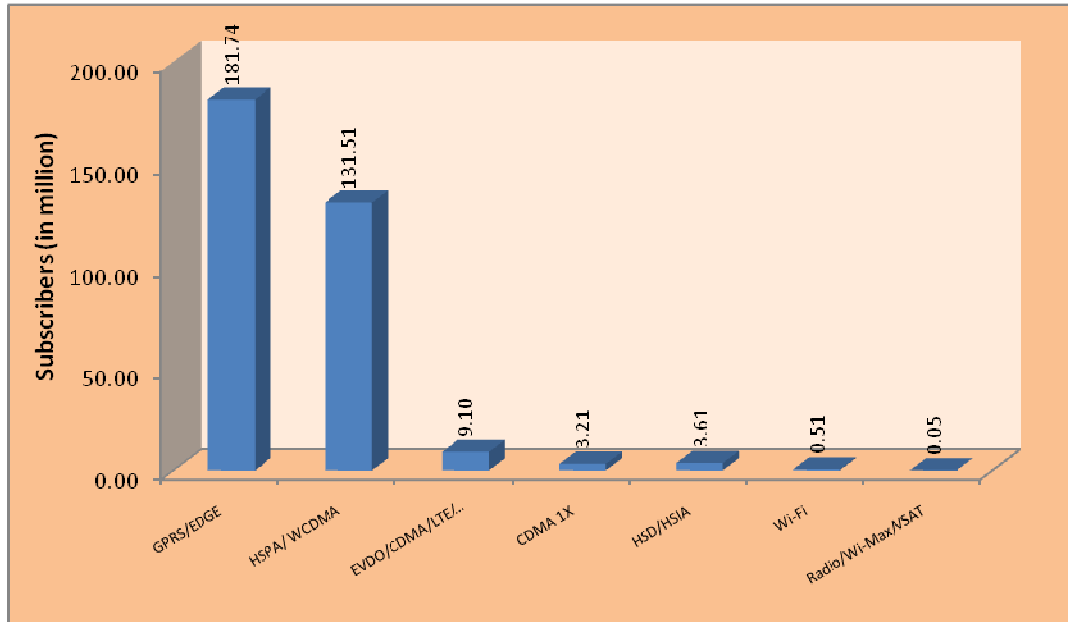


1.44 In wireless internet segment, Bharti holds 27.48% market share with 90.61 million subscribers followed by Vodafone (69.72 million internet subscribers).

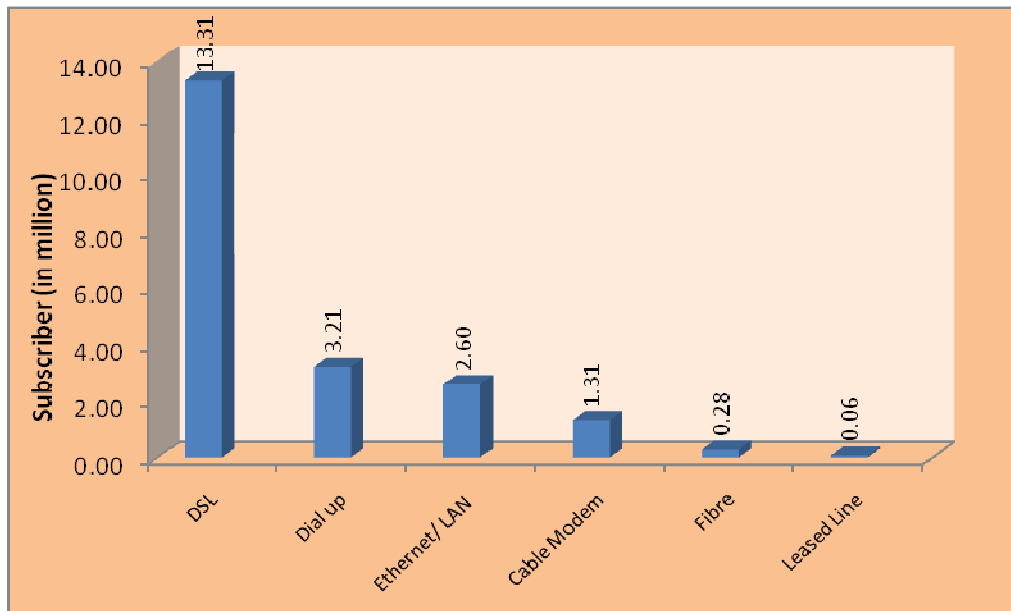
**Chart 1.17 : Composition of Wireless Internet subscription**



**Chart 1.18 : Technology trend for Wireless Internet Access – Jun-16**



**Chart 1.19 : Technology trend for Wired Internet Access – Jun-16**



1.45 Top five service areas in terms of internet subscriptions (wired + wireless) are Maharashtra (30.36 million), Tamil Nadu including Chennai (27.96 million), Andhra Pradesh (25.86 million), U.P.(E) (24.00 million) and Karnataka (22.56 million).



**Table 1.27 : Service Area wise number of Internet Subscribers per 100 population at the end of Jun-16**

Service Area	Internet Subscribers (in million)			Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	9.60	16.26	25.86	15.04	65.68	29.19
Assam	3.31	3.41	6.72	12.13	64.84	20.64
Bihar	8.96	11.10	20.05	7.52	58.19	14.52
Delhi	-	-	21.42	-	-	99.70
Gujarat	6.15	15.57	21.71	16.61	58.08	34.02
Haryana	2.73	4.77	7.50	15.52	47.57	27.15
Himachal Pradesh	1.80	1.29	3.09	28.61	154.24	43.38
Jammu & Kashmir	1.83	1.72	3.55	20.35	49.37	28.46
Karnataka	5.44	17.12	22.56	14.24	70.28	36.07
Kerala	5.60	9.23	14.82	20.91	101.77	41.38
Madhya Pradesh	6.79	14.19	20.98	8.98	49.59	20.13
Maharashtra	9.99	20.37	30.36	16.27	60.36	37.67
Mumbai	0.26	15.54	15.80			
North East	2.03	2.09	4.12	19.35	59.33	29.43
Orissa	3.85	4.57	8.42	11.00	60.30	19.77
Punjab	4.66	8.98	13.64	26.84	65.82	44.00
Rajasthan	7.01	10.77	17.78	12.61	60.77	24.26
Tamil Nadu	6.58	21.38	27.96	23.16	49.96	39.27
UP (East)	11.72	12.27	24.00	10.23	43.34	17.82
UP (West)	6.40	10.57	16.97			
Kolkata	0.53	8.79	9.31	11.95	55.22	24.38
West Bengal	7.56	6.29	13.86			
<b>Total</b>	<b>113.71</b>	<b>236.77</b>	<b>350.48</b>	<b>12.98</b>	<b>59.53</b>	<b>27.51</b>

\* Population data/projections are available state-wise only.

Notes:

1. No. of total internet subscribers per 100 population is derived from the subscriber data provided by the operators and the population projections of the country, published by the Office of the Registrar General & Census Commissioner, India.

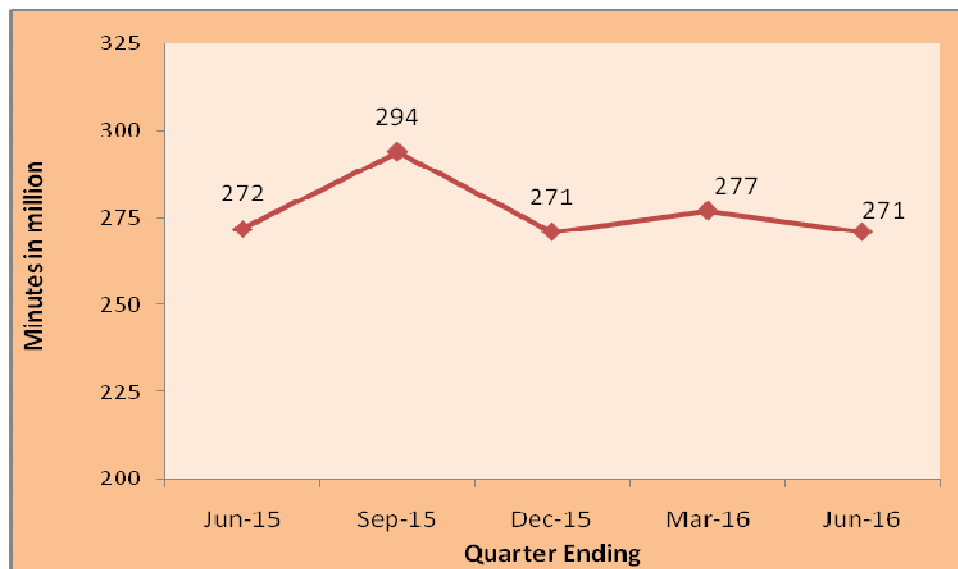
## ISP Connectivity

1.46 The International Internet bandwidth owned by various service providers is reported to be 2099 Gbps during the quarter ending Jun-16 as compared to 2070 Gbps during the previous quarter.

## Internet Telephony

1.47 As per the reports received from 16 service providers, providing Internet Telephony services, the total outgoing minutes of usage for internet telephony is 271 million during the Q.E. Jun-16. List of Internet Telephony Service providers is available at Annexure-1.7.

**Chart 1.20 : Trends in MOU for Internet Telephony**

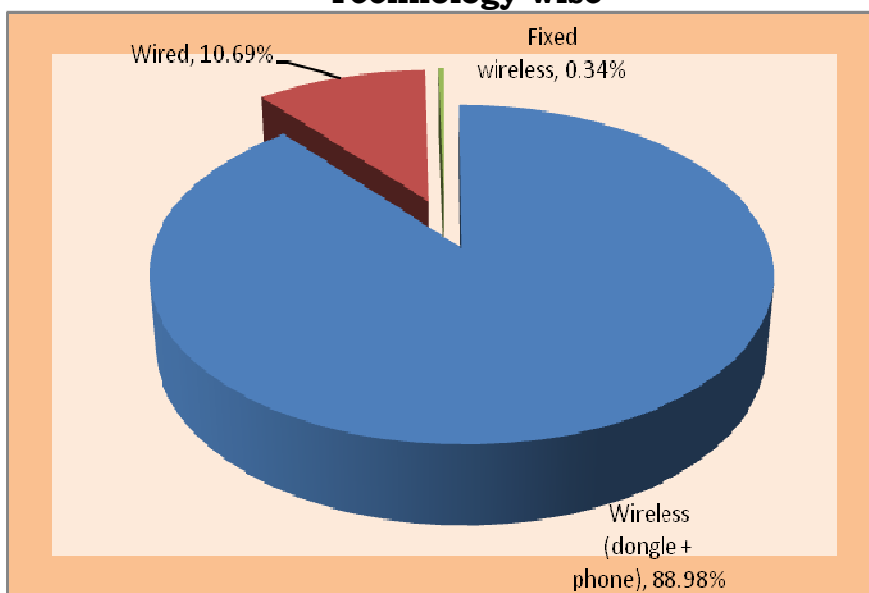


## Part-II : Broadband Service (Download Speed $\geq$ 512 Kbps)

1.48 The total number of broadband subscribers increased from 149.75 million at the end of Mar-16 to 162.06 million at the end of Jun-16. Out of which wired broadband subscribers are 17.32 million and wireless broadband subscribers are 144.74 million.

- 1.49 Top five broadband (wired+wireless) service providers in term of subscribers are Bharti (40.61 million), Vodafone (32.28 million), Idea (27.02 million), BSNL (20.56 million), and Reliance Communications Group (16.64 million).
- 1.50 In wired broadband segment, BSNL holds 57.03% market share with 9.88 million subscribers followed by Bharti with 1.82 million and MTNL with 1.10 million subscribers.
- 1.51 In wireless broadband segment, Bharti holds 26.80% market share with 38.79 million subscribers followed by Vodafone with 32.27 million (22.29%) and Idea Cellular with 27.02 million subscribers.
- 1.52 Top five service areas in respect of broadband subscriptions are Tamil Nadu including Chennai (15.35 million), Maharashtra (15.13 million), Delhi (13.02 million), Karnataka (12.92 million) and Andhra Pradesh (12.11 million).

**Chart 1.21 : Composition of Broadband subscription – Technology wise**

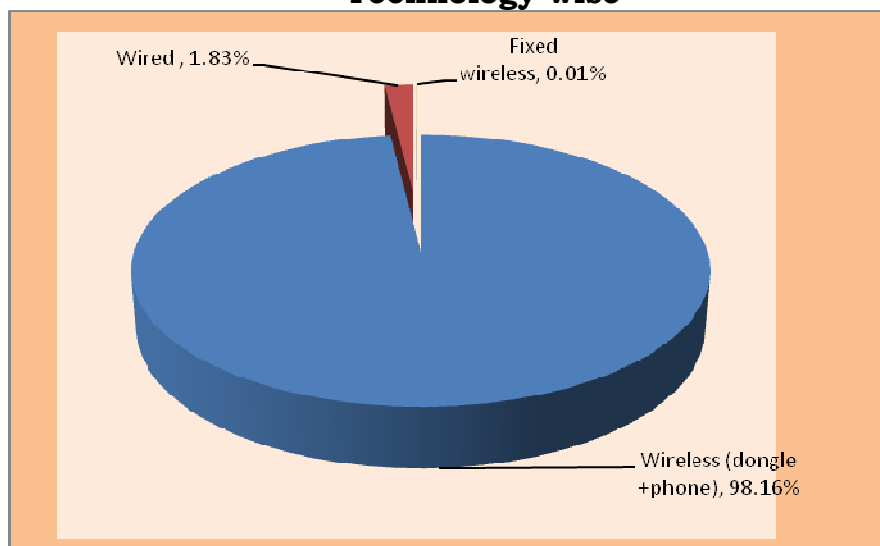


- 1.53 Mobile Device Users (dongle + phone) constitute 88.98% of total broadband subscribers at the end of Jun-16.

### Part-III : Narrowband Service (Download Speed <512 Kbps)

- 1.54 Total number of narrowband subscribers declined from 192.90 million at the end of Mar-16 to 188.42 million at the end of Jun-16 with the quarterly decline rate of 2.32%. Out of 188.42 million narrowband subscribers, Wired Narrowband subscribers are 3.44 million and Wireless Narrowband subscribers are 184.98 million.
- 1.55 The top five narrowband (wired + wireless) service providers in term of subscriber base are Bharti (51.91 million), Vodafone (37.45 million), Reliance Communications Group (22.36 million), Idea Cellular (22.05 million) and Telenor (14.94 million).
- 1.56 In wired narrowband segment, BSNL holds 92.78% market share with 3.20 million subscribers followed by Bharti Airtel (0.09 million) and Syscon Infoway Pvt. Ltd. (0.04 million).
- 1.57 In wireless narrowband segment, Bharti holds 28.01% market share with 51.82 million subscribers followed by Vodafone (37.45 million) and Reliance Communications Group (22.34 million).

**Chart 1.22 : Composition of Narrowband subscription – Technology wise**



## Section E : Other Value Added Services - PMRTS & VSAT

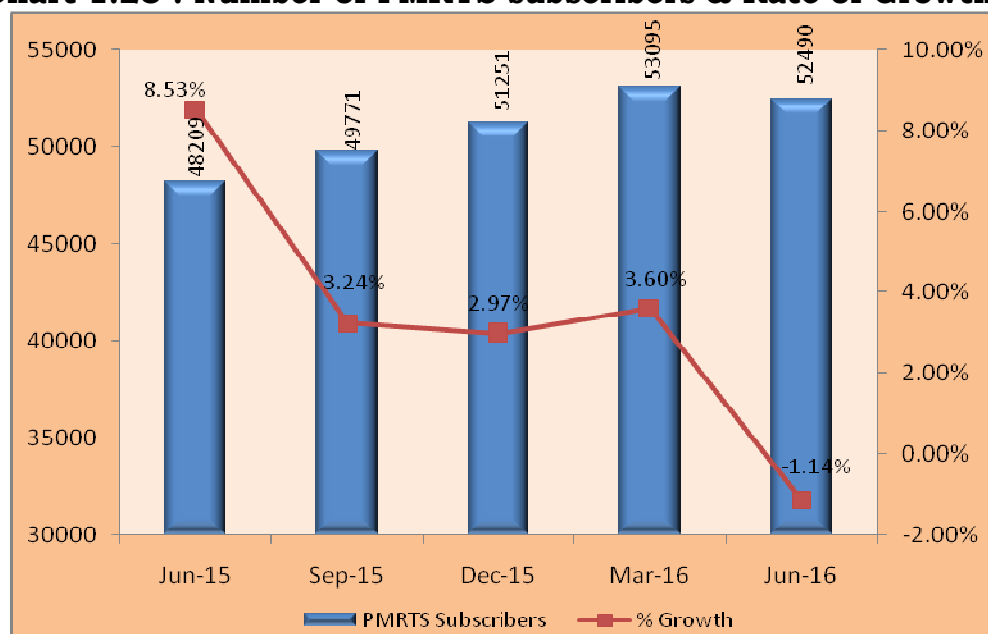
### Public Mobile Radio Trunk Services (PMRTS)

1.58 The subscriber base of PMRTS declined from 53,095 at the end of Mar-16 to 52,490 at the end of Jun-16 with quarterly decline rate of 1.14%.

**Table 1.28 : PMRTS Subscriber base - Service Provider wise**

Sr. No.	Name of the Service Provider	Subscriber Base as on 31.03.2016	Subscriber Base as on 30.06.2016	Growth in Subscribers	% Growth in subscribers as on 30.06.2016
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	45245	44408	-837	-1.85%
4	Procall Ltd.	2813	2860	47	1.67%
2	Quick Call	1404	1456	52	3.70%
3	Inative Networks Pvt Ltd	1820	1820	0	0.00%
5	Bhilwara Telenet Services Pvt Ltd	450	506	56	12.44%
6	Smartlink Pvt Ltd	925	927	2	0.22%
7	Wiwonet Solutions Pvt Ltd	210	264	54	25.71%
8	Airtalk Solutions & Services Pvt Ltd	228	249	21	9.21%
	<b>Total</b>	<b>53095</b>	<b>52490</b>	<b>-605</b>	<b>-1.14%</b>

**Chart 1.23 : Number of PMRTS subscribers & Rate of Growth (%)**



1.59 Detailed table on Service Area wise subscriber base of PMRTS is available at Annexure-1.8.

**Very Small Aperture Terminal (VSAT)**

1.60 The total number of VSAT subscribers increased from 2,73,043 at the end of Mar-16 to 2,77,114 at the end of Jun-16. Net addition during the quarter has been 4,071 at the quarterly growth rate of 1.49%.

**Table 1.29 : VSAT Service Providers currently providing service & their subscriber base**

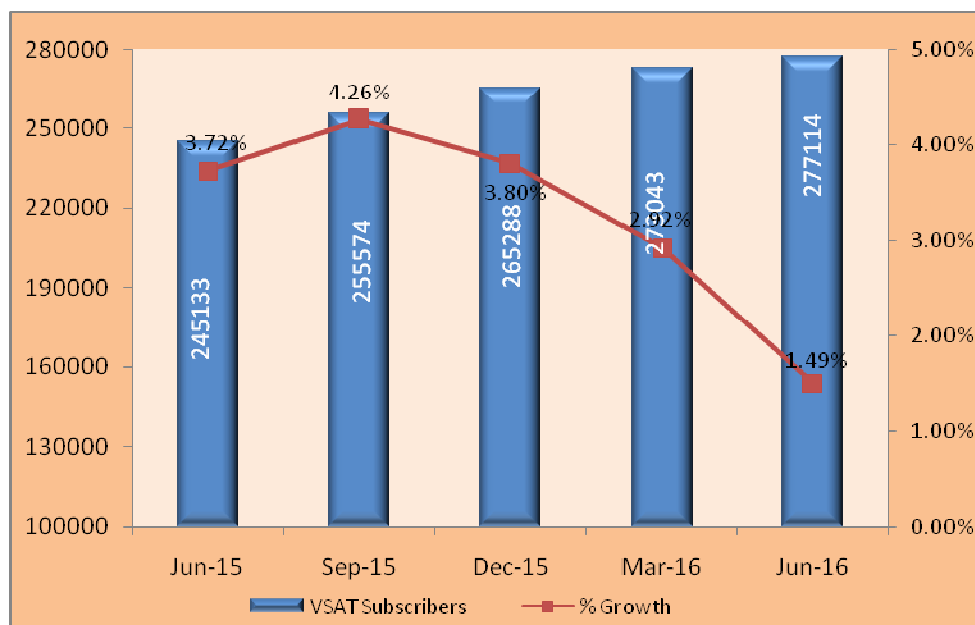
Sr. No	Name of Service Providers	Subscriber base at the Quarter ending		Net Addition	%age Growth	Market Share (%) Jun-16
		Mar-16	Jun-16			
1	Hughes Communications Ltd.	106491	106548	57	0.05	38.45
2	Bharti Airtel Limited	62188	64893	2705	4.35	23.42
3	Tatanet Services	50969	51805	836	1.64	18.69
4	HCL Comnet	27949	28080	131	0.47	10.13
5	BSNL	20703	20907	204	0.99	7.54
6	National Informatics Centre Services Incorporated	2617	2637	20	0.76	0.95
7	Infotel Satcom	2022	2150	128	6.33	0.78
8	Planetcast Media Services Ltd	104	94	-10	-9.62	0.03
	<b>Total</b>	<b>273,043</b>	<b>277,114</b>	<b>4071</b>	<b>1.49</b>	<b>100</b>

1.61 Hughes Communication Limited continues to be the market leader with subscriber base of 1,06,548 followed by Bharti Airtel Ltd (64,893) at the end of Jun-16.

1.62 M/s Infotel Satcom has recorded maximum growth rate of 6.33% followed by M/s Bharti Airtel Ltd (4.35%). M/s Planetcast Media Services Ltd shown decline in number of VSAT subscribers during this quarter.

1.63 The following chart depicts the trend of VSAT subscriber base and its quarterly growth rate.

**Chart 1.24 : Number of VSAT Subscribers & Rate of Growth (%)**



# **Chapter 2 :**

# **Revenue and Usage**

- 
- For all the parameters, Metros indicate data for Delhi, Mumbai & Kolkata. Data for Chennai service area has been included in Circle A, as part of TN.
  - ARPU arrived after adjusting interconnect usage charges and roaming settlement charges.
  - The data contained in the section A & B covers the licensees, who have been providing service during the entire period from 1<sup>st</sup> April, 2016 to 30<sup>th</sup> June, 2016 in the various service areas.



## Section A: GSM Service

**Table 2.1: Key Indicators - GSM Service**

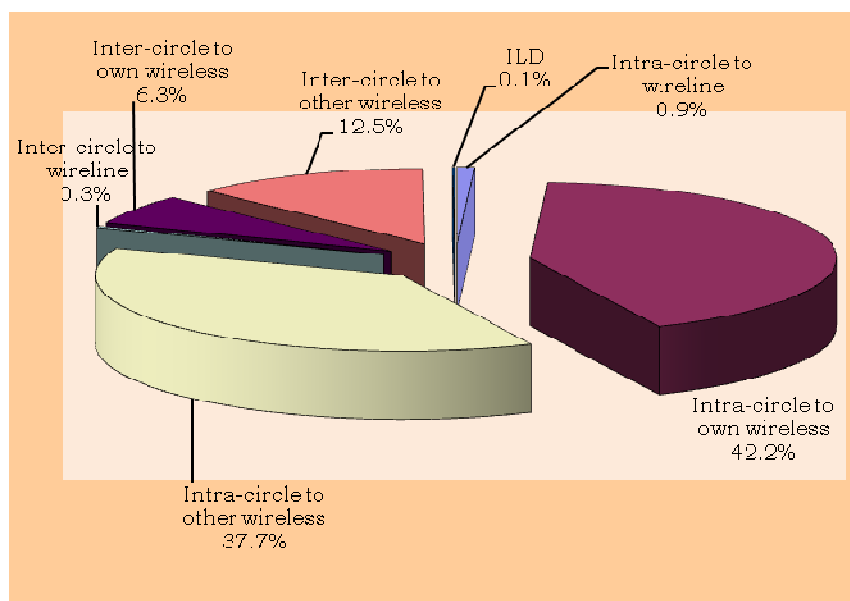
Parameter	Jun-16	Mar-16	Jun-15	QoQ %age change over Mar-16	YoY %age change over Jun-15
Subscriber Base# (million)	996.63	989.54	930.88	0.72	7.06
Share of Prepaid (%)	95.23	95.36	95.57	-0.14	-0.35
Incoming MOU* per subscriber per month	194.60	196.29	200.27	-0.86	-2.83
Outgoing MOU* per subscriber per month	181.97	184.33	188.23	-1.28	-3.33
No. of Outgoing SMS per subscriber per month	19.52	20.99	22.07	-6.96	-11.54
Average Revenue Per User (ARPU) per month	126.05	124.85	125.93	0.96	0.09

# The subscriber figures are as on the last day of the respective quarters

\* Minutes of Usage

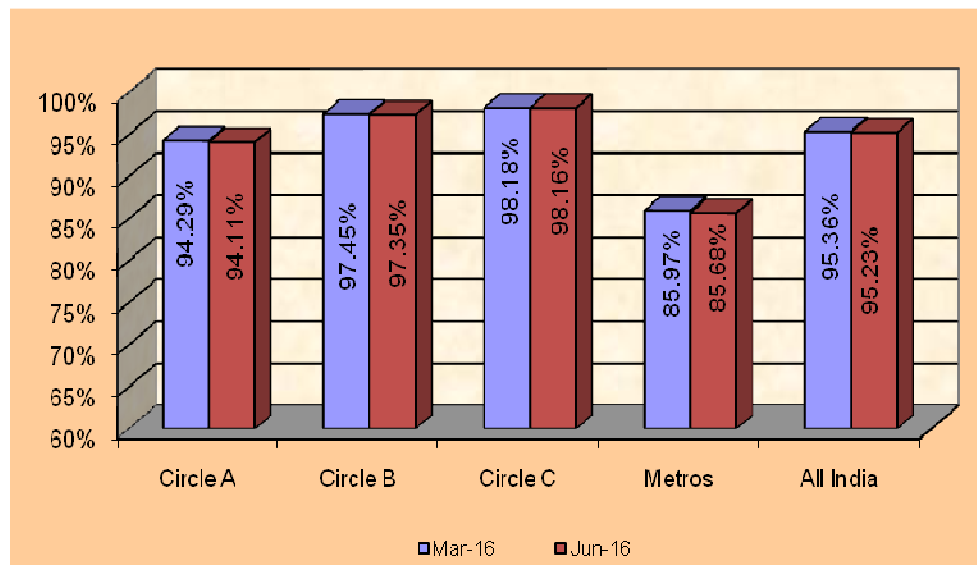
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Jun-16.

**Chart 2.1: Break-up of Outgoing minutes from Home Service Area (HSA) - GSM Service in QE Jun-16**



2.2 The following chart depicts prepaid subscribers as a % of total subscribers as on the last day of the respective quarters for various categories of circles.

**Chart 2.2: Proportion of prepaid subscribers - GSM Service**



*Note: Based on subscriber figures as on the last day of the quarter.*

2.3 Market share of prepaid segment declined from 95.36% at the end of Mar-16 to 95.23% at the end of Jun-16.

2.4 The ARPU per month (all India, blended) increased from ₹125 in Q.E. Mar-16 to ₹126 in Q.E. Jun-16. The following table presents the ARPU per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

**Table 2.2: Monthly ARPU - GSM Service in QE Jun-16**

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	488	117	138
Circle B	478	103	112
Circle C	474	101	108
Metros	522	109	167
<b>All India</b>	<b>495</b>	<b>108</b>	<b>126</b>
All private SPs	497	109	127
BSNL/MTNL	465	99	112

2.5 The ARPU per month for pre-paid segment increased from ₹107 in QE Mar-16 to ₹108 in QE Jun-16, and the ARPU per month for post-paid segment increased from ₹488 in QE Mar-16 to ₹495 in QE Jun-16.

2.6 The following table presents the composition of ARPU per month in the QE Jun-16.

**Table 2.3: Composition of ARPU per month - GSM Service in QE Jun-16**

<b>S. No.</b>	<b>Item</b>	<b>Revenue (excl. service tax) per subscriber per month (in ₹)</b>	<b>Share of total revenue from subscribers</b>
1	<b>Usage from Home Service Area</b>		
1.1.	Rental Revenue	22.88	17.2%
1.2.	Revenue from calls	62.59	47.0%
1.3.	Revenue from SMS	3.04	2.3%
1.4.	Revenue from data usage	29.43	22.1%
1.5.	Revenue from other VAS	5.07	3.8%
1.6.	Other revenue	3.36	2.5%
2	<b>Usage outside Home Service Area</b>		
2.1.	Revenue from outroamers	6.66	5.0%
3	<b>Total revenue from subscribers (1+2)</b>	<b>133.03</b>	<b>100%</b>
4	Net inter-operator settlement charges receivable *	-6.98	
5	<b>Net Revenue (ARPU) per month(3+4)</b>	<b>126</b>	

\* includes Interconnect Usages Charges and roaming settlement charges

2.7 From the above table, it may be seen that the net inter-operator settlement charges payable (₹6.98) accounts for 5.25% of the total revenue from subscribers.

2.8 On an all India average, the overall minutes of usage (MOU) per subscriber per month declined from 381 in QE Mar-16 to 377 in QE Jun-16.

2.9 The following table presents the total MOU (usage from, and outside, the home service area) per subscriber per month for various categories of circles.

**Table 2.4: MOU per subscriber per month - GSM Service in QE Jun-16**

Circle category	MOU per subscriber per month								
	Postpaid			Prepaid			Blended		
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU
Circle A	527	384	911	162	165	327	183	178	361
Circle B	553	367	919	160	194	354	170	198	369
Circle C	525	348	874	175	225	400	181	227	408
<b>Metro</b>	501	336	837	182	164	347	228	189	416
<b>All India</b>	<b>525</b>	<b>364</b>	<b>889</b>	<b>165</b>	<b>186</b>	<b>351</b>	<b>182</b>	<b>195</b>	<b>377</b>

Note: MOU indicates total usage i.e. usage from and outside HSA

2.10 The overall ratio of incoming MOU and outgoing MOUs for the QE Jun-16 is 51.7 : 48.3.

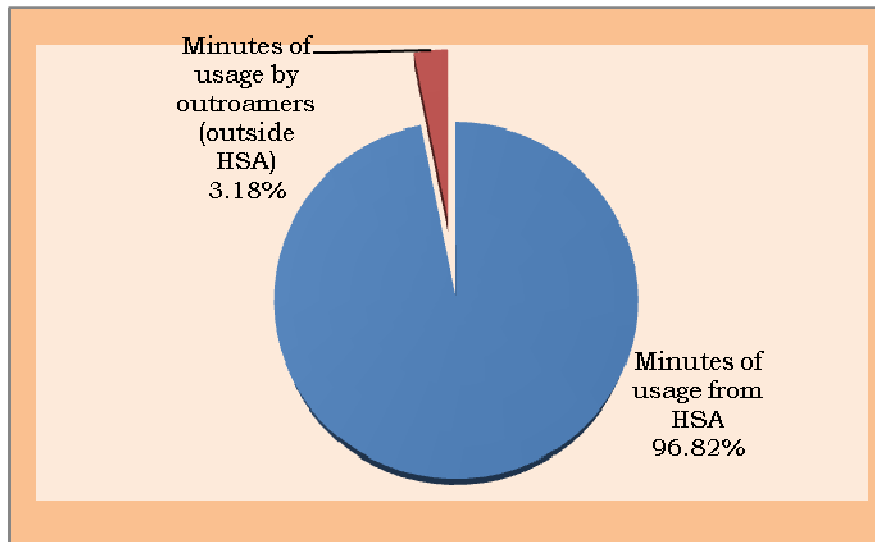
2.11 Number of outgoing SMS per subscriber per month declined from 21 in Q.E. Mar-16 to 20 in Q.E. Jun-16. The following table presents the outgoing SMS usage (usage from, and outside, the home service area) per subscriber per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

**Table 2.5: No. of Outgoing SMS per subscriber per month - GSM Service in QE Jun-16**

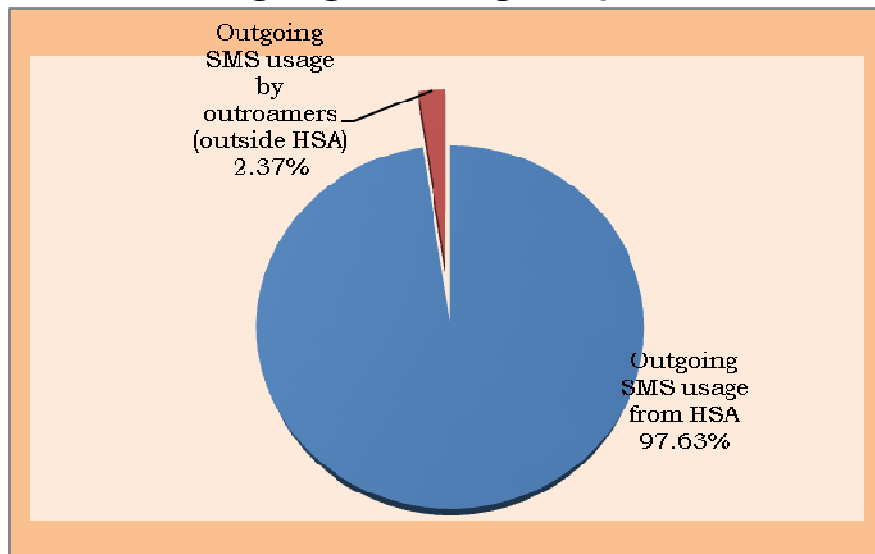
Circle category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Circle A	50	25	27
Circle B	44	16	17
Circle C	27	12	12
Metro	29	13	15
<b>All India</b>	<b>41</b>	<b>18</b>	<b>20</b>

Note: No. of Outgoing SMS indicate total usage i.e. usage from and outside HSA

**Chart 2.3 : Minutes of Usage by Out-roamers as a % of Total Minutes of Usage in QE Jun-16**



**Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage in QE Jun-16**



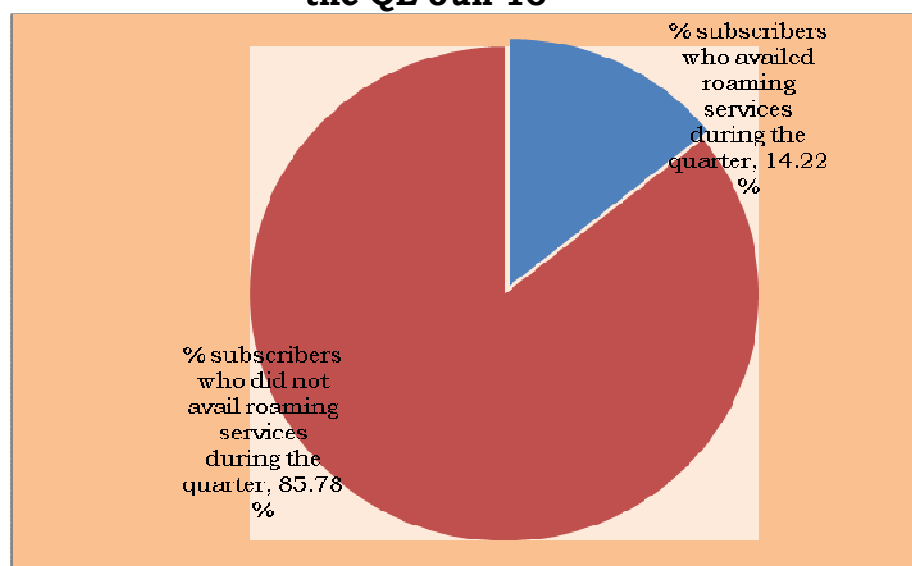
2.12 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks.

