



Telecom Regulatory Authority of India

The Indian Telecom Services Performance Indicators October - December, 2017

New Delhi, India
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Snapshot

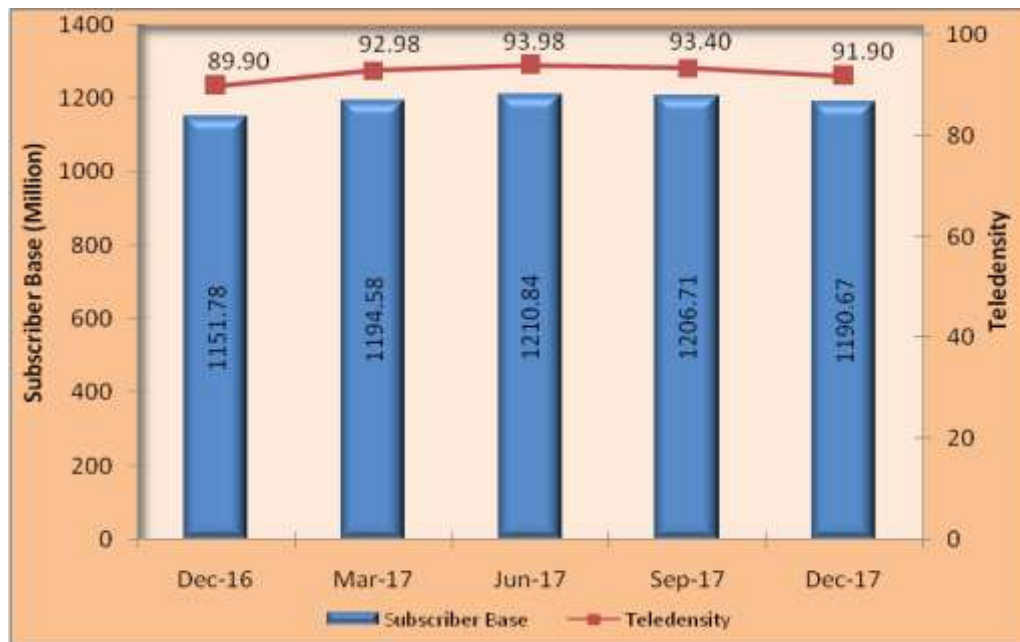
(Data As on Q.E. 31st December, 2017)	
Telecom Subscribers (Wireless + Wireline)	
Total Subscribers	1,190.67 Million
% change over the previous quarter	-1.33%
Urban Subscribers	688.25 Million
Rural Subscribers	502.42 Million
Market share of Private Operators	89.31%
Market share of PSU Operators	10.69%
Teledensity	91.90
Urban Teledensity	168.29
Rural Teledensity	56.66
Wireless Subscribers	
Total Wireless Subscribers	1,167.44 Million
% change over the previous quarter	-1.32%
Urban Subscribers	668.44 Million
Rural Subscribers	499.00 Million
GSM Subscribers	1,162.20 Million
CDMA Subscribers	5.24 Million
Market share of Private Operators	90.45%
Market share of PSU Operators	9.55%
Teledensity	90.11
Urban Teledensity	163.44
Rural Teledensity	56.28
Total Wireless Data Usage during the quarter	6,521,893 TB
Wireline Subscribers	
Total Wireline Subscribers	23.23 Million
% change over the previous quarter	-1.84%
Urban Subscribers	19.81 Million
Rural Subscribers	3.42 Million
Market share of Private Operators	31.97%
Market share of PSU Operators	68.03%
Teledensity	1.79
Urban Teledensity	4.84
Rural Teledensity	0.39
No. of Village Public Telephones (VPT)	2,02,395
No. of Public Call Office (PCO)	3,93,483

Telecom Financial Data	
Gross Revenue (GR) during the quarter	₹ 61,089 Crore
% change in GR over the previous quarter	-7.95%
Adjusted Gross Revenue (AGR) during the quarter	₹ 38,536 Crore
% change in AGR over the previous quarter	-7.52%
Share of Public sector undertakings in Access AGR	8.14%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 80.77
Internet/Broadband Subscribers	
Total Internet Subscribers	445.96 Million
% change over previous quarter	3.90%
Narrowband subscribers	83.09 Million
Broadband subscribers	362.87 Million
Wired Internet Subscribers	21.28 Million
Wireless Internet Subscribers	424.67 Million
Urban Internet Subscribers	313.92 Million
Rural Internet Subscribers	132.03 Million
Total Internet Subscribers per 100 population	34.42
Urban Internet Subscribers per 100 population	76.76
Rural Internet Subscribers per 100 population	14.89
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/downlinking /uplinking	877
Number of Pay TV Channels	304
Number of private FM Radio Stations (excluding All India Radio)	326
Number of Pay Subscribers Active with Private DTH Operators	67.56 Million
Number of Operational Community Radio Stations	214
Number of pay DTH Operators	6
Revenue & Usage Parameters	
Monthly ARPU GSM Full Mobility Service including LTE	₹ 79
Monthly ARPU CDMA Full Mobility Service	₹ 111
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service including LTE	495 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	112 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	322 Million
Data Usage of Mobile Users	
Average Data Usage per subscriber per month – GSM (2G+3G+4G)	1,955 MB
Average Data Usage per subscriber per month - CDMA	292 MB
Average Data Usage per subscriber per month – Total(GSM+CDMA)	1,945 MB
Average outgo per GB data for GSM including LTE (2G+3G+4G)	₹ 18.85
Average outgo per GB data for CDMA	₹ 125.86

Executive Summary

1. The number of telephone subscribers in India declined from 1,206.71 million at the end of Sep-17 to 1,190.67 million at the end of Dec-17, registering a decline rate of 1.33% over the previous quarter. However, this reflects year-on-year (Y-O-Y) positive growth of 3.38% over the same quarter of last year. The overall Teledensity in India declined from 93.40 as on QE Sep-17 to 91.90 as on QE Dec-17.

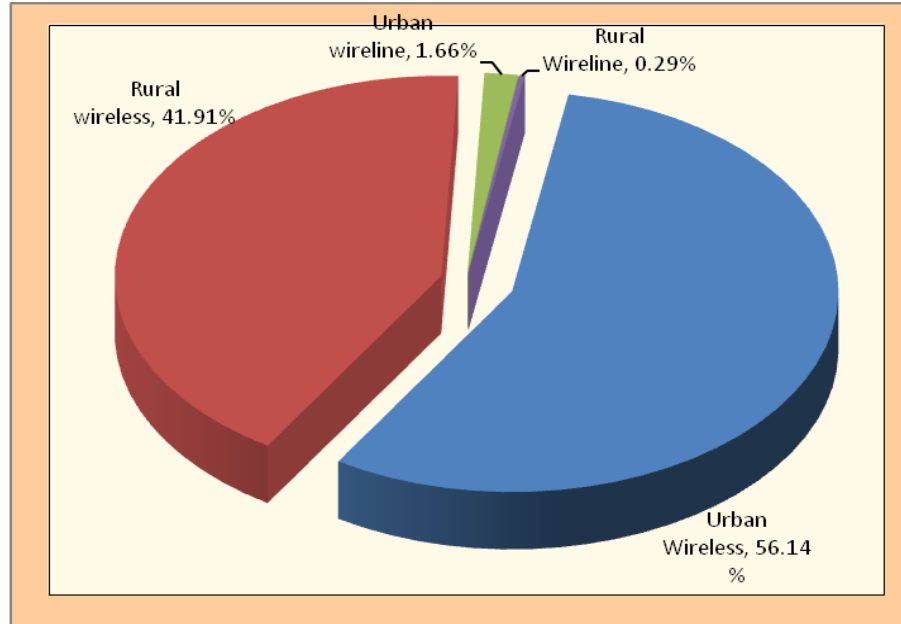
Trends in Telephone subscribers and Teledensity in India



2. Subscription in Urban Areas declined from 704.89 million at the end of Sep-17 to 688.25 million at the end of Dec-17, and Urban Teledensity also declined from 173.15 to 168.29 during the same period.
3. Rural subscription increased from 501.82 million to 502.42 million however, Rural Teledensity slightly declined from 56.71 to 56.66 at the end of Dec-17.

4. Out of the total subscription, the share of Rural subscription increased from 41.59% at the end of Sep-17 to 42.20% at the end of Dec-17.

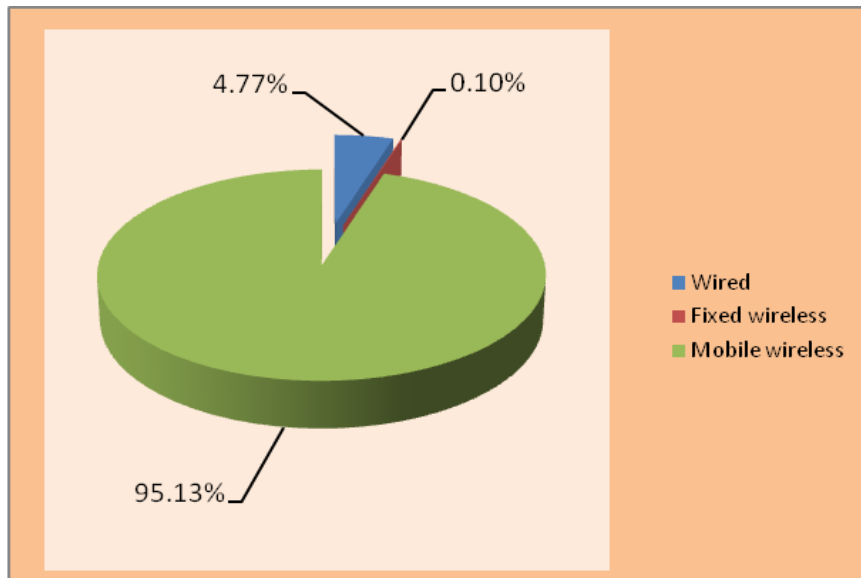
Composition of Telephone Subscribers



5. With a net decline of 15.61 million subscribers during the quarter, total wireless (GSM incl. LTE + CDMA) subscriber base declined from 1,183.04 million at the end of Sep-17 to 1,167.44 million at the end of Dec-17, registering a quarterly decline rate of 1.32% over the previous quarter. However, the year-on-year (Y-O-Y) growth rate of wireless subscribers for Dec-17 is 3.55%.
6. Wireless Tele-density declined from 91.56 at the end of Sep-17 to 90.11 at the end of Dec-17.
7. Wireline subscriber declined from 23.67 million at the end of Sep-17 to 23.23 million at the end of Dec-17 with quarterly decline rate of 1.84%. The year-on-year (Y-O-Y) decline rate in wireline subscribers for Dec-17 is 4.79%.
8. Wireline Teledensity declined from 1.83 at the end of Sep-17 to 1.79 at the end of Dec-17.

9. Total number of Internet subscribers increased from 429.23 million at the end of Sep-17 to 445.96 million at the end of Dec-17, registering a quarterly growth rate of 3.90%. Out of 445.96 million internet subscribers, Wired Internet subscribers are 21.28 million and Wireless Internet subscribers are 424.67 million.

Composition of internet subscription

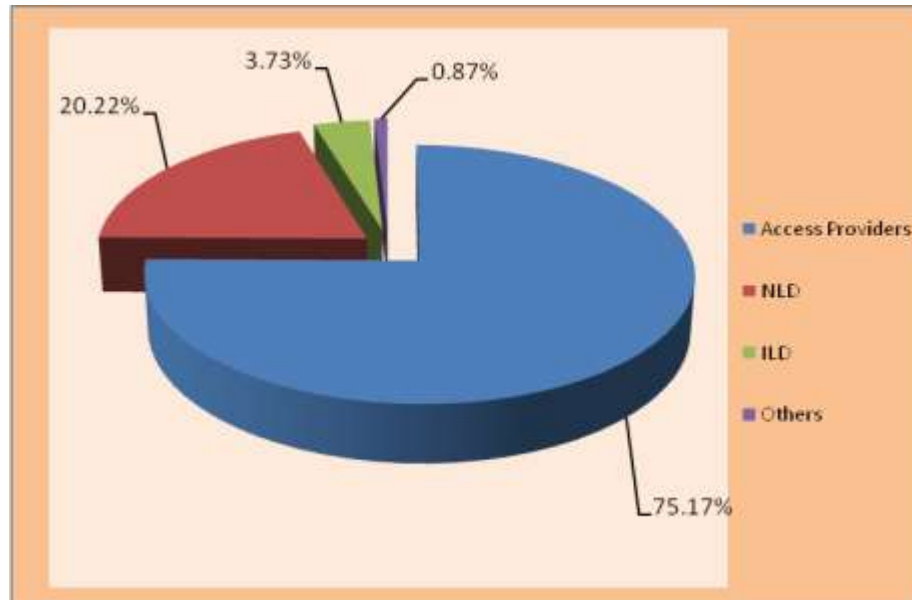


10. The Internet subscriber base is comprised of Broadband Internet subscriber base of 362.87 million and Narrowband Internet subscriber base of 83.09 million.
11. The broadband Internet subscriber base grew by 11.69% from 324.89 million at the end of Sep-17 to 362.87 million at the end of Dec-17. On the other hand, the narrowband Internet subscriber base declined by 20.37% from 104.34 million at the end of Sep-17 to 83.09 million at the end of Dec-17.
12. Monthly Average Revenue per User (ARPU) for GSM service (including LTE) declined by 5.37%, from ₹84 in QE Sep-17 to ₹79 in QE Dec-17. Monthly ARPU for GSM service (including LTE) declined by 23.61% on Y-O-Y in this quarter.

13. Prepaid ARPU for GSM service per month declined from ₹71 in QE Sep-17 to ₹67 in QE Dec-17, and Postpaid ARPU per month also declined from ₹361 in QE Sep-17 to ₹348 in QE Dec-17.
14. On an all India average, the overall MOU per subscriber per month for GSM service increased by 13.27% from 437 for QE Sep-17 to 495 in QE Dec-17.
15. Prepaid MOU per subscriber for GSM service increased from 419 in QE Sep-17 to 481 in QE Dec-17, however postpaid MOU declined from 818 in QE Sep-17 to 786 in QE Dec-17.
16. Monthly ARPU for CDMA full mobility service declined by 11.68%, from ₹125 in QE Sep-17 to ₹111 in QE Dec-17 and Y-O-Y basis Monthly ARPU for CDMA full mobility service declined by 21.78% in this quarter.
17. The total MOU per subscriber per month for CDMA full mobility service declined by 45.33%, from 206 in QE Sep-17 to 112 in QE Dec-17. The outgoing MOUs declined from 83 in QE Sep-17 to 73 in QE Dec-17, and incoming MOUs also declined from 123 in QE Sep-17 to 40 in QE Dec-17.
18. Gross Revenue (GR) and Adjusted Gross Revenue (AGR) of Telecom Service Sector for the QE Dec-17 has been ₹61,089 Crore and ₹38,536 Crore respectively. GR declined by 7.95% and AGR declined by 7.52% in Q.E. Dec-17 as compared to previous quarter.
19. The year-on-year (Y-O-Y) growth in GR and AGR over the same quarter in last year has been -8.18% and -16.05% respectively.

