



Telecom Regulatory Authority of India

The Indian Telecom Services Performance Indicators January - March, 2016

New Delhi, India
5th August, 2016

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Snapshot

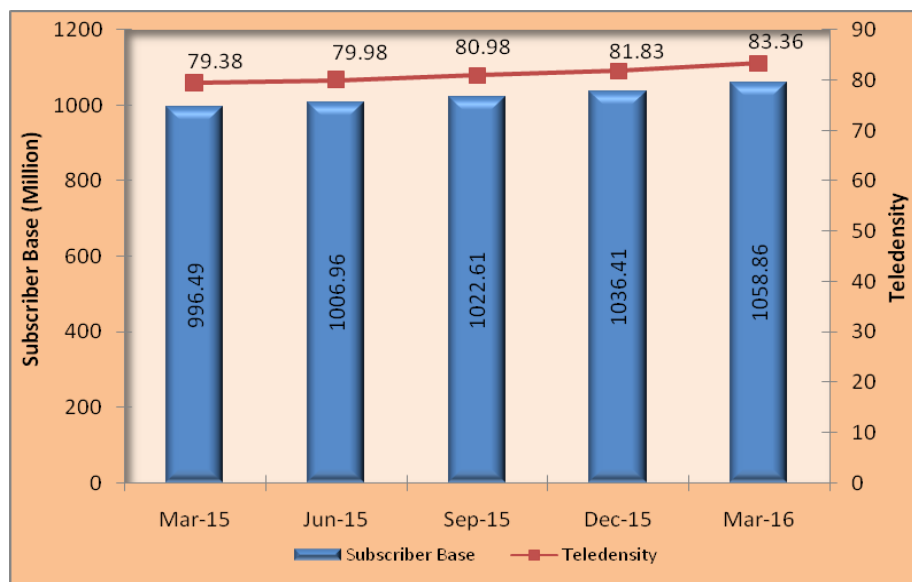
(Data As on 31st March, 2016)	
Telecom Subscribers (Wireless +Wireline)	
Total Subscribers	1,058.86 Million
% change over the previous quarter	2.17%
Urban Subscribers	609.69 Million
Rural Subscribers	449.17 Million
Market share of Private Operators	89.78%
Market share of PSU Operators	10.22%
Teledensity	83.36
Urban Teledensity	154.01
Rural Teledensity	51.37
Wireless Subscribers	
Total Wireless Subscribers	1,033.63 Million
% change over the previous quarter	2.25%
Urban Subscribers	588.79 Million
Rural Subscribers	444.84 Million
GSM Subscribers	989.54 Million
CDMA Subscribers	44.09 Million
Market share of Private Operators	91.30%
Market share of PSU Operators	8.70%
Teledensity	81.38
Urban Teledensity	148.73
Rural Teledensity	50.88
Wireline Subscribers	
Total Wireline Subscribers	25.22 Million
% change over the previous quarter	-1.15%
Urban Subscribers	20.90 Million
Rural Subscribers	4.32 Million
Market share of Private Operators	27.58%
Market share of PSU Operators	72.42%
Teledensity	1.99
Urban Teledensity	5.28
Rural Teledensity	0.49
No. of Village Public Telephones (VPT)	5,86,799
No. of Public Call Office (PCO)	5,88,936

Internet/Broadband Subscribers	
Total Internet Subscribers	342.65 Million
% change over previous quarter	3.31%
Narrowband subscribers	192.90 Million
Broadband subscribers	149.75 Million
Wired Internet Subscribers	20.44 Million
Wireless Internet Subscribers	322.21 Million
Urban Internet Subscribers	230.71 Million
Rural Internet Subscribers	111.94 Million
Total Internet Subscribers per 100 population	26.98
Urban Internet Subscribers per 100 population	58.28
Rural Internet Subscribers per 100 population	12.80
Broadcasting & Cable Services	
Number of private satellite TV channels registered with Ministry of I&B	869
Number of Pay TV Channels	263
Number of private FM Radio Stations	243
Registered DTH Subscribers	88.64 Million
Active DTH Subscribers	58.53 Million
Number of Community Radio Stations licenced (GOPA signed)	237
Number of Operational Community Radio Stations	191
Number of pay DTH Operators	6
Number of teleports permitted in India	90
Telecom Financial Data (QE Mar-16)	
Gross Revenue (GR) during the quarter	₹ 68,335 Crore
% change in GR over the previous quarter	4.57%
Adjusted Gross Revenue (AGR) during the quarter	₹ 48,379 Crore
% change in AGR over the previous quarter	4.97%
Share of Public sector undertakings in Access AGR	11.33%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 127
Revenue & Usage Parameters (QE Mar-16)	
Monthly ARPU GSM Full Mobility Service	₹ 125
Monthly ARPU CDMA Full Mobility Service	₹ 104
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service	381 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	260 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	277 Million
Data Usage of Mobile Users (QE Mar-16)	
Data Usage per subscriber per month - GSM	133.87 MB
Data Usage per subscriber per month - CDMA	433.64 MB
Data Usage per subscriber per month – Total(GSM+CDMA)	147.12 MB

Executive Summary

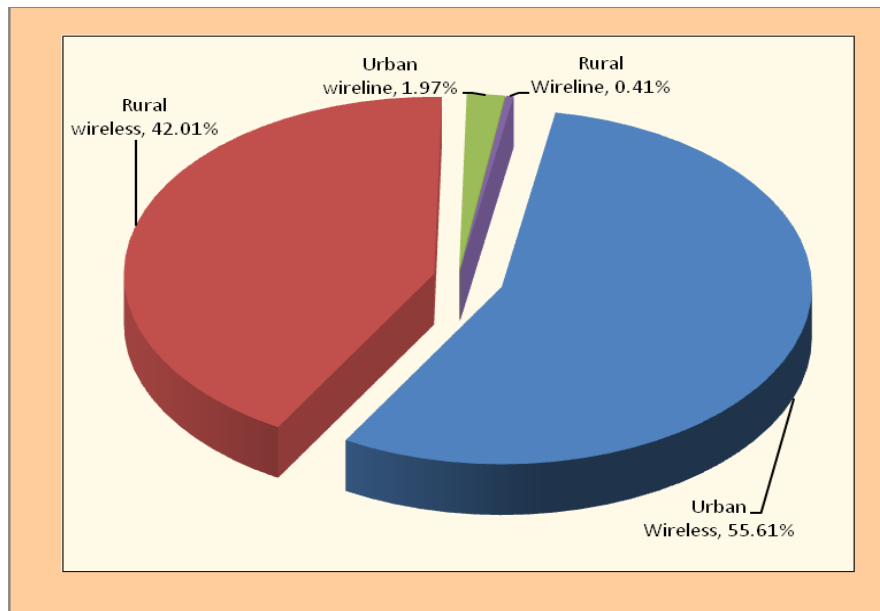
1. The number of telephone subscribers in India increased from 1,036.41 million at the end of Dec-15 to 1,058.86 million at the end of Mar-16, registering a growth of 2.17% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 6.26% over the same quarter of last year. The overall Teledensity in India increased from 81.83 as on 31st December, 2015 to 83.36 as on 31st March, 2016.

Trends in Telephone subscribers and Teledensity in India



2. Subscription in Urban Areas increased from 600.66 million at the end of Dec-15 to 609.69 million at the end of Mar-16, and Urban Teledensity increased from 152.45 to 154.01. Rural subscription increased from 435.75 million to 449.17 million, and Rural Teledensity also increased from 49.94 to 51.37 during the same period.
3. Out of the total subscription, the share of the Rural subscription increased from 42.04% at the end of Dec-15 to 42.42% at the end of Mar-16.

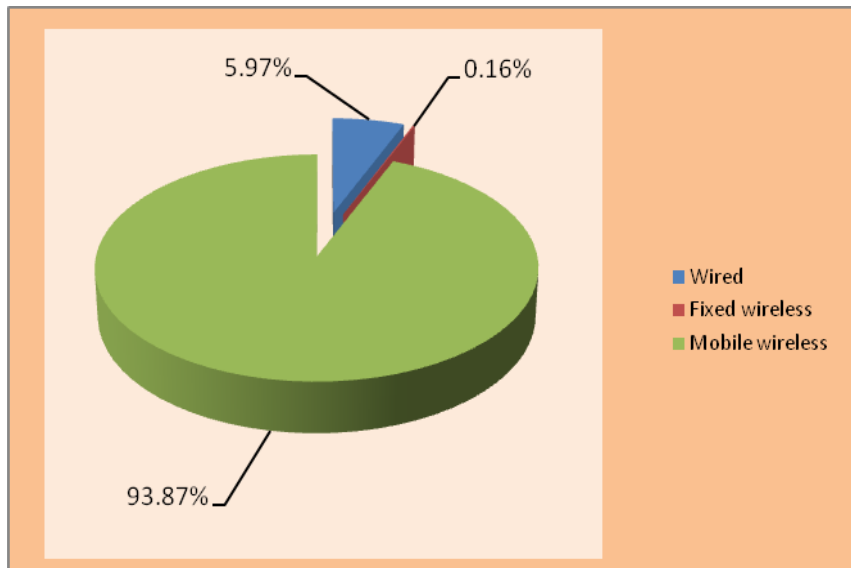
Composition of Telephone Subscribers



4. With a net addition of 22.74 million subscribers during the quarter, total wireless (GSM+CDMA) subscriber base increased from 1,010.89 million at the end of Dec-15 to 1,033.63 million at the end of Mar-16, registering a growth rate of 2.25% over the previous quarter. The year-on-year (Y-O-Y) growth rate of wireless subscribers for Mar-16 is 6.57%.
5. Wireless Tele-density increased from 79.82 at the end of Dec-15 to 81.38 at the end of Mar-16.
6. Wireline subscriber base further declined from 25.52 million at the end of Dec-15 to 25.22 million at the end of Mar-16, registering a quarterly decline rate of 1.15%. The year-on-year (Y-O-Y) decline in wireline subscribers for Mar-16 is 5.15%.
7. Wireline Teledensity declined from 2.01 at the end of Dec-15 to 1.99 at the end of Mar-16.

8. Total number of Internet subscribers has increased from 331.66 million at the end of Dec-15 to 342.65 million at the end of Mar-16, registering a quarterly growth rate of 3.31%. Out of 342.65 million, Wired Internet subscribers are 20.44 million and Wireless Internet subscribers are 322.21 million.

Composition of internet subscription

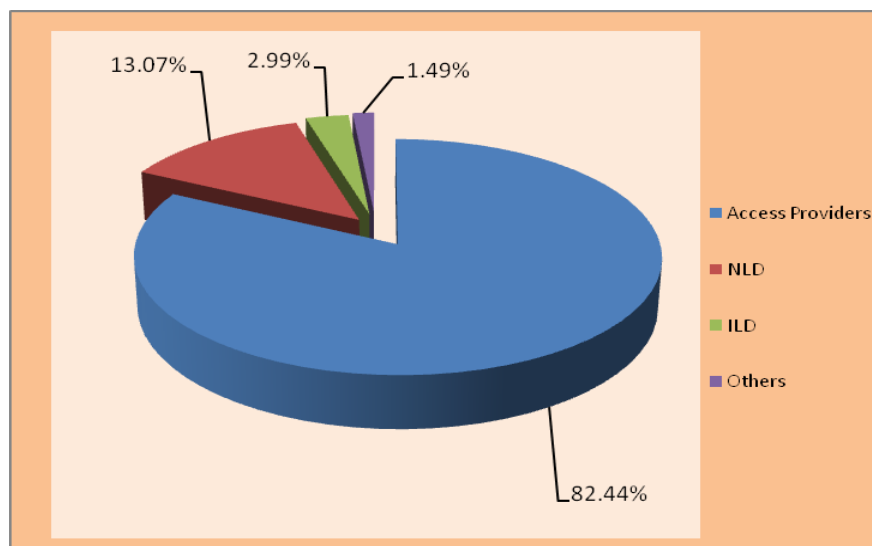


9. The Internet subscriber base of 342.65 million at the end of Mar-16 is comprised of Broadband Internet subscriber base of 149.75 million and Narrowband Internet subscriber base of 192.90 million.
10. The broadband Internet subscriber base grew by 9.69% from 136.53 million at the end of Dec-15 to 149.75 million at the end of Mar-16. On the other hand, the narrowband Internet subscriber base declined by 1.14% from 195.13 million at the end of Dec-15 to 192.90 million at the end of Mar-16.
11. Monthly Average Revenue Per User (ARPU) for GSM service increased by 1.75%, from ₹123 in QE Dec-15 to ₹125 in QE Mar-16. Monthly ARPU for GSM service grew by 3.46% on Y-O-Y in this quarter.

12. Prepaid ARPU for GSM service per month increased from ₹105.14 in QE Dec-15 to ₹107.33 in QE Mar-16, whereas Postpaid ARPU per month declined from ₹491 in QE Dec-15 to ₹488 in QE Mar-16.
13. On an all India average, the overall MOU per subscriber per month for GSM service increased by 1.34% from 376 for QE Dec-15 to 381 in QE Dec-15.
14. Prepaid MOU per subscriber for GSM service increased from 351 in QE Dec-15 to 356 in QE Mar-16, however postpaid MOU declined from 899 in QE Dec-15 to 892 in QE Mar-16.
15. Monthly ARPU for CDMA full mobility service slightly increased by 0.2%, from ₹103.30 in QE Dec-15 to ₹103.50 in QE Mar-16. Monthly ARPU for CDMA full mobility service declined by 4.3% on Y-O-Y basis in this quarter.
16. The total MOU per subscriber per month for CDMA full mobility service increased by 3.3%, from 252 in QE Dec-15 to 260 in QE Mar-16. The outgoing MOUs increased from 144 in QE Dec-15 to 150 in QE Mar-16, and incoming MOUs also increased from 108 in QE Dec-15 to 110 in QE Mar-16.
17. Gross Revenue (GR) and Adjusted Gross Revenue (AGR) of Telecom Service Sector for the QE Mar-16 has been ₹68,335 Crore and ₹48,379 Crore respectively. GR increased by 4.57% and AGR increased by 4.97% in QE Mar-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 4.77% and 7.13% respectively.

19. Pass-through charges increased from ₹19,260 Crore in Q.E. Dec-15 to ₹19,956 in Q.E. Mar-16. The quarterly and the year-on-year (Y-O-Y) growth rates of pass-through charges for QE Mar-16 are 3.61% and -0.56% respectively.
20. The License Fee increased from ₹3,690 Crore for the QE Dec-15 to ₹3,872 Crore for the QE Mar-16. The quarterly and the year-on-year (Y-O-Y) growth rates of license fee are 4.92% and 7.04% respectively in this quarter.
21. Access services contributed 82.44% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee and Pass Through Charges increased by 4.45%, 4.16%, 4.18% and 5.43% respectively whereas, Spectrum Usage Charges(SUC) declined by 0.24% in QE Mar-16.
22. Monthly Average Revenue per User (ARPU) for Access Services based on AGR increased from ₹123.77 in QE Dec-15 to ₹126.91 in QE Mar-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:

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • BTSs Accumulated Downtime (Not available for service) • Worst affected cells having more than 3% TCH drop (call drop) rate • Call Set-up Success Rate (within licensee's own network) • Connections with good voice quality • Metering and billing credibility – Postpaid • Metering and billing credibility – Prepaid • Resolution of billing/charging/ credit & validity complaints (98% within 4 weeks) • Resolution of billing/charging/ credit & validity complaints (100% within 6 weeks) • Period of applying credit/waiver/ adjustment to customer's account from the date of resolution of complaints • Accessibility of call centre/ customer care • %age requests for Termination/ Closure of service complied within 7 days • Time taken for refund of deposits after closures 	<ul style="list-style-type: none"> • SDCCH/Paging Channel Congestion • TCH Congestion • Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) • %age of calls answered by the operators (voice to voice) within 90 sec

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:

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • BTSs and Node-B's accumulated downtime (not available for service) (%age) • Worst affected BTSs and Node-B's due to downtime (%age) • TCH and Circuit Switched RAB Congestion (%age) • Worst affected cells having more than 3% TCH drop (call drop) rate and Circuit Switched Voice Drop Rate:- CBBH 	<ul style="list-style-type: none"> • Call Set-up Success Rate (within licensee's own network) • SDCCH/Paging Channel and RRC Congestion (%age) • Call Drop and Circuit Switched Voice Drop Rate (%age)

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:

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • Resolution of billing/ charging/ credit & validity complaints (98% within 4 weeks & 100% within 6 weeks) 	<ul style="list-style-type: none"> • %age of calls answered by the operators (voice to voice) within 90 sec • Termination/ Closure of service 100% within 7 days

26. A total of 869 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking, as on 31st March 2016.

27. As reported by broadcasters, there were 263 pay channels at the quarter ending of March, 2016 as compared to 262 pay channels for the previous quarter. During the quarter, five new pay channels were reported, two channels were discontinued and two channels were converted from Pay Channel to FTA.
28. Since introduction in the year 2003, Indian DTH services have displayed a phenomenal growth. DTH has attained a registered subscriber base of around 88.64 million (including 58.53 million active subscribers). As on March 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 243 operational private FM Radio stations as on 31st March, 2016. This is as per the information available on the website of MIB.
30. As per data received from MIB, as on 31st March, 2016, out of the 237 community radio licenses issued so far, 191 stations are operational.

Trends at a Glance

A. Access Service (Wireline + Wireless)

	QE Mar 2015	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	%age change over Mar- 2015	%age change over Jun- 2015	%age change over Sep- 2015	%age change over Dec- 2015
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber Base (in million)									
Wireline	26.59	26.15	25.95	25.52	25.22	-5.15%	-3.55%	-2.81%	-1.15%
Wireless	969.89	980.81	996.66	1010.89	1033.63	6.57%	5.39%	3.71%	2.25%
Total	996.49	1006.96	1022.61	1036.41	1058.86	6.26%	5.15%	3.54%	2.17%
Rural	419.31	422.75	423.61	435.75	449.17	7.12%	6.25%	6.03%	3.08%
Urban	577.18	584.21	599.01	600.66	609.69	5.63%	4.36%	1.78%	1.50%
2) Teledensity									
Wireline	2.12	2.08	2.06	2.01	1.99	-6.26%	-4.39%	-3.38%	-1.44%
Wireless	77.27	77.90	78.93	79.82	81.38	5.32%	4.46%	3.10%	1.95%
Total	79.38	79.98	80.98	81.83	83.36	5.01%	4.23%	2.94%	1.87%
Rural	48.37	48.66	48.66	49.94	51.37	6.21%	5.57%	5.58%	2.86%
Urban	148.61	149.70	152.76	152.45	154.01	3.63%	2.88%	0.82%	1.02%
3) Service Provider wise Subscribers Base (in Million)									
Bharti	229.43	234.11	238.74	246.89	254.90	11.10%	8.88%	6.77%	3.25%
Vodafone	183.88	185.47	188.26	193.69	198.04	7.70%	6.78%	5.19%	2.24%
Idea	157.81	162.08	166.56	171.91	175.07	10.94%	8.02%	5.11%	1.84%
Reliance	110.65	111.08	111.55	102.05	103.58	-6.40%	-6.76%	-7.15%	1.49%
BSNL	93.64	93.29	95.34	97.64	101.11	7.98%	8.38%	6.05%	3.55%
Aircel	81.40	83.05	84.00	85.63	87.09	6.99%	4.86%	3.68%	1.70%
Tata	67.99	63.26	63.73	62.43	61.82	-9.07%	-2.28%	-3.00%	-0.98%
Telenor	45.62	48.13	47.78	50.70	52.45	14.99%	8.98%	9.77%	3.46%
Sistema	8.92	8.75	8.42	8.06	7.75	-13.13%	-11.47%	-7.94%	-3.90%
Videocon	7.13	7.61	7.90	6.96	6.56	-7.99%	-13.75%	-16.92%	-5.67%
MTNL	7.06	7.08	7.13	7.13	7.06	0.02%	-0.26%	-0.89%	-0.94%
Quadrant	2.96	3.04	3.20	3.30	3.42	15.51%	12.53%	6.77%	3.61%
Total	996.49	1006.96	1022.61	1036.41	1058.86	6.26%	5.15%	3.54%	2.17%

B. Internet Services

	QE Mar 2015	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	%age change over Mar-2015	%age change over Jun-2015	%age change over Sep-2015	%age change over Dec-2015
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber's Base (in million)									
A. Wired Internet Subscribers	19.07	19.21	19.60	19.98	20.44	7.22%	6.45%	4.29%	2.34%
B. Wireless Internet Subscribers	283.29	300.22	305.35	311.69	322.21	13.74%	7.33%	5.52%	3.38%
i. Mobile Wireless (Mobile & Dongle)	282.81	299.73	304.85	311.16	321.66	13.74%	7.31%	5.51%	3.37%
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.48	0.48	0.49	0.52	0.55	16.11%	14.33%	11.69%	5.33%
Total Internet Subscribers	302.35	319.42	324.95	331.66	342.65	13.33%	7.27%	5.45%	3.31%
2) No. of Internet Subs per 100 Population	24.09	25.37	25.73	26.19	26.98	12.00%	6.33%	4.83%	3.01%

C. Usage and Revenue for Full Mobility Services

1. Traffic (MOU) (minutes of use/subscriber/month)									
i) GSM	383	388	374	376	381	-0.53%	-2.00%	1.69%	1.34%
ii) CDMA	265	263	256	252	260	-1.81%	-1.02%	1.52%	3.46%
2) ARPU (Rs./sub/ month)									
i) GSM	120.68	125.93	122.17	122.71	124.85	3.46%	-0.85%	2.19%	1.75%
ii) CDMA	108.21	107.02	106.21	103.33	103.54	-4.31%	-3.25%	-2.51%	0.21%

D. Telecom Financial Data

	QE Mar 2015	QE Jun 2015	QE Sep 2015	QE Dec 2015	QE Mar 2016	%age change over Mar-2015	%age change over Jun-2015	%age change over Sep-2015	%age change over Dec-2015
						(12 months)	(9 months)	(6 months)	(3 months)
1. Telecom Sector									
i) Gross Revenue (₹ in Crores)	65226.73	65030.31	64996.42	65347.09	68335.39	4.77%	5.08%	5.14%	4.57%
ii) Adjusted Gross Revenue (₹ in Crores)	45157.78	47134.27	46256.85	46086.66	48379.00	7.13%	2.64%	4.59%	4.97%
2. Access Services									
Adjusted Gross Revenue (₹ in Crores)	35938.26	38578.39	37882.13	38293.56	39885.55	10.98%	3.39%	5.29%	4.16%
ARPU per month (AGR/ Average subscribers/3)	121.81	128.45	124.68	123.77	126.91	4.18%	-1.19%	1.79%	2.54%

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending March, 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). 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@traigov.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 1,036.41 million at the end of Dec-15 to 1,058.86 million at the end of Mar-16, registering a growth of 2.17% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 6.26% over the same quarter of last year. The overall Tele-density in India increased to 83.36 at the end of Mar-16 from 81.83 at the end of the previous quarter.

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

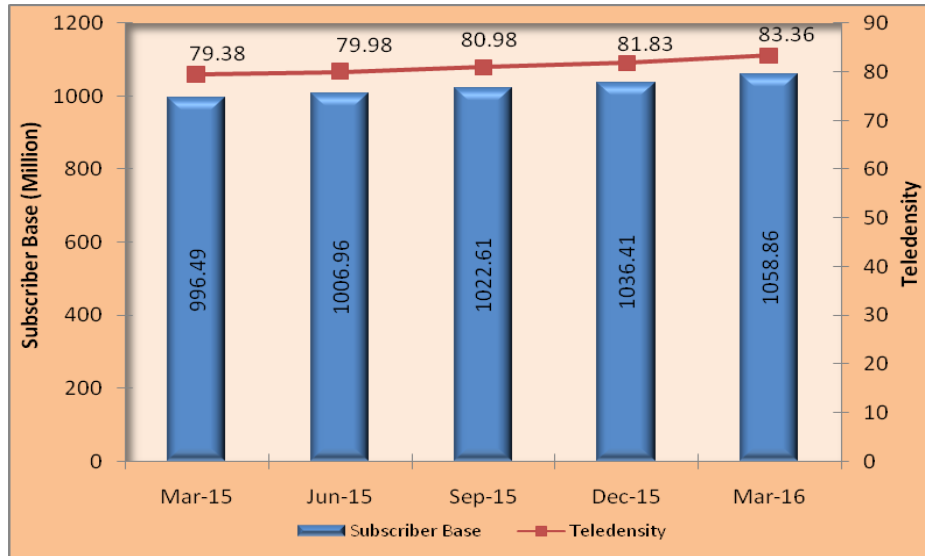
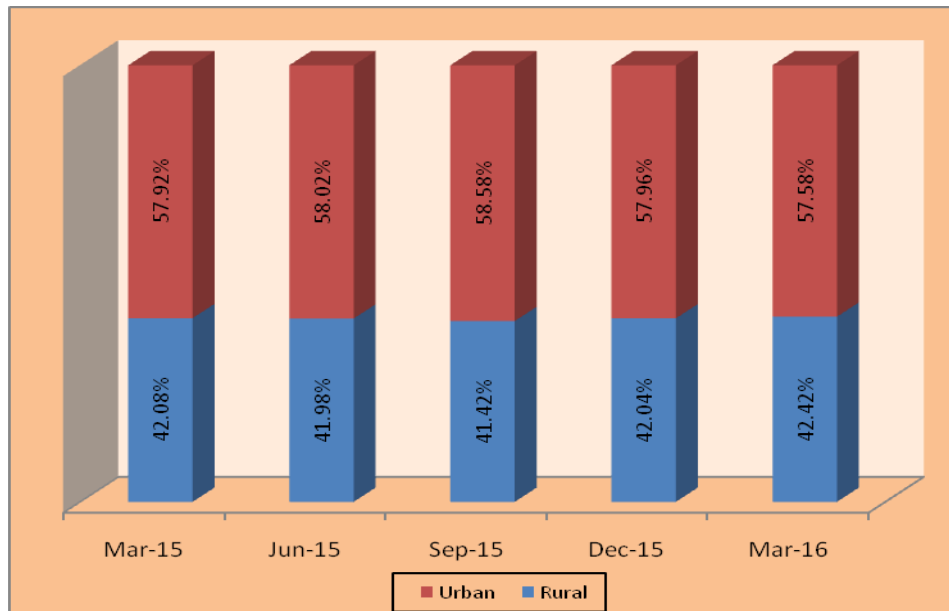


Table 1.1: Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Mar-15	419.31	577.18	48.37	148.61
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

- 1.2 Subscription in Urban Areas increased from 600.66 million at the end of Dec-15 to 609.69 million at the end of Mar-16, and the Urban Tele-density increased from 152.45 to 154.01 during the quarter.
- 1.3 Rural subscription increased from 435.75 million to 449.17 million and the Rural Tele-density also increased from 49.94 to 51.37 during the quarter.
- 1.4 The year-on-year (Y-O-Y) growth rate of Rural and Urban Tele-density from Mar-15 to Mar-16 is 6.21% and 3.63% respectively.

Chart 1.2: Market Share - Rural & Urban



- 1.5 Share of rural areas in total subscription has increased from 42.04% at the end of Dec-15 to 42.42% at the end of Mar-16. The year-on-year (Y-O-Y) growth of the market share in the rural areas for Mar-16 is 0.81%.

Chart 1.3: Composition of Access subscription - Wireline & Wireless

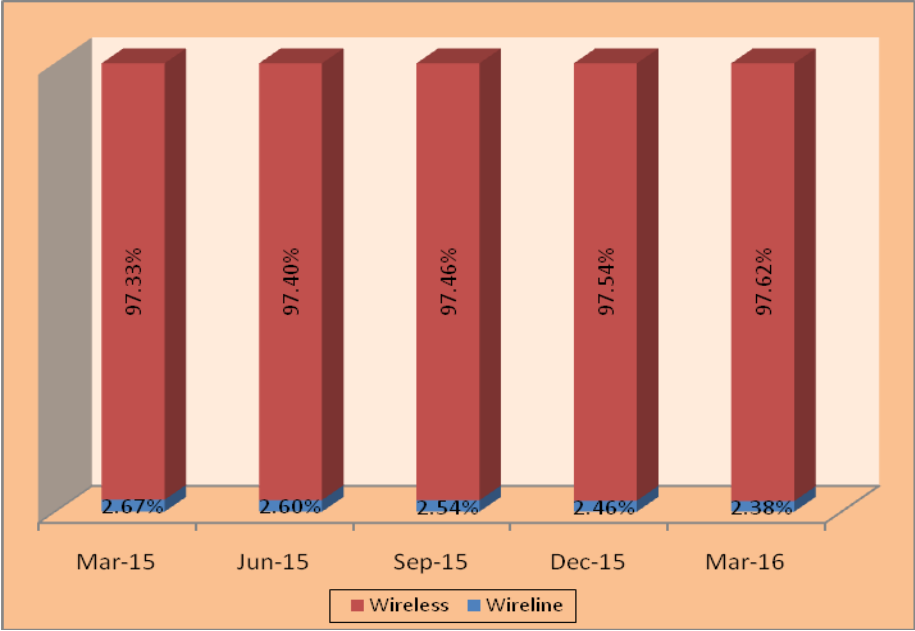


Chart 1.4: Composition of Rural-Urban Telephone Subscribers at the end of the quarter

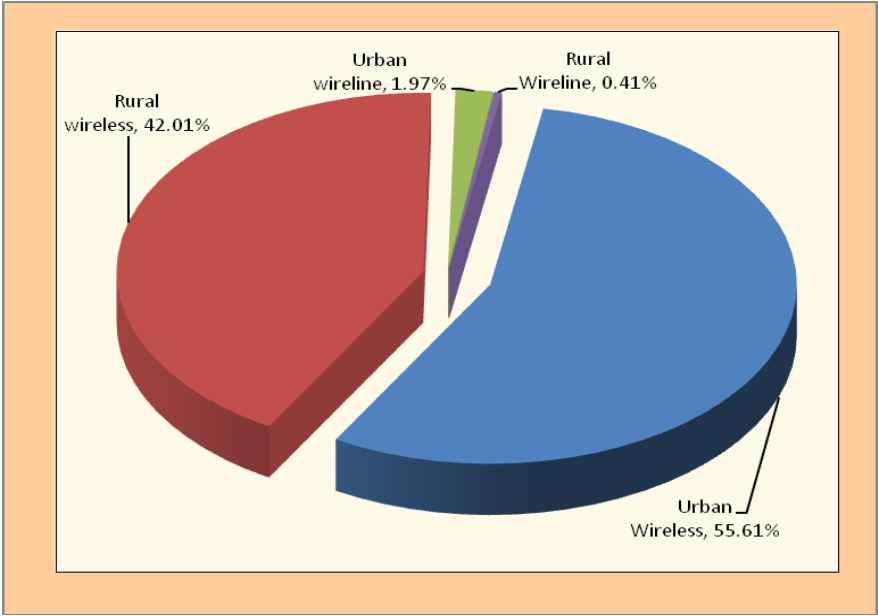


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

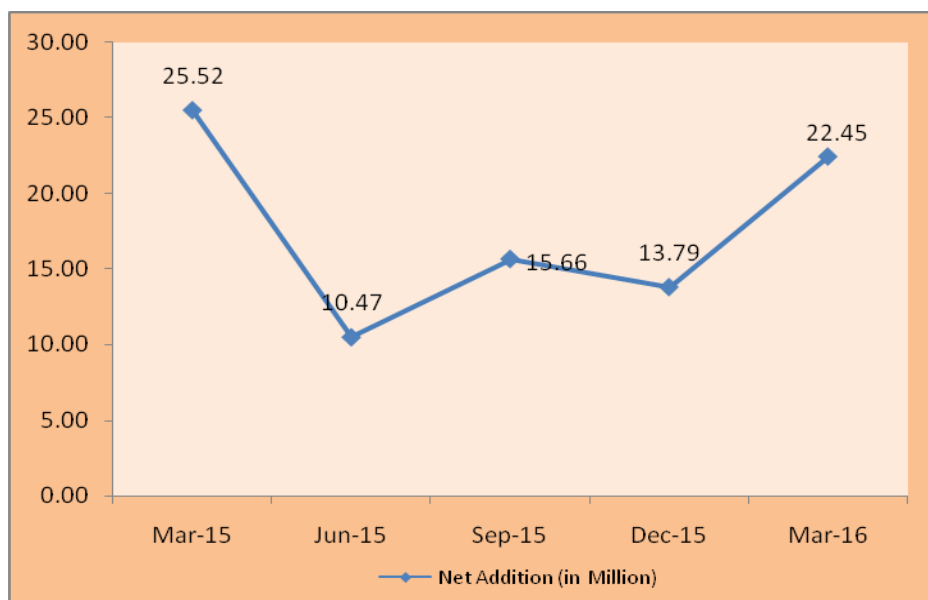
Service Area	Subscribers (million)			
	Dec-15	Mar-16	Net Additions	Rate of Growth (%)
Andhra Pradesh	76.35	76.39	0.03	0.04
Assam	17.85	18.69	0.84	4.70
Bihar	72.09	74.78	2.69	3.73
Delhi	51.03	50.42	-0.61	-1.19
Gujarat	61.91	63.67	1.76	2.85
Haryana	23.14	23.62	0.49	2.10
Himachal Pradesh	8.81	9.05	0.24	2.68
Jammu & Kashmir	9.77	9.94	0.17	1.71
Karnataka	63.72	63.59	-0.13	-0.21
Kerala	35.89	36.59	0.69	1.94
Madhya Pradesh	65.24	66.67	1.43	2.19
Maharashtra	83.35	86.09	2.74	3.29
Mumbai	34.60	34.84	0.24	0.68
North East	10.79	11.11	0.31	2.91
Orissa	27.86	29.37	1.50	5.40
Punjab	32.12	32.80	0.69	2.14
Rajasthan	59.81	60.83	1.02	1.71
T.N. (incl. Chennai)	83.25	83.98	0.73	0.88
U.P.(E)	89.12	92.74	3.62	4.06
U.P.(W)	55.75	58.01	2.26	4.06
Kolkata	25.35	25.93	0.58	2.30
West Bengal	48.60	49.75	1.15	2.36
All India	1,036.41	1,058.86	22.45	2.17

1.6 During the quarter, Orissa service area has recorded the highest growth rate of 5.40% followed by Assam service area (4.70%). Delhi and Karnataka service areas showed decline rate in subscriber base during the quarter ending Mar-16.

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

Service Area	Subscribers (million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	76.39	32.72	43.66	42.84
Assam	18.69	11.77	6.92	62.97
Bihar	74.78	43.21	31.57	57.78
Delhi	50.42	2.26	48.16	4.48
Gujarat	63.67	24.90	38.77	39.10
Haryana	23.62	11.40	12.23	48.24
Himachal Pradesh	9.05	5.94	3.11	65.62
Jammu & Kashmir	9.94	5.18	4.76	52.11
Karnataka	63.59	20.20	43.39	31.77
Kerala	36.59	16.62	19.96	45.44
Madhya Pradesh	66.67	31.27	35.40	46.90
Maharashtra	86.09	40.38	45.71	46.90
Mumbai	34.84	0.84	34.00	2.41
North East	11.11	5.57	5.54	50.11
Orissa	29.37	17.33	12.04	59.00
Punjab	32.80	12.49	20.32	38.07
Rajasthan	60.83	32.24	28.60	52.99
T.N. (incl. Chennai)	83.98	24.24	59.74	28.87
U.P.(E)	92.74	47.39	45.35	51.10
U.P.(W)	58.01	27.13	30.89	46.76
Kolkata	25.93	1.95	23.99	7.51
West Bengal	49.75	34.15	15.60	68.65
All India	1,058.86	449.17	609.69	42.42

Chart 1.5: Trend of Net Addition in Telephone Subscription



1.7 The net addition in telephone subscribers is 22.45 million in QE Mar-16 as against the net addition of 13.79 million in QE Dec-15.

Table 1.4 : Service Area wise Teledensity

Service Area	As on 31 st December, 2015			As on 31 st March, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	50.94	178.38	86.53	51.35	176.81	86.39
Assam	40.96	129.29	55.13	43.20	132.36	57.55
Bihar	35.05	161.67	52.51	36.41	166.15	54.31
Delhi	-	-	240.87	-	-	236.30
Gujarat	64.93	142.97	97.58	67.35	145.38	100.05
Haryana	62.98	122.46	84.42	64.90	122.89	85.88
H.P.	92.33	366.14	124.34	94.71	373.65	127.41
J&K	57.27	134.72	78.83	57.79	137.33	79.97
Karnataka	53.27	179.75	102.32	52.95	178.84	101.88
Kerala	61.49	215.33	100.47	62.23	220.32	102.27
Madhya Pradesh	39.94	124.28	63.03	41.48	124.28	64.18
Maharashtra*	63.39	132.55	96.83	65.43	134.67	98.98
Mumbai*						
North East	51.88	154.01	77.54	53.29	157.72	79.57

Service Area	As on 31 st December, 2015			As on 31 st March, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Orissa	46.54	154.78	65.68	49.55	159.75	69.09
Punjab	70.50	147.42	104.15	71.95	149.77	106.09
Rajasthan	57.04	161.05	82.17	58.21	161.99	83.30
T.N. (incl Chennai)	83.22	140.31	117.26	84.97	140.35	118.12
U.P.(E)*	40.67	140.54	63.50	42.20	145.41	65.83
U.P.(W)*						
Kolkata*	52.04	143.02	78.16	53.42	145.33	79.82
W.B.*						
All India	49.94	152.45	81.83	51.37	154.01	83.36

* 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 94.71, followed by Tamil Nadu service area (84.97). Bihar service area continues to have the lowest Rural Tele-density of 36.41.