**Table 2.6: %Break-up of Outgoing minutes from Home Service Area (HSA) in QE Jun-16**

Circle Category	% Intra-circle to wireline	% Intra-circle to own wireless	% Intra-circle to other wireless	% Inter-circle to wireline	% Inter-circle to own wireless	% Inter-circle to other wireless	% ILD
<b>Circle A</b>	1.13	38.73	42.55	0.26	4.85	12.36	0.13
<b>Circle B</b>	0.69	47.08	36.26	0.30	5.55	10.02	0.08
<b>Circle C</b>	0.33	51.99	33.31	0.18	4.99	9.16	0.04
<b>Metros</b>	1.73	23.56	33.28	0.45	15.29	25.43	0.27
<b>All India</b>	<b>0.91</b>	<b>42.22</b>	<b>37.70</b>	<b>0.29</b>	<b>6.32</b>	<b>12.46</b>	<b>0.11</b>

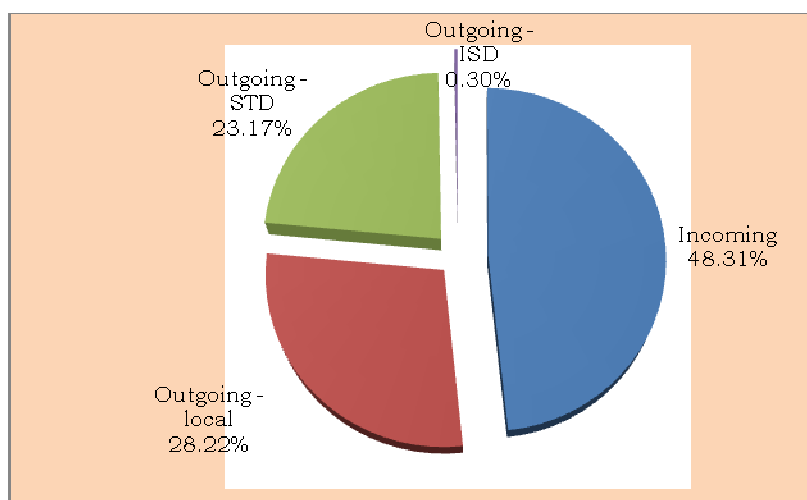
2.13 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter ending Jun-16.

**Chart 2.5: % subscribers who availed roaming services during the QE Jun-16**



2.14 The usage pattern of out-roamers i.e. usage from outside the home service area shows that incoming minutes accounts for 48.31% of the total minutes of usage by out-roamers in QE Jun-16 as against 48.62% in the previous quarter. The chart given below presents the break-up of minutes of usage of out-roamers during the QE Jun-16.

**Chart 2.6: % Break-up of minutes of usage of outroamers (usage from outside the Home Service Area) in QE Jun-16**



2.15 The tariff plans are of bundled nature and the trade-off is generally between monthly fixed charges and variable (call) charges. Therefore, average subscriber outgo per outgoing minute for usage from Home Service Area (HSA\*) as defined below would be a realistic indicator of average tariff.

\*Average Subscriber Outgo per Outgoing Minute for usage from HSA =

$$\frac{\text{Rental revenue} + \text{revenue from outgoing calls from HSA}}{\text{No. of outgoing minutes from HSA}}$$

**Table 2.7: Average subscriber outgo per outgoing minute from HSA for GSM Service in QE Jun-16**

Circle Category	Average subscriber outgo per outgoing minute from HSA for GSM Service in QE Jun-16 (₹ per minute)		
	Postpaid	Prepaid	Blended
Circle A	0.51	0.53	0.53
Circle B	0.50	0.45	0.46
Circle C	0.58	0.42	0.43
Metros	0.59	0.52	0.54
<b>All India</b>	<b>0.53</b>	<b>0.48</b>	<b>0.49</b>

2.16 All India average subscriber outgo per outgoing minute increased from ₹ 0.48 in the QE Mar-16 to ₹ 0.49 in the QE Jun-16.

**Table 2.8: Trends of Key Parameters - GSM Service**

<b>Parameter</b>	<b>Jun-15</b>	<b>Sep-15</b>	<b>Dec-15</b>	<b>Mar-16</b>	<b>Jun-16</b>
<b>1. ARPU (₹ Per month)</b>	126	122	123	125	126
<b>2. Average Revenue from data usage per subscriber per month ( in ₹)</b>	25	27	28	28	29
<b>3. MOU per subscriber per month</b>	388	374	376	381	377
<b>4. Outgoing MOU per subscriber per month</b>					
4.1 Local (Intra-circle)	152	145	146	147	145
4.2 NLD (inter-circle)	37	37	36	37	36
4.3 ILD	0.20	0.20	0.24	0.25	0.20
<b>5. No. of Outgoing SMS per subscriber per month</b>	24	22	23	22	20
<b>6. Average subscriber Outgo per outgoing minute from HSA (in ₹)</b>	0.49	0.48	0.47	0.48	0.49

2.17 Service Area wise statistics are available at Annexure-2.1.



## Section B: CDMA - Full Mobility Service

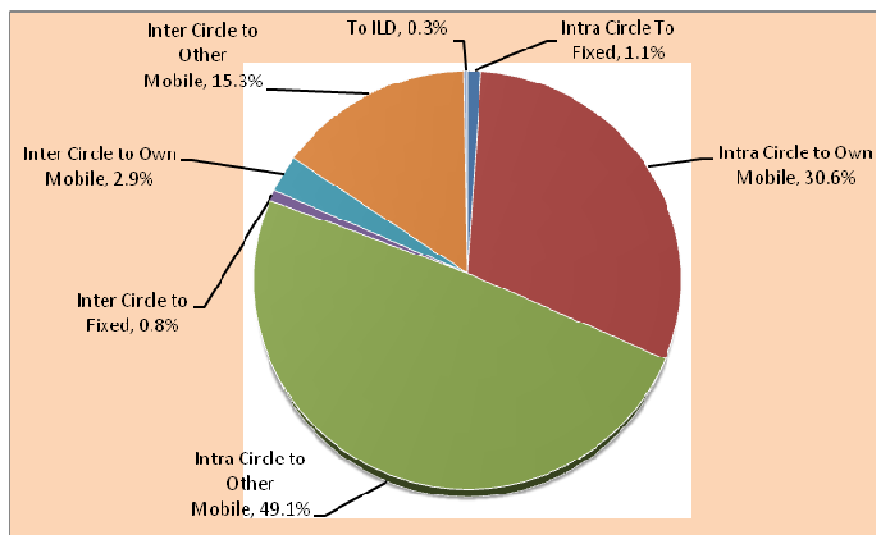
**Table 2.9: Key Indicators - CDMA Full Mobility Service**

Parameters	QE Jun-16	QE Mar-16	QE Jun-15	QoQ change (%)	YoY change (%)
Subscriber Base in Millions*	32.50	34.84	40.65	-6.70	-20.04
Share of Prepaid (%)	88.67	89.5	88.72	-0.96	-0.06
Incoming MOUs per subscriber per month	97.77	110.11	118.26	-11.21	-17.33
Outgoing MOUs per subscriber per month	129.95	150.25	144.78	-13.51	-10.24
Outgoing SMS per subs per month	6.85	7.61	9.49	-9.98	-27.77
ARPU (₹ per month)	98.51	103.54	107.02	-4.86	-7.95

\* The subscriber figures are as on last day of the quarter.

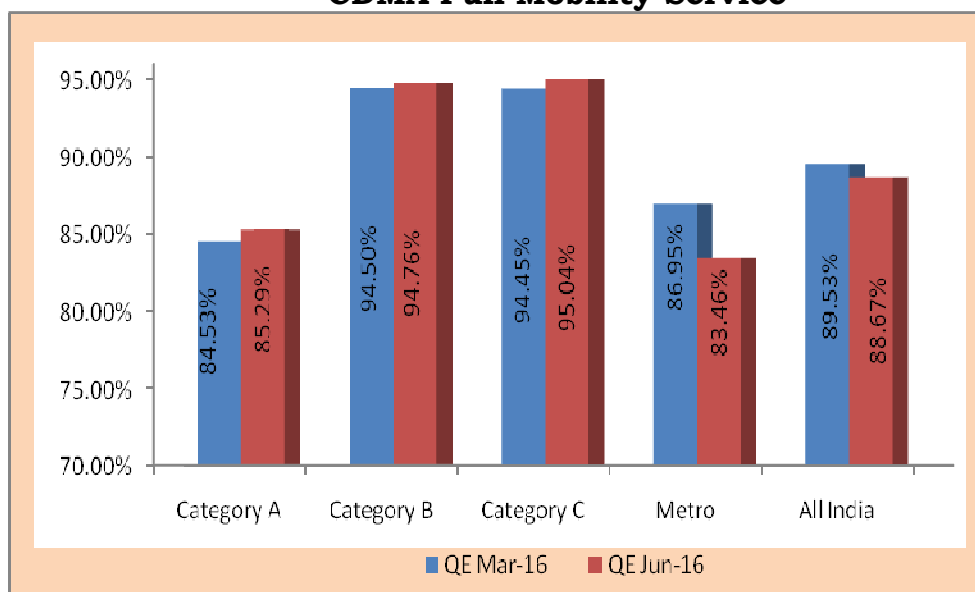
2.18 The following chart depicts % break-up of outgoing minutes from home service area (HSA).

**Chart 2.7: % Break-up of Outgoing Minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Jun-16**



2.19 The following chart depicts prepaid subscribers as a % of total subscribers as on the last day of the respective quarters for various categories of circles.

**Chart 2.8: Proportion of prepaid subscribers – CDMA Full Mobility Service**



2.20 Market share of Prepaid segment declined from 89.53% in QE Mar-16 to 88.67% in QE Jun-16.

2.21 The following table presents the ARPU per month for various categories of circles and various platforms for payment viz. postpaid and prepaid.

**Table 2.10: Monthly ARPU - CDMA Full Mobility Service in QE Jun-16**

(₹ per month)

Circle category	Postpaid	Prepaid	Blended ARPU
Circle A	440	63	121
Circle B	456	46	69
Circle C	445	25	47
Metro	516	46	125
<b>All India</b>	<b>474</b>	<b>49</b>	<b>99</b>

2.22 The All India blended Average Revenue Per User (ARPU) per month has shown a decline of 4.86% from ₹103.54 in QE Mar-16 to ₹ 98.51 in QE Jun-16.

2.23 ARPU for Prepaid service declined from ₹52 in QE Mar-16 to ₹49 in QE Jun-16. ARPU for Postpaid service also declined from ₹499 in QE Mar-16 to ₹474 in QE Jun-16.

**Table 2.11: Composition of ARPU per month- CDMA Full Mobility Service**

S. No.	Item	Revenue (excl. service tax) per subscriber per month (in ₹)	Share of total revenue from subscribers
<b>1</b>	<b>Usage from Home Service Area</b>		
1.1	Rental Revenue	20.53	19.09%
1.2	Revenue from Calls	29.75	27.66%
1.3	Revenue from SMS#	0.56	0.52%
1.4	Revenue from data usage	48.91	45.48%
1.5	Revenue from other VAS	1.86	1.73%
1.6	Other Revenue#	3.97	3.70%
<b>2</b>	<b>Usage Outside Home Service Area</b>		
2.1	Revenue from Out-roamers	1.95	1.82%
<b>3</b>	<b>Total Revenue from Subscribers (1+2)</b>	<b>107.53</b>	<b>100%</b>
<b>4</b>	<b>Net inter-operator settlement charges receivable*</b>	<b>-9.02</b>	
<b>5</b>	<b>Net Revenue (ARPU) (3+4)</b>	<b>98.51</b>	

\* Includes Interconnect Usage Charges and roaming settlement charges

2.24 From the above table, it may be seen that the net inter-operator settlement charges payable (₹ 9.02) accounts for 8.39% of total revenue from subscribers in QE Jun-16.

2.25 Revenue from data usage per subscriber per month (for usage from HSA) declined from ₹ 50.94 in QE Mar-16 to ₹ 48.91 in QE Jun-16.

2.26 The total MOUs per subscriber per month declined by 12.54%, from 260 in QE Mar-16 to 228 in QE Jun-16. Outgoing MOUs declined from 150 in QE Mar-16 to 130 in QE Jun-16 and incoming MOUs declined from 110 in QE Mar-16 to 98 in QE Jun-16.

2.27 Prepaid MOUs per subscriber per month declined from 237 in QE Mar-16 to 208 in QE Jun-16 and postpaid MOUs per subscriber per month declined from 445 in QE Mar-16 to 379 in QE Jun-16.

**Table 2.12 : MOU per subscriber per month – CDMA Full Mobility Service**

<b>MOU per subscriber per month</b>									
<b>Circle category</b>	<b>Postpaid</b>			<b>Prepaid</b>			<b>Blended</b>		
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU
Circle A	189	125	<b>315</b>	87	80	<b>167</b>	103	87	<b>189</b>
Circle B	401	213	<b>614</b>	133	103	<b>236</b>	148	110	<b>257</b>
Circle C	726	335	<b>1061</b>	218	130	<b>349</b>	245	141	<b>387</b>
Metro	178	113	<b>291</b>	96	79	<b>175</b>	110	85	<b>194</b>
<b>All India</b>	237	142	<b>379</b>	116	92	<b>208</b>	130	98	<b>228</b>

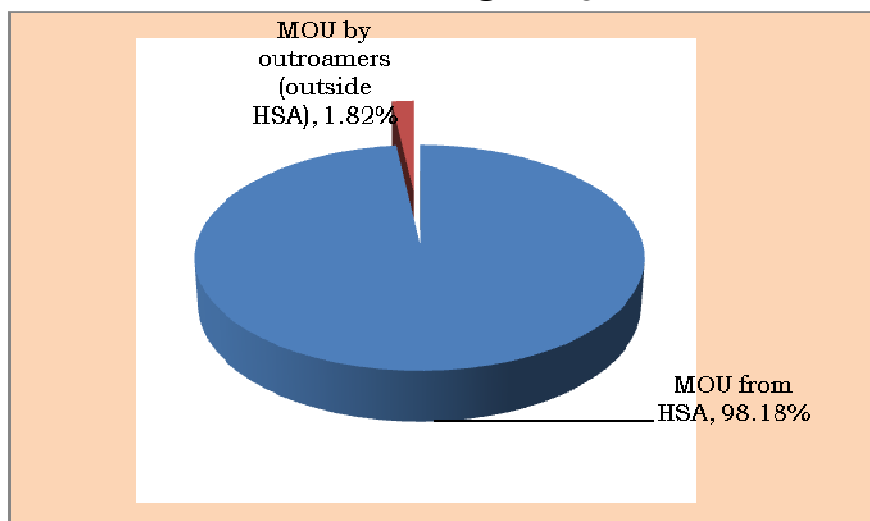
*Note: MOU indicate total usage i.e. usage from and outside HSA*

**Table 2.13 : Outgoing SMS per subscriber per month in QE Jun-16 – CDMA Full Mobility Service**

Category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Category A	6	8	7
Category B	6	8	8
Category C	8	10	10
Metro	4	5	5
All India	5	7	7

Note: Outgoing SMS indicates total usage i.e. usage from and outside HSA.

**Chart 2.9: Minutes of usage by out-roamers as a percentage of total minutes of usage in QE Jun-16**

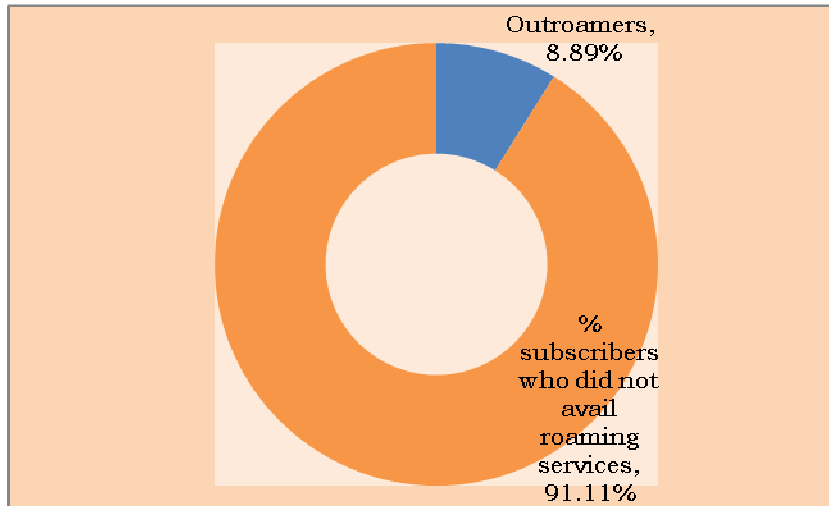


**Table 2.14: %Break-up of Outgoing minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Jun-16**

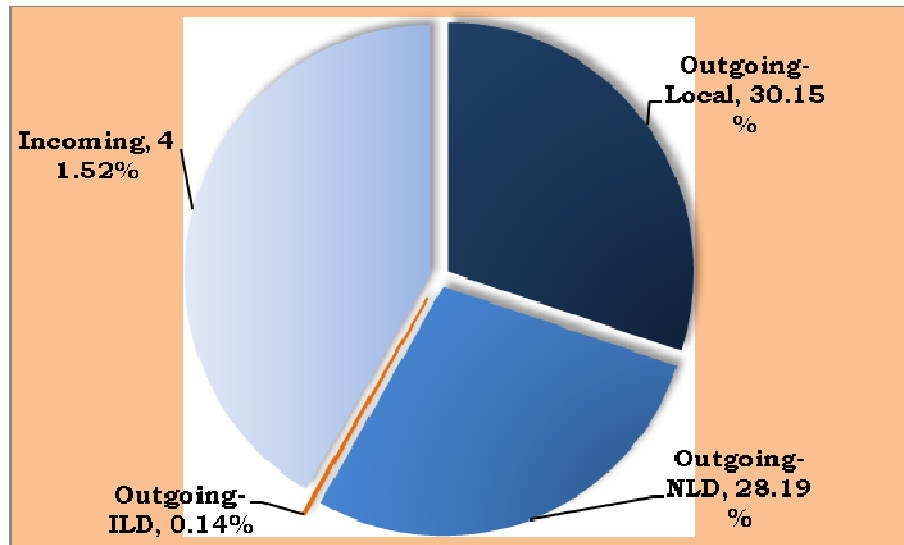
Circle	Intra Circle To Wireline (%)	Intra Circle to Own Wireless (%)	Intra Circle to Other Wireless (%)	Inter Circle to Wireline (%)	Inter Circle to Own Wireless(%)	Inter Circle to Other Wireless (%)	ILD (%)
Circle A	1.8	27.8	55.7	0.8	2.2	11.1	0.7
Circle B	1.5	31.9	37.6	1.0	4.2	23.7	0.2
Circle C	0.3	25.4	47.9	1.3	2.8	22.3	0.0
Metro	1.6	28.2	37.5	1.0	4.7	26.7	0.3
All India	1.1	30.6	49.1	0.8	2.9	15.3	0.27

2.28 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter.

**Chart 2.10: Percentage of subscribers who availed roaming service during the quarter in QE Jun-16**



**Chart 2.11: Percentage breakup of minutes of usage of Out-roamers (usage from outside the Home Service Area) in QE Jun-16**



**Table 2.15: Average subscriber outgo per outgoing minute from HSA\* for CDMA Full Mobility Service in QE Jun-16**  
[₹ Per min]

Circle Category	Postpaid	Prepaid	Blended
Circle A	0.91	0.36	0.52
Circle B	0.47	0.24	0.45
Circle C	0.43	0.19	0.23
Metros	1.15	0.35	0.57
<b>All India</b>	<b>0.81</b>	<b>0.28</b>	<b>0.39</b>

\*Average Subscriber Outgo per Outgoing Minute for usage from HSA =  

$$\frac{\text{Rental revenue} + \text{revenue from outgoing calls from HSA}}{\text{No. of outgoing minutes from HSA}}$$

**Table 2.16: Trends of Key Parameters - CDMA Full Mobility Service**

Parameter	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16
<b>1. ARPU (₹ Per month)</b>	107	106	103	104	99
<b>2. Average revenue from data usage per subscriber per month (in ₹)</b>	49	52	51	51	49
<b>3. MOU per subscriber per month</b>	263	256	252	260	228
<b>4. Outgoing MOU per subscriber per month</b>	145	144	144	150	130
<b>5. No. of Outgoing SMS per subscriber per month</b>	9.49	8.67	8.52	7.61	6.85
<b>6. Average subscriber Outgo per outgoing minute from HSA (₹)</b>	0.42	0.39	0.38	0.38	0.39

2.29 Service Area wise statistics are available at Annexure-2.2.

# **Chapter 3 :**

# **Financial Data of**

# **Telecom Service**

# **Sector**



**Table 3.1: Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee (LF) & Spectrum Charges**

Particulars	QE Jun-15 (₹ in Crore)	QE Mar-16 (₹ in Crore)	QE Jun-16 (₹ in Crore)	Q-O-Q % Change Over Mar-16	Y-O-Y % Change over Jun-15
Gross Revenue (GR)	65,030	68,335	73,344	7.33	12.79
Adjusted Gross Revenue (AGR)	47,134	48,379	53,383	10.34	13.26
Pass Through Charges (GR-AGR)	17,896	19,956	19,961	0.03	11.54
License Fee	3,783	3,872	4,314	11.43	14.05
Spectrum Usage Charges	1,913	1,918	2,148	12.00	12.31

3.1 Gross Revenue (GR) increased by 7.33% in QE Jun-16, and on annual basis, it has increased by 12.79%. Adjusted Gross Revenue (AGR) increased by 10.34% in the QE Jun-16.

3.2 Pass through charges increased by 0.03% in the QE Jun-16 and on annual basis it increased by 11.54%.

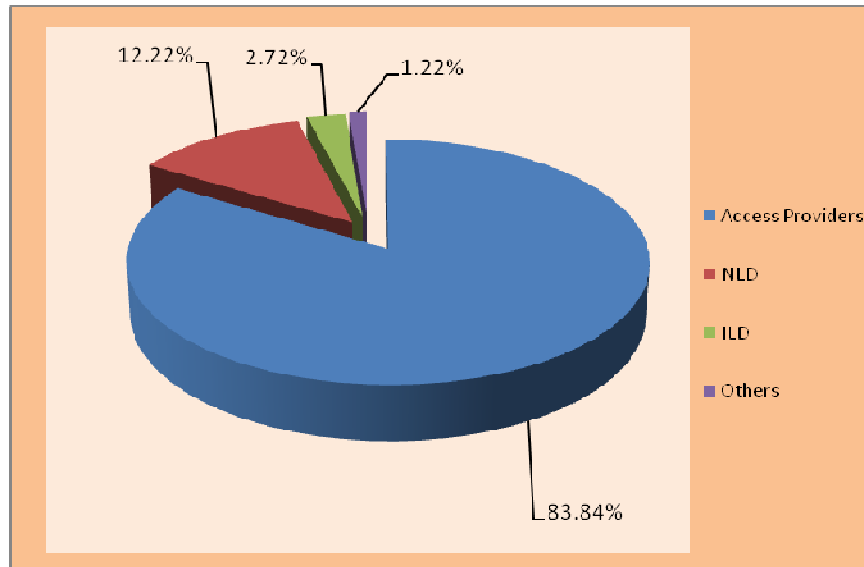
3.3 Pass-through charges as a percentage of Gross Revenue are 27.22% in QE Jun-16 as against 29.20% in the previous quarter.

**Table 3.2: Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges**

(in ₹ Crore)

Service	GR	AGR	LF	Spectrum Charges
<b>Access Providers</b>	56,855	44,754	3,624	2,110
<b>NLD</b>	8,243	6,523	522	12
<b>ILD</b>	4,019	1,454	116	-
<b>Others</b>	4,228	652	52	27
<b>Total</b>	<b>73,344</b>	<b>53,383</b>	<b>4,314</b>	<b>2,148</b>

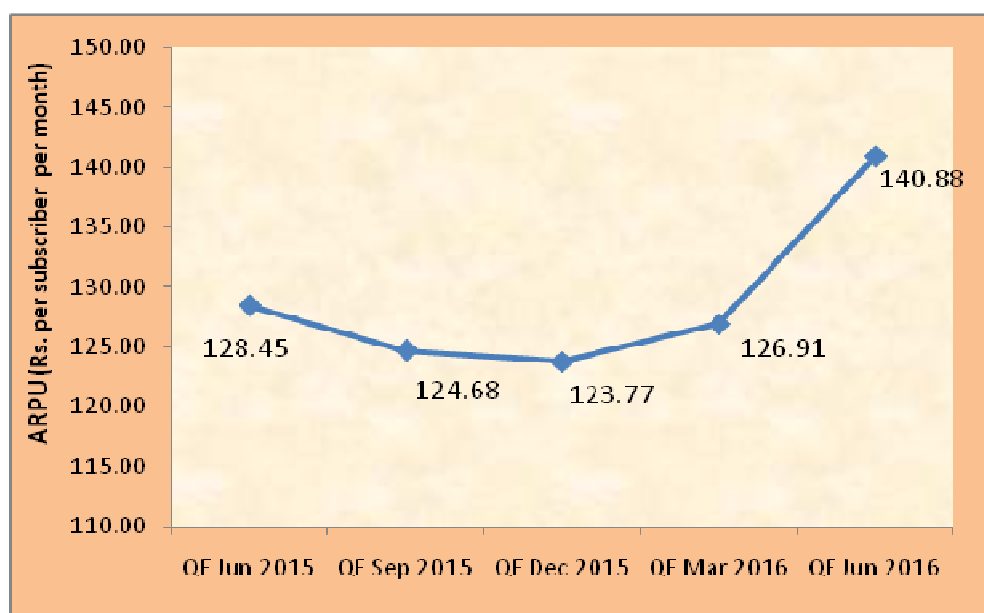
**Chart 3.1: Composition of Adjusted Gross Revenue**



3.4 Access services contributed 83.84% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee and Spectrum Usage Charges(SUC) increased by 9.20%, 12.21%, 13.55% and 12.42% respectively whereas, Pass Through Charges declined by 0.67% in QE Jun-16.

3.5 Monthly Average Revenue per User (ARPU) for Access Services based on AGR increased from ₹126.91 in QE Mar-16 to ₹140.88 in QE Jun-16.

**Chart 3.2: Trend in ARPU per month for Access Services**



**Table 3.3: Access Services - Service Provider wise Adjusted Gross Revenue**

(in ₹ Crore)

Service	QE Jun-16	QE Mar-16	% Change
<b>Bharti</b>	12858.26	12032.45	6.86
<b>Vodafone</b>	9004.50	8616.27	4.51
<b>Idea</b>	7667.60	7492.79	2.33
<b>BSNL</b>	3131.89	3548.02	-11.73
<b>Tata</b>	2620.49	2595.85	0.95
<b>Aircel</b>	1985.82	2002.77	-0.85
<b>Reliance</b>	1274.22	1360.95	-6.37
<b>Telenor</b>	860.11	856.69	0.40
<b>MTNL<sup>^</sup></b>	555.06	972.46	-42.92
<b>Sistema Shyam</b>	302.74	314.02	-3.59
<b>Videocon*</b>	4434.31	58.69	7455.81
<b>Quadrant</b>	50.86	32.10	58.43
<b>Reliance Jio</b>	8.25	2.41	242.81
<b>Grand Total (Access)</b>	<b>44754.11</b>	<b>39885.55</b>	<b>12.21%</b>

\*Revenue from surrender of spectrum by M/s Videocon has been shown.

<sup>^</sup>Revenue of MTNL of Q.E. March, 2016 was very high due to receipt from surrender of Spectrum.

3.6 Public Sector Undertakings' share in the Access AGR of telecom services is 8.24% in the QE Jun-16.

**Table 3.4: Category-wise share in Adjusted Gross Revenue (AGR) of Access Services**

<b>Category</b>	<b>AGR of Access Services for QE Jun-16 (in ₹ crore)</b>	<b>%age share of AGR</b>
Metro	5980.33	13.36
A	17085.47	38.18
B	16478.46	36.82
C	5209.84	11.64
<b>Total</b>	<b>44754.11</b>	<b>100</b>

**Notes :**

1. Source: Figures are un-audited and as submitted by the Operators.
2. The figures have been regrouped wherever considered necessary for analysis purpose.
3. The Spectrum usage charges (mostly) are now reported on "Payment for the current Quarter" basis. However, some operators are reporting on payment basis or on estimate basis on projected AGR for next quarter.
4. Metro area includes Delhi, Mumbai and Kolkata only. Chennai is clubbed with Tamilnadu.

# **Chapter 4 : Quality of Service (QoS)**

## Section A: Quality of Service Performance of Wireless Service Providers

### Part-I : 2G Wireless Services

**Table 4.1: QoS Summary - 2G Wireless Service**

Sl. No.	Parameters	Bench- mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q. E. March, 2016		Q. E., June, 2016	
			Out Of 178 for Network and Out of 183 for Customer (Nos.)	Out Of 178 for Network and Out of 183 for Customer (%)	Out Of 175 for Network and Out of 180 for Customer (Nos.)	Out Of 175 for Network and Out of 180 for Customer (%)
<b>I.</b>	<b>Network Related Parameters</b>					
<b>1</b>	<b>Network Availability</b>					
(i)	BTSs Accumulated downtime (not available for service)	≤ 2%	3	1.69%	3	1.71%
(ii)	Worst affected BTSs due to downtime	≤ 2%	9	5.06%	7	4.00%
<b>2</b>	<b>Connection Establishment (Accessibility)</b>					
(i)	Call Set-up Success Rate (within licensee's own network)	≥ 95%	4	2.25%	3	1.71%
(ii)	SDCCH/ Paging Chl. Congestion	≤ 1%	5	2.81%	5	2.86%
(iii)	TCH Congestion	≤ 2%	7	3.93%	6	3.43%
<b>3</b>	<b>Connection Maintenance (Retain ability)</b>					
(i)	Call Drop Rate	≤ 2%	1	0.56%	0	0
(ii)	Worst affected cells having more than 3% TCH drop (call drop) rate	≤ 3%	27	15.17%	19	10.86%
(iii)	Connection with good voice quality	≥ 95%	5	2.81%	3	1.71%
<b>4</b>	<b>Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)</b>	≤ 0.5%	1	0.56%	2	1.14%
<b>II.</b>	<b>Customer Service Quality Parameters</b>					
<b>5</b>	<b>Metering and Billing</b>					
(i)	Metering and billing credibility - post paid	≤ 0.1%	6	3.28%	6	3.33%
(ii)	Metering and billing credibility - pre paid	≤ 0.1%	11	6.01%	7	3.89%

Sl. No.	Parameters	Bench- mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q. E. March, 2016		Q. E., June, 2016	
			Out Of 178 for Network and Out of 183 for Customer (Nos.)	Out Of 178 for Network and Out of 183 for Customer (%)	Out Of 175 for Network and Out of 180 for Customer (Nos.)	Out Of 175 for Network and Out of 180 for Customer (%)
(iii)	Resolution of billing/charging/ validity complaints	98% within 4 weeks	0	0	0	0
	Resolution of billing/charging/ validity complaints	100% within 6 weeks	0	0	0	0
(iv)	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	6	3.28%	3	1.67%
<b>6</b>	<b>Response time to the customer for assistance</b>					
(i)	Accessibility of call centre/ customer care	≥ 95%	2	1.09%	5	2.78%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	60	32.79%	59	32.78%
<b>7</b>	<b>Termination / closure of service</b>					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	2	1.09%	4	2.22%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	27	14.75%	46	25.56%

Note : M/s Airtel, M/s idea and M/s Vodafone are submitting the PMR for Chennai circle including in TamilNadu hence number of CMTS Licensees has decreased from 178 to 175 in network related parameters and from 183 to 180 in Customer related parameters.