20. Pass-through charges declined from ₹24,693 Crore in Q.E. Sep-17 to ₹22,552 in Q.E. Dec-17. The quarterly and the year-on-year (Y-O-Y) growth rates of pass-through charges for QE Dec-17 are -8.67% and 9.33% respectively.
21. The License Fee declined from ₹3,249 Crore for the QE Sep-17 to ₹3,104 Crore for the QE Dec-17. The quarterly and the year-on-year (Y-O-Y) growth rates of license fee are -4.46% and -16.04% respectively in this quarter.
22. Access services contributed 75.17% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee, Spectrum Usage Charges(SUC) and Pass Through Charges declined by 7.95%, 7.52%, 4.46%, 8.31% and 8.67% respectively in QE Dec-17.

Composition of Adjusted Gross Revenue



23. Monthly Average Revenue per User (ARPU) for Access Services based on AGR, declined from ₹88.09 in QE Sep-17 to ₹80.77 in QE Dec-17.

24. The performance of Cellular Mobile 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"> • Worst affected BTSs due to downtime • Call set-up success rate and Session Establishment success rate for Circuit Switched Voice or VoLTE as applicable (within licensee’s own network) • SDCCH/Paging Channel and RCC Congestion (%age) • Connection with good voice quality, Circuit Switched Voice or VoLTE quality • Metering and billing credibility- pre-paid • Resolution of billing/ charging/ validity complaints (100% within 6 weeks) • %age of calls answered by the operators (voice to voice) within 90 sec • %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"> • BS Accumulated down-time (not available for service (%age)) • TCH, RAB and E-RAB Congestion (%age) • Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) • Metering and billing credibility- post paid • Period of applying credit/ waiver/adjustment to customer’s account from the date of resolution of complaints • Accessibility of call centre/ customer care

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
<ul style="list-style-type: none"> • Fault repaired by next working day for urban areas • Mean Time to Repair (MTTR) • Metering and billing credibility- post paid • %age of calls answered by the operators (voice to voice) within 90 seconds.

26. A total number of 877 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking/uplinking, as on 31st December, 2017.
27. During the quarter ending Dec-17, there were 304 pay channels as reported by 49 broadcasters as compared to 300 pay channels reported in the previous quarter. 304 pay channels include 216 SD pay TV channels and 88 HD Pay TV channels. During the quarter ending Dec-17, as per the reporting, **three** new pay channels were commenced. One FTA channel namely “JAN TV PLUS” converted into Pay channel.
28. Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. DTH has attained net pay active subscriber base of around 67.56 million. This is in addition the viewership of the free DTH services of Doordarshan. As on QE Dec-17, there are 6 pay DTH service providers in the country.
29. Apart from the radio Stations operated by All India Radio, the public broadcaster, as on 31st December, 2017, there are 326 operational private FM Radio stations and 86 existing cities with operational 34 FM Radio broadcasters as compared to 322 private FM Radio Stations 86 cities with operational 34 FM Radio broadcasters in the previous quarter.
30. According to the reporting of advertisement revenue done by the 34 FM Radio broadcasters, it has emerged that during the quarter ending Dec-17, four (4) new private FM Radio Stations have become operational.
31. As per data received from MIB, as on 31st December, 2017, there are 214 Community Radio Stations are operational.

Trends at a Glance

A. Access Service (Wireline + Wireless)

	QE Dec 2016	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	%age change over Dec-2016	%age change over Mar-2017	%age change over Jun-2017	%age change over Sep-2017
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber Base (in million)									
Wireline	24.40	24.40	24.00	23.67	23.23	-4.79%	-4.78%	-3.18%	-1.84%
Wireless	1127.37	1170.18	1186.84	1183.04	1167.44	3.55%	-0.23%	-1.64%	-1.32%
Total	1151.78	1194.58	1210.84	1206.71	1190.67	3.38%	-0.33%	-1.67%	-1.33%
Rural	468.64	501.61	509.88	501.82	502.42	7.21%	0.16%	-1.46%	0.12%
Urban	683.14	692.97	700.96	704.89	688.25	0.75%	-0.68%	-1.81%	-2.36%
2) Teledensity									
Wireline	1.90	1.90	1.86	1.83	1.79	-5.86%	-5.57%	-3.72%	-2.11%
Wireless	88.00	91.08	92.12	91.56	90.11	2.40%	-1.07%	-2.18%	-1.59%
Total	89.90	92.98	93.98	93.40	91.90	2.22%	-1.16%	-2.21%	-1.60%
Rural	53.27	56.91	57.73	56.71	56.66	6.36%	-0.43%	-1.85%	-0.08%
Urban	170.15	171.80	172.98	173.15	168.29	-1.10%	-2.05%	-2.71%	-2.81%
3) Service Provider wise Subscribers Base (in Million) (wireless+wireline)									
Bharti	269.68	277.51	284.53	285.95	294.03	9.03%	5.95%	3.34%	2.82%
Vodafone	204.82	209.20	212.09	207.63	212.73	3.86%	1.68%	0.30%	2.46%
Idea	190.52	195.37	196.28	190.16	196.50	3.14%	0.58%	0.11%	3.34%
Reliance Jio	72.16	108.68	123.36	138.62	160.09	121.86%	47.30%	29.77%	15.49%
BSNL	110.53	114.68	117.37	118.61	120.35	8.89%	4.94%	2.54%	1.47%
Aircel	90.88	90.90	90.32	88.82	85.00	-6.46%	-6.49%	-5.89%	-4.30%
Reliance	87.72	84.68	82.50	73.31	34.30	-60.89%	-59.49%	-58.42%	-53.21%
Tata	54.71	50.74	45.54	46.76	38.55	-29.53%	-24.02%	-15.34%	-17.55%
Telenor	54.47	50.49	47.34	46.01	41.91	-23.06%	-17.00%	-11.46%	-8.91%
MTNL	7.10	7.09	7.06	7.01	6.96	-2.01%	-1.82%	-1.36%	-0.71%
Sistema	5.94	4.97	4.19	3.57	-	-	-	-	-
Quadrant	3.26	0.26	0.27	0.26	0.25	-92.32%	-4.76%	-6.08%	-4.92%
Total	1151.78	1194.58	1210.84	1206.71	1190.67	3.38%	-0.33%	-1.67%	-1.33%

B. Internet Services

	QE Dec 2016	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	%age change over Dec-2016	%age change over Mar-2017	%age change over Jun-2017	%age change over Sep-2017
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber's Base (in million)									
A. Wired Internet Subscribers	21.51	21.58	21.67	21.35	21.28	-1.03%	-1.35%	-1.76%	-0.33%
B. Wireless Internet Subscribers	370.00	400.62	409.55	407.88	424.67	14.78%	6.00%	3.69%	4.12%
i. Mobile Wireless (Mobile & Dongle)	369.39	400.04	409.01	407.41	424.22	14.84%	6.05%	3.72%	4.13%
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.61	0.58	0.54	0.47	0.45	-25.40%	-21.87%	-15.50%	-3.59%
Total Internet Subscribers	391.50	422.19	431.21	429.23	445.96	13.91%	5.63%	3.42%	3.90%
2) No. of Internet Subs per 100 Population	30.56	32.86	33.47	33.22	34.42	12.64%	4.75%	2.84%	3.61%

C. Usage and Revenue for Full Mobility Services

1. Traffic (MOU) (minutes of use/subscriber/month)									
i) GSM	360	405	428	437	495	37.60%	22.20%	15.59%	13.40%
ii) CDMA	255	250	246	206	112	-55.96%	-54.97%	-54.35%	-45.33%
2) ARPU (₹/sub/ month)									
i) GSM	103.92	82.68	79.58	83.89	79.39	-23.61%	-3.98%	-0.24%	-5.37%
ii) CDMA	141.42	131.34	124.49	125.24	110.62	-21.78%	-15.78%	-11.14%	-11.68%

D. Telecom Financial Data

	QE Dec 2016	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	%age change over Dec-2016	%age change over Mar-2017	%age change over Jun-2017	%age change over Sep-2017
						(12 months)	(9 months)	(6 months)	(3 months)
1. Telecom Sector									
i) Gross Revenue (₹ in Crores)	66532.37	63315.18	64889.47	66361.70	61088.65	-8.18%	-3.52%	-5.86%	-7.95%
ii) Adjusted Gross Revenue (₹ in Crores)	45905.34	40831.33	39777.55	41668.84	38536.22	-16.05%	-5.62%	-3.12%	-7.52%
2. Access Services									
Adjusted Gross Revenue (₹ in Crores)	37283.71	31594.91	30082.33	31968.03	28967.93	-22.30%	-8.31%	-3.70%	-9.38%
ARPU per month (AGR/ Average subscribers/3)	111.63	89.34	83.41	88.09	80.77	-27.64%	-9.59%	-3.16%	-8.30%

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending December, 2017. 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) as well as Wireless Data Usage. 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 under the link <http://www.trai.gov.in/release-publication/reports/performance-indicators-reports>). Any suggestion or any clarification pertaining to this report, Pr. Advisor (F&EA), TRAI may be contacted on Tel. +91-11-23221856, Fax. +91-11-23235249 and e-mail: skmishra.trai@nic.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 declined from 1,206.71 million at the end of Sep-17 to 1,190.67 million at the end of Dec-17, registering a decline rate of 1.33% over the previous quarter. However, this reflects year-on-year (Y-O-Y) positive growth of 3.38% over the same quarter of last year. The overall Teledensity in India declined from 93.40 as on QE Sep-17 to 91.90 as on QE Dec-17.

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

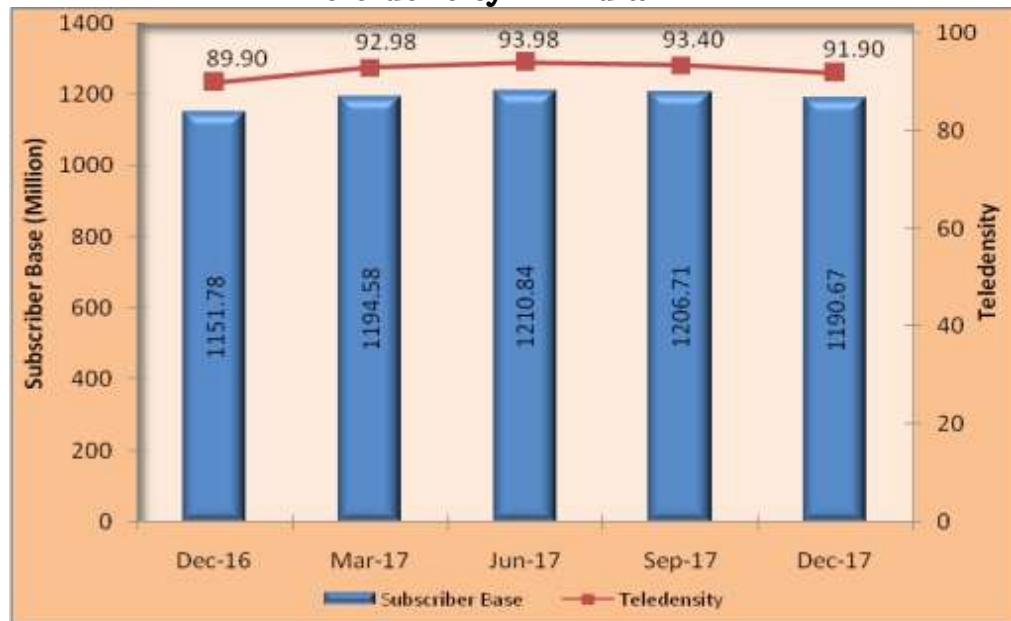
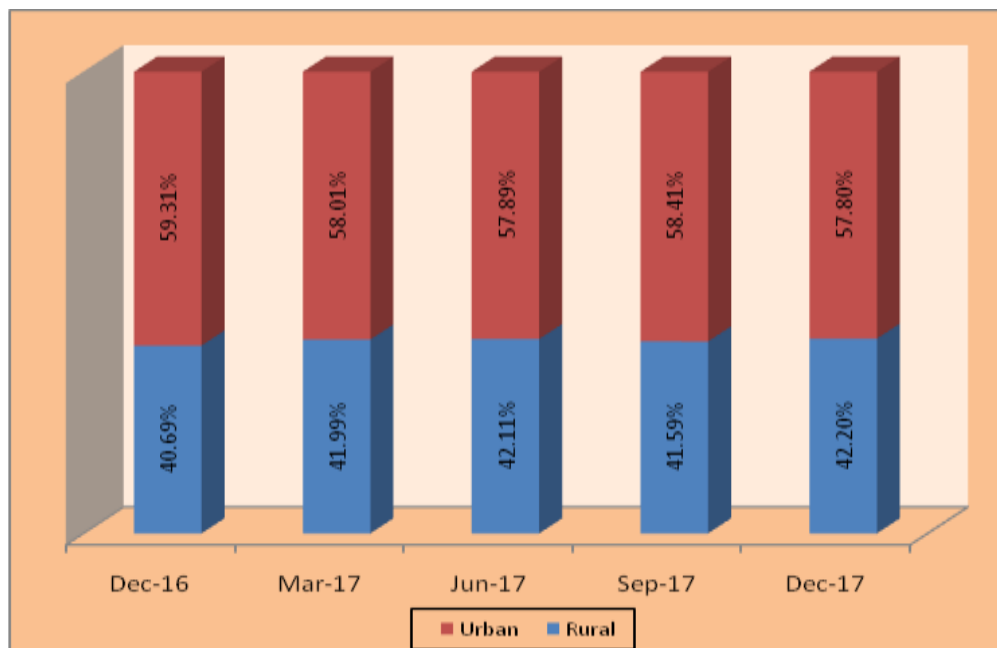


Table 1.1: Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Dec-16	468.64	683.14	53.27	170.15
Mar-17	501.61	692.97	56.91	171.80
Jun-17	509.88	700.96	57.73	172.98
Sep-17	501.82	704.89	56.71	173.15
Dec-17	502.42	688.25	56.66	168.29

- 1.2 Subscription in Urban Areas declined from 704.89 million at the end of Sep-17 to 688.25 million at the end of Dec-17, and the Urban Tele-density also declined from 173.15 to 168.29 during the quarter.
- 1.3 Rural subscription increased from 501.82 million to 502.42 million however, the Rural Tele-density slightly declined from 56.71 to 56.66 at the end of Dec-17.
- 1.4 The year-on-year (Y-O-Y) growth rate of Rural and Urban telephone subscription from Dec-16 to Dec-17 is 7.21% and 0.75% respectively and year-on-year growth rate of Rural and Urban Tele-density from Dec-16 to Dec-17 is 6.16% and -1.10% respectively.