Table 1.5 : Growth/Decline in Subscriber base

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Dec-15 (%)	Market Share in QE Mar-16 (%)
	Dec-15	Mar-16	Net Additions			
Bharti	246.89	254.90	8.01	3.25	23.82	24.07
Vodafone	193.69	198.04	4.34	2.24	18.69	18.70
IDEA	171.91	175.07	3.16	1.84	16.59	16.53
Reliance Comm. Group	102.05	103.58	1.52	1.49	9.85	9.78
BSNL	97.64	101.11	3.47	3.55	9.42	9.55
Aircel	85.63	87.09	1.45	1.70	8.26	8.22
Tata	62.43	61.82	-0.61	-0.98	6.02	5.84
Telenor	50.70	52.45	1.75	3.46	4.89	4.95
Sistema	8.06	7.75	-0.31	-3.90	0.78	0.73

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Dec-15 (%)	Market Share in QE Mar-16 (%)
	Dec-15	Mar-16	Net Additions			
MTNL	7.13	7.06	-0.07	-0.94	0.69	0.67
Videocon	6.96	6.56	-0.39	-5.67	0.67	0.62
Quadrant	3.30	3.42	0.12	3.61	0.32	0.32
Total	1036.41	1058.86	22.45	2.17	100	100

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 8.01 million subscribers. M/s Videocon recorded the maximum decline rate (5.67%) in subscriber base during the QE Mar-16.

Table 1.6 : Market Share of the service providers in total rural subscriber base – Q.E. Mar-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	254.90	121.98	47.85	27.27
Vodafone	198.04	106.02	53.53	23.70
IDEA	175.07	97.41	55.64	21.78
BSNL	101.11	33.10	32.74	7.40
Aircel	87.09	29.78	34.20	6.66
Reliance Comm. Group	103.58	25.32	24.45	5.66
Telenor	52.45	15.96	30.43	3.57
Tata	61.82	15.92	25.75	3.56
Sistema	7.75	1.65	21.30	0.37
Quadrant	3.42	0.13	3.93	0.03
MTNL	7.06	-	0.00	0.00
Videocon	6.56	-	0.00	0.00
Total	1,058.86	447.28	42.24	100

1.10 IDEA continues to remain the service provider with highest proportion of rural subscribers (55.64%), followed by Vodafone (53.53%) to their total subscribers.

Section B : Wireless Service

Table 1.7: List of Cellular Mobile (GSM & CDMA) Service Providers currently providing service [As on 31st March, 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 Services Pvt. Ltd.	MH, Gujarat, AP, UP(W), UP(E), Bihar
13	Videocon Telecommunications Ltd	Gujarat, Haryana, UP(W), UP(E), MP, Bihar

1.11 Complete list of licensed Cellular (GSM & CDMA) Service providers as on 31st March, 2016 is at Annexure -1.1.

1.12 Total Wireless (GSM+CDMA) subscriber base increased from 1,010.89 million at the end of Dec-15 to 1,033.63 million at the end of Mar-16, thereby showing a quarterly growth rate of 2.25%. During this quarter, net addition of 22.74 million subscribers was recorded. The year-on-year (Y-O-Y) growth of wireless subscribers is 6.57% for Q.E. Mar-16.

1.13 Wireless Teledensity increased from 79.82 at the end of Dec-15 to 81.38 at the end of Mar-16.

Chart 1.6: Wireless Subscriber Base and Teledensity

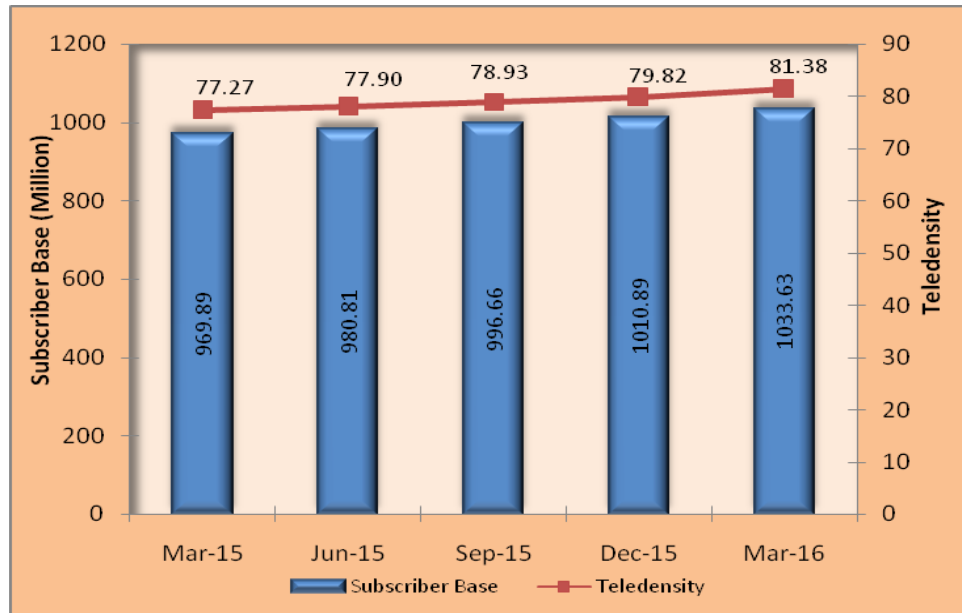


Table 1.8: Wireless Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Tele-density	
	Rural	Urban	Rural	Urban
Mar-15	414.18	555.71	47.78	143.08
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

1.14 The Rural Wireless subscribers increased from 431.22 million at the end of Dec-15 to 444.84 million at the end of Mar-16.

1.15 Rural and Urban subscriptions increased quarterly at the rate of 3.16% and 1.57% respectively during the QE Mar-16.

1.16 The share of rural wireless subscription increased from 42.66% to 43.04% in total wireless subscription in this quarter.

Chart 1.7: Wireless Market Share - Rural & Urban

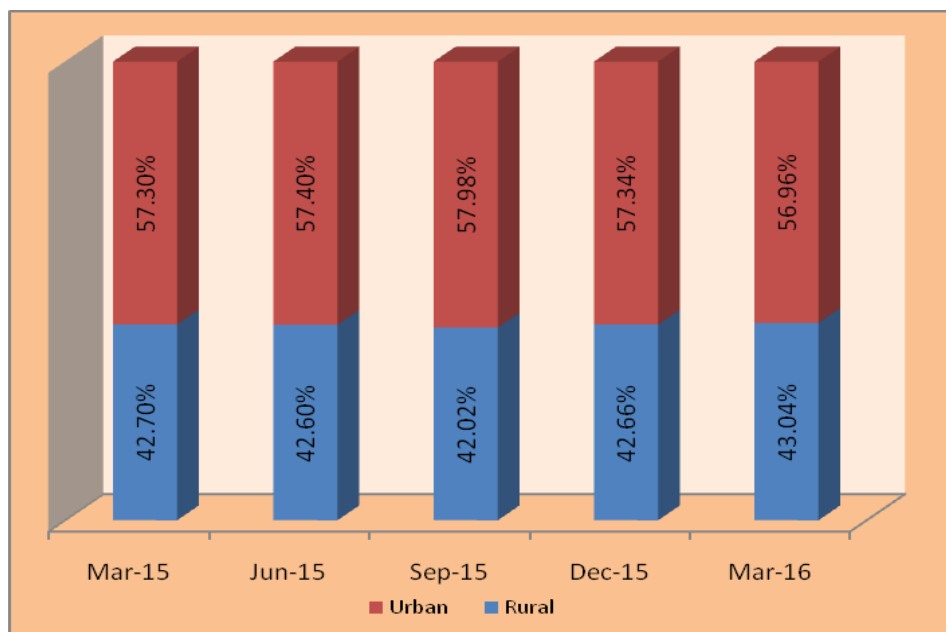


Table 1.9: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Dec-15 (%)	Market Share Mar-16 (%)
	Dec-15	Mar-16	Net Additions			
Bharti	243.29	251.24	7.95	3.27	24.07	24.31
Vodafone	193.60	197.95	4.35	2.25	19.15	19.15
IDEA	171.91	175.07	3.16	1.84	17.01	16.94
Reliance Comm. Group	100.89	102.41	1.52	1.50	9.98	9.91
Aircel	85.63	87.09	1.45	1.70	8.47	8.43
BSNL	82.51	86.35	3.84	4.65	8.16	8.35
Tata	60.73	60.10	-0.63	-1.04	6.01	5.81
Telenor	50.70	52.45	1.75	3.46	5.02	5.07
Sistema	8.01	7.69	-0.32	-3.94	0.79	0.74
Videocon	6.96	6.56	-0.39	-5.67	0.69	0.64
MTNL	3.61	3.56	-0.05	-1.48	0.36	0.34
Quadrant	3.05	3.16	0.12	3.82	0.30	0.31
Total	1,010.89	1,033.63	22.74	2.25	100	100

- 1.17 Bharti remains the leading service provider with 251.24 million wireless subscribers at the end of Mar-16, followed by Vodafone (197.95 million) and Idea (175.07 million).
- 1.18 In terms of net additions during the quarter ending Mar-16, Bharti (7.95 million) has added the highest number of subscribers, followed by Vodafone (4.35 million). M/s Videocon shown maximum decline rate (5.67%) in wireless subscribers during this quarter.

Table 1.10: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Dec-15	Mar-16	Net Additions	Rate of change (%)
Andhra Pradesh	74.59	74.65	0.06	0.09
Assam	17.69	18.53	0.84	4.75
Bihar	71.76	74.45	2.70	3.76
Delhi	47.87	47.24	-0.62	-1.30
Gujarat	60.48	62.26	1.78	2.95
Haryana	22.76	23.26	0.49	2.15
Himachal Pradesh	8.63	8.87	0.24	2.80
Jammu & Kashmir	9.64	9.81	0.17	1.74
Karnataka	61.45	61.33	-0.12	-0.19
Kerala	33.48	34.29	0.81	2.41
Madhya Pradesh	64.20	65.63	1.43	2.23
Maharashtra	81.35	84.10	2.75	3.39
Mumbai	31.55	31.80	0.24	0.77
North East	10.67	10.98	0.32	2.96
Orissa	27.56	29.06	1.51	5.46
Punjab	31.04	31.74	0.70	2.27
Rajasthan	59.02	60.04	1.03	1.74
T.N. (incl. Chennai)	80.58	81.34	0.76	0.95
U.P.(E)	88.62	92.24	3.62	4.08
U.P.(W)	55.31	57.58	2.27	4.11
Kolkata	24.43	25.02	0.59	2.42
West Bengal	48.21	49.38	1.17	2.42
All India	1,010.89	1,033.63	22.74	2.25

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

Service Area	Subscriber base (in million) – Mar-16			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	74.65	32.35	42.30	43.34
Assam	18.53	11.74	6.79	63.36
Bihar	74.45	43.12	31.33	57.92
Delhi	47.24	2.26	44.98	4.78
Gujarat	62.26	24.67	37.59	39.63
Haryana	23.26	11.31	11.94	48.65
Himachal Pradesh	8.87	5.82	3.05	65.63
Jammu & Kashmir	9.81	5.16	4.65	52.63
Karnataka	61.33	19.99	41.34	32.59
Kerala	34.29	15.17	19.12	44.25
Madhya Pradesh	65.63	31.14	34.48	47.45
Maharashtra	84.10	39.99	44.11	47.55
Mumbai	31.80	0.84	30.96	2.64
North East	10.98	5.54	5.44	50.44
Orissa	29.06	17.25	11.81	59.37
Punjab	31.74	12.20	19.54	38.44
Rajasthan	60.04	32.09	27.95	53.44
T.N. (incl. Chennai)	81.34	23.83	57.51	29.30
U.P.(E)	92.24	47.32	44.92	51.30
U.P.(W)	57.58	27.08	30.50	47.03
Kolkata	25.02	1.79	23.24	7.14
West Bengal	49.38	34.15	15.23	69.16
All India	1,033.63	444.84	588.79	43.04

Table 1.12 : Service Area wise Wireless Tele-density

Service Area	As on 31 st December, 2015			As on 31 st March, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	50.33	172.79	84.52	50.77	171.28	84.43
Assam	40.85	126.72	54.63	43.09	129.84	57.06
Bihar	34.97	160.38	52.27	36.33	164.87	54.07
Delhi	-	-	225.97	-	-	221.43
Gujarat	64.29	138.47	95.32	66.74	140.94	97.84
Haryana	62.49	119.53	83.05	64.44	120.00	84.54
H.P.	90.47	358.86	121.85	92.93	366.45	125.00
J&K	57.07	131.43	77.77	57.59	134.06	78.91
Karnataka	52.67	171.29	98.67	52.39	170.42	98.26
Kerala	55.70	205.75	93.72	56.80	211.00	95.85
M.P.	39.76	121.06	62.02	41.31	121.08	63.18
Maharashtra*	62.76	124.66	92.68	64.82	126.84	94.86
Mumbai*						
North East	51.62	151.20	76.63	53.04	154.93	78.68
Orissa	46.33	151.66	64.96	49.34	156.66	68.37
Punjab	68.78	141.66	100.66	70.32	144.05	102.67
Rajasthan	56.77	157.42	81.09	57.95	158.36	82.22
Tamil Nadu (incl. Chennai)	81.74	135.00	113.50	83.53	135.11	114.41
U.P.(E)*	40.60	138.98	63.09	42.13	143.87	65.42
U.P.(W)*						
Kolkata*	51.79	138.84	76.79	53.18	141.23	78.48
West Bengal*						
All India	49.43	147.12	79.82	50.88	148.73	81.38

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

Notes:

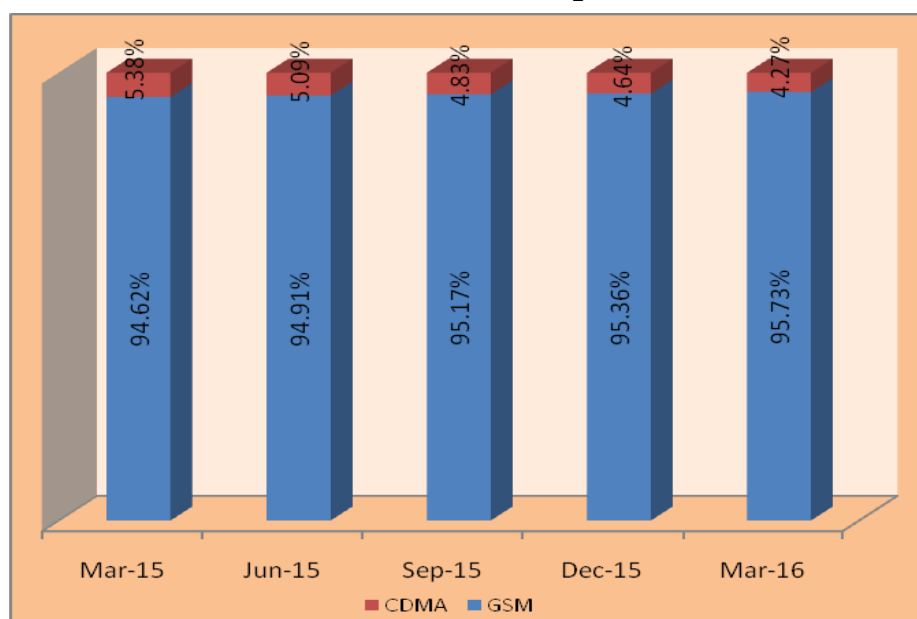
1. Teledensity figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. Delhi service area, apart from the State of Delhi, includes 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

Service Provider	Subscribers at the end of Mar-16 (in millions)	Rural Subscribers (in millions)		% of Rural subscribers in total		Market Share of Rural Subscribers (%)	
		Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16
Bharti	251.24	117.49	121.98	48.29	48.55	27.25	27.42
Vodafone	197.95	102.74	106.02	53.07	53.56	23.82	23.83
IDEA	175.07	94.45	97.41	54.94	55.64	21.90	21.90
Aircel	87.09	29.38	29.78	34.31	34.20	6.81	6.69
BSNL	86.35	27.53	28.90	33.37	33.47	6.39	6.50
Reliance Comm. Group	102.41	24.65	25.32	24.43	24.72	5.72	5.69
Telenor	52.45	15.67	15.96	30.91	30.43	3.63	3.59
Tata	60.10	15.64	15.87	25.75	26.41	3.63	3.57
Videocon	6.56	1.87	1.89	26.82	28.79	0.43	0.42
Sistema	7.69	1.73	1.64	21.56	21.33	0.40	0.37
Quadrant	3.16	0.08	0.08	2.48	2.43	0.02	0.02
MTNL	3.56	0.00	0.00	0.00	0.00	0.00	0.00
Total	1,033.63	431.22	444.84	42.66	43.04	100	100

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 Mar-16, GSM subscribers constituted 95.73% share of the wireless market as compare to 95.36% in previous quarter.

GSM Services

1.21 The GSM subscribers increased from 963.99 million at the end of Dec-15 to 989.54 million at the end of Mar-16, showing a quarterly growth of 2.65%. Bharti with 251.24 million subscribers continues to be the largest GSM mobile operator, followed by Vodafone (197.95 million).

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

Service Provider	Dec-15		Mar-16		Net Additions (in million)
	No of Subscribers (in millions)	Market Share (%)	No of Subscribers (in millions)	Market Share (%)	
Bharti	243.29	25.24	251.24	25.39	7.95
Vodafone	193.60	20.08	197.95	20.00	4.35
Idea	171.91	17.83	175.07	17.69	3.16
BSNL	81.30	8.43	85.20	8.61	3.89
Reliance Comm. Group	75.18	7.80	78.25	7.91	3.07
Aircel	85.63	8.88	87.09	8.80	1.45
Tata	48.85	5.07	49.01	4.95	0.16
Telenor	50.70	5.26	52.45	5.30	1.75
Videocon	6.96	0.72	6.56	0.66	-0.39
MTNL	3.53	0.37	3.56	0.36	0.03
Quadrant	3.04	0.32	3.16	0.32	0.12
Total	963.99	100	989.54	100	25.55

1.22 There has been a net increase of 25.55 million GSM subscribers during the quarter ending Mar-16.

CDMA Services

1.23 The CDMA subscriber base declined from 46.90 million at the end of Dec-15 to 44.09 million at the end of Mar-16, thereby showing a decline rate of 2.81%. Reliance Communications Group with 24.16 million subscribers continues to be the largest CDMA mobile operator.

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

Service Provider	Dec-15		Mar-16		Net Addition/ Decline (in million)
	No of Subscribers (in million)	Market Share (%)	No of Subscribers (in million)	Market Share (%)	
Reliance Comm. Group	25.71	54.83	24.16	54.79	-1.55
Tata	11.88	25.33	11.09	25.15	-0.79
Sistema	8.01	17.07	7.69	17.44	-0.32
BSNL	1.21	2.57	1.15	2.61	-0.06
Quadrant	0.003	0.01	0.002	0.004	-0.002
MTNL	0.09	0.19	0.00	0.00	-0.09
Total	46.90	100	44.09	100	-2.81

1.24 There has been a net decline of 2.81 million CDMA subscribers during the quarter ending Mar-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 31st March, 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 25.52 million at the end of Dec-15 to 25.22 million at the end of Mar-16 with quarterly declining rate of 1.15%. Overall Wireline Teledensity is 1.99 at the end of Mar-16 as against 2.01 of the previous quarter.

1.27 Rural subscriber base has shown decline of 4.55%, from 4.53 Million at the end of Dec-15 to 4.32 Million at the end of Mar-16. During the same period, Urban subscription also recorded decline of 0.42%, from 20.99 million to 20.90 million.

Chart 1.9: Wireline Subscriber Base and Teledensity

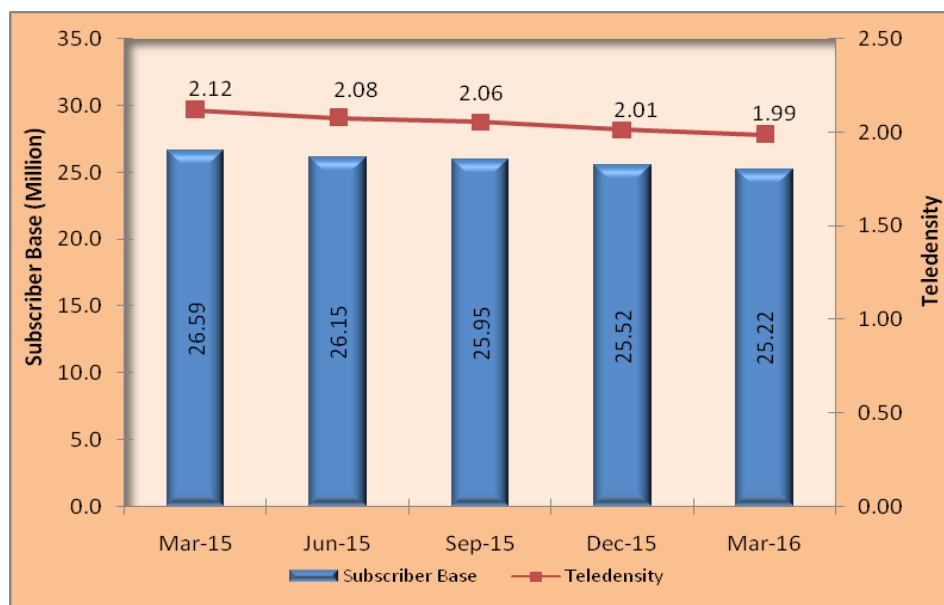


Table 1.17 : Wireline Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Mar-15	5.12	21.47	0.59	5.53
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

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

Service Provider	Subscriber Base (million) Mar-16			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	4.20	10.56	14.76	28.48
Bharti	--	3.66	3.66	--
MTNL	--	3.50	3.50	--
Tata	0.05	1.67	1.72	4.33
Reliance	0.002	1.17	1.17	0.10
Quadrant	0.06	0.20	0.25	22.69
Vodafone	--	0.09	0.09	--
Sistema	0.01	0.05	0.06	17.20
Total	4.32	20.90	25.22	17.14

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

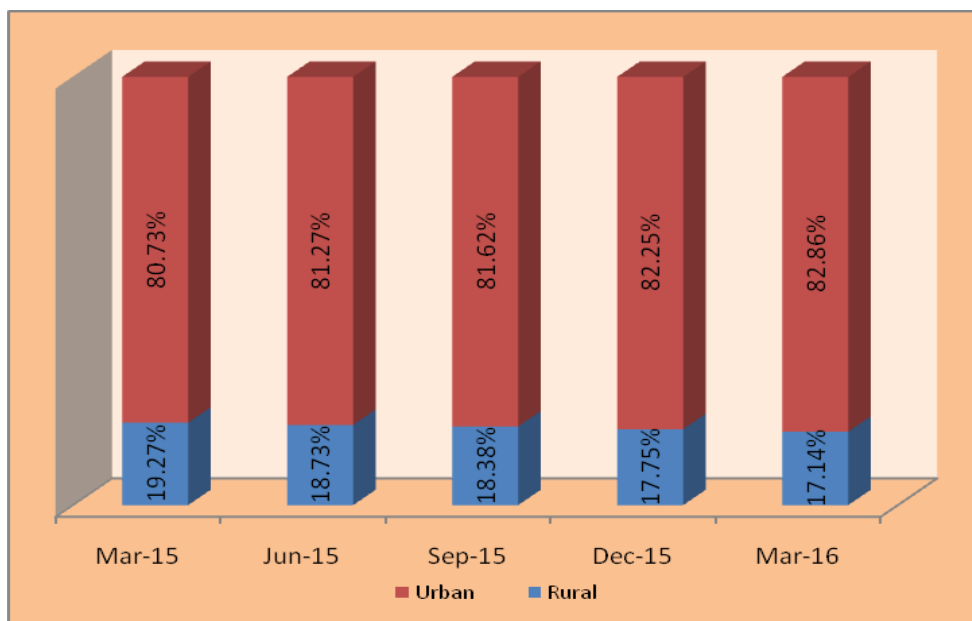


Table 1.19 : Service Provider wise growth in Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share- Dec-15 (%)	Market share- Mar-16 (%)
	Dec-15	Mar-16	Net Addition			
BSNL	15.13	14.76	-0.372	-2.46	59.31	58.52
Bharti	3.60	3.66	0.066	1.84	14.10	14.52
MTNL	3.52	3.50	-0.014	-0.39	13.79	13.89
Tata	1.70	1.72	0.019	1.12	6.68	6.83
Reliance	1.16	1.17	0.005	0.46	4.56	4.64
Quadrant	0.25	0.25	0.003	1.14	0.98	1.00
Vodafone	0.09	0.09	-0.003	-3.49	0.37	0.36
Sistema	0.06	0.06	0.001	2.07	0.23	0.23
Total	25.52	25.22	-0.294	-1.15	100	100

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)

Service Area	Dec-15	Mar-16	Net Additions (in million)	Rate of Change (%)
Andhra Pradesh	1.77	1.74	-0.032	-1.79
Assam	0.16	0.16	-0.002	-1.47
Bihar	0.34	0.33	-0.004	-1.25
Delhi	3.16	3.17	0.015	0.46
Gujarat	1.43	1.41	-0.021	-1.46
Haryana	0.37	0.37	-0.005	-1.40
Himachal Pradesh	0.18	0.17	-0.006	-3.23
Jammu & Kashmir	0.13	0.13	0.000	-0.33
Karnataka	2.27	2.26	-0.017	-0.73
Kerala	2.41	2.30	-0.114	-4.72
Madhya Pradesh	1.04	1.04	-0.002	-0.18
Maharashtra	2.00	1.99	-0.014	-0.68
Mumbai	3.05	3.04	-0.008	-0.26
North East	0.13	0.12	-0.001	-1.12
Orissa	0.31	0.31	-0.002	-0.67
Punjab	1.08	1.06	-0.016	-1.45
Rajasthan	0.79	0.79	-0.002	-0.23
T.N. (incl. Chennai)	2.67	2.64	-0.030	-1.13
U.P.(E)	0.50	0.50	0.002	0.35
U.P.(W)	0.43	0.43	-0.007	-1.67
Kolkata	0.92	0.91	-0.008	-0.86
W.B.	0.39	0.37	-0.020	-5.08
All India	25.52	25.22	-0.294	-1.15

1.29 Only Delhi and U.P.(East) service areas showed positive growth in wireline subscriber base during QE Mar-16. All other service areas showed decline rate during the same period.

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

Service Area	Total Subscribers	Rural Subscribers	Urban Subscribers	% of Rural Subscribers
Andhra Pradesh	1.74	0.37	1.37	21.33
Assam	0.16	0.03	0.13	18.20
Bihar	0.33	0.09	0.24	26.69
Delhi	3.17	0.00	3.17	0.00
Gujarat	1.41	0.22	1.18	15.95
Haryana	0.37	0.08	0.29	22.19
Himachal Pradesh	0.17	0.11	0.06	65.02
Jammu & Kashmir	0.13	0.02	0.11	13.56
Karnataka	2.26	0.21	2.04	9.48
Kerala	2.30	1.45	0.85	63.21
Madhya Pradesh	1.04	0.13	0.91	12.25
Maharashtra	1.99	0.39	1.60	19.56
Mumbai	3.04	0.00	3.04	0.00
North East	0.12	0.03	0.10	21.13
Orissa	0.31	0.07	0.23	23.96
Punjab	1.06	0.28	0.78	26.74
Rajasthan	0.79	0.15	0.64	18.48
T.N. (incl. Chennai)	2.64	0.41	2.23	15.54
U.P.(E)	0.50	0.07	0.43	14.61
U.P.(W)	0.43	0.05	0.38	10.79
Kolkata	0.91	0.00	0.91	0.00
W.B.	0.37	0.16	0.21	43.39
All India	25.22	4.32	20.90	17.14

Table 1.22: Service Area wise Wireline Teledensity

Service Area	As on 31 st December, 2015			As on 31 st March, 2016		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.61	5.59	2.00	0.58	5.53	1.96
Assam	0.11	2.56	0.50	0.11	2.51	0.49
Bihar	0.08	1.29	0.24	0.07	1.28	0.24
Delhi	-	-	14.90	-	-	14.86
Gujarat	0.64	4.50	2.25	0.61	4.44	2.21
Haryana	0.48	2.93	1.37	0.47	2.89	1.34
Himachal Pradesh	1.86	7.29	2.50	1.78	7.19	2.41
Jammu & Kashmir	0.20	3.29	1.06	0.20	3.27	1.06
Karnataka	0.60	8.46	3.65	0.56	8.42	3.61
Kerala	5.79	9.58	6.75	5.44	9.33	6.42
Madhya Pradesh	0.17	3.22	1.01	0.17	3.21	1.00
Maharashtra*	0.63	7.90	4.14	0.62	7.84	4.11
Mumbai*						
North East	0.26	2.81	0.90	0.25	2.79	0.89
Orissa	0.21	3.12	0.73	0.21	3.09	0.72
Punjab	1.72	5.77	3.49	1.63	5.72	3.43
Rajasthan	0.27	3.64	1.08	0.26	3.63	1.08
Tamil Nadu (incl. Chennai)	1.48	5.31	3.76	1.44	5.24	3.71
U.P.(E)*	0.07	1.56	0.41	0.07	1.55	0.41
U.P.(W)*						
Kolkata*	0.25	4.18	1.38	0.24	4.10	1.35
W.B.*						
All India	0.52	5.33	2.01	0.49	5.28	1.99

* 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 6.18 lakh at the end of Dec-15 to 5.89 lakh at the end of Mar-16. Detailed table of service provider wise PCOs is available at Annexure -1.4.

Chart 1.11: Trend of Number of PCOs

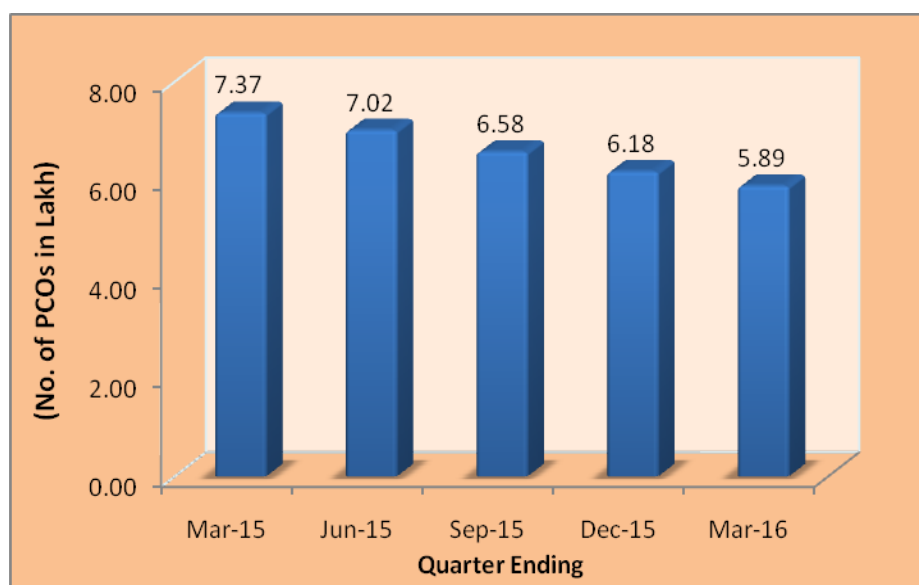


Table 1.23 : Rate of change & Market share of PCOs

Service Provider	Dec-15	Mar-16	Rate of change (%)	Market share (%) (Mar-16)
BSNL	3.80	3.56	-6.28	60.42
MTNL	1.35	1.34	-0.84	22.75
Bharti	0.18	0.17	-4.78	2.95
Quadrant (HFCL)	0.02	0.02	-6.97	0.35
Sistema	0.10	0.10	-2.28	1.67
Tata	0.38	0.40	4.95	6.74
Reliance	0.35	0.30	-13.68	5.11
Vodafone	-	-	-	-
Total	6.18	5.89	-4.72	100

1.31 Number of PCOs continued shows declining trend, however M/s Tata showed positive growth in number of their PCOs during the quarter ending Mar-16. This quarter has recorded a overall decline of 4.72%. The year-on-year (Y-O-Y) decline rate over the same quarter of the last year is 20.07%.

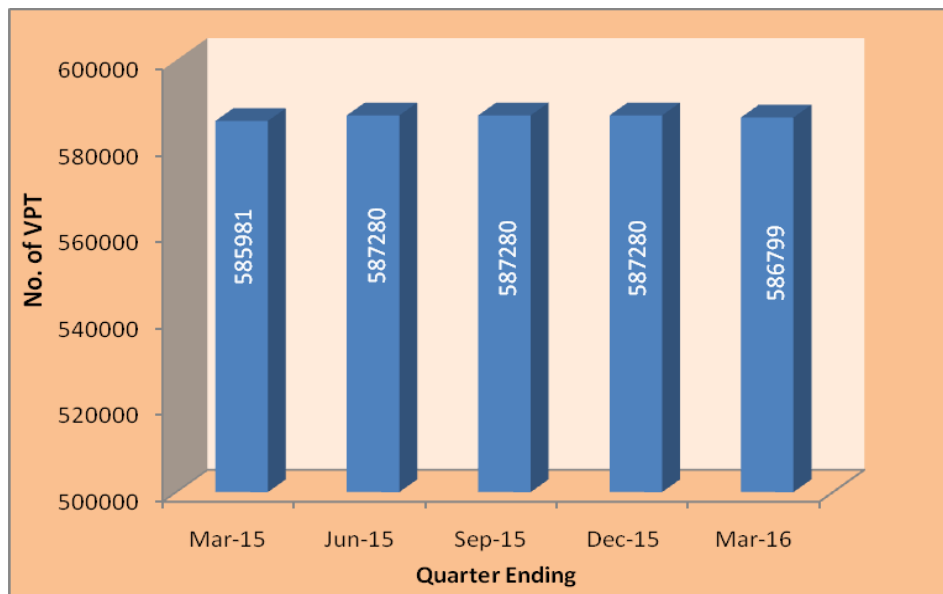
Village Public Telephones (VPTs)

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 5,87,280 at the end of Dec-15 to 5,86,799 at the end of Mar-16 with a quaterly decline rate of 0.08%.

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 at available Annexure -1.5.

Chart 1.12: Growth/decline Trend in VPTs



Section D: Internet Service

1.35 This section summarizes information submitted by 138 operators for the quarter ending Mar-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 331.66 million at the end of Dec-15 to 342.65 million at the end of Mar-16 with quarterly growth rate of 3.31%.

1.37 Wired Internet subscribers increased from 19.98 million at the end of Dec-15 to 20.44 million at the end of Mar-16 with quarterly growth of 2.34%, and Wireless Internet subscribers increased from 311.69 million at the end of Dec-15 to 322.21 million at the end of Mar-16 with quarterly growth rate of 3.38%.