4.1 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters :-

- a. Worst affected BTSS due to downtime
- b. Call Set-up Success Rate (within licensee's own network)
- c. TCH Congession
- d. Call Drop Rate

- e. Worst affected cells having more than 3% TCH drop (call drop) rate
- f. Connection with good voice quality
- g. Metering and billing credibility - pre paid
- h. Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints
- i. %age of calls answered by the operators (voice to voice) within 90 sec

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

- a. Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)
- b. Accessibility of call centre/ customer care
- c. %age requests for Termination / Closure of service complied within 7 days
- d. Time taken for refund of deposits after closures.

**Table 4.2: Parameter wise Analysis of Non-compliance of QoS Benchmarks for 2G Wireless Service Providers**

Parameter	Benchmark	Service Provider	Service Area	Performance
BTSs Accumulated downtime (not available for service) (%age)	≤ 2%	Aircel	Assam	4.18
			Bihar	2.02
			North East	6.82
Worst affected BTSs due to downtime (%age)	≤ 2%	Aircel	Assam	29.42
			Bihar	14.21
			Jammu & Kashmir	3.04
			North East	46.44
			West Bengal	2.22
		BSNL	Kolkata	2.99
		North East	2.43	
Call Set-up Success Rate (within licensee's own network)	≥ 95%	Aircel	Assam	90.89
			Bihar	83.62
			North East	94.92



Parameter	Benchmark	Service Provider	Service Area	Performance
SDCCH/ Paging Chl. Congestion (%age)	≤ 1%	Aircel	Assam	1.44
			Bihar	3.37
		BSNL	West Bengal	1.32
		Telenor	Bihar	1.71
			UPE	1.43
TCH Congestion (%age)	≤ 2%	Aircel	Assam	6.47
			Bihar	16.01
			North East	3.31
		RCOM CDMA	Bihar	2.08
		Telenor	Bihar	3.39
			UPE	3.75
Worst affected cells having more than 3% TCH drop	≤ 3%	Aircel	Assam	17.22
			Bihar	13.66
			Delhi	4.18
			Himachal Pradesh	10.16
			Jammu & Kashmir	10.99
			Karnataka	4.57
			Mumbai	4.44
			North East	18.76
			Orissa	5.78
			Rajasthan	3.16
			Tamil Nadu	5.88
	West Bengal	9.14		
	BSNL	West Bengal	12.56	
	≤ 3%	Telenor	Bihar	6.12
			Maharashtra	3.82
			UPE	8.24
UPW			5.22	
TTL GSM	UPE	3.25		
Vodafone	Madhya Pradesh	3.24		
Connection with good voice quality	≥ 95%	Aircel	Assam	91.00
			North East	92.57
		Telenor	UPE	94.72
Point of Interconnection (POI)	≤ 0.5%	Aircel	Jammu & Kashmir	1

Parameter	Benchmark	Service Provider	Service Area	Performance
Congestion (No. of POIs not meeting the benchmark)		Vodafone	Jammu & Kashmir	1
Metering and billing credibility - post paid	≤ 0.1%	Vodafone	Delhi	0.14
			Himachal Pradesh	0.12
			Mumbai	0.50
			Punjab	0.14
			Tamil Nadu	0.12
			UPW	0.13
Metering and billing credibility - pre paid	≤ 0.1%	Idea	Delhi	0.17
			Haryana	0.14
			Tamil Nadu	0.20
		Vodafone	Andhra Pradesh	0.15
			Karnataka	0.21
			Mumbai	0.18
			UPW	0.14
Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	Vodafone	Delhi	99.84
			Tamil Nadu	99.79
			UPW	99.98
Accessibility of call centre/ customer care	≥ 95%	Aircel	Bihar	91.27
			Gujarat	93.82
			Maharashtra	89.43
			Rajasthan	94.10
		Airtel	West Bengal	94.58
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Aircel	Bihar	92.99
			Delhi	89.71
			Jammu & Kashmir	92.56
			Rajasthan	93.75
		Airtel	Andhra Pradesh	60.71
			Assam	73.43
			Bihar	86.88
			Delhi	90.06
			Gujarat	78.98
			Haryana	89.36
Himachal Pradesh	93.81			

Parameter	Benchmark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Airtel	Jammu & Kashmir	63.31
			Karnataka	74.73
			Kerala	92.69
			Kolkata	68.28
			Madhya Pradesh	61.76
			Maharashtra	87.25
			Mumbai	89.69
			North East	87.14
			Orissa	70.64
			Punjab	77.02
			Rajasthan	82.74
			Tamil Nadu+Chennai	80.66
			UPE	76.93
			UPW	93.10
		West Bengal	61.89	
		RCOM CDMA	Andhra Pradesh	88.86
			Bihar	82.24
			Delhi	79.95
			Gujarat	83.79
			Karnataka	91.19
			Kerala	93.70
			Madhya Pradesh	90.95
			Maharashtra	84.79
			Mumbai	78.73
			Rajasthan	84.63
			UPE	88.15
		RCOM GSM	UPW	89.08
			Andhra Pradesh	91.18
			Delhi	70.73
			Gujarat	85.24
Jammu & Kashmir	94.26			
Karnataka	89.68			
RCOM GSM	Kerala	93.13		
	Maharashtra	82.75		

Parameter	Benchmark	Service Provider	Service Area	Performance
			Mumbai	78.42
			Punjab	93.88
			Rajasthan	92.89
			UPE	93.74
			UPW	94.28
		RTL	Bihar	91.73
			Kolkata	80.45
			Madhya Pradesh	90.37
			Orissa	93.94
			West Bengal	79.15
		TTL GSM	Haryana	93.05
			Kolkata	94.87
			Madhya Pradesh	93.63
Vodafone	Karnataka	90.54		
%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	Aircel	Assam	99.93
		Idea	Delhi	99.91
		Vodafone	Andhra Pradesh	98.65
Orissa	98.49			
	100% within 60 days	Idea	Haryana	99.89
			UPW	99.41
		RCOM CDMA	Andhra Pradesh	99.98
			Bihar	97.45
			Delhi	96.29
			Gujarat	92.36
			Haryana	80.63
			Himachal Pradesh	74.30
			Karnataka	89.12
			Kerala	89.20
			Kolkata	89.41
			Madhya Pradesh	89.59
			Maharashtra	84.16
			Mumbai	89.06
			ORISSA	68.24
Punjab	89.14			
Rajasthan	82.77			

Parameter	Benchmark	Service Provider	Service Area	Performance
Time taken for refund of deposits after closures			Tamilnadu+Chennai	90.36
			UPE	85.93
			UPW	86.78
			West Bengal	82.30
		RCOM GSM	Delhi	93.69
			Gujarat	73.27
			Haryana	59.29
			Jammu & Kashmir	85.98
			Karnataka	82.06
			Kerala	19.23
			Maharashtra	60.72
			Mumbai	79.51
			Punjab	77.84
			Rajasthan	53.99
			Tamilnadu+Chennai	60.96
			UPE	76.26
			UPW	75.62
		RTL	Assam	60.43
			Bihar	70.44
			Himachal Pradesh	67.86
			Kolkata	85.38
			Madhya Pradesh	68.24
			North East	61.41
			Orissa	45.83
		West Bengal	88.79	
		Vodafone	Andhra Pradesh	99.50
			Karnataka	99.84
Rajasthan	99.82			
Tamil Nadu	99.91			

4.3 The detailed table on Service Provider wise performance of QoS parameters for Wireless 2G Services is available at Annexure-4.1.

## Part-II : 3G Wireless Services

4.4 The summary of performance of 3G service providers who have not met the benchmarks in this quarter is given in below table.

**Table 4.3: QoS Summary - 3G Wireless Service**

Sl. No.	Parameters		Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
				Q. E. March 2016		Q. E. June 2016	
				Out Of 106 (Nos.)	Out Of 106 (in %)	Out Of 106 (Nos.)	Out of 106 (in %)
1	<b>Network Availability</b>	BTSs and Node-B's Accumulated downtime (not available for service) (%age)	≤ 2%	2	1.89%	2	1.89%
		Worst affected BTSs and Node-B's due to downtime (%age)	≤ 2%	8	7.55%	7	6.60%
2	<b>Connection Establishment (Accessibility)</b>	Call Set-up Success Rate (within licensee's own network)	≥ 95%	3	2.83%	0	0
		SDCCH/Paging Channel and RRC Congestion (%age)	≤ 1%	4	3.77%	1	0.94%
		TCH and Circuit Switched RAB Congestion (%age)	≤ 2%	2	1.89%	0	0
3	<b>Connection Maintenance (Retainability)</b>	Call Drop and Circuit Switched Voice Drop Rate: (%age)	≤ 2%	3	2.83%	0	0
		Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop Rate:-CBBH	≤ 3%	15	14.15 %	14	13.21%
		Connections with good voice quality and Circuit Switch Voice Quality (CSV quality)	≥ 95%	0	0	1	0.94%
4	<b>Point of Interconnection</b>	Point of Interconnection (POI) Congestion	≤ 0.5%	0	0	1	0.94%

4.5 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters :-

- a. Worst affected BTSs and Node-B's due to downtime (%age)
- b. Call Set Up Success Rate (within licensee's own network)
- c. SDCCH/Paging Channel and RRC Congestion (%age)
- d. TCH and Circuit Switched RAB Congestion (%age)
- e. Call drop and Circuit Switched Voice Drop Rate (%age)
- f. Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop Rate:-CBBH

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

- a. Connection with good voice quality and Circuit Switch Voice Quality (CSV Quality)
- b. Point of Interconnection (POI) Congestion

**Table 4.4: Parameter wise Analysis of Non-compliance of QoS Benchmarks for 3G Wireless Service Providers**

Parameter	Benchmark	Service Provider	Service Area	Performance
BTSs and Node-B's Accumulated downtime (not available for service) (%age) downtime (not available for service) (%age)	≤ 2%	Aircel	Assam	3.13
			North East	7.72
Worst affected Node B's due to downtime (%age)	≤ 2%	Aircel	Assam	21.70
			Bihar	12.79
			Jammu & Kashmir	2.91
			North East	53.09
			West Bengal	5.23
		BSNL	Kolkata	4.77
			North East	2.08

<b>Parameter</b>	<b>Benchmark</b>	<b>Service Provider</b>	<b>Service Area</b>	<b>Performance</b>
RRC Congestion (age)	≤ 1%	Aircel	Karnataka	1.04
Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	≤ 3%	Aircel	Andhra Pradesh	3.01
			Assam	8.24
			Bihar	8.72
			Jammu & Kashmir	16.12
			Karnataka	4.60
			North East	14.68
			Orissa	7.14
			Punjab	3.91
			Tamil Nadu	5.43
			UP-East	5.03
			West Bengal	3.60
		BSNL	West Bengal	8.35
		Vodafone	Assam	3.56
North East	4.60			
Connections with good voice quality and Circuit Switch Voice Quality (CSV quality)	≥ 95%	MTNL	Delhi	64.73
Point of Interconnection (POI) Congestion	≤ 0.5%	Aircel	Jammu & Kashmir	1

4.7 The details table on Service Area wise performance of QoS parameters for 3G Wireless Services is available at Annexure-4.2.



## Section B: Quality of Service Performance of Wireline Service Providers

**Table 4.5: QoS Summary - Wireline Service**

S. No.	Parameters	Benchmark	No of license areas where operators not meeting the benchmarks			
			QE March, 2016		QE June, 2016	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 103 (in Nos.)	Out of 103 (in %age)
(i)	<b>Fault incidences per 100 subs/month</b>	≤ 7	0	0%	0	0%
(ii)	<b>% Fault repaired by next working day for urban areas</b>	≥ 85%	0	0%	0	0%
	<b>% Fault repaired within 5 days (for urban areas)</b>	≥100%	2	2%	2	2%
(iii)	<b>% Fault repaired by next working day for rural and hilly areas</b>	≥ 75%	0	0%	0	0%
	<b>% Fault repaired within 7 days (for rural and hilly areas)</b>	≥100%	0	0%	0	0%
(iv)	<b>MTTR</b>	≤10Hs	0	0%	0	0%
(v)	<b>Point of Interconnection (POI) Congestion (No. of POIs not meeting benchmark)</b>	≤ 0.5%	0	0%	0	0%
(vi)	<b>Metering and Billing credibility - post-paid</b>	≤ 0.1%	0	0%	0	0%
	<b>Metering and Billing credibility -pre-paid</b>	≤ 0.1%	0	0%	0	0%
(vii)	<b>Period of applying credit/waiver/adjustment to customer's</b>	1 week of resolution of complaint	0	0%	0	0%
(viii)	<b>Resolution of billing/charging/Credit &amp; validity complaints</b>	98% within 4 weeks	0	0%	1	1%
	<b>Resolution of billing/charging/Credit &amp; validity complaints</b>	100% within 6 weeks	0	0%	0	0%
	<b>Accessibility of call centre/customer care</b>	≥ 95%	0	0%	0	0%
(ix)	<b>%age of calls answered by the operators (voice to voice) within 90 seconds</b>	≥ 95%	24	24%	26	25%

S. No.	Parameters	Benchmark	No of license areas where operators not meeting the benchmarks			
			QE March, 2016		QE June, 2016	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 103 (in Nos.)	Out of 103 (in %age)
(x)	<b>Termination/closure of service</b>	100% within 7 days	5	5%	2	2%
(xi)	<b>Time taken for refund of deposits after closures</b>	100% within 60 days	0	0%	0	0%

NOTE: (i) Most of the SPs have not reported for the parameter “Metering and billing credibility - pre paid” because most of the service providers are not providing pre-paid service in Basic (Wire line) service.

(ii) It is noted that overall performance in respect of many of the parameters have improved compared with the performance of the previous quarter.

4.8 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters:-

a. Termination / closure of service 100% within 7 days

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

a. Resolution of billing/charging /credit & validity complaints (98% within 4 weeks)

b. %age of calls answered by the operators (voice to voice) within 90 seconds.

**Table 4.6: Parameter wise Analysis of Non-compliance of QoS  
Benchmarks for Wireline Service Providers**

Parameters	Benchmark	Service Provider	Service Area	Parameters not met
% Fault repaired within 5 days (for urban areas)	≥100%	MTNL	DEL	99.41%
			Mum	99.90%
Resolution of billing/charging/ validity complaints	98% within 4 weeks	Tata	MH	85.29%
Response time to the customer for assistance %age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Bharti Airtel Ltd	AP	61%
			KTK	67%
			TN	85%
			DL	63%
			HR	94%
			KOL	92%
			PB	93%
			GJ	60%
			UPE	93%
			UPW	93%
			MP	59%
			MH	62%
			MUM	59%
Raj	93%			
Response time to the customer for assistance %age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Tata	AP	89.59%
			DL	86.76%
			GJ	92.04%
			HR	93.21%
			KTR	89.46%
			MP	92.39%
			MUM	89.61%
			MH	91.40%
			PB	90.82%
			RJ	88.61%
			TN	92.55%
WB	93.36%			
Termination / closure of service— %age requests for Termination / Closure of service complied within 7 days	100% within 7 days	MTNL	MUM	99.99%
		Tata	KR	92.86%

4.10 Detailed table containing QoS parameters for all the Wireline Service Providers is given in Annexure-4.3.

## Section C : Quality of Service Performance of Broadband (wireline) Service

4.11 There are 124 Service Providers (SPs) providing broadband (wireline) service at the end of June, 2016. Out of these SPs, 39 Service Providers are having broadband subscriber base >10,000 and market share of these 39 SPs is 99.17% of total subscriber base. This report covers performance of top 38 broadband Service Providers vis-à-vis the QoS benchmarks prescribed by TRAI, for the QE June, 2016.

**Table 4.7 : Summary of Performance of Broadband Service Providers against identified parameters**

S. No.	Parameter	Benchmark	Number of Licensees not meeting the Benchmarks			
			Q. E. March, 2016		Q. E. June, 2016	
			Out of 62 (Nos.)	Out of 62 (%)	Out of 64 (Nos.)	Out of 64 (%)
<b>1</b>	<b>Service Provisioning</b>	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	4	<b>6.45%</b>	5	<b>7.81%</b>
<b>2</b>	<b>Faults Repair</b>					
2.2	% of faults repaired by next working day (>90%)	>90%	2	<b>3.23%</b>	3	<b>4.69%</b>
2.3	% of faults repaired within 3 working day	=>99%	4	<b>6.45%</b>	3	<b>4.69%</b>
<b>3</b>	<b>Billing Performance</b>					
3.3	%age of bills disputed	<2%	0	<b>0.00%</b>	0	<b>0.00%</b>
3.4	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	2	<b>3.23%</b>	3	<b>4.69%</b>
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	1	<b>1.61%</b>	0	<b>0.00%</b>
<b>4</b>	<b>Response Time to the Customer for assistance</b>					
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	1	<b>1.61%</b>	8	<b>12.50%</b>

S. No.	Parameter	Benchmark	Number of Licensees not meeting the Benchmarks			
			Q. E. March, 2016		Q. E. June, 2016	
			Out of 62 (Nos.)	Out of 62 (%)	Out of 64 (Nos.)	Out of 64 (%)
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	11	17.74%	9	14.06%
<b>5</b>	<b>Bandwidth utilisation/ throughput</b>					
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	0	0.00%
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	0	0.00%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	1	1.61%	0	0.00%
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	0	0.00%	0	0.00%
<b>6</b>	<b>Service availability /uptime (for all users) in %age</b>					
6.3	Service availability /uptime (for all users) in %age	>98%	0	0.00%	0	0.00%
<b>7</b>	<b>Packet loss (for wired broadband access) in %age</b>					
		<1%	0	0.00%	0	0.00%
<b>8</b>	<b>Network latency (for wired broadband access)</b>					
8.1	User reference point at POP/ISP Gateway node to IGSP/NIXI	<120 ms	0	0.00%	0	0.00%
8.2	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	<350 ms	0	0.00%	0	0.00%
8.3	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)	<800 ms	0	0.00%	0	0.00%

**Table 4.8: Parameter-wise Analysis of non-compliance of QoS benchmarks for Broadband Service Providers**

<b>Sl. No.</b>	<b>Parameters</b>	<b>Benchmark</b>	<b>Name of the Service Provider not meeting the Benchmark</b>
<b>1</b>	<b>Service Provisioning/ Activation Time</b>	100% in =< 15 working days	
1.2	%age of connections provided within 15 days of registration of demand	100%	<b>MTNL</b> - Delhi & Mumbai (99.84%), <b>Atria Convergence</b> - All India (98.61%), <b>Nextra</b> - Delhi (99%), <b>Yashash Cable</b> – Karnataka (45.33%) <b>You Broadband</b> - All India (99.67%)
<b>2</b>	<b>Faults Repair/ Restoration Time</b>		
2.2	% of faults repaired by next working day	>90%	<b>MTNL</b> - Delhi & Mumbai (86.92%), <b>Atria Convergence</b> - All India (86.19%) <b>Yashash Cable</b> – Karnataka (46.50%)
2.3	% of faults repaired within 3 working day	=>99%	<b>MTNL</b> - Delhi & Mumbai (96.72%), <b>Atria Convergence</b> - All India (98.20%) <b>Yashash Cable</b> – Karnataka (30.42%)
<b>3</b>	<b>Billing Performance</b>		
3.4	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	<b>Tata (TTML)</b> - Maharashtra & Goa (84.38%), <b>Tata (TTSL)</b> - All India (91.09%) <b>Yashash Cable</b> – Karnataka (0.00%)
<b>4</b>	<b>Response Time to the Customer for assistance</b>		
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	<b>Bharti Airtel</b> - Andhra Pradesh (51%), Delhi (58%), Gujarat (43%), Karnataka (53%), Madhya Pradesh (48%), Maharashtra(52%), Mumbai (51%). <b>Atria Convergence</b> - All India (57%) <b>Yashash Cable</b> – Karnataka (NR)
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	<b>Bharti Airtel</b> - Delhi (57%), Gujarat (65%), Karnataka (50%), Kerala (60%), Madhya Pradesh(59%), Maharashtra (58%), Mumbai (57%), Tamilnadu(74%). <b>Atria Convergence</b> - All India (64%) <b>Yashash Cable</b> – Karnataka (NR)

4.12 Detailed table containing QoS parameters for all the Broadband Service Providers is given in Annexure-4.4.

# **Chapter 5 :**

## **Performance of Cable TV, DTH and Radio Broadcasting Services**

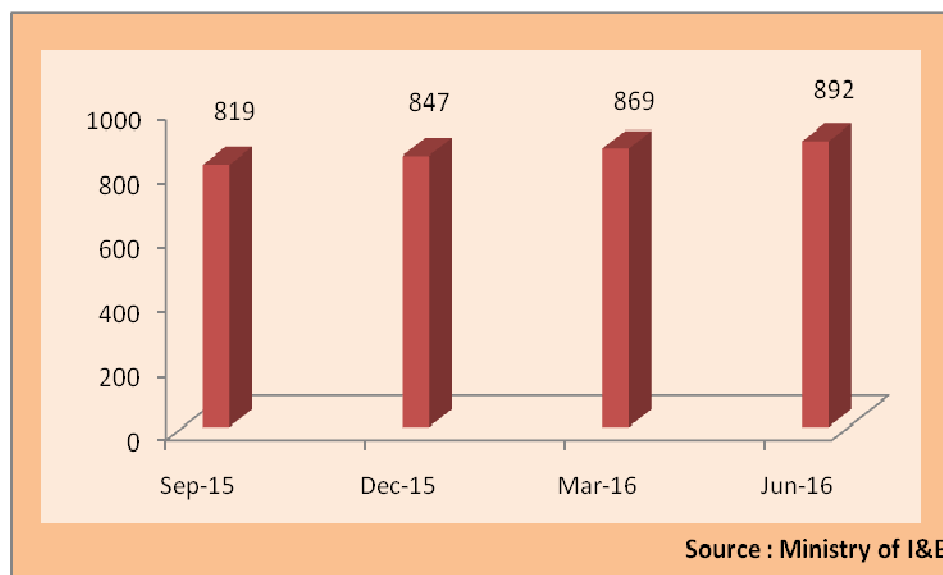
**Table 5.1: Key Parameters - Broadcasting & Cable Services**

S.No	Parameter	QE Mar-16	QE Jun-16
1	Number of Private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	869	892
2	Number of Pay TV Channels	263	275
3	Private FM Radio stations in operation	243	245
4	Private DTH Operators	6	6
5	Number of Registered DTH Subscribers	88.64 Million	91.53 Million
6	Number of Registered DTH Subscribers	58.53 Million	60.50 Million
7	Licensees of community radio stations	237	243
8	Operational community radio stations	191	196

**A. Satellite TV Channels**

5.1 A total of 892 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking, as on 30<sup>th</sup> Jun, 2016.

**Chart 5.1 : Quarterly growth in number of Satellite TV channels (FTA & Pay) registered with Ministry of I&B**



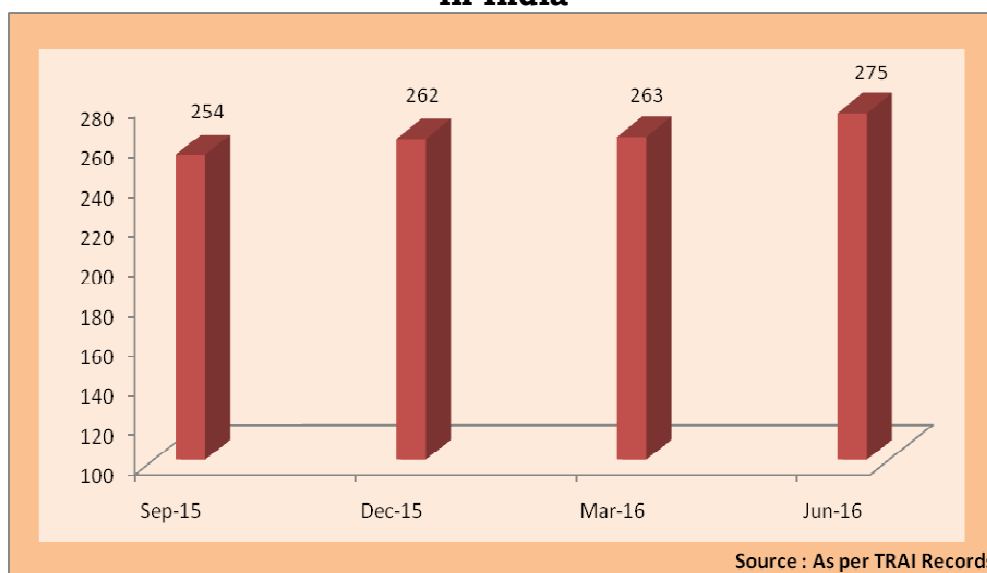


## B. Pay TV Channels

5.2 During the quarter ending June 2016, there were 275 pay channels as reported by broadcasters as compared to 263 pay channels reported in the previous quarter. The list of 275 Pay TV Channels is placed at Annexure-5.1. During the quarter ending June 2016, as per the reporting, sixteen new pay channels were commenced and four pay channels were converted from Pay to FTA. The details are as under :-

<b>New Channels</b> (Sixteen channels)	<b>Converted from Pay to FTA</b> (Four channels)
(1) Star Pravah HD	(1) 9X Jalwa
(2) Rishtey Complex	(2) 9X Jhakaas
(3) X Zone	(3) Zee News
(4) Star Jalsha HD	(4) NDTV India
(5) Ten 3	
(6) Vijay HD	
(7) Colors Kannada HD	
(8) Colors Marathi HD	
(9) Colors Bangla HD	
(10) News 18 Kerala	
(11) News 18 Tamil Nadu	
(12) News 18 Assam/North East	
(13) Movies Now 2 HD	
(14) Movies Now 2	
(15) ETV HD	
(16) Jalsha Movies HD	

**Chart 5.2 : Quarterly growth in number of satellite Pay TV channels in India**



### C. Cable TV Sector

5.3 Digitization, with addressability, of cable TV sector is under progress, in a phased manner. It is envisaged to be executed in four phases. The time line of the plan was subsequently revised and the revised time-table and schedule is as below: -

**Table 5.2 : Migration Schedule - Digital Addressable Cable TV Systems**

Phase	Areas	Sunset date for analog Cable TV
Phase -I	Four Metros of Delhi, Mumbai, Kolkata, Chennai	31.10.2012
Phase -II	Cities with population more than one million (38 cities)	31.03.2013
Phase -III	All Urban areas (Municipal Corporation/ Municipalities)	31.12.2015
Phase -IV	Rest of India	31.12.2016

5.4 As reported by MSOs providing Cable TV services through Digital Addressable System (DAS), details about number of reported channels being carried by the MSOs in areas served by Digital addressable system are as under:-

**Areas served by Digital Addressable Systems (DAS)**

<b>Particulars</b>	<b>MSO</b>	<b>Number</b>
Maximum number of TV channels <b>(FTA+Pay+Local)</b> carried	M/s Siti Cable Network Ltd	<b>454</b>
Minimum of TV channels <b>(FTA+Pay+Local)</b> carried	M/s Ortal Communications Limited	<b>201</b>
Maximum number of <b>FTA</b> channels carried	M/s Siti Cable Network Ltd	<b>206</b>
Maximum number of <b>Pay</b> channels carried	M/s Indian Cable Net Company Limited	<b>213</b>
Maximum number of <b>Local</b> channels carried	M/s Fastway Transmissions Pvt Ltd	<b>89</b>

**D. Direct-to-Home (DTH) Sector**

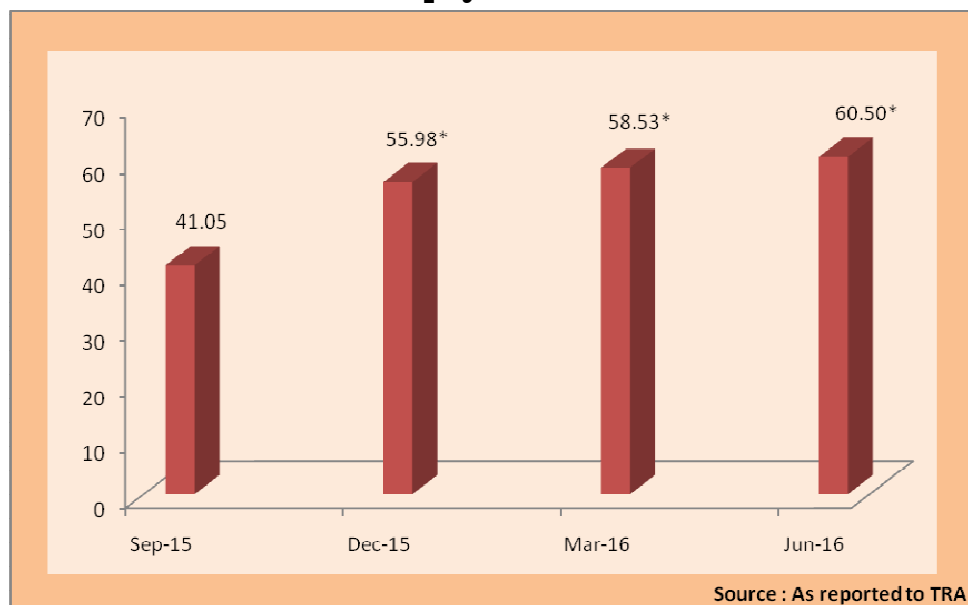
5.5 As reported by Pay Direct to Home (DTH) operator, details about number of reported channels being carried by the DTH operators on their platforms are as under:-

<b>Particulars</b>	<b>DTH Operator</b>	<b>Number</b>
Maximum number of TV channels <b>(FTA+Pay)</b> carried	M/s Tata Sky Ltd	<b>479</b>
Minimum of TV channels <b>(FTA+Pay)</b> carried	M/s Sun Direct Pvt Ltd	<b>225</b>
Maximum number of <b>FTA</b> channels carried	M/s DISH TV India Ltd	<b>224</b>
Maximum number of <b>Pay</b> channels carried	M/s Tata Sky Ltd	<b>269</b>

5.5 Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. DTH has attained a registered pay subscriber base of around **91.53** million (including **60.50** million active subscribers). As on 30<sup>th</sup> June 2016, there are 6 pay DTH service providers. This is besides the viewership of the free DTH services of Doordarshan. The list of private DTH service providers is placed at Annexure 5.2.

5.6 Quarterly growth in the DTH sector in terms of the registered and net active subscriber base is depicted in the chart below.

**Chart 5.3 : Quarterly growth in Net Active subscribers (in million) of pay DTH**



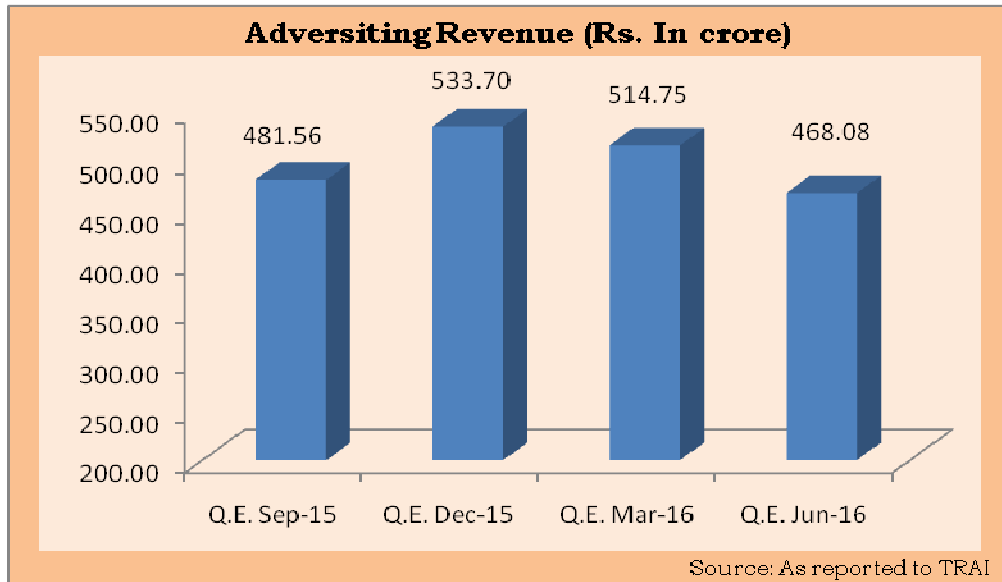
\* The net active subscriber base includes number of temporarily suspended subscribers who have been inactive but for not more than 120 days.

## **E. FM Radio Services**

5.7 Apart from the radio Stations operated by All India Radio, Prasar Bharati – a public broadcaster, there are 245 operational private FM radio stations and 84 existing cities with operational FM radio channels as on 30<sup>th</sup> June, 2016. A list of 84 existing cities with operational FM radio channels is placed at Annexure 5.3.

5.8 The reported advertisement revenue during the quarter ending June, 2016 in respect of 244 private FM Radio stations was ₹468.08 crores as against ₹514.75 crores in respect of 242 private FM Radio stations in the previous quarter. The information is based on the details of Advertisement Revenue submitted by the FM radio service providers to TRAI.