Chart 1.2: Market Share - Rural & Urban Subscribers



- 1.5 Share of subscription of rural areas in total telephone subscription increased from 41.59% at the end of Sep-17 to 42.20% at the end of Dec-17.

Chart 1.3: Composition of Access subscription - Wireline & Wireless

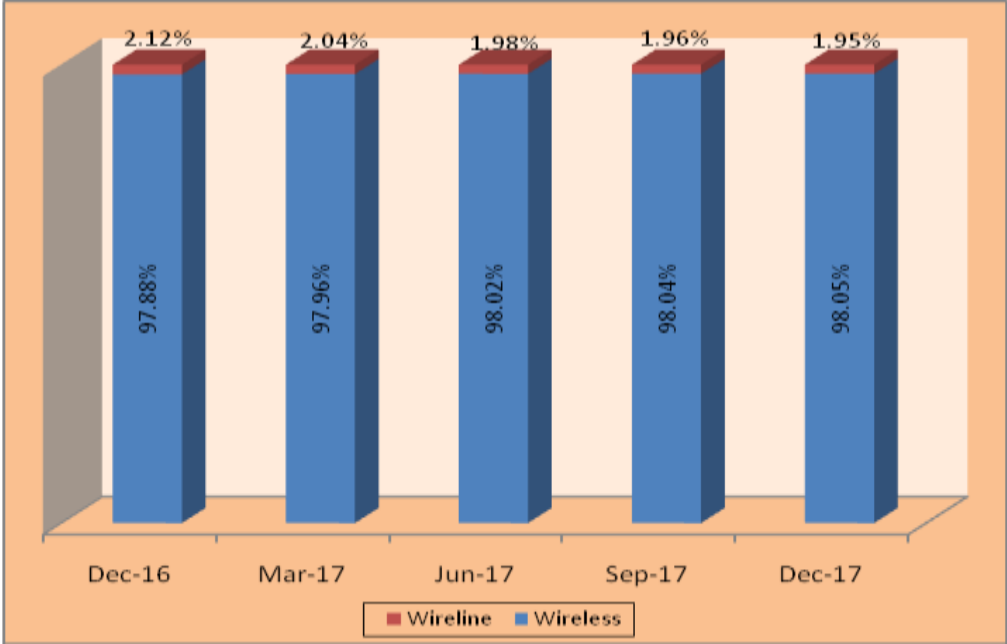


Chart 1.4: Composition of Rural-Urban Telephone Subscribers at the end of the quarter

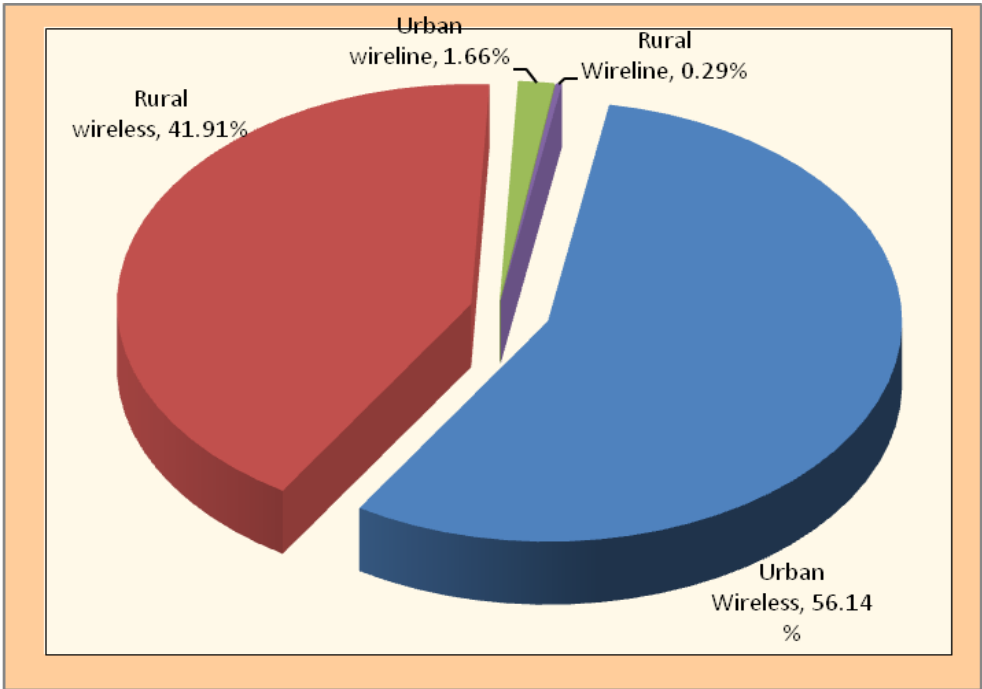


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

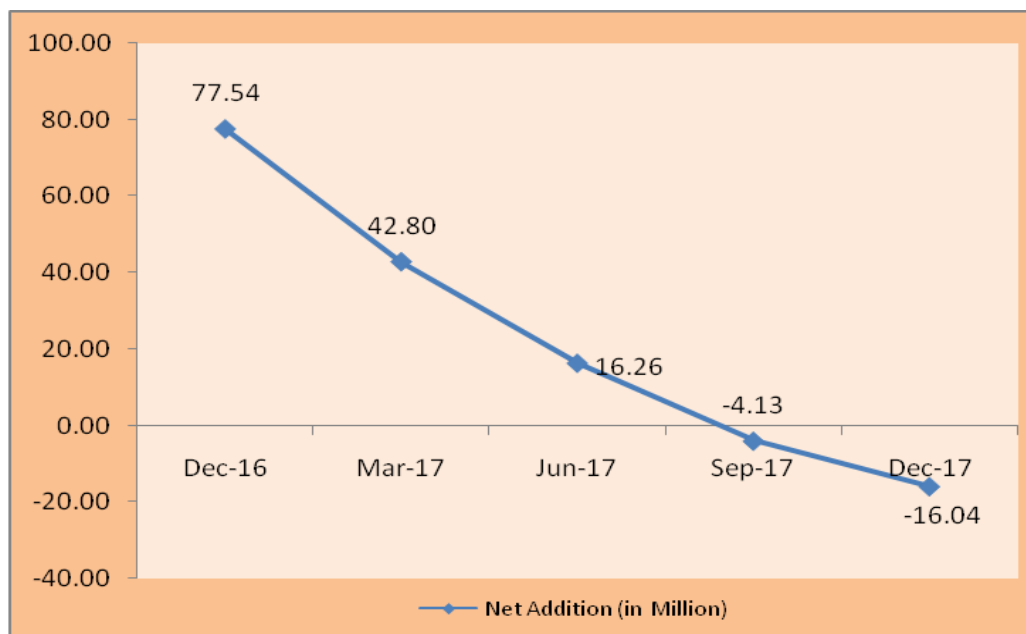
Service Area	Subscribers (million)			
	Sep-17	Dec-17	Net Additions	Rate of Growth
Andhra Pradesh	86.86	85.84	-1.02	-1.17
Assam	22.30	22.74	0.44	1.97
Bihar	84.88	84.56	-0.32	-0.38
Delhi	58.00	58.77	0.77	1.33
Gujarat	70.36	71.89	1.52	2.16
Haryana	25.80	25.77	-0.03	-0.10
Himachal Pradesh	10.95	10.70	-0.25	-2.25
Jammu & Kashmir	12.69	13.24	0.55	4.37
Karnataka	72.75	69.45	-3.30	-4.53
Kerala	43.28	43.00	-0.27	-0.63
Madhya Pradesh	72.48	74.08	1.60	2.20
Maharashtra	96.42	95.15	-1.27	-1.32
Mumbai	40.50	41.35	0.86	2.12
North East	13.02	12.93	-0.09	-0.71
Orissa	34.74	34.30	-0.44	-1.27
Punjab	38.28	38.96	0.68	1.77
Rajasthan	67.48	66.42	-1.06	-1.56
T.N. (incl. Chennai)	93.29	89.41	-3.88	-4.16
U.P.(E)	106.17	101.26	-4.91	-4.62
U.P.(W)	66.92	62.68	-4.24	-6.34
Kolkata	30.58	29.89	-0.69	-2.27
West Bengal	58.98	58.29	-0.69	-1.18
All India	1,206.71	1,190.67	-16.04	-1.33

1.6 Jammu & Kashmir service areas showed highest growth rate of 4.37% followed by Madhya Pradesh with 2.20% in their subscriber base during the quarter ending Dec-17. U.P.(West) service area has recorded maximum decline rate of 6.34% during the same period.

Table 1.3: Service Area wise Rural-Urban Subscribers

Service Area	Subscribers (million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	85.84	38.39	47.45	44.72
Assam	22.74	14.28	8.46	62.81
Bihar	84.56	49.32	35.24	58.33
Delhi	58.77	-	58.77	-
Gujarat	71.89	27.26	44.63	37.92
Haryana	25.77	11.25	14.52	43.65
Himachal Pradesh	10.70	7.53	3.17	70.38
Jammu & Kashmir	13.24	6.41	6.83	48.38
Karnataka	69.45	22.75	46.70	32.76
Kerala	43.00	19.73	23.27	45.89
Madhya Pradesh	74.08	33.45	40.63	45.15
Maharashtra	95.15	43.82	51.33	46.06
Mumbai	41.35	1.72	39.63	4.17
North East	12.93	6.61	6.31	51.17
Orissa	34.30	20.52	13.78	59.83
Punjab	38.96	14.06	24.90	36.09
Rajasthan	66.42	33.01	33.41	49.70
T.N. (incl. Chennai)	89.41	26.02	63.39	29.10
U.P.(E)	101.26	53.69	47.57	53.02
U.P.(W)	62.68	27.50	35.18	43.87
Kolkata	29.89	2.91	26.98	9.72
West Bengal	58.29	39.43	18.86	67.64
All India	1,190.67	502.42	688.25	42.20

Chart 1.5: Trend of Net Addition/decline in Telephone Subscription



1.7 The net decline in telephone subscribers is 16.04 million in QE Dec-17 as against the net decline of 4.13 million in QE Sep-17.

Table 1.4 : Service Area wise Teledensity

Service Area/ States	As on 30 th September, 2017			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	59.73	193.36	97.14	59.52	189.15	95.82
Assam	50.48	154.19	67.55	51.68	154.74	68.69
Bihar	40.48	185.81	60.61	40.78	181.06	60.22
Delhi	-	-	260.53	-	-	262.14
Gujarat	71.29	159.55	108.70	72.98	161.91	110.74
Haryana	61.97	142.83	91.83	63.41	139.02	91.43
Himachal Pradesh	116.83	414.63	152.37	118.86	367.89	148.66
J&K	67.92	183.64	100.56	70.60	191.27	104.70
Karnataka	58.87	201.67	115.08	59.31	186.89	109.64

Service Area/ States	As on 30 th September, 2017			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Kerala	72.88	259.39	120.00	73.11	255.17	119.08
Madhya Pradesh	43.18	134.30	68.41	43.54	137.83	69.69
Maharashtra (incl. Mumbai)*	70.35	151.35	110.07	71.78	148.38	109.42
North East	63.08	175.70	91.81	62.51	173.66	90.93
Orissa	58.31	183.01	80.79	58.14	176.96	79.61
Punjab	79.98	173.54	121.81	80.90	176.18	123.63
Rajasthan	59.42	187.98	90.60	58.33	184.28	88.89
Tamil Nadu (incl. Chennai)	95.90	151.70	130.13	94.37	143.37	124.55
Uttar Pradesh (incl. UPE & UPW)	46.22	166.07	73.89	44.91	152.25	69.72
West Bengal (incl. Kolkata)*	62.19	170.08	93.28	61.82	165.28	91.65
All India	56.71	173.15	93.40	56.66	168.29	91.90

* 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).
3. Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhatishgarh, Bihar includes Jharkhand, Maharashtra includes Goa, Uttar Pradesh includes Uttarakhand, West Bengal includes Sikkim and North-East includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura states.

1.8 Himachal Pradesh service area has the highest Rural Tele-density of 118.86 followed by Tamil Nadu service area (94.37). Bihar service area continues to have the lowest Rural Tele-density of 40.78.

Table 1.5 : State/UT wise subscriber base (wireline+wireless)

Sl.No.	States/UT	Total Telephone Subscribers (million)		
		Total	Rural	Urban
1	Andhra Pradesh	45.06	23.18	21.88
2	Arunachal Pradesh	1.41	0.65	0.76
3	Assam	22.74	14.28	8.46
4	Bihar	62.56	38.64	23.92
5	Chhattisgarh	18.21	8.50	9.71
6	Goa	2.67	1.17	1.51
7	Gujarat	70.87	26.99	43.88
8	Haryana	33.62	11.80	21.82
9	Himachal Pradesh	10.70	7.53	3.17
10	Jammu & Kashmir	13.24	6.41	6.83
11	Jharkhand	22.00	10.68	11.32
12	Karnataka	69.45	22.75	46.70
13	Kerala	42.92	19.66	23.26
14	Madhya Pradesh	55.87	24.95	30.92
15	Maharashtra Incl. Mumbai	133.83	44.38	89.45
16	Manipur	2.73	1.31	1.42
17	Meghalaya	2.29	1.38	0.91
18	Mizoram	1.25	0.49	0.76
19	Nagaland	1.79	0.86	0.93
20	Odisha	34.30	20.52	13.78
21	Punjab	36.34	13.83	22.50
22	Rajasthan	66.42	33.01	33.41
23	Sikkim	0.73	0.39	0.35
24	Tamil Nadu (incl. Chennai)	88.20	25.67	62.52
25	Telangana	40.78	15.21	25.57
26	Tripura	3.46	1.93	1.53
27	Uttar Pradesh (UPE +UPW)	160.95	76.37	84.58
28	Uttarakhand	12.05	5.47	6.59
29	West Bengal Incl. Kolkata	86.96	41.70	45.25
	Union Territories			
1	Andaman & Nicobar Islands	0.48	0.25	0.24
2	Chandigarh	2.43	0.23	2.21
3	Dadar & Nagar Haweli	0.62	0.19	0.44
4	Daman & Diu	0.39	0.08	0.31
5	Delhi	42.04	1.56	40.49
6	Lakshdweep	0.08	0.08	0.003
7	Puduchery	1.21	0.35	0.86
	Total	1190.67	502.42	688.25