1.38 Number of Broadband subscribers increased from 136.53 million at the end of Dec-15 to 149.75 million at the end of Mar-16. The number of Narrowband subscribers declined from 195.13 million at the end of Dec-15 to 192.90 million at the end of Mar-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			
	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16
Broadband	16.51	16.98	0.487	0.525	119.53	132.24	120.02	132.77	136.53	149.75
Narrowband	3.47	3.46	0.037	0.028	191.63	189.41	191.67	189.44	195.13	192.90
Total	19.98	20.44	0.525	0.553	311.16	321.66	311.69	322.21	331.66	342.65

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

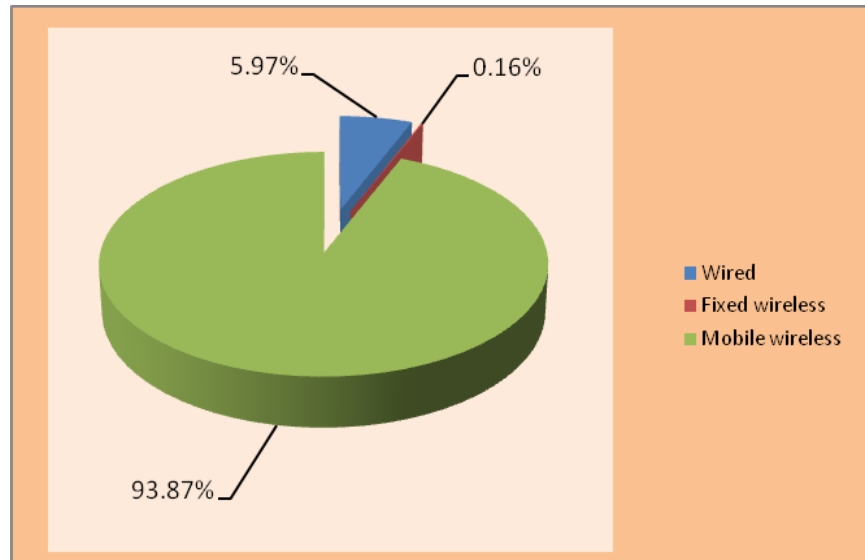
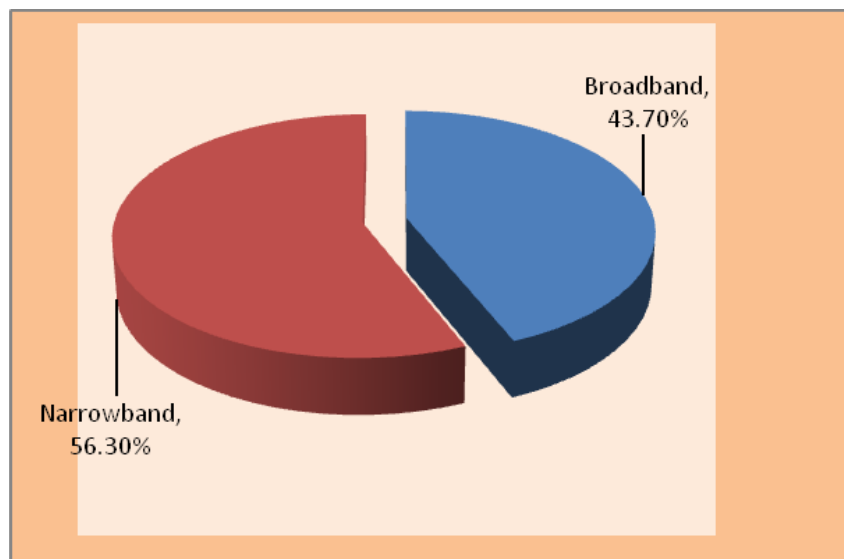


Chart 1.14 : Composition of Broadband & Narrowband subscription



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 (Mar-16)		Broadband (Mar-16)		Total Internet (Dec-15)		Total Internet (Mar-16)	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	5.70	7.99	3.43	7.74	9.05	15.38	9.13	15.73
Assam	2.37	1.56	0.84	1.98	3.38	2.79	3.21	3.54
Bihar	6.92	6.89	1.95	3.87	8.43	10.00	8.86	10.76
Delhi	0.49	8.13	0.45	11.53	0.95	18.72	0.93	19.66
Gujarat	4.11	7.23	1.95	7.81	6.16	15.00	6.06	15.04
Haryana	2.08	2.27	0.89	2.32	2.96	4.50	2.97	4.59
Himachal Pradesh	1.02	0.82	0.74	0.46	1.73	1.15	1.76	1.28
Jammu & Kashmir	1.16	1.10	0.67	0.68	1.84	1.65	1.83	1.79
Karnataka	3.62	6.83	1.92	10.26	5.85	16.33	5.54	17.09
Kerala	2.70	3.76	2.87	5.27	6.14	8.25	5.57	9.02
Kolkata	0.25	4.62	0.30	4.10	0.55	8.48	0.55	8.72
Madhya Pradesh	5.18	7.39	1.07	6.78	6.37	13.08	6.24	14.17
Maharashtra	6.59	9.08	3.18	10.64	9.70	18.82	9.76	19.72
Mumbai	0.16	6.60	0.12	8.77	0.30	15.31	0.28	15.37
North East	1.35	1.11	0.62	0.99	1.96	1.74	1.97	2.10
Orissa	2.72	2.68	0.65	2.25	3.60	4.25	3.37	4.93
Punjab	3.59	4.68	1.12	4.07	4.56	8.45	4.71	8.75
Rajasthan	5.16	6.38	1.85	3.87	7.28	9.58	7.01	10.25
Tamil Nadu	3.53	9.59	3.32	11.56	6.86	20.41	6.86	21.16
Uttar Pradesh(East)	9.40	7.26	1.81	4.01	10.98	10.86	11.21	11.27
Uttar Pradesh(West)	5.15	6.04	1.32	4.00	6.15	9.48	6.48	10.04
West Bengal	5.43	2.24	2.21	3.51	7.36	5.27	7.64	5.75
Total	78.65	114.25	33.29	116.47	112.16	219.50	111.94	230.71

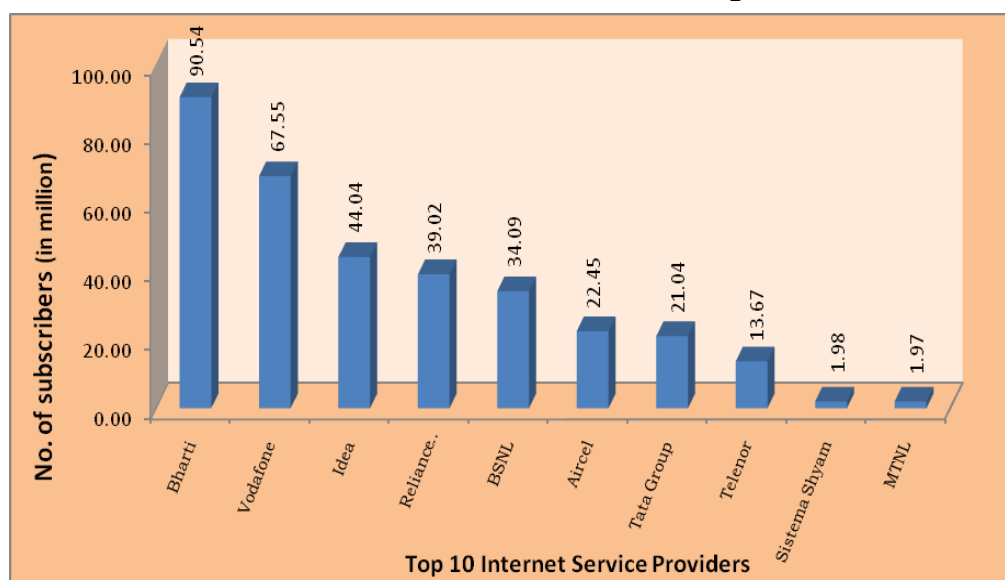
Table 1.26: Internet Subscriber Base and Market Share of top 10 Service Providers – Mar-16

S.No	ISP	No. of Subscribers	Share (%)
1	Bharti	90537790	26.42
2	Vodafone	67552749	19.71
3	Idea	44035828	12.85
4	Reliance Communication Group	39017002	11.39
5	BSNL	34091621	9.95
6	Aircel	22447287	6.55
7	Tata Group	21041242	6.14
8	Telenor	13671479	3.99
9	Sistema Shyam	1981489	0.58
10	MTNL	1967592	0.57
	Total of Top 10 ISPs	336344079	98.16
	Others	6310671	1.84
	Grand Total	342654750	100

1.41 Bharti holds the top position with 26.42% of market share of internet subscribers followed by Vodafone with 19.71%. Top 10 Service Providers together hold 98.16% of total internet subscriber base at the QE Mar-16. Detailed table of number of subscriber base of all the service providers is available at Annexure-1.6.

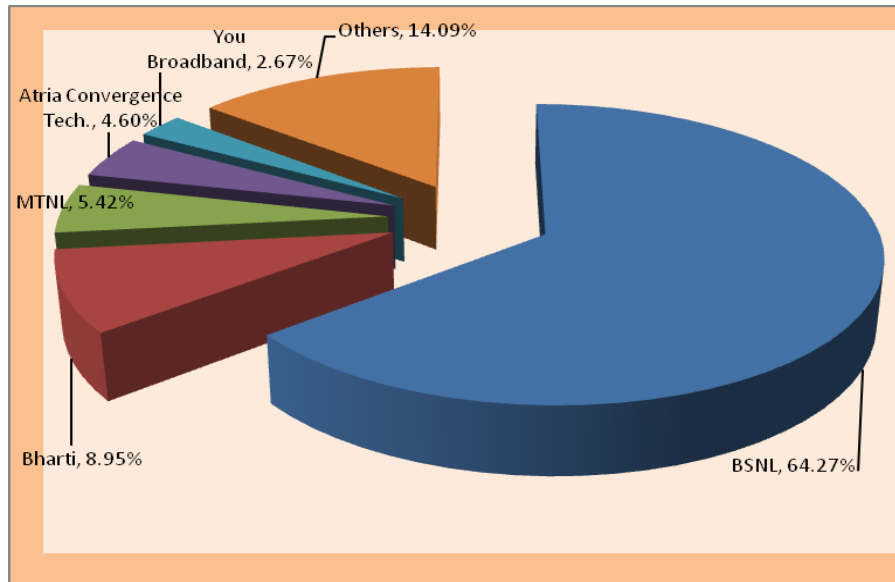
1.42 The following chart depicts the subscriber base of top ten ISPs in the QE Mar-16.

Chart 1.15 : Subscriber base of top ten ISPs



1.43 In wired internet segment, BSNL holds 64.27% market share with 13.14 million subscribers, followed by Bharti with 1.83 million subscribers. Total number of wired internet subscriber is 20.44 million at the end of Mar-16.

Chart 1.16 : Composition of Wired Internet subscribers



1.44 In wireless internet segment, Bharti holds 27.53% market share with 88.71 million subscribers followed by Vodafone (67.55 million internet subscribers).

Chart 1.17 : Composition of Wireless Internet subscription

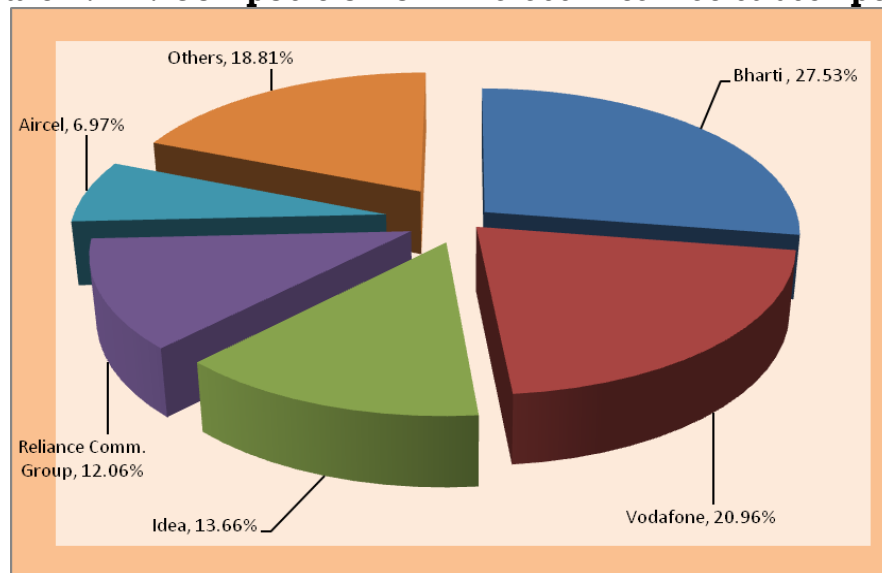


Chart 1.18 : Technology trend for Wireless Internet Access – Mar-16

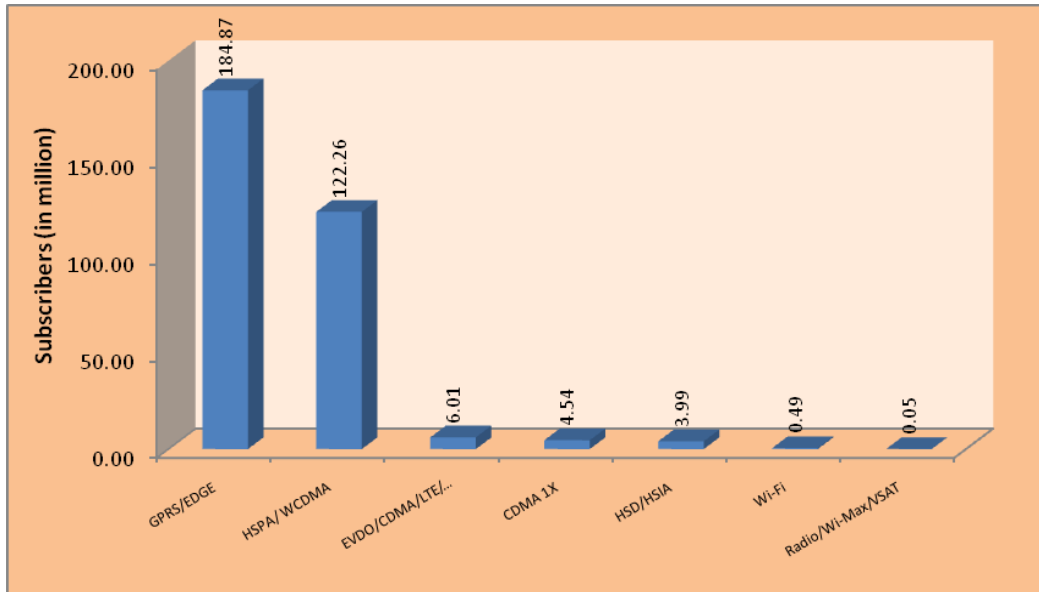
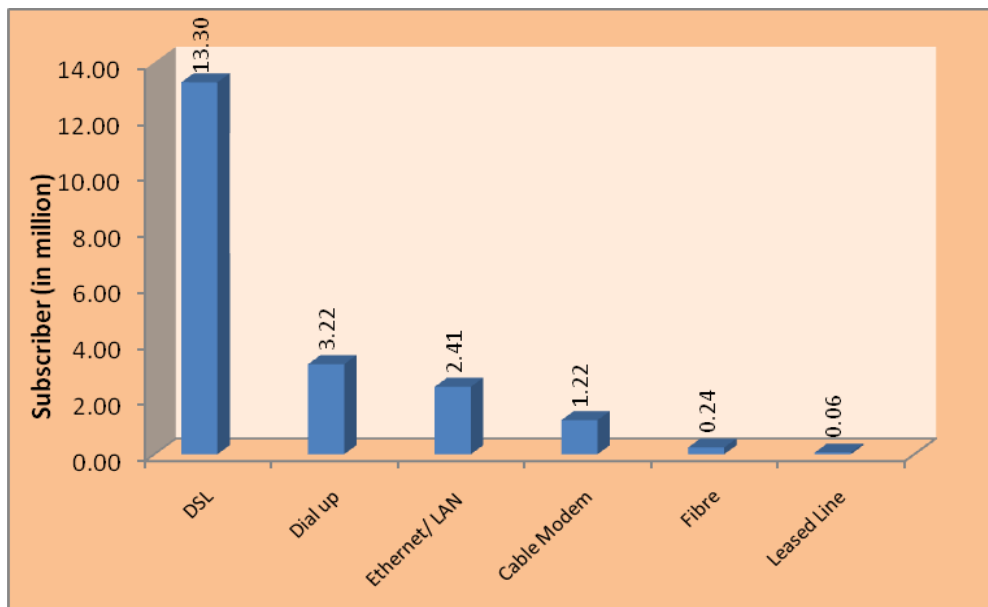


Chart 1.19 : Technology trend for Wired Internet Access – Mar-16



1.45 Top five service areas in terms of internet subscriptions (wired + wireless) are Maharashtra (29.48 million), Tamil Nadu including Chennai (28.01 million), Andhra Pradesh (24.85 million), Karnataka (22.63 million) and U.P.(E) (22.46 million)

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

Service Area	Internet Subscribers (in million)			Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	9.13	15.73	24.85	14.32	63.68	28.11
Assam	3.21	3.54	6.75	11.79	67.70	20.79
Bihar	8.86	10.76	19.63	7.47	56.63	14.25
Delhi	-	-	20.59	-	-	96.51
Gujarat	6.06	15.04	21.10	16.39	56.41	33.16
Haryana	2.97	4.59	7.56	16.90	46.12	27.47
Himachal Pradesh	1.76	1.28	3.04	28.05	153.48	42.76
Jammu & Kashmir	1.83	1.79	3.62	20.46	51.59	29.14
Karnataka	5.54	17.09	22.63	14.52	70.43	36.25
Kerala	5.57	9.02	14.59	20.84	99.60	40.79
Madhya Pradesh	6.24	14.17	20.42	8.28	49.76	19.65
Maharashtra	9.76	19.72	29.48	15.95	59.28	36.94
Mumbai	0.28	15.37	15.65			
North East	1.97	2.10	4.06	18.82	59.71	29.11
Orissa	3.37	4.93	8.30	9.63	65.47	19.53
Punjab	4.71	8.75	13.46	27.15	64.50	43.54
Rajasthan	7.01	10.25	17.26	12.66	58.05	23.63
Tamil Nadu	6.86	21.16	28.01	24.03	49.70	39.40
UP (East)	11.21	11.27	22.48	10.02	40.65	17.03
UP (West)	6.48	10.04	16.52			
Kolkata	0.55	8.72	9.26	12.12	53.11	23.89
West Bengal	7.64	5.75	13.39			
Total	111.94	230.71	342.65	12.80	58.28	26.98

* 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.

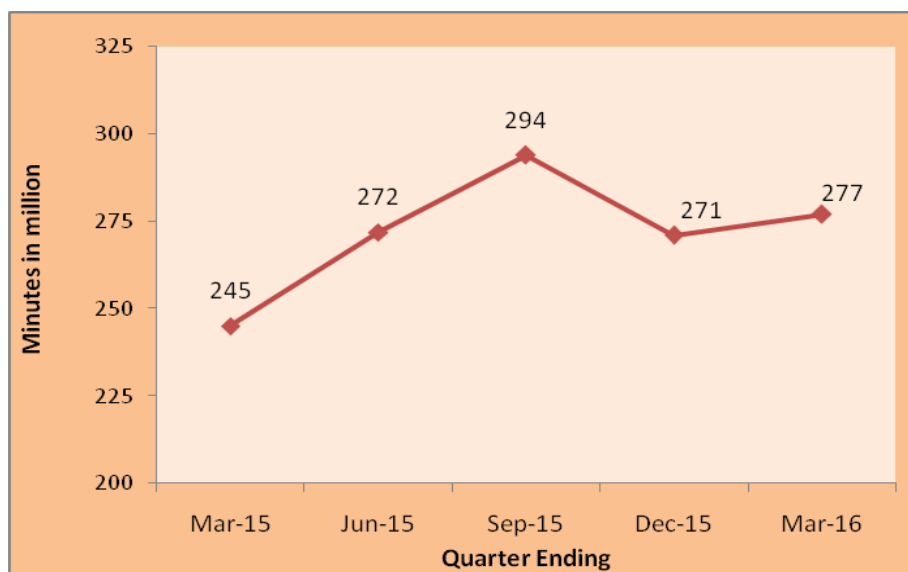
ISP Connectivity

1.46 The International Internet bandwidth owned by various service providers is reported to be 2070 Gbps during the quarter ending Mar-16 as compared to 1864 Gbps during the previous quarter.

Internet Telephony

1.47 As per the reports received from 17 service providers, providing Internet Telephony services, the total outgoing minutes of usage for internet telephony is 277 million during the Q.E. Mar-16. List of Internet Telephony Service providers is available at Annexure-1.7.

Chart 1.20 : Trends in MOU for Internet Telephony

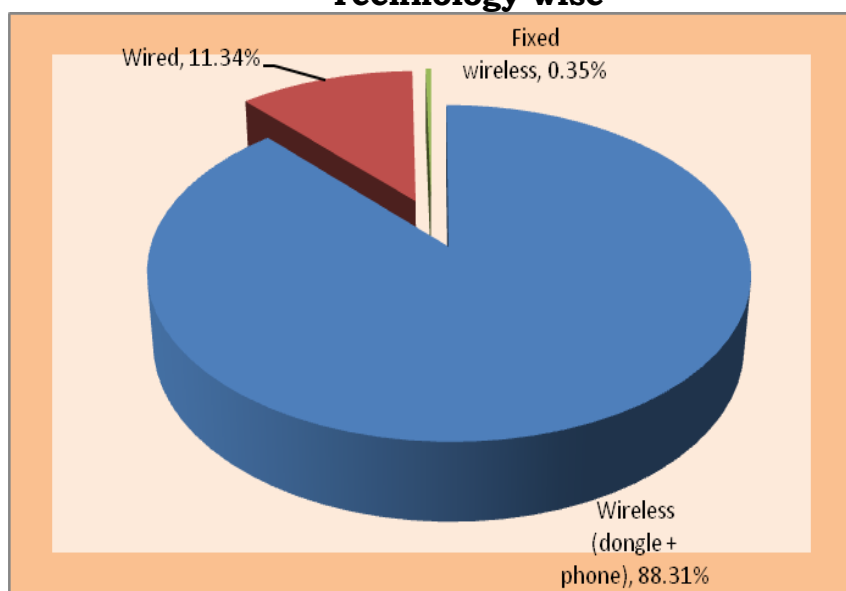


Part-II : Broadband Service (Download Speed \geq 512 Kbps)

1.48 The total number of broadband subscribers increased from 136.53 million at the end of Dec-15 to 149.75 million at the end of Mar-16. Out of which wired broadband subscribers are 16.98 million and wireless broadband subscribers are 132.77 million.

- 1.49 Top five broadband (wired+wireless) service providers in term of subscribers are Bharti (38.47 million), Vodafone (27.76 million), Idea (22.92 million), BSNL (20.35 million), and Reliance Communications Group (15.57 million).
- 1.50 In wired broadband segment, BSNL holds 58.55% market share with 9.94 million subscribers followed by Bharti with 1.74 million and MTNL with 1.11 million subscribers.
- 1.51 In wireless broadband segment, Bharti holds 27.67% market share with 36.74 million subscribers followed by Vodafone with 27.75 million (20.90%) and Idea Cellular with 22.92 million subscribers.
- 1.52 Top five service areas in respect of broadband subscriptions are Tamil Nadu including Chennai (14.89 million), Maharashtra (13.82 million), Karnataka (12.18 million), Delhi (11.98 million) and Andhra Pradesh (11.17 million).

Chart 1.21 : Composition of Broadband subscription – Technology wise

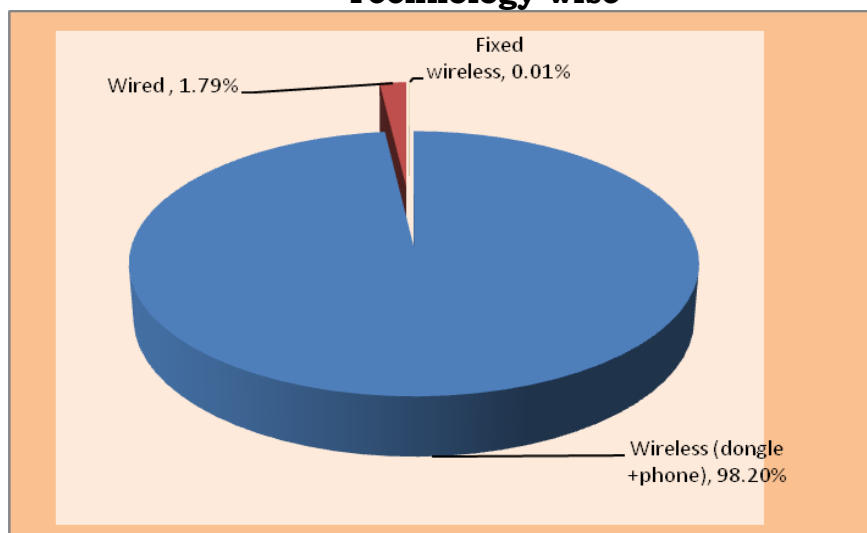


- 1.53 Mobile Device Users (dongle + phone) constitute 88.31% of total broadband subscribers at the end of Mar-16.

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

- 1.54 Total number of narrowband subscribers declined from 195.13 million at the end of Dec-15 to 192.90 million at the end of Mar-16 with the quarterly decline rate of 1.14%. Out of 192.90 million narrowband subscribers, Wired Narrowband subscribers are 3.46 million and Wireless Narrowband subscribers are 189.44 million.
- 1.55 The top five narrowband (wired + wireless) service providers in term of subscriber base are Bharti (52.06 million), Vodafone (39.79 million), Reliance Communications Group (23.45 million), Idea Cellular (21.11 million) and Aircel (14.91 million).
- 1.56 In wired narrowband segment, BSNL holds 92.32% market share with 3.19 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 27.43% market share with 51.97 million subscribers followed by Vodafone (39.79 million) and Reliance Communications Group (23.43 million).

Chart 1.22 : Composition of Narrowband subscription – Technology wise



Section E : Other Value Added Services - PMRTS & VSAT

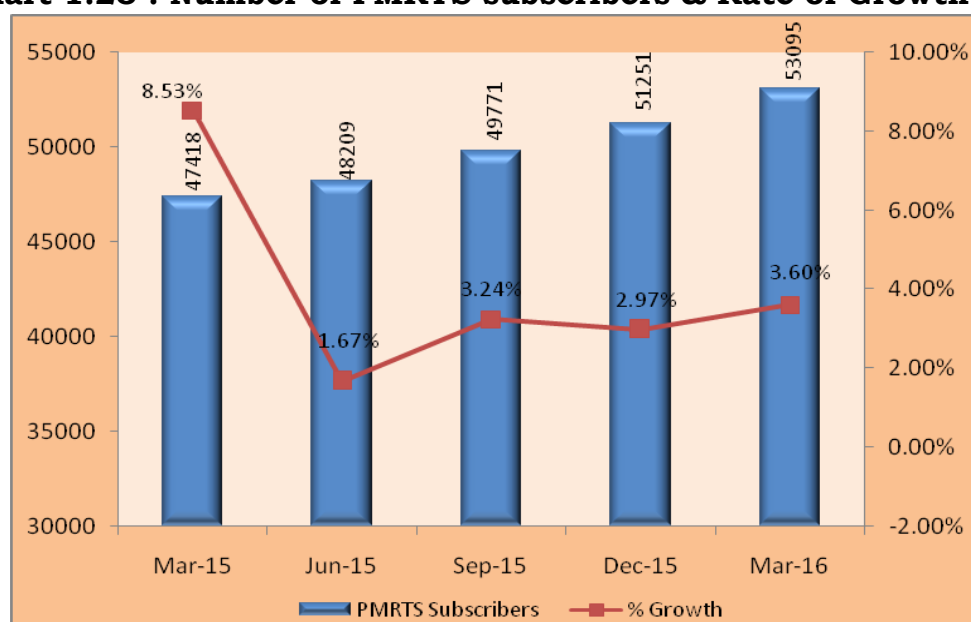
Public Mobile Radio Trunk Services (PMRTS)

1.58 The subscriber base of PMRTS increased from 51,251 at the end of Dec-15 to 53,095 at the end of Mar-16 with quarterly growth rate of 3.60%.

Table 1.28 : PMRTS Subscriber base - Service Provider wise

Sr. No.	Name of the Service Provider	Subscriber Base as on 31.12.2015	Subscriber Base as on 31.03.2016	Growth in Subscribers	% Growth in subscribers as on 31.03.2016
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	43216	45245	2029	4.70%
4	Procall Ltd.	3063	2813	-250	-8.16%
2	Inative Networks Pvt Ltd	1820	1820	0	0.00%
3	Quick Call	1432	1404	-28	-1.96%
5	Smartlink Pvt Ltd	925	925	0	0.00%
6	Bhilwara Telenet Services Pvt Ltd	414	450	36	8.70%
8	Airtalk Solutions & Services Pvt Ltd	250	228	-22	-8.80%
7	Wiwonet Solutions Pvt Ltd	131	210	79	60.31%
	Total	51251	53095	1844	3.60%

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 2,65,288 at the end of Dec-15 to 2,73,043 at the end of Mar-16. Net addition during the quarter has been 7,755 at the quarterly growth rate of 2.92%.

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

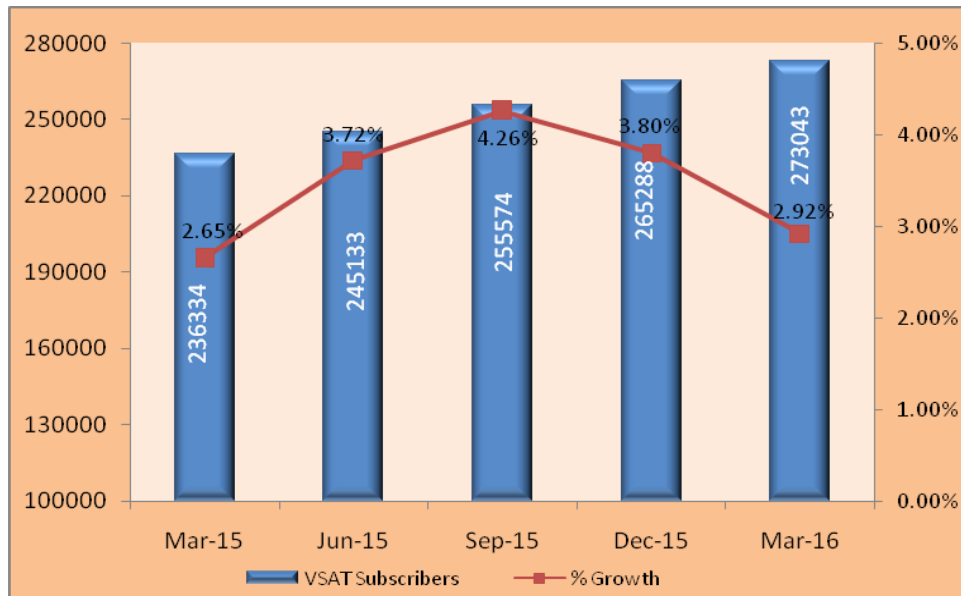
Sr. No	Name of Service Providers	Subscriber base at the Quarter ending		Net Addition	%age Growth	Market Share (%) Mar-16
		Dec-15	Mar-16			
1	Hughes Communications Ltd.	104744	106491	1747	1.67	39.00
2	Bharti Airtel Limited	59309	62188	2879	4.85	22.78
3	Tatanet Services	50233	50969	736	1.47	18.67
4	HCL Comnet	26287	27949	1662	6.32	10.24
5	BSNL	19979	20703	724	3.62	7.58
6	National Informatics Centre Services Incorporated	2580	2617	37	1.43	0.96
7	Infotel Satcom	2052	2022	-30	-1.46	0.74
8	Planetcast Media Services Ltd	104	104	0	0.00	0.04
	Total	265288	273043	7755	2.92	100

1.61 Hughes Communication Limited continues to be the market leader with subscriber base of 1,06,491 followed by Bharti Airtel Ltd (62,188) at the end of Mar-16.

1.62 M/s HCL Comnet has recorded maximum growth rate of 6.32% followed by M/s Bharti Airtel Ltd (4.85%). M/s Infotel Satcom 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 1st January, 2016 to 31st March, 2016 in the various service areas.

Section A: GSM Service

Table 2.1: Key Indicators - GSM Service

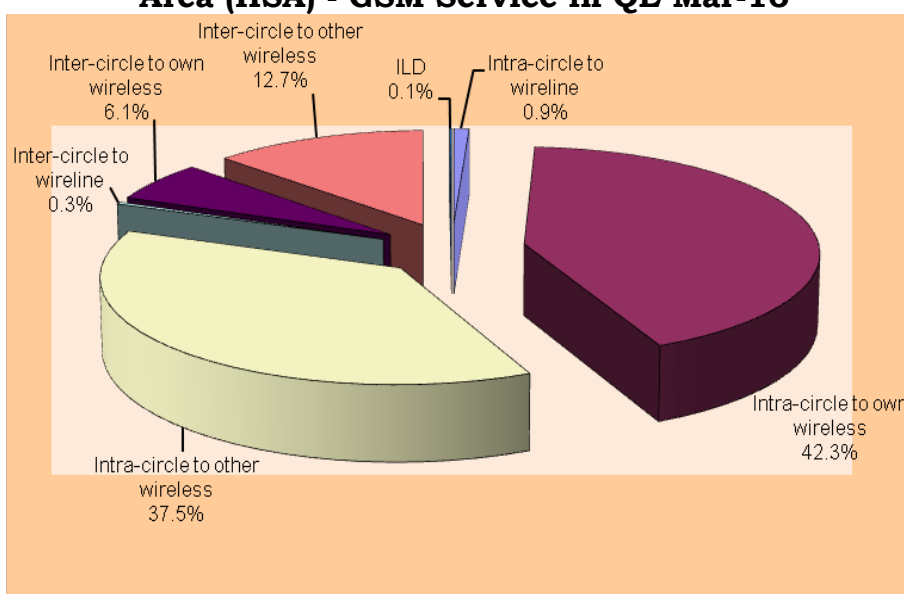
Parameter	Mar-16	Dec-15	Mar-15	QoQ %age change over Dec-15	YoY %age change over Mar-15
Subscriber Base# (million)	989.54	963.67	917.73	2.68	7.83
Share of Prepaid (%)	95.36%	95.41%	95.65	-0.05	-0.30
Incoming MOU* per subscriber per month	196	193	197	1.49	-0.36
Outgoing MOU* per subscriber per month	184	182	186	1.17	-0.71
No. of Outgoing SMS per subscriber per month	21	22	24	-3.47	-11.50
Average Revenue Per User (ARPU) per month	125	123	121	1.75	3.46

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

* Minutes of Usage

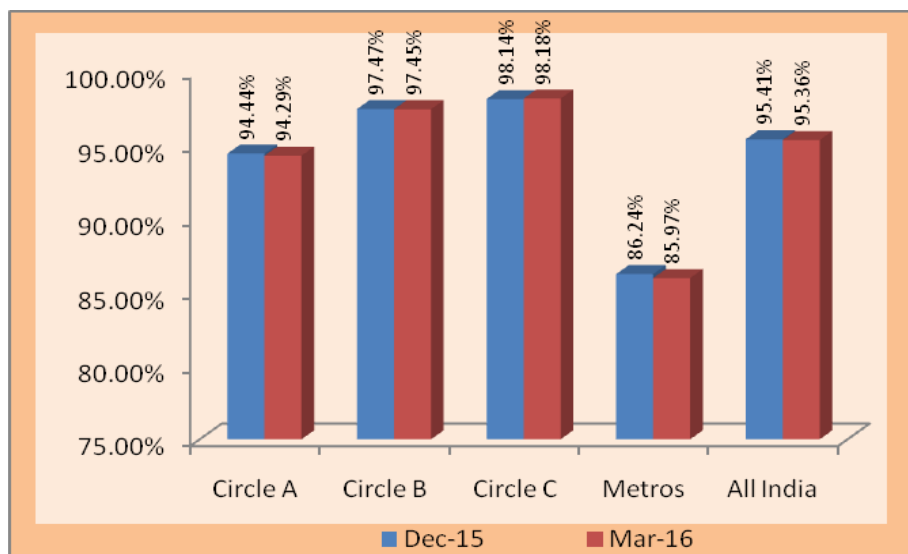
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Mar-16.

Chart 2.1: Break-up of Outgoing minutes from Home Service Area (HSA) - GSM Service in QE Mar-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 95.41% at the end of Dec-15 to 95.36% at the end of Mar-16.

2.4 The ARPU per month (all India, blended) increased from ₹123 in Q.E. Dec-15 to ₹125 in Q.E. Mar-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 Mar-16

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	481	115	136
Circle B	475	102	111
Circle C	459	102	109
Metros	513	112	167
All India	488	107	125
All private SPs	490	108	126
BSNL/MTNL	455	104	118

2.5 The ARPU per month for pre-paid segment increased from ₹105 in QE Dec-15 to ₹107 in QE Mar-16, whereas the ARPU per month for post-paid segment declined from ₹491 in QE Dec-15 to ₹488 in QE Mar-16.

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

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

S. No.	Item	Revenue (excl. service tax) per subscriber per month (in ₹)	Share of total revenue from subscribers
1	Usage from Home Service Area		
1.1.	Rental Revenue	22.25	16.9%
1.2.	Revenue from calls	63.34	48.2%
1.3.	Revenue from SMS	3.18	2.4%
1.4.	Revenue from data usage	28.31	21.6%
1.5.	Revenue from other VAS	4.95	3.8%
1.6.	Other revenue	3.20	2.4%
2	Usage outside Home Service Area		
2.1.	Revenue from outroamers	6.05	4.6%
3	Total revenue from subscribers (1+2)	131.27	100%
4	Net inter-operator settlement charges receivable *	-6.42	
5	Net Revenue (ARPU) per month(3+4)	125	

* 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 (₹6.42) accounts for 4.89% of the total revenue from subscribers.

2.8 On an all India average, the overall minutes of usage (MOU) per subscriber per month increased from 376 in QE Dec-15 to 381 in QE Mar-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 Mar-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	533	384	918	165	165	331	186	178	364
Circle B	549	356	905	162	197	359	172	201	373
Circle C	519	356	875	177	234	411	183	236	419
Metro	509	338	847	185	160	345	230	185	415
All India	529	363	892	168	188	356	184	196	381

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 Dec-15 is 51.6 : 48.4.