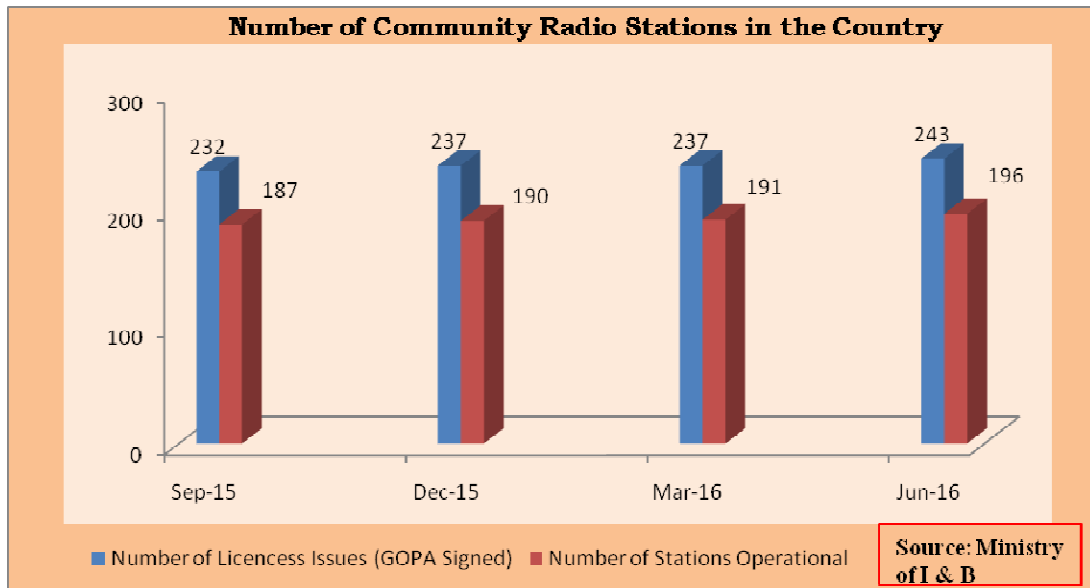
**Chart 5.4 : Comparative position in FM Radio Advertisement Revenue**



**F. Community Radio**

5.9 As on 30<sup>th</sup> June 2016, out of the 243 licenses issued for setting up of Community Radio Stations (CRS), 193 stations are already operational. The quarterly growth in the number of community radio stations is depicted in the chart below.

**Chart 5.5 : Quarterly Growth in number of Community Radio Stations**



**Table 5.3 : Number of application received/Letters of Intent issued/ Licenses issued in respect of Community Radio Stations**

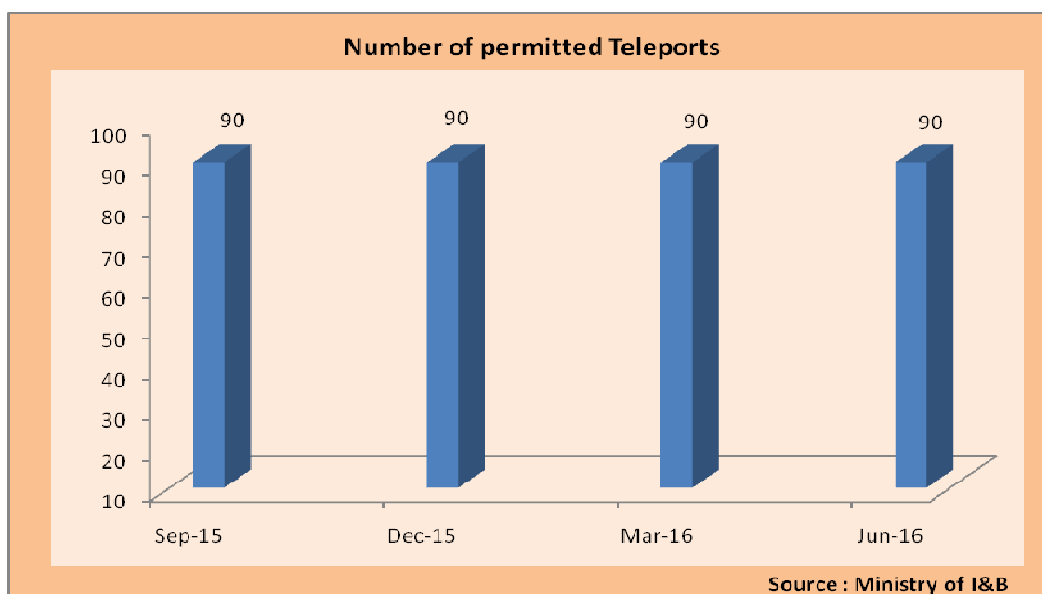
Sl. No.	Items	As on 30.06.2016
1	Total No. of Applications Received	1886
2	No. of Letters of Intent (LOIs) issued	545
3	No. of Applications rejected	1050
4	No. of Licenses issued (GOPA signed)	243
5	No. of Stations Operational	196

*Source: Ministry of Information & Broadcasting (MIB)*

### Teleport Service

5.11 As per information available on the website of MIB, there are a total of 90 permitted Teleports in the country. The status of permitted Teleports is placed at Annexure-5.4.

**Chart 5.6: Quarterly growth in number of permitted teleports**



# **Annexures**

### Annexure 1.1: Licensed Cellular (GSM & CDMA) Service Providers

Sl. No	Service Provider	Area for which licensed with No.	UASL/UL(AS)	CMTS
1	Bharti	All India (22)	All India except NE	North East
2	Aircel Group	All India (23)	All India except Chennai & TN	Chennai & Tamil Nadu
3	Reliance Communications Ltd	All India (except Assam & NE) (20)	All	
4	Reliance Telecom Ltd	Kolkata, MP, WB, HP, Bihar, OR, Assam & NE (8)	All	
5	Vodafone	All India (23)	All	
6	Tata Teleservices	All India except Assam, NE & J&K (19)	All	
7	IDEA	All India (22)	Mumbai, TN incl. Chennai, Kol, WB, Bihar, OR, Assam, NE, Punjab, KTK & J&K	Delhi, MH, Guj, AP, MP, Kerala, HP, Haryana, UP-W, UP-E, Rajasthan
8	Sistema Shyam Telelink	Delhi, Kol, Guj, KTK, TN incl. Chennai, Kerala, UP-W, Raj, WB (9)	All	
9	BSNL	All India (except Delhi & Mumbai) 20		All
10	MTNL	Delhi, Mumbai (2)		All
11	Telenor Communication (India) Pvt Ltd	MH, Guj, AP, UP-W, UP-E, Bihar (6)	All	
12	Videocon Telecommunications Ltd.	Guj, Haryana, UP-W, UP-E, MP, Bihar (6)	All	
13	Reliance Jio Infocomm Ltd	All India (22)	All	
14	Quadrant	Punjab (1)	Punjab	

Source: DoT and Service providers



### Annexure 1.2: Wireless Subscriber Base

Service Area	Vodafone (GSM)		Bharti (GSM)		Idea (GSM)		Aircel/Dishnet (GSM)		Reliance (GSM)		Reliance (CDMA)	
	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16
Andhra Pradesh	70,32,368	68,94,398	235,92,784	239,49,999	153,90,077	156,61,659	27,25,320	27,01,875	38,33,767	32,94,180	17,77,482	11,01,710
Assam	36,49,556	37,67,696	59,43,777	61,06,187	11,75,401	11,45,170	51,09,583	54,32,338	13,37,953	14,17,819		
Bihar	94,99,503	94,96,221	284,21,472	290,03,028	111,84,133	110,01,449	70,65,809	72,49,253	27,45,326	32,63,336	17,44,596	11,63,256
Delhi	100,45,493	102,02,478	112,07,790	113,07,411	61,31,926	61,43,964	63,27,144	64,58,607	50,38,072	49,72,373	30,59,652	28,24,326
Gujarat	193,57,609	193,72,544	85,30,459	86,00,721	120,87,098	120,72,340	17,063	17,063	48,27,887	53,83,049	10,95,620	8,46,650
Haryana	54,76,264	55,36,474	29,34,743	32,48,189	46,42,834	48,10,980	3,092	3,092	15,88,663	16,26,025	3,69,712	0
Himachal Pradesh	7,16,728	7,36,466	27,42,531	28,86,253	8,01,146	8,13,623	10,92,515	11,06,961	15,82,322	16,15,994	1,67,261	0
Jammu & Kashmir	10,62,347	10,56,570	33,40,288	33,63,404	6,36,451	6,64,262	25,44,817	26,33,105	9,30,333	9,73,198	38	22
Karnataka	76,69,476	76,79,607	208,74,185	210,47,626	84,14,950	85,10,255	30,95,767	31,91,048	45,92,173	46,25,640	13,01,577	12,75,873
Kerala	74,90,687	75,48,548	44,12,144	43,96,649	103,97,873	105,59,627	2,92,060	3,21,701	13,57,322	13,61,655	8,34,857	8,18,685
Madhya Pradesh	68,84,697	70,14,078	126,26,117	131,61,158	213,16,755	219,02,610	20,694	20,694	98,94,198	91,74,977	22,35,050	19,51,424
Maharashtra	184,91,225	185,05,027	134,36,216	134,83,912	233,64,582	237,74,648	26,09,745	26,56,480	38,57,528	37,68,258	17,49,419	15,08,655
Mumbai	86,43,366	87,27,088	57,83,099	58,63,284	42,00,800	41,61,802	28,58,561	28,99,955	42,23,586	42,95,252	15,40,018	12,73,678
North East	15,31,194	15,78,990	39,03,133	39,25,056	5,03,791	4,95,176	31,33,041	33,35,036	3,75,245	4,12,385		
Orissa	41,13,658	41,61,934	103,14,568	106,45,162	17,42,044	17,61,959	46,25,593	46,72,837	16,73,400	20,14,356	2,01,459	0
Punjab	51,14,504	51,47,562	80,13,787	80,37,799	64,64,695	64,85,668	10,58,525	11,05,683	15,00,854	16,13,559	1,52,014	0
Rajasthan	121,64,350	120,27,918	193,75,697	196,43,122	77,95,738	75,70,599	64,42,470	65,24,060	57,42,368	58,53,468	9,39,914	9,34,947
Tamil Nadu (incl. Chennai)	155,27,782	156,24,762	172,44,929	175,79,650	58,60,715	58,23,707	215,89,089	217,49,425	50,27,213	47,87,477	17,93,628	17,79,015
UP(E)	190,03,913	194,27,245	208,52,300	213,80,650	108,28,315	107,95,912	68,96,435	70,42,456	69,37,481	70,33,966	24,15,524	22,87,523
UP(W)	115,72,864	114,32,149	83,34,605	83,89,295	144,89,273	145,25,071	6,80,246	7,31,978	48,21,795	47,52,161	12,03,109	9,25,425
Kolkata	53,80,984	54,60,570	46,67,382	47,02,043	21,44,452	20,87,940	40,83,162	41,63,448	36,56,000	38,84,006	10,01,717	8,84,735
West Bengal	175,18,187	179,85,187	146,85,257	150,14,052	55,00,993	54,65,731	48,15,881	49,17,094	27,05,000	30,10,597	5,76,939	0
<b>Total</b>	<b>1979,46,755</b>	<b>1993,83,512</b>	<b>2512,37,263</b>	<b>2557,34,650</b>	<b>1750,74,042</b>	<b>1762,34,152</b>	<b>870,86,612</b>	<b>889,34,189</b>	<b>782,48,486</b>	<b>791,33,731</b>	<b>241,59,586</b>	<b>195,75,924</b>

**Annexure 1.2 (contd.)**

Service Area	Tata (GSM)		Tata (CDMA)		BSNL (GSM)		BSNL (CDMA)		MTNL (GSM)	
	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16
Andhra Pradesh	41,66,636	38,99,514	7,95,975	7,18,047	96,24,990	95,72,765	25,502	22,756		
Assam					12,49,917	12,70,745	66,177	66,353		
Bihar	12,37,934	12,21,008	4,50,800	4,62,452	31,41,722	34,75,208	1,43,502	42,153		
Delhi			21,92,037	20,74,731	-	-			23,18,460	23,19,473
Gujarat	25,78,712	26,42,635	2,99,982	2,92,291	35,53,430	37,71,196	50,753	47,253		
Haryana	24,05,245	26,33,411	3,80,388	3,63,668	31,96,266	30,81,978	5,844	5,198		
Himachal Pradesh	37,244	35,479	32,272	30,555	16,87,579	17,96,442	15,095	13,619		
Jammu & Kashmir					12,70,482	13,09,250	23,882	24,761		
Karnataka	69,02,176	68,97,863	3,71,943	3,55,214	68,85,739	69,68,678	60,822	56,598		
Kerala	14,65,457	14,50,630	1,09,597	1,01,733	74,53,461	77,99,040	1,21,205	1,12,462		
Madhya Pradesh	43,60,679	48,01,887	3,96,353	3,86,485	42,73,554	44,62,953	88,045	83,178		
Maharashtra	44,68,614	44,65,091	21,09,305	18,82,457	57,88,850	59,94,925	61,004	55,633		
Mumbai	22,60,841	22,21,159	10,45,275	9,12,004	-	-	-		12,42,396	12,70,970
North East					13,75,422	14,22,132	1,61,846	1,62,303		
Orissa	21,24,386	20,84,526	1,26,256	1,18,881	41,01,667	43,62,696	38,451	37,331		
Punjab	22,14,328	22,68,590	4,80,064	4,59,616	35,66,447	38,11,093	16,061	0		
Rajasthan	5,98,911	6,27,564	9,07,387	8,93,651	38,99,673	43,23,650	69,755	66,901		
Tamil Nadu (incl. Chennai)	46,03,415	43,38,850	1,92,250	1,77,002	87,05,687	87,38,858	47,105	44,095		
UP(E)	37,02,123	35,72,402	3,82,010	3,63,415	88,80,615	94,72,049	21,270	20,139		
UP(W)	30,18,921	29,85,712	4,54,061	4,16,284	42,01,285	45,65,827	56,556	1,896		
Kolkata	24,58,329	24,88,609	3,15,844	3,00,175	7,75,269	7,85,842	6,614	6,337		
West Bengal	4,05,217	3,87,366	47,021	43,421	15,63,612	16,17,566	70,553	70,657		
<b>Total</b>	<b>490,09,168</b>	<b>490,22,296</b>	<b>110,88,820</b>	<b>103,52,082</b>	<b>851,95,667</b>	<b>886,02,893</b>	<b>11,50,042</b>	<b>9,39,623</b>	<b>35,60,856</b>	<b>35,90,443</b>

**Annexure 1.2 (contd.)**

Service Area	Sistema (CDMA)		Quadrant (GSM)		Quadrant (CDMA)		Telenor (GSM)		Videocon (GSM)		Total		Net Additions
	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	
Andhra Pradesh							56,85,052	55,10,192			746,49,953	733,27,095	(13,22,858)
Assam											185,32,364	192,06,308	6,73,944
Bihar							88,06,055	95,64,596	10,009	0	744,50,861	759,41,960	14,91,099
Delhi	9,24,066	9,25,438									472,44,640	472,28,801	(15,839)
Gujarat	2,06,366	2,08,084					89,04,356	84,17,351	7,54,570	0	622,63,905	616,71,177	(5,92,728)
Haryana									22,52,375	0	232,55,426	213,09,015	(19,46,411)
Himachal Pradesh											88,74,693	90,35,392	1,60,699
Jammu & Kashmir											98,08,638	100,24,572	2,15,934
Karnataka	11,66,079	11,09,823									613,34,887	617,18,225	3,83,338
Kerala	3,55,554	3,34,215									342,90,217	348,04,945	5,14,728
Madhya Pradesh									35,29,215	0	656,25,357	629,59,444	(26,65,913)
Maharashtra							81,63,400	82,03,761			840,99,888	842,98,847	1,98,959
Mumbai											317,97,942	316,25,192	(1,72,750)
North East											109,83,672	113,31,078	3,47,406
Orissa											290,61,482	298,59,682	7,98,200
Punjab			31,61,732	29,33,294	1,706	0					317,44,717	318,62,864	1,18,147
Rajasthan	21,07,751	21,25,520									600,44,014	605,91,400	5,47,386
Tamil Nadu (incl. Chennai)	7,50,309	7,37,153									813,42,122	813,79,994	37,872
UP(E)							123,07,775	125,95,116	7,989	0	922,35,750	939,90,873	17,55,123
UP(W)	1,53,244	1,49,871					85,88,311	87,99,952	9,604	0	575,83,874	576,75,621	91,747
Kolkata	5,34,281	5,27,667									250,24,034	252,91,372	2,67,338
West Bengal	14,93,729	14,70,462									493,82,389	499,82,133	5,99,744
<b>Total</b>	<b>76,91,379</b>	<b>75,88,233</b>	<b>31,61,732</b>	<b>29,33,294</b>	<b>1,706</b>	<b>0</b>	<b>524,54,949</b>	<b>530,90,968</b>	<b>65,63,762</b>	<b>0</b>	<b>10336,30,825</b>	<b>10351,15,990</b>	<b>14,85,165</b>

### Annexure 1.3: Wireline Subscriber Base

Sl. No	Service Area	Bharti		Reliance		Quadrant		Sistema		Tata		MTNL		BSNL		Vodafone		Total		Net Additions
		Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	Mar-16	Jun-16	
1	Andhra Pradesh	1,45,755	1,50,408	75,937	75,875	-	-	-	-	1,64,318	1,69,040	-	-	13,40,655	12,66,334	9,240	10,530	17,35,905	16,72,187	-63,718
2	Assam					-	-	-	-			-	-	1,58,772	1,56,019	1,770	1,890	1,60,542	1,57,909	-2,633
3	Bihar			6,883	6,824	-	-	-	-	13,134	13,190	-	-	3,11,091	3,05,941	930	1,110	3,32,038	3,27,065	-4,973
4	Delhi	12,27,042	12,39,478	1,74,750	1,74,616	-	-	-	-	1,32,930	1,32,550	16,15,433	16,15,253			21,030	22,290	31,71,185	31,84,187	13,002
5	Gujarat	72,192	75,381	74,762	74,575	-	-	-	-	86,802	86,541	-	-	11,72,423	11,17,336	2,910	5,280	14,09,089	13,59,113	-49,976
6	Haryana	20,344	21,820	4,427	4,397	-	-	-	-	38,644	36,746	-	-	3,05,885	2,94,316	30	30	3,69,330	3,57,309	-12,021
7	Himachal Pradesh			4,126	4,126	-	-	-	-	2,747	2,677	-	-	1,64,336	1,54,863	-	30	1,71,209	1,61,696	-9,513
8	Jammu & Kashmir					-	-	-	-			-	-	1,31,214	1,28,187			1,31,214	1,28,187	-3,027
9	Karnataka	5,96,146	6,03,903	1,48,398	1,51,836	-	-	-	-	2,06,366	2,08,818	-	-	12,94,726	12,60,874	9,750	17,880	22,55,386	22,43,311	-12,075
10	Kerala	56,574	57,004	33,623	33,187	-	-	-	-	18,115	18,636	-	-	21,87,427	21,12,431	1,440	1,530	22,97,179	22,22,788	-74,391
11	Madhya Pradesh	2,61,310	2,67,937	20,471	19,736	-	-	-	-	18,222	16,732	-	-	7,41,227	7,26,579	360	390	10,41,590	10,31,374	-10,216
12	Maharashtra	74,684	75,345	82,987	82,730	-	-	-	-	2,84,063	2,85,088	-	-	15,34,836	14,59,104	10,650	12,120	19,87,220	19,14,387	-72,833
13	Mumbai	3,49,585	3,51,227	2,50,477	2,53,122	-	-	-	-	5,34,127	5,34,595	18,88,655	18,68,635			16,054	18,147	30,38,898	30,25,726	-13,172
14	North East					-	-	-	-			-	-	1,24,177	1,22,922	150	150	1,24,327	1,23,072	-1,255
15	Orissa			3,290	3,290	-	-	-	-	8,214	8,277	-	-	2,94,061	2,80,002	930	990	3,06,495	2,92,559	-13,936
16	Punjab	1,08,897	1,13,381	21,276	21,284	2,52,803	2,56,881	-	-	16,882	16,890	-	-	6,59,460	6,35,124	750	930	10,60,068	10,44,490	-15,578
17	Rajasthan	46,187	47,239	20,832	20,734	-	-	59,130	58,115	11,510	11,826	-	-	6,46,839	6,35,392	1,950	1,890	7,86,448	7,75,196	-11,252
18	Tamil Nadu (incl. Chennai)	5,04,323	5,24,915	1,34,303	1,34,173	-	-	-	-	1,07,105	1,09,958	-	-	18,87,457	17,93,697	7,110	8,550	26,40,298	25,71,293	-69,005
19	U.P.(E)	61,575	62,930	35,129	35,081	-	-	-	-	15,210	15,202	-	-	3,90,103	3,87,814	990	1,200	5,03,007	5,02,227	-780
20	U.P.(W)	21,793	22,622	7,105	7,105	-	-	-	-	10,037	10,043	-	-	3,88,005	3,76,586	480	480	4,27,420	4,16,836	-10,584
21	Kolkata	1,17,242	1,17,877	69,214	69,160	-	-	-	-	50,059	48,422	-	-	6,68,964	6,41,246	3,630	4,860	9,09,109	8,81,565	-27,544
22	West Bengal			1,962	1,934	-	-	-	-	3,877	3,893	-	-	3,60,712	3,46,084	60	60	3,66,611	3,51,971	-14,640
	<b>Total</b>	<b>36,63,649</b>	<b>37,31,467</b>	<b>11,69,952</b>	<b>11,73,785</b>	<b>2,52,803</b>	<b>2,56,881</b>	<b>59,130</b>	<b>58,115</b>	<b>17,22,362</b>	<b>17,29,124</b>	<b>35,04,088</b>	<b>34,83,888</b>	<b>147,62,370</b>	<b>142,00,851</b>	<b>90,214</b>	<b>1,10,337</b>	<b>252,24,568</b>	<b>247,44,448</b>	<b>-4,80,120</b>

**Annexure 1.4: Service Area and Operator wise details of PCOs**

<b>Name of the Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of PCOs as on 31.3.2016</b>	<b>Number of PCOs as on 30.6.2016</b>	<b>Net PCO increase/decrease as on 30.6.2016</b>	<b>Growth/Decline as on 30.6.2016 (%)</b>
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	31,748	27,168	-4,580	-14.43
	Bharti Group	191	181	-10	-5.24
	Reliance Group	8,977	0	-8,977	-100.00
	Tata Group	3,138	2,885	-253	-8.06
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	31,748	27,168	-4,580	-14.43
	Bharti Group	191	181	-10	-5.24
	Reliance Group	8,977	0	-8,977	-100.00
	Tata Group	3,138	2,885	-253	-8.06
Assam	Bharat Sanchar Nigam Ltd.	8,909	8,628	-281	-3.15
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,644	1,641	-3	-0.18
	Reliance Group	148	0	-148	-100.00
	Tata Group	10	1	-9	-90.00
Jharkhand	Bharat Sanchar Nigam Ltd.	4,736	4,727	-9	-0.19
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	6,380	6,368	-12	-0.19
	Reliance Group	148	0	-148	-100.00
	Tata Group	10	1	-9	-90.00
Delhi	Bharti Group	657	586	-71	-10.81
	Mahanagar Telephone Nigam Ltd./MTNL	55,071	54,618	-453	-0.82
	Reliance Group	288	0	-288	-100.00
	Tata Group	2,785	2,529	-256	-9.19
Gujarat	Bharat Sanchar Nigam Ltd.	24,066	23,066	-1,000	-4.16
	Bharti Group	15	15	0	0
	Reliance Group	1,298	0	-1,298	-100.00
	Tata Group	1,504	1,113	-391	-26.00
Haryana	Bharat Sanchar Nigam Ltd.	2,303	2,159	-144	-6.25
	Bharti Group	187	179	-8	-4.28
	Reliance Group	26	0	-26	-100.00
	Tata Group	57	43	-14	-24.56
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	2,245	2,094	-151	-6.73
	Reliance Group	15	0	-15	-100.00
	Tata Group	26	24	-2	-7.69

**Annexure 1.4 (Contd.)**

<b>Name of the Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of PCOs as on 31.3.2016</b>	<b>Number of PCOs as on 30.6.2016</b>	<b>Net PCO increase/decrease as on 30.6.2016</b>	<b>Growth/Decline as on 30.6.2016 (%)</b>
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	3,430	2,579	-851	-24.81
Karnataka	Bharat Sanchar Nigam Ltd.	32,630	30,944	-1,686	-5.17
	Bharti Group	4,731	4,594	-137	-2.90
	Reliance Group	3,168	2,794	-374	-11.81
	Tata Group	1,652	1,446	-206	-12.47
Kerala	Bharat Sanchar Nigam Ltd.	23,596	22,575	-1,021	-4.33
	Bharti Group	548	533	-15	-2.74
	Reliance Group	520	461	-59	-11.35
	Tata Group	70	59	-11	-15.71
Kolkata	Bharat Sanchar Nigam Ltd.	5,954	5,478	-476	-7.99
	Bharti Group	36	30	-6	-16.67
	Reliance Group	346	0	-346	-100.00
	Tata Group	562	470	-92	-16.37
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	23,815	23,148	-667	-2.80
	Bharti Group	2,776	2,634	-142	-5.12
	Reliance Group	1,045	0	-1,045	-100.00
	Tata Group	982	874	-108	-11.00
Chhatisgarh	Bharat Sanchar Nigam Ltd.	1,890	1,723	-167	-8.84
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	25,705	24,871	-834	-3.24
	Bharti Group	2,776	2,634	-142	-5.12
	Reliance Group	1,045	0	-1,045	-100.00
	Tata Group	982	874	-108	-11.00
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	67,397	62,503	-4,894	-7.26
	Reliance Group	3,113	0	-3,113	-100.00
	Tata Group	21,848	11,024	-10,824	-49.54
Mumbai	Bharti Group	40	40	0	0
	Mahanagar Telephone Nigam Ltd./MTNL	78,935	77,944	-991	-1.26
	Reliance Group	6,002	0	0	0
	Tata Group	5,247	5,044	-203	-3.87

**Annexure 1.4 (Contd.)**

<b>Name of the Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of PCOs as on 31.3.2016</b>	<b>Number of PCOs as on 30.6.2016</b>	<b>Net PCO increase/decrease as on 30.6.2016</b>	<b>Growth/Decline as on 30.6.2016 (%)</b>
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	67,397	62,503	-4,894	-7.26
	Bharti Group	40	40	0	0
	Mahanagar Telephone Nigam Ltd./MTNL	78,935	77,944	-991	-1.26
	Reliance Group	9,115	0	-9,115	-100.00
	Tata Group	27,095	16,068	-11,027	-40.70
North East	Bharat Sanchar Nigam Ltd.	4,689	4,532	-157	-3.35
Orissa	Bharat Sanchar Nigam Ltd.	2,486	2,395	-91	-3.66
	Reliance Group	29	0	-29	-100.00
	Tata Group	162	121	-41	-25.31
Punjab	Bharat Sanchar Nigam Ltd.	6,450	5,432	-1,018	-15.78
	Bharti Group	96	89	-7	-7.29
	Quadrant Televentures Ltd.	2,081	1,940	-141	-6.78
	Reliance Group	71	0	-71	-100.00
	Tata Group	348	267	-81	-23.28
Rajasthan	Bharat Sanchar Nigam Ltd.	9,900	10,473	573	5.79
	Bharti Group	213	211	-2	-0.94
	Reliance Group	462	462	0	0
	Sistema Shyam	9,836	9,727	-109	-1.11
	Tata Group	260	219	-41	-15.77
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	58,836	51,947	-6,889	-11.71
	Bharti Group	7,667	7,342	-325	-4.24
	Reliance Group	2,874	2,324	-550	-19.14
	Tata Group	499	390	-109	-21.84
Chennai	Bharat Sanchar Nigam Ltd.	11,889	11,792	-97	-0.82
	Reliance Group	1,389	1,037	-352	-25.34
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	70,725	63,739	-6,986	-9.88
	Bharti Group	7,667	7,342	-325	-4.24
	Reliance Group	4,263	3,361	-902	-21.16
	Tata Group	499	390	-109	-21.84

**Annexure 1.4 (Contd.)**

<b>Name of the Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of PCOs as on 31.3.2016</b>	<b>Number of PCOs as on 30.6.2016</b>	<b>Net PCO increase/decrease as on 30.6.2016</b>	<b>Growth/Decline as on 30.6.2016 (%)</b>
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	15,227	14,441	-786	-5.16
	Bharti Group	131	122	-9	-6.87
	Reliance Group	34	0	-34	-100.00
	Tata Group	79	43	-36	-45.57
Uttarakhand	Bharat Sanchar Nigam Ltd.	2,076	1,947	-129	-6.21
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,851	1,947	-1,904	-49.44
	Bharti Group	100	96	-4	-4.00
	Reliance Group	115	0	-115	-100.00
	Tata Group	338	247	-91	-26.92
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	5,927	3,894	-2,033	-34.30
	Bharti Group	100	96	-4	-4.00
	Reliance Group	115	0	-115	-100.00
	Tata Group	338	247	-91	-26.92
West Bengal (excluding Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	5,928	7,161	1,233	20.80
	Reliance Group	168	0	-168	-100.00
	Tata Group	126	113	-13	-10.32
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	149	143	-6	-4.03
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	6,077	7,304	1,227	20.19
	Reliance Group	168	0	-168	-100.00
	Tata Group	126	113	-13	-10.32
<b>Total</b>		<b>5,88,936</b>	<b>5,25,514</b>	<b>-63,422</b>	<b>-10.77</b>



**Annexure 1.5: Service Area & Operator wise details of Village Public Telephones**

<b>Name of Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of VPTs as on 31.3.2016</b>	<b>Number of VPTs as on 30.6.2016</b>	<b>Net VPTs increase/decreased as on 30.6.2016</b>	<b>Percentage Growth/Decline as on 30.6.2016</b>
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	25,107	25,107	0	0
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	25,107	25,107	0	0
Assam	Bharat Sanchar Nigam Ltd.	24,692	24,692	0	0
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	38,941	38,941	0	0
Jharkhand	Bharat Sanchar Nigam Ltd.	28,821	28,821	0	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	67,762	67,762	0	0
Gujarat	Bharat Sanchar Nigam Ltd.	18,054	18,054	0	0
Haryana	Bharat Sanchar Nigam Ltd.	6,678	6,678	0	0
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	17,408	17,408	0	0
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	6,385	6,385	0	0
Karnataka	Bharat Sanchar Nigam Ltd.	27,451	27,451	0	0
Kerala	Bharat Sanchar Nigam Ltd.	1,372	1,372	0	0
Kolkata	Bharat Sanchar Nigam Ltd.	613	613	0	0
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	51,986	51,986	0	0
Chhattisgarh	Bharat Sanchar Nigam Ltd.	18,328	18,328	0	0
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	70,314	70,314	0	0
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	40,654	40,654	0	0
	Tata Group	1,305	1,282	-23	-0.02
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	40,654	40,654	0	0
	Tata Group	1,305	1,282	-23	-0.02
North East	Bharat Sanchar Nigam Ltd.	13,109	13,109	0	0
Orissa	Bharat Sanchar Nigam Ltd.	45,215	45,215	0	0
Punjab	Bharat Sanchar Nigam Ltd.	12,065	12,065	0	0
	Quadrant Televentures Ltd.	2	0	-2	-1.00
Rajasthan	Bharat Sanchar Nigam Ltd.	39,568	39,568	0	0
	Sistema Shyam	3,010	3,010	0	0

**Annexure 1.5 (contd.)**

<b>Name of Circle/Service Area</b>	<b>Service Provider</b>	<b>Number of VPTs as on 31.3.2016</b>	<b>Number of VPTs as on 30.6.2016</b>	<b>Net VPTs increase/decreased as on 30.6.2016</b>	<b>Percentage Growth/Decline as on 30.6.2016</b>
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	13,837	13,837	0	0
Chennai	Bharat Sanchar Nigam Ltd.	1,655	1,655	0	0
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	15,492	15,492	0	0
Uttar Pradesh- East	Bharat Sanchar Nigam Ltd.	74,145	74,145	0	0
Uttarakhand	Bharat Sanchar Nigam Ltd.	15,381	15,381	0	0
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	23,707	23,707	0	0
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	39,088	39,088	0	0
West Bengal (excluding Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	36,958	36,958	0	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	352	352	0	0
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	37,310	37,310	0	0
<b>Total</b>		<b>5,86,799</b>	<b>5,86,774</b>	<b>-25</b>	<b>-0.004</b>

**Annexure 1.6 : Internet Service Provider(ISP) wise Internet Subscriber base**

<b>S. No.</b>	<b>Name of the Service Provider</b>	<b>Narrowband Subscribers</b>	<b>Broadband Subscribers</b>	<b>Total Subscribers</b>
1	Bharti Airtel Ltd.	51910483	40608371	92518854
2	Vodafone India Limited	37446747	32275839	69722586
3	Idea Cellular Limited	22049191	27017635	49066826
4	Reliance Communications Limited	22355881	16636552	38992433
5	Bharat Sanchar Nigam Ltd.	13793369	20556845	34350214
6	Aircel	14007206	7659200	21666406
7	Tata Teleservices Limited	10827994	9058038	19886032
8	Telenor	14937693	0	14937693
9	Mahanagar Telephone Nigam Ltd.	471442	1513614	1985056
10	Sistema Shyam Teleservices Ltd.	16406	1951531	1967937
11	Atria Convergence Technologies Pvt Ltd.	0	1018373	1018373
12	Quadrant Televentures Ltd. (HFCL Infotel Ltd.)	475557	230909	706466
13	You Broadband India Pvt. Ltd.	16528	560730	577258
14	Hathway Cable & Datacom Pvt. Ltd.	15064	479380	494444
15	Tikona Digital Networks Pvt Ltd	6158	363362	369520
16	GTPL Broadband Pvt. Ltd.	529	191477	192006
17	Syscon Infoway Pvt Ltd	39982	147724	187706
18	Asianet Satellite Communications Ltd.	0	186492	186492
19	D-Vois Broadband Private Limited	0	183871	183871
20	SITI Broadband Services Pvt. Ltd.	0	149639	149639
21	Alliance Broadband Services Pvt. Ltd.	0	147157	147157
22	Five Network Solution (India) Ltd.	0	88586	88586
23	DEN Networks Ltd	69	88174	88243
24	RailTel Corporation of India Ltd.	0	82344	82344
25	Ortel Communication Ltd.	0	73638	73638
26	Honesty Net Solutions (I) Pvt Ltd	1144	65284	66428
27	Planet E-Shop Holdings India Ltd.	2835	44919	47754
28	Citycom Networks Pvt. Ltd.	0	42996	42996
29	Meghbela Cable & Broadband Servies (P) Ltd	0	42450	42450
30	Nextra Teleservices Pvt. Ltd.	0	42383	42383
31	Excitel Broadband Private Limited	0	41571	41571
32	Broadband Pacenet (I) Pvt. Ltd.	0	40439	40439
33	R.K. Infratel Limited	5	36111	36116
34	Home Systems Pvt. Ltd.	0	33632	33632
35	Wish Net Pvt. Ltd.	0	27160	27160
36	Limras Eronet Broadband Service Pvt Ltd	4994	22140	27134
37	Tata Communications Limited	1186	23509	24695
38	Vasai Cable Pvt. Ltd.	0	24096	24096