Table 1.6 : State/UT wise total Teledensity

Sl.No.	State/UT	Total Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	50.30	59.52	189.15
2	Arunachal Pradesh	105.32	82.74	137.61
3	Assam	68.69	51.68	154.74
4	Bihar	59.02	40.75	213.71
5	Chhattisgarh	68.88	43.03	145.18
6	Goa	129.72	158.82	113.57
7	Gujarat	110.55	73.11	161.41
8	Haryana	119.28	66.54	208.85
9	Himachal Pradesh	148.66	118.86	367.89
10	Jammu & Kashmir	104.70	70.60	191.27
11	Jharkhand	63.92	40.86	136.86
12	Karnataka	109.64	59.31	186.89
13	Kerala	119.13	72.99	255.75
14	Madhya Pradesh	69.96	43.72	135.67
15	Maharashtra Incl. Mumbai	109.08	70.76	149.15
16	Manipur	103.31	66.21	214.40
17	Meghalaya	80.92	61.96	150.61
18	Mizoram	115.41	100.93	126.97
19	Nagaland	73.73	42.78	221.49
20	Odisha	79.61	58.14	176.96
21	Punjab	122.83	80.50	181.50
22	Rajasthan	88.89	58.33	184.28
23	Sikkim	111.42	68.99	347.18
24	Tamil Nadu (incl. Chennai)	126.01	94.93	145.58
26	Tripura	88.76	62.22	192.35
27	Uttar Pradesh (UPE +UPW)	71.76	44.09	165.64
28	Uttarakhand	110.94	72.18	200.15
29	West Bengal Incl. Kolkata	91.55	61.69	165.26
Union Territories				
1	Andaman & Nicobar Islands	84.39	76.25	94.81
2	Chandigarh	126.33	116.23	127.47
3	Dadar & Nagar Haweli	138.90	129.00	143.67
4	Daman & Diu	109.36	26.82	420.02
5	Delhi	187.54	201.38	187.05
6	Lakshdweep	94.74	124.20	13.29
7	Puduchery	67.55	65.81	68.27
	Total	91.90	56.66	168.29

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Table 1.7 : Service Provider wise Growth/Decline in Subscriber base

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Sep-17 (%)	Market Share in QE Dec-17 (%)
	Sep-17	Dec-17	Net Additions			
Bharti	285.95	294.03	8.08	2.82	23.70	24.69
Vodafone	207.63	212.73	5.10	2.46	17.21	17.87
IDEA	190.16	196.50	6.34	3.34	15.76	16.50
Reliance Com.	73.31	34.30	-39.01	-53.21	6.08	2.88
Tata	46.76	38.55	-8.21	-17.55	3.88	3.24
Aircel	88.82	85.00	-3.82	-4.30	7.36	7.14
Quadrant	0.26	0.25	-0.01	-4.92	0.02	0.02
Sistema*	3.57	-	-3.57	-	0.30	-
Telenor	46.01	41.91	-4.10	-8.91	3.81	3.52
Reliance Jio	138.62	160.09	21.48	15.49	11.49	13.45
BSNL	118.61	120.35	1.74	1.47	9.83	10.11
MTNL	7.01	6.96	-0.05	-0.71	0.58	0.58
Total	1,206.71	1,190.67	-16.04	-1.33	100	100

*M/s Sistema Shyam has been merged with M/s Reliance Communications Ltd.

1.9 Bharti Airtel is the leading service provider in access segment in terms of number of subscribers with 294.03 million subscribers followed by Vodafone (212.73 million) at the end of Dec-17.

1.10 Reliance Jio Infocom Ltd. recorded the highest net addition of 21.48 million subscribers however, Reliance Communications Group showed maximum decline of 39.01 million subscribers during the QE Dec-17.

Table 1.8 : Market Share of the service providers in total rural subscriber base

Service Provider	No. of Total Subscribers (in millions)	No. of Rural Subscribers (in millions)	Percentage of Rural subscribers	Market share of Rural subscribers (%)
Bharti	294.03	147.89	50.30	29.44
Vodafone	212.73	114.88	54.01	22.87
IDEA	196.50	106.05	53.97	21.11
Reliance Com.	34.30	4.89	14.27	0.97
Tata	38.55	6.47	16.78	1.29
Aircel	85.00	30.81	36.25	6.13
Quadrant	0.25	0.06	22.16	0.01
Telenor	41.91	11.93	28.45	2.37
Reliance Jio	160.09	41.08	25.66	8.18
BSNL	120.35	38.31	31.83	7.62
MTNL	6.96	0.05	0.69	0.01
Total	1,190.67	502.42	42.20	100

1.11 M/s Vodafone is the telecom service provider with highest proportion of rural telephone subscribers (54.01%), followed by Idea Cellular (53.97%) to their total telephone subscribers.

Section B : Wireless Service

Table 1.9: List of Cellular Mobile (GSM, LTE & CDMA) Service Providers currently providing service [As on 31st December, 2017]

Sl.No.	Service Provider	Licenced Service Areas
1	Bharti Airtel Ltd	All India
2	Aircel Group	All India*
3	Reliance Communications Ltd	All India (except Assam & NE)
4	Reliance Telecom Ltd	Kolkata, MP, WB, HP, Bihar, Odisha, Assam & NE
5	Vodafone (India) Ltd	All India
6	Tata Teleservices	All India except Assam, NE & J&K
7	IDEA Cellular Ltd	All India [#]
8	BSNL	All India (except Delhi & Mumbai)
9	MTNL	Delhi & Mumbai
10	Telenor Communications (India) Pvt. Ltd.	Maharashtra, Gujarat, AP, UP(W), UP(E) & Bihar
11	Reliance Jio Infocom Ltd	All India

*TN & AP – CMTS

[#]Delhi, HP & UP(E) – CMTS.

In remaining LSAs the TSPs have either UASL, UL or UL(AS).

Source : DoT website

1.12 Total Wireless (GSM+CDMA) subscriber base declined from 1,183.04 million at the end of Sep-17 to 1,167.44 million at the end of Dec-17, thereby showing a quarterly decline rate of 1.32%. During this quarter, net decline of 15.61 million wireless subscribers was recorded. However, total wireless subscribers showed year-on-year (Y-O-Y) positive growth rate of 3.55% in Q.E. Dec-17.

1.13 Wireless Teledensity also declined from 91.56 at the end of Sep-17 to 90.11 at the end of Dec-17.

Chart 1.6: Wireless Subscriber Base and Teledensity



Table 1.10: Wireless Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Tele-density	
	Rural	Urban	Rural	Urban
Dec-16	464.78	662.60	52.84	165.04
Mar-17	497.76	672.42	56.47	166.71
Jun-17	506.18	680.66	57.31	167.97
Sep-17	498.28	684.77	56.31	168.20
Dec-17	499.00	668.44	56.28	163.44

1.14 The Rural Wireless subscribers increased from 498.28 million at the end of Sep-17 to 499.00 million at the end of Dec-17, however the urban wireless subscribers declined from 684.77 million to 668.44 million during the quarter.

1.15 Quarterly Growth rates of Rural and Urban wireless subscriptions are 0.14% and -2.38% respectively in QE Dec-17.

1.16 The share of rural wireless subscription increased from 42.12% to 42.74% in total wireless subscription in this quarter.

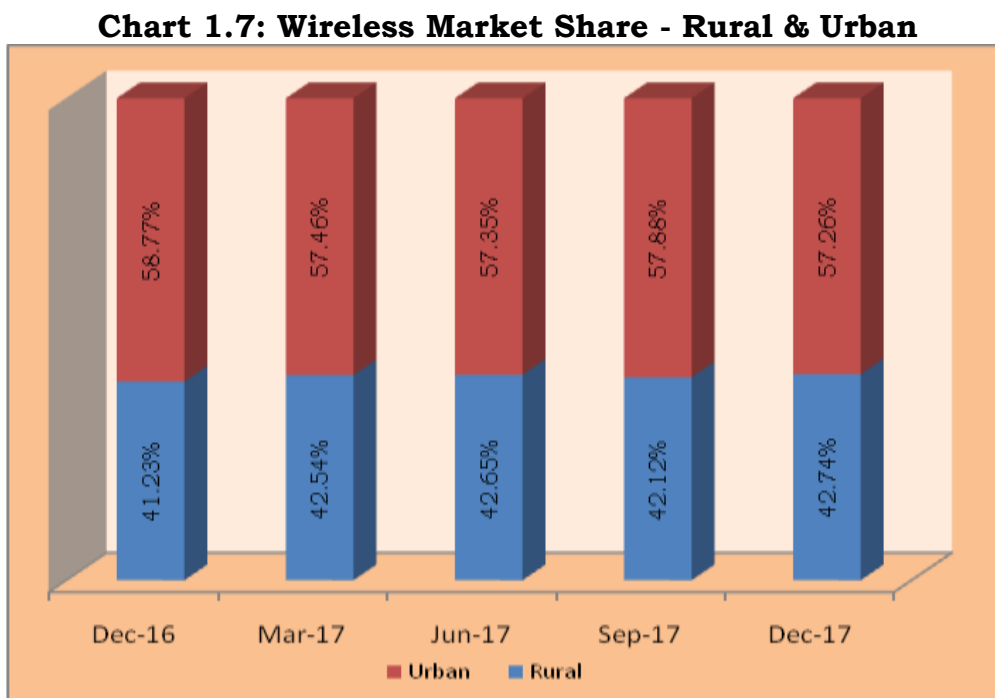


Table 1.11: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share □ Sep-17 (%)	Market Share □ Dec-17 (%)
	Sep-17	Dec-17	Net Additions			
Bharti	282.05	290.11	8.07	2.86	23.84	24.85
Vodafone	207.44	212.53	5.08	2.45	17.53	18.20
IDEA	190.16	196.50	6.34	3.34	16.07	16.83
Reliance Com.	72.16	33.17*	-39.00	-56.18*	6.10	2.84*
Sistema	3.52		-3.52		0.30	
Tata	44.92	36.69	-8.22	-18.31	3.80	3.14
Aircel	88.75	84.93	-3.82	-4.30	7.50	7.28
Telenor	46.01	41.91	-4.10	-8.91	3.89	3.59
BSNL	105.81	107.92	2.10	1.99	8.94	9.24
MTNL	3.61	3.58	-0.02	-0.61	0.30	0.31
Reliance Jio	138.62	160.09	21.48	15.49	11.72	13.71
Total	1,183.04	1,167.44	-15.61	-1.32	100	100

* M/s Sistema Shyam has been merged with M/s Reliance Communications during the quarter Sep-Dec, 2017

- 1.17 Bharti remains the leading service provider with 290.11 million wireless subscribers at the end of Dec-17, followed by Vodafone (212.53 million).
- 1.18 In terms of net additions during the quarter ending Dec-17, Reliance Jio (21.48 million) has added the highest number of subscribers, however, Reliance Communications Group showed maximum decline of 39.00 million in its wireless subscribers.

Table 1.12: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Sep-17	Dec-17	Net Additions	Rate of change (%)
Andhra Pradesh	85.29	84.32	-0.97	-1.14
Assam	22.16	22.60	0.45	2.01
Bihar	84.60	84.29	-0.31	-0.37
Delhi	54.75	55.55	0.80	1.45
Gujarat	69.06	70.59	1.53	2.22
Haryana	25.48	25.47	-0.02	-0.07
Himachal Pradesh	10.81	10.57	-0.24	-2.22
Jammu & Kashmir	12.56	13.12	0.56	4.45
Karnataka	70.48	67.20	-3.28	-4.65
Kerala	41.25	41.01	-0.24	-0.59
Madhya Pradesh	71.48	73.10	1.62	2.26
Maharashtra	94.61	93.38	-1.22	-1.29
Mumbai	37.47	38.33	0.86	2.30
North East	12.90	12.81	-0.09	-0.70
Orissa	34.46	34.02	-0.44	-1.27
Punjab	37.35	38.07	0.72	1.92
Rajasthan	66.80	65.81	-0.99	-1.48
T.N. (incl. Chennai)	90.86	87.03	-3.83	-4.21
U.P.(E)	105.68	100.77	-4.91	-4.64
U.P.(W)	66.55	62.32	-4.23	-6.36
Kolkata	29.75	29.07	-0.69	-2.31
West Bengal	58.68	58.00	-0.67	-1.15
All India	1,183.04	1,167.44	-15.61	-1.32

Table 1.13: Service Area wise Wireless Rural-Urban Subscriber base

Service Area	Subscriber base (in million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	84.32	38.13	46.19	45.22
Assam	22.60	14.26	8.34	63.09
Bihar	84.29	49.25	35.04	58.42
Delhi	55.55	2.76	52.79	4.97
Gujarat	70.59	27.07	43.52	38.35
Haryana	25.47	11.19	14.27	43.95
Himachal Pradesh	10.57	7.45	3.12	70.50
Jammu & Kashmir	13.12	6.39	6.73	48.71
Karnataka	67.20	22.59	44.61	33.62
Kerala	41.01	18.53	22.48	45.19
Madhya Pradesh	73.10	33.34	39.76	45.61
Maharashtra	93.38	43.51	49.88	46.59
Mumbai	38.33	1.72	36.60	4.50
North East	12.81	6.59	6.22	51.45
Orissa	34.02	20.46	13.57	60.13
Punjab	38.07	13.85	24.21	36.39
Rajasthan	65.81	32.92	32.89	50.02
T.N. (incl. Chennai)	87.03	25.69	61.34	29.52
U.P.(E)	100.77	53.62	47.15	53.21
U.P.(W)	62.32	27.46	34.86	44.06
Kolkata	29.07	2.91	26.16	10.00
West Bengal	58.00	39.30	18.70	67.76
All India	1,167.44	499.00	668.44	42.74

1.19 Detailed table on service provider wise subscriber base in each service area is at Annexure-1.1.

Table 1.14 : Service Area wise Wireless Tele-density

Service Area	As on 30 th September, 2017			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	59.30	188.19	95.38	59.11	184.12	94.12
Assam	50.39	151.98	67.10	51.59	152.63	68.27
Bihar	40.42	184.77	60.42	40.71	180.05	60.03
Delhi	-	-	245.95	-	-	247.78
Gujarat	70.80	155.47	106.69	72.49	157.89	108.75
Haryana	61.63	140.36	90.71	63.09	136.61	90.34
H.P.	115.54	408.52	150.51	117.64	362.03	146.89
J&K	67.77	180.61	99.59	70.46	188.37	103.77
Karnataka	58.42	193.23	111.49	58.89	178.51	106.08
Kerala	68.33	250.64	114.38	68.65	246.50	113.56
M.P.	43.03	131.28	67.47	43.40	134.88	68.77
Maharashtra (incl. Mumbai)*	69.84	143.95	106.18	71.29	141.07	105.58
North East	62.86	173.17	91.00	62.30	171.18	90.13
Orissa	58.14	180.25	80.15	57.97	174.23	78.98
Punjab	78.71	168.48	118.85	79.72	171.35	120.81
Rajasthan	59.22	184.80	89.68	58.17	181.40	88.07
Tamil Nadu (incl. Chennai)	94.67	146.95	126.74	93.17	138.75	121.24
Uttar Pradesh (incl. UPE&UPW)*	46.17	164.68	73.52	44.85	150.89	69.36
West Bengal (incl. Kolkata)*	62.00	166.46	92.10	61.64	161.74	90.50
All India	56.31	168.20	91.56	56.28	163.44	90.11

* 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).
3. Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhathishgarh, Bihar includes Jharkhand, Maharashtra includes Goa, Uttar Pradesh includes Uttarakhand, West Bengal includes Sikkim and North-East includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura states.