2.11 Number of outgoing SMS per subscriber per month declined from 22 in Q.E. Dec-15 to 21 in Q.E. Mar-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 Mar-16

Circle category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Circle A	49	26	27
Circle B	42	18	18
Circle C	29	13	13
Metro	53	16	21
All India	47	20	21

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 Mar-16

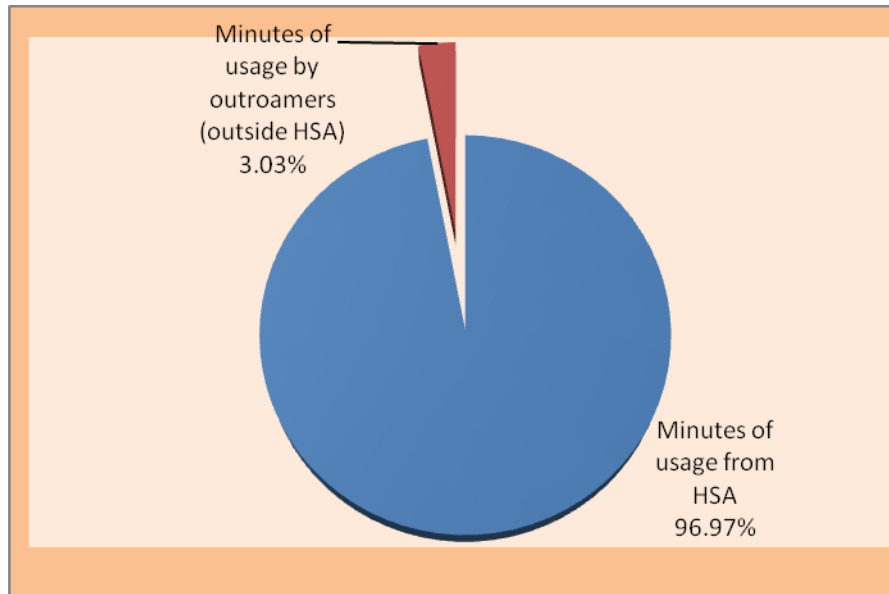
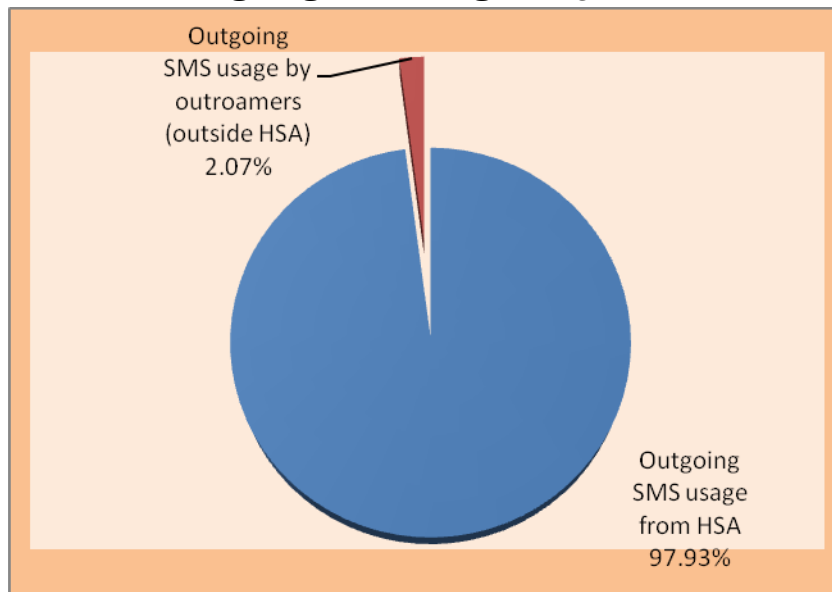


Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage in QE Mar-16



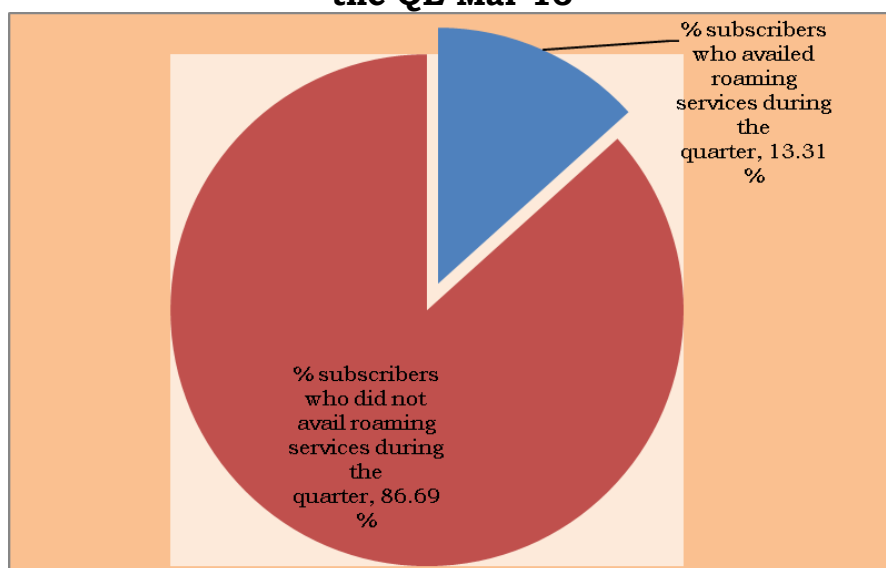
2.12 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks.

Table 2.6: %Break-up of Outgoing minutes from Home Service Area (HSA) in QE Mar-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
Circle A	1.13	38.92	41.94	0.26	4.95	12.67	0.14
Circle B	0.68	47.22	36.38	0.30	5.37	9.96	0.09
Circle C	0.33	52.28	32.96	0.18	4.94	9.26	0.05
Metros	1.71	23.77	33.23	0.55	13.78	26.68	0.28
All India	0.90	42.32	37.50	0.30	6.12	12.74	0.12

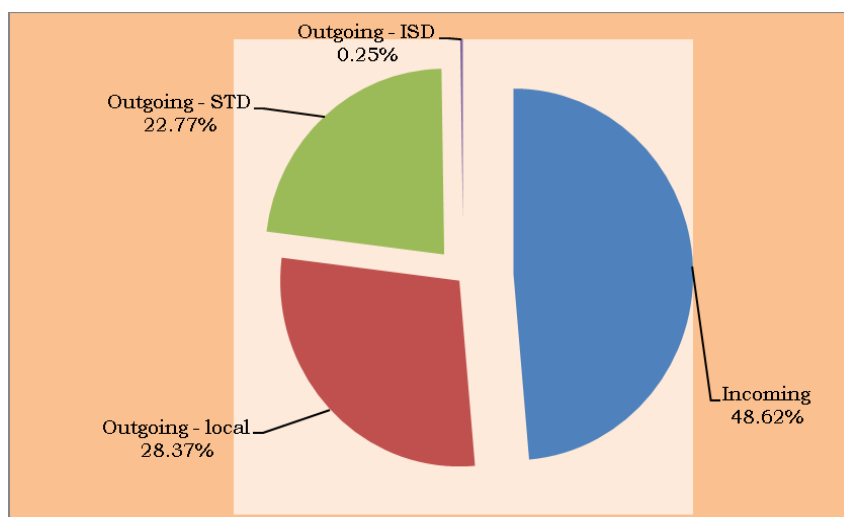
2.13 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter ending Mar-16.

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



2.14 The usage pattern of out-roamers i.e. usage from outside the home service area shows that incoming minutes accounts for 48.62% of the total minutes of usage by out-roamers in QE Mar-16 as against 49.36% in the previous quarter. The chart given below presents the break-up of minutes of usage of out-roamers during the QE Mar-16.

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

Circle Category	(₹ per minute)		
	Postpaid	Prepaid	Blended
Circle A	0.51	0.52	0.51
Circle B	0.50	0.44	0.45
Circle C	0.55	0.42	0.43
Metros	0.59	0.52	0.54
All India	0.53	0.47	0.48

2.16 All India average subscriber outgo per outgoing minute more or less remained same at ₹ 0.48 in the QE Mar-16.

Table 2.8: Trends of Key Parameters - GSM Service

Parameter	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16
1. ARPU (₹ Per month)	121	126	122	123	125
2. Average Revenue from data usage per subscriber per month (in ₹)	23	25	27	28	28
3. MOU per subscriber per month	383	388	374	376	381
4. Outgoing MOU per subscriber per month					
4.1 Local (Intra-circle)	149	152	145	146	147
4.2 NLD (inter-circle)	36	37	37	36	37
4.3 ILD	0.2	0.2	0.2	0.24	0.25
5. No. of Outgoing SMS per subscriber per month	24	22	23	22	21
6. Average subscriber Outgo per outgoing minute from HSA (in ₹)	0.50	0.49	0.48	0.47	0.48

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

Section B: CDMA - Full Mobility Service

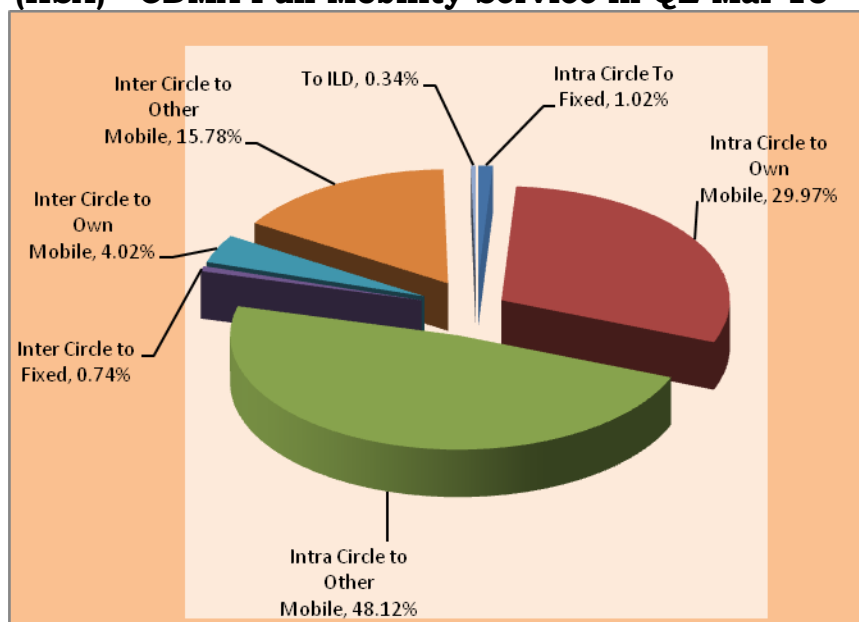
Table 2.9: Key Indicators - CDMA Full Mobility Service

Parameters	QE Mar-16	QE Dec-15	QE Mar-15	QoQ change (%)	YoY change (%)
Subscriber Base in Millions*	34.84	37.90	42.17	-8.08	-17.39
Share of Prepaid (%)	89.53%	88.50%	88.70%	1.16	0.94
Incoming MOUs per subscriber per month	110	108	121	2.16	-8.86
Outgoing MOUs per subscriber per month	150	144	144	4.44	4.10
Outgoing SMS per subs per month	7.61	8.52	11.00	-10.64	-30.79
ARPU (₹ per month)	104	103	108	0.21	-4.31

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

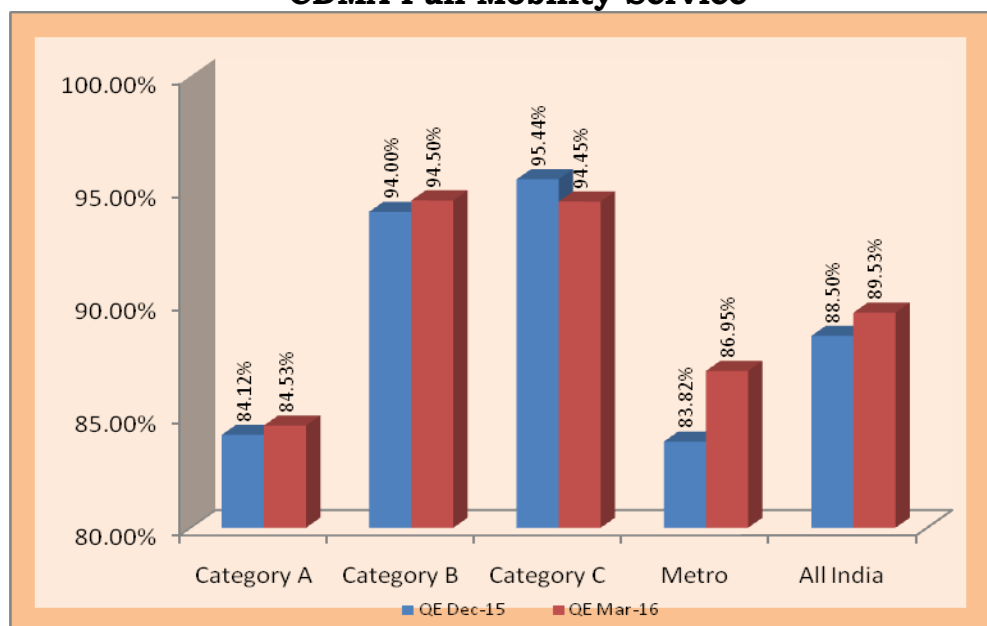
2.18 The following chart depicts % break-up of outgoing minutes from home service area (HSA).

Chart 2.7: % Break-up of Outgoing Minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Mar-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 increased from 88.50% in QE Dec-15 to 89.53% in QE Mar-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 Mar-16

(₹ per month)

Circle category	Postpaid	Prepaid	Blended ARPU
Circle A	452	67	127
Circle B	466	49	74
Circle C	422	30	51
Metro	566	49	131
All India	499	52	104

2.22 The All India blended Average Revenue Per User (ARPU) per month has shown a decrease of 0.21% from ₹103.33 in QE Dec-15 to ₹103.54 in QE Mar-16.

2.23 ARPU for Prepaid service more or less remained same at ₹52 in QE Mar-16 as compared to previous quarter. ARPU for Postpaid service increased from ₹497 in QE Dec-15 to ₹499 in QE Mar-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
1	Usage from Home Service Area		
1.1	Rental Revenue	21.30	18.42
1.2	Revenue from Calls	34.02	29.42
1.3	Revenue from SMS#	0.69	0.60
1.4	Revenue from data usage	50.94	44.05
1.5	Revenue from other VAS	2.13	1.84
1.6	Other Revenue#	4.38	3.79
2	Usage Outside Home Service Area		
2.1	Revenue from Out-roamers	2.19	1.89
3	Total Revenue from Subscribers (1+2)	115.65	100
4	Net inter-operator settlement charges receivable*	-12.11	
5	Net Revenue (ARPU) (3+4)	103.54	

* 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 (₹12.11) accounts for 10.47% of total revenue from subscribers in QE Mar-16.

2.25 Revenue from data usage per subscriber per month (for usage from HSA) increased from ₹50.68 in QE Dec-15 to ₹50.94 in QE Mar-16.

2.26 The total MOUs per subscriber per month increased by 3.3%, from 252 in QE Dec-15 to 260 in QE Mar-16. Outgoing MOUs increased from 144 in QE Dec-15 to 150 in QE Mar-16 and incoming MOUs increased from 108 in QE Dec-15 to 110 in QE Mar-16.

2.27 Prepaid MOUs per subscriber per month increased from 423 in QE Dec-15 to 445 in QE Mar-16 and postpaid MOUs per subscriber per month increased from 230 in QE Dec-15 to 237 in QE Mar-16.

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

MOU per subscriber per month									
Circle category	Postpaid			Prepaid			Blended		
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU
Circle A	222	141	363	100	88	188	119	96	215
Circle B	429	239	668	147	113	259	163	120	284
Circle C	889	412	1301	263	159	422	297	173	469
Metro	210	137	347	114	88	201	129	95	224
All India	278	167	445	134	103	237	150	110	260

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

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

Category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended

Category A	6	8	8
Category B	6	9	9
Category C	10	12	12
Metro	5	5	5
All India	6	8	8

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 Mar-16

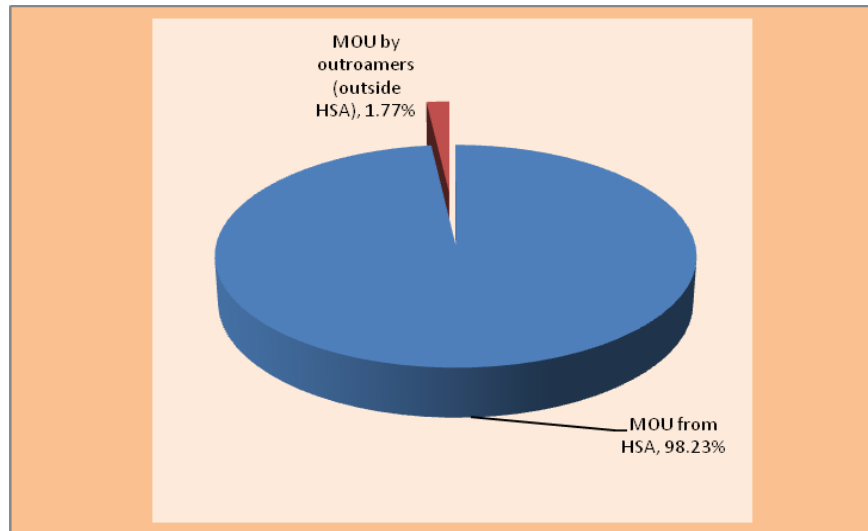


Table 2.14: %Break-up of Outgoing minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Mar-16

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	1.7	28.2	54.6	0.7	2.3	11.6	0.9
Circle B	0.6	34.5	51.4	0.6	2.8	10.1	0.1
Circle C	0.4	26.1	49.7	1.0	3.1	19.7	0.0
Metro	1.4	26.4	35.9	0.8	8.2	26.8	0.4
All India	1.0	30.0	48.1	0.7	4.0	15.8	0.3

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 Mar-16

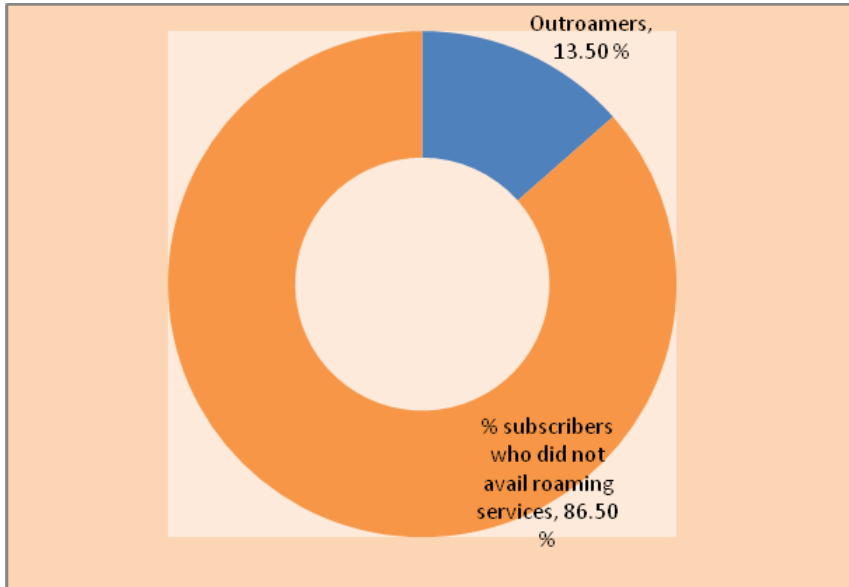


Chart 2.11: Percentage breakup of minutes of usage of Out-roamers (usage from outside the Home Service Area) in QE Mar-16

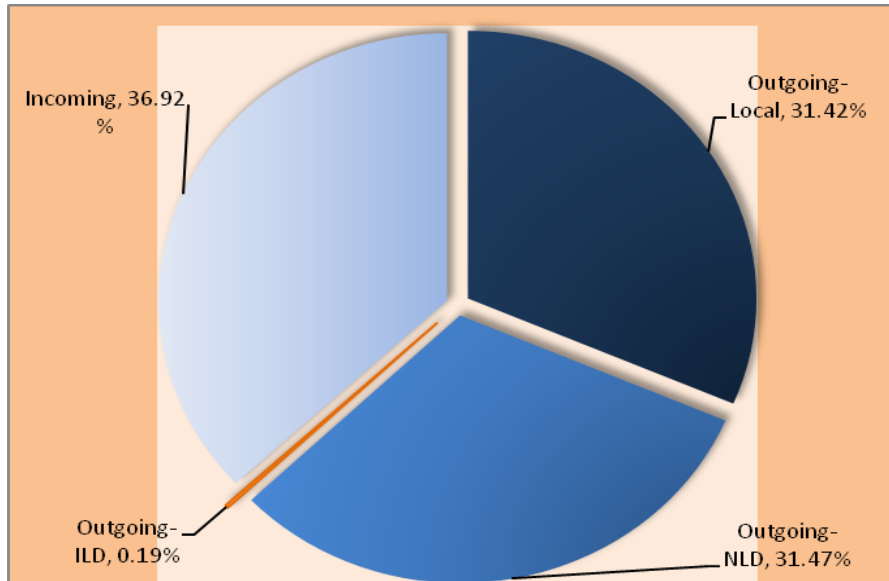


Table 2.15: Average subscriber outgo per outgoing minute from HSA* for CDMA Full Mobility Service in QE Mar-16
[₹ Per min]

Circle Category	Postpaid	Prepaid	Blended
Circle A	0.83	0.34	0.48

Circle B	0.44	0.24	0.27
Circle C	0.38	0.18	0.21
Metros	1.12	0.33	0.53
All India	0.75	0.27	0.37

*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	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16
1. ARPU (₹ Per month)	108	107	106	103	104
2. Average revenue from data usage per subscriber per month (in ₹)	46	49	52	51	51
3. MOU per subscriber per month	265	263	256	252	260
4. Outgoing MOU per subscriber per month	144	145	144	144	150
5. No. of Outgoing SMS per subscriber per month	10.70	9.49	8.67	8.52	7.61
6. Average subscriber Outgo per outgoing minute from HSA (₹)	0.45	0.42	0.39	0.38	0.38

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 Mar-15 (₹ in Crore)	QE Dec-15 (₹ in Crore)	QE Mar-16 (₹ in Crore)	Q-O-Q % Change Over Dec-15	Y-O-Y % Change over Mar-15
Gross Revenue (GR)	65,227	65,347	68,335	4.57	4.77
Adjusted Gross Revenue (AGR)	45,158	46,087	48,379	4.97	7.13
Pass Through Charges (GR-AGR)	20,069	19,260	19,956	3.61	-0.56
License Fee	3,617	3,690	3,872	4.92	7.04
Spectrum Usage Charges	1,771	1,885	1,918	1.77	8.29

3.1 Gross Revenue (GR) increased by 4.57% in QE Mar-16, and on annual basis, it has increased by 4.77%. Adjusted Gross Revenue (AGR) increased by 4.97% in the QE Mar-16.

3.2 Pass through charges increased by 3.61% in the QE Mar-16 whereas on annual basis it has declined by 0.56%.

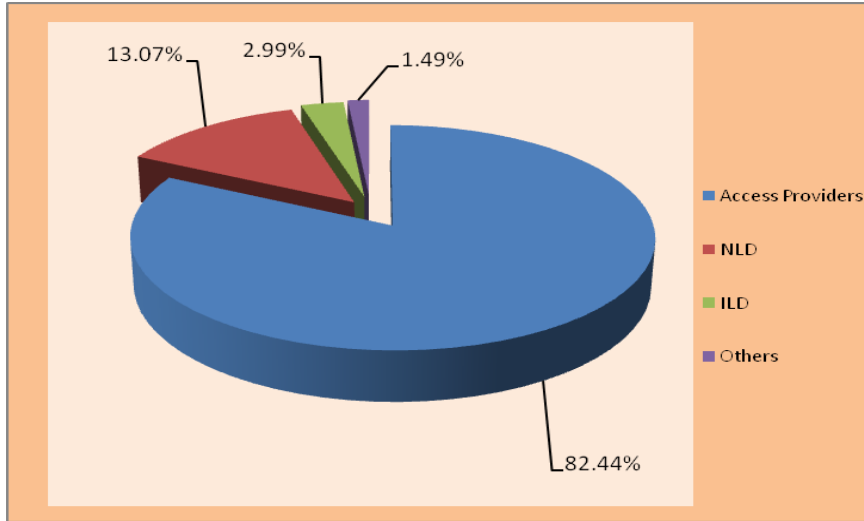
3.3 Pass-through charges as a percentage of Gross Revenue are 29.20% in QE Mar-16 as against 29.47% in the previous quarter.

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

(in ₹ Crore)

Service	GR	AGR	LF	Spectrum Charges
Access Providers	52,065	39,886	3,192	1,877
NLD	8,070	6,324	506	12
ILD	3,912	1,448	116	-
Others	4,288	722	58	27
Total	68,335	48,379	3,872	1,916

Chart 3.1: Composition of Adjusted Gross Revenue



3.4 Access services contributed 82.44% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee and Pass Through Charges increased by 4.45%, 4.16%, 4.18% and 5.43% respectively whereas, Spectrum Usage Charges(SUC) declined by 0.24% in QE Mar-16.

3.5 Monthly Average Revenue per User (ARPU) for Access Services based on AGR increased from ₹123.77 in QE Dec-15 to ₹126.91 in QE Mar-16.

Chart 3.2: Trend in ARPU per month for Access Services

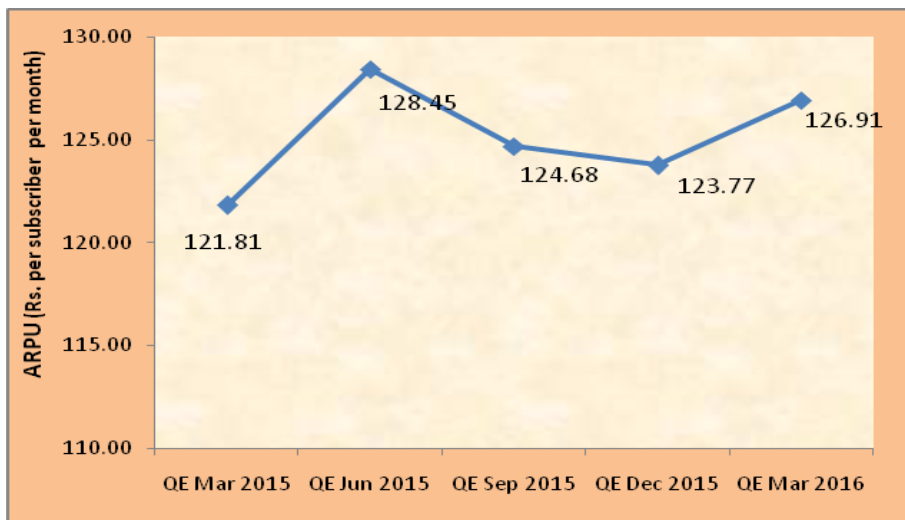


Table 3.3: Access Services - Service Provider wise Adjusted Gross Revenue

(in ₹ Crore)

Service	QE Mar-16	QE Dec-15	% Change
Bharti	12032.45	11684.65	2.98
Vodafone	8616.27	8239.12	4.58
Idea	7492.79	7172.43	4.47
BSNL	3548.02	3288.32	7.90
Tata	2595.85	2520.68	2.98
Aircel	2002.77	1961.86	2.09
Reliance	1360.95	1553.87	-12.42
Telenor	856.69	832.50	2.91
MTNL	972.46	621.73	56.41
Sistema Shyam	314.02	307.08	2.26
Videocon	58.69	63.14	-7.06
Quadrant	32.19	42.66	-24.55
Reliance Jio	2.41	5.52	-56.38
Grand Total (Access)	39885.55	38293.56	4.16

3.6 Public Sector Undertakings' share in the Access AGR of telecom services is 11.33% in the QE Mar-16.

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

Category	AGR of Access Services for QE Mar-16 (in ₹ crore)	%age share of AGR
Metro	6328.42	15.87
A	15299.42	38.36
B	13581.74	34.05
C	4675.97	11.72
Total	39885.55	100

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

S. No.	Parameters	Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q. E. December, 2015		Q. E. March, 2016	
			Out Of 183 (Nos.)	Out Of 183 (%)	Out Of 178 for Network and Out of 183 for Customer (Nos.)	Out Of 178 for Network and Out of 183 for Customer (%)
I.	Network Related Parameters					
1	Network Availability					
(i)	BTSs Accumulated downtime (not available for service)	≤ 2%	7	3.83%	3	1.69%
(ii)	Worst affected BTSs due to downtime	≤ 2%	11	6.01%	9	5.06%
2	Connection Establishment (Accessibility)					
(i)	Call Set-up Success Rate (within licensee's own network)	≥ 95%	5	2.73%	4	2.25%
(ii)	SDCCH/ Paging Chl. Congestion	≤ 1%	4	2.19%	5	2.81%
(iii)	TCH Congestion	≤ 2%	6	3.28%	7	3.93%
3	Connection Maintenance (Retain ability)					
(i)	Call Drop Rate	≤ 2%	1	0.55%	1	0.56%
(ii)	Worst affected cells having more than 3% TCH drop (call drop) rate	≤ 3%	39	21.31%	27	15.17%
(iii)	Connection with good voice quality	≥ 95%	6	3.28%	5	2.81%
4	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	0	0	1	0.56%

S. No.	Parameters	Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q. E. December, 2015		Q. E. March, 2016	
			Out Of 183 (Nos.)	Out Of 183 (%)	Out Of 178 for Network and Out of 183 for Customer (Nos.)	Out Of 178 for Network and Out of 183 for Customer (%)
II.	Customer Service Quality Parameters					
5	Metering and Billing					
(i)	Metering and billing credibility - post paid	≤ 0.1%	12	6.56%	6	3.28%
(ii)	Metering and billing credibility - pre paid	≤ 0.1%	18	9.84%	11	6.01%
(iii)	Resolution of billing/ charging/validity complaints	98% within 4 weeks	3	1.64%	0	0
	Resolution of billing/ charging/validity complaints	100% within 6 weeks	4	2.19%	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	8	4.37%	6	3.28%
6	Response time to the customer for assistance					
(i)	Accessibility of call centre/ customer care	≥ 95%	8	4.37%	2	1.09%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	58	31.69%	60	32.79%
7	Termination / closure of service					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	5	2.73%	2	1.09%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	37	20.22%	27	14.75%

- 4.1 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters :-
- a. BTSs Accumulated downtime (not available for service)
 - b. Worst affected BTSs due to downtime
 - c. Call Set-up Success Rate (within licensee's own network)
 - d. Worst affected cells having more than 3% TCH drop (call drop) rate
 - e. Connection with good voice quality
 - f. Metering and billing credibility - post paid
 - g. Metering and billing credibility - pre paid
 - h. Resolution of billing/ charging/ validity complaints (98% within 4 weeks)
 - i. Resolution of billing/ charging/ validity complaints (100% within 6 weeks)
 - j. Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints
 - k. Accessibility of call centre/ customer care
 - l. %age requests for Termination / Closure of service complied within 7 days
- 4.2 The performance has deteriorated in this quarter as compared to the previous quarter in respect of the following parameters:-
- a. SDCCH/Paging Channel Congestion
 - b. TCH Congestion
 - c. Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)
 - d. %age of calls answered by the operators (voice to voice) within 90 sec
 - e. 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	2.41
			North East	6.08
		BSNL	North East	2.43
Worst affected BTSs due to downtime (%age)	≤ 2%	Aircel	Assam	14.77
			Bihar	11.52
			Jammu & Kashmir	4.18
			North East	37.50
			West Bengal	2.64
		BSNL	Kolkata	3.86
			North East	6.84
RCOM CDMA	West Bengal	5.55		
Call Set-up Success Rate (within licensee's own network)	≥ 95%	Aircel	Assam	91.98
			Bihar	84.52
		Telenor	Bihar	92.73
		TTL CDMA	Haryana	93.64
SDCCH/ Paging Chl. Congestion (%age)	≤ 1%	Aircel	Assam	1.68
			Bihar	2.07
		BSNL	North East	1.97
			West Bengal	1.13
		Telenor	Bihar	1.65
TCH Congestion (%age)	≤ 2%	Aircel	Assam	5.58
			Bihar	15.13
			North East	4.02
		BSNL	North East	2.69
			Bihar	5.95
		Telenor	UPE	3.02
TTL CDMA	Haryana	3.98		
Call Drop Rate (%age)	≤ 2%	BSNL	North East	2.56
Worst affected cells having more than 3% TCH drop	≤ 3%	Aircel	Assam	12.42
			Bihar	14.66
			Himachal Pradesh	10.21
			Jammu & Kashmir	10.87
			Karnataka	8.22
			Maharashtra	3.04
			Mumbai	4.40
			North East	16.31
			Orissa	4.54
			Tamil Nadu	5.60
		West Bengal	10.26	
		Airtel	Tamilnadu+Chennai	3.40
		BSNL	Bihar	5.11
			North East	5.25
West Bengal	11.57			

Parameter	Benchmark	Service Provider	Service Area	Performance
Worst affected cells having more than 3% TCH drop	≤ 3%	Telenor	Bihar	4.22
			Gujarat	3.14
			Maharashtra	4.12
			UPE	3.07
		TTL CDMA	Gujarat	3.02
			Haryana	4.95
			Punjab	3.25
		TTL GSM	UPE	4.43
			Himachal Pradesh	3.64
			Punjab	3.06
UPE	4.05			
Connection with good voice quality	≥ 95%	Aircel	Assam	91.62
			North East	92.71
		BSNL	North East	94.27
		Telenor	Bihar	94.69
UPE	94.13			
Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)	≤ 0.5%	Vodafone	Jammu & Kashmir	1
Metering and billing credibility - post paid	≤ 0.1%	Vodafone	Delhi	0.17
			Karnataka	0.14
			Mumbai	0.51
			Punjab	0.17
			Tamil Nadu	0.23
			UPW	0.11
Metering and billing credibility - pre paid	≤ 0.1%	Idea	Andhra Pradesh	0.11
			Delhi	0.26
			Haryana	0.39
			Kerala	0.19
			Tamilnadu	0.15
		Vodafone	Andhra Pradesh	0.25
			Karnataka	0.22
			Madhya Pradesh	0.17
			Mumbai	0.27
			Tamil Nadu	0.17
UPW	0.23			
Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	Idea	UPW	99.81
		TTL GSM	Gujarat	66.67
			Haryana	83.33
		Vodafone	Delhi	99.99
			Kerala	99.39
			Tamil Nadu	99.58
Accessibility of call centre/ customer care	≥ 95%	Aircel	Bihar	93.18
			Karnataka	94.67

Parameter	Benchmark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Aircel	Andhra Pradesh	89.34
			Jammu & Kashmir	93.58
			Kolkata	89.70
			North East	94.11
			Rajasthan	92.28
			UPE	94.67
		Aircel	West Bengal	93.60
			Airtel	Andhra Pradesh
		Assam		94.23
		Bihar		85.99
		Gujarat		70.61
		HARYANA		75.91
		Himachal Pradesh		94.58
		Jammu & Kashmir		64.31
		Karnataka		81.46
		Kolkata		66.65
		Madhya Pradesh		82.25
		Maharashtra		90.23
		Mumbai		93.56
		North East		93.06
		Orissa		94.84
		Punjab		93.63
		Rajasthan		94.25
		Tamilnadu+Chennai		94.14
		UPE		82.51
		UPW	87.73	
		West Bengal	56.97	
		BSNL	Assam	92.43
			Tamil Nadu	91.00
		RCOM CDMA	Delhi	91.42
			Gujarat	90.16
			Kolkata	93.66
			Madhya Pradesh	93.44
Mumbai	90.15			
Rajasthan	91.22			
West Bengal	93.66			
RCOM GSM	Delhi	91.52		
	Gujarat	92.32		
	Haryana	93.12		
	Jammu & Kashmir	93.27		
	Mumbai	92.53		
Punjab	94.51			
RTL	Kolkata	94.53		
	West Bengal	94.75		
TTL CDMA	Delhi	94.03		

Parameter	Benchmark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	TTL GSM	Tamil Nadu	94.54
			Andhra Pradesh	93.11
			Gujarat	90.36
			Haryana	88.91
			Karnataka	93.05
			Kerala	92.80
			Kolkata	93.27
			Madhya Pradesh	94.28
			Orissa	94.90
			Punjab	94.88
			Rajasthan	90.13
			Tamil Nadu	91.85
			UPE	85.39
			UPW	88.44
%age requests for Termination/Closure of service complied within 7 days	100% within 7 days	Idea	Jammu & Kashmir	99.93
			Madhya Pradesh	99.45
Time taken for refund of deposits after closures	100% within 60 days	Aircel	Assam	97.27
			Bihar	85.00
			Delhi	81.31
			Jammu & Kashmir	54.92
			Karnataka	82.68
			Maharashtra	84.00
			Mumbai	67.54
			Rajasthan	77.59
			Tamil Nadu	93.03
		Idea	Maharashtra	99.35
		RCOM CDMA	Rajasthan	99.91
		RCOM GSM	West Bengal	89.12
			Jammu & Kashmir	99.84
		RTL	Madhya Pradesh	99.92
			West Bengal	93.98
		TTL CDMA	Andhra Pradesh	99.48
			Kerala	97.83
			Tamil Nadu	99.50
		Vodafone	Andhra Pradesh	96.03
			Bihar	99.28
Delhi	99.98			
Gujarat	99.46			
Kerala	99.37			
Kolkata	96.25			
Tamil Nadu	98.76			
UP West	93.56			
West Bengal	98.62			

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 (excluding BSNL) who have not met the benchmarks in this quarter is given in below table.