**Annexure 1.6 (contd.)**

<b>S. No.</b>	<b>Name of the Service Provider</b>	<b>Narrowband Subscribers</b>	<b>Broadband Subscribers</b>	<b>Total Subscribers</b>
39	Chandra Net Pvt. Limited	78	22510	22588
40	Rajesh Multi Channel Pvt. Ltd.	398	21417	21815
41	Apna Telelink Ltd.	0	15472	15472
42	Southern Online Bio Technologies Ltd.	1037	14022	15059
43	World Phone Internet Services Pvt Ltd	1234	12268	13502
44	GBPS Networks Pvt. Ltd.	0	12889	12889
45	North East Dataa Network Pvt Ltd.	105	12455	12560
46	Quest Consultancy Pvt. Ltd.	0	12302	12302
47	Geocity Network Solutions Pvt. Ltd.	1171	10700	11871
48	Ishan Netsol Pvt Ltd	10711	1067	11778
49	Kappa Internet Services Pvt Ltd.	4068	6303	10371
50	Pioneerelabs	358	9989	10347
51	City Online Services Ltd	0	10156	10156
52	Yashash Cable Network Pvt Ltd	0	10131	10131
53	Wan and Lan Internet Pvt. Ltd.	0	9599	9599
54	SmartLink Broadband Services	0	8898	8898
55	Blazenet Ltd.	4069	3874	7943
56	IKF Technologies Ltd	2632	4825	7457
57	CJM Consultancy Services Pvt. Ltd.	0	6164	6164
58	Intermedia Cable Communication Pvt Ltd	0	5735	5735
59	Nettlinx Ltd.	260	4728	4988
60	Narmada Cyberzone Pvt Ltd	1858	3097	4955
61	Siliguri Internet & Cable TV Pvt. Ltd.	0	4666	4666
62	CJ Online Pvt. Ltd.	0	4358	4358
63	Rajesh Patel Net Services Pvt. Ltd.	405	3893	4298
64	Kaizen Infonet Pvt Ltd	282	4009	4291
65	Sikka Broadband(P) Ltd.(Gomti Cable Network Pvt. Ltd.)	0	3916	3916
66	Digital Network associates Pvt. Ltd	1244	2650	3894
67	United Telecoms Ltd.	243	3512	3755
68	Swiftmail Communications Ltd.	1128	2576	3704
69	Fusionnet Web Services Pvt. Ltd.	0	3662	3662
70	Readylink Internet Services Pvt Ltd	479	3169	3648
71	Spacenet Internet Services Pvt Ltd	0	3616	3616
72	HCL Comnet Systems & Services Ltd.	3403	31	3434
73	Shri Omkar Infocom Pvt. Ltd.	0	3259	3259
74	Sify Technologies Ltd.	1528	1424	2952
75	F/X Wireless Technology Services Pvt Ltd	0	2803	2803
76	Airgenie Communications Pvt. Ltd.	0	2511	2511
77	Multinet (Udaipur) Pvt. Ltd.	0	2429	2429
78	Speed Online.net Pvt. Ltd.	0	2186	2186

**Annexure 1.6 (contd.)**

<b>S. No.</b>	<b>Name of the Service Provider</b>	<b>Narrowband Subscribers</b>	<b>Broadband Subscribers</b>	<b>Total Subscribers</b>
79	Hughes Communications India Ltd.	665	1408	2073
80	WE INTERNET LIMITED (Nivyah Infrastructure & Telecom Services Ltd.)	0	2032	2032
81	Sphier Infotech Pvt. Ltd.	0	1999	1999
82	Star Broadband Services (I) Pvt Ltd	0	1925	1925
83	Touch Net India Pvt. Ltd.	126	1715	1841
84	Capture Network Systems Pvt. Ltd.	269	1546	1815
85	S.S.Netcom Pvt Ltd	0	1666	1666
86	Digital2Virtual ISP Pvt. Ltd.	15	1310	1325
87	STN Communication & Advertising Pvt Ltd.	261	1040	1301
88	Harisree CableNet Pvt. Ltd.	0	1054	1054
89	Symbois Creations Pvt. Ltd.	18	1029	1047
90	Aeroway Networks Pvt Ltd.	0	954	954
91	delDSL Internet Pvt Ltd	0	902	902
92	Data Infosys Ltd.	25	871	896
93	Elyzium Technologies Pvt. Ltd.	0	804	804
94	Hathway Bhawani Cabletel & Datacom Pvt. Ltd.	0	773	773
95	Rajdhani Telecom Pvt. Ltd.	87	580	667
96	Bhiwani Communications Pvt. Ltd.	235	421	656
97	NetMagic Solutions(P) Ltd.	0	610	610
98	Primenet Global Ltd.	0	558	558
99	Sab Infotech (Sab Industries)	0	535	535
100	Correl IT Services Pvt. Ltd.	0	529	529
101	Japra Tele Link Pvt. Ltd.	0	478	478
102	Gleam Worldwide Services Pvt. Ltd.	0	423	423
103	Rida Communication Pvt. Ltd.	0	388	388
104	Tamana Winet Pvt. Ltd.	0	347	347
105	Cityzone Infonet Pvt. Ltd	0	324	324
106	Pulse Telesystems Pvt. Ltd.	0	324	324
107	Conjoinix Technologies Pvt Ltd	0	321	321
108	Chetan Internet Services Pvt. Ltd.	0	277	277
109	Singh Internet Services Pvt. Ltd.	0	233	233
110	Gorakhpur Net Services Pvt. Ltd.	0	232	232
111	ERNET India	158	62	220
112	QBC Infotech Pvt. Ltd.	0	216	216
113	Oasis Cable Pvt Ltd.	0	208	208
114	Khetan Cable Network (P) Ltd	0	182	182
115	Nextgen Communications Ltd (RPG Infotech Ltd).	42	138	180

**Annexure 1.6 (contd.)**

<b>S. No.</b>	<b>Name of the Service Provider</b>	<b>Narrowband Subscribers</b>	<b>Broadband Subscribers</b>	<b>Total Subscribers</b>
116	Microsense Pvt. Ltd.	0	176	176
117	Dream Plus Multi Services Pvt. Ltd.	11	138	149
118	Power Grid Corporation of India Ltd.	0	146	146
119	Shri Vinayagaa Internet Pvt Ltd	28	115	143
120	Trans Virtual Pvt. Ltd.	36	99	135
121	Oistel Telecom Pvt. Ltd.	0	115	115
122	Jetspot Networks Pvt. Ltd.	0	108	108
123	Reticule Infotech Pvt. Ltd.	0	104	104
124	Pacific Internet India Pvt. Ltd.	103	0	103
125	Sanyog Networks Pvt Ltd	0	79	79
126	Edge Telecommunications Pvt. Ltd.	0	75	75
127	AT&T Global Network Services India Private Limited	0	49	49
128	Verizon Communications India Pvt. Ltd. (Worldcom Communications)	0	47	47
129	West Bengal Electronics Industry Development Corp. Ltd.	0	46	46
130	Adya Tech One Services Pvt Ltd	0	44	44
131	Telestra Telecommunications Pvt. Ltd.	0	27	27
132	VIVA Communications Pvt Ltd(Mylai Karpagambal Information Systems (P) Ltd)	0	23	23
133	Essel Shyam Communications Limited	16	0	16
134	Novanet India Ltd.	0	16	16
135	Vcare Call Centres India Pvt. Ltd.	0	16	16
136	Airmesh Communications Limited	0	15	15
137	Financial Technologies Communications Ltd.	12	0	12
138	Tatanet Services Ltd	0	12	12
139	Nelco Ltd.	0	6	6
140	ABT Ltd.	3	2	5
141	Orange Business Services India Network Pvt. Ltd.	0	5	5
142	Reliance Jio Infocomm Ltd (Infotel Broadband Services Limited)	0	1	1
	<b>Total</b>	<b>188419264</b>	<b>162059320</b>	<b>350478584</b>

Note: Some wireless service providers exclude incidental data users from their subscriber base, based on minimum usage decided by them.

**Annexure 1.7: List of Service Providers which reported IP  
Telephony Minutes for Q.E. Jun-16**

<b>S. No.</b>	<b>Name of Service Providers which reported IP Telephony Minutes</b>
1	Alliance Broadband Services Pvt. Ltd.
2	Asianet Satellite Communications Ltd.
3	Blazenet Ltd.
4	City Online Services Ltd.
5	Citycom Networks Pvt. Ltd.
6	Data Infosys Ltd.
7	delDSL Internet Pvt Ltd
8	Novanet Ltd.
9	Pipetel Communications Pvt. Ltd.
10	Pulse Telesystems Pvt. Ltd.
11	Sify Technologies Ltd.
12	Tata Communications Limited
13	Trikon Electronics Pvt. Ltd.
14	VIVA Communications Pvt. Ltd.
15	World Phone Internet Services Pvt. Ltd.
16	You Broadband & Cable India Pvt. Ltd.

**Annexure 1.8: Service Area wise PMRTS subscriber Base**

SNo.	Operative Area	Service Provider	Subscriber Base	
			31.03.2016	30.06.2016
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6094	5770
		Procall(Delhi)	2527	2559
		Procall (Faridabad)		
		Procall (Gurgaon)		
		<b>Total</b>	<b>8621</b>	<b>8329</b>
2	Mumbai(Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	8265	8149
		Smartalk (Mumbai)	460	476
		Bhilwara Telenet(Mumbai)	450	506
		Airtalk Solutions & Services Pvt. Ltd	228	249
		<b>Total</b>	<b>9403</b>	<b>9380</b>
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2416	2387
		<b>Total</b>	<b>2416</b>	<b>2387</b>
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6781	6606
		Quick Calls	228	267
		<b>Total</b>	<b>7009</b>	<b>6873</b>
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7166	7270
		Quick Calls	240	256
		<b>Total</b>	<b>7406</b>	<b>7526</b>
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	4895	4853
		Quick Calls (Hyderabad Urban)	936	933
		<b>Total</b>	<b>5831</b>	<b>5786</b>
7	Madhya Pradesh ( Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1051	995
		<b>Total</b>	<b>1051</b>	<b>995</b>
8	Rajasthan (Jaipur)	Procall	286	301
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	526	504
		<b>Total</b>	<b>812</b>	<b>805</b>



**Annexure- 1.8 (Contd.)**

SNo.	Operative Area	Service Provider	Subscriber Base	
			31.03.2016	30.06.2016
9	Gujrat (Ahmedaba/ Surat/Vadodara/ Bharuch/ Kutch/ Amrela / Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch)	6214	6007
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		<b>Total</b>	<b>8034</b>	<b>7827</b>
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1413	1385
		Smartalk	465	451
		<b>Total</b>	<b>1878</b>	<b>1836</b>
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	210	264
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	424	482
		<b>Total</b>	<b>634</b>	<b>746</b>
<b>Grand Total</b>			<b>51251</b>	<b>52490</b>

## Annexure 2.1: GSM Service - Service Area wise Statistics for QE Jun-16

### Key parameters for service areas of category-A

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
AP	95.25	144	25	192	199	391
Gujarat	93.78	118	9	186	158	343
Karnataka	92.54	155	33	195	189	385
MH	94.34	133	34	170	155	326
TN (incl. Chennai)	94.25	141	31	179	188	367

### Key parameters for service areas of category-B

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Haryana	96.23	114	22	196	181	377
Kerala	96.07	198	13	191	234	425
MP	97.38	106	11	146	154	300
Punjab	92.69	150	77	217	212	429
Rajasthan	97.11	111	7	156	176	332
UP(E)	98.59	96	8	171	234	405
UP(W)	97.91	99	15	167	188	355
WB	99.00	86	16	163	203	366

### Key parameters for service areas of category-C

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Assam	96.54	131	31	183	214	397
Bihar	99.21	95	5	166	246	411
HP	98.13	113	8	183	170	353
J&K	92.73	166	5	281	253	534
NE	97.75	135	54	165	158	323
Orissa	98.58	94	7	192	224	415

### Key parameters for service areas of category-Metro

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Kolkata	92.60	111	12	174	181	355
Delhi	84.88	181	15	240	198	438
Mumbai	81.27	193	17	253	182	435

**Annexure 2.2: CDMA Full Mobility Service - Service Area wise Statistics  
for QE Jun-16**

**Key parameters for service areas of Category A**

Service Area	% of Prepaid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
MH	90	68	9	94	78	172
Gujarat	82	137	6	97	71	168
TN (incl. Chennai)	81	174	6	76	67	143
Karnataka	83	145	5	118	109	227
AP	88	100	10	131	107	238

**Key parameters for service areas of Category B**

Service Area	% of Prepaid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
WB	99	56	4	160	159	318
Rajasthan	95	84	6	244	163	406
UP(E)	96	38	8	53	54	106
MP	96	35	13	155	77	232
Kerala	84	167	3	69	60	129
UP(W)	94	80	9	82	85	167
Haryana	89	65	4	183	144	327
Punjab	70	193	10	240	141	381

**Key parameters for service areas of Category C**

Service Area	% of Prepaid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Orissa	81	125	3	122	138	260
Bihar	97	36	11	261	143	404
HP	63	151	3	134	91	225
North East	NA					
Assam	NA					
J&K	56	165	1	114	64	178

**Key parameters for service areas of Category Metro**

Service Area	% of Prepaid in total subscribers	ARPU (₹ per month)	Total usage ( from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Kolkata	90	93	4	114	95	209
Delhi	88	104	4	117	86	203
Mumbai	67	205	7	87	74	161

### Annexure 4.1: Performance of QoS Parameters for Cellular Mobile 2G Service

Performance Monitoring Report on Quality of Service of Cellular Mobile Service Providers for quarter ending, June, 2016																			
Name of Service Area	Name of Service Provider	Network Related Parameters									Customer Service Quality Parameters								
		Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)			POI	Metering and billing					Response time to the customer for assistance		Termination / closure of service	
		BTSs Accumulated downtime (not available for service) (%age)	Worst affected BTSs due to downtime (%age)	Call Set-up Success Rate (within licensee's own network)	SDCCH/ Paging Chl. Congestion (%age)	TCH Congestion (%age)	Call Drop Rate (%age)	Worst affected cells having more than 3% TCH drop (call drop) rate (%age)	Connection with good voice quality	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	Metering and billing credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/charging complaints	Resolution of billing/charging complaints	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/ customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures
		≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%	≤ 0.5%	≤ 0.1%	≤ 0.1%	98% within 4 weeks	100% within 6 weeks	within 1 week of resolution of complaint	≥ 95%	≥ 95%	100% within 7 days	100% within 60 days
Andhra Pradesh	Aircel	0.17	0.58	98.70	0.10	0.34	0.48	2.87	97.24	0	0.03	0.00	100.00	100.00	100.00	97.24	97.16	100.00	100.00
	Airtel	0.24	0.64	98.15	0.94	1.24	0.69	1.04	96.99	0	0.01	0.00	100.00	100.00	100.00	100.00	60.71	100.00	100.00
	BSNL	1.67	1.94	98.07	0.66	1.14	0.69	2.50	98.33	0	0.00	0.00	100.00	100.00	100.00	98.00	95.45	100.00	100.00
	Idea	0.10	0.15	99.10	0.84	0.89	0.78	2.77	96.95	0	0.06	0.09	99.99	100.00	100.00	99.37	98.79	100.00	100.00
	RCOM CDMA	0.27	1.10	97.87	0.00	0.93	0.20	0.83	99.09	0	0.09	0.01	100.00	100.00	100.00	98.50	88.86	100.00	99.98
	RCOM GSM	0.51	1.46	99.28	0.04	0.68	0.16	0.55	99.31	0	0.09	0.10	100.00	100.00	100.00	99.44	91.18	100.00	100.00
	Telenor	0.08	0.15	99.34	0.16	0.20	0.64	1.48	98.62	0	NA	0.01	100.00	100.00	NA	99.58	99.43	NA	NA
	TTL CDMA	0.14	0.34	99.45	0.00	0.01	0.19	2.11	98.25	0	0.00	0.00	100.00	100.00	100.00	97.14	99.56	100.00	100.00
	TTL GSM	0.08	0.25	98.98	0.11	0.08	0.49	2.45	97.80	0	0.00	0.00	100.00	100.00	100.00	98.64	97.49	100.00	100.00
Vodafone	0.09	0.24	99.85	0.09	0.15	0.40	2.50	99.10	0	0.09	0.15	100.00	100.00	100.00	100.00	98.71	98.65	99.50	
Assam	Aircel	4.18	29.42	90.89	1.44	6.47	1.90	17.22	91.00	0	0.00	0.00	100.00	100.00	100.00	96.12	95.39	99.93	100.00
	Airtel	0.50	1.06	95.97	0.82	1.30	0.94	1.18	99.08	0	0.01	0.00	100.00	100.00	100.00	99.98	73.43	100.00	100.00
	BSNL	1.99	1.94	98.27	0.89	1.73	1.92	2.97	96.07	0	0.01	0.00	100.00	100.00	100.00	97.00	97.57	100.00	100.00
	Idea	1.54	1.18	97.53	0.37	0.53	0.45	2.27	95.75	0	0.00	0.04	100.00	100.00	100.00	96.62	99.76	100.00	100.00
	RTL										0.09	0.05	100.00	100.00	100.00	98.00	96.68	100.00	60.43
Vodafone	1.04	1.68	98.72	0.66	1.28	0.71	2.51	96.62	0	0.08	0.04	100.00	100.00	100.00	99.49	100.00	100.00	100.00	
Bihar	Aircel	2.02	14.21	83.62	3.37	16.01	1.89	13.66	95.09	0	0.00	0.00	100.00	100.00	100.00	91.27	92.99	100.00	100.00
	Airtel	0.06	0.15	95.61	0.82	1.41	1.49	2.41	95.95	0	0.01	0.00	100.00	100.00	100.00	98.12	86.88	100.00	100.00
	BSNL	1.89	1.95	97.07	0.52	0.46	1.40	2.76	97.45	0	0.00	0.00	100.00	100.00	100.00	99.00	97.30	100.00	100.00
	Idea	0.90	1.83	96.63	0.89	1.86	0.84	2.67	96.89	0	0.01	0.01	100.00	100.00	100.00	99.42	99.98	100.00	100.00
	RCOM CDMA	0.15	1.13	95.50	0.00	2.08	0.26	0.53	97.19	0	0.08	0.07	100.00	100.00	100.00	99.45	82.24	100.00	97.45
	RTL										0.09	0.08	100.00	100.00	100.00	99.54	91.73	100.00	70.44
	Telenor	0.38	1.03	95.81	1.71	3.39	1.15	6.12	95.52	0	NA	0.00	100.00	100.00	NA	99.74	98.24	NA	NA
	TTL CDMA	0.28	0.00	97.77	0.00	0.61	0.39	1.95	98.25	0	0.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	TTL GSM	0.20	0.00	97.60	0.76	0.81	0.55	2.94	97.32	0	0.00	0.00	100.00	100.00	100.00	96.42	97.62	100.00	100.00
	Videocon	0.26	0.00	99.07	0.72	0.10	0.71	0.00	99.20	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.48	1.78	99.23	0.35	0.77	0.75	2.77	98.15	0	0.01	0.05	100.00	100.00	100.00	100.00	97.59	100.00	100.00	

## Annexure 4.1 (Contd.)

CHN	BSNL	0.49	1.59	97.42	0.80	1.68	0.74	1.57	98.81	0	0.05	0.00	99.00	100.00	100.00	100.00	96.46	100.00	100.00
Delhi	Aircel	0.14	0.31	96.94	0.33	1.56	0.84	<b>4.18</b>	95.64	0	0.00	0.00	100.00	100.00	100.00	95.70	<b>89.71</b>	100.00	100.00
	Airtel	0.01	0.00	99.13	0.04	0.02	0.68	1.53	98.88	0	0.02	0.00	100.00	100.00	100.00	100.00	<b>90.06</b>	100.00	100.00
	Idea	0.06	0.00	99.07	0.43	0.38	0.65	2.07	98.35	0	0.09	<b>0.17</b>	100.00	100.00	100.00	98.81	99.45	<b>99.91</b>	100.00
	MTNL GSM	0.12	0.18	97.08	0.59	1.77	1.79	2.53	97.41	0	0.04	0.02	100.00	100.00	100.00	96.92	96.72	100.00	100.00
	Sistema Shyam	0.07	0.00	99.04	0.00	0.11	0.30	1.49	99.18	0	0.08	0.01	100.00	100.00	100.00	98.99	95.18	100.00	100.00
	RCOM CDMA	0.20	0.45	96.83	0.00	0.73	0.45	1.41	99.81	0	0.09	0.01	100.00	100.00	100.00	99.27	<b>79.95</b>	100.00	<b>96.29</b>
	RCOM GSM	0.06	0.19	97.10	0.39	1.35	0.20	0.56	98.71	0	0.09	0.09	100.00	100.00	100.00	99.73	<b>70.73</b>	100.00	<b>93.69</b>
	TTL CDMA	0.07	0.27	98.97	0.00	0.26	0.33	1.50	99.12	0	0.00	0.00	100.00	100.00	100.00	99.06	97.72	100.00	100.00
	Vodafone	0.22	1.36	99.10	0.15	0.90	1.07	2.65	98.12	0	<b>0.14</b>	0.02	100.00	100.00	<b>99.84</b>	100.00	97.99	100.00	100.00
Gujarat	Aircel	0.03	0.00	98.86	0.05	0.09	0.32	1.74	96.90	0	0.00	0.00	100.00	100.00	100.00	<b>93.82</b>	99.13	100.00	100.00
	Airtel	0.10	0.10	99.05	0.05	0.43	0.62	1.22	97.45	0	0.01	0.00	100.00	100.00	100.00	100.00	<b>78.98</b>	100.00	100.00
	BSNL	1.70	1.08	97.59	0.07	0.35	0.41	1.31	100.00	0	0.01	0.02	100.00	100.00	100.00	98.00	97.62	100.00	100.00
	Idea	0.05	0.09	99.34	0.40	0.25	0.76	2.29	96.68	0	0.03	0.03	99.96	100.00	100.00	98.86	99.75	100.00	100.00
	Sistema Shyam	0.03	0.00	99.77	0.00	0.00	0.08	0.65	99.24	0	0.03	0.02	100.00	100.00	100.00	95.43	95.01	100.00	100.00
	RCOM CDMA	0.12	0.78	98.86	0.00	0.10	0.11	0.65	99.63	0	0.09	0.02	100.00	100.00	100.00	98.39	<b>83.79</b>	100.00	<b>92.36</b>
	RCOM GSM	0.07	0.61	96.85	0.04	1.77	0.13	0.26	98.97	0	0.08	0.09	100.00	100.00	100.00	99.65	<b>85.24</b>	100.00	<b>73.27</b>
	Telenor	0.09	0.27	98.15	0.26	1.00	0.84	2.74	97.97	0	NA	0.00	100.00	100.00	NA	99.53	98.52	NA	NA
	TTL CDMA	0.02	0.00	98.87	0.00	0.05	0.28	1.71	99.36	0	0.01	0.00	100.00	100.00	100.00	100.00	99.63	100.00	100.00
TTL GSM	0.04	0.00	99.08	0.06	0.20	0.56	2.21	98.44	0	0.01	0.00	100.00	100.00	100.00	98.31	97.05	100.00	100.00	
Videocon	0.07	0.16	98.22	0.14	1.70	0.16	0.00	98.87	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Vodafone	0.04	0.16	99.68	0.17	0.32	0.61	1.52	97.68	0	0.10	0.01	100.00	100.00	100.00	100.00	97.86	100.00	100.00	
Haryana	Aircel	0.25	0.00	100.00	0.03	0.00	0.00	0.06	99.17	0	0.00	0.00	100.00	100.00	100.00	98.13	99.26	100.00	100.00
	Airtel	0.13	0.12	99.07	0.45	0.71	0.70	0.29	98.78	0	0.02	0.00	100.00	100.00	100.00	100.00	<b>89.36</b>	100.00	100.00
	BSNL	1.25	1.44	97.89	0.53	0.78	1.24	0.99	97.22	0	0.05	0.00	100.00	100.00	100.00	100.00	99.99	100.00	100.00
	Idea	0.09	0.00	98.28	0.43	0.43	0.53	1.96	98.03	0	0.08	<b>0.14</b>	100.00	100.00	100.00	99.83	97.77	100.00	<b>99.89</b>
	RCOM CDMA	0.08	0.46	98.24	0.00	0.50	0.25	1.27	99.88	0	0.10	0.01	100.00	100.00	100.00	96.43	97.61	100.00	<b>80.63</b>
	RCOM GSM	0.12	0.97	97.52	0.45	0.17	0.09	0.54	99.60	0	0.09	0.08	100.00	100.00	100.00	98.91	95.23	100.00	<b>59.29</b>
	TTL CDMA	0.55	0.00	98.19	0.00	0.17	0.34	2.03	97.14	0	0.01	0.00	100.00	100.00	100.00	100.00	99.66	100.00	100.00
	TTL GSM	0.31	0.87	98.09	0.19	0.61	0.58	2.51	96.79	0	0.00	0.00	100.00	100.00	100.00	98.48	<b>93.05</b>	100.00	100.00
	Videocon	0.19	0.48	98.58	0.11	0.10	0.43	0.50	97.67	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.08	0.09	99.77	0.15	0.23	0.54	1.63	97.97	0	0.07	0.07	100.00	100.00	100.00	100.00	99.04	100.00	100.00	
Himachal Pradesh	Aircel	0.17	0.09	99.50	0.06	0.31	1.19	<b>10.16</b>	95.41	0	0.00	0.00	100.00	100.00	100.00	98.23	96.75	100.00	100.00
	Airtel	0.03	0.16	98.66	0.23	0.35	0.60	0.40	97.77	0	0.01	0.00	100.00	100.00	100.00	99.99	<b>93.81</b>	100.00	100.00
	BSNL	1.97	1.90	98.38	0.90	1.81	1.83	2.76	95.02	0	0.01	0.00	100.00	100.00	100.00	100.00	99.99	100.00	100.00
	Idea	0.17	0.67	99.44	0.08	0.18	1.01	2.10	97.71	0	0.02	0.02	100.00	100.00	100.00	99.32	99.66	100.00	100.00
	RCOM CDMA	0.06	0.00	99.06	0.00	0.10	0.08	0.58	99.84	0	0.08	0.01	100.00	100.00	100.00	95.88	97.77	100.00	<b>74.30</b>
	RTL	0.10	0.74	95.47	0.32	0.35	0.32	1.24	96.66	0	0.09	0.09	100.00	100.00	100.00	99.30	96.62	100.00	<b>67.86</b>
	TTL CDMA	0.01	0.00	99.31	0.00	0.02	0.10	1.86	98.09	0	0.00	0.00	100.00	100.00	100.00	100.00	99.89	100.00	100.00
	TTL GSM	0.00	0.00	99.68	0.00	0.00	0.07	0.22	97.14	0	0.00	0.00	100.00	100.00	100.00	98.03	99.83	100.00	100.00
Vodafone	0.07	0.00	99.85	0.15	0.15	0.57	2.40	97.54	0	<b>0.12</b>	0.03	100.00	100.00	100.00	100.00	99.60	100.00	100.00	

**Annexure 4.1 (Contd.)**

Jammu & Kashmir	Aircel	0.62	<b>3.04</b>	97.61	0.41	1.66	1.31	<b>10.99</b>	95.37	<b>1</b>	0.00	0.00	100.00	100.00	100.00	97.25	<b>92.56</b>	100.00	100.00
	Airtel	0.12	0.12	98.35	0.50	1.07	1.29	0.28	97.88	0	0.01	0.00	100.00	100.00	100.00	99.23	<b>63.31</b>	100.00	100.00
	BSNL	1.45	0.64	98.76	0.58	1.23	1.09	1.78	96.72	0	0.04	0.00	100.00	100.00	100.00	100.00	99.00	100.00	100.00
	Idea	0.16	0.46	98.53	0.19	0.95	1.27	1.88	96.31	0	0.01	0.02	100.00	100.00	100.00	96.45	95.17	100.00	100.00
	RCOM GSM	0.05	0.39	98.25	0.07	0.17	0.14	0.48	99.15	0	0.09	0.09	100.00	100.00	100.00	98.97	<b>94.26</b>	100.00	<b>85.98</b>
	Vodafone	0.23	1.15	99.32	0.06	0.68	0.61	2.59	98.55	<b>1</b>	0.03	0.01	100.00	100.00	100.00	100.00	99.37	100.00	100.00
Karnataka	Aircel	0.30	0.66	99.06	0.06	0.26	0.84	<b>4.57</b>	97.22	0	0.00	0.00	100.00	100.00	100.00	97.26	96.09	100.00	100.00
	Airtel	0.25	0.91	98.19	0.30	0.42	0.59	1.96	96.70	0	0.01	0.00	100.00	100.00	100.00	100.00	<b>74.73</b>	100.00	100.00
	BSNL	1.41	1.87	98.46	0.37	1.25	0.67	1.74	97.08	0	0.05	0.00	99.78	100.00	100.00	99.00	96.82	100.00	100.00
	Idea	0.13	0.39	98.76	0.48	0.20	0.54	1.81	96.75	0	0.05	0.03	100.00	100.00	100.00	99.51	98.65	100.00	100.00
	Sistema Shyam	0.15	0.00	99.35	0.00	0.09	0.38	1.74	99.19	0	0.01	0.01	100.00	100.00	100.00	99.80	96.28	100.00	100.00
	RCOM CDMA	0.20	1.08	98.03	0.00	0.70	0.19	0.88	98.69	0	0.09	0.01	100.00	100.00	100.00	96.66	<b>91.19</b>	100.00	<b>89.12</b>
	RCOM GSM	0.29	0.70	98.43	0.11	0.37	0.10	0.40	99.29	0	0.09	0.09	100.00	100.00	100.00	99.59	<b>89.68</b>	100.00	<b>82.06</b>
	TTL CDMA	0.12	0.52	99.24	0.00	0.03	0.35	1.72	98.34	0	0.00	0.00	100.00	100.00	100.00	99.28	98.85	100.00	100.00
	TTL GSM	0.12	0.18	98.18	0.11	0.19	0.65	2.92	97.68	0	0.00	0.00	100.00	100.00	100.00	98.85	98.52	100.00	100.00
Vodafone	0.31	1.06	99.89	0.14	0.11	0.40	2.68	98.53	0	0.09	<b>0.21</b>	100.00	100.00	100.00	100.00	<b>90.54</b>	100.00	<b>99.84</b>	
Kerala	Aircel	0.17	0.10	99.37	0.11	0.11	0.50	2.84	97.29	0	0.00	0.00	100.00	100.00	100.00	97.61	97.57	100.00	100.00
	Airtel	0.10	0.17	98.39	0.26	1.40	0.86	2.86	97.41	0	0.01	0.00	100.00	100.00	100.00	100.00	<b>92.69</b>	100.00	100.00
	BSNL	0.58	0.18	98.78	0.28	1.22	0.57	1.08	99.94	0	0.02	0.01	100.00	100.00	100.00	97.00	98.56	100.00	100.00
	Idea	0.16	0.33	99.90	0.23	0.68	0.61	1.81	96.52	0	0.08	0.02	99.92	100.00	100.00	98.47	99.41	100.00	100.00
	Sistema Shyam	0.07	0.00	99.43	0.00	0.00	0.17	2.09	99.17	0	0.09	0.01	100.00	100.00	100.00	99.00	95.98	100.00	100.00
	RCOM CDMA	0.05	0.29	98.34	0.00	0.84	0.11	1.17	99.13	0	0.09	0.01	100.00	100.00	100.00	95.70	<b>93.70</b>	100.00	<b>89.20</b>
	RCOM GSM	0.17	0.58	96.71	0.05	0.24	0.09	0.94	99.50	0	0.08	0.09	100.00	100.00	100.00	98.68	<b>93.13</b>	100.00	<b>19.23</b>
	TTL CDMA	0.06	0.00	98.80	0.00	0.01	0.28	1.95	99.14	0	0.00	0.00	100.00	100.00	100.00	100.00	99.33	100.00	100.00
	TTL GSM	0.09	0.00	99.72	0.02	0.03	0.47	2.81	98.94	0	0.00	0.00	100.00	100.00	100.00	97.97	97.99	100.00	100.00
	Vodafone	0.07	0.21	99.93	0.07	0.07	0.41	1.40	97.87	0	0.09	0.05	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Kolkata	Aircel	0.20	0.85	97.21	0.68	0.29	0.73	2.86	97.11	0	0.00	0.00	100.00	100.00	100.00	98.02	98.56	100.00	100.00
	Airtel	0.02	0.00	99.34	0.00	0.00	0.60	1.81	97.84	0	0.02	0.00	100.00	100.00	100.00	99.98	<b>68.28</b>	100.00	100.00
	BSNL	1.89	<b>2.99</b>	99.15	0.72	0.41	1.03	2.27	99.82	0	0.03	0.02	100.00	100.00	100.00	96.00	97.27	100.00	100.00
	Idea	0.14	0.36	99.71	0.10	0.07	0.26	0.14	97.65	0	0.08	0.01	100.00	100.00	100.00	99.35	99.11	100.00	100.00
	Sistema Shyam	0.03	0.00	99.86	0.00	0.00	0.46	1.78	99.93	0	0.05	0.04	100.00	100.00	100.00	99.84	95.62	100.00	100.00
	RCOM CDMA	0.30	1.32	97.28	0.00	1.19	0.34	0.91	99.20	0	0.07	0.06	100.00	100.00	100.00	98.18	98.41	100.00	<b>89.41</b>
	RTL	0.34	1.12	97.66	0.09	0.17	0.09	0.41	99.04	0	0.09	0.09	100.00	100.00	100.00	99.54	<b>80.45</b>	100.00	<b>85.38</b>
	TTL CDMA	0.05	0.24	99.06	0.00	0.12	0.47	2.53	99.24	0	0.00	0.00	100.00	100.00	100.00	100.00	98.09	100.00	100.00
	TTL GSM	0.14	0.22	99.30	0.11	0.15	0.60	2.41	98.35	0	0.00	0.00	100.00	100.00	100.00	97.83	<b>94.87</b>	100.00	100.00
	Vodafone	0.08	0.49	99.59	0.06	0.41	0.72	2.49	97.87	0	0.03	0.04	100.00	100.00	100.00	100.00	97.64	100.00	100.00