Table 1.15 : State/UT wise Wireless Subscriber Base

Sl.No.	States/UT	Wireless Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	44.22	22.97	21.25
2	Arunachal Pradesh	1.39	0.65	0.74
3	Assam	22.60	14.26	8.34
4	Bihar	62.42	38.57	23.84
5	Chhattisgarh	18.02	8.48	9.54
6	Goa	2.56	1.13	1.43
7	Gujarat	69.59	26.81	42.77
8	Haryana	33.25	11.75	21.51
9	Himachal Pradesh	10.57	7.45	3.12
10	Jammu & Kashmir	13.12	6.39	6.73
11	Jharkhand	21.87	10.67	11.20
12	Karnataka	67.20	22.59	44.61
13	Kerala	40.94	18.46	22.48
14	Madhya Pradesh	55.08	24.86	30.22
15	Maharashtra	129.15	44.10	85.05
16	Manipur	2.71	1.31	1.40
17	Meghalaya	2.27	1.37	0.89
18	Mizoram	1.23	0.48	0.75
19	Nagaland	1.78	0.86	0.92
20	Odisha	34.02	20.46	13.57
21	Punjab	35.63	13.63	22.00
22	Rajasthan	65.81	32.92	32.89
23	Sikkim	0.73	0.38	0.34
24	Tamil Nadu	85.88	25.35	60.53
25	Telangana	40.09	15.15	24.94
26	Tripura	3.44	1.92	1.51
27	Uttar Pradesh	160.17	76.28	83.89
28	Uttarakhand	11.95	5.45	6.49
29	West Bengal	85.87	41.59	44.29
Union Territories				
1	Andaman & Nicobar Islands	0.47	0.24	0.23
2	Chandigarh	2.25	0.23	2.02
3	Dadar & Nagar Haweli	0.62	0.19	0.43
4	Daman & Diu	0.38	0.07	0.31
5	Delhi	38.93	1.56	37.37
6	Lakshdweep	0.07	0.07	0.00
7	Puduchery	1.15	0.34	0.81
	Total	1167.44	499.00	668.44

Table 1.16 : State/UT wise Wireless Tele-density

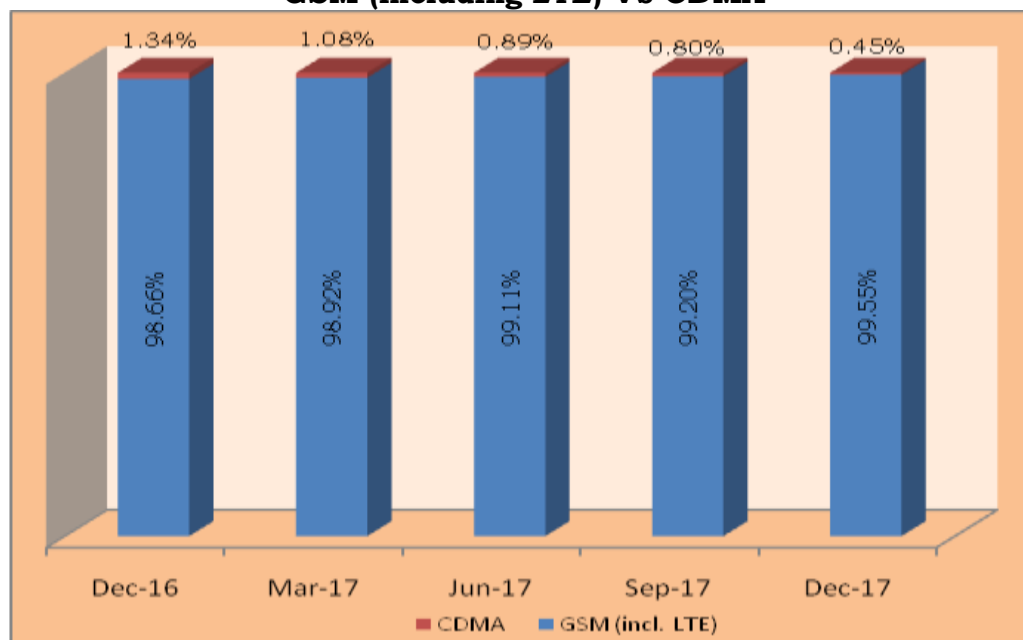
Sl.No.	State/UT	Wireless Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh*	94.12	59.11	184.12
2	Arunachal Pradesh	103.53	81.89	134.49
3	Assam	68.27	51.59	152.63
4	Bihar	58.88	40.69	212.97
5	Chhattisgarh	68.16	42.92	142.64
6	Goa	124.12	153.97	107.56
7	Gujarat	108.55	72.62	157.35
8	Haryana	117.97	66.22	205.86
9	Himachal Pradesh	146.89	117.64	362.03
10	Jammu & Kashmir	103.77	70.46	188.37
11	Jharkhand	63.56	40.82	135.48
12	Karnataka	106.08	58.89	178.51
13	Kerala	113.62	68.54	247.10
14	Madhya Pradesh	68.97	43.56	132.61
15	Maharashtra	105.27	70.32	141.81
16	Manipur	102.49	65.95	211.91
17	Meghalaya	80.26	61.85	147.96
18	Mizoram	114.00	100.72	124.59
19	Nagaland	73.24	42.72	218.91
20	Odisha	78.98	57.97	174.23
21	Punjab	120.45	79.31	177.46
22	Rajasthan	88.07	58.17	181.40
23	Sikkim	110.38	68.88	340.94
24	Tamil Nadu	122.70	93.74	140.93
25	Tripura	88.20	62.01	190.44
26	Uttar Pradesh	71.42	44.04	164.29
27	Uttarakhand	109.94	72.01	197.25
28	West Bengal	90.41	61.52	161.73
	Union Territories			
1	Andaman & Nicobar Islands	81.68	74.38	91.00
2	Chandigarh	116.74	115.19	116.92
3	Dadar & Nagar Haweli	138.02	127.98	142.85
4	Daman & Diu	107.65	25.96	415.11
5	Delhi	173.66	201.38	172.67
6	Lakshdweep	87.22	118.77	0.00
7	Puduchery	64.31	64.09	64.41
	All India Teledensity	90.11	56.28	163.44

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Table 1.17 : Rural Wireless Subscriber base and Market Share

Service Provider	Total number of wireless Subscribers (in millions)	Rural Subscribers (in millions)	% of Rural subscribers in total	Market Share of Rural Subscribers (%)
Bharti	290.11	147.89	50.98	29.64
Vodafone	212.53	114.88	54.06	23.02
IDEA	196.50	106.05	53.97	21.25
Reliance Jio	160.09	41.08	25.66	8.23
BSNL	107.92	35.00	32.43	7.01
Aircel	84.93	30.81	36.28	6.18
Telenor	41.91	11.93	28.45	2.39
Tata	36.69	6.42	17.48	1.29
Reliance Com.	33.17	4.89	14.75	0.98
MTNL	3.58	0.05	1.34	0.01
Total	1,167.44	499.00	42.74	100

Chart 1.8: Share of Wireless Subscription: GSM (including LTE) Vs CDMA

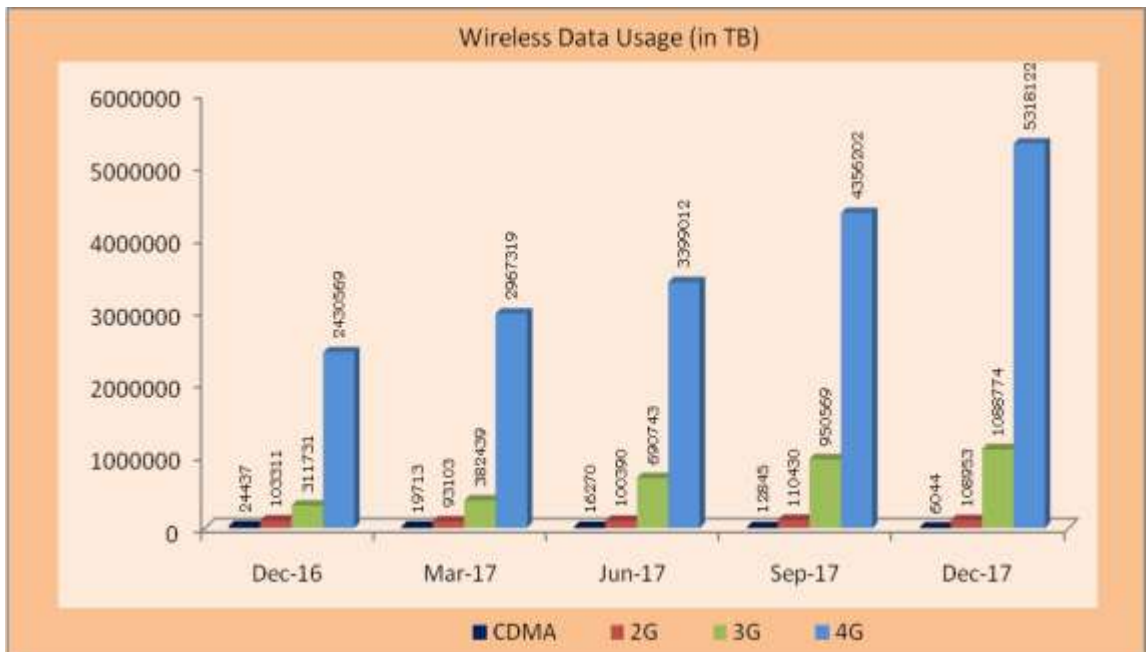


1.20 At the end of Dec-17, GSM (including LTE) subscribers constituted 99.55% share of the wireless market as compare to 99.20% in previous quarter.

Wireless Data Usage

1.21 Total wireless data usage increased from 5,430,046 terabytes during Q.E. Sep-17 to 6,521,893 terabytes during Q.E. Dec-17. Out of total data usage, 2G data usage was 108,953 terabytes, 3G data usage was 1,088,774 terabyte, 4G data usage was 5,318,122 terabytes and CDMA data usage was 6,044 terabytes.

Chart 1.9: Trend of technology wise wireless data usage (in Terabyte)



1.22 The contribution of 3G and 4G data usage in total data usage are about 16% and 82% respectively during the Q.E. Dec-17.

Section C : Wireline Service

Table 1.19 : Service Providers providing Wireline Service

[As on 31st December, 2017]

Sl. No.	Name of the Service Provider	Area of Operation
1	Aircel	Andhra Pradesh (excluding Telangana), Delhi, Gujarat, Karnataka, Kolkata, Maharashtra (Excluding Mumbai & Goa) Mumbai, Rajasthan, UP-East, UP-West (Excluding Uttarakhand)
2	Bharti Airtel Ltd	Telangana, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh (excluding Chhattisgarh), Chhattisgarh, Maharashtra(excluding Mumbai), Mumbai, Punjab, Rajasthan, Tamilnadu (excluding Chennai), Chennai, UP-East and UP-West(excluding Uttarakhand).
3	BSNL	All India except Delhi & Mumbai
4	MTNL	Delhi & Mumbai
5	Quadrant Televentures Ltd.	Punjab
6	Reliance Communications Ltd.	Andhra Pradesh (excluding Telangana), Telangana, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (excluding Chattisgarh), Chhattisgarh, Maharashtra (Excluding Mumbai & Goa) Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (excluding Chennai), Chennai, UP-East, UP-West (Excluding Uttarakhand) and West Bengal (Excluding Andaman & Nicobar)
7	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Goa, Mumbai
	Tata Teleservices Ltd.	Andhra Pradesh (Excluding Telangana), Telangana, Assam, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Kolkata, Madhya Pradesh (Excluding Chattisgarh), Chhattisgarh, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Orissa, Punjab, Rajasthan, Tamilnadu (Excluding Chennai), UP-East, UP-West (Excluding Uttarakhand), West Bengal (Excluding Andaman & Nicobar) and Sikkim
8	Vodafone	Andhra Pradesh (Excluding Telangana), Telangana, Assam, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (Excluding Chattisgarh), Maharashtra (Excluding Mumbai & Goa), Goa, Mumbai Meghalaya, Orissa, Punjab, Rajasthan, Tamilnadu (Excluding Chennai), UP-East, UP-West (Excluding Uttarakhand), Uttarakhand and West Bengal (Excluding Andaman & Nicobar)

1.23 Total Wireline subscriber base declined from 23.67 million at the quarter ending Sep-17 to 23.23 at the end of Dec-17 with quarterly decline rate of 1.84%. Overall Wireline Teledensity also declined from 1.83 at the end of Sep-17 to 1.79 at the end of Dec-17.

1.24 Rural subscriber base has shown decline of 3.55%, from 3.55 Million at the end of Sep-17 to 3.42 Million at the end of Dec-17. Urban wireline subscription also recorded decline rate of 1.54%, from 20.12 million to 19.81 million during the same period.