Table 4.3: QoS Summary - 3G Wireless Service

S. No.	Parameters		Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
				Q. E. December, 2015		Q. E. March, 2016	
				Out Of 97 (Nos.)	Out of 97 (in %)	Out Of 106 (Nos.)	Out of 106 (in %)
1	Network Availability	BTSs and Node-B's Accumulated downtime (not available for service) (%age)	≤ 2%	4	4.12%	2	1.89%
		Worst affected BTSs and Node-B's due to downtime (%age)	≤ 2%	13	13.40 %	8	7.55%
2	Connection Establishment (Accessibility)	Call Set-up Success Rate (within licensee's own network)	≥ 95%	1	1.03%	3	2.83%
		SDCCH/Paging Channel and RRC Congestion (%age)	≤ 1%	3	3.09%	4	3.77%
		TCH and Circuit Switched RAB Congestion (%age)	≤ 2%	3	3.09%	2	1.89%
3	Connection Maintenance (Retainability)	Call Drop and Circuit Switched Voice Drop Rate: (%age)	≤ 2%	2	2.06%	3	2.83%
		Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop Rate:-CBBH	≤ 3%	18	18.56%	15	14.15%
		Connections with good voice quality and Circuit Switch Voice Quality (CSV quality)	≥ 95%	0	0	0	0
4	Point of Interconnection	Point of Interconnection (POI) Congestion	≤ 0.5%	0	0	0	0

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

- a. BTSs and Node-B's Accumulated downtime (not available for service) (%age)
- b. Worst affected BTSs and Node-B's due to downtime (%age)
- c. TCH and Circuit Switched RAB Congestion (%age)
- d. 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. Call Set Up Success Rate (within licensee's own network)
- b. SDCCH/Paging Channel and RRC Congestion (%age)
- c. Call drop and Circuit Switched Voice Drop Rate (%age)

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)	≤ 2%	Aircel	North East	5.53
		BSNL	Kolkata	2.37
Worst affected Node B's due to downtime (%age)	≤ 2%	Aircel	Assam	11.49
			Bihar	7.79
			Jammu & Kashmir	5.67
			North East	37.81
			West Bengal	4.36
		BSNL	Kolkata	4.97
			North East	5.57
Call Set-up Success Rate (within licensee's own network)	≥ 95%	Aircel	Bihar	88.93
		Vodafone	Haryana	33.92
			UP-West	66.43

Parameter	Benchmark	Service Provider	Service Area	Performance
SDCCH/Paging Channel and RRC Congestion (%age)	≤ 1%	Aircel	Bihar	1.09
		BSNL	Kolkata	1.07
			North East	1.67
Tata	Haryana	14.15		
TCH and Circuit Switched RAB Congestion (%age)	≤ 2%	BSNL	Kolkata	2.57
			NE	2.13
Call Drop and Circuit Switched Voice Drop Rate: (%age)	≤ 2%	Aircel	Jammu & Kashmir	2.35
		BSNL	Kolkata	2.23
			North East	2.20
Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	≤ 3%	Aircel	Andhra Pradesh	3.61
			Assam	9.25
			Bihar	9.33
			Jammu & Kashmir	23.60
			Karnataka	4.16
			North East	12.87
			Orissa	5.36
			Punjab	5.98
			Tamil Nadu	4.99
			UP-East	6.54
		West Bengal	5.67	
		BSNL	Bihar	3.55
			West Bengal	7.60
Vodafone	Haryana	3.17		
	UP-West	4.48		

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	Bench mark	No of license areas where operators not meeting the benchmarks			
			QE December, 2015		QE March, 2016	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 103 (in Nos.)	Out of 103 (in %age)
(i)	Fault incidences per 100 subs/ month	≤ 7	0	0%	0	0%
(ii)	% Fault repaired by next working day for urban areas	≥ 85%	0	0%	0	0%
	% Fault repaired within 5 days (for urban areas)	≥100%	2	2%	2	2%
(iii)	% Fault repaired by next working day for rural and hilly areas	≥ 75%	0	0%	0	0%
	% Fault repaired within 7 days (for rural and hilly areas)	≥100%	0	0%	0	0%
(iv)	MTTR	≤10Hs	0	0%	0	0%
(v)	Point of Interconnection (POI) Congestion (No. of PoIs not meeting benchmark)	≤ 0.5%	0	0%	0	0%
(vi)	Metering and Billing credibility - post-paid	≤ 0.1%	0	0%	0	0%
	Metering and Billing credibility -pre-paid	≤ 0.1%	0	0%	0	0%
(vii)	Period of applying credit/ waiver/ adjustment to customer's	1 week of resolution of complaint	0	0%	0	0%
(viii)	Resolution of billing/charging/ Credit & validity complaints	98% within 4 weeks	2	2%	0	0%
	Resolution of billing/ charging/ Credit & validity complaints	100% within 6 weeks	2	2%	0	0%
(ix)	Accessibility of call centre/ customer care	≥ 95%	0	0%	0	0%
	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	18	17%	24	24%

S. No.	Parameters	Bench mark	No of license areas where operators not meeting the benchmarks			
			QE December, 2015		QE March, 2016	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 103 (in Nos.)	Out of 103 (in %age)
(x)	Termination / closure of service	100% within 7 days	2	2%	5	5%
(xi)	Time taken for refund of deposits after closures	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 in quarter ending March, 2016 as compare to the performance of the previous quarter ending December, 2015.

4.8 The performance has improved 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 & 100% within 6 weeks)

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

- a. %age of calls answered by the operators (voice to voice) within 90 seconds.
- b. Termination / closure of service 100% within 7 days

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

Parameter	Benchmark	Service Providers	Service Areas	Parameters not met (%)
% Fault repaired within 5 days (for urban areas)	≥100%	MTNL	DEL	99.06%
			Mum	99.93%
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	84%
			KTK	79%
			KR	82%
			TN	82%
			DL	75%
			Kol	93%
			GJ	52%
			MP	73%
			MH	71%
			MUM	70%
			Tata	AP
		BH		80.39%
		DL		75.08%
		GJ		80.50%
		HR		80.31%
		KTR		75.92%
		KR		68.12%
		MP		79.90%
		MH		77.94%
		MUM		76.72%
		PB		77.09%
		RJ	75.84%	
TN	77.78			
WB	80.56%			
Termination / closure of service— %age requests for Termination / Closure of service complied within 7 days	100% within 7 days	MTNL	MUM	99.86%
		Tata	AP	99.90%
			GJ	99.74%
			KTK	99.70%
			MH	98.38%

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 March, 2016. Out of these SPs, 38 Service Providers are having broadband subscriber base >10,000 and market share of these 38 SPs is 99.11% 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 March, 2016.

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

S. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Q. E. December, 2015		Q. E. March, 2016	
			Out of 59 (in Nos.)	Out of 59 (in %)	Out of 62 (in Nos.)	Out of 62 (in %)
1	Service Provisioning	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	5	8.47%	4	6.45%
2	Faults Repair					
2.2	% of faults repaired by next working day (>90%)	>90%	3	5.08%	2	3.23%
2.3	% of faults repaired within 3 working day	=>99%	6	10.17%	4	6.45%
3	Billing Performance					
3.3	%age of bills disputed	<2%	0	0.00%	0	0.00%
3.4	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	2	3.39%	2	3.23%
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	0	0.00%	1	1.61%
4	Response Time to the Customer for assistance					
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	2	3.39%	1	1.61%

S. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Q. E. December, 2015		Q. E. March, 2016	
			Out of 59 (in Nos.)	Out of 59 (in %)	Out of 62 (in Nos.)	Out of 62 (in %)
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	8	13.56%	11	17.74%
5	Bandwidth utilisation/ throughput					
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	1	1.69%	0	0.00%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	1	1.69%	1	1.61%
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	0	0.00%	0	0.00%
6	Service availability /uptime (for all users) in %age					
6.3	Service availability /uptime (for all users) in %age	>98%	0	0.00%	0	0.00%
7	Packet loss (for wired broadband access) in %age					
		<1%	0	0.00%	0	0.00%
8	Network latency (for wired broadband access)					
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

Sl. No.	Parameters	Benchmark	Name of the Service Provider not meeting the Benchmark
1	Service Provisioning/ Activation Time		
1.2	%age of connections provided within 15 days of registration of demand	100%	MTNL - Delhi & Mumbai (99.66%), Atria Convergence - All India (98.99%), Hathway Cable - Maharashtra & Goa (98%), You Broadband - All India (99.68%)
2	Faults Repair/Restoration Time		
2.2	% of faults repaired by next working day	>90%	MTNL - Delhi & Mumbai (89.72%), Tata Communications (TCL) - All India (88%)
2.3	% of faults repaired within 3 working day	=>99%	MTNL -Delhi & Mumbai (97.60%), Atria Convergence - All India (98.70%), Tata Communications - All India (94%)
3	Billing Performance		
3.4	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	Tata (TTSL) - Maharashtra & Goa (76.09%), Bharti Airtel - Karnataka (99%)
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	You Broadband - All India (98.86%)
4	Response Time to the Customer for assistance		
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	Bharti Airtel - Gujarat (49%),
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	Bharti Airtel - Delhi (70%), Gujarat (56%), Karnataka (72%), Kerala (78%), Madhya Pradesh (72%), Maharashtra (67%), Mumbai (68%), Tamilnadu (78%) Atria Convergence - All India (75%), Tata Communications(TCL) - (66%) & Tata Teleservices (TTSL) - (78.79%)
5	Bandwidth utilisation/ throughput		
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	Atria Convergence - All India (91%)

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

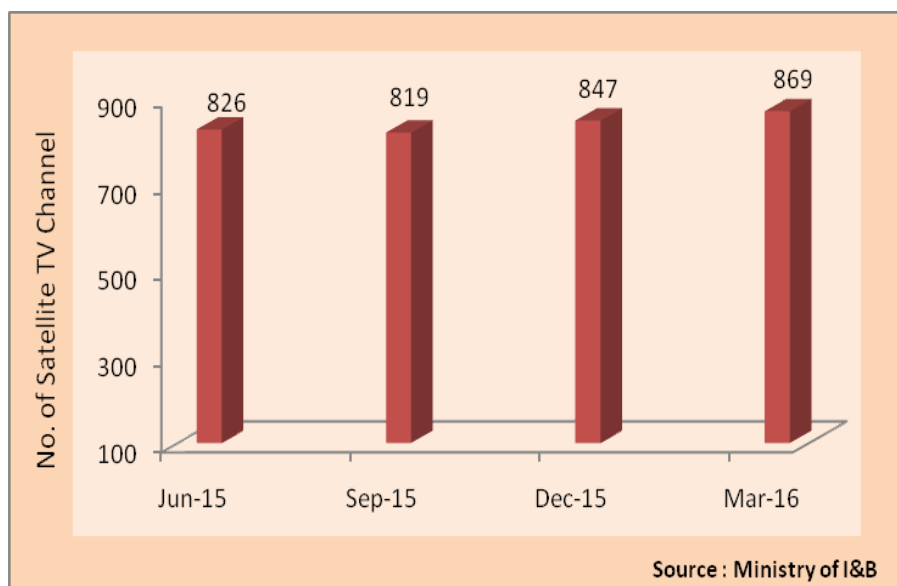
Table 5.1: Key Parameters - Broadcasting & Cable Services

S.No	Parameter	QE Dec-15	QE Mar-16
1	Number of private satellite TV channels registered with Ministry of I&B	847	869
2	Number of Pay TV Channels	262	263
3	Private FM Radio stations in operation	243	243
4	Private DTH Operators	6	6
5	Number of Registered DTH Subscribers	84.80 Million	88.64 Million
6	Number of Registered DTH Subscribers	55.98 Million	58.53 Million
7	Licensees of community radio stations	237	237
8	Operational community radio stations	190	191

A. Satellite TV Channels

5.1 A total of 869 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking, as on 31st March 2016.

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

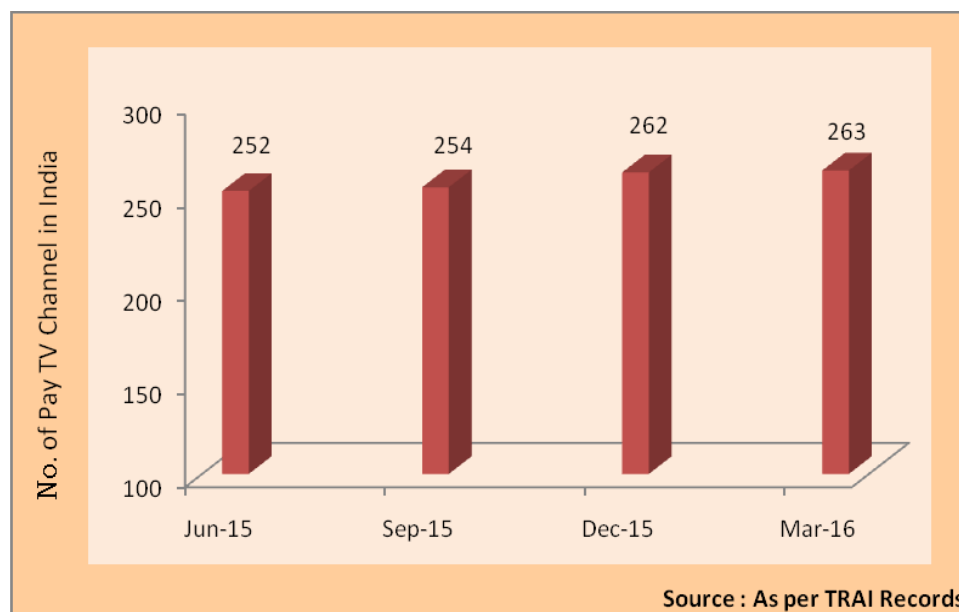


B. Pay TV Channels

5.2 During the quarter ending March 2016, there were 263 pay channels as reported by broadcasters as compared to 262 pay channels reported in the previous quarter. The list of 263 Pay TV Channels is placed at Annexure-5.1. During the quarter ending March 2016, as per the reporting, five new channels were commenced, two pay channels were discontinued and two pay channels were converted to FTA. The details are as under :-

New Channels (Five channels)	Discontinued (two channels)	Converted from Pay to FTA (Two channels)
(1) Movies Now HD	(1) Ten Cricket	(1)Big Magic
(2) SONY ESPN HD	(2) Net Geo People	(2) Big Ganga
(3) Romedy Now HD		
(4) Granada TV (HD)		
(5) Trace Sports 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 Details of number of reported channels being carried by the MSOs in areas served by Digital addressable systems and also in areas served by Non-Addressable systems are as under :-

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

Particulars	MSO	Number
Maximum number of TV channels (FTA+Pay+Local) carried	M/s Indian Cable Net Company Ltd	426
Minimum of TV channels (FTA+Pay+Local) carried	M/s Ortel Communications Ltd	201
Maximum number of FTA channels carried	M/s Hathway Cable & Datacom Pvt Ltd	208
Maximum number of Pay channels carried	M/s Den Satellite - Mumbai	223
Maximum number of Local channels carried	M/s Fastway Transmissions Pvt Limited	81

(ii) Areas served by Non-Addressable systems

Particulars	MSO	Number
Maximum number of TV channels (FTA+Pay+Local) carried in digital form	M/s Hathway Cable & Datacom Pvt Ltd	452
Minimum of TV channels (FTA+Pay+Local) carried in analog form	M/s Ortel Communications Ltd	100
Maximum number of FTA channels carried	M/s Hathway Cable & Datacom Pvt Ltd	208
Maximum number of Pay channels carried	M/s Hathway Cable & Datacom Pvt Ltd	221
Maximum number of Local channels carried	M/s Hathway Cable & Datacom Pvt Ltd	23

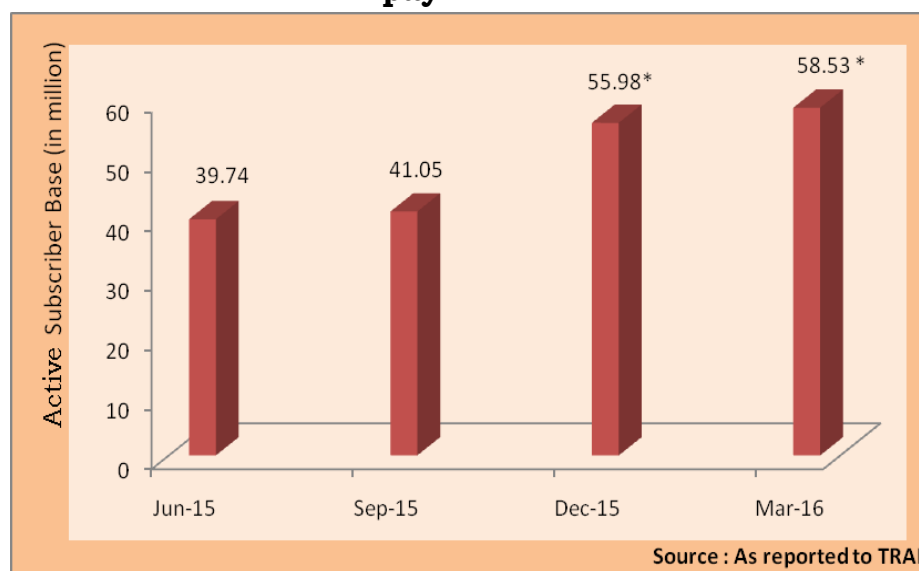
D. Direct-to-Home (DTH) Sector

Particulars	DTH Operator	Number
Maximum number of TV channels (FTA+Pay) carried	M/s Tata Sky Ltd	439
Minimum of TV channels (FTA+Pay) carried	M/s Sun Direct Pvt Ltd	226
Maximum number of FTA channels carried	M/s DISH TV India Ltd	204
Maximum number of Pay channels carried	M/s Tata Sky Ltd	246

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 **88.64** million (including **58.53** million active subscribers). As on 31st March 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



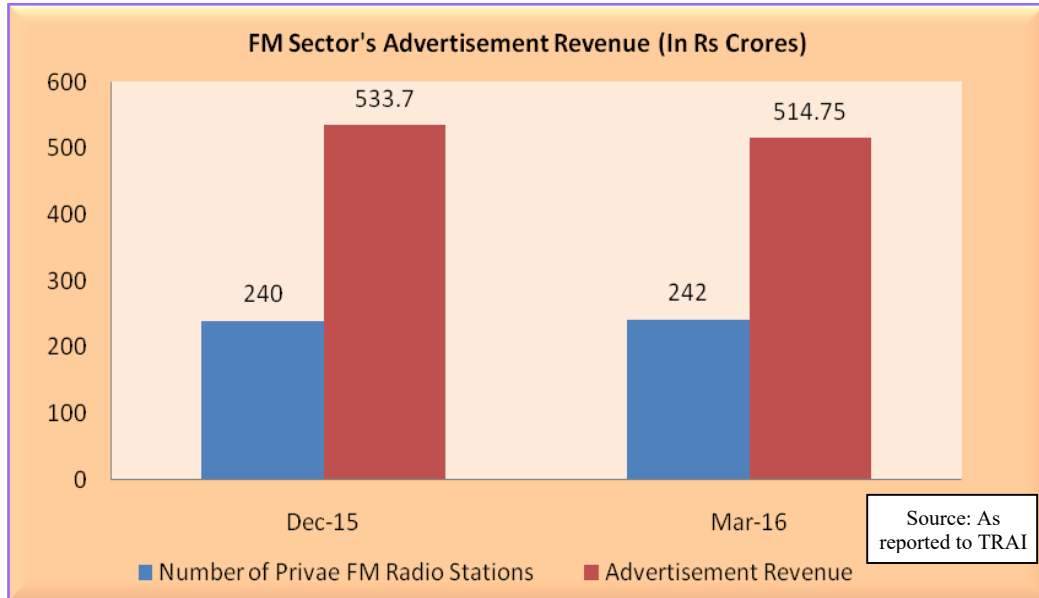
* The net active subscriber base includes number of temporarily suspended subscribers who have been inactive but for not more than 120 days.

E. FM Radio Services

5.7 Apart from the radio Stations operated by All India Radio, Prasar Bharati – a public broadcaster, there are 243 operational private FM radio stations as on 31st March, 2016. A list of 84 existing cities with operational FM radio channels is placed at Annexure 5.3. This is as per the information available on the website of MIB.

5.8 The reported advertisement revenue during the quarter ending March, 2016 in respect of 242 private FM Radio stations was ₹514.75 crores as against ₹533.70 crores in respect of 240 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 31st March 2016, out of the 237 licenses issued for setting up of Community Radio Stations (CRS), 191 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

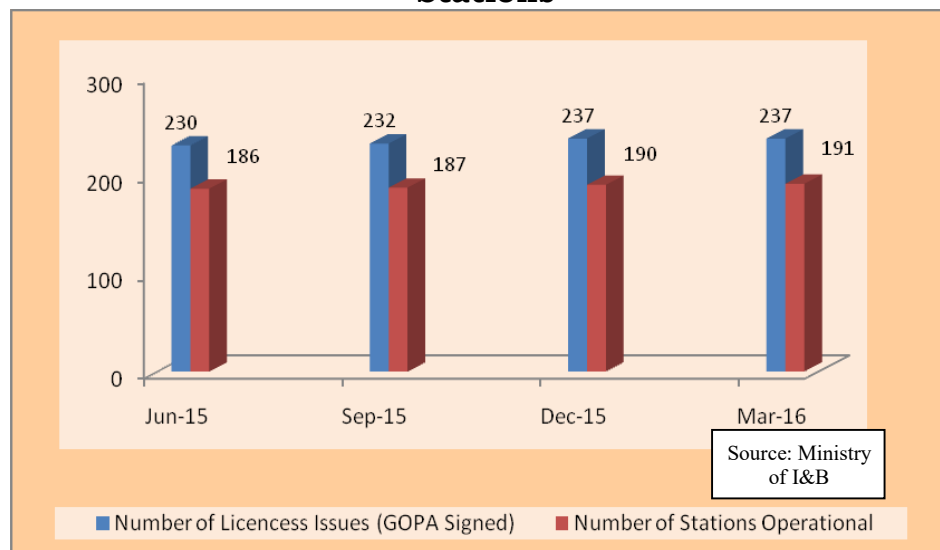


Table 5.3 : Number of application received/Letters of Intent issued/ Licenses issued in respect of Community Radio Stations

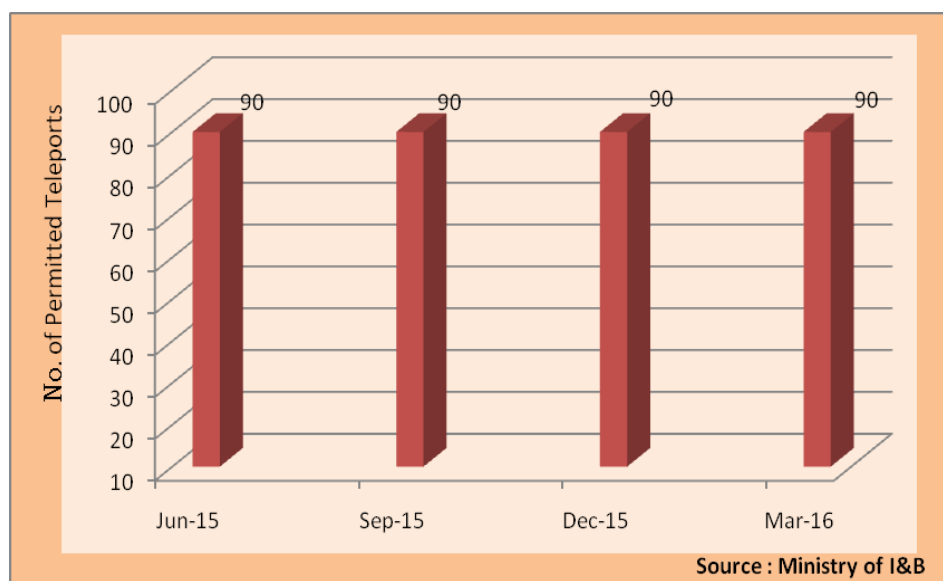
Sl. No.	Items	As on 31.03.2016
1	Total No. of Applications Received	1869
2	No. of Letters of Intent (LOIs) issued	532
3	No. of Applications rejected	1000
4	No. of Licenses issued (GOPA signed)	237
5	No. of Stations Operational	191

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	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	Telewings Communication Pvt Ltd	MH, Guj, AP, UP-W, UP-E, Bihar (6)	All	
12	Videocon Telecommunications Ltd.	Guj, Har, 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)	
	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16
Andhra Pradesh	71,62,882	70,32,368	232,27,059	235,92,784	152,98,893	153,90,077	28,14,331	27,25,320	36,32,123	38,33,767	18,11,716	17,77,482
Assam	34,48,664	36,49,556	56,83,518	59,43,777	10,63,049	11,75,401	48,53,001	51,09,583	13,61,181	13,37,953		
Bihar	92,95,680	94,99,503	269,27,312	284,21,472	108,59,315	111,84,133	68,54,934	70,65,809	25,89,532	27,45,326	23,70,183	17,44,596
Delhi	100,49,752	100,45,493	112,22,985	112,07,790	62,11,520	61,31,926	61,04,002	63,27,144	54,22,773	50,38,072	30,53,784	30,59,652
Gujarat	192,19,078	193,57,609	82,72,527	85,30,459	119,90,608	120,87,098	17,063	17,063	41,15,866	48,27,887	10,92,810	10,95,620
Haryana	53,56,970	54,76,264	28,56,230	29,34,743	45,89,375	46,42,834	3,092	3,092	16,40,990	15,88,663	3,94,203	3,69,712
Himachal Pradesh	6,94,948	7,16,728	27,22,881	27,42,531	7,83,552	8,01,146	10,58,139	10,92,515	15,76,757	15,82,322	1,76,349	1,67,261
Jammu & Kashmir	10,48,029	10,62,347	33,48,374	33,40,288	6,02,415	6,36,451	25,39,460	25,44,817	8,49,787	9,30,333	44	38
Karnataka	76,80,807	76,69,476	208,40,739	208,74,185	86,20,705	84,14,950	30,31,064	30,95,767	44,05,061	45,92,173	13,17,163	13,01,577
Kerala	74,81,599	74,90,687	42,67,406	44,12,144	102,64,554	103,97,873	2,06,848	2,92,060	13,05,124	13,57,322	8,37,105	8,34,857
Madhya Pradesh	66,92,882	68,84,697	121,11,570	126,26,117	205,68,936	213,16,755	20,694	20,694	104,00,467	98,94,198	22,28,611	22,35,050
Maharashtra	180,58,780	184,91,225	126,87,714	134,36,216	230,36,628	233,64,582	24,87,523	26,09,745	36,25,847	38,57,528	17,40,151	17,49,419
Mumbai	86,12,645	86,43,366	55,64,834	57,83,099	42,54,544	42,00,800	28,39,599	28,58,561	36,97,075	42,23,586	19,49,100	15,40,018
North East	14,87,135	15,31,194	38,18,049	39,03,133	4,85,744	5,03,791	30,90,064	31,33,041	3,26,467	3,75,245		
Orissa	38,79,819	41,13,658	97,03,785	103,14,568	16,07,740	17,42,044	44,45,162	46,25,593	14,90,790	16,73,400	2,93,488	2,01,459
Punjab	50,82,701	51,14,504	79,36,063	80,13,787	63,57,576	64,64,695	10,38,960	10,58,525	14,03,158	15,00,854	1,90,316	1,52,014
Rajasthan	117,07,557	121,64,350	188,97,726	193,75,697	77,52,344	77,95,738	64,61,780	64,42,470	58,49,444	57,42,368	10,15,620	9,39,914
Tamil Nadu (incl. Chennai)	152,35,488	155,27,782	168,29,940	172,44,929	59,34,165	58,60,715	213,15,077	215,89,089	47,66,932	50,27,213	18,03,655	17,93,628
UP(E)	182,54,718	190,03,913	199,88,762	208,52,300	103,77,719	108,28,315	66,89,790	68,96,435	64,10,249	69,37,481	24,14,613	24,15,524
UP(W)	111,93,594	115,72,864	79,66,851	83,34,605	138,73,955	144,89,273	5,69,880	6,80,246	44,79,724	48,21,795	11,98,327	12,03,109
Kolkata	52,62,820	53,80,984	44,52,322	46,67,382	21,23,788	21,44,452	40,42,132	40,83,162	34,42,689	36,56,000	10,10,902	10,01,717
West Bengal	166,93,537	175,18,187	139,62,757	146,85,257	52,55,483	55,00,993	51,49,654	48,15,881	23,84,056	27,05,000	8,16,199	5,76,939
Total	1936,00,085	1979,46,755	2432,89,404	2512,37,263	1719,12,608	1750,74,042	856,32,249	870,86,612	751,76,092	782,48,486	257,14,339	241,59,586

Annexure 1.2 (contd.)

Service Area	Tata (GSM)		Tata (CDMA)		BSNL (GSM)		BSNL (CDMA)		MTNL (GSM)		MTNL (CDMA)	
	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16
Andhra Pradesh	42,59,621	41,66,636	9,30,779	7,95,975	95,38,253	96,24,990	28,364	25,502				
Assam					12,16,010	12,49,917	66,145	66,177				
Bihar	12,82,975	12,37,934	4,67,486	4,50,800	26,62,009	31,41,722	1,43,447	1,43,502				
Delhi		-	25,10,720	21,92,037		-			23,16,792	23,18,460	22,977	-
Gujarat	24,46,541	25,78,712	3,37,210	2,99,982	32,92,725	35,53,430	54,529	50,753				
Haryana	23,14,747	24,05,245	4,04,294	3,80,388	30,29,933	31,96,266	6,453	5,844				
Himachal Pradesh	37,808	37,244	40,997	32,272	15,24,774	16,87,579	17,033	15,095				
Jammu & Kashmir					12,26,547	12,70,482	26,273	23,882				
Karnataka	68,12,820	69,02,176	3,90,106	3,71,943	70,31,865	68,85,739	64,459	60,822				
Kerala	14,16,971	14,65,457	1,19,277	1,09,597	70,86,801	74,53,461	1,30,033	1,21,205				
Madhya Pradesh	42,91,091	43,60,679	4,15,350	3,96,353	39,43,000	42,73,554	93,568	88,045				
Maharashtra	43,44,006	44,68,614	19,97,526	21,09,305	53,67,905	57,88,850	66,840	61,004				
Mumbai	22,89,098	22,60,841	10,72,467	10,45,275					12,10,760	12,42,396	63,910	-
North East					12,99,354	13,75,422	1,61,512	1,61,846				
Orissa	21,24,406	21,24,386	1,33,190	1,26,256	38,37,071	41,01,667	40,324	38,451				
Punjab	20,94,542	22,14,328	5,30,611	4,80,064	33,37,315	35,66,447	21,924	16,061				
Rajasthan	5,55,537	5,98,911	10,28,464	9,07,387	35,04,482	38,99,673	72,832	69,755				
Tamil Nadu (incl. Chennai)	49,87,388	46,03,415	2,11,429	1,92,250	86,71,072	87,05,687	50,188	47,105				
UP(E)	37,26,651	37,02,123	4,28,883	3,82,010	82,68,228	88,80,615	24,440	21,270				
UP(W)	29,94,179	30,18,921	4,70,718	4,54,061	38,64,746	42,01,285	59,880	56,556				
Kolkata	24,30,525	24,58,329	3,39,776	3,15,844	7,55,664	7,75,269	8,793	6,614				
West Bengal	4,39,560	4,05,217	50,107	47,021	18,43,012	15,63,612	69,837	70,553				
Total	488,48,466	490,09,168	118,79,390	110,88,820	813,00,766	851,95,667	12,06,874	11,50,042	35,27,552	35,60,856	86,887	-

Annexure 1.2 (contd.)

Service Area	Sistema (CDMA)		Quadrant (GSM)		Quadrant (CDMA)		Telenor (GSM)		Videocon (GSM)		Total		Net Additions
	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	
Andhra Pradesh							58,82,383	56,85,052			745,86,404	746,49,953	63,549
Assam											176,91,568	185,32,364	8,40,796
Bihar							82,81,332	88,06,055	21,352	10,009	717,55,557	744,50,861	26,95,304
Delhi	9,53,352	9,24,066									478,68,657	472,44,640	(6,24,017)
Gujarat	2,12,206	2,06,366					81,30,404	89,04,356	12,99,648	7,54,570	604,81,215	622,63,905	17,82,690
Haryana									21,68,579	22,52,375	227,64,866	232,55,426	4,90,560
Himachal Pradesh											86,33,238	88,74,693	2,41,455
Jammu & Kashmir											96,40,929	98,08,638	1,67,709
Karnataka	12,56,837	11,66,079									614,51,626	613,34,887	(1,16,739)
Kerala	3,66,013	3,55,554									334,81,731	342,90,217	8,08,486
Madhya Pradesh									34,30,269	35,29,215	641,96,438	656,25,357	14,28,919
Maharashtra							79,33,145	81,63,400			813,46,065	840,99,888	27,53,823
Mumbai											315,54,032	317,97,942	2,43,910
North East											106,68,325	109,83,672	3,15,347
Orissa											275,55,775	290,61,482	15,05,707
Punjab			30,43,757	31,61,732	3,343	1,706					310,40,266	317,44,717	7,04,451
Rajasthan	21,72,906	21,07,751									590,18,692	600,44,014	10,25,322
Tamil Nadu (incl. Chennai)	7,73,356	7,50,309									805,78,690	813,42,122	7,63,432
UP(E)							120,17,737	123,07,775	15,417	7,989	886,17,207	922,35,750	36,18,543
UP(W)	1,59,495	1,53,244					84,57,395	85,88,311	22,913	9,604	553,11,657	575,83,874	22,72,217
Kolkata	5,62,909	5,34,281									244,32,320	250,24,034	5,91,714
West Bengal	15,49,740	14,93,729									482,13,942	493,82,389	11,68,447
Total	80,06,814	76,91,379	30,43,757	31,61,732	3,343	1,706	507,02,396	524,54,949	69,58,178	65,63,762	10108,89,200	10336,30,825	227,41,625

Annexure 1.3: Wireline Subscriber Base

Sl. No	Service Area	Bharti		Reliance		Quadrant		Sistema		Tata		MTNL		BSNL		Vodafone		Total		Net Additions
		Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	Dec-15	Mar-16	
1	Andhra Pradesh	1,42,278	1,45,755	75,943	75,937	-	-	-	-	1,64,031	1,64,318	-	-	13,75,839	13,40,655	9,450	9,240	17,67,541	17,35,905	-31,636
2	Assam					-	-	-	-			-	-	1,61,219	1,58,772	1,710	1,770	1,62,929	1,60,542	-2,387
3	Bihar			6,778	6,883	-	-	-	-	13,156	13,134	-	-	3,15,300	3,11,091	1,020	930	3,36,254	3,32,038	-4,216
4	Delhi	12,12,538	12,27,042	1,74,883	1,74,750	-	-	-	-	1,33,904	1,32,930	16,13,063	16,15,433			22,140	21,030	31,56,528	31,71,185	14,657
5	Gujarat	68,759	72,192	75,050	74,762	-	-	-	-	86,623	86,802	-	-	11,96,386	11,72,423	3,180	2,910	14,29,998	14,09,089	-20,909
6	Haryana	18,917	20,344	4,427	4,427	-	-	-	-	38,654	38,644	-	-	3,12,553	3,05,885	30	30	3,74,581	3,69,330	-5,251
7	Himachal Pradesh			4,343	4,126	-	-	-	-	2,733	2,747	-	-	1,69,765	1,64,336	90	-	1,76,931	1,71,209	-5,722
8	Jammu & Kashmir					-	-	-	-			-	-	1,31,649	1,31,214			1,31,649	1,31,214	-435
9	Karnataka	5,92,441	5,96,146	1,44,139	1,48,398	-	-	-	-	2,00,816	2,06,366	-	-	13,25,557	12,94,726	9,120	9,750	22,72,073	22,55,386	-16,687
10	Kerala	55,695	56,574	34,053	33,623	-	-	-	-	17,409	18,115	-	-	23,02,820	21,87,427	1,020	1,440	24,10,997	22,97,179	-1,13,818
11	Madhya Pradesh	2,52,550	2,61,310	20,459	20,471	-	-	-	-	20,784	18,222	-	-	7,49,297	7,41,227	390	360	10,43,480	10,41,590	-1,890
12	Maharashtra	73,542	74,684	82,154	82,987	-	-	-	-	2,80,412	2,84,063	-	-	15,53,843	15,34,836	10,860	10,650	20,00,811	19,87,220	-13,591
13	Mumbai	3,48,195	3,49,585	2,47,905	2,50,477	-	-	-	-	5,28,854	5,34,127	19,04,731	18,88,655			17,130	16,054	30,46,815	30,38,898	-7,917
14	North East					-	-	-	-			-	-	1,25,580	1,24,177	150	150	1,25,730	1,24,327	-1,403
15	Orissa			3,290	3,290	-	-	-	-	8,170	8,214	-	-	2,96,128	2,94,061	960	930	3,08,548	3,06,495	-2,053
16	Punjab	1,03,046	1,08,897	21,077	21,276	2,49,964	2,52,803	-	-	16,883	16,882	-	-	6,83,984	6,59,460	750	750	10,75,704	10,60,068	-15,636
17	Rajasthan	45,248	46,187	20,843	20,832	-	-	57,932	59,130	10,888	11,510	-	-	6,51,453	6,46,839	1,860	1,950	7,88,224	7,86,448	-1,776
18	Tamil Nadu (incl. Chennai)	4,87,532	5,04,323	1,34,365	1,34,303	-	-	-	-	1,02,329	1,07,105	-	-	19,38,374	18,87,457	7,980	7,110	26,70,580	26,40,298	-30,282
19	U.P.(E)	59,845	61,575	35,585	35,129	-	-	-	-	15,225	15,210	-	-	3,89,410	3,90,103	1,170	990	5,01,235	5,03,007	1,772
20	U.P.(W)	21,028	21,793	7,227	7,105	-	-	-	-	10,000	10,037	-	-	3,95,975	3,88,005	450	480	4,34,680	4,27,420	-7,260
21	Kolkata	1,15,848	1,17,242	70,121	69,214	-	-	-	-	48,692	50,059	-	-	6,78,306	6,68,964	3,990	3,630	9,16,957	9,09,109	-7,848
22	West Bengal			1,902	1,962	-	-	-	-	3,801	3,877	-	-	3,80,507	3,60,712	30	60	3,86,240	3,66,611	-19,629
	Total	35,97,462	36,63,649	11,64,544	11,69,952	2,49,964	2,52,803	57,932	59,130	17,03,364	17,22,362	35,17,794	35,04,088	151,33,945	147,62,370	93,480	90,214	255,18,485	252,24,568	-2,93,917

Annexure 1.4: Service Area and Operator wise details of PCOs

S. No	Name of the Circle/ Service Area	Service Provider	Number of PCOs as on 31.12.2015	Number of PCOs as on 31.03.2016	Net PCO increase/ decline during QE Mar-16	Percentage Growth/ decline during QE Mar-16
1	Andhra Pradesh (excluding Telegana)	BSNL	34420	31748	-2672	-7.76%
		Bharti	201	191	-10	-4.98%
		TTL	8286	3138	-5148	-62.13%
		RCL	10521	8977	-1544	-14.68%
	Telangana	BSNL	0	0	0	-
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
	Andhra Pradesh (including Telangana)	BSNL	34420	31748	-2672	-7.76%
		Bharti	201	191	-10	-4.98%
		TTL	8286	3138	-5148	-62.13%
		RCL	10521	8977	-1544	-14.68%
2	Assam	BSNL	9175	8909	-266	-2.90%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
3	Bihar (excluding Jharkhand)	BSNL	1648	1644	-4	-0.24%
		Bharti	0	0	0	-
		TTL	13	10	-3	-23.08%
		RCL	235	148	-87	-37.02%
	Jharkhand	BSNL	4749	4736	-13	-0.27%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
	Bihar (including Jharkhand)	BSNL	6397	6380	-17	-0.27%
		Bharti	0	0	0	-
		TTL	13	10	-3	-23.08%
		RCL	235	148	-87	-37.02%
4	Delhi	BSNL	0	0	0	-
		Bharti	757	657	-100	-13.21%
		TTL	2992	2785	-207	-6.92%
		RCL	337	288	-49	-14.54%
		MTNL	55450	55071	-379	-0.68%
5	Gujarat	BSNL	25246	24066	-1180	-4.67%
		Bharti	16	15	-1	-6.25%
		TTL	2519	1504	-1015	-40.29%
		RCL	1439	1298	-141	-9.80%
6	Haryana	BSNL	2671	2303	-368	-13.78%
		Bharti	190	187	-3	-1.58%
		TTL	100	57	-43	-43.00%
		RCL	40	26	-14	-35.00%

Annexure 1.4 (Contd.)