### Annexure 4.1 (Contd.)

Madhya Pradesh	Aircel	0.34	0.78	97.90	0.72	0.00	0.85	0.78	99.12	0	0.00	0.00	100.00	100.00	100.00	98.44	99.85	100.00	100.00	
	Airtel	0.22	0.60	98.83	0.15	0.84	0.66	1.65	97.62	0	0.01	0.00	100.00	100.00	100.00	100.00	<b>61.76</b>	100.00	100.00	
	BSNL	1.90	1.73	96.84	0.56	1.21	1.17	2.40	97.41	0	0.01	0.02	100.00	100.00	100.00	98.00	97.59	100.00	100.00	
	Idea	0.12	0.42	97.60	0.39	1.23	0.60	1.39	98.08	0	0.10	0.02	100.00	100.00	100.00	96.74	98.27	100.00	100.00	
	RCOM CDMA	0.03	0.07	98.05	0.00	1.04	0.12	0.46	99.29	0	0.09	0.02	100.00	100.00	100.00	99.26	<b>90.95</b>	100.00	<b>89.59</b>	
	RTL	0.40	1.56	96.23	0.18	0.81	0.17	0.69	98.59	0	0.09	0.09	100.00	100.00	100.00	99.90	<b>90.37</b>	100.00	<b>68.24</b>	
	TTL CDMA	0.14	0.47	99.10	0.00	0.01	0.34	2.55	99.13	0	0.00	0.00	100.00	100.00	100.00	100.00	98.79	100.00	100.00	
	TTL GSM	0.05	0.00	99.36	0.25	0.11	0.54	2.47	98.82	0	0.00	0.00	100.00	100.00	100.00	97.78	<b>93.63</b>	100.00	100.00	
	Videocon	0.12	0.57	98.82	0.09	0.17	0.53	2.34	98.70	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Vodafone	0.16	0.55	99.31	0.22	0.69	0.58	<b>3.24</b>	98.87	0	0.10	0.10	99.97	100.00	100.00	100.00	99.39	100.00	100.00	100.00
Maharashtra	Aircel	0.10	0.22	99.33	0.14	0.17	0.64	2.64	96.25	0	0.00	0.00	100.00	100.00	100.00	<b>89.43</b>	95.23	100.00	100.00	
	Airtel	0.03	0.00	98.47	0.10	0.67	0.63	1.78	96.94	0	0.01	0.01	100.00	100.00	100.00	99.95	<b>87.25</b>	100.00	100.00	
	BSNL	1.95	1.75	96.67	0.55	1.17	1.11	2.74	96.71	0	0.00	0.01	100.00	100.00	100.00	100.00	99.31	100.00	100.00	
	Idea	0.08	0.10	98.26	0.67	1.25	0.59	2.16	98.60	0	0.06	0.06	100.00	100.00	100.00	98.79	99.68	100.00	100.00	
	RCOM CDMA	0.20	1.16	97.82	0.00	0.70	0.13	0.42	99.62	0	0.09	0.02	100.00	100.00	100.00	98.71	<b>84.79</b>	100.00	<b>84.16</b>	
	RCOM GSM	0.13	1.00	98.35	0.20	0.45	0.11	0.41	99.24	0	0.09	0.09	100.00	100.00	100.00	99.53	<b>82.75</b>	100.00	<b>60.72</b>	
	Telenor	0.23	1.04	98.50	0.38	0.53	0.91	<b>3.82</b>	97.34	0	NA	0.00	100.00	100.00	NA	99.51	98.76	NA	NA	
	TTML CDMA	0.04	0.00	98.21	0.00	0.82	0.63	2.41	99.91	0	0.00	0.00	100.00	100.00	100.00	100.00	99.78	100.00	100.00	
	TTML GSM	0.02	0.00	99.54	0.09	0.12	0.40	1.67	97.55	0	0.00	0.00	100.00	100.00	100.00	95.57	97.97	100.00	100.00	
	Vodafone	0.24	0.86	99.33	0.41	0.67	0.73	2.69	97.12	0	0.04	0.04	100.00	100.00	100.00	99.98	98.33	100.00	100.00	
Mumbai	Aircel	0.09	0.08	97.90	0.29	0.62	0.90	<b>4.44</b>	97.07	0	0.01	0.00	100.00	100.00	100.00	98.59	95.45	100.00	100.00	
	Airtel	0.07	0.00	99.90	0.04	0.09	0.77	1.58	97.58	0	0.01	0.01	100.00	100.00	100.00	100.00	<b>89.69</b>	100.00	100.00	
	Idea	0.07	0.06	99.26	0.27	0.48	0.93	1.48	96.48	0	0.04	0.09	100.00	100.00	100.00	96.42	98.98	100.00	100.00	
	MTNL GSM	0.75	1.12	98.16	0.29	0.12	1.49	2.01	96.67	0	0.05	0.01	98.88	100.00	100.00	95.26	95.60	100.00	100.00	
	RCOM CDMA	0.13	0.62	98.04	0.00	0.49	0.22	0.26	99.89	0	0.08	0.03	100.00	100.00	100.00	97.54	<b>78.73</b>	100.00	<b>89.06</b>	
	RCOM GSM	0.04	0.15	99.20	0.21	0.47	0.14	0.30	99.32	0	0.09	0.09	100.00	100.00	100.00	99.30	<b>78.42</b>	100.00	<b>79.51</b>	
	TTML CDMA	0.09	0.00	99.19	0.00	0.02	0.44	1.10	99.09	0	0.00	0.00	100.00	100.00	100.00	100.00	99.70	100.00	100.00	
	TTML GSM	0.31	0.00	99.35	0.05	0.05	0.51	2.07	97.79	0	0.00	0.00	100.00	100.00	100.00	98.15	97.93	100.00	100.00	
Vodafone	0.15	0.00	99.39	0.06	0.62	1.01	2.77	97.71	0	<b>0.50</b>	<b>0.18</b>	99.95	100.00	100.00	99.65	96.05	100.00	100.00		
North East	Aircel	<b>6.82</b>	<b>46.44</b>	<b>94.92</b>	0.87	<b>3.31</b>	1.91	<b>18.76</b>	<b>92.57</b>	0	0.00	0.00	100.00	100.00	100.00	96.08	98.90	100.00	100.00	
	Airtel	1.09	1.36	95.60	0.78	1.04	0.89	1.29	98.91	0	0.01	0.00	100.00	100.00	100.00	99.99	<b>87.14</b>	100.00	100.00	
	BSNL	1.85	<b>2.43</b>	96.95	0.97	1.86	1.91	2.73	96.73	0	0.03	0.03	100.00	100.00	100.00	98.50	97.98	100.00	100.00	
	Idea	1.97	1.55	97.24	0.11	0.76	0.57	1.76	96.20	0	0.02	0.04	100.00	100.00	100.00	100.00	99.85	100.00	100.00	
	RTL										0.09	0.07	100.00	100.00	100.00	96.94	97.36	100.00	<b>61.41</b>	
	Vodafone	1.78	1.81	98.46	0.77	1.65	0.86	2.96	97.13	0	0.06	0.04	100.00	100.00	100.00	99.99	100.00	100.00	100.00	

**Annexure 4.1 (Contd.)**

Orissa	Aircel	0.58	1.95	96.63	0.69	1.94	1.19	5.78	95.69	0	0.00	0.00	100.00	100.00	100.00	96.91	98.83	100.00	100.00	
	Airtel	0.15	0.08	96.45	0.77	1.86	1.03	1.60	96.06	0	0.01	0.00	100.00	100.00	100.00	99.90	70.64	100.00	100.00	
	BSNL	1.36	1.94	98.54	0.87	1.46	1.79	2.92	97.34	0	0.01	0.00	100.00	100.00	100.00	98.00	95.00	100.00	100.00	
	Idea	0.33	1.10	98.86	0.11	0.16	0.26	0.16	95.63	0	0.03	0.05	100.00	100.00	100.00	98.39	99.95	100.00	100.00	
	RCOM CDMA	0.12	1.39	99.76	0.00	0.03	0.11	0.74	99.69	0	0.10	0.01	100.00	100.00	100.00	95.55	99.22	100.00	68.24	
	RTL											0.09	0.08	100.00	100.00	100.00	98.88	93.94	100.00	45.83
	TTL CDMA	0.27	1.29	98.32	0.00	0.06	0.39	2.37	98.25	0	0.00	0.00	100.00	100.00	100.00	100.00	98.47	100.00	100.00	
	TTL GSM	0.10	0.45	97.80	0.40	1.28	0.38	1.22	97.42	0	0.00	0.00	100.00	100.00	100.00	95.44	96.99	100.00	100.00	
Vodafone	0.13	0.36	98.81	0.68	1.19	0.72	2.83	98.07	0	0.04	0.05	100.00	100.00	100.00	99.98	99.48	98.49	100.00		
Punjab	Aircel	0.16	0.41	97.95	0.16	0.33	0.74	2.87	96.89	0	0.00	0.00	100.00	100.00	100.00	97.81	95.97	100.00	100.00	
	Airtel	0.05	0.06	99.34	0.18	0.11	0.60	0.85	98.63	0	0.01	0.00	100.00	100.00	100.00	100.00	77.02	100.00	100.00	
	BSNL	0.73	1.91	97.35	0.61	0.94	0.31	0.93	96.74	0	0.03	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
	Idea	0.08	0.07	98.80	0.14	0.20	0.56	1.59	96.99	0	0.05	0.03	100.00	100.00	100.00	99.81	99.10	100.00	100.00	
	QTL cdma	0.24	0.00	98.94	0.03	0.11	0.01	0.04	97.97	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	QTL gsm	0.18	0.00	98.14	0.09	0.30	0.77	0.44	96.45	0	0.00	0.08	100.00	100.00	100.00	100.00	96.44	100.00	100.00	
	RCOM CDMA	0.08	0.65	97.74	0.00	0.66	0.11	1.13	99.51	0	0.09	0.03	100.00	100.00	100.00	95.93	97.24	100.00	89.14	
	RCOM GSM	0.22	1.66	98.76	0.16	0.08	0.09	0.56	99.44	0	0.09	0.09	100.00	100.00	100.00	99.18	93.88	100.00	77.84	
	TTL CDMA	0.05	0.09	98.71	0.00	0.04	0.21	2.40	99.00	0	0.00	0.00	100.00	100.00	100.00	100.00	99.80	100.00	100.00	
	TTL GSM	0.05	0.00	98.66	0.05	0.19	0.44	1.91	97.22	0	0.00	0.00	100.00	100.00	100.00	98.47	98.02	100.00	100.00	
Vodafone	0.05	0.02	99.83	0.05	0.17	0.51	2.73	98.12	0	0.14	0.03	100.00	100.00	100.00	100.00	98.90	100.00	100.00		
Rajasthan	Aircel	0.08	0.04	96.98	0.37	1.24	0.83	3.16	96.45	0	0.00	0.00	100.00	100.00	100.00	94.10	93.75	100.00	100.00	
	Airtel	0.13	0.14	97.58	0.61	1.42	0.58	0.64	98.71	0	0.01	0.00	100.00	100.00	100.00	100.00	82.74	100.00	100.00	
	BSNL	1.32	1.53	98.09	0.70	1.62	1.37	2.00	97.92	0	0.04	0.09	100.00	100.00	100.00	100.00	96.83	100.00	100.00	
	Idea	0.06	0.01	99.59	0.22	0.20	0.50	1.28	97.48	0	0.06	0.03	100.00	100.00	100.00	99.29	99.79	100.00	100.00	
	Sistema Shyam	0.07	0.00	99.01	0.00	0.12	0.33	0.53	99.18	0	0.08	0.02	100.00	100.00	100.00	99.96	95.50	100.00	100.00	
	RCOM CDMA	0.06	0.22	98.62	0.00	0.37	0.26	2.01	99.13	0	0.09	0.08	100.00	100.00	100.00	99.03	84.63	100.00	82.77	
	RCOM GSM	0.09	0.34	96.20	0.13	0.44	0.15	0.77	99.33	0	0.09	0.09	100.00	100.00	100.00	99.53	92.89	100.00	53.99	
	TTL CDMA	0.05	0.00	98.18	0.00	1.02	0.27	2.38	98.86	0	0.00	0.00	100.00	100.00	100.00	100.00	99.33	100.00	100.00	
	TTL GSM	0.05	0.00	99.33	0.07	0.18	0.43	2.24	98.92	0	0.00	0.00	100.00	100.00	100.00	96.21	98.25	100.00	100.00	
	Vodafone	0.12	0.40	99.66	0.23	0.34	0.61	2.29	96.97	0	0.09	0.10	100.00	100.00	100.00	100.00	99.19	100.00	99.82	
Tamil Nadu	Aircel	0.19	0.69	98.62	0.58	0.98	1.03	5.88	95.58	0	0.00	0.00	100.00	100.00	100.00	97.48	96.64	100.00	100.00	
	BSNL	0.90	1.91	98.70	0.24	0.67	1.02	2.30	97.17	0	0.02	0.00	100.00	100.00	100.00	100.00	96.00	100.00	100.00	
	Idea	0.08	0.06	99.64	0.13	0.11	0.22	1.24	98.49	0	0.07	0.20	100.00	100.00	100.00	99.42	98.93	100.00	100.00	
	Sistema Shyam	0.02	0.00	99.53	0.00	0.01	0.37	2.78	99.19	0	0.09	0.00	100.00	100.00	100.00	96.71	96.07	100.00	100.00	
	TTL CDMA	0.08	0.00	98.71	0.00	0.04	0.34	1.63	98.47	0	0.00	0.00	100.00	100.00	100.00	100.00	99.31	100.00	100.00	
	TTL GSM	0.05	0.06	99.51	0.03	0.01	0.51	2.31	98.71	0	0.00	0.00	100.00	100.00	100.00	98.61	98.04	100.00	100.00	
	Vodafone	0.04	0.13	99.63	0.13	0.37	0.54	1.98	98.18	0	0.12	0.10	100.00	100.00	100.00	99.79	100.00	97.97	100.00	99.91



**Annexure 4.1 (Contd.)**

TamilNadu+Chennai	Airtel	0.11	0.42	98.80	0.35	0.93	0.67	2.75	98.25	0	0.01	0.00	100.00	100.00	100.00	100.00	<b>80.66</b>	100.00	100.00
	RCOM CDMA	0.02	0.00	98.19	0.00	0.74	0.14	0.77	98.43	0	0.09	0.01	100.00	100.00	100.00	96.86	95.77	100.00	<b>90.36</b>
	RCOM GSM	0.26	0.96	99.75	0.06	0.06	0.10	0.38	99.43	0	0.09	0.09	100.00	100.00	100.00	98.86	95.20	100.00	<b>60.96</b>
UPE	Aircel	0.24	1.07	98.96	0.66	0.78	0.55	2.66	97.32	0	0.00	0.00	100.00	100.00	100.00	98.28	95.57	100.00	100.00
	Airtel	0.62	1.87	96.15	0.73	0.67	0.83	2.84	96.50	0	0.00	0.00	100.00	100.00	100.00	100.00	<b>76.93</b>	100.00	100.00
	BSNL	1.86	1.84	98.58	0.63	1.71	1.38	2.40	96.50	0	0.09	0.09	98.90	100.00	100.00	99.00	97.14	100.00	100.00
	Idea	0.33	0.71	99.18	0.64	0.75	0.97	2.57	97.22	0	0.04	0.04	100.00	100.00	100.00	95.70	99.74	100.00	100.00
	RCOM CDMA	0.02	0.09	97.97	0.00	0.56	0.26	1.28	99.64	0	0.09	0.04	100.00	100.00	100.00	99.13	<b>88.15</b>	100.00	<b>85.93</b>
	RCOM GSM	0.02	0.18	95.42	0.56	1.26	0.12	0.37	98.99	0	0.08	0.09	100.00	100.00	100.00	99.57	<b>93.74</b>	100.00	<b>76.26</b>
	Telenor	0.40	0.80	95.18	<b>1.43</b>	<b>3.75</b>	1.42	<b>8.24</b>	<b>94.72</b>	0	NA	0.02	100.00	100.00	NA	99.04	98.63	NA	NA
	TTL CDMA	0.20	0.32	97.94	0.00	0.31	0.19	1.99	99.83	0	0.00	0.00	100.00	100.00	100.00	100.00	99.77	100.00	100.00
	TTL GSM	0.18	0.89	95.57	0.92	1.97	0.42	<b>3.25</b>	97.24	0	0.00	0.00	100.00	100.00	100.00	99.73	97.56	100.00	100.00
	Videocon	0.15	0.00	100.00	0.62	0.02	0.82	0.00	99.45	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Vodafone	0.12	0.11	98.40	0.39	1.60	0.64	2.58	95.97	0	0.08	0.01	100.00	100.00	100.00	100.00	98.86	100.00	100.00
UPW	Aircel	0.15	0.89	97.91	0.40	0.84	0.43	2.31	96.49	0	0.00	0.00	100.00	100.00	100.00	98.19	98.86	100.00	100.00
	Airtel	1.23	1.34	98.17	0.69	1.46	1.11	1.88	96.65	0	0.01	0.00	99.50	100.00	100.00	100.00	<b>93.10</b>	100.00	100.00
	BSNL	1.56	1.75	98.12	0.62	1.25	1.24	2.26	96.28	0	0.00	0.00	100.00	100.00	100.00	99.00	99.14	100.00	100.00
	Idea	0.15	0.28	97.94	0.92	1.61	1.09	2.58	96.11	0	0.09	0.00	99.99	100.00	100.00	99.41	99.46	100.00	<b>99.41</b>
	Sistema Shyam	0.05	0.00	99.61	0.00	0.00	0.24	2.32	98.53	0	0.07	0.04	100.00	100.00	100.00	98.95	95.08	100.00	100.00
	RCOM CDMA	0.02	0.07	97.78	0.00	0.48	0.51	0.71	99.40	0	0.09	0.05	100.00	100.00	100.00	98.68	<b>89.08</b>	100.00	<b>86.78</b>
	RCOM GSM	0.02	0.06	97.57	0.41	0.68	0.11	0.28	98.93	0	0.08	0.09	100.00	100.00	100.00	99.45	<b>94.28</b>	100.00	<b>75.62</b>
	Telenor	0.40	0.73	97.70	0.95	1.85	0.86	<b>5.22</b>	97.35	0	NA	0.01	100.00	100.00	NA	99.01	98.24	NA	NA
	TTL CDMA	0.28	0.64	99.04	0.00	0.08	0.26	2.39	98.89	0	0.00	0.00	100.00	100.00	100.00	100.00	98.42	100.00	100.00
	TTL GSM	0.32	1.14	97.93	0.44	0.51	0.56	2.65	97.07	0	0.00	0.00	100.00	100.00	100.00	99.55	98.09	100.00	100.00
	Videocon	0.35	0.00	98.71	0.02	0.00	0.50	0.00	95.60	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.40	1.45	99.02	0.46	0.98	0.87	2.92	96.66	0	<b>0.13</b>	<b>0.14</b>	100.00	100.00	<b>99.98</b>	100.00	98.06	100.00	100.00	
West Bengal	Aircel	0.48	<b>2.22</b>	96.88	0.59	1.64	1.04	<b>9.14</b>	96.93	0	0.00	0.00	100.00	100.00	100.00	97.87	96.70	100.00	100.00
	Airtel	0.13	0.37	95.61	0.57	1.75	1.14	2.59	95.99	0	0.01	0.00	100.00	100.00	100.00	<b>94.58</b>	<b>61.89</b>	100.00	100.00
	BSNL	0.35	1.15	97.89	<b>1.32</b>	1.64	1.34	<b>12.56</b>	96.34	0	0.03	0.02	99.71	100.00	100.00	99.50	98.34	100.00	100.00
	Idea	0.17	0.74	98.89	0.20	0.17	0.39	0.48	97.66	0	0.05	0.02	100.00	100.00	100.00	99.04	99.86	100.00	100.00
	Sistema Shyam	0.11	0.00	99.64	0.00	0.09	0.58	2.04	99.63	0	0.07	0.02	100.00	100.00	100.00	99.65	95.27	100.00	100.00
	RCOM CDMA	0.18	1.63	97.52	0.00	0.23	0.15	0.22	99.18	0	0.09	0.03	100.00	100.00	100.00	98.70	98.41	100.00	<b>82.30</b>
	RTL										0.08	0.09	100.00	100.00	100.00	99.63	<b>79.15</b>	100.00	<b>88.79</b>
	TTL CDMA	0.05	0.00	99.38	0.00	0.00	0.21	2.11	97.99	0	0.00	0.00	100.00	100.00	100.00	100.00	99.54	100.00	100.00
	TTL GSM	0.10	0.39	99.12	0.06	0.15	0.49	2.42	97.90	0	0.00	0.00	100.00	100.00	100.00	97.89	99.11	100.00	100.00
	Vodafone	0.06	0.09	98.80	0.49	1.20	0.63	2.06	97.19	0	0.05	0.05	100.00	100.00	100.00	100.00	96.36	100.00	100.00

## Annexure 4.2: Performance of QoS Parameters for Cellular Mobile 3G Service

Performance Monitoring Report on Quality of Service of Cellular Mobile Service Providers for quarter ending June , 2016											
Name of the Service Area / City	Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)			POI	
		BTS and Node-B's Accumulated downtime (not available for service) (%age)	Worst affected BTSs and Node-B's due to downtime (%age)	Call Set-up Success Rate (within licensee's own network)	SDCCH/Paging Channel and RRC Congestion (%age)	TCH and Circuit Switched RAB Congestion (%age)	Call Drop and Circuit Switched Voice Drop Rate: (%age)	Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop	Connections with good voice quality and Circuit Switch Voice Quality (CSV quality)	Point of Interconnection (POI) Congestion	
		1	2	3	4	5	6	7	8	9	10
		Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%	≤ 0.5%
Andhra Pradesh	Aircel	0.18	0.43	97.53	0.71	1.78	0.33	3.01	99.82	0	
	Airtel	0.25	0.86	99.12	0.24	0.00	0.48	1.40	98.92	0	
	BSNL	0.87	1.83	98.00	0.87	1.27	0.43	2.70	99.80	0	
	IDEA	0.11	0.13	99.77	0.16	0.17	0.23	1.26	99.73	0	
Assam	Aircel	3.13	21.70	99.00	0.36	0.00	0.70	8.24	98.97	0	
	Airtel	0.64	1.15	97.64	0.48	0.12	0.77	1.27	98.80	0	
	BSNL	1.90	1.97	96.00	0.00	0.00	1.77	2.90	96.07	0	
	RTL	0.12	0.24	99.42	0.05	0.05	0.20	1.21	99.87	0	
	vodafone	1.19	1.21	99.70	0.07	0.10	0.37	3.56	98.91	0	
Bihar	Aircel	1.93	12.79	95.98	0.73	0.29	0.97	8.72	98.88	0	
	Airtel	0.03	0.15	99.23	0.02	0.09	0.62	2.50	99.40	0	
	BSNL	1.87	1.85	95.33	0.12	0.52	1.52	2.90	96.75	0	
	RTL	0.07	0.30	97.08	0.03	0.02	0.01	0.05	99.86	0	
Chennai	BSNL	0.80	1.83	98.00	0.90	1.33	1.53	1.80	95.90	0	
Delhi	Airtel	0.03	0.00	99.20	0.07	0.09	0.44	2.26	98.75	0	
	IDEA	0.13	0.00	99.86	0.04	0.01	0.29	2.05	98.46	0	
	MTNL	0.21	0.63	97.48	0.57	1.50	1.53	1.63	64.73	0	
	RCOM	0.14	0.76	99.92	0.02	0.02	0.14	0.68	96.29	0	
	vodafone	0.26	1.70	99.61	0.20	0.15	0.59	2.60	98.92	0	
Gujarat	Airtel	0.13	0.37	99.40	0.03	0.05	0.17	1.85	99.50	0	
	BSNL	1.23	1.63	98.00	0.43	0.90	1.23	2.33	100.00	0	
	IDEA	0.06	0.10	99.72	0.16	0.06	0.40	2.21	98.75	0	
	Tata	0.03	0.00	99.03	0.07	0.28	0.46	2.05	99.72	0	
	Vodafone	0.04	0.05	99.81	0.08	0.02	0.16	1.05	99.02	0	
Haryana	Airtel	0.12	0.12	99.01	0.00	0.01	0.12	0.73	97.85	0	
	BSNL	0.70	1.63	99.00	0.83	0.60	0.57	1.33	96.77	0	
	IDEA	0.07	0.00	99.29	0.39	0.16	0.32	2.45	98.90	0	
	Tata	0.25	1.11	99.82	0.39	0.62	0.13	0.94	99.14	0	
	Vodafone	0.11	0.13	99.83	0.01	0.00	0.22	1.78	98.31	0	

**Annexure 4.2 (Contd.)**

Himachal Pradesh	Airtel	0.12	0.21	98.99	0.04	0.01	0.65	1.14	98.90	0
	BSNL	1.37	1.67	98.00	0.63	0.33	0.97	2.60	98.10	0
	IDEA	0.26	0.22	99.23	0.50	0.19	1.73	2.24	97.55	0
	RTL	0.08	0.59	96.69	0.13	0.13	0.13	0.67	98.56	0
Jammu & Kashmir	Aircel	0.79	2.91	97.40	0.35	0.08	1.89	16.12	97.95	1
	Airtel	0.19	0.21	99.34	0.02	0.00	0.61	1.06	99.07	0
	BSNL	1.53	0.63	97.33	0.73	1.23	0.70	2.10	96.53	0
	IDEA	0.19	0.38	99.38	0.39	0.22	1.41	1.76	97.18	0
	RCOM	0.46	1.46	98.06	0.45	0.19	0.14	0.78	99.79	0
Karnataka	Aircel	0.32	0.68	98.41	1.04	0.56	0.52	4.60	99.80	0
	Airtel	0.19	0.52	98.60	0.09	0.36	0.21	1.57	99.70	0
	BSNL	1.07	1.83	98.00	0.80	1.10	0.53	1.43	99.70	0
	Tata	0.12	0.24	98.41	0.75	1.15	0.32	1.43	99.09	0
	vodafone	0.41	1.51	99.81	0.05	0.04	0.15	0.68	99.75	0
Kerala	Aircel	0.22	0.34	98.10	0.72	1.03	0.82	2.37	97.11	0
	BSNL	0.43	0.23	95.67	0.10	0.37	0.97	0.07	99.90	0
	IDEA	0.09	0.09	99.62	0.33	0.14	0.28	1.27	97.50	0
	Tata	0.05	0.00	99.12	0.10	0.16	0.30	1.73	99.75	0
	vodafone	0.07	0.14	99.85	0.01	0.02	0.15	0.70	99.72	0
Kolkata	Aircel	0.20	0.66	98.61	0.56	0.28	0.29	2.87	98.16	0
	Airtel	0.00	0.00	99.52	0.00	0.00	0.30	2.33	99.16	0
	BSNL	1.97	4.77	96.00	0.73	1.13	1.13	2.40	99.80	0
	IDEA	0.13	0.34	99.86	0.02	0.07	0.23	0.59	99.83	0
	rtl	0.14	0.99	97.63	0.11	0.13	0.09	0.19	99.90	0
	vodafone	0.47	0.39	99.88	0.01	0.01	0.30	1.74	98.99	0
Madhya Pradesh	Airtel	0.24	0.78	99.83	0.01	0.02	0.37	1.73	99.55	0
	BSNL	1.77	1.50	96.67	0.77	0.52	0.40	1.97	96.38	0
	IDEA	0.07	0.07	99.63	0.11	0.15	0.50	1.52	99.16	0
	rtl	0.07	0.10	97.67	0.09	0.04	0.07	0.20	99.89	0
	Tata	0.04	0.00	98.61	0.25	0.61	0.30	1.54	99.83	0
Maharashtra	Airtel	0.07	0.00	99.42	0.07	0.25	0.54	1.78	99.02	0
	BSNL	1.83	1.53	96.00	0.73	1.67	1.33	2.27	96.70	0
	IDEA	0.11	0.10	99.66	0.25	0.09	0.35	1.95	98.59	0
	Tata	0.04	0.00	98.78	0.17	0.31	0.43	2.52	100.00	0
	vodafone	0.21	0.88	99.83	0.09	0.03	0.18	1.37	98.93	0
Mumbai	Airtel	0.06	0.00	98.89	0.06	0.08	0.38	1.84	99.50	0
	MTNL	0.80	1.37	96.63	0.70	0.37	1.60	2.70	98.90	0
	RCOM	0.16	1.18	99.87	0.06	0.04	0.09	0.43	98.60	0
	Vodafone	0.18	0.00	99.83	0.00	0.00	0.35	1.91	98.89	0

**Annexure 4.2 (Contd.)**

North East	Aircel	7.72	53.09	97.83	0.59	0.11	1.47	14.68	98.56	0
	Airtel	1.50	1.23	96.35	0.48	0.18	1.30	1.21	98.33	0
	BSNL	1.45	2.08	96.83	0.73	1.67	1.55	2.48	96.95	0
	RTL	0.35	0.45	99.21	0.08	0.11	0.01	0.09	99.86	0
	Vodafone	1.59	1.46	99.56	0.21	0.18	0.56	4.60	98.90	0
Orissa	Aircel	0.70	1.54	97.79	0.38	0.16	1.10	7.14	98.80	0
	Airtel	0.07	0.00	99.51	0.06	0.25	0.39	1.82	99.50	0
	BSNL	1.53	1.77	97.00	0.83	1.80	1.60	2.30	97.30	0
	RTL	0.28	1.08	98.35	0.05	0.01	0.13	0.64	99.90	0
Punjab	Aircel	0.31	1.65	99.53	0.29	0.18	0.33	3.91	99.01	0
	BSNL	0.50	1.50	99.00	0.60	0.20	0.37	0.67	97.80	0
	IDEA	0.11	0.24	99.72	0.06	0.03	0.30	2.09	99.43	0
	RCOM	0.56	1.39	99.74	0.07	0.07	0.04	0.31	99.89	0
	Tata	0.07	0.07	98.38	0.49	1.14	0.12	0.60	99.13	0
Rajasthan	Airtel	0.23	0.14	99.59	0.03	0.03	0.48	1.02	98.89	0
	BSNL	1.47	1.67	96.00	0.47	1.20	1.73	2.60	97.53	0
	RCOM	0.34	1.20	99.16	0.03	0.04	0.06	0.25	99.85	0
	Tata	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0
	vodafone	0.30	0.75	99.92	0.01	0.01	0.23	2.53	98.94	0
Tamil Nadu	Aircel	0.24	1.02	98.67	0.27	0.08	0.52	5.43	98.79	0
	BSNL	0.60	1.87	99.00	0.00	0.43	0.27	2.13	99.60	0
	Vodafone	0.06	0.06	99.82	0.05	0.04	0.24	1.54	99.07	0
	Airtel	0.09	0.32	99.84	0.04	0.04	0.20	1.00	99.83	0
UP-East	Aircel	0.32	1.25	97.81	0.14	0.01	0.50	5.03	99.75	0
	Airtel	0.50	1.86	99.82	0.30	0.18	0.44	2.11	98.35	0
	BSNL	1.33	1.73	96.33	0.90	1.10	1.47	0.93	96.50	0
	IDEA	0.33	1.55	99.63	0.60	0.17	0.52	2.25	98.72	0
	Vodafone	0.37	0.82	99.81	0.20	0.03	0.26	2.20	99.00	0
UP-West	Airtel	1.20	1.52	99.07	0.06	0.00	0.57	1.47	98.91	0
	BSNL	1.45	1.30	97.33	0.83	1.20	1.22	2.52	96.80	0
	IDEA	0.46	1.63	99.25	0.95	0.48	0.30	2.65	99.05	0
	Tata	0.37	1.45	98.70	0.45	0.92	0.19	1.39	99.13	0
	Vodafone	0.50	1.69	99.82	0.01	0.01	0.16	2.90	98.35	0
West Bengal	Aircel	0.74	5.23	99.00	0.22	0.25	0.34	3.60	98.24	0
	Airtel	0.14	0.27	99.55	0.02	0.05	0.54	1.57	99.07	0
	BSNL	0.23	0.40	96.00	0.67	1.52	1.07	8.35	95.52	0
	RTL	0.19	0.91	96.90	0.06	0.04	0.33	1.18	99.85	0
	Vodafone	0.06	0.08	99.70	0.05	0.05	0.26	2.47	98.75	0