Chart 1.10: Wireline Subscriber Base and Teledensity

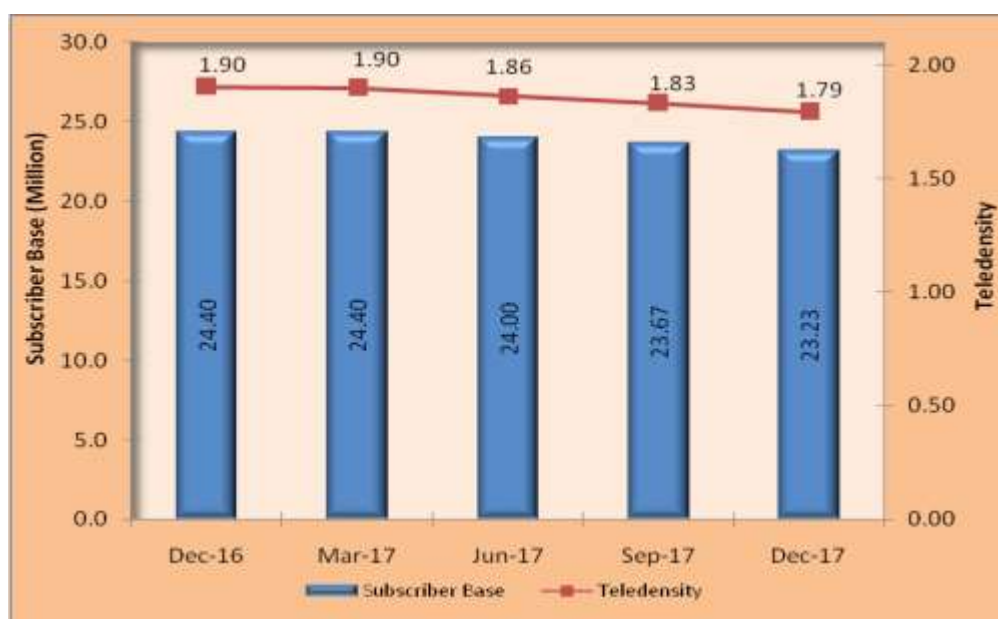


Table 1.20 : Wireline Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Dec-16	3.86	20.55	0.44	5.12
Mar-17	3.85	20.56	0.44	5.10
Jun-17	3.69	20.31	0.42	5.01
Sep-17	3.55	20.12	0.40	4.94
Dec-17	3.42	19.81	0.39	4.84

Table 1.21 : Service Provider wise Subscriber base (Rural - Urban)

Service Provider	Subscriber Base (million)			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	3.31	9.12	12.43	26.62
Bharti	--	3.91	3.91	--
MTNL	--	3.38	3.38	--
Tata	0.05	1.81	1.86	2.94
Reliance	0.002	1.14	1.14	0.15
Quadrant	0.06	0.19	0.25	22.16
Vodafone	--	0.20	0.20	--
Aircel	--	0.07	0.07	--
Total	3.42	19.81	23.23	14.72

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

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

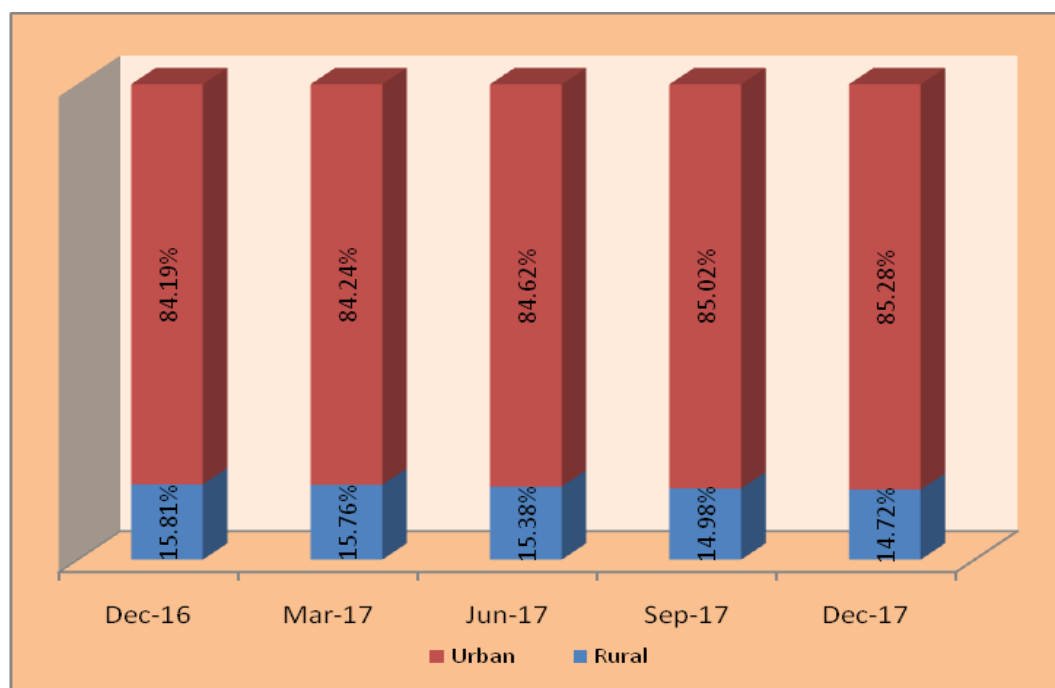


Table 1.22 : Service Provider wise growth in Wireline Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share-Sep-17(%)	Market share-Dec-17(%)
	Sep-17	Dec-17	Net Addition			
BSNL	12.80	12.43	-0.37	-2.85	54.06	53.50
Bharti	3.90	3.91	0.01	0.26	16.49	16.84
MTNL	3.40	3.38	-0.03	-0.82	14.38	14.53
Tata	1.85	1.86	0.02	0.83	7.80	8.01
Reliance Com	1.15	1.14	-0.01	-1.01	4.86	4.90
Quadrant	0.26	0.25	-0.01	-4.92	1.11	1.08
Vodafone	0.18	0.20	0.01	7.99	0.77	0.85
Sistema	0.05	-	-0.05	-	0.23	--
Aircel	0.07	0.07	0.00	-5.62	0.30	0.29
Total	23.67	23.23	-0.44	-1.84	100	100

Table 1.23: Service Area wise Wireline Subscriber base & Net Additions (in million)

Service Area	Sep-17	Dec-17	Net Additions	Rate of Change (%)
Andhra Pradesh	1.57	1.52	-0.047	-3.02
Assam	0.15	0.14	-0.005	-3.33
Bihar	0.28	0.27	-0.005	-1.80
Delhi	3.25	3.22	-0.025	-0.76
Gujarat	1.30	1.29	-0.009	-0.71
Haryana	0.32	0.31	-0.008	-2.46
Himachal Pradesh	0.13	0.13	-0.006	-4.32
Jammu & Kashmir	0.12	0.12	-0.005	-4.18
Karnataka	2.27	2.25	-0.018	-0.79
Kerala	2.02	1.99	-0.031	-1.52
Madhya Pradesh	1.00	0.98	-0.021	-2.10
Maharashtra	1.81	1.76	-0.045	-2.46
Mumbai	3.03	3.03	-0.003	-0.10
North East	0.12	0.11	-0.002	-1.83
Orissa	0.27	0.27	-0.001	-0.46
Punjab	0.93	0.89	-0.041	-4.40
Rajasthan	0.68	0.62	-0.068	-9.91
T.N. (incl. Chennai)	2.43	2.38	-0.054	-2.22

Service Area	Sep-17	Dec-17	Net Additions	Rate of Change (%)
U.P.(E)	0.49	0.49	-0.002	-0.49
U.P.(W)	0.37	0.36	-0.012	-3.18
Kolkata	0.83	0.82	-0.008	-0.99
West Bengal	0.31	0.28	-0.020	-6.67
All India	23.67	23.23	-0.436	-1.84

1.26 All service areas showed decline in wireline subscriber base during the QE Dec-17.

Table 1.24: Service Area wise Wireline Rural-Urban Subscriber Base (in million)

Service Area	Total Subscribers	Rural Subscribers	Urban Subscribers	% of Rural Subscribers
Andhra Pradesh	1.52	0.26	1.26	17.19
Assam	0.14	0.03	0.12	17.88
Bihar	0.27	0.07	0.20	27.48
Delhi	3.22	-	3.22	-
Gujarat	1.29	0.18	1.11	14.17
Haryana	0.31	0.06	0.25	18.48
Himachal Pradesh	0.13	0.08	0.05	60.55
Jammu & Kashmir	0.12	0.01	0.10	11.35
Karnataka	2.25	0.16	2.09	7.13
Kerala	1.99	1.20	0.79	60.37
Madhya Pradesh	0.98	0.11	0.87	11.31
Maharashtra	1.76	0.31	1.45	17.74
Mumbai	3.03	-	3.03	-
North East	0.11	0.02	0.09	20.40
Orissa	0.27	0.06	0.21	22.19
Punjab	0.89	0.21	0.68	23.21
Rajasthan	0.62	0.09	0.52	15.14
T.N. (incl. Chennai)	2.38	0.33	2.05	13.93
U.P.(E)	0.49	0.07	0.42	13.81
U.P.(W)	0.36	0.04	0.32	10.14
Kolkata	0.82	-	0.82	-
West Bengal	0.28	0.12	0.16	42.88
All India	23.23	3.42	19.81	14.72

Table 1.25: Service Area wise Wireline Teledensity

Service Area	As on 30 th September, 2017			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.43	5.16	1.76	0.41	5.03	1.70
Assam	0.09	2.20	0.44	0.09	2.11	0.43
Bihar	0.06	1.04	0.20	0.06	1.01	0.19
Delhi	-	-	14.58	-	-	14.37
Gujarat	0.49	4.08	2.01	0.49	4.03	1.99
Haryana	0.34	2.47	1.12	0.32	2.40	1.09
Himachal Pradesh	1.29	6.11	1.86	1.22	5.86	1.78
Jammu & Kashmir	0.15	3.03	0.97	0.15	2.90	0.92
Karnataka	0.45	8.44	3.59	0.42	8.38	3.56
Kerala	4.55	8.76	5.61	4.46	8.66	5.52
Madhya Pradesh	0.15	3.02	0.94	0.14	2.94	0.92
Maharashtra (incl. Mumbai)*	0.51	7.40	3.89	0.49	7.30	3.84
North East	0.22	2.54	0.81	0.22	2.48	0.80
Orissa	0.17	2.76	0.64	0.17	2.73	0.63
Punjab	1.26	5.06	2.96	1.19	4.83	2.82
Rajasthan	0.20	3.18	0.92	0.16	2.88	0.82
Tamil Nadu (incl. Chennai)	1.23	4.75	3.39	1.20	4.63	3.31
Uttar Pradesh (incl. UPE & UPW)	0.06	1.39	0.37	0.06	1.36	0.36
West Bengal (incl. Kolkata)*	0.19	3.62	1.18	0.18	3.54	1.15
All India	0.40	4.94	1.83	0.39	4.84	1.79

* Population data/projections are available state-wise only

- Note: 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. Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhatisgarh, Bihar includes Jharkhand, Maharashtra includes Goa, Uttar Pradesh includes Uttarakhand, West Bengal includes Sikkim and North-East includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura states.

Table 1.26: State/UT wise Wireline Subscriber base

Sl.No.	States/UT	Wireline Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	0.84	0.21	0.63
2	Arunachal Pradesh	0.02	0.01	0.02
3	Assam	0.14	0.03	0.12
4	Bihar	0.15	0.06	0.08
5	Chhattisgarh	0.19	0.02	0.17
6	Goa	0.12	0.04	0.08
7	Gujarat	1.28	0.18	1.10
8	Haryana	0.37	0.06	0.31
9	Himachal Pradesh	0.13	0.08	0.05
10	Jammu & Kashmir	0.12	0.01	0.10
11	Jharkhand	0.13	0.01	0.11
12	Karnataka	2.25	0.16	2.09
13	Kerala	1.99	1.20	0.79
14	Madhya Pradesh	0.79	0.09	0.70
15	Maharashtra Incl. Mumbai	4.68	0.28	4.40
16	Manipur	0.02	0.01	0.02
17	Meghalaya	0.02	0.00	0.02
18	Mizoram	0.02	0.00	0.01
19	Nagaland	0.01	0.00	0.01
20	Odisha	0.27	0.06	0.21
21	Punjab	0.70	0.20	0.50
22	Rajasthan	0.62	0.09	0.52
23	Sikkim	0.01	0.00	0.01
24	Tamil Nadu (incl. Chennai)	2.32	0.32	2.00
25	Telangana	0.69	0.06	0.63
26	Tripura	0.02	0.01	0.02
27	Uttar Pradesh (UPE +UPW)	0.78	0.09	0.69
28	Uttarakhand	0.11	0.01	0.10
29	West Bengal Incl. Kolkata	1.08	0.12	0.97
	Union Territories			
1	Andaman & Nicobar Islands	0.02	0.01	0.01
2	Chandigarh	0.18	0.00	0.18
3	Dadar & Nagar Haweli	0.00	0.00	0.00
4	Daman & Diu	0.01	0.00	0.00
5	Delhi	3.11	0.00	3.11
6	Lakshdweep	0.01	0.003	0.00
7	Puduchery	0.06	0.01	0.05
	Total	23.23	3.42	19.81

Table 1.27: State/UT wise Wireline Teledensity

Sl.No.	State/UT	Wireline Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	1.70	0.41	5.03
2	Arunachal Pradesh	1.78	0.85	3.12
3	Assam	0.43	0.09	2.11
4	Bihar	0.14	0.07	0.74
5	Chhattisgarh	0.72	0.10	2.54
6	Goa	5.60	4.85	6.02
7	Gujarat	2.00	0.49	4.06
8	Haryana	1.31	0.32	2.99
9	Himachal Pradesh	1.78	1.22	5.86
10	Jammu & Kashmir	0.92	0.15	2.90
11	Jharkhand	0.36	0.04	1.38
12	Karnataka	3.56	0.42	8.38
13	Kerala	5.51	4.45	8.65
14	Madhya Pradesh	0.99	0.16	3.06
15	Maharashtra Incl. Mumbai	3.81	0.44	7.33
16	Manipur	0.82	0.26	2.50
17	Meghalaya	0.65	0.11	2.65
18	Mizoram	1.41	0.21	2.37
19	Nagaland	0.49	0.05	2.58
20	Odisha	0.63	0.17	2.73
21	Punjab	2.38	1.19	4.04
22	Rajasthan	0.82	0.16	2.88
23	Sikkim	1.04	0.11	6.24
24	Tamil Nadu (incl. Chennai)	3.31	1.19	4.65
25	Tripura	0.56	0.22	1.91
26	Uttar Pradesh (UPE + UPW)	0.35	0.05	1.35
27	Uttarakhand	1.00	0.17	2.90
28	West Bengal incl. Kolkata	1.14	0.17	3.53
	Union Territories			
1	Andaman & Nicobar Islands	2.72	1.86	3.81
2	Chandigarh	9.59	1.05	10.55
3	Dadar & Nagar Haweli	0.88	1.01	0.81
4	Daman & Diu	1.71	0.86	4.91
5	Delhi	13.89	-	-
6	Lakshdweep	7.52	5.43	13.29
7	Puduchery	3.24	1.72	3.87
	Total	1.79	0.39	4.84

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Public Call Offices (PCO)

1.27 Total number of PCOs in the country declined from 4,13,275 at the end of Sep-17 to 3,93,483 at the end of Dec-17. Detailed table of service provider wise PCOs is available at Annexure -1.3.