S. No	Name of the Circle/ Service Area	Service Provider	Number of PCOs as on 31.12.2015	Number of PCOs as on 31.03.2016	Net PCO increase/ decline during QE Mar-16	Percentage Growth/ Decline during QE Mar-16
7	Himachal Pradesh	BSNL	2648	2245	-403	-15.22%
		Bharti	0	0	0	-
		TTL	28	26	-2	-7.14%
		RCL	21	15	-6	-28.57%
8	Jammu & Kashmir	BSNL	3461	3430	-31	-0.90%
		Bharti	0	0	0	-
		TTL	0	0	0	-
9	Karnataka	BSNL	37620	32630	-4990	-13.26%
		Bharti	4901	4731	-170	-3.47%
		TTL	1931	1652	-279	-14.45%
		RCL	3669	3168	-501	-13.65%
10	Kerala	BSNL	25382	23596	-1786	-7.04%
		Bharti	559	548	-11	-1.97%
		TTL	81	70	-11	-13.58%
		RCL	638	520	-118	-18.50%
11	Kolkata	BSNL	6123	5954	-169	-2.76%
		Bharti	37	36	-1	-2.70%
		TTL	652	562	-90	-13.80%
		RCL	397	346	-51	-12.85%
12	Madhya Pradesh (excluding Chhattisgarh)	BSNL	24381	23815	-566	-2.32%
		Bharti	2937	2776	-161	-5.48%
		TTL	1069	982	-87	-8.14%
		RCL	1145	1045	-100	-8.73%
	Chhattisgarh	BSNL	2058	1890	-168	-8.16%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
	Madhya Pradesh (including Chhattisgarh)	BSNL	26439	25705	-734	-2.78%
		Bharti	2937	2776	-161	-5.48%
		TTL	1069	982	-87	-8.14%
		RCL	1145	1045	-100	-8.73%
13	Maharashtra (excluding Mumbai & Goa)	BSNL	68491	67397	-1094	-1.60%
		Bharti	0	0	0	-
		TTL	12264	21848	9584	78.15%
		RCL	3542	3113	-429	-12.11%
	Goa	BSNL	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
	Mumbai	BSNL	0	0	0	-
		Bharti	41	40	-1	-2.44%
		TTL	5464	5247	-217	-3.97%

Annexure 1.4 (Contd.)

S. No	Name of the Circle/ Service Area	Service Provider	Number of PCOs as on 31.12.2015	Number of PCOs as on 31.03.2016	Net PCO increase/ decline during QE Mar-16	Percentage Growth/ decline during QE Mar-16
	Mumbai	RCL	6651	6002	-649	-9.76%
		MTNL	79697	78935	-762	-0.96%
	Maharashtra (including Mumbai & Goa)	BSNL	68491	67397	-1094	-1.60%
		Bharti	41	40	-1	-2.44%
		TTL	17728	27095	9367	52.84%
		RCL	10193	9115	-1078	-10.58%
14	Arunachal Pradesh	BSNL	4768	4,689	-79	-1.66%
	Manipur	BSNL	0	0	0	-
	Meghalaya	BSNL	0	0	0	-
	Mizoram	BSNL	0	0	0	-
	Nagaland	BSNL	0	0	0	-
	Tripura	BSNL	0	0	0	-
	North East	BSNL	4768	4,689	-79	-1.66%
15	Orissa	BSNL	2569	2486	-83	-3.23%
		Bharti	0	0	0	-
		TTL	167	162	-5	-2.99%
		RCL	40	29	-11	-27.50%
16	Punjab	BSNL	7255	6450	-805	-11.10%
		Bharti	101	96	-5	-4.95%
		QTL	2237	2081	-156	-6.97%
		TTL	559	348	-211	-37.75%
		RCL	97	71	-26	-26.80%
17	Rajasthan	BSNL	10258	9900	-358	-3.49%
		Bharti	216	213	-3	-1.39%
		S.Shyam	10065	9836	-229	-2.28%
		TTL	384	260	-124	-32.29%
		RCL	554	462	-92	-16.61%
		Vodafone	0	0	0	-
18	Tamilnadu (excluding chennai)	BSNL	63532	58836	-4696	-7.39%
		Bharti	8057	7667	-390	-4.84%
		TTL	660	499	-161	-24.39%
		RCL	3443	2874	-569	-16.53%
		Vodafone	0	0	0	-
	Chennai	BSNL	12787	11889	-898	-7.02%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	1576	1389	-187	-11.87%
		Vodafone	0	0	0	-
	Tamil Nadu (including Chennai)	BSNL	76319	70725	-5594	-7.33%
		Bharti	8057	7667	-390	-4.84%
TTL		660	499	-161	-24.39%	

Annexure 1.4 (Contd.)

S. No	Name of the Circle/ Service Area	Service Provider	Number of PCOs as on 31.12.2015	Number of PCOs as on 31.03.2016	Net PCO increase/ decline during QE Mar-16	Percentage Growth/ decline during QE Mar-16
	Tamil Nadu (including Chennai)	RCL	5019	4263	-756	-15.06%
		Vodafone	0	0	0	-
19	Uttar Pradesh- East	BSNL	16657	15227	-1430	-8.58%
		Bharti	137	131	-6	-4.38%
		TTL	110	79	-31	-28.18%
		RCL	64	34	-30	-46.88%
		Vodafone	0	0	0	-
20	Uttarakhand	BSNL	2145	2076	-69	-3.22%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
		Vodafone	0	0	0	-
	Uttar Pradesh - West (excluding Uttarakhand)	BSNL	4565	3851	-714	-15.64%
		Bharti	111	100	-11	-9.91%
		TTL	406	338	-68	-16.75%
		RCL	145	115	-30	-20.69%
		Vodafone	0	0	0	-
	Uttar Pradesh - West (including Uttarakhand)	BSNL	6710	5927	-783	-11.67%
		Bharti	111	100	-11	-9.91%
		TTL	406	338	-68	-16.75%
		RCL	145	115	-30	-20.69%
		Vodafone	0	0	0	-
21	West Bengal (excluding Andaman & Nicobar)	BSNL	6935	5928	-1007	-14.52%
		Bharti	0	0	0	-
		TTL	137	126	-11	-8.03%
		RCL	302	168	-134	-44.37%
		Vodafone	0	0	0	-
	Andaman and Nicobar	BSNL	152	149	-3	-1.97%
		Bharti	0	0	0	-
		TTL	0	0	0	-
		RCL	0	0	0	-
		Vodafone	0	0	0	-
	West Bengal (including Andaman & Nicobar)	BSNL	7087	6077	-1010	-14.25%
		Bharti	0	0	0	-
		TTL	137	126	-11	-8.03%
		RCL	302	168	-134	-44.37%
		Vodafone	0	0	0	-
Total			618,084	588,936	-29148	-4.72%

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

S. No	Name of the Circle/ Service Area	Service Provider	Number of VPTs as on 31.12.2015	Number of VPTs as on 31.03.2016	Net VPTs increase/ decrease during QE Mar-16	Percentage Growth/ Decline during QE Mar-16
1	Andhra Pradesh (excluding Telegana)	BSNL	25107	25107	0	0%
	Telangana	BSNL	0	0	0	0%
	Andhra Pradesh (including Telangana)	BSNL	25107	25107	0	0%
2	Assam	BSNL	24692	24692	0	0%
3	Bihar (excluding Jharkhand)	BSNL	38941	38941	0	0%
	Jharkhand	BSNL	28821	28821	0	0%
	Bihar (including Jharkhand)	BSNL	67762	67762	0	0%
5	Gujarat	BSNL	18054	18054	0	0%
6	Haryana	BSNL	6678	6678	0	0%
7	Himachal Pradesh	BSNL	17408	17408	0	0%
8	Jammu & Kashmir	BSNL	6385	6385	0	0%
9	Karnataka	BSNL	27451	27451	0	0%
10	Kerala	BSNL	1372	1372	0	0%
11	Kolkata	BSNL	613	613	0	0%
12	Madhya Pradesh (excl. Chhattisgarh)	BSNL	51986	51986	0	0%
	Chhattisgarh	BSNL	18328	18328	0	0%
	Madhya Pradesh (incl. Chhattisgarh)	BSNL	70314	70314	0	0%
13	Maharashtra (excluding Mumbai & Goa)	BSNL	40654	40654	0	0%
		TTL	1786	1305	-1786	0%
	Goa	BSNL	0	0	0	0%
		TTL	0	0	0	0%
	Mumbai	BSNL	0	0	0	0%
		TTL	0	0	0	0%
	Maharashtra (incl. Mumbai & Goa)	BSNL	40654	40654	0	0%
TTL		1786	1305	-1786	0%	
14	Arunachal Pradesh	BSNL	13109	13109	0	0%
	North East	BSNL	13109	13190	0	0%
15	Orissa	BSNL	45215	45215	0	0%
16	Punjab	BSNL	12065	12065	0	0%
		QTL	2	2	0	0%
17	Rajasthan	BSNL	39568	39568	0	0%
		S.Shyam	3010	3010	0	0%

Annexure 1.5 (contd.)

S. No	Name of the Circle/ Service Area	Service Provider	Number of VPTs as on 31.12.2015	Number of VPTs as on 31.03.2016	Net VPTs increase/ decrease during QE Mar-16	Percentage Growth/ Decline during QE Mar-16
18	Tamilnadu (excluding chennai)	BSNL	13837	13837	0	0%
	Chennai	BSNL	1655	1655	0	0%
	Tamil Nadu (including Chennai)	BSNL	15492	15492	0	0%
19	Uttar Pradesh- East	BSNL	74145	74145	0	0%
20	Uttarakhand	BSNL	15381	15381	0	0%
	Uttar Pradesh - West (excluding Uttarakhand)	BSNL	23707	23707	0	0%
	Uttar Pradesh - West (including Uttarakhand)	BSNL	39088	39088	0	0%
21	West Bengal (excluding Andaman & Nicobar)	BSNL	36958	36958	0	0%
	Andaman and Nicobar	BSNL	352	352	0	0%
	West Bengal (including Andaman & Nicobar)	BSNL	37310	37310	0	0%
Total			5,87,280	5,86,799	-481	-0.08%

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

S. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
1	Bharti Airtel Limited	520,64,601	384,73,189	905,37,790
2	Vodafone	397,92,668	277,60,081	675,52,749
3	Idea Cellular	211,10,847	229,24,981	440,35,828
4	Reliance Communications	234,49,233	155,67,769	390,17,002
5	Bharat Sanchar Nigam Ltd.	137,40,051	203,51,570	340,91,621
6	Aircel	149,06,282	75,41,005	224,47,287
7	Tata	118,12,117	92,29,125	210,41,242
8	Telenor	136,71,479	0	136,71,479
9	Sistema Shyam	17,019	19,64,470	19,81,489
10	Mahanagar Telephone Nigam Ltd.	4,56,096	15,11,496	19,67,592
11	Videocon	12,13,631	0	12,13,631
12	Atria Convergence Technologies Pvt. Ltd.	0	9,41,006	9,41,006
13	Quadrant Televentures Ltd.	5,22,883	2,24,691	7,47,574
14	You Broadband India Pvt. Ltd.	16,525	5,33,476	5,50,001
15	Hathway Cable & Datacom Pvt. Ltd.	13,930	4,29,280	4,43,210
16	Tikona	7,001	3,34,220	3,41,221
17	Syscon Infoway Pvt Ltd	35,300	1,59,608	1,94,908
18	Asianet Satellite Communications Ltd.	0	1,76,453	1,76,453
19	D-Vois Broadband Private Limited	0	1,70,773	1,70,773
20	GTPL Hathway Private Limited (Gujarat Telelink Pvt. Ltd.)	839	1,67,980	1,68,819
21	Alliance Broadband Services Pvt. Ltd.	3,736	1,28,697	1,32,433
22	SITI Broadband Services Pvt. Ltd.	0	1,21,409	1,21,409
23	Five Network Solution (India) Ltd.	0	87,184	87,184
24	DEN Networks Ltd	73	76,375	76,448
25	Ortel Communication Ltd.	6,503	65,979	72,482
26	RailTel Corporation of India Ltd.	0	70,731	70,731
27	Honesty Net Solutions (I) Pvt Ltd	1,833	58,972	60,805
28	Meghbela Cable & Broadband Servies (P) Ltd	0	45,319	45,319
29	Citycom Networks Pvt. Ltd.	0	44,788	44,788
30	Indusind Media & Communications Limited (In2cable (I) Ltd.)	2,810	40,553	43,363
31	Broadband Pacenet (I) Pvt. Ltd.	0	42,558	42,558
32	Nextra Teleservices Pvt. Ltd.	0	37,768	37,768
33	Tata Communications Limited	11,265	25,470	36,735
34	Home Systems Pvt. Ltd.	0	32,684	32,684
35	R.K. Infratel Limited	36	29,423	29,459
36	Wish Net Pvt. Ltd.	0	25,146	25,146
37	Chandra Net Pvt. Limited	136	23,510	23,646

Annexure 1.6 (contd.)

S. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
38	Digital Network associates Pvt. Ltd	1,217	21,806	23,023
39	Vasai Cable Pvt. Ltd.	0	22,561	22,561
40	Limras Eronet Broadband Service Pvt Ltd	5,067	17,268	22,335
41	Rajesh Multi Channel Pvt. Ltd.	494	21,127	21,621
42	Excitel Broadband Private Limited	0	17,700	17,700
43	Apna Telelink Ltd.	0	14,962	14,962
44	Southern Online Bio Technologies Ltd.	1,348	12,435	13,783
45	World Phone Internet Services Pvt Ltd	1,203	12,063	13,266
46	GBPS Networks Pvt. Ltd.	229	13,034	13,263
47	North East Dataa Network Pvt Ltd.	93	11,165	11,258
48	Quest Consultancy Pvt. Ltd.	0	11,238	11,238
49	Pioneerelabs	361	10,063	10,424
50	Ishan Netsol Pvt Ltd	9,250	804	10,054
51	City Online Services Ltd	0	9,766	9,766
52	Yashash Cable Network Pvt Ltd	0	9,668	9,668
53	Geocity Network Solutions Pvt. Ltd.	1,059	8,482	9,541
54	Wan and Lan Internet Pvt. Ltd.	743	7,945	8,688
55	SmartLink Broadband Services	0	8,617	8,617
56	Kappa Internet Services Pvt Ltd.	3,259	5,299	8,558
57	Blazenet Ltd.	4,069	3,533	7,602
58	IKF Technologies Ltd	2,354	4,495	6,849
59	Spacenet Internet Services Pvt Ltd	0	5,791	5,791
60	Nettlinx Ltd.	698	4,472	5,170
61	Intermedia Cable Communication Pvt Ltd	0	5,095	5,095
62	CJM Consultancy Services Pvt. Ltd.	0	5,015	5,015
63	Kaizen Infonet Pvt Ltd	519	4,470	4,989
64	Narmada Cyberzone Pvt Ltd	1,858	3,097	4,955
65	Siliguri Internet & Cable TV Pvt. Ltd.	0	4,502	4,502
66	CJ Online Pvt. Ltd.	0	4,319	4,319
67	Rajesh Patel Net Services Pvt. Ltd.	425	3,549	3,974
68	Swiftmail Communications Ltd.	1,114	2,555	3,669
69	United Telecoms Ltd.	225	3,272	3,497
70	Sify Technologies Ltd.	1,737	1,743	3,480
71	HCL Comnet Systems & Services Ltd.	3,403	31	3,434
72	Sikka Broadband (P) Ltd.(Gomti Cable Network Pvt. Ltd.)	0	3,218	3,218
73	Shri Omkar Infocom Pvt. Ltd.	0	3,010	3,010
74	F/X Wireless Technology Services Pvt. Ltd.	0	2,811	2,811
75	Readylink Internet Services Pvt Ltd	406	2,118	2,524

Annexure 1.6 (contd.)

S. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
76	Multinet (Udaipur) Pvt. Ltd.	0	2,150	2,150
77	Hughes Communications India Ltd.	658	1,473	2,131
78	Speed Online.net Pvt. Ltd.	0	2,125	2,125
79	Fusionnet Web Services Pvt. Ltd.	0	2,086	2,086
80	Star Broadband Services (I) Pvt Ltd	0	1,862	1,862
81	Capture Network Systems Pvt. Ltd.	259	1,538	1,797
82	Touch Net India Pvt. Ltd.	214	1,484	1,698
83	Sphier Infotech Pvt. Ltd.	0	1,597	1,597
84	Hathway Bhawani Cabletel & Datacom Pvt Ltd	0	1,554	1,554
85	S.S.Netcom Pvt Ltd	0	1,492	1,492
86	WE INTERNET LIMITED (Nivyah Infrastructure & Telecom Services Ltd.)	0	1,321	1,321
87	Digital2Virtual ISP Pvt. Ltd.	10	1,249	1,259
88	STN Communication & Advertising Pvt Ltd.	270	951	1,221
89	Symbois Creations Pvt. Ltd.	28	1,110	1,138
90	Harisree CableNet Pvt. Ltd.	0	835	835
91	Aeroway Networks Pvt Ltd.	0	828	828
92	delDSL Internet Pvt Ltd	0	828	828
93	Data Infosys Ltd.	30	713	743
94	Sab Infotech (Sab Industries)	0	699	699
95	Elyzium Technologies Pvt. Ltd.	0	678	678
96	Rajdhani Telecom Pvt. Ltd.	86	557	643
97	Airgenie Communications Pvt. Ltd.	0	638	638
98	NetMagic Solutions(P) Ltd.	0	591	591
99	Primenet Global Ltd.	0	574	574
100	Bhiwani Communications Pvt. Ltd.	188	385	573
101	Correl IT Services Pvt. Ltd.	0	490	490
102	Gleam Worldwide Services Pvt. Ltd.	0	395	395
103	Japra Tele Link Pvt. Ltd.	0	368	368
104	Rida Communication Pvt. Ltd.	0	365	365
105	Microsense Pvt. Ltd.	0	234	234
106	Conjoinix Technologies Pvt Ltd	0	232	232
107	QBC Infotech Pvt. Ltd.	0	226	226
108	ERNET India	163	62	225
109	Pulse Telesystems Pvt. Ltd.	0	211	211
110	Gorakhpur Net Services Pvt. Ltd.	0	199	199
111	Nextgen Communications Ltd (RPG Infotech Ltd).	45	140	185

Annexure 1.6 (contd.)

S. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
112	Tamana Winet Pvt. Ltd.	0	185	185
113	Khetan Cable Network (P) Ltd	0	174	174
114	Oasis Cable Pvt Ltd.	0	153	153
115	Shri Vinayagaa Internet Pvt Ltd	28	115	143
116	Trans Virtual Pvt. Ltd.	32	95	127
117	Power Grid Corporation of India Ltd.	0	126	126
118	Pacific Internet India Pvt. Ltd.	112	0	112
119	Singh Internet Services Pvt. Ltd.	0	93	93
120	Dream Plus Multi Services Pvt. Ltd.	13	76	89
121	Sanyog Networks Pvt Ltd	7	65	72
122	Edge Telecommunications Pvt. Ltd.	0	68	68
123	AT&T Global Network Services India Pvt Ltd	0	49	49
124	Verizon Communications India Pvt. Ltd. (Worldcom Communications)	0	47	47
125	Adya Tech One Services Pvt Ltd	0	43	43
126	West Bengal Electronics Industry Development Corp. Ltd.	0	43	43
127	VIVA Communications Pvt Ltd(Mylai Karpagambal Information Systems (P) Ltd)	0	42	42
128	Jetspot Networks Pvt. Ltd.	0	25	25
129	Essel Shyam Communications Limited	17	0	17
130	Vcare Call Centres India Pvt. Ltd.	0	17	17
131	Novanet India Ltd.	0	16	16
132	Airmesh Communications Limited	0	15	15
133	Financial Technologies Communications Ltd.	14	0	14
134	Tatanet Services Ltd	0	9	9
135	Nelco Ltd.	0	6	6
136	ABT Ltd.	3	2	5
137	Orange Business Services India Network Pvt. Ltd.	0	5	5
138	Reliance Jio Infocomm Ltd (Infotel Broadband Services Limited)	0	1	1
	Total No. of Subscribers	1929,00,202	1497,54,548	3426,54,750

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. Mar-16**

S. No.	Name of Service Providers which reported IP Telephony Minutes
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 Ltd.
13	Tata Teleservices (Maharashtra) Ltd.
14	Trikon Electronics Pvt. Ltd.
15	VIVA Communications Pvt. Ltd.
16	World Phone Internet Services Pvt. Ltd.
17	You Broadband India Pvt. Ltd.

Annexure 1.8: Service Area wise PMRTS subscriber Base

SNo.	Operative Area	Service Provider	Subscriber Base	
			31.12.2015	31.03.2016
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6348	6094
		Procall(Delhi)	2252	2527
		Procall (Faridabad)	53	
		Procall (Gurgaon)	51	
		Total	8704	8621
2	Mumbai(Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7737	8265
		Smartalk (Mumbai)	460	460
		Bhilwara Telenet(Mumbai)	414	450
		Airtalk Solutions & Services Pvt. Ltd	250	228
		Total	8861	9403
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2168	2416
		Total	2168	2416
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6645	6781
		Quick Calls	187	228
		Total	6832	7009
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7048	7166
		Quick Calls	235	240
		Total	7283	7406
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	4457	4895
		Quick Calls (Hyderabad Urban)	1010	936
		Total	5467	5831
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	981	1051
		Total	981	1051
8	Rajasthan (Jaipur)	Procall	707	286
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.		526
		Total	707	812

Annexure- 1.8 (Contd.)

SNo.	Operative Area	Service Provider	Subscriber Base	
			31.12.2015	31.03.2016
9	Gujrat (Ahmedaba/ Surat/Vadodara/ Bharuch/ Kutch/ Amrela / Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch)	6096	6214
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		Total	7916	8034
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1312	1413
		Smartalk	465	465
		Total	1777	1878
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	131	210
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	424	424
		Total	555	634
Grand Total			51251	53095

Annexure 2.1: GSM Service - Service Area wise Statistics for QE Mar-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	140	25	190	196	387
Gujarat	94	118	10	187	156	344
Karnataka	93	151	39	196	184	381
MH	94	133	32	177	160	337
TN (incl. Chennai)	94	136	30	183	189	373

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	97	108	29	209	182	391
Kerala	96	196	13	198	242	440
MP	98	103	13	148	154	302
Punjab	93	150	75	218	206	424
Rajasthan	97	110	8	156	176	332
UP(E)	99	95	9	170	240	411
UP(W)	98	97	21	168	190	358
WB	99	85	16	167	208	375

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	137	32	194	227	421
Bihar	99	93	5	165	257	421
HP	98	112	10	180	168	348
J&K	93	161	6	267	248	514
NE	98	134	54	175	166	341
Orissa	99	101	8	198	234	432

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	93	110	13	181	188	369
Delhi	85	176	16	237	183	420
Mumbai	82	201	35	259	184	444

**Annexure 2.2: CDMA Full Mobility Service - Service Area wise Statistics
for QE Mar-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	76	9	115	89	204
Gujarat	79	156	6	128	88	216
TN (incl. Chennai)	81	177	6	81	70	152
Karnataka	83	142	6	127	112	239
AP	87	112	11	150	121	271

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	52	5	155	152	307
Rajasthan	95	85	6	243	166	409
UP(E)	96	47	8	72	72	144
MP	96	49	17	210	103	312
Kerala	89	171	4	79	64	143
UP(W)	92	87	10	95	101	196
Haryana	91	62	6	179	127	306
Punjab	69	172	13	244	140	384

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	89	94	6	151	140	291
Bihar	96	43	13	322	181	504
HP	87	100	5	186	97	283
North East	NA					
Assam	NA					
J&K	34	185	1	84	51	135

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	89	98	5	150	114	264
Delhi	94	108	4	136	97	233
Mumbai	70	204	7	99	79	178

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, March, 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		
		ENIS: Accumulated downtime (not available for service) (%age)	Worst affected ENIS due to downtime (%age)	Call Set-up Success Rate (with in licensee's own network)	SDOCH/ Paging CH. 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	Metering and billing credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/changing complaints	Resolution of billing/changing 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	0.07	0.10	98.42	0.10	0.66	0.48	2.92	97.27	0	0.00	0.00	100.00	100.00	100.00	97.93	89.34	100.00	100.00	
	Airtel	0.07	0.07	98.46	0.82	0.94	0.36	0.95	99.90	0	0.01	0.00	100.00	100.00	100.00	100.00	92.85	100.00	100.00	
	BSNL	0.96	1.97	98.33	0.51	1.38	0.71	2.53	98.67	0	0.00	0.00	100.00	100.00	100.00	98.00	95.30	100.00	100.00	
	Idea	0.04	0.01	99.08	0.71	0.93	0.73	2.83	97.07	0	0.05	0.11	100.00	100.00	100.00	99.35	97.15	100.00	100.00	
	RCOM CDMA	0.14	0.91	97.95	0.00	0.95	0.12	0.51	98.96	0	0.09	0.02	100.00	100.00	100.00	98.28	97.66	100.00	100.00	
	RCOM GSM	0.24	0.95	99.24	0.03	0.38	0.11	0.43	99.38	0	0.09	0.09	100.00	100.00	100.00	98.88	96.43	100.00	100.00	
	Telenor	0.06	0.01	99.14	0.22	0.28	0.70	2.15	98.51	0	NA	0.01	100.00	100.00	NA	99.50	99.22	NA	NA	
	TTL CDMA	0.03	0.03	99.48	0.00	0.02	0.18	1.96	98.25	0	0.00	0.00	100.00	100.00	100.00	96.79	99.54	100.00	99.48	
	TTL GSM	0.02	0.00	98.90	0.13	0.12	0.47	2.33	97.81	0	0.00	0.00	100.00	100.00	100.00	99.33	93.11	100.00	100.00	
Vodafone	0.03	0.02	99.76	0.13	0.24	0.38	2.49	99.09	0	0.09	0.25	100.00	100.00	100.00	100.00	95.45	100.00	96.03		
Assam	BSNL	1.99	1.92	97.70	0.96	1.81	1.93	2.98	96.18	0	0.01	0.00	100.00	100.00	100.00	97.00	92.43	100.00	100.00	
	Aircel	2.41	14.77	91.98	1.68	5.58	1.62	12.42	91.62	0	0.00	0.00	100.00	100.00	100.00	95.79	95.49	100.00	97.27	
	Airtel	0.21	0.57	95.95	0.41	1.08	1.05	1.09	99.03	0	0.01	0.00	100.00	100.00	100.00	100.00	94.23	100.00	100.00	
	Idea	1.06	0.82	96.42	0.75	1.45	0.40	1.75	95.77	0	0.00	0.03	100.00	100.00	100.00	95.50	99.79	100.00	100.00	
	RTL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.09	100.00	100.00	100.00	99.07	96.18	100.00	100.00
Vodafone	0.65	1.54	98.88	0.47	1.12	0.68	2.74	96.88	0	0.07	0.04	100.00	100.00	100.00	99.33	100.00	100.00	100.00		
Bihar	Aircel	1.94	11.52	84.52	2.07	15.13	1.89	14.66	95.03	0	0.00	0.00	100.00	100.00	100.00	93.18	96.43	100.00	85.00	
	Airtel	0.05	0.14	95.43	0.77	1.30	1.67	2.25	95.75	0	0.00	0.00	100.00	100.00	100.00	99.28	85.99	100.00	100.00	
	BSNL	1.93	1.91	96.55	0.49	0.45	1.59	5.11	97.35	0	0.00	0.00	99.50	100.00	100.00	95.00	96.54	100.00	100.00	
	Idea	0.55	1.65	96.20	0.82	1.85	0.88	2.69	96.47	0	0.03	0.01	100.00	100.00	100.00	98.46	99.92	100.00	100.00	
	RCOM CDMA	0.23	1.32	96.93	0.00	0.84	0.19	0.46	97.10	0	0.07	0.08	100.00	100.00	100.00	99.76	95.49	100.00	100.00	
	RTL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.09	100.00	100.00	100.00	99.80	96.49	100.00	100.00
	Telenor	0.27	0.57	92.73	1.65	5.95	0.94	4.22	94.69	0	NA	0.00	100.00	100.00	NA	99.70	99.31	NA	NA	
	TTL CDMA	0.17	0.00	97.83	0.00	0.51	0.36	1.60	98.25	0	0.00	0.00	100.00	100.00	100.00	100.00	99.79	100.00	100.00	100.00
	TTL GSM	0.10	0.00	97.88	0.30	0.70	0.61	2.45	97.46	0	0.00	0.00	100.00	100.00	100.00	95.60	95.02	100.00	100.00	
	Videocon	0.16	0.00	99.35	0.22	0.17	0.68	0.00	99.35	0	NA	0.00	100.00	100.00	NA	100.00	97.48	NA	100.00	
Vodafone	0.35	1.27	99.20	0.47	0.80	0.73	2.76	97.89	0	0.01	0.09	100.00	100.00	100.00	100.00	97.97	100.00	99.28		

Annexure 4.1 (Contd.)

Chennai	Airtel	CHN incl. in TN																		
	BSNL	0.48	1.50	98.32	0.63	1.68	0.71	1.72	99.98	0	0.03	0.01	99.00	100.00	100.00	100.00	95.80	100.00	100.00	
	Idea	0.12	0.39	99.68	0.22	0.15	0.24	0.90	98.54	0	CHN Incl. in TN									
	Vodafone	CHN incl. in TN																		
Delhi	Aircel	0.13	0.27	97.62	0.25	1.45	0.51	2.96	96.33	0	0.01	0.00	100.00	100.00	100.00	99.01	95.30	100.00	81.31	
	Airtel	0.01	0.00	99.37	0.04	0.03	0.73	1.18	99.15	0	0.02	0.00	100.00	100.00	100.00	100.00	95.54	100.00	100.00	
	Idea	0.03	0.00	99.02	0.51	0.47	0.67	2.28	98.18	0	0.07	0.26	100.00	100.00	100.00	98.95	99.03	100.00	100.00	
	MTNL GSM	0.11	0.21	96.79	0.46	1.77	1.82	2.54	97.20	0	0.05	0.02	100.00	100.00	100.00	97.77	97.30	100.00	100.00	
	MTNL CDMA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	100.00	NR	NR	NR	NR	
	MTS	0.04	0.00	99.10	0.00	0.10	0.25	1.25	99.20	0	0.00	0.00	100.00	100.00	100.00	99.04	96.07	100.00	100.00	
	RCOM CDMA	0.04	0.00	97.01	0.00	0.98	0.22	0.97	99.50	0	0.07	0.03	100.00	100.00	100.00	99.66	91.42	100.00	100.00	
	RCOM GSM	0.04	0.09	98.17	0.40	0.95	0.13	0.52	98.69	0	0.09	0.10	100.00	100.00	100.00	99.84	91.52	100.00	100.00	
	TTL CDMA	0.04	0.07	99.23	0.00	0.10	0.25	1.45	99.19	0	0.00	0.00	100.00	100.00	100.00	98.87	94.03	100.00	100.00	
Vodafone	0.16	0.66	99.01	0.23	0.78	1.13	2.67	97.90	0	0.17	0.03	100.00	100.00	99.99	100.00	95.28	100.00	99.98		
Gujarat	Aircel	0.01	0.00	98.84	0.03	0.04	0.32	1.75	96.98	0	0.00	0.00	100.00	100.00	100.00	97.74	98.40	100.00	100.00	
	Airtel	0.09	0.15	98.98	0.07	0.73	0.69	1.04	96.79	0	0.00	0.00	100.00	100.00	100.00	100.00	70.61	100.00	100.00	
	BSNL	1.52	1.28	97.96	0.07	0.34	0.53	1.57	100.00	0	0.01	0.00	100.00	100.00	100.00	98.00	96.43	100.00	100.00	
	Idea	0.04	0.10	99.13	0.41	0.39	0.86	2.24	96.00	0	0.04	0.02	100.00	100.00	100.00	98.61	99.76	100.00	100.00	
	MTS	0.01	0.00	99.70	0.00	0.00	0.01	0.15	99.21	0	0.03	0.01	100.00	100.00	100.00	98.07	98.14	100.00	100.00	
	RCOM CDMA	0.04	0.30	97.98	0.00	0.79	0.07	0.31	99.27	0	0.09	0.03	100.00	100.00	100.00	99.00	90.16	100.00	100.00	
	RCOM GSM	0.05	0.49	98.03	0.09	0.92	0.10	0.28	98.91	0	0.09	0.09	100.00	100.00	100.00	99.76	92.32	100.00	100.00	
	Telenor	0.07	0.19	98.08	0.29	1.15	0.81	3.14	98.05	0	NA	0.00	100.00	100.00	NA	99.65	98.21	NA	NA	
	TTL CDMA	0.01	0.00	98.85	0.00	0.24	0.27	3.02	99.37	0	0.00	0.00	100.00	100.00	100.00	100.00	99.05	100.00	100.00	
	TTL GSM	0.03	0.00	98.54	0.17	0.22	0.61	2.87	98.39	0	0.00	0.00	100.00	100.00	66.67	98.44	90.36	100.00	100.00	
Videocon	0.06	0.16	98.54	0.09	0.89	0.17	0.12	98.85	0	NA	0.00	100.00	100.00	100.00	100.00	96.81	NA	100.00		
Vodafone	0.03	0.10	99.58	0.20	0.42	0.68	1.89	97.41	0	0.10	0.01	100.00	100.00	100.00	100.00	98.10	100.00	99.46		
Haryana	Aircel	0.19	0.00	99.52	0.00	0.00	0.00	0.01	99.99	0	0.00	0.00	100.00	100.00	100.00	98.17	100.09	100.00	100.00	
	Airtel	0.07	0.07	98.81	0.41	0.48	0.84	1.15	98.43	0	0.03	0.00	100.00	100.00	100.00	100.00	75.91	100.00	100.00	
	BSNL	1.01	1.47	98.45	0.28	0.64	1.14	1.18	97.24	0	0.06	0.01	100.00	100.00	100.00	100.00	99.63	100.00	100.00	
	Idea	0.01	0.00	98.50	0.34	0.35	0.60	2.20	97.85	0	0.08	0.39	100.00	100.00	100.00	99.78	97.92	100.00	100.00	
	RCOM CDMA	0.26	2.12	97.81	0.00	0.98	0.12	0.47	99.80	0	0.09	0.09	100.00	100.00	100.00	98.07	96.27	100.00	100.00	
	RCOM GSM	0.12	0.89	98.62	0.18	0.14	0.06	0.44	99.52	0	0.09	0.09	100.00	100.00	100.00	99.16	93.12	100.00	100.00	
	TTL CDMA	0.12	0.18	93.64	0.00	3.98	0.68	4.95	96.58	0	0.00	0.00	100.00	100.00	100.00	100.00	99.62	100.00	100.00	
	TTL GSM	0.31	1.90	98.47	0.24	0.25	0.71	2.82	96.82	0	0.00	0.00	100.00	100.00	83.33	97.86	88.91	100.00	100.00	
	Videocon	0.10	0.14	98.68	0.20	0.20	0.57	0.76	97.40	0	NA	0.07	100.00	100.00	100.00	100.00	96.22	NA	100.00	
Vodafone	0.07	0.47	99.61	0.15	0.39	0.62	1.92	97.85	0	0.07	0.08	100.00	100.00	100.00	100.00	98.46	100.00	100.00		

Annexure 4.1 (Contd.)