### Annexure 4.3: Performance of QoS Parameters for Basic (Wire-line) Service

Quarterly Performance Monitoring Report (PMR) on QoS of Basic Telephone Service (Wireline) for QE June, 2016																			
Sl. No.	Name of Service Area	Name of Service Provider	Faults incidences ( No. of faults/100 Subs./month)	Fault Repair				Rent Rebate	Mean Time to Repair (MTTR)	POI	Metering and Billing				Response time to the customer for Assistance		Termination / closure of service		
				% of faults repaired by next working day	% of faults repaired within 5 days	% of faults repaired by next working day	% of faults repaired within 7 days				Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark	Metering and Billing creditibility - post paid	Metering and billing creditibility - pre paid	Resolution of billing/ charging/v alidity complaints	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/ customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures
1	A&N	BSNL	4.00	98.00%	100.00%	95	100%	48	7.00	0.00	0.10%	0.00	98.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
2	AP	Reliance	0.11	100.00%	100.00%	NA	NA	0	4.7	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
3		TTSL	6.53	96.93%	100.00%	NA	NA	19.00	4.36	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.86%	<b>89.59%</b>	100.00%	100.00%
4		Vodafone	0.40	100.00%	100.00%	NA	NA	NA	0.04	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
5		Bharti	2.42	88.14%	100.00%	NA	NA	0	8.40	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	<b>61.00%</b>	100.00%	100.00%
6		BSNL	5.00	100.00%	100.00%	91	100%	232	6.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	97.72%	97.00%	100.00%	100.00%
7	ASM	Vodafone	2.28	100.00%	100.00%	NA	NA	NA	0.07	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
8		BSNL	4.00	96.00%	100.00%	95	100%	126	3.00	0.00	0.04%	0.00	100.00%	100.00%	100.00%	99.26%	99.00%	100.00%	100.00%
9	BH	Reliance	0.00%	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
10		TTSL	1.86	97.18%	100.00%	NA	NA	1	2.61	0.00%	0.00%	0.00%	NA	NA	NA	96.58%	95.56%	100.00%	NA
11		Vodafone	2.73	100.00%	100.00%	NA	NA	NA	0.12	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
12		BSNL	4.00	95.00%	100.00%	95	100%	0	5.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	98.72%	99.00%	100.00%	100.00%
13	Chattisgarh	BSNL	3.00	98.00%	100.00%	97	100%	921	6.00	0.00	0.01%	0.01	99.00%	100.00%	100.00%	97.97%	98.00%	100.00%	100.00%
14	CN	Reliance	0.02%	100.00%	100.00%	NA	NA	0	4.4	0.00	0.01%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
15		Vodafone	0.61	100.00%	100.00%	NA	NA	NA	0.05	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
16		BSNL	5.00	95.00%	100.00%	95	100%	787	6.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	99.07%	99.04%	100.00%	100.00%
17	DEL	Reliance	0.03%	100.00%	100.00%	NA	NA	0	5.0	0.00	0.01%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
18		TTSL	1.12	97.06%	100.00%	NA	NA	1	3.97	0.00%	0.00%	0.00%	NA	NA	NA	96.95%	<b>86.76%</b>	100.00%	NA
19		Vodafone	0.67	100.00%	100.00%	NA	NA	NA	0.06	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
20		Bharti	4.58	88.90%	100.00%	NA	NA	2219	5.47	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	<b>63.00%</b>	100.00%	100.00%
21		MTNL	6.25	85.18%	<b>99.41%</b>	NA	NA	14298	5.14	0.00	0.01%	0.00%	99.71%	100.00%	100.00%	99.75%	99.83%	100.00%	100.00%
22	GUJ	Reliance	0.48%	100.00%	100.00%	NA	NA	0	4.7	0.00	0.02%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
23		TTSL	1.42	97.33%	100.00%	NA	NA	NA	3.85	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.35%	<b>92.04%</b>	100.00%	100.00%
24		Vodafone	0.31	100.00%	100.00%	NA	NA	NA	0.05	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
25		Bharti	2.50	95.92%	100.00%	NA	NA	26	4.69	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	<b>60.00%</b>	100.00%	100.00%
26	HP	BSNL	5.00	96.00%	100.00%	93	100%	571	5.00	0.00	0.03%	0.00	100.00%	100.00%	100.00%	97.81%	98.00%	100.00%	100.00%
27		Reliance	0.00%	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
28	BSNL	6.00	90.00%	100.00%	94	100%	349	7.00	0.00	0.03%	0.00	98.27%	100.00%	100.00%	96.46%	100.00%	100.00%	100.00%	

### Annexure 4.3 (Contd.)

29	HR	Vodafone	5.56	100.00%	100.00%	NA	NA	NA	0.03	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
30		Reliance	0.00%	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
31		TTSL	0.20	100.00%	100.00%	NA	NA	NA	2.82	0.00%	0.00%	0.00%	NA	NA	NA	98.38%	<b>93.21%</b>	100.00%	NA
32		Bharti	6.75	93.57%	100.00%	NA	NA	1	5.19	0.00	0.06%	NA	100.00%	100.00%	100.00%	100.00%	<b>94.00%</b>	100.00%	100.00%
33		BSNL	5.00	94.00%	100.00%	95	100%	536	6.00	0.00	0.08%	0.00	100.00%	100.00%	100.00%	96.50%	100.00%	100.00%	100.00%
34	J&K	BSNL	5.00	85.00%	100.00%	89	100%	40	6.00	0.00	0.04%	0.00	98.00%	100.00%	100.00%	96.42%	100.00%	100.00%	100.00%
35	JHAR	BSNL	2.00	97.00%	100.00%	81	100%	280	6.00	0.00	0.01%	0.00	98.00%	100.00%	100.00%	99.37%	99.00%	100.00%	100.00%
36	KER	Vodafone	0.33	100.00%	100.00%	NA	NA	NA	0.03	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
37		Reliance	0.08%	100.00%	100.00%	NA	NA	0	4.9	0.00	0.01%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
38		TTSL	0.48	93.33%	100.00%	NA	NA	NA	4.49	0.00%	0.00%	0.00%	NA	NA	NA	98.12%	95.14%	<b>92.86%</b>	NA
39		Bharti	5.13	90.19%	100.00%	NA	NA	820	8	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
40		BSNL	5.00	91.00%	100.00%	91	100%	884	8.00	0.00	0.03%	0.00	99.82%	100.00%	100.00%	96.06%	96.00%	100.00%	100.00%
41	KOL	Vodafone	0.64	100.00%	100.00%	NA	NA	NA	0.08	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
42		Reliance	0.09%	100.00%	100.00%	NA	NA	0	4.5	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
43		Bharti	5.20	87.69%	100.00%	NA	NA	133	8.42	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	<b>92.00%</b>	100.00%	100.00%
44		BSNL	6.00	90.00%	100.00%	NA	NA	363	8.00	0.00	0.00%	0.00	98.56%	100.00%	100.00%	99.47%	99.00%	100.00%	100.00%
45	KTK	Vodafone	0.54	100.00%	100.00%	NA	NA	NA	0.07	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
46		Reliance	0.02%	100.00%	100.00%	NA	NA	0	4.4	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
47		TTSL	0.45	99.40%	100.00%	NA	NA	NA	2.89	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.79%	<b>89.46%</b>	100.00%	NA
48		Bharti	2.99	86.29%	100.00%	NA	NA	1399	6.53	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	<b>67.00%</b>	100.00%	100.00%
49		BSNL	4.00	96.00%	100.00%	94	100%	2595	6.00	0.00	0.10%	0.00	100.00%	100.00%	100.00%	97.21%	97.00%	100.00%	100.00%
50	MH	Bharti	1.64	92.39%	100.00%	NA	NA	54	6.36	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	<b>62.00%</b>	100.00%	100.00%
51		BSNL	5.00	92.00%	100.00%	88	100%	604	6.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	97.23%	97.11%	100.00%	100.00%
52		Reliance	0.00	100.00%	100.00%	NA	NA	0	4.8	0.00	0.01%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
53		Vodafone	0.34	100.00%	100.00%	NA	NA	NA	0.12	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
54	TTSL	1.10	97.05%	100.00%	NA	NA	11	4.77	0.00%	0.00%	0.00%	<b>85.29%</b>	100.00%	100.00%	95.64%	<b>91.40%</b>	100.00%	100.00%	
55	MP	Vodafone	1.11	100.00%	100.00%	NA	NA	NA	0.03	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
56		Reliance	0.16	100.00%	100.00%	NA	NA	0	4.8	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
57		TTSL	2.13	100.00%	100.00%	NA	NA	NA	2.38	0.00%	0.00%	0.00%	NA	NA	NA	97.78%	<b>92.39%</b>	100.00%	NA
58		Bharti	6.58	92.23%	100.00%	NA	NA	1037	4.21	0.00	0.06%	NA	100.00%	100.00%	100.00%	100.00%	<b>59.00%</b>	100.00%	100.00%
59	BSNL	4.00	90.00%	100.00%	83	100%	433	3.00	0.00	0.10%	0.00	98.00%	100.00%	100.00%	97.28%	97.00%	100.00%	100.00%	
60	MUM	Vodafone	0.43	100.00%	100.00%	NA	NA	NA	0.07	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
61		Bharti	1.07	91.41%	100.00%	NA	NA	230	6.08	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	<b>59.00%</b>	100.00%	100.00%
62		MTNL	4.11	94.56%	<b>99.90%</b>	NA	NA	13225	6.01	0.00	0.02%	NA	99.43%	100.00%	NA	96.74%	96.08%	<b>99.99%</b>	100.00%
63		Reliance	0.03	100.00%	100.00%	NA	NA	0	4.3	0.00	0.01%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
64	TTSL	2.39	94.57%	100.00%	NA	NA	45	6.27	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.31%	<b>89.61%</b>	100.00%	100.00%	
65	NE	Vodafone	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
66	NE-I	BSNL	4.00	92.00%	100.00%	93	100%	45	7.00	0.00	0.05%	0.00	98.00%	100.00%	100.00%	99.37%	98.67%	100.00%	100.00%
67	NE-II	BSNL	3.00	89.00%	100.00%	100	100%	35	3.00	0.00	0.01%	0.10	100.00%	100.00%	100.00%	99.29%	99.00%	100.00%	100.00%

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68	OR	Reliance	0.00	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
69		TTSL	1.32	97.06%	100.00%	NA	NA	NA	2.95	0.00%	0.00%	0.00%	NA	NA	NA	95.91%	100.00%	NA	NA
70		BSNL	6.00	91.00%	100.00%	92	100%	777	5.00	0.00	0.09%	0.00	99.00%	100.00%	100.00%	99.00%	99.00%	100.00%	100.00%
71		Vodafone	2.46	100.00%	100.00%	NA	NA	NA	2.33	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
72	PB	Vodafone	0.83	100.00%	100.00%	NA	NA	NA	0.07	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
73		Reliance	0.03	100.00%	100.00%	NA	NA	0	5.1	0.00	0.02%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
74		TTSL	1.74	95.73%	100.00%	NA	NA	NA	4.14	0.00%	0.00%	0.00%	NA	NA	NA	98.47%	90.82%	100.00%	NA
75		Bharti	5.52	87.21%	100.00%	NA	NA	15	5.7	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	93.00%	100.00%	100.00%
76		Quadrant	3.20	85.40%	100.00%	100.00%	100%	0	10	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.00%	95.00%	100.00%	100.00%
77		BSNL	5.00	92.00%	100.00%	93	100%	917	6.00	0.00	0.05%	0.00	98.00%	100.00%	100.00%	96.36%	100.00%	100.00%	100.00%
78	RAJ	Reliance	0.04	100.00%	100.00%	NA	NA	0	5.5	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
79		TTSL	0.57	100.00%	100.00%	NA	NA	NA	3.21	0.00%	0.00%	0.00%	NA	NA	NA	96.80%	88.61%	100.00%	NA
80		Vodafone	0.78	100.00%	100.00%	NA	NA	NA	0.29	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
81		Bharti	4.82	89.51%	100.00%	NA	NA	13	4.46	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	93.00%	100.00%	100.00%
82		Sistema	2.45	94.08%	100.00%	96.84%	100%	0	7.32	0.00	0.06%	0.00%	100.00%	100.00%	100.00%	98.40%	96.50%	100.00%	100.00%
83		BSNL	6.00	93.00%	100.00%	96	100%	291	6.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	96.95%	100.00%	100.00%	100.00%
84	TN	Reliance	0.11	100.00%	100.00%	NA	NA	0	4.7	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
85		TTSL	1.08	98.14%	100.00%	NA	NA	1	2.89	0.00%	0.10%	0.00%	NA	NA	NA	98.67%	92.55%	100.00%	NA
86		Vodafone	2.98	100.00%	100.00%	NA	NA	NA	0.06	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
87		Bharti	6.31	95.62%	100.00%	NA	NA	925	7.29	0.00	0.06%	NA	100.00%	100.00%	100.00%	100.00%	85.00%	100.00%	100.00%
88		BSNL	4.00	92.00%	100.00%	92	100%	1774	8.00	0.00	0.07%	0.00	100.00%	100.00%	100.00%	98.49%	98.44%	100.00%	100.00%
89	UPE	Reliance	0.50	100.00%	100.00%	NA	NA	0	5.5	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
90		TTSL	1.45	100.00%	100.00%	NA	NA	NA	1.74	0.00%	0.00%	0.00%	NA	NA	NA	NA	NA	NA	NA
91		Vodafone	0.72	100.00%	100.00%	NA	NA	NA	0.05	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
92		Bharti	6.61	90.07%	100.00%	NA	NA	0	4.87	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	93.00%	100.00%	100.00%
93		BSNL	4.00	95.00%	100.00%	94	100%	857	5.00	0.00	0.09%	0.00	100.00%	100.00%	100.00%	96.82%	100.00%	100.00%	100.00%
94	UPW	Reliance	0.00	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
95		TTSL	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	NA	NA	NA	99.55%	100.00%	NA	NA
96		Vodafone	3.13	100.00	100.00%	NA	NA	NA	0.05	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
97		Bharti	6.64	93.49%	100.00%	NA	NA	0	4.02	0.00	0.04%	NA	100.00%	100.00%	100.00%	100.00%	93.00%	100.00%	100.00%
98		BSNL	5.00	95.00%	100.00%	95	100%	745	5.00	0.00	0.05%	0.00	100.00%	100.00%	100.00%	95.78%	100.00%	100.00%	100.00%
99	Uttaranchal	BSNL	5.00	92.00%	100.00%	95	100%	166	5.00	0.00	0.00%	0.00	98.00%	100.00%	100.00%	97.64%	100.00%	100.00%	100.00%
100	West Bengal	Reliance	0.00	NA	NA	NA	NA	0	0.0	0.00	0.00%	NA	100%	100%	NA	96.80%	98.70%	100.00%	100.00%
101		BSNL	5.00	90.00%	100.00%	93	100%	734	5.00	0.00	0.10%	0.00	100.00%	100.00%	100.00%	98.87%	98.67%	100.00%	100.00%
102		TTSL	1.16	99.51%	100.00%	NA	NA	1	2.14	0.00	0.00%	0	100.00%	100.00%	100.00%	98.94%	93.36%	100.00%	100.00%
103		Vodafone	2.22	100.00%	100.00%	NA	NA	NA	0.03	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA

## Annexure 4.4: Quality of Service Performance of Broadband Service Providers

Performance Monitoring Report on Quality of Service of Service Providers providing broadband service (wireline) for Quarter Ending June, 2016

Sl. No.	Service Provider	Service area	Service Provisioning	Faults Repair		Billing Performance				Response Time to the Customer for assistance		Bandwidth utilisation/throughput				Service availability /uptime (for all users) in %age	Packet Loss	Network latency (for wired broadband access)		
			% age of connections provided within 15 days 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) 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) (Hence <90%)	Broadband Connection Speed (download) from ISP node to user	Packet loss (for wired broadband access) in %age	User reference point at POP/ISP Gateway node to International (IS/NI)	User reference point at ISP Gateway node to nearest NAP port abroad (terrestrial)	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)	
			100%	>90%	=>99%	in nos.	<2%	100% within 4 weeks	100% within 60 days	>60%	>80%	0	0	<90%	>80%	>98%	<1%	<120 ms	<350 ms	<800 ms
1	BSNL	All India	100.00%	96.86%	99.67%	74066	0.07%	100.00%	100.00%	97.70%	98.48%	0	0	65.90%	90.38%	99.65%	0.10%	25	185	NA
2	Bharti Airtel	Andhra Pradesh	100.00%	90.96%	100.00%	0	0.01%	100.00%	100.00%	51.00%	57.00%	0	0	51.33%	100.00%	99.99%	0.00%	40	48	NA
		Delhi	100.00%	90.47%	99.28%	666	0.01%	100.00%	100.00%	58.00%	65.00%	0	0	78.27%	100.00%	99.98%	0.00%	36	82	NA
		Gujarat	100.00%	97.92%	99.91%	6	0.01%	100.00%	100.00%	43.00%	50.00%	0	0	NA	100.00%	99.99%	0.32%	42	62	NA
		Haryana	100.00%	90.30%	99.52%	14	0.02%	100.00%	100.00%	85.00%	91.00%	0	NA	NA	100.00%	99.98%	0.09%	39	82	NA
		Karnataka	100.00%	90.51%	99.72%	300	0.03%	100.00%	100.00%	53.00%	60.00%	0	0	77.08%	100.00%	99.98%	0.00%	30	43	NA
		Kerala	100.00%	91.75%	99.83%	110	0.02%	100.00%	100.00%	93.00%	95.00%	0	NA	NA	100.00%	99.98%	0.00%	36	36	NA
		Kolkata	100.00%	92.91%	99.84%	96	0.00%	100.00%	100.00%	85.00%	90.00%	0	0	58.33%	100.00%	100.00%	0.00%	58	75	NA
		Madhya Pradesh	100.00%	91.97%	99.27%	211	0.01%	100.00%	100.00%	48.00%	59.00%	0	0	68.65%	100.00%	99.96%	0.00%	71	77	NA
		Maharashtra	100.00%	93.54%	99.20%	45	0.02%	100.00%	100.00%	52.00%	58.00%	0	0	NA	100.00%	99.93%	0.12%	34	62	NA
		Mumbai	100.00%	94.25%	99.33%	67	0.01%	100.00%	100.00%	51.00%	57.00%	0	0	75.61%	100.00%	99.98%	0.23%	40	62	NA
		Punjab	100.00%	93.29%	99.30%	76	0.01%	100.00%	100.00%	83.00%	88.00%	0	0	71.62%	100.00%	99.98%	0.09%	38	89	NA
		Rajasthan	100.00%	90.73%	99.97%	1	0.00%	100.00%	100.00%	80.00%	86.00%	0	NA	NA	100.00%	99.97%	0.09%	36	82	NA
		Tamilnadu	100.00%	93.70%	99.97%	750	0.02%	100.00%	100.00%	68.00%	74.00%	0	0	78.44%	98.08%	99.99%	0.00%	27	36	NA
Uttar Pradesh - East	100.00%	92.36%	99.51%	37	0.01%	100.00%	100.00%	83.00%	89.00%	0	0	89.01%	100.00%	99.93%	0.09%	38	92	NA		
Uttar Pradesh - West	100.00%	91.95%	99.13%	26	0.01%	100.00%	100.00%	84.00%	89.00%	0	0	NA	100.00%	99.98%	0.09%	33	82	NA		
3	MTNL	Delhi & Mumbai	99.84%	86.92%	96.72%	17424	0.070%	100.00%	100.00%	97.37%	98.20%	Nil	0	79.02%	90.00%	99.89%	0.56%	42	281	NA
4	Alliance Broadband	West Bengal	100.00%	91.00%	99.14%	0	1.21%	100.00%	0.00	73.00%	89.00%	0	0	72.00%	98.00%	100.00%	0.40%	30	130	268
		Kolkata	100.00%	92.00%	99.70%	0	0.90%	100.00%	0.00	75.00%	92.00%	0	0	72.00%	98.00%	100.00%	0.20%	20	12	250
5	Asianet Satellite	Kerala	100.00%	90.13%	99.21%	Nil	1.85%	100.00%	100.00%	60.45%	80.45%	Nil	0	64.01%	90.00%	99.57%	1.00%	50	270	NA
6	Atria Convergence	All India	98.61%	86.19%	98.20%	22536	0.58%	100.00%	Nil	57.00%	64.00%	0	0	88.45%	90.00%	99.63%	1.00%	50	300	NA
7	Broadband Pacenet India	All India	100.00%	90.40%	99.10%	120	1.00%	100.00%	Nil	82.00%	90.00%	0	0	67.63%	84.00%	99.10%	0.45%	75	260	0
8	Citycom Networks	All India	100.00%	90.40%	99.20%	1596	0.10%	100.00%	100.00%	85.40%	89.90%	0	0	37.00%	89.84%	98.90%	1.00%	2	163	NA
9	DEN Networks Ltd.	All India	100.00%	90.39%	99.00%	Nil	NA	NA	NA	72.79%	80.42%	Nil	Nil	85.87%	95.00%	99.25%	0.75%	33	268	NA
10	D-VoiS Broadband	All India	100.00%	98.00%	100.00%	-	1.00%	100.00%	-	97.63%	98.29%	0	Nil	Nil	90.00%	100.00%	0.10%	120	350	800
11	Excitel Broadband Private Limited	Delhi	100.00%	94.94%	99.15%	567	NA	NA	NA	77.24%	93.40%	Nil	Nil	78.80%	98.50%	98.84%	0.00%	5	198.3	NA
12	Five Networks	All India	100.00%	99.50%	100.00%	NA	0.00%	100.00%	100.00%	NA	NA	NA	0	NA	90.00%	99.00%	1.00%	NA	NA	NA
13	GBPS Networks Pvt. Ltd.	Pune, Maharashtra	100.00%	92.30%	99.52%	Nil	0.00%	100.00%	Nil	62.53%	83.30%	0	0	80.00%	80.00%	99.82%	1.00%	4	255	600
14	Geocity Network	Delhi	100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	72.00%	96.00%	0	0	90.00%	87.00%	99.30%	0.50%	60	300	400
15	GTPL Broadband Pvt.Ltd.	Gujarat	100.00%	95.00%	99.00%	677	0.08%	100.00%	NA	94.00%	99.00%	NA	0	88.58%	91.00%	99.23%	0.00%	11	300	NA



**Annexure 4.4 (Contd.)**

16	Hathway Cable & Dacom Ltd.	Andhra Pradesh	100.00%	96.00%	99.00%	186	1.78%	100.00%	100.00%	72.00%	85.00%	0	0	78.00%	90.00%	99.42%	1.00%	78	300	NA
		Delhi	100.00%	98.00%	99.00%	33	0.44%	100.00%	100.00%	76.00%	86.00%	0	0	78.00%	85.00%	99.58%	1.00%	115	325	NA
		Gujarat	100.00%	92.00%	99.00%	0	NA	NA	NA	87.00%	97.00%	0	0	77.00%	90.00%	99.00%	1.00%	79	265	NA
		Karnataka	100.00%	93.00%	99.04%	5	1.93%	100.00%	100.00%	90.00%	93.00%	0	0	77.00%	90.00%	100.00%	1.00%	82	275	NA
		Maharashtra & Goa	100.00%	95.00%	99.00%	2996	1.92%	100.00%	100.00%	93.00%	95.00%	0	0	77.00%	90.00%	99.00%	1.00%	76	258	NA
		Madhya Pradesh	100.00%	91.00%	99.00%	0	NA	NA	NA	90.00%	98.00%	0	0	34.00%	100.00%	98.44%	1.00%	100	295	NA
		Punjab	100.00%	96.00%	99.00%	0	0.00%	100.00%	100.00%	89.00%	99.00%	0	0	86.00%	85.00%	99.80%	1.00%	115	325	NA
		Uttar Pradesh - West	100.00%	98.00%	99.00%	0	0.00%	100.00%	100.00%	76.00%	86.00%	0	0	87.00%	85.00%	99.56%	1.00%	115	310	NA
		Kolkata	100.00%	100.00%	100.00%	0	NA	NA	NA	100.00%	100.00%	0	0	76.00%	100.00%	99.73%	1.00%	4	238	NA
17	Home Systems	Mumbai	100.00%	95.00%	99.99%	NA	0.00%	100.00%	NA	70.00%	89.00%	0	0	75.00%	95.00%	99.00%	0.01%	50	295	NA
18	Honesty Net Solutions (I) Pvt. Ltd.	Mumbai	100.00%	94.00%	100.00%	0	Nil	100.00%	Nil	68.00%	100.00%	0	NA	NA	95.00%	98.00%	1.00%	7	66	NA
19	Limras Eronet	Chennai	100.00%	99.00%	100.00%	0	1.00%	100.00%	0.00	90.00%	100.00%	0	0	70.00%	90.00%	99.00%	1.00%	44	235	0
20	Planet E-Shop Holdings India Ltd. (formerly IndusInd Media)	All India	100.00%	97.00%	99.00%	23	0.00%	100.00%	100.00%	100.00%	100.00%	0	0	54.70	80.00%	98.00%	1.00%	45	260	NA
21	Meghela Cable & Broadband Services	Kolkata	100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	93.00%	100.00%	0	0	0.00%	100.00%	99.90%	1.00%	60	150	0
		West Bengal	100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	94.00%	100.00%	0	0	0.00%	100.00%	99.90%	0.00%	60	150	0
22	Nextra Teleservices Pvt.	Delhi	99.00%	92.00%	99.20%	2638	1.80%	100.00%	100.00%	91.00%	95.00%	0	0	88.00%	100.00%	100.00%	1.00%	120	350	NA
23	North East Dataa Network Pvt. Ltd.	Karnataka	100.00%	99.20%	99.99%	0	0.00%	100.00%	100.00%	99.50%	99.50%	0	0	70.00%	90.00%	99.00%	1.00%	100	300	NA
24	Ortel Communications	All India	100.00%	92.78%	99.64%	NA	NA	NA	NA	100.00%	100.00%	0	0	62.59%	91.80%	99.82%	0.00%	86	243	NA
25	Quadrant Televentures	Punjab	100.00%	97.28%	99.88%	0	0.01%	100.00%	100.00%	82.67%	87.00%	Nil	Nil	74.00%	100.00%	99.87%	0.00%	80	280	NA
26	RailTel Corporation	All India (Pan India)	100.00%	97.70%	100.00%	Nil	0.00%	100.00%	NA	87.94%	97.61%	0	0	50.00%	100.00%	99.63%	1.00%	120	350	NA
27	Rajesh Multichannel	Mumbai	100.00%	97.00%	100.00%	0	0.00%	100.00%	100.00%	95.00%	96.00%	0	0	87.00%	86.00%	99.00%	0.00%	46	250	500
28	Reliance Com. (RCL)	All India	100.00%	100.00%	100.00%	Nil	0.16%	100.00%	100.00%	94.00%	95.00%	0	Nil	50.85%	91.00%	99.00%	0.32%	3	22	0
29	RK Infratel Ltd.	Gujarat	100.00%	91.28%	99.27%	0	0.00%	100.00%	NA	100.00%	100.00%	0	0	87.45%	85.00%	99.83%	0.00%	120	350	NA
30	Siti Broadband	All India	100.00%	90.95%	99.80%	271	0.00%	100.00%	100.00%	76.00%	94.00%	0	0	71.34%	99.00%	99.56%	0.00%	62	279	NA
31	Southern (SOBTL)	Andhra Pradesh	100.00%	99.00%	100.00%	0	0.00%	100.00%	100.00%	94.00%	100.00%	0	0	79.00%	95.00%	99.30%	0.05%	100	300	500
32	Syscon Infoway Pvt. Ltd.	Maharashtra	100.00%	97.00%	100.00%	Nil	0.00%	100.00%	NA	76.00%	87.67%	0	0	56.93%	99.00%	100.00%	1.00%	1	47	80
		Mumbai	100.00%	96.33%	100.00%	Nil	0.00%	100.00%	Nil	82.33%	88.00%	0	0	54.00%	99.00%	100.00%	0.00%	1	47	80
33	Tata (TTML)	Maharashtra & Goa	100.00%	95.61%	99.80%	69	0.00%	84.38%	100.00%	84.43%	89.24%	0	0	75.89%	91.94%	98.33%	0.00%	51	183	Nil
34	Tata (TTSL)	All India (Pan India)	100.00%	95.39%	99.79%	48	0.18%	91.09%	100.00%	83.16%	88.02%	0	0	75.00%	90.29%	99.86%	0.00%	63	55	Nil
35	Vasai Cable	Mumbai	100.00%	95.32%	100.00%	Nil	0.11%	100.00%	Nil	97.28%	97.97%	Nil	0	63.00%	100.00%	100.00%	1.00%	4	255	NA
36	Wish Net Pvt. Ltd.	West Bengal	100.00%	98.73%	100.00%	0	0.03%	100.00%	NA	81.33%	97.67%	0	0	73.82%	100.00%	99.88%	1.00%	20	NA	NA
		Kolkata	100.00%	98.89%	100.00%	0	0.01%	100.00%	NA	81.67%	97.67%	0	0	73.67%	100.00%	99.88%	1.00%	40	NA	NA
37	Yashash Cable Network	Karnataka	45.33%	46.50%	30.42%	24	0.00%	0.00%	100.00%	NR	NR	0	0	0.00%	80.00%	98.00%	1.00%	30	280	0
38	You Broadband	All India	99.67%	92.03%	99.67%	7059	0.00%	100.00%	100.00%	91.97%	95.83%	NA	0	75.92%	87.49%	99.39%	0.00%	9	278	NA
			DNF= Data not as per Format				NR= Data not reported by the Service Provider						NA = Not Applicable			C/DNF= Complied the parameter but Data is not in the required format				

**Annexure 5.1: List of Broadcasters and their Pay TV Channels as reported to TRAI**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
1	M/s 9X Media Private Limited	1	9XM	SD
		2	9XO	SD
2	M/s AETN 18 Media Pvt Limited	3	The History Channel	HD
3	M/s Asianet Communications Limited	4	Asianet	SD
		5	Asianet Plus	SD
		6	Asianet Movies	SD
		7	Suvarna Plus	SD
		8	Asianet HD	HD
		9	Suvarna	SD
		4	M/s B4U Television Network India Limited	10
5	M/s Bangla Entertainment Private Limited	11	AATH	SD
6	M/s BBC Global News India Private Limited	12	BBC World News	SD
7	M/s Bennett, Coleman & Company Limited	13	Zoom	SD
		14	Romedy Now	SD
		15	MN +(Earlier name "Movies Now +")	HD
		16	Magicbricks Now	SD
		17	ET NOW	SD
		18	Times Now	SD
		19	Romedy Now HD	HD
		20	Movies Now HD	HD
		21	Movies Now 2 HD	HD
		22	Movies Now 2	SD
		8	M/s Business Broadcast News Private Limited	23
9	M/s Celebrities Management Pvt Limited	24	Travel XP HD (Earlier name "Travel XP")	HD
10	M/s Greycells18 Media Limited	25	Topper TV (#)	SD
11	M/s Discovery Communications India	26	Animal Planet	SD
		27	Discovery Channel	SD
		28	Discovery Channel – Tamil	SD
		29	Discovery Kids Channel	SD
		30	Discovery Science	SD
		31	Discovery Turbo	SD
		32	ID Investigation Discovery	SD
		33	Discovery HD World (earlier name "Discovery HD")	HD
		34	Animal Planet HD World (earlier name "Discovery Home and Health")	HD

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
		35	TLC HD world (earlier name "Military Channel")	HD
		36	TLC	SD
12	M/s Da Vinci Media India Private Limited	37	Da Vinci Learning	HD
13	E-24 Glamour Limited	38	E 24	SD
14	M/s Eenadu Televisoin Private Limited	39	ETV Telugu	SD
		40	ETV Andhra Pradesh (earlier name "ETV-2")	SD
		41	ETV - Telangana (earlier name "ETV-3")	SD
		42	ETV Cinema	SD
		43	ETV Life	SD
		44	ETV Plus	SD
		45	ETV Abhiruchi	SD
		46	ETV HD	HD
15	M/s EPIC Television Networks Pvt Limited	47	EPIC TV (HD Distribution)	HD
16	M/s Genx Entertainment Limited	48	UTV Bindass	SD
		49	UTV Action	SD
17	M/s IBN Lokmat News Private Ltd	50	IBN Lokmat	SD
18	M/s Mavis Satcom Limited	51	J Movies	SD
		52	Jaya Max	SD
		53	Jaya Plus	SD
		54	Jaya TV	SD
19	M/s ABP News Network Pvt Limited	55	ABP Ananda	SD
		56	ABP Majha	SD
20	M/s Sony Pictures Networks Distribution India Private Limited	57	Animax	SD
		58	AXN	SD
		59	SET MAX	SD
		60	MIX	SD
		61	SAB	SD
		62	SONY ENTERTAINMENT CHANNEL (SET)	SD
		63	PIX	SD
		64	SIX	SD
		65	MAX 2 (Earlier name "MAX HD")	SD
		66	PAL (Earlier Name "SAB HD")	SD
		67	SET HD	HD
		68	SIX HD	HD
		69	PIX HD	HD
		70	MAX HD	HD
		71	SONY ESPN HD	HD