Chart 1.11: Trend of Number of PCOs



Table 1.28 : Rate of change & Market share of PCOs

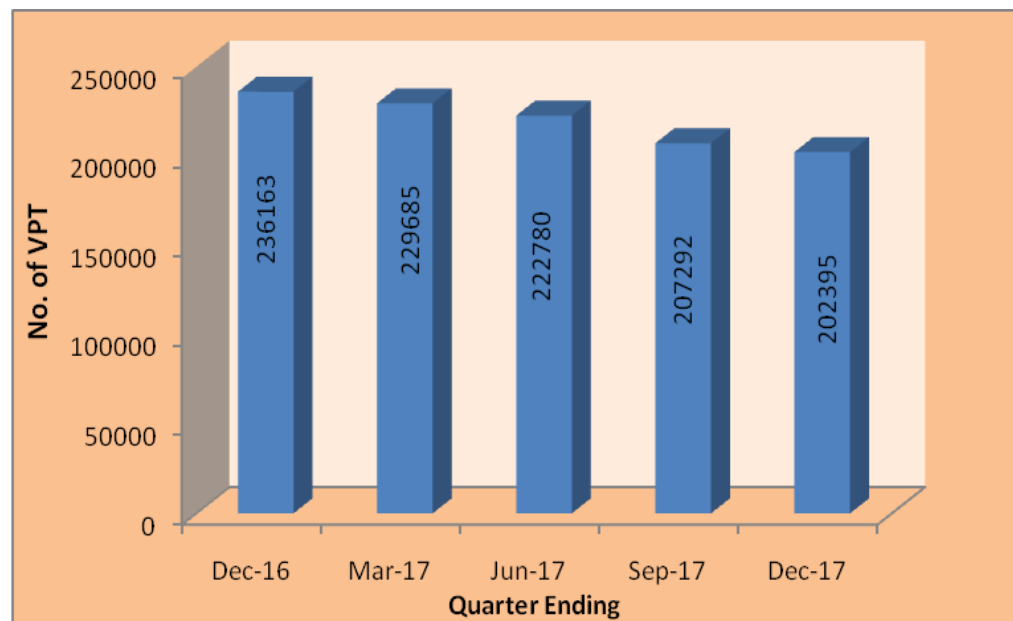
Service Provider	Sep-17 (in lakh)	Dec-17 (in lakh)	Rate of change (%)	Market share (%) (Dec-17)
BSNL	2.46	2.36	-4.04	60.02
MTNL	1.23	1.21	-1.48	30.78
Bharti	0.27	0.13	-52.86	3.21
Quadrant	0.02	0.01	-6.15	0.36
Tata	0.20	0.22	11.31	5.62
Total	4.17	3.93	-5.70	100

1.28 Number of PCOs continued shows declining trend. At the Q.E. Dec-17, it has recorded a overall decline of 5.70%. The year-on-year (Y-O-Y) decline rate over the same quarter of the last year is 19.89%.

Village Public Telephones (VPTs)

- 1.29 There are 5,93,731 inhabited villages in India as per census 2001. At the end of the quarter, 34.09% of the total inhabited villages in India have been connected by VPTs.
- 1.30 Number of VPTs declined from 2,07,292 at the end of Sep-17 to 2,02,395 at the end of Dec-17.
- 1.31 As per the information received in TRAI, at the end of Dec-17, only two service providers M/s BSNL and Tata Teleservices were providing VPT in the country. BSNL holds 99.37% market share of total number of VPT in QE Dec-17. Service area wise detailed table of VPT is available at Annexure -1.4.

Chart 1.12: Growth/decline Trend in VPTs



Section D: Internet Service

1.32 This section summarizes information submitted by 156 internet service providers for the quarter ending Dec-17. **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)

1.33 As per reports received from operators, total number of internet subscribers increased from 429.23 million at the end of Sep-17 to 445.96 million at the end of Dec-17 with quarterly growth rate of 3.90%.

1.34 Wired Internet subscribers declined from 21.35 million at the end of Sep-17 to 21.28 million at the end of Dec-17 with quarterly decline rate of 0.33%. However, Wireless Internet subscribers increased from 407.88 million at the end of Sep-17 to 424.67 million at the end of Dec-17 with quarterly growth rate of 4.12%.

1.35 Number of Broadband subscribers increased from 324.89 million at the end of Sep-17 to 362.87 million at the end of Dec-17 with quarterly growth rate of 11.69%. However, the number of Narrowband subscribers declined from 104.34 million at the end of Sep-17 to 83.09 million at the end of Dec-17 with quarterly decline rate of 20.37%.

Table 1.29: 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			
	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17
Broadband	18.04	17.86	0.456	0.441	306.40	344.57	306.86	345.01	324.89	362.87
Narrowband	3.32	3.43	0.016	0.013	101.01	79.65	101.03	79.66	104.34	83.09
Total	21.35	21.28	0.472	0.455	407.41	424.22	407.88	424.67	429.23	445.96

1.36 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

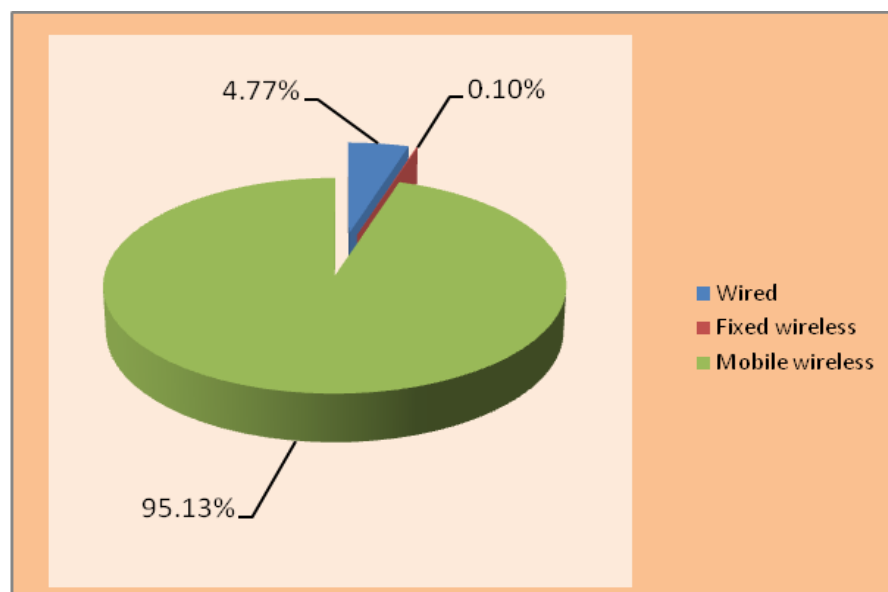
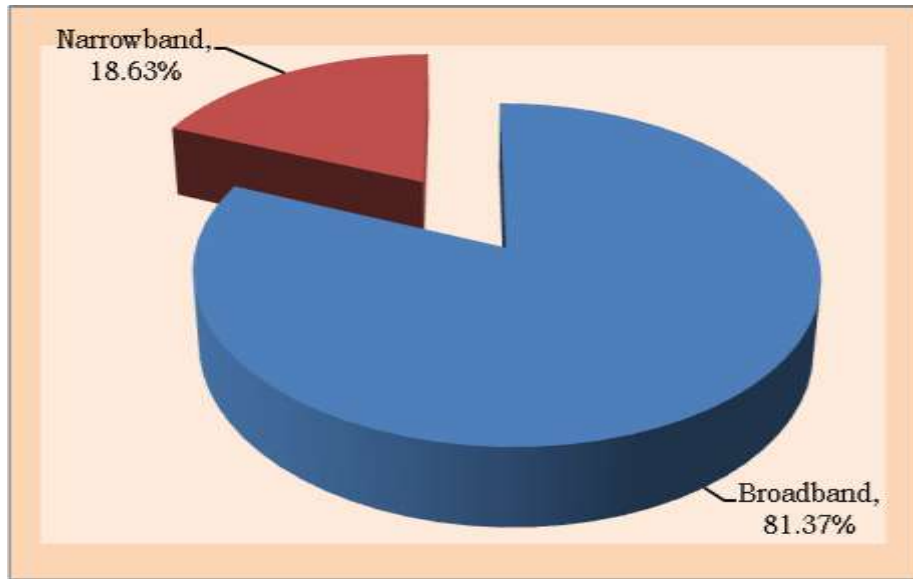
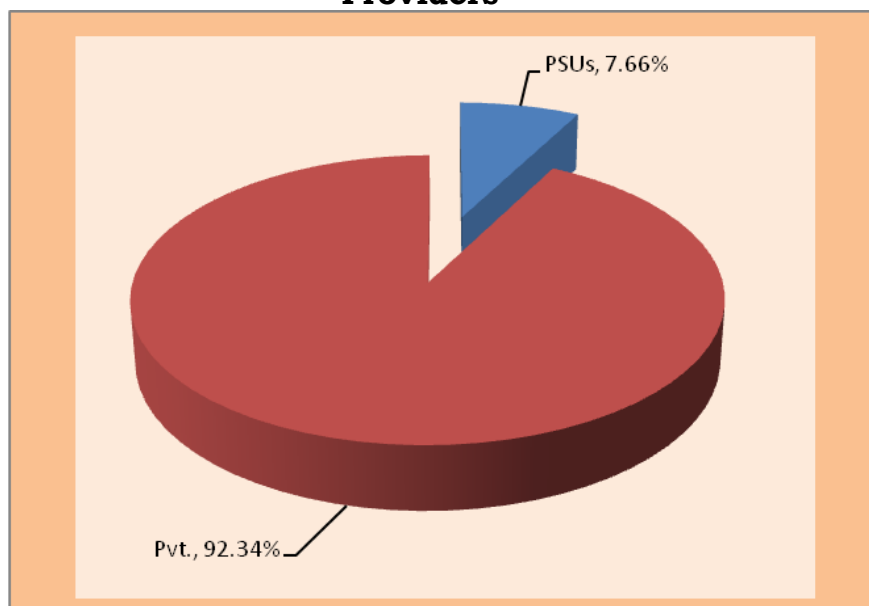


Chart 1.14 : Composition of Broadband & Narrowband subscription



1.37 Private internet service providers hold 92.34% market share of total internet subscribers at the Q.E. Dec-17. The following charts present the composition of market share of PSUs and Private Internet service providers.

Chart 1.15 : Market share of PSUs and Private Internet Service Providers



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

Table 1.30: Break up of Rural-Urban internet subscriber base

Telecom Service Area	Narrowband		Broadband		Total Internet	
	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	2.66	3.24	9.02	19.38	11.67	22.62
Assam	2.02	0.64	2.51	3.29	4.53	3.94
Bihar	4.29	2.57	6.75	10.01	11.05	12.58
Delhi	0.24	3.50	0.45	24.02	0.69	27.52
Gujarat	1.48	2.28	6.25	18.78	7.73	21.07
Haryana	0.78	0.56	2.81	6.51	3.59	7.06
Himachal Pradesh	0.48	0.32	1.53	1.57	2.01	1.88
Jammu & Kashmir	0.76	0.46	1.00	2.81	1.75	3.27
Karnataka	1.83	2.70	4.59	20.84	6.42	23.54
Kerala	0.95	1.36	6.17	10.45	7.11	11.82
Kolkata	0.12	1.89	0.78	9.43	0.90	11.32
Madhya Pradesh	2.21	2.32	4.03	14.62	6.24	16.94
Maharashtra	2.42	2.95	9.55	22.19	11.98	25.14
Mumbai	0.13	2.90	0.53	17.67	0.65	20.57
North East	0.84	0.53	1.36	2.46	2.20	2.99
Orissa	1.56	1.20	3.10	4.58	4.66	5.78
Punjab	1.19	1.40	3.11	11.58	4.31	12.97
Rajasthan	2.75	2.49	5.48	12.77	8.23	15.26
Tamil Nadu	1.86	4.29	6.40	21.91	8.25	26.20
Uttar Pradesh(East)	5.15	3.13	7.79	14.52	12.94	17.66
Uttar Pradesh(West)	2.43	2.06	4.09	12.96	6.52	15.02
West Bengal	2.85	1.30	5.74	7.49	8.59	8.79
Total	38.99	44.10	93.04	269.82	132.03	313.92

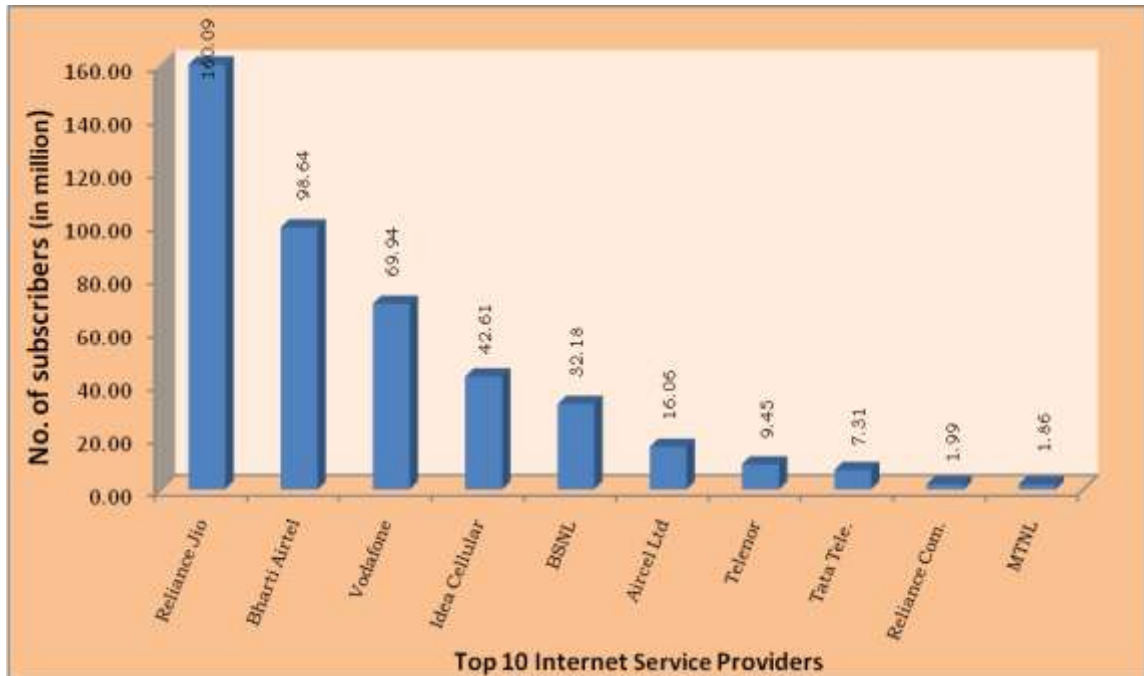
Table 1.31: Internet Subscriber Base and Market Share of top 10 Service Providers

S.No	ISP	No. of Subscribers	Share (%)
1	RJIL	160,091,242	35.90
2	Bharti Airtel Limited	98,636,052	22.12
3	Vodafone	69,943,388	15.68
4	Idea Cellular	42,614,713	9.56
5	BSNL	32,178,910	7.22
6	Aircel	16,059,347	3.60
7	Telenor	9,445,086	2.12
8	Tata Teleservices	7,307,710	1.64
9	Reliance Communications	1,988,610	0.45
10	MTNL	1,863,774	0.42
	Total of Top 10 ISPs	440,128,832	98.69
	Others	5,827,975	1.31
	Grand Total	445,956,807	100

1.39 Reliance Jio holds the top position with 35.90% of market share of internet subscribers followed by Bharti Airtel with 22.12%. Top 10 Service Providers together hold 98.69% of total internet subscriber base at the QE Dec-17. Detailed table of number of internet subscriber base (broadband and narrowband) of all the service providers is available at Annexure-1.5.