Himachal Pradesh	Aircel	0.15	0.45	99.65	0.14	0.16	1.19	10.21	95.31	0	0.00	0.00	100.00	100.00	100.00	98.53	96.85	100.00	100.00
	Airtel	0.04	0.08	98.06	0.38	0.46	0.69	1.17	98.38	0	0.02	0.00	100.00	100.00	100.00	99.91	94.58	100.00	100.00
	BSNL	1.97	1.91	98.03	0.63	1.97	0.67	2.83	96.08	0	0.01	0.04	100.00	100.00	100.00	100.00	99.52	100.00	100.00
	Idea	0.09	0.17	99.15	0.09	0.22	1.10	1.93	97.14	0	0.02	0.03	100.00	100.00	100.00	99.17	99.78	100.00	100.00
	RCOM CDMA	0.06	0.23	98.45	0.00	0.63	0.12	0.54	99.38	0	0.08	0.05	100.00	100.00	100.00	96.91	97.73	100.00	100.00
	RTL	0.09	0.66	95.62	0.22	1.27	0.27	0.77	96.66	0	0.09	0.09	100.00	100.00	100.00	99.58	96.87	100.00	100.00
	TTL CDMA	0.01	0.00	99.40	0.00	0.01	0.09	1.35	98.11	0	0.00	0.00	100.00	100.00	100.00	100.00	99.73	100.00	100.00
	TTL GSM	0.00	0.00	99.69	0.00	0.00	0.79	3.64	97.85	0	0.00	0.00	100.00	100.00	100.00	98.78	99.77	100.00	100.00
Vodafone	0.02	0.00	99.83	0.12	0.17	0.67	2.44	97.71	0	0.09	0.05	100.00	100.00	100.00	100.00	98.44	100.00	100.00	
Jammu & Kashmir	Aircel	0.73	4.18	97.16	0.24	1.97	1.20	10.87	95.72	0	0.00	0.00	100.00	100.00	100.00	97.32	93.58	100.00	54.92
	Airtel	0.12	0.12	97.29	0.63	0.58	1.10	1.82	97.78	0	0.02	0.00	100.00	100.00	100.00	95.64	64.31	100.00	100.00
	BSNL	1.82	0.50	98.86	0.62	1.12	0.99	2.56	96.80	0	0.02	0.00	100.00	100.00	100.00	100.00	99.00	100.00	100.00
	Idea	0.35	1.64	98.33	0.12	1.26	1.32	1.74	96.32	0	0.03	0.10	100.00	100.00	100.00	96.63	97.19	99.93	100.00
	RCOM GSM	0.06	0.23	96.96	0.09	0.31	0.13	0.43	98.94	0	0.09	0.09	100.00	100.00	100.00	99.31	93.27	100.00	99.84
	Vodafone	0.27	1.21	99.09	0.05	0.91	0.59	2.74	98.79	1	0.04	0.10	100.00	100.00	100.00	100.00	99.59	100.00	100.00
Karnataka	Aircel	0.27	0.62	99.02	0.09	0.34	1.18	8.22	96.35	0	0.00	0.00	100.00	100.00	100.00	94.67	96.21	100.00	82.68
	Airtel	0.18	0.81	98.20	0.34	0.42	0.68	1.70	99.25	0	0.01	0.00	100.00	100.00	100.00	100.00	81.46	100.00	100.00
	BSNL	1.11	1.90	98.54	0.20	0.69	0.45	1.76	97.87	0	0.07	0.00	99.70	100.00	100.00	99.00	96.59	100.00	100.00
	Idea	0.15	0.38	98.42	0.39	0.26	0.54	1.73	96.95	0	0.05	0.02	100.00	100.00	100.00	99.62	99.45	100.00	100.00
	MTS	0.08	0.00	99.42	0.00	0.08	0.36	1.41	99.20	0	0.01	0.00	100.00	100.00	100.00	99.00	97.43	100.00	100.00
	RCOM CDMA	0.15	0.74	98.17	0.00	0.74	0.16	0.65	98.94	0	0.09	0.01	100.00	100.00	100.00	97.51	96.12	100.00	100.00
	RCOM GSM	0.28	1.11	98.55	0.10	0.44	0.09	0.52	99.24	0	0.09	0.08	100.00	100.00	100.00	99.51	95.22	100.00	100.00
	TTL CDMA	0.32	0.53	99.18	0.00	0.04	0.34	1.75	98.30	0	0.00	0.00	100.00	100.00	100.00	99.47	99.30	100.00	100.00
TTL GSM	0.11	0.11	98.08	0.13	0.31	0.59	2.76	97.45	0	0.00	0.00	100.00	100.00	100.00	99.39	93.05	100.00	100.00	
Vodafone	0.15	0.60	99.85	0.14	0.16	0.43	2.69	98.79	0	0.14	0.22	100.00	100.00	100.00	100.00	95.00	100.00	100.00	
Kerala	Aircel	0.16	0.05	98.99	0.08	0.05	0.46	2.80	97.22	0	0.00	0.00	100.00	100.00	100.00	97.31	98.31	100.00	100.00
	Airtel	0.41	0.45	98.26	0.42	1.32	0.98	2.36	97.94	0	0.02	0.00	100.00	100.00	100.00	99.87	96.62	100.00	100.00
	BSNL	0.29	0.11	98.68	0.26	1.32	0.56	1.11	99.95	0	0.02	0.01	98.40	100.00	100.00	98.00	95.00	100.00	100.00
	Idea	0.06	0.09	99.86	0.42	0.89	0.56	1.75	95.92	0	0.09	0.19	99.94	100.00	100.00	99.63	99.44	100.00	100.00
	MTS	0.02	0.00	99.55	0.00	0.00	0.12	1.42	99.19	0	0.06	0.00	100.00	100.00	100.00	98.70	97.00	100.00	100.00
	RCOM CDMA	0.00	0.00	98.37	0.00	0.83	0.10	0.90	99.20	0	0.07	0.01	100.00	100.00	100.00	96.55	96.82	100.00	100.00
	RCOM GSM	0.07	0.21	96.42	0.08	0.26	0.05	0.55	99.53	0	0.08	0.09	100.00	100.00	100.00	98.59	96.86	100.00	100.00
	TTL CDMA	0.03	0.00	98.67	0.00	0.03	0.24	2.44	99.15	0	0.01	0.00	100.00	100.00	100.00	99.43	98.09	100.00	97.83
	TTL GSM	0.06	0.00	98.83	0.04	0.05	0.45	2.52	98.87	0	0.00	0.00	100.00	100.00	100.00	98.80	92.80	100.00	100.00
Vodafone	0.02	0.02	99.74	0.39	0.26	0.36	1.67	97.94	0	0.10	0.05	100.00	100.00	100.00	99.39	100.00	100.00	100.00	99.37

Annexure 4.1 (Contd.)

Kolkata	Aircel	0.20	0.60	97.40	0.83	0.61	0.67	2.36	96.94	0	0.00	0.00	100.00	100.00	100.00	97.74	89.70	100.00	100.00
	Airtel	0.01	0.00	99.58	0.02	0.02	0.95	2.44	97.45	0	0.02	0.00	100.00	100.00	100.00	96.28	66.65	100.00	100.00
	BSNL	1.88	3.86	99.20	0.72	0.57	0.93	2.42	99.79	0	0.01	0.04	99.90	100.00	100.00	96.00	95.05	100.00	100.00
	Idea	0.14	0.75	99.56	0.09	0.13	0.28	0.30	97.52	0	0.09	0.03	100.00	100.00	100.00	98.29	98.99	100.00	100.00
	MTS	0.06	0.00	99.85	0.00	0.00	0.50	2.00	99.96	0	0.07	0.03	100.00	100.00	100.00	99.11	95.40	100.00	100.00
	RCOM CDMA	0.26	1.54	97.17	0.00	1.18	0.29	0.67	99.21	0	0.08	0.03	100.00	100.00	100.00	99.19	93.66	100.00	100.00
	RTL	0.43	1.20	98.73	0.06	0.07	0.09	0.30	99.09	0	0.09	0.09	100.00	100.00	100.00	99.76	94.53	100.00	100.00
	TTL CDMA	0.02	0.00	99.06	0.00	0.08	0.47	2.51	99.27	0	0.00	0.00	100.00	100.00	100.00	99.35	98.57	100.00	100.00
	TTL GSM	0.09	0.26	99.04	0.07	0.10	0.63	2.37	98.38	0	0.00	0.00	100.00	100.00	100.00	99.29	93.27	100.00	100.00
Vodafone	0.09	0.42	99.59	0.06	0.41	0.78	2.63	97.25	0	0.03	0.01	100.00	100.00	100.00	100.00	98.17	100.00	96.25	
Madhya Pradesh	Aircel	0.36	1.04	97.91	0.37	0.00	0.69	0.52	98.95	0	0.00	0.00	100.00	100.00	100.00	98.20	99.86	100.00	100.00
	Airtel	0.12	0.20	98.90	0.05	0.48	0.70	1.60	97.85	0	0.01	0.00	100.00	100.00	100.00	100.00	82.25	100.00	100.00
	BSNL	1.83	1.69	97.11	0.48	1.12	1.07	2.37	97.06	0	0.01	0.02	100.00	100.00	100.00	97.50	97.28	100.00	100.00
	Idea	0.09	0.27	97.21	0.38	1.42	0.61	1.23	97.84	0	0.06	0.06	100.00	100.00	100.00	95.08	96.86	99.45	100.00
	RCOM CDMA	0.02	0.06	99.06	0.00	0.23	0.07	0.50	98.96	0	0.09	0.08	100.00	100.00	100.00	99.66	93.44	100.00	100.00
	RTL	0.29	1.27	96.33	0.08	0.80	0.18	0.63	98.51	0	0.09	0.09	100.00	100.00	100.00	99.95	95.42	100.00	99.92
	TTL CDMA	0.17	0.16	99.00	0.00	0.09	0.24	2.75	99.21	0	0.00	0.00	100.00	100.00	100.00	100.00	99.52	100.00	100.00
	TTL GSM	0.10	0.04	99.12	0.08	0.06	0.52	2.25	98.91	0	0.00	0.00	100.00	100.00	100.00	97.70	94.28	100.00	100.00
	Videocon	0.11	0.31	98.34	0.20	0.60	0.67	2.51	98.35	0	NA	0.03	100.00	100.00	100.00	100.00	96.50	NA	100.00
Vodafone	0.07	0.10	99.44	0.18	0.56	0.57	2.93	98.89	0	0.10	0.17	99.93	100.00	100.00	100.00	99.28	100.00	100.00	
Maharashtra	Aircel	0.05	0.02	99.27	0.12	0.16	0.69	3.04	95.29	0	0.00	0.00	100.00	100.00	100.00	98.17	96.55	100.00	84.00
	Airtel	0.03	0.00	98.12	0.11	0.63	0.65	1.71	97.08	0	0.02	0.00	100.00	100.00	100.00	100.00	90.23	100.00	100.00
	BSNL	1.91	1.78	96.71	0.54	1.15	1.16	2.83	96.58	0	0.00	0.01	100.00	100.00	100.00	100.00	98.33	100.00	100.00
	Idea	0.06	0.11	97.83	0.58	1.46	0.62	2.16	97.71	0	0.06	0.08	100.00	100.00	100.00	98.49	99.79	100.00	99.35
	RCOM CDMA	0.11	0.59	98.17	0.00	0.83	0.10	1.34	99.07	0	0.08	0.03	100.00	100.00	100.00	99.42	95.61	100.00	100.00
	RCOM GSM	0.15	1.32	96.92	0.20	0.58	0.11	0.47	98.98	0	0.09	0.09	100.00	100.00	100.00	99.67	96.45	100.00	100.00
	Telenor	0.17	0.43	98.14	0.32	0.68	0.86	4.12	97.42	0	NA	0.00	100.00	100.00	NA	99.59	99.49	NA	NA
	TTML GSM	0.02	0.00	98.91	0.11	0.17	0.42	2.60	97.29	0	0.00	0.00	100.00	100.00	100.00	95.37	95.48	100.00	100.00
	TTML CDMA	0.04	0.00	98.50	0.00	0.39	0.79	2.62	99.60	0	0.00	0.00	100.00	100.00	100.00	100.00	99.43	100.00	100.00
Vodafone	0.12	0.31	99.36	0.51	0.64	0.75	2.71	96.96	0	0.03	0.03	100.00	100.00	100.00	99.95	98.69	100.00	100.00	
Mumbai	Aircel	0.08	0.14	97.97	0.32	1.33	0.83	4.40	97.05	0	0.00	0.00	100.00	100.00	100.00	98.77	95.39	100.00	67.54
	Airtel	0.04	0.00	99.87	0.07	0.07	0.82	1.43	97.59	0	0.01	0.00	100.00	100.00	100.00	99.70	93.56	100.00	100.00
	Idea	0.08	0.10	99.29	0.34	0.46	0.96	1.49	96.38	0	0.06	0.02	100.00	100.00	100.00	98.42	98.64	100.00	100.00
	MTNL CDMA	0.00	0.00	98.67	0.74	0.22	1.10	0.51	96.57	0	NR	NR	NR	NR	NR	NR	NR	NR	NR
	MTNL GSM	0.53	1.08	98.34	0.40	0.09	1.51	2.10	96.29	0	0.05	0.03	99.52	100.00	100.00	95.48	95.48	100.00	100.00
	RCOM CDMA	0.07	0.35	97.46	0.00	0.96	0.15	0.35	99.60	0	0.09	0.05	100.00	100.00	100.00	98.44	90.15	100.00	100.00
	RCOM GSM	0.07	0.88	98.91	0.27	0.54	0.12	0.23	99.18	0	0.09	0.09	100.00	100.00	100.00	99.36	92.53	100.00	100.00
	TTML GSM	0.01	0.00	99.53	0.04	0.03	0.59	2.49	97.64	0	0.00	0.00	100.00	100.00	100.00	98.68	94.79	100.00	100.00
	TTML CDMA	0.02	0.00	99.12	0.00	0.07	0.41	1.36	99.12	0	0.01	0.00	100.00	100.00	100.00	100.00	99.30	100.00	100.00
Vodafone	0.10	0.00	99.42	0.13	0.58	0.90	1.51	97.62	0	0.51	0.27	99.92	100.00	100.00	99.55	95.62	100.00	100.00	

Annexure 4.1 (Contd.)

North East	Aircel	6.08	37.50	95.01	0.84	4.02	1.68	16.31	92.71	0	0.00	0.00	100.00	100.00	100.00	96.15	94.11	100.00	100.00	
	Airtel	1.03	1.33	95.58	0.58	1.14	1.59	1.61	99.04	0	0.01	0.01	100.00	100.00	100.00	100.00	93.06	100.00	100.00	
	BSNL	2.43	6.84	96.31	1.97	2.69	2.56	5.25	94.27	0	0.03	0.03	99.00	100.00	100.00	98.00	95.96	100.00	100.00	
	Idea	1.91	1.38	95.23	0.14	1.21	0.53	1.55	96.23	0	0.02	0.02	100.00	100.00	100.00	100.00	99.90	100.00	100.00	
	RTL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.09	100.00	100.00	100.00	97.68	96.11	100.00	100.00
	Vodafone	1.67	1.81	98.63	0.67	1.37	0.84	2.86	97.34	0	0.04	0.05	100.00	100.00	100.00	99.98	100.00	100.00	100.00	
Orissa	Aircel	0.59	1.91	97.27	0.68	1.82	1.26	4.54	95.73	0	0.00	0.00	100.00	100.00	100.00	96.76	99.55	100.00	100.00	
	Airtel	0.12	0.06	96.86	0.59	1.87	0.91	1.51	96.08	0	0.01	0.00	100.00	100.00	100.00	100.00	94.84	100.00	100.00	
	BSNL	1.38	1.93	98.45	0.84	1.55	1.85	2.88	97.52	0	0.01	0.02	100.00	100.00	100.00	99.00	97.26	100.00	100.00	
	Idea	0.18	0.56	98.52	0.10	0.11	0.31	0.23	96.89	0	0.02	0.07	100.00	100.00	100.00	98.40	99.92	100.00	100.00	
	RCOM CDMA	0.15	0.92	99.80	0.00	0.04	0.07	0.33	99.65	0	0.08	0.04	100.00	100.00	100.00	95.55	98.78	100.00	100.00	
	RTL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.09	100.00	100.00	100.00	99.39	97.84	100.00	100.00
	TTL CDMA	0.10	0.20	99.07	0.00	0.01	0.37	1.96	98.25	0	0.00	0.00	100.00	100.00	100.00	99.40	99.58	100.00	100.00	
	TTL GSM	0.09	0.21	98.08	0.25	1.09	0.42	1.36	97.45	0	0.00	0.00	100.00	100.00	100.00	95.54	94.90	100.00	100.00	
Vodafone	0.12	0.31	98.70	0.61	1.30	0.60	2.73	98.27	0	0.03	0.06	100.00	100.00	100.00	99.96	97.96	100.00	100.00		
Punjab	Aircel	0.16	0.31	97.99	0.11	0.16	0.73	2.65	97.04	0	0.00	0.00	100.00	100.00	100.00	97.92	97.08	100.00	100.00	
	Airtel	0.05	0.03	99.29	0.30	0.20	0.71	1.04	98.32	0	0.02	0.00	100.00	100.00	100.00	100.00	93.63	100.00	100.00	
	BSNL	0.61	1.94	97.12	0.54	0.97	0.24	1.23	96.40	0	0.04	0.00	100.00	100.00	100.00	100.00	99.43	100.00	100.00	
	Idea	0.06	0.02	98.56	0.07	0.22	0.51	1.28	97.75	0	0.07	0.04	100.00	100.00	100.00	99.88	99.24	100.00	100.00	
	QTL cdma	0.27	0.00	98.93	0.08	0.06	0.07	0.11	97.84	0	0	0.00	100.00	100.00	100.00	96.00	97.00	100.00	100.00	
	QTL gsm	0.17	0.49	98.23	0.12	0.21	0.79	0.52	96.72	0	0.00	0.03	100.00	100.00	100.00	100.00	96.64	100.00	100.00	
	RCOM CDMA	0.08	0.75	98.09	0.00	0.76	0.06	0.39	99.22	0	0.09	0.09	100.00	100.00	100.00	97.42	96.89	100.00	100.00	
	RCOM GSM	0.10	0.76	98.97	0.05	0.10	0.07	0.34	99.15	0	0.09	0.09	100.00	100.00	100.00	99.43	94.51	100.00	100.00	
	TTL CDMA	0.05	0.00	98.56	0.00	0.09	0.29	3.25	99.05	0	0.00	0.00	100.00	100.00	100.00	98.81	99.18	100.00	100.00	
	TTL GSM	0.03	0.02	98.62	0.11	0.16	0.56	3.06	97.24	0	0.00	0.00	100.00	100.00	100.00	98.63	94.88	100.00	100.00	
Vodafone	0.02	0.01	99.83	0.03	0.17	0.55	2.83	97.96	0	0.17	0.06	100.00	100.00	100.00	100.00	98.80	100.00	100.00		
Rajasthan	Aircel	0.07	0.05	97.04	0.23	0.99	0.72	2.95	96.64	0	0.00	0.00	100.00	100.00	100.00	96.85	92.28	100.00	77.59	
	Airtel	0.10	0.20	97.84	0.23	1.22	0.66	0.63	99.17	0	0.01	0.00	100.00	100.00	100.00	99.99	94.25	100.00	100.00	
	BSNL	1.38	1.60	98.47	0.47	1.45	1.42	1.65	98.26	0	0.05	0.03	100.00	100.00	100.00	100.00	98.52	100.00	100.00	
	Idea	0.04	0.01	99.53	0.19	0.21	0.62	1.73	97.00	0	0.08	0.07	100.00	100.00	100.00	98.94	96.45	100.00	100.00	
	MTS	0.06	0.00	99.16	0.00	0.06	0.33	0.40	99.22	0	0.06	0.03	100.00	100.00	100.00	99.96	95.78	100.00	100.00	
	RCOM CDMA	0.02	0.07	97.71	0.00	0.90	0.16	1.13	98.75	0	0.08	0.09	100.00	100.00	100.00	99.58	91.22	100.00	99.91	
	RCOM GSM	0.06	0.31	97.57	0.13	0.56	0.09	0.51	99.23	0	0.09	0.09	100.00	100.00	100.00	99.71	95.31	100.00	100.00	
	TTL CDMA	0.05	0.00	98.78	0.00	0.43	0.27	2.76	98.91	0	0.00	0.00	100.00	100.00	100.00	100.00	98.21	100.00	100.00	
	TTL GSM	0.05	0.00	99.06	0.04	0.10	0.42	2.38	98.97	0	0.00	0.00	100.00	100.00	100.00	95.90	90.13	100.00	100.00	
	Vodafone	0.12	0.64	99.55	0.22	0.45	0.67	2.46	96.54	0	0.10	0.09	100.00	100.00	100.00	100.00	97.53	100.00	100.00	

Annexure 4.1 (Contd.)

Tamil Nadu	Aircel	0.14	0.44	98.47	0.59	1.08	1.06	5.60	95.54	0	0.00	0.00	100.00	100.00	100.00	97.53	95.72	100.00	93.03
	BSNL	0.79	1.88	98.53	0.17	0.70	1.09	2.13	96.74	0	0.03	0.00	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	Idea	0.07	0.11	99.54	0.16	0.19	0.20	0.96	98.30	0	0.10	0.15	100.00	100.00	100.00	99.20	98.11	100.00	100.00
	MTS	0.01	0.00	99.55	0.00	0.01	0.39	2.83	99.20	0	0.10	0.00	100.00	100.00	100.00	97.22	95.02	100.00	100.00
	TTL CDMA	0.05	0.00	99.02	0.00	0.01	0.30	1.66	98.86	0	0.00	0.00	100.00	100.00	100.00	100.00	94.54	100.00	99.50
	TTL GSM	0.06	0.01	99.47	0.04	0.02	0.54	2.34	98.68	0	0.00	0.00	100.00	100.00	100.00	98.88	91.85	100.00	100.00
Tamilnadu+Chennai	Vodafone	0.02	0.06	99.54	0.16	0.46	0.55	2.14	98.27	0	0.23	0.17	100.00	100.00	99.58	97.59	97.00	100.00	98.76
	Airtel	0.11	0.61	98.70	0.46	0.96	0.73	3.40	98.29	0	0.02	0.00	100.00	100.00	100.00	100.00	94.14	100.00	100.00
	RCOM CDMA	0.03	0.18	98.18	0.00	0.75	0.15	0.71	98.49	0	0.09	0.02	100.00	100.00	100.00	97.91	97.12	100.00	100.00
UPE	RCOM GSM	0.23	0.78	99.28	0.05	0.05	0.08	0.36	99.44	0	0.09	0.09	100.00	100.00	100.00	99.27	97.06	100.00	100.00
	Aircel	0.14	0.38	98.88	0.41	0.48	0.47	2.32	96.90	0	0.00	0.00	100.00	100.00	100.00	97.83	94.67	100.00	100.00
	Airtel	0.43	1.17	95.16	0.55	0.82	0.97	2.87	96.93	0	0.01	0.00	100.00	100.00	100.00	100.00	82.51	100.00	100.00
	BSNL	1.84	1.80	98.47	0.61	1.91	1.49	2.18	96.50	0	0.10	0.10	99.40	100.00	100.00	98.00	96.57	100.00	100.00
	Idea	0.35	1.23	98.25	0.68	1.57	1.04	2.77	96.94	0	0.04	0.05	100.00	100.00	100.00	99.69	99.64	100.00	100.00
	RCOM CDMA	0.04	0.38	97.66	0.00	0.77	0.16	1.33	99.16	0	0.08	0.04	100.00	100.00	100.00	99.51	95.91	100.00	100.00
	RCOM GSM	0.03	0.30	97.59	0.32	0.77	0.09	0.37	98.80	0	0.08	0.09	100.00	100.00	100.00	99.66	95.12	100.00	100.00
	Telenor	0.28	0.81	95.67	0.59	3.02	0.91	3.07	94.13	0	NA	0.03	100.00	100.00	NA	99.07	99.67	NA	NA
	TTL CDMA	0.10	0.21	97.68	0.00	0.14	0.25	4.43	99.70	0	0.00	0.00	100.00	100.00	100.00	100.00	99.70	100.00	100.00
	TTL GSM	0.16	0.48	96.02	0.76	1.27	0.68	4.05	96.47	0	0.00	0.00	100.00	100.00	100.00	99.48	85.39	100.00	100.00
UPW	Videocon	0.12	0.00	99.44	0.31	0.02	0.90	0.00	99.29	0	NA	0.00	100.00	100.00	NA	100.00	96.71	NA	100.00
	Vodafone	0.08	0.21	98.65	0.31	1.35	0.73	2.54	96.18	0	0.08	0.01	100.00	100.00	100.00	100.00	99.05	100.00	100.00
	Aircel	0.11	0.70	97.87	0.25	0.88	0.36	1.86	96.07	0	0.00	0.00	100.00	100.00	100.00	98.30	99.08	100.00	100.00
	Airtel	0.73	0.78	98.65	0.75	1.02	1.13	2.17	96.05	0	0.01	0.00	100.00	100.00	100.00	100.00	87.73	100.00	100.00
	BSNL	1.44	1.83	97.96	0.66	1.37	1.34	2.37	96.34	0	0.00	0.00	100.00	100.00	100.00	100.00	98.81	100.00	100.00
	Idea	0.10	0.15	97.99	0.75	1.40	1.13	2.60	96.26	0	0.08	0.01	99.99	100.00	99.81	99.28	99.30	100.00	100.00
	MTS	0.03	0.00	99.60	0.00	0.00	0.20	2.12	98.53	0	0.00	0.01	100.00	100.00	100.00	98.68	95.60	100.00	100.00
	RCOM CDMA	0.03	0.27	98.00	0.00	0.65	0.15	0.84	98.84	0	0.08	0.04	100.00	100.00	100.00	99.27	95.89	100.00	100.00
	RCOM GSM	0.02	0.12	98.07	0.32	0.35	0.09	0.26	98.77	0	0.08	0.09	100.00	100.00	100.00	99.63	95.85	100.00	100.00
	Telenor	0.23	0.42	97.74	0.58	1.53	0.67	2.51	96.61	0	NA	0.02	100.00	100.00	NA	99.08	99.01	NA	NA
West Bengal	TTL CDMA	0.17	0.35	99.15	0.00	0.04	0.28	1.95	98.94	0	0.00	0.00	100.00	100.00	100.00	100.00	99.77	100.00	100.00
	TTL GSM	0.25	0.76	98.07	0.35	0.44	0.72	3.48	97.09	0	0.00	0.00	100.00	100.00	100.00	99.75	88.44	100.00	100.00
	Videocon	0.21	0.00	99.33	0.04	0.04	0.45	0.00	99.02	0	NA	0.00	100.00	100.00	NA	100.00	96.06	NA	100.00
	Vodafone	0.22	0.99	98.76	0.58	1.24	0.87	2.99	96.48	0	0.11	0.23	100.00	100.00	100.00	100.00	96.06	100.00	93.56
	Aircel	0.60	2.64	97.54	0.65	0.87	1.11	10.26	96.92	0	0.00	0.00	100.00	100.00	100.00	98.33	93.60	100.00	100.00
	Airtel	0.12	0.47	95.56	0.47	1.48	1.32	2.57	95.73	0	0.01	0.00	100.00	100.00	100.00	96.75	56.97	100.00	100.00
	BSNL	0.90	5.55	97.94	1.13	1.62	1.32	11.57	96.33	0	0.03	0.02	99.80	100.00	100.00	98.50	97.88	100.00	100.00
	Idea	0.10	0.37	98.64	0.08	0.19	0.43	0.48	97.36	0	0.04	0.02	100.00	100.00	100.00	98.87	97.83	100.00	100.00
	MTS	0.15	0.00	99.56	0.00	0.22	0.62	2.02	99.69	0	0.09	0.02	100.00	100.00	100.00	99.11	95.90	100.00	100.00
	RCOM CDMA	0.11	0.36	97.76	0.00	0.81	0.15	0.13	98.96	0	0.09	0.07	100.00	100.00	100.00	99.18	93.66	100.00	89.12
RTL	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08	0.09	100.00	100.00	100.00	99.77	94.75	100.00	93.98	
TTL CDMA	0.00	0.00	99.21	0.00	0.02	0.24	1.49	98.04	0	0.00	0.00	100.00	100.00	100.00	99.54	99.32	100.00	100.00	
TTL GSM	0.09	0.00	99.08	0.17	0.14	0.50	2.64	97.88	0	0.00	0.00	100.00	100.00	100.00	96.60	97.90	100.00	100.00	
Vodafone	0.03	0.05	98.45	0.76	1.55	0.59	1.74	97.12	0	0.02	0.05	100.00	100.00	100.00	100.00	97.94	100.00	98.62	

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 March , 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 Rate: CBBH	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
Benchmark		≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%	≤ 0.5%
Andhra Pradesh	Aircel	0.09	0.22	97.31	0.98	1.73	0.36	3.61	99.81	0
	Airtel	0.10	0.19	99.00	0.35	0.00	0.47	1.21	98.97	0
	BSNL	0.60	1.80	97.67	0.83	1.80	0.60	2.63	99.80	0
	IDEA	0.06	0.04	99.63	0.31	0.28	0.25	1.40	99.72	0
Assam	Aircel	1.83	11.49	98.10	0.12	0.00	0.70	9.25	99.03	0
	Airtel	0.53	1.32	98.13	0.41	0.12	0.62	1.41	98.74	0
	BSNL	1.87	1.93	95.33	0.00	0.00	1.93	2.83	96.13	0
	RTL	0.39	1.18	98.19	0.43	0.03	0.95	1.73	99.83	0
	Vodafone	0.92	1.56	99.82	0.06	0.09	0.33	2.51	98.99	0
Bihar	Aircel	1.39	7.79	88.93	1.09	1.24	0.98	9.33	98.98	0
	Airtel	0.03	0.09	98.83	0.06	0.51	0.62	2.09	98.96	0
	BSNL	1.92	1.85	95.00	0.05	0.45	1.38	3.55	97.13	0
	RTL	0.16	0.47	97.27	0.32	0.17	0.87	1.65	99.83	0
Chennai	BSNL	1.00	1.73	98.00	0.77	1.73	1.57	1.70	95.93	0
Delhi	Airtel	0.14	0.18	98.64	0.14	0.16	0.46	2.28	98.76	0
	IDEA	0.05	0.00	99.85	0.03	0.01	0.35	2.49	98.37	0
	MTNL	0.47	1.17	96.56	0.77	1.53	1.43	1.83	95.97	0
	RCOM	0.34	1.26	99.28	0.12	0.14	0.39	1.49	99.52	0
	Vodafone	0.19	0.97	99.64	0.15	0.16	0.58	2.67	98.87	0
Gujrat	Airtel	0.13	0.56	99.85	0.03	0.13	0.25	2.47	99.16	0
	BSNL	1.13	1.63	96.00	0.73	1.10	1.33	2.43	100.00	0
	IDEA	0.05	0.11	99.70	0.25	0.09	0.41	2.36	98.81	0
	Tata	0.02	0.00	97.95	0.30	1.03	0.52	2.47	99.69	0
	Vodafone	0.03	0.03	99.80	0.06	0.03	0.18	1.37	98.97	0
Haryana	Airtel	0.11	0.07	99.06	0.00	0.00	0.26	0.50	98.10	0
	BSNL	1.63	1.50	97.00	0.57	0.80	1.30	1.80	96.87	0
	IDEA	0.00	0.00	99.29	0.40	0.23	0.28	2.12	98.78	0
	Tata	0.25	1.61	96.91	14.15	0.78	0.19	1.30	99.13	0
	Vodafone	0.07	0.28	33.92	0.03	0.01	0.30	3.17	97.81	0

Annexure 4.2 (Contd.)

Himachal Pradesh	Airtel	0.20	0.19	98.74	0.14	0.03	0.81	1.36	98.56	0
	BSNL	1.57	1.70	98.00	0.57	0.40	1.57	2.60	97.67	0
	IDEA	0.12	0.12	99.03	0.35	0.13	1.51	2.08	97.78	0
	RTL	0.17	0.39	98.49	0.32	0.00	0.42	0.87	98.45	0
J&K	Airtel	0.85	5.67	96.85	0.50	0.17	2.35	23.60	97.95	0
	Airtel	0.20	0.18	98.41	0.09	0.04	0.65	1.25	99.03	0
	BSNL	1.67	0.27	96.67	0.73	1.33	0.73	2.70	96.63	0
	IDEA	0.37	1.51	99.48	0.29	0.13	1.46	1.92	97.84	0
Karnataka	RCOM	0.33	1.24	97.10	0.14	0.41	0.53	1.52	99.66	0
	Airtel	0.32	0.48	98.56	0.90	0.52	0.47	4.16	99.80	0
	Airtel	0.22	0.96	98.91	0.10	0.32	0.22	1.61	99.66	0
	BSNL	1.13	1.77	97.33	0.67	1.07	0.67	2.47	97.40	0
	Tata	0.11	0.15	98.47	0.82	1.01	0.34	1.47	99.08	0
Kerala	Vodafone	1.21	1.81	99.23	0.11	0.06	0.24	1.12	99.74	0
	Airtel	0.19	0.00	97.69	0.84	1.45	1.01	2.31	96.77	0
	BSNL	0.23	0.10	96.00	0.10	0.57	0.80	0.00	99.90	0
	IDEA	0.06	0.03	99.49	0.56	0.23	0.28	1.15	97.64	0
	Tata	0.02	0.00	98.84	0.20	0.34	0.28	1.47	99.75	0
Kolkata	Vodafone	0.04	0.00	99.38	0.08	0.11	0.17	0.89	99.68	0
	Airtel	0.23	0.64	97.31	0.88	0.52	0.44	2.91	99.41	0
	Airtel	0.00	0.00	99.49	0.00	0.00	0.35	2.73	99.35	0
	BSNL	2.37	4.97	96.67	1.07	2.57	2.23	2.57	99.73	0
	IDEA	0.25	0.91	99.87	0.00	0.01	0.29	0.45	99.83	0
	RTL	0.09	0.39	97.52	0.45	0.13	0.61	1.23	99.90	0
Madhya Pradesh	Vodafone	0.58	0.27	99.85	0.03	0.01	0.33	1.97	99.02	0
	Airtel	0.14	0.40	99.80	0.02	0.08	0.32	2.15	99.95	0
	BSNL	1.65	1.47	96.83	0.77	0.70	0.42	2.07	96.55	0
	IDEA	0.05	0.07	99.59	0.08	0.09	0.68	1.87	99.19	0
	RTL	0.07	0.21	98.42	0.37	0.02	0.68	1.21	99.88	0
Maharashtra	Tata	0.06	0.00	98.17	0.40	0.86	0.36	1.95	99.73	0
	Airtel	0.16	0.44	99.34	0.05	0.30	0.58	2.11	99.82	0
	BSNL	1.87	1.53	96.00	0.80	1.30	1.40	2.50	96.53	0
	IDEA	0.05	0.04	99.64	0.29	0.11	0.28	1.82	98.62	0
	Tata	0.06	0.00	97.38	0.99	0.75	0.49	2.89	99.92	0
Mumbai	Vodafone	0.17	0.37	99.74	0.22	0.08	0.24	1.62	98.91	0
	Airtel	0.07	0.00	98.64	0.07	0.10	0.44	2.17	99.11	0
	MTNL	0.47	1.13	96.80	0.77	0.27	1.70	2.70	98.92	0
	RCOM	0.10	0.38	98.49	0.28	0.27	0.36	1.17	99.58	0
	Vodafone	0.14	0.00	99.78	0.00	0.00	0.38	1.87	97.90	0

Annexure 4.2 (Contd.)