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
21	M/s NDTV Life style Limited	72	NDTV Good Times	SD
22	M/s Neo Sports Broadcast Pvt Limited	73	NEO Prime (Earlier name "Neo Cricket")	SD
		74	Neo Sports	SD
23	M/s New Delhi Television Limited	75	NDTV 24*7	SD
		76	Granada TV (HD)	HD
		77	Trace Sports HD	HD
		78	NDTV Profit	SD
24	M/s NGC Network (India) Pvt Limited	79	Fox Life	SD
		80	National Geographic Channel (NGC)	SD
		81	Fox Life HD	HD
		82	Nat Geo Wild	SD
		83	National Geographic HD	HD
		84	Nat Geo Music HD	HD
		85	Nat Geo Wild HD	HD
		86	Nat Geo People HD	HD
25	M/s Odisha Television Limited	87	Baby TV HD	HD
		88	Prarthana	SD
		89	Tarang	SD
		90	Tarang Music	SD
26	M/s Panorama Television Private Limited	91	Alankar	SD
		92	ETV Bihar Jharkhand	SD
		93	ETV MP Chattisgarh	SD
		94	ETV Rajasthan	SD
		95	ETV Uttar Pradesh Uttarachal	SD
		96	ETV Urdu	SD
		97	ETV News Kannada	SD
		98	ETV News Bangla	SD
		99	ETV Haryana / Himachal Pradesh	SD
		100	ETV News Gujarati	SD
		101	ETV News Odia	SD
27	M/s Paul Entertainments Pvt Limited	102	9X Tashan (Earlier name "Purvaiya")	SD
28	M/s Prism Television Private Limited	103	Colors Bangla (Earlier name "ETV Bangla")	SD
		104	Colors Gujarati ( Earlier name "ETV Gujarati")	SD
		105	Colors Kannada (Earlier name "ETV Kannada")	SD
		106	Colors Marathi (Earlier name "ETV Marathi")	SD

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
		107	Colors Oriya (Earlier name "ETV Oriya")	SD
29	M/s Raj Television Network Limited	108	Raj Musix Kannada	SD
		109	Raj Digital Plus	SD
		110	Raj Musix	SD
		111	Raj News	SD
		112	Raj TV	SD
		113	Vissa TV	SD
30	M/s Sahara India Commercial Corporation Ltd	114	Sahara Filmy	SD
		115	Sahara One	SD
31	M/s Sarthak Entertainment Pvt Limited	116	Sarthak TV	SD
32	M/s Silverstar Communications Limited	117	Mega 24	SD
		118	Mega Musiq	SD
		119	Mega TV	SD
33	M/s Star India Private Limited	120	Channel (V)	SD
		121	Star Sports 4	SD
		122	FX	SD
		123	Life Ok (earlier name "Star One")	SD
		124	Movies OK (earlier name "Gold Action")	SD
		125	Star Sports 3	SD
		126	Star Gold	SD
		127	Star Jalsha	SD
		128	Star Movies	SD
		129	Star Movies Action	SD
		130	Star Plus	SD
		131	Star Pravah	SD
		132	Star Sports 1	SD
		133	Star Sports 2	SD
		134	Star World	SD
		135	Jalsha Movies (Earlier name "Star Bengali")	SD
		136	Star Sports HD 2	HD
		137	Star Sports HD 1	HD
		138	Life Ok HD	HD
		139	Star Gold HD	HD
140	Star Movies HD	HD		
141	Star Plus HD	HD		
142	Star World Prmiere HD	HD		
143	Star Sports HD 3	HD		
144	Star Sports HD 4	HD		
145	Star Movies Select HD	HD		
146	Star World HD	HD		

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
		147	FX HD	HD
		148	MAA Gold	SD
		149	MAA Movies	SD
		150	MAA Music	SD
		151	MAA TV	SD
		152	Star Pravah HD	HD
		153	Star Jalsha HD	HD
		154	Jalsha Movies HD	HD
34	M/s SUN TV Network Limited	155	Adithya TV	SD
		156	Chintu TV	SD
		157	Chutti TV	SD
		158	Gemini Comedy	SD
		159	Gemini Life	SD
		160	Gemini Movies	SD
		161	Gemini Music	SD
		162	Gemini News	SD
		163	Gemini TV	SD
		164	KTV	SD
		165	Kiran TV	SD
		166	Kushi TV	SD
		167	SUN Life	SD
		168	Sun Music	SD
		169	Sun News	SD
		170	Surya Music (Earlier name "Sun News English")	SD
		171	SUN TV	SD
		172	SUN TV RI	SD
		173	Surya TV	SD
		174	Udaya Comedy	SD
		175	Udaya Movies	SD
		176	Udaya Music	SD
		177	Udaya News	SD
		178	Udaya TV	SD
		179	Kochu TV	SD
		180	Sun TV HD	HD
		181	KTV HD	HD
		182	Sun Music HD	HD
		183	Gemini TV HD	HD
		184	Sun Action (#)	SD
		185	Gemini Action (#)	SD
		186	Surya Action (#)	SD
		187	Suriyan TV (#)	SD

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
35	M/s Taj Television India Private Limited	188	Ten 2 (earlier name 'Ten Action')	SD
		189	Ten 1 (earlier name 'Ten Sports')	SD
		190	Ten Golf HD	HD
		191	Ten 1 HD (earlier name 'Ten HD')	HD
36	M/s Turmeric Vision Private Limited	192	Food Food TV	SD
37	M/s Turner International India Pvt Ltd	193	Cartoon Network	SD
		194	CNN International	SD
		195	HBO	SD
		196	POGO	SD
		197	Toonami (Earlier name "Boomerang")	SD
		198	WB	SD
		199	HBO Hits HD	HD
38	M/s TV 18 Broadcast Limited	200	CNN News 18 (earlier name "CNN-IBN")	SD
		201	IBN 7	SD
		202	CNBC Bazaar	SD
		203	CNBC TV 18 Prime HD	HD
		204	CNBC Awaaz	SD
		205	CNBC TV 18	SD
		206	News 18 Kerala	SD
		207	News 18 Tamil Nadu	SD
		208	News 18 Assam / North East	SD
39	M/s TV Today Network Limited	209	Aaj Tak	SD
		210	Delhi Aaj Tak	SD
		211	India Today (Earlier name "Headlines Today")	SD
		212	Aaj Tak Tez	SD
40	M/s United Home Entertainment Pvt Limited	213	Hungama TV	SD
41	M/s Disney Broadcasting (India) Limited	214	Disney Junior (Earlier name "UTV Comedy")	SD
		215	UTV Movies	SD
		216	Disney XD (Earlier name "UTV World Movies")	SD
		217	Bindass Play (Earlier name "UTV Stars")	SD
		218	The Disney Channel	SD

**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
42	M/s Viacom 18 Media Private Limited	219	Colors	SD
		220	Comedy Central (HD Distribution)	HD
		221	MTV	SD
		222	NICK	SD
		223	Nick Jr / Teen Nick	SD
		224	SONIC	SD
		225	VH 1 (HD Distribution)	HD
		226	Colors Infinity HD	HD
		227	Colors Infinity	SD
		228	Colors HD	HD
		229	NICKS HD+	HD
		230	MTV Indies (HD Distribution)	HD
		231	Rishtey Cineplex	SD
		232	X Zone	SD
		233	Colors Kannada HD	HD
		234	Colors Marathi HD	HD
235	Colors Bangla HD	HD		
43	M/s Vijay Television Pvt Limited	236	Vijay TV (except Tamil Nadu)	SD
		237	Vijay HD	HD
44	M/s Zee Akaash News Private Limited	238	24 Ghanta	SD
45	M/s Zee Entertainment Enterprises Limited	239	Zee ETC Bollywood (Earlier name "Zee Bollywood")	SD
		240	Action Cinema	SD
		241	Zee Bangla Cinema	SD
		242	Zee Café HD	HD
		243	Zee Café	SD
		244	Zee Cinema	SD
		245	Classic Cinema	SD
		246	Zee Salaam	SD
		247	Zee Smile	SD
		248	Zee Studio	SD
		249	Zee Talkies	SD
		250	Zee TV	SD
		251	Zing	SD
252	Zindagi	SD		
253	& Picture	SD		
254	Zee Q	SD		
255	Zee Bangla	SD		
256	Zee Marathi	SD		



**Annexure 5.1(Contd.)**

<b>Sl. No.</b>	<b>Broadcaster Name</b>	<b>Sl. No</b>	<b>Channel Name</b>	<b>Declared as SD or HD</b>
		257	Living Foodz (earlier name "Zee Khana Khazana")	SD
		258	Zee TV HD	HD
		259	Zee Cinema HD	HD
		260	Zee Studio HD	HD
		261	& TV	SD
		262	& TV HD	HD
		263	Zee Kannada	SD
		264	Zee Telugu	SD
		265	& Pictures HD	HD
		266	Ten 3	SD
46	M/s Zee Media Corporation Limited	267	Zee 24 Taas	SD
		268	Zee Kalinga (Earlier name "Zee 24 Ghantalu)	SD
		269	Zee Business	SD
		270	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")	SD
		271	Zee Madhya Pradesh Chattisgarh	SD
		272	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")	SD
47	M/s Zoom Entertainment Network Limited	273	Movies Now (HD)	HD
48	M/s AXN Networks India Private Limited	274	SONY ESPN (Earlier name "SONY KIX")	SD
		275	AXN HD	HD
<p><b>Note :</b></p> <p>(A) Indicative a-la-carte rates of the pay channels, as reported to TRAI as offered by the broadcaster to the DPOs, are for information of the stakeholders.</p> <p>(B) * the a-la-cartes rate of the pay channels for addressable systems shall not be more than 42% of the rate for such channel, as specified for non-addressable systems.</p> <p>(C) # Advertisement free channels</p> <p>(D) ** Channel is not being distributed on non- Addressable Systems.</p>				

## **Annexure 5.2 : List of pay DTH Operators**

- 1. M/s. Tata Sky Ltd.,**  
3<sup>rd</sup> Floor, C-1, Wadia International Centre (Bombay Dyeing)  
Pandurang Budhkar Marg, Worli,  
Mumbai – 400 025  
Tel: 022-6613 3000  
Fax-022-6613 3030  
Website : [www.tatasky.com](http://www.tatasky.com)
  
- 2. M/s Dish TV India Ltd.**  
FC-19, Sector-16A, Film City,  
Noida-201301  
Tel: 91-120-2467005 / 2467000  
Fax: 91-120-4357082  
Website : [www.dishtv.in](http://www.dishtv.in)
  
- 3. SUN Direct TV(P) Ltd.**  
Murasoli Maran Towers, 73, MRC Nagar,  
Main Road, MRC Nagar, Chennai – 28  
PH: 044-44676767, Fax No 044-40679191  
Website : [www.sundirect.in](http://www.sundirect.in)
  
- 4. Bharti Telemedia Ltd.**  
Airtel Centre, Plot No 16,  
Udyog Vihar Phase IV,  
Gurgaon – 122 015  
Ph: 0124-4222222  
Fax : 0124-4248063  
Website : [www.airtel.in](http://www.airtel.in)
  
- 5. Reliance Big TV Pvt. Ltd.**  
3<sup>rd</sup> Floor, A-Wing,  
Reliance Centre, Maharaja Ranjit Singh Marg,  
New Delhi – 110 002  
Ph: 011-30331012  
Fax : 011-30331781  
Website : [www.rcom.co.in](http://www.rcom.co.in)
  
- 6. M/s Videocon d2h Limited  
(Formerly Bharat Business Channel Limited)**  
Plot No 1D, Udyog Vihar Industrial Area,  
Surajpur, Greater NOIDA,  
Distt, Gautam Budh Nagar- 201 306  
Ph: 0120-6141000  
Fax : 0120-6141250  
Website : [www.vedeocond2h.com](http://www.vedeocond2h.com)

**Annexure 5.3: List of 84 existing cities with operational FM Radio Channels in India**

<b>S.No.</b>	<b>Name of City</b>	<b>Category</b>	<b>Number of operational channels</b>
1	Agra	B	2
2	Ahmedabad	A	5
3	Ahmednagar	C	2
4	Aizwal	D	1
5	Ajmer	C	2
6	Akola	C	1
7	Aligarh	C	1
8	Allahabad	B	2
9	Amritsar	B	3
10	Asansol	B	2
11	Aurangabad	C	2
12	Bareilly	C	2
13	Bengaluru	A	8
14	Bhopal	B	4
15	Bhubaneshwar	C	3
16	Bikaner	C	1
17	Bilaspur	C	1
18	Chandigarh	C	2
19	Chennai	A+	8
20	Cochin	B	4
21	Coimbatore	B	4
22	Delhi	A+	9
23	Dhule	C	1
24	Gangtok	D	2
25	Gorakhpur	C	1
26	Gulbarga	C	1
27	Guwahati	C	4
28	Gwalior	C	4
29	Hissar	D	3
30	Hyderabad	A	4
31	Indore	B	4
32	Jabalpur	B	4

**Annexure- 5.3 (Contd.)**

<b>S.No.</b>	<b>Name of City</b>	<b>Category</b>	<b>Number of operational channels</b>
33	Jaipur	A	5
34	Jalandhar	C	4
35	Jalgaon	C	2
36	Jammu	C	1
37	Jamshedpur	B	3
38	Jhansi	C	1
39	Jodhpur	C	3
40	Kannur	C	4
41	Kanpur	A	3
42	Karnal	D	2
43	Kolhapur	C	2
44	Kolkata	A+	9
45	Kota	C	3
46	Kozhikode	C	2
47	Lucknow	A	3
48	Madurai	B	3
49	Mangalore	C	3
50	Mumbai	A+	8
51	Muzaffarpur	C	1
52	Mysore	C	2
53	Nagpur	A	4
54	Nanded	C	1
55	Nasik	C	2
56	Panaji	D	3
57	Patiala	C	3
58	Patna	B	1
59	Puducherry	C	3
60	Pune	A	4
61	Raipur	C	4
62	Rajahmundry	C	1
63	Rajkot	B	3
64	Ranchi	C	4
65	Rourkela	C	2
66	Sangli	C	2
67	Shillong	D	1

**Annexure- 5.3 (Contd.)**

<b>S.No.</b>	<b>Name of City</b>	<b>Category</b>	<b>Number of operational channels</b>
68	Shimla	D	3
69	Sholapur	C	2
70	Siliguri	C	3
71	Srinagar	C	1
72	Surat	A	4
73	Thiruvananthapuram	C	4
74	Thrissur	C	4
75	Tiruchy	C	2
76	Tirunelveli	C	2
77	Tirupati	C	2
78	Tuticorin	C	2
79	Udaipur	C	3
80	Vadodra	B	4
81	Varanasi	B	3
82	Vijayawada	B	2
83	Vishakapatnam	B	4
84	Warrangal	C	1
<b>Total</b>			<b>245</b>

**Source:** Ministry of Information & Broadcasting (MIB)

**Annexure 5.4: List of permitted teleports as obtained from the website of  
Ministry of Information & Broadcasting**

<b>Sr. No</b>	<b>Name of Teleport</b>	<b>Address</b>	<b>Location</b>	<b>Date of Permission</b>
1	TV TODAY NETWORK LIMITED	TV TODAY NETWORK LIMITED FC-8, SECTOR-16A, NOIDA(UP)	NEW DELHI	22-Nov-2000
2	SUN TV LTD.	R S NO. 4288/72, 73 & 116, BLOCK NO. 94, MRC NAGAR CHENNAI-600018	CHENNAI	12-Mar-01
3	ENTERTAINMENT TELEVISION NETWORK PVT. LTD	7B, SHAH INDUSTRIAL ESTATE, OFF VEERA DESAI ROAD, ANDHERI W , MUMBAI-400053	MUMBAI	23-May-01
4	USHODAYA ENTERPRISES LTD.	6-3-570, EENADU COMPLEX, SOMAJIGUDA, HYDERABAD- 500082	HYDERABAD	23-May-01
5	ESSEL SHYAM COMMUNICATION LIMITED	C-34, SECTOR-62, ELECTRONIC CITY, NOIDA-201307	NOIDA	3-Sep-01
6	ASIANET INFRASTRUCTURE PVT. LTD.	ASIANET STUDIO/COMPLEX, PULIYARAKONAM P.O. THIRUVANANTHAPURAM KERALA	THIRUVANANTHAPURAM	17-Oct-01
7	ESSEL SHYAM COMMUNICATION LTD	C-34, ELECTRONIC CITY, SECTOR-62, NOIDA-201307	NOIDA-2	7-Feb-02
8	SAHARA SANCHAR LIMITED	SAHARA INDIA COMPLEX, C-2, C-3, SECTOR-XI NOIDA-201301	NOIDA	12-Feb-02
9	TELEVISION EIGHTEEN INDIA LIMITED	VIDEOCON TOWER, E-1 RANI JHANSI ROAD, JHANDEWALAN EXTN., NEW DELHI-110055	NEW DELHI	18-Mar-02
10	NEW DELHI TELEVISION LTD. (NDTV)	ARCHANA COMPLEX, GREATER KAILASH-I, NEW DELHI-110048	NEW DELHI	11-Jun-02
11	INDIAVISION COMMUNICATIONS LTD.	SATELLITE TATU'S TOWER, 32/1787, PADIVATTOM, NH BY-PASS ROAD, KOCHI (KERALA) 682024	KOCHI -KERALA	7-Nov-02
12	NOIDA SOFTWARE TECHNOLOGY PARK LTD.	B-23-25, POCKET-C, SURAJPUR INDUSTRIAL AREA, GREATER NOIDA(U.P)	GREATER NOIDA	27-Jan-03
13	DISH TV INDIA LIMITED (Formerly known ASC Enterprises Ltd.)	FC-19, SECTOR-16A, NOIDA- 201301 (U.P.)	NOIDA	2-Apr-03
14	POSITIVE TELEVISION PVT. LTD.	7 C, DOCTORS LANE, GOL MARKET, NEW DELHI-110001	GUWAHATI	9-Jun-03
15	CHANNEL GUIDE INDIA LTD.	BOKADIA MANSION, 3RD FLOOR,229, PRINCESS STREET, MUMBAI	MUMBAI	15-Sep-03
16	INDIASIGN PVT. LTD.	A-49, SECTOR-18, ELECTRONICS CITY, HARTRON COMPLEX, GURGAON(HARYANA)	GURGAON	18-Nov-03
17	ASSOCIATED BROADCASTING PVT. LTD.	CO.NO.97, ROAD NO.3, BANJARA HILLS, HYDERABAD- 500034	HYDERABAD	24-Nov-03
18	AV ENTERTAINMENT PVT. LTD.	240, ZONE-I, M.P.NAGER, BHOPAL(M.P)	BHOPAL	15-Dec-03

**Annexure 5.4 (Contd.)**

<b>Sr.No</b>	<b>Name of Teleport</b>	<b>Address</b>	<b>Location</b>	<b>Date of Permission</b>
19	TELEVISION EIGHTEEN INDIA LIMITED	EMPIRE COMPLEX, 414, SENAPATI BAPAT MARG, LOWER PAREL, MUMBAI-400013	MUMBAI	19-Mar-04
20	AMRITA ENTERPRISES PVT. LTD.	TCNO.15/1069, AMRITA, GANDHI NAGER, VAZHUTHANCADU, THIRUVANANTHAPURAM-695014	THIRUVANANTHAPURAM	20-Apr-04
21	MAVIS SATCOM LIMITED	NO.48 NP, JAWAHARLAL NEHRU ROAD, EKKATUTHANGAL, CHENNAI-600092	CHENNAI	22-Apr-04
22	TATA COMMUNICATIONS LTD.VSNL	VSNL, TECHNICAL COMPLEX, SDF BUILDING, SALT LAKE, KOLKATTA-700091	KOLKATTA	14-May-04
23	TATA COMMUNICATIONS LTD. VSNL	VSNL, VSB, KAKKANAD, THIRKKAKARA, ERNAKULAM, COACHIN-682030	COCHIN	14-May-04
24	TATA COMMUNICATIONS LTD., VSNL,	THIRUVELLUVAR SATELLITE VSNL EARTH STATION, REDHILLS ROAD, AMBATTUR, CHENNAI-600053	CHENNAI	14-May-04
25	TATA COMMUNICATIONS LTD., VSNL	VSNL, VSB, BANGLA SAHAB ROAD, NEW DELHI-110001	NEW DELHI	14-May-04
26	TATA COMMUNICATIONS LTD., VSNL	VSNL,VSB, FORT, MG ROAD, MUMBAI-400001	MUMBAI	14-May-04
27	LAMHAS SATELLITE LTD.	SERVICES 161, TOWER-I, INTERNATIONAL INFOTECH PARK, VASHI, NAVI MUMBAI	MUMBAI	10-Aug-04
28	MALAYALAM COMMUNICATIONS LTD.	MALAYALAM COMMUNICATIONS LTD. CHANDRAGIRI 61, VIKRAMPURAM HILLS,KOWDIAR P.O., THIRUVANANTHAPURAM-695003	THIRUVANANTHAPURAM	22-Dec-04
29	SANSKAR INFO TV PVT. LTD.	B-10, MELKAY BUILDING, OPP. MAROL TELEPHONE EXCHANGE, CENTRAL ROAD, MIDC, ANDHERI E, MUMBAI-400093	MUMBAI	23-Feb-05
30	BENNETT COLEMAN AND CO. LTD.	BENNETT, COLEMAN & CO. LTD., THE TIMES OF INDIA BUILDING, DR. D.N ROAD, MUMBAI-400001	MUMBAI	2-May-05
31	SENIOR MEDIA LTD.	SENIOR MEDIA LTD NO.3, SIRI FORT ROAD, NEW DELHI-49	NEW DELHI	5-May-05
32	LOK PRAKASHAN LTD.	LOK PRAKASHAN LTD. 57 CHOWRINGHEE ROAD, HORIZON, 3RD FLOOR, KOLKATA-700071	AHMEDABAD	6-May-05
33	CALCUTTATELEVISION NETWORK PVT. LTD.	CALCUTTA TELEVISION NETWORK PVT. LTD. 89 M.B.ROAD BIRATI, KOLKATA-70051	KOLKATA	22-Aug-05
34	KOHINOOR CORPORATION LTD.	BROADCASTING KOHINOOR BROADCASTING CORPORATION LTD. TAGORE COMPLEX, MODEL TOWN, PATIALA-147001, PUNJAB	RAJPURA - PUNJAB	9-Sep-05

**Annexure 5.4 (Contd.)**

<b>Sr.No</b>	<b>Name of Teleport</b>	<b>Address</b>	<b>Location</b>	<b>Date of Permission</b>
35	TELEVISION EIGHTEEN INDIA LIMITED	VIDEOCON TOWER, E-1 RANI JHANSI ROAD, JHANDEWALAN EXTN., NEW DELHI-110055	NOIDA	14-Sep-05
36	KAMYAB TV PVT. LTD. (Formerly known as MD TV Pvt. Ltd.)	KAMYAB TV PVT. LTD. 168, EKAMRA MARG, UNIT-6 BHUBANESWER-751001	BHUBANESHWER	30-Sep-05
37	KASTURI MEDIA PVT. LTD.	KASTHURI MEDIAS PVT. LTD. NO.286, 3RD MAIN ROAD, J.P. NAGER, BANGLORE-560078	BANGALORE	10-Nov-05
38	SST MEDIA PVT. LTD.	57 J.L NEHRU ROAD HORIZON, 3RD FLOOR, KOLKATA-700071	KOLKATA	30-Nov-05
39	ESSEL SHYAM COMMUNICATION LTD.	ROYAL PALAMS, SURVEY NO. 169, NEAR UNIT 26, AAREY MILK COLONY GOREGAON EAST, MUMBAI- 400065	MUMBAI	2-Dec-05
40	MM TV LTD.	MM TV LTD. POST BOX NO. 106, KANDATHIL VARGHESE MAPPILLAI MEMORIAL SOCIETY BUILDING K.K.ROAD, KOTTAYAM-686001, KERALA	ALAPUZZA	2-Mar-06
41	IN CABLENET ANDHRA LTD.	IN CABLENET ANDHRA LTD. 98, OM PLAZA, DOMALGUDA, HYDERABAD-500029	HYDERABAD	9-Mar-06
42	INDRA TELEVISION LTD.	INDRA TELEVISION LTD. MEGA CITY NO. 338, ROAD NO.3, ARORA COLONY BANJARA HILLS HYDERABAD-500034	HYDERABAD	7-Jun-06
43	SUN TV LTD.	R S NO. 4288/72,73 & 116, BLOCK NO. 94, MRC NAGAR CHENNAI-600018	CHENNAI	14-Jul-06
44	MEDIA CONTENT AND COMMUNICATION INDIA PRIVATE LIMITED	DLF CNTRE, 7TH FLOOR, 4 SNANSAD SERVICESMARG, NEW DELHI-110001	NOIDA	20-Sep-06
45	TATA SKY LIMITED	TATA SKY LTD. 3RD FLOOR,C-1, WADIA INTERNATIONAL CENTRE BOMBAY DYEING, PANDURANG BUDHAR MARG, WORLI, MUMBAI-400025	NEW DELHI	20-Sep-06
46	SATISH SUGERS LTD.	VAISHNAVI BHAVANA, 89/1, 1ST A MAIN ROAD, INDUSTRIAL SUBRUB, 2ND STAGE, YESHWANTHPUR, BANGLORE-560022	BANGALORE	26-Sep-06
47	SHITAL FIBRES LTD.	SHITAL FIBRES LTD. A-17, FOCAL POINT EXTENSION, P.O.BOX NO. 407 AND 449, JALLANDHAR-144004	JALANDHAR	29-Sep-06
48	MH ONE TV NETWORK LTD.	MH ONE TV NETWORK LTD. 2,SSI INDUSTRIAL AREA, GT KARNAL ROAD, DELHI-33	DELHI	23-Nov-06
49	STV ENTERPRISES LTD.	268 MASJID KOTH, NEAR UDAI PARK MARKET, NEW DELHI-110049	NEW DELHI	11-Jan-07
50	AIRR X MEDIA LTD.	502 ASHWIN ATHWA LINES SURAT GUJARAT	SURAT	13-Mar-07



**Annexure 5.4 (Contd.)**

<b>Sr.No</b>	<b>Name of Teleport</b>	<b>Address</b>	<b>Location</b>	<b>Date of Permission</b>
51	BROADCAST EQUIPMENTS INDIA PVT. LTD.	370-371/2, FIRST FLOOR, HOSPITAL ROAD, JANGPURA, NEW DELHI-110014	NEW DELHI	21-May-07
52	WINNING COMMUNICATIONS LTD.	EDGEWINNING EDGE COMMUNICATIONS LTD. 301, SWARNA JAYANTHI COMPLEX, AMEERPET, HYDERABAD-500038	HYDERABAD	25-May-07
53	INDIASIGN PVT. LTD.	GL-34/1 SALLAKE ELECTRONIC COMPLEX SECTOR-5, KOLKATTA WEST BANGAL	KOLKATA	15-Jun-07
54	INDIASIGN PVT. LTD.		CHENNAI	15-Jun-07
55	RACHANA TELEVISION PVT. LTD.	PLOT NO. 564-A-19-III, ROAD NO.92, JUBILEE HILLS, HYDERABAD-500033	HYDERABAD	15-Jun-07
56	ORTEL COMMUNICATIONS LTD.	ORTEL COMMUNICATIONS LTD. B-7/122 A, SAFDARJUNG ENCLAVE, NEW DELHI-110029	BHUBANESHWER	25-Jun-07
57	SOWBHAGYA EXPORTS LTD.	SOWBHAGYA EXPORTS LTD. 77/14 SKD NAGER, SRINAGER COLONY HYDERABAD-500073 ANDHRA PRADESH	HYDERABAD	4-Jul-07
58	ESSEL SHYAM COMMUNICATION LTD.	C-138, NARAINA INDUSTRIAL AREA-I, AROOR NEW DELI-28	KERALA	5-Jul-07
59	PRAGYA VISION PVT. LTD.	FC-13, SECTOR 16A, FILM CITY, NOIDA-201301	NOIDA	5-Sep-07
60	BRAHMAPUTRA TELE-PRODUCTIONS PVT. LTD.	13 <sup>TH</sup> MILE TAMULIKUCHI BYRNIHAT RI -BHOI MEGHALAYA	GUWAHATI	25-Sep-07
61	G. NEXT MEDIA PVT. LTD.	78, OKHALA INDUSTRIAL ESTATE PHASE-III, NEW DELHI-110020	NEW DELHI	5-Oct-07
62	INDIASIGN PVT. LTD.	1343, ROAD NO. 67, JUBILEE HILL, HYDERABAD	HYDERABAD	14-Mar-08
63	TATA COMMUNICATIONS LIMITED	THIRUVALLUR SATELLITE EARTH STATION, 226, RED HILLS ROAD, AMBATTUR, CHENNAI-600053	CHENNAI-2	6-May-08
64	POSITIVE TELEVISION PVT. LTD.	POSSITIVE TELEVISION PVT. LTD. DOCTOR'S LANE, GOL MARKET, NEW DELHI-110001	7C,NOIDA	23-May-08
65	EASTERN MEDIA LTD.	A/62,NAYAPALLI, BHUBANESWAR-751003, ORISSA	BHUBANESHWER	2-Jul-08
66	RAJASTHAN PATRIKA PRIVATE LIMITED	KESARGARH, JLN MARG, JAIPUR-302004	JAIPUR	5-Aug-08
67	PRIDE EAST ENTERTAINMENT PVT. LIMITED	NEWS LIVE, 558, G.S.ROAD, CHRISTIAN BARTI, DISPUR, GUWAHATI-78	GUWAHATI	13-Aug-08
68	INDIASIGN PVT. LTD.	1343, ROAD NO. 67, JUBILEE HILL, HYDERABAD	HYDERABAD (Location Shifted from Noida)	17-Sep-08
69	VINTAGE STUDIO PVT. LTD.	23/24, EAST PATEL NAGAR, NEW DELHI-110008	NEW DELHI	5-Jan-09
70	SKYLINE TELE MEDIA SERVICES PVT. LTD.	C-4,SHIVALIK, NEAR MALVIYA NAGAR MARKET, NEW DELHI-110017	NOIDA	27-May-09
71	INFORMATION TV PVT. LTD.	275, CAPTAIN GAUR MARG, SRINIVASPURI, NEW DELHI-110065	NEW DELHI	3-Jun-09

**Annexure 5.4 (Contd.)**

<b>Sr.No</b>	<b>Name of Teleport</b>	<b>Address</b>	<b>Location</b>	<b>Date of Permission</b>
72	UNILAZER EXPORTS AND MANAGEMENT CONSULTANTS LIMITED	PARIJAT HOUSE, 1076, DR. E.MOSES ROAD, WORLI, NAKA, MUMBAI-400018	MUMBAI	26-Jun-09
73	COMSAT SYSTEM PVT. LTD.	PLOT NO.22/A, IDA, MALLAPUR, HYDERABAD-50076	HYDERABAD	14-Oct-09
74	BHARTI TELEPORTS LIMITED	THE GRAND HOTEL, VASANT KUNJ, PHASE-II, NELSON MANDELA ROAD, NEW DELHI-110070	Noida	11-Nov-09
75	SRI VENKATESWARA CHANNEL PVT. LTD.	BHAKTITHIRUNILAYAM, HIMAYATH NAGAR, HYDERABAD	TIRUPATI	11-Nov-09
76	TATA COMMUNICATIONS LIMITED	THIRUVALLUVAR SATELLITE EARTH STATION, 226, RED HILLS ROAD, AMBATTUR, CHENNAI-600053	CHENNAI -3	13-Jan-10
77	ROYS INSTITUTE OF COMPETITIVE EXAMINATION PVT LTD	11/1 B.T ROAD BELGHORIA KOLKATA-700056 24 PARGANAS NORTH WEST BENGAL	KOLKATA	1-Apr-10
78	INDEPENDENT NEWS SERVICES PVT. LTD.	PLOT NO. 17B & 17C, SECTOR 16A, FILM CITY NOIDA(UP)	NOIDA -2	28-Apr-10
79	RAJ TELEVISION NETWORK LTD.	32, POES ROAD, 2ND STREET, TEYNAMPET, CHENNAI-600018	CHENNAI	5-May-10
80	ESSEL SHYAMCOMMUNICATION LTD.	C-138, NARAINA INDUSTRIAL AREA-I, NEW DELHI-28	NOIDA -3	12-May-10
81	KANSANNEWS PRIVATE LIMITED	HOUSE NO. 18, SECTOR-18, CHANDIGARH	CHANDIGARH	13-May-10
82	TATA COMMUNICATIONS LTD. VSNL	TATA COMMUNICATIONS LTD. VIDESH SANCHAR BHAWAN MAHATMA GANDHI ROAD, MUMBAI-400001	CHENNAI -4	4-Jun-10
83	DISH TV INDIA LTD.	PLOT NO.18, SECTOR-16A, NOIDA-201301	NOIDA	6-Apr-11
84	AASTHA BROADCASTING NETWORK LIMITED	AATHA BHAWAN, A-105, SECTOR-5, NOIDA-201301	NOIDA	2-May-11
85	MAHUA MEDIA PRIVATE LIMITED	FC 17A & 17B, SECTOR 16A, FILM CITY, NOIDA-201301	NOIDA	25-May-11
86	RTR Broadcast Pvt. Ltd.	D-38, RDC, Raj Nagar, Ghaziabad	Ghaziabad	7-Sep-11
87	Silver Star Communication Ltd.	NO. 24, VI MAIN ROAD, KASTURIBA NAGAR, ADYAR, CHENNAI-600020 INDIA	CHENNAI	2-Nov-11
88	Lamha Satellite Services Ltd	TOWER-I, 6TH FLOOR, INTERNATIONAL INFOTECH PARK, ABOVE VASI RAILWAY STATION, VASI, NAVI MUMBAI-400703.	MUMBAI	13-Feb-12
89	Skyline Tele Media Services Ltd.	FC-23, SECTOR-16A, FILM CITY, NOIDA-201305	NOIDA-2	02-Jul-12
90	Bharti Teleports Limited	Plot No 192, Block B, Phase II, NOIDA - 201 305	NOIDA-2	29-Oct-12

**Source:** Ministry of Information & Broadcasting

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