North East	Aircel	5.53	37.81	97.13	0.53	0.72	1.35	12.87	98.36	0
	Airtel	1.65	1.30	96.46	0.58	0.30	1.22	1.55	98.27	0
	BSNL	1.58	5.57	96.00	1.67	2.13	2.20	2.70	96.08	0
	RTL	0.74	0.88	98.20	0.51	0.03	0.89	1.23	99.80	0
	Vodafone	1.37	1.68	99.72	0.14	0.17	0.59	2.68	98.96	0
Orissa	Aircel	0.69	1.88	97.04	0.59	0.10	1.43	5.36	98.95	0
	Airtel	0.16	0.16	99.52	0.10	0.46	0.57	1.70	99.96	0
	BSNL	1.60	1.87	97.00	0.90	1.77	1.53	2.07	97.47	0
	RTL	0.17	0.80	98.76	0.11	0.01	0.58	1.53	99.89	0
Punjab	Aircel	0.27	0.69	99.10	0.49	0.07	0.47	5.98	99.07	0
	BSNL	0.40	1.67	99.00	0.80	0.23	0.30	0.67	97.67	0
	IDEA	0.02	0.05	99.50	0.17	0.12	0.68	2.06	99.34	0
	RCOM	0.24	0.42	98.94	0.06	0.15	0.26	1.75	99.63	0
	Tata	0.04	0.07	98.14	0.54	1.29	0.18	0.95	99.12	0
Rajasthan	Airtel	0.18	0.23	99.46	0.05	0.07	0.50	1.14	98.93	0
	BSNL	1.50	1.90	96.33	0.60	1.30	1.80	2.67	97.00	0
	RCOM	0.14	0.75	99.63	0.04	0.06	0.32	1.44	99.59	0
	Tata	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0
	Vodafone	0.36	1.10	99.92	0.02	0.02	0.27	2.54	98.99	0
Tamil Nadu	Aircel	0.20	0.79	98.84	0.36	0.03	0.46	4.99	99.43	0
	Airtel	0.11	0.55	99.75	0.12	0.12	0.19	1.25	99.35	0
	BSNL	0.47	1.80	99.00	0.13	1.10	0.10	0.83	99.67	0
	Vodafone	0.08	0.19	99.78	0.14	0.07	0.23	1.51	99.03	0
UP(W)	Airtel	0.94	1.16	99.76	0.09	0.00	0.47	1.14	98.92	0
	BSNL	1.22	1.28	96.67	0.72	1.30	1.15	2.13	96.70	0
	IDEA	0.39	1.65	99.19	0.96	0.46	0.27	2.50	99.17	0
	Tata	0.28	0.98	97.75	0.46	1.49	0.30	2.26	99.12	0
	Vodafone	0.71	1.64	66.43	0.01	0.02	0.39	4.48	98.46	0
UP-East	Aircel	0.10	0.20	98.04	0.21	0.01	0.70	6.54	99.72	0
	Airtel	0.06	1.95	99.69	0.19	0.31	0.47	2.74	98.35	0
	BSNL	1.60	1.67	96.33	0.87	1.10	1.40	2.57	96.50	0
	IDEA	0.35	1.82	99.45	0.63	0.24	0.50	2.24	98.73	0
	Vodafone	0.27	1.31	99.80	0.23	0.03	0.22	2.14	98.97	0
West Bengal	Aircel	0.73	4.36	98.03	0.43	0.50	0.64	5.67	98.82	0
	Airtel	0.22	0.62	99.32	0.09	0.43	0.64	2.12	99.03	0
	BSNL	0.82	5.60	96.33	0.50	1.55	1.05	7.60	95.53	0
	RTL	0.12	0.83	98.25	0.25	0.05	0.87	1.98	99.86	0
	Vodafone	0.03	0.04	99.64	0.14	0.07	0.29	2.76	98.64	0

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

Quarterly Performance Report on QoS of Basic Telephone Services (Wireline) for QE March, 2016

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 credibility - post paid	Metering and Billing credibility - pre paid	Resolution of billing/charging/validity 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
≤7	For urban areas by next working day: ≥ 85%	For urban areas: ≥ 100%	For rural and hilly areas: ≥ 75%	For rural and hilly areas: ≥ 100%	≤ 10 Hrs	≤ 0.5%	≤ 0.1%	≤ 0.1%	98% within 4 weeks	100% within 6 weeks	1 week of resolution of complaint	≥ 95%	≥ 95%	100% within 7 days	100% within 60 days			
A&N	BSNL	4.00	95.00%	100.00%	94.00%	100%	18	7.00	0.00	0.10%	0.10	98.00%	100.00%	100.00%	100.00%	99.33%	100.00%	100.00%
AP	Reliance	0.08	100.00%	100.00%	NA	NA	0	4.73	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	4.21	99.64%	100.00%	NA	NA	NA	2.05	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	80.15%	99.90%	100.00%
	Vodafone	0.48	100.00%	100.00%	NA	NA	NA	0.42	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Bharti	2.46	86.21%	100.00%	NA	NA	NA	8.97	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	84.00%	100.00%	100.00%
	BSNL	4.00	94.00%	100.00%	90.00%	100%	218	6.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	98.29%	98.18%	100.00%	100.00%
ASM	Vodafone	1.93	100.00%	100.00%	NA	NA	NA	1.43	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	BSNL	4.00	96.00%	100.00%	96.00%	100%	132	3.00	0.00	0.04%	0.00	100.00%	100.00%	100.00%	99.21%	98.67%	100.00%	100.00%
BH	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.52	100.00%	100.00%	NA	NA	NA	1.42	0.00	0.00%	NA	NA	NA	NA	100.00%	80.39%	100.00%	NA
	Vodafone	2.22	100.00%	100.00%	NA	NA	NA	1.57	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	BSNL	4.00	96.00%	100.00%	95.00%	100%	0	4.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	98.86%	99.00%	100.00%	100.00%
Chattisgarh	BSNL	3.00	97.00%	100.00%	86.00%	100%	800	6.00	0.00	0.01%	0.01	99.00%	100.00%	100.00%	97.87%	97.80%	100.00%	100.00%
CN	Reliance	0.01	100.00%	100.00%	NA	NA	0	5.37	0.00	0.01%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	Vodafone	0.89	100.00%	100.00%	NA	NA	NA	1.27	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	BSNL	5.00	92.00%	100.00%	92.00%	100%	1924	8.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	99.19%	99.14%	100.00%	100.00%
DEL	Reliance	0.03	100.00%	100.00%	NA	NA	0	4.96	0.00	0.02%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.49	100.00%	100.00%	NA	NA	NA	2.29	0.00	0.00%	NA	NA	NA	NA	100.00%	75.08%	100.00%	100.00%
	Vodafone	0.53	100.00%	100.00%	NA	NA	NA	1.47	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Bharti	3.88	89.40%	100.00%	NA	NA	1683	5.31	0.00	0.10%	NA	100.00%	100.00%	100.00%	100.00%	75.00%	100.00%	100.00%
	MTNL	6.03	89.17%	99.06%	NA	NA	12132	4.35	0.00	0.02%	0.00%	99.71%	100.00%	100.00%	99.56%	99.82%	100.00%	100.00%
GUJ	Reliance	0.32	100.00%	100.00%	NA	NA	0	4.41	0.00	0.02%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.01	99.02%	100.00%	NA	NA	1	2.65	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	80.50%	99.74%	100.00%
	Vodafone	0.50	100.00%	100.00%	NA	NA	NA	2.28	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Bharti	2.02	92.58%	100.00%	NA	NA	63	5.55	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	52.00%	100.00%	100.00%
	BSNL	5.00	96.00%	100.00%	94.00%	100%	505	5.00	0.00	0.02%	0.00	100.00%	100.00%	100.00%	97.75%	98.05%	100.00%	100.00%
HP	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	BSNL	5.00	92.00%	100.00%	95.00%	100%	345	6.00	0.00	0.01%	0.00	98.22%	100.00%	100.00%	97.27%	100.00%	100.00%	100.00%

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HR	Vodafone	3.33	100.00%	100.00%	NA	NA	NA	0.00	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.27	91.30%	100.00%	NA	NA	NA	6.11	0.00	0.00%	NA	NA	NA	NA	100.00%	80.31%	100.00%	NA
	Bharti	6.60	89.01%	100.00%	NA	NA	0	4.72	0.00	0.04%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
	BSNL	5.00	97.00%	100.00%	97.00%	100%	766	6.00	0.00	0.10%	0.00	100.00%	100.00%	100.00%	97.41%	100.00%	100.00%	100.00%
J&K	BSNL	5.00	93.00%	100.00%	90.00%	100%	186	6.00	0.00	0.10%	0.00	98.00%	100.00%	100.00%	97.29%	100.00%	100.00%	100.00%
JHAR	BSNL	2.00	96.00%	100.00%	91.00%	100%	399	6.00	0.00	0.01%	0.00	98.00%	100.00%	100.00%	99.50%	99.00%	100.00%	100.00%
KER	Vodafone	0.52	100.00%	100.00%	NA	NA	NA	3.44	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Reliance	0.10	100.00%	100.00%	NA	NA	0	4.92	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.14	90.48%	100.00%	NA	NA	NA	6.65	0.00	0.00%	NA	NA	NA	NA	100.00%	68.12%	100.00%	NA
	Bharti	2.94	87.80%	100.00%	NA	NA	793	6.95	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	82.00%	100.00%	100.00%
	BSNL	4.00	91.00%	100.00%	91.00%	100%	1117	7.00	0.00	0.03%	0.00	99.82%	100.00%	100.00%	97.02%	96.98%	100.00%	100.00%
KOL	Vodafone	0.56	100.00%	100.00%	NA	NA	NA	1.39	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Reliance	0.07	100.00%	100.00%	NA	NA	0	4.33	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	Bharti	4.47	85.99%	100.00%	NA	NA	224	9.64	0.00	0.01%	NA	100.00%	100.00%	100.00%	98.69%	93.00%	100.00%	100.00%
	BSNL	6.00	90.00%	100.00%	NA	NA	402	8.00	0.00	0.00%	0.00	98.46%	100.00%	100.00%	99.46%	99.00%	100.00%	100.00%
KTK	Vodafone	0.87	100.00%	100.00%	NA	NA	NA	1.49	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Reliance	0.02	100.00%	100.00%	NA	NA	0	4.91	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.39	99.48%	100.00%	NA	NA	NA	2.02	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	75.92%	99.70%	100.00%
	Bharti	2.00	85.39%	100.00%	NA	NA	809	5.53	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	79.00%	100.00%	100.00%
	BSNL	4.00	97.00%	100.00%	95.00%	100%	3048	7.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	97.45%	97.45%	100.00%	100.00%
MH	Bharti	1.23	93.87%	100.00%	NA	NA	37	5.36	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	71.00%	100.00%	100.00%
	BSNL	4.00	91.00%	100.00%	87.00%	100%	1288	4.00	0.00	0.10%	0.00	100.00%	100.00%	100.00%	97.03%	96.97%	100.00%	100.00%
	Reliance	0.20	100.00%	100.00%	NA	NA	0	4.80	0.00	0.02%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	Vodafone	0.39	100.00%	100.00%	NA	NA	NA	1.19	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	TTSL	1.54	97.16%	100.00%	NA	NA	NA	4.84	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	77.94%	98.38%	100.00%
MP	Vodafone	1.28	100.00%	100.00%	NA	NA	NA	0.19	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Reliance	0.13	100.00%	100.00%	NA	NA	0	4.43	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.72	100.00%	100.00%	NA	NA	NA	1.93	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	79.90%	100.00%	NA
	Bharti	6.43	91.58%	100.00%	NA	NA	983	4.4	0.00	0.05%	NA	100.00%	100.00%	100.00%	100.00%	73.00%	100.00%	100.00%
	BSNL	4.00	88.00%	100.00%	84.00%	100%	322	3.00	0.00	0.10%	0.00	98.00%	100.00%	100.00%	97.75%	97.57%	100.00%	100.00%
MUM	Vodafone	0.30	100.00%	100.00%	NA	NA	NA	2.29	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Bharti	0.81	92.88%	100.00%	NA	NA	124	5.51	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	70.00%	100.00%	100.00%
	MTNL	3.46	96.55%	99.93%	NA	NA	13690	5.16	0.00	0.02%	NA	99.44%	100.00%	NA	98.45%	98.22%	99.86%	100.00%
	Reliance	0.05	100.00%	100.00%	NA	NA	0	4.17	0.00	0.01%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.91	96.88%	100.00%	NA	NA	NA	5.07	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	76.72%	100.00%	100.00%
NE	Vodafone	0.00	NA	NA	NA	NA	NA	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
NE-I	BSNL	4.00	93.00%	100.00%	94.00%	100%	35	4.00	0.00	0.03%	0.00	98.00%	100.00%	100.00%	98.61%	99.00%	100.00%	100.00%
NE-II	BSNL	3.00	97.00%	100.00%	100.00%	100%	92	3.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	99.19%	99.33%	100.00%	100.00%

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OR	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.16	100.00%	100.00%	NA	NA	NA	1.45	0.00	0.00%	NA	NA	NA	NA	100.00%	100.00%	100.00%	NA
	BSNL	6.00	92.00%	100.00%	89.00%	100%	719	4.00	0.00	0.08%	0.00	99.00%	100.00%	100.00%	99.28%	99.00%	100.00%	100.00%
	Vodafone	2.13	100.00%	100.00%	NA	NA	NA	1.23	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
PB	Vodafone	0.95	100.00%	100.00%	NA	NA	NA	2.10	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Reliance	0.05	100.00%	100.00%	NA	NA	0	4.09	0.00	0.01%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.70	100.00%	100.00%	NA	NA	NA	1.77	0.00	0.00%	NA	NA	NA	NA	100.00%	77.09%	100.00%	NA
	Bharti	4.35	89.25%	100.00%	NA	NA	0	5.17	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
	Quadrant	3.01	88.56%	100.00%	100.00%	100.00%	0	9.66	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.00%	96.00%	100.00%	100.00%
RAJ	BSNL	5.00	91.00%	100.00%	92.00%	100%	765	6.00	0.00	0.04%	0.00	98.00%	100.00%	100.00%	95.41%	100.00%	100.00%	100.00%
	Reliance	0.02	100.00%	100.00%	NA	NA	0	4.31	0.00	0.01%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.02	100.00%	100.00%	NA	NA	NA	2.04	0.00	0.00%	NA	NA	NA	NA	100.00%	75.84%	100.00%	NA
	Vodafone	0.45	100.00%	100.00%	NA	NA	NA	9.17	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
	Bharti	3.80	88.22%	100.00%	NA	NA	0	4.71	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
	Sistema	1.07	95.03%	100.00%	88.59%	100%	0	7.41	0.00	0.05%	0.00%	100.00%	100.00%	100.00%	99.09%	97.00%	100.00%	100.00%
TN	BSNL	5.00	95.00%	100.00%	95.00%	100%	545	6.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	97.87%	100.00%	100.00%	100.00%
	Reliance	0.07	100.00%	100.00%	NA	NA	0	4.61	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.48	97.10%	100.00%	NA	NA	NA	4.57	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	77.78%	100.00%	NA
	Vodafone	3.06	100.00%	100.00%	NA	NA	NA	1.22	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Bharti	6.56	86.39%	100.00%	NA	NA	2805	6.28	0.00	0.06%	NA	100.00%	100.00%	100.00%	100.00%	82.00%	100.00%	100.00%
UPE	BSNL	4.00	93.00%	100.00%	93.00%	100%	2667	8.00	0.00	0.10%	0.00	100.00%	100.00%	100.00%	98.72%	98.67%	100.00%	100.00%
	Reliance	0.05	100.00%	100.00%	NA	NA	0	4.33	0.00	0.01%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	1.54	100.00%	100.00%	NA	NA	NA	1.57	0.00	0.00%	NA	NA	NA	NA	100.00%	100.00%	NA	NA
	Vodafone	0.44	100.00%	100.00%	NA	NA	NA	2.43	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Bharti	6.57	94.31%	100.00%	NA	NA	0	5.06	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
UPW	BSNL	4.00	94.00%	100.00%	94.00%	100%	588	5.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	97.43%	100.00%	100.00%	100.00%
	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	TTSL	0.10	100.00%	100.00%	NA	NA	NA	5.42	0.00	0.00%	NA	NA	NA	NA	100.00%	100.00%	NA	NA
	Vodafone	2.50	100.00%	100.00%	NA	NA	NA	1.37	0.00	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
	Bharti	6.57	94.31%	100.00%	NA	NA	0	3.6	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
Uttaranchal	BSNL	5.00	94.00%	100.00%	93.00%	100%	935	6.00	0.00	0.04%	0.00	100.00%	100.00%	100.00%	95.84%	100.00%	100.00%	100.00%
West Bengal	BSNL	5.00	97.00%	100.00%	96.00%	100%	249	5.00	0.00	0.00%	0.00	98.00%	100.00%	100.00%	98.42%	100.00%	100.00%	100.00%
	Reliance	0.00	NA	NA	NA	NA	0	0.00	0.00	0.00%	NA	100.00%	100.00%	100.00%	97.45%	96.78%	100.00%	100.00%
	BSNL	4.00	90.00%	100.00%	93.00%	100%	1924	8.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	99.19%	99.14%	100.00%	100.00%
	TTSL	1.52	100.00%	100.00%	NA	NA	NA	1.84	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	80.56%	100.00%	NA
	Vodafone	1.67	100.00%	100.00%	NA	NA	NA	0.48	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 QoS of Service Providers providing Broadband Services (Wireline) for QE March, 2016

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 registration of demand	% of faults repaired by next working day (>90%)	% of faults repaired within 3 working day	Rent Rebate	%age of bills disputed	%age of billing complaints resolved within 4 weeks	%age of cases to whom refund of deposits is made within 60 days of closures	%age of calls answered by operator (Voice to voice) within 60 sec	%age of calls answered by operator (Voice to voice) within 90 sec	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	Broadband Connection Speed available (download) from ISP node to user			Packet loss (for wired broadband access) in %age	User reference point at POP/ISP Gateway node to International gateway (IGSP/ NIXI)	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)
		100%	>90%	=>99%	in nos.	<2%	100% within 4 weeks	100% within 60 days	>60%	>80%	0	0	<90%	>80%			>98%	<1%	<120 ms	<350 ms
BSNL	All India	100.00%	94.29%	99.69%	10512	0.07%	100.00%	100.00%	97.86%	98.50%	0	0	68.20%	90.63%	99.68%	0.40%	31	182	NA	
Bharti Airtel	Andhra Pradesh	100.00%	90.72%	100.00%	0	0.01%	100.00%	100.00%	76.00%	82.00%	0	0	66.30%	100.00%	99.98%	0.00%	38	53	NA	
	Delhi	100.00%	90.62%	99.40%	541	0.01%	100.00%	100.00%	62.00%	70.00%	0	0	70.27%	100.00%	99.97%	0.00%	37	80	NA	
	Gujarat	100.00%	95.05%	99.54%	16	0.01%	100.00%	100.00%	49.00%	56.00%	0	NA	NA	100.00%	99.99%	0.00%	96	61	NA	
	Haryana	100.00%	90.71%	99.51%	10	Nil	-	100.00%	89.00%	94.00%	0	NA	NA	100.00%	100.00%	0.00%	40	80	NA	
	Karnataka	100.00%	90.47%	99.93%	183	0.01%	99.00%	100.00%	65.00%	72.00%	0	0	62.03%	100.00%	99.97%	0.00%	28	39	NA	
	Kerala	100.00%	91.17%	99.74%	180	0.00%	100.00%	100.00%	73.00%	78.00%	0	NA	NA	100.00%	99.99%	0.00%	40	32	NA	
	Kolkata	100.00%	92.48%	99.42%	127	0.00%	100.00%	100.00%	82.00%	87.00%	0	0	64.79%	100.00%	99.99%	0.00%	50	77	NA	
	Madhya Pradesh	100.00%	92.42%	99.40%	142	0.01%	100.00%	100.00%	61.00%	72.00%	0	0	76.60%	100.00%	99.94%	0.00%	73	78	NA	
	Maharashtra	100.00%	95.10%	99.53%	22	0.02%	100.00%	100.00%	61.00%	67.00%	0	NA	NA	100.00%	99.98%	0.19%	49	61	NA	
	Mumbai	100.00%	95.18%	99.50%	52	0.02%	100.00%	100.00%	61.00%	68.00%	0	0	68.06%	100.00%	99.97%	0.07%	24	61	NA	
	Punjab	100.00%	90.14%	99.23%	63	0.01%	100.00%	100.00%	86.00%	91.00%	0	0	66.53%	100.00%	99.99%	0.00%	35	83	NA	
	Rajasthan	100.00%	91.24%	99.89%	3	0.00%	100.00%	100.00%	83.00%	89.00%	0	NA	NA	100.00%	99.98%	0.00%	38	80	NA	
	Tamilnadu	100.00%	91.93%	99.95%	901	0.02%	100.00%	100.00%	72.00%	78.00%	0	0	69.68%	100.00%	99.99%	0.00%	36	32	NA	
Uttar Pradesh - East	100.00%	92.00%	99.66%	21	0.01%	100.00%	100.00%	85.00%	90.00%	0	0	72.08%	100.00%	99.99%	0.00%	40	101	NA		
Uttar Pradesh - West	100.00%	94.14%	99.70%	7	0.01%	100.00%	100.00%	85.00%	91.00%	0	NA	NA	100.00%	99.99%	0.00%	36	80	NA		
MTNL	Delhi & Mumbai	99.66%	89.72%	97.60%	14843	0.056%	100.00%	100.00%	95.45%	96.11%	Nil	0	79.12%	90.00%	99.90%	0.56%	43	295	NA	
Alliance Broadband	Kolkata	100.00%	92.00%	99.00%	0	0.90%	100.00%	Nil	75.00%	97.00%	0	0	76.46%	93.70%	98.00%	0.60%	114	338	783	
Asianet Satellite	Kerala	100.00%	90.46%	99.49%	Nil	1.81%	100.00%	100.00%	60.89%	81.09%	Nil	0	67.40%	90.00%	99.57%	1.00%	50	270	NA	
Atria Convergence	All India	98.99%	90.10%	98.70%	19301	0.43%	100.00%	Nil	68.00%	75.00%	0	0	91.00%	90.00%	99.89%	1.00%	50	300	NA	
Broadband Pacenet	All India	100.00%	90.40%	99.10%	150	1.00%	100.00%	Nil	82.00%	90.00%	0	0	66.75%	84.00%	99.04%	0.45%	75	260	0	
Citycom Networks	All India	100.00%	93.70%	99.20%	559	0.73%	100.00%	100.00%	80.90%	86.80%	0	0	38.00%	88.80%	99.60%	1.00%	2	166	NA	
DEN Networks Ltd.	All India	100.00%	90.28%	99.01%	Nil	NA	NA	NA	65.00%	81.00%	Nil	Nil	83.04%	91.00%	99.28%	0.72%	67	258	NA	
Digital Network	Maharashtra & Goa	100.00%	90.57%	99.17%	Nil	0.27%	100.00%	Nil	60.55%	80.33%	Nil	0	80.00%	80.00%	99.50%	1.00%	4	255	600	
D-VoiS Broadband	All India	100.00%	95.00%	99.00%	-	0.79%	100.00%	-	98.00%	96.00%	0	Nil	Nil	90.00%	99.99%	0.10%	120	350	800	
Excitel Broadband Private Limited	Delhi	100.00%	94.70%	99.17%	365	NA	NA	NA	75.66%	90.00%	Nil	Nil	62.30%	92.89%	98.50%	0.30%	7	202.3	NA	
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	
GBPS Networks Pvt.	Pune, Maharashtra	100.00%	93.01%	99.40%	Nil	0.00%	100.00%	Nil	62.19%	82.70%	Nil	0	80.00%	80.00%	99.50%	1.00%	4	255	600	
Gujarat Telelink	Gujarat	100.00%	95.00%	99.00%	1130	0.05%	100.00%	NA	94.00%	99.00%	NA	0	88.99%	92.00%	98.89%	0.00%	11	300	NA	

Annexure 4.4 (Contd.)

Hathway Cable & Datacom Ltd.	Andhra Pradesh	100.00%	97.00%	99.00%	32	1.82%	100.00%	100.00%	92.00%	98.00%	0	0	78.00%	90.00%	100.00%	1.00%	77	302	NA	
	Delhi	100.00%	98.00%	99.00%	13	1.38%	100.00%	100.00%	75.00%	90.00%	0	0	78.00%	85.00%	100.00%	1.00%	110	320	NA	
	Gujarat	100.00%	92.00%	99.00%	0	NA	NA	NA	87.00%	97.00%	0	0	87.00%	87.00%	99.00%	0.00%	55	250	NA	
	Karnataka	100.00%	90.00%	100.00%	14	1.93%	100.00%	100.00%	90.00%	93.00%	0	0	77.00%	90.00%	100.00%	1.00%	80	270	NA	
	Maharashtra & Goa	98.00%	93.00%	99.00%	1385	1.92%	100.00%	100.00%	79.00%	84.00%	0	0	78.00%	90.00%	99.00%	1.00%	70	265	NA	
	Punjab	100.00%	96.00%	99.00%	0	1.94%	100.00%	100.00%	83.00%	99.00%	0	0	77.00%	85.00%	99.00%	1.00%	110	295	NA	
	Uttar Pradesh - West	100.00%	98.00%	99.00%	0	1.20%	100.00%	100.00%	75.00%	90.00%	0	0	84.00%	85.00%	99.71%	1.00%	95	320	NA	
Kolkata	100.00%	100.00%	100.00%	0	NA	NA	NA	100.00%	100.00%	0	0	25.00%	100.00%	100.00%	0.00%	4	238	NA		
Home Systems	Mumbai	100.00%	95.00%	99.99%	NA	0.00%	100.00%	NA	70.00%	87.00%	0	0	75.00%	95.00%	99.00%	0.01%	50	295	NA	
Honesty Net Solutions (I) Pvt. Ltd.	Mumbai	100.00%	95.00%	100.00%	0	Nil	100.00%	Nil	68.00%	100.00%	0	NA	NA	95.00%	98.00%	1.00%	7	66	NA	
IndusInd Media	All India	100.00%	97.00%	99.00%	11	0.00%	100.00%	100.00%	100.00%	100.00%	0	0	64.27	80.00%	98.00%	1.00%	45	260	NA	
Meghbela Cable & Broadband Services	Kolkata	100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	92.00%	100.00%	0	0	0.00%	100.00%	99.90%	0.00%	60	150	0	
	West Bengal	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%	0.00%	60	150	0	
Nextra Teleservices Pvt. Ltd.	Delhi	100.00%	94.20%	99.30%	1384	1.67%	100.00%	100.00%	94.00%	97.00%	0	0	88.00%	100.00%	100.00%	1.00%	120	350	NA	
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	78.00%	90.00%	99.00%	1.00%	100	300	NA	
Ortel Communications	All India	100.00%	92.70%	99.64%	NA	NA	NA	NA	100.00%	100.00%	0	0	67.96%	92.50%	99.80%	0.00%	87	243	NA	
Pioneer Elabs Ltd.	Hyderabad	100.00%	90.00%	99.00%	29	Nil	100.00%	Nil	65.00%	85.00%	0	0	24.00%	60.00%	99.80%	1.00%	5	1	NA	
Quadrant Televentures	Punjab	100.00%	90.40%	99.34%	0	0.01%	100.00%	100.00%	87.00%	90.33%	Nil	Nil	77.00%	100.00%	99.78%	0.00%	80	280	NA	
RailTel Corporation	PAN India	100.00%	96.00%	100.00%	Nil	0.00%	100.00%	NA	64.39%	81.39%	0	0	35.39%	100.00%	99.35%	1.00%	100	100	NA	
Rajesh Multichannel	Mumbai	100.00%	97.00%	100.00%	0	0.00%	100.00%	100.00%	97.00%	93.00%	0	0	87.00%	86.00%	99.00%	0.00%	46	250	500	
Reliance Com. (RCL)	All India	100.00%	100.00%	100.00%	Nil	0.10%	100.00%	100.00%	96.00%	97.00%	0	0	54.00%	91.00%	99.45%	0.46%	1	1.56	0	
RK Infratel Ltd.	Gujarat	100.00%	91.93%	99.03%	0	0.00%	100.00%	NA	100.00%	100.00%	0	0	89.02%	85.00%	99.80%	0.00%	120	350	NA	
Siti Broadband	All India	100.00%	92.88%	99.84%	271	0.00%	100.00%	100.00%	78.00%	84.00%	0	0	65.37%	100.00%	99.94%	0.00%	106	280	NA	
Southern (SOBTL)	Andhra Pradesh	100.00%	99.00%	100.00%	0	0.00%	100.00%	100.00%	94.00%	100.00%	0	0	77.00%	95.00%	99.00%	0.05%	100	300	500	
Syscon Infoway Pvt. Ltd.	Maharashtra	100.00%	97.00%	100.00%	Nil	0.00%	100.00%	NA	76.00%	87.67%	0	0	83.33%	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	62.00%	99.00%	100.00%	0.00%	1	47	80	
Tata Communications	All India	Nil	88.00%	94.00%	0	0.07%	100.00%	100.00%	61.00%	66.00%	0	Nil	50.75%	88.00%	99.02%	0.00%	15	253	NA	
Tata (TTML)	Maharashtra & Goa	100.00%	97.06%	99.54%	NA	0.00%	100.00%	100.00%	82.86%	86.62%	0	0	82.00%	93.00%	98.56%	0.00%	44	177	Nil	
Tata (TTSL)	All India (Pan India)	100.00%	98.16%	99.45%	NA	0.08%	76.09%	100.00%	75.01%	78.79%	0	0	75.00%	90.29%	99.61%	0.00%	63	55	Nil	
Vasai Cable	Mumbai	100.00%	93.72%	100.00%	Nil	0.16%	100.00%	Nil	96.19%	97.09%	Nil	0	63.00%	90.00%	100.00%	1.00%	4	255	NA	
Wish Net Pvt. Ltd.	West Bengal	100.00%	98.76%	100.00%	0	0.03%	100.00%	NA	81.00%	97.67%	0	0	73.84%	100.00%	99.88%	1.00%	20	NA	NA	
	Kolkata	100.00%	98.83%	100.00%	0	0.01%	100.00%	NA	81.33%	97.67%	0	0	73.84%	100.00%	99.88%	1.00%	40	NA	NA	
You Broadband	All India	99.68%	90.17%	99.31%	4787	0.00%	100.00%	98.86%	90.00%	95.00%	NA	0	75.32%	87.04%	99.36%	0.00%	9	269	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

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

Annexure 5.1(Contd.)

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

Annexure 5.1(Contd.)

Sl. No.	Broadcaster name	Sl. No	Channel name
	M/s Sony Pictures Networks Distribution India Private Limited	73	MAX 2 (Earlier name "MAX HD")
		74	PAL (Earlier Name "SAB HD")
		75	SET HD
		76	SIX HD
		77	PIX HD
		78	SONY ESPN HD
		79	MAX HD
22	M/s NDTV Life style Limited	80	NDTV Good Times
23	M/s Neo Sports Broadcast Pvt Limited	81	NEO Prime (Earlier name "Neo Cricket")
		82	Neo Sports
24	M/s New Delhi Television Limited	83	NDTV 24*7
		84	NDTV India
		85	NDTV Profit
		86	Granada TV (HD)
		87	Trace Sports HD
25	M/s Odisha Television Limited	88	Prarthana
		89	Tarang
		90	Tarang Music
		91	Alankar
26	M/s Panorama Television Private Limited	92	ETV Bihar Jharkhand
		93	ETV MP Chattisgarh
		94	ETV Rajasthan
		95	ETV Uttar Pradesh Uttarachal
		96	ETV Urdu
		97	ETV News Kannada
		98	ETV News Bangla
		99	ETV Haryana / Himanchal Pradesh
		100	ETV News Gujarati
		101	ETV News Odia
27	M/s Paul Entertainments Pvt Limited	102	9X Tashan (Earlier name "Purvaiya")
29	M/s Prism Television Private Limited	103	Colors Bangla (Earlier name "ETV Bangla")
		104	Colors Gujarati (Earlier name "ETV Gujarati")
		105	Colors Kannada (Earlier name "ETV Kannada")
		106	Colors Marathi (Earlier name "ETV Marathi")
		107	Colors Oriya (Earlier name "ETV Oriya")

Annexure 5.1(Contd.)

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

Annexure 5.1(Contd.)

Sl. No.	Broadcaster name	Sl. No	Channel name
34	M/s SUN TV Network Limited	152	Adithya TV
		153	Chintu TV
		154	Chutti TV
		155	Gemini Comedy
		156	Gemini Life
		157	Gemini Movies
		158	Gemini Music
		159	Gemini News
		160	Gemini TV
		161	KTV
		162	Kiran TV
		163	Kushi TV
		164	SUN Life
		165	Sun Music
		166	Sun News
		167	Surya Music (Earlier name "Sun News English")
		168	SUN TV
		169	SUN TV RI
		170	Surya TV
		171	Udaya Comedy
		172	Udaya Movies
		173	Udaya Music
		174	Udaya News
		175	Udaya TV
176	Kochu TV		
177	Sun TV HD		
178	KTV HD		
179	Sun Music HD		
180	Gemini TV HD		
181	Sun Action		
182	Gemini Action		
183	Surya Action		
184	Suriyan Tv		
35	M/s Taj Television India Private Limited	185	Ten Action
		186	Ten Sports
		187	Ten Golf HD
		188	Ten HD
36	M/s Turmeric Vision Private Limited	189	Food Food TV
37	M/s Turner International India Pvt Ltd	190	Cartoon Network
		191	CNN International
		192	HBO
		193	POGO
		194	Toonami (Earlier name "Boomerang")

Annexure 5.1(Contd.)

Sl. No.	Broadcaster name	Sl. No	Channel name
		195	WB
		196	HBO Hits HD
38	M/s TV 18 Broadcast Limited	197	CNN News 18 (Earlier name "CNN-IBN")
		198	IBN 7
		199	CNBC Bazaar
		200	CNBC TV 18 Prime HD
		201	CNBC Awaaz
		202	CNBC TV 18
39	M/s TV Today Network Limited	203	Aaj Tak
		204	Delhi Aaj Tak
		205	Headlines Today
		206	Aaj Tak Tez
40	M/s United Home Entertainment Pvt Limited	207	Hungama TV
41	M/s Disney Broadcasting (India) Limited	208	Disney Junior (Earlier name "UTV Comedy")
		209	UTV Movies
		210	Disney XD (Earlier name "UTV World Movies")
		211	Bindass Play (Earlier name "UTV Stars")
		212	The Disney Channel
42	M/s Viacom 18 Media Private Limited	213	Colors
		214	Comedy Central (HD Distribution)
		215	MTV
		216	NICK
		217	Nick Jr / Teen Nick
		218	SONIC
		219	VH 1 (HD Distribution)
		220	Colors Infinity HD
		221	Colors Infinity
		222	Colors HD
		223	NICKS HD+
		224	MTV Indies (HD Distribution)
43	M/s Vijay Television Pvt Limited	225	Vijay TV
44	M/s Zee Akaash News Private Limited	226	24 Ghanta
45	M/s Zee Entertainment Enterprises Limited	227	Zee ETC Bollywood (Earlier name "Zee Bollywood")
		228	Action Cinema
		229	Zee Bangla Cinema
		230	Zee Café HD
		231	Zee Café
		232	Zee Cinema
		233	Classic Cinema
		234	Zee Salaam
		235	Zee Smile

Annexure 5.1(Contd.)

Sl. No.	Broadcaster name	Sl. No	Channel name
		236	Zee Studio
		237	Zee Talkies
		238	Zee TV
		239	Zing
		240	Zindagi
		241	& Picture
		242	Zee Q
		243	Zee Bangla
		244	Zee Marathi
		245	Living Foodz (earlier name "Zee Khana Khazana")
		246	Zee TV HD
		247	Zee Cinema HD
		248	Zee Studio HD
		249	& TV
		250	& TV HD
		251	& Pictures HD
46	M/s Zee Media Corporation Limited	252	Zee 24 Taas
		253	Zee Kalinga (Earlier name "Zee 24 Ghantalu")
		254	Zee Business
		255	Zee Kannada
		256	Zee News
		257	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")
		258	Zee Telugu
		259	Zee Madhya Pradesh Chattisgarh
		260	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")
47	M/s Zoom Entertainment Network Limited	261	Movies Now (HD)
48	M/s AXN Networks India Private Limited	262	SONY ESPN (Earlier name "SONY KIX")
		263	AXN HD

Annexure 5.2 : List of pay DTH Operators

- 1. M/s. Tata Sky Ltd.,**
3rd 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

- 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

- 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

- 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

- 5. Reliance Big TV Pvt. Ltd.**
3rd Floor, A-Wing,
Reliance Centre, Maharaja Ranjit Singh Marg,
New Delhi – 110 002
Ph: 011-30331012
Fax : 011-30331781
Website : 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

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

S.No.	Name of City	Category	Number of operational channels
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	7
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	Coimbatore	B	4
21	Delhi	A+	9
22	Dhule	C	1
23	Gangtok	D	3
24	Gorakhpur	C	1
25	Gulbarga	C	1
26	Guwahati	C	3
27	Gwalior	C	4
28	Hissar	D	3
29	Hyderabad	A	4
30	Indore	B	4
31	Jabalpur	B	4
32	Jaipur	A	5
33	Jalandhar	C	4
34	Jalgaon	C	2
35	Jammu	C	1

Annexure- 5.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
36	Jamshedpur	B	3
37	Jhansi	C	1
38	Jodhpur	C	3
39	Kannur	C	4
40	Kanpur	A	3
41	Karnal	D	2
42	Kochi	B	3
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
68	Shimla	D	3
69	Sholapur	C	2
70	Siliguri	C	3
71	Srinagar	C	1
72	Surat	A	4
73	Thiruvananthapuram	C	4

Annexure- 5.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
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
Total			243

Source: Ministry of Information & Broadcasting (MIB)

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

Sr. No	Name of Teleport	Address	Location	Date of Permission
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.)

Sr.No	Name of Teleport	Address	Location	Date of Permission
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.)

Sr.No	Name of Teleport	Address	Location	Date of Permission
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.)

Sr.No	Name of Teleport	Address	Location	Date of Permission
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, KOLKATA 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 DELHI-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 TH 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.	POSITIVE 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.)

Sr.No	Name of Teleport	Address	Location	Date of Permission
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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