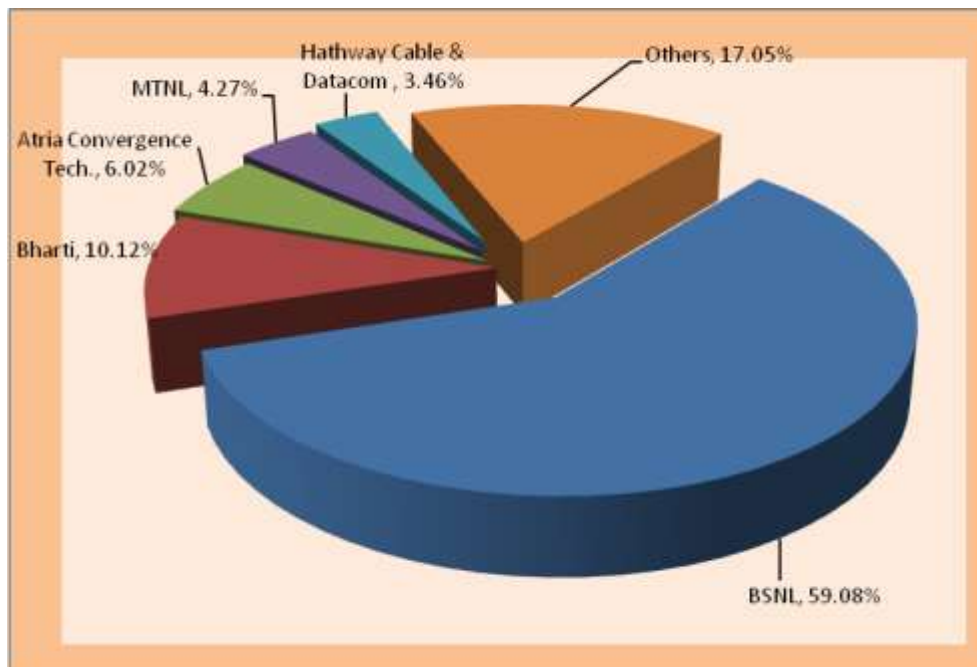
1.40 The following chart depicts the internet subscriber base of top ten Internet Service Providers (ISPs) in the QE Dec-17.

Chart 1.17 : Subscriber base of top ten ISPs



1.41 In wired internet segment, BSNL holds 59.08% market share with 12.57 million subscribers, followed by Bharti with 2.15 million subscribers. Total number of wired internet subscriber is 21.28 million at the end of Dec-17.

Chart 1.18 : Composition of Wired Internet subscribers



1.42 In wireless internet segment, Reliance Jio holds 37.70% market share with 160.09 million subscribers followed by Bharti Airtel with 96.48 million wireless internet subscribers at the QE Dec-17.

Chart 1.19 : Composition of Wireless Internet subscription

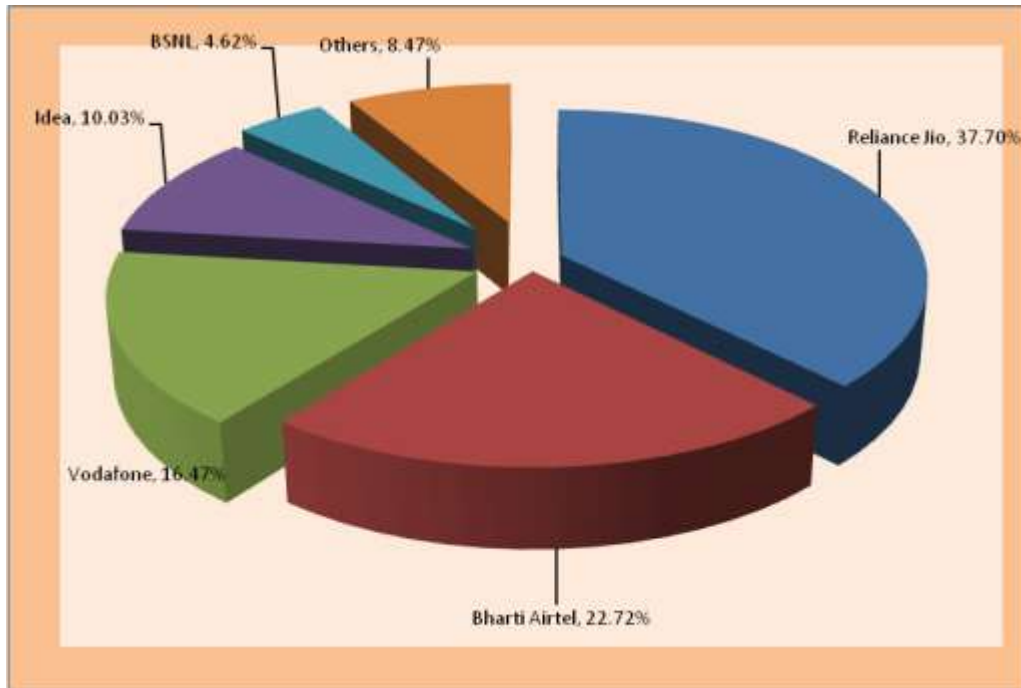


Chart 1.20 : Technology trend for Wireless Internet Access

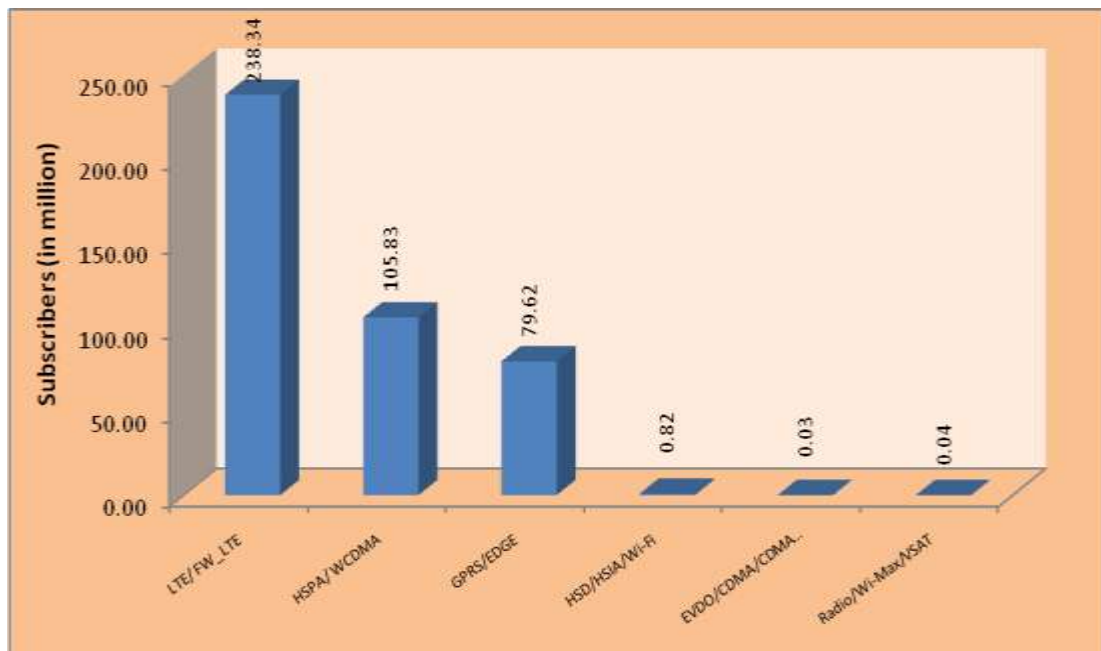
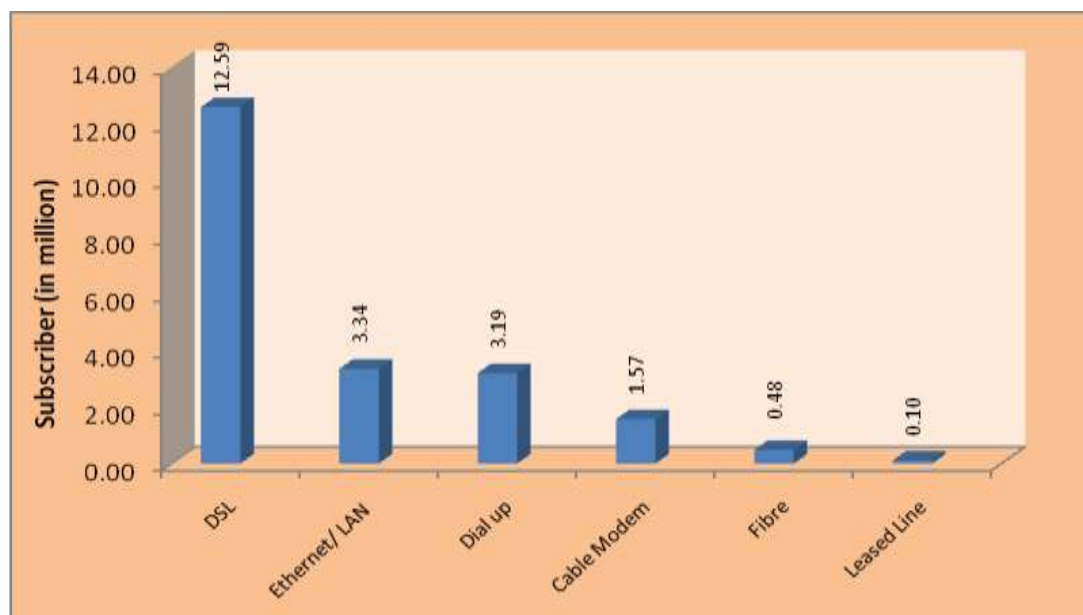


Chart 1.21 : Technology trend for Wired Internet Access



1.43 Top five service areas in terms of internet subscriptions (wired + wireless) are Maharashtra (37.12 million), Tamil Nadu including Chennai (34.45 million), Andhra Pradesh (34.29 million), U.P.(E) (30.59 million) and Karnataka (29.97 million).

Table 1.32 : Service Area wise number of Internet Subscribers per 100 population at the end of Dec-17

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	11.67	22.62	34.29	18.10	90.17	38.28
Assam	4.53	3.94	8.47	16.39	72.04	25.58
Bihar	11.05	12.58	23.63	9.13	64.63	16.83
Delhi	0.69	27.52	28.22	89.59	127.16	125.86
Gujarat	7.73	21.07	28.80	20.69	76.43	44.36
Haryana	3.59	7.06	10.65	20.21	67.58	37.77
Himachal Pradesh	2.01	1.88	3.89	31.73	218.78	54.12
Jammu & Kashmir	1.75	3.27	5.02	19.32	91.47	39.70
Karnataka	6.42	23.54	29.97	16.75	94.20	47.30

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Kerala	7.11	11.82	18.93	26.35	129.58	52.42
Madhya Pradesh	6.24	16.94	23.18	8.12	57.46	21.80
Maharashtra	11.98	25.14	37.12	19.91	74.57	46.77
Mumbai	0.65	20.57	21.22			
North East	2.20	2.99	5.19	20.82	82.18	36.51
Orissa	4.66	5.78	10.44	13.21	74.21	24.23
Punjab	4.31	12.97	17.28	24.78	91.81	54.84
Rajasthan	8.23	15.26	23.49	14.55	84.14	31.44
Tamil Nadu	8.25	26.20	34.45	29.93	59.25	47.99
UP (East)	12.94	17.66	30.59	10.76	60.12	22.17
UP (West)	6.52	15.02	21.54			
Kolkata	0.90	11.32	12.22	13.86	72.49	30.76
West Bengal	8.59	8.79	17.38			
Total	132.03	313.92	445.96	14.89	76.76	34.42

* 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.
2. Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhatisgarh, Bihar includes Jharkhand, Maharashtra includes Goa, Uttar Pradesh includes Uttarakhand, West Bengal includes Sikkim and North-East includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura states.

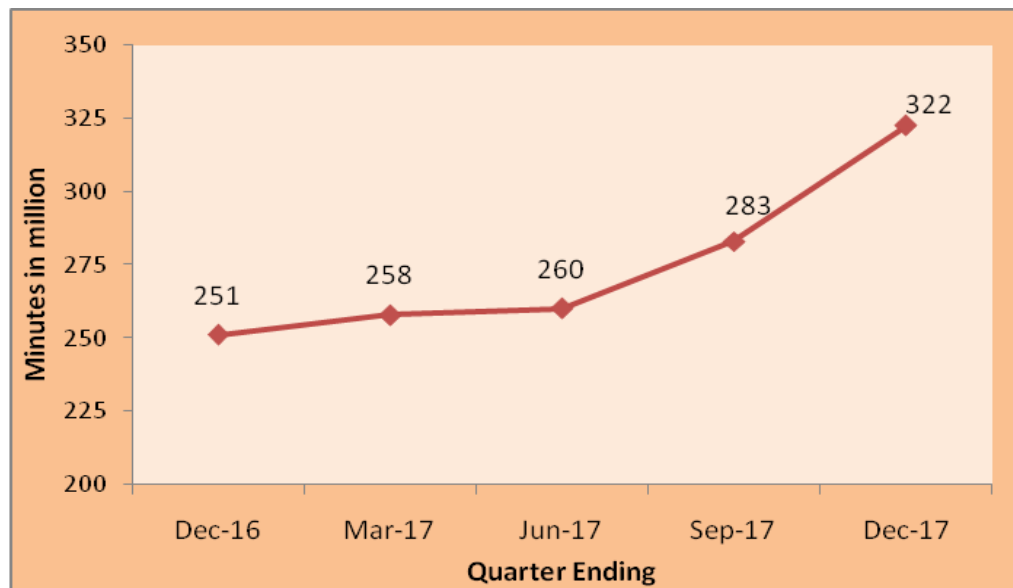
ISP Connectivity

1.44 The International Internet bandwidth owned by various service providers is reported to be 3,054 Gbps during the quarter ending Dec-17 as compared to 2,956 Gbps during the previous quarter.

Internet Telephony

1.45 As per the reports received from 16 service providers, providing Internet Telephony services, the total outgoing minutes of usage for internet telephony is 322 million during the Q.E. Dec-17 as compare to 283 million in previous quarter. List of Internet Telephony Service providers is available at Annexure-1.6.

Chart 1.22 : Trends in MOU for Internet Telephony



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

1.46 The total number of broadband subscribers increased from 324.89 million at the end of Sep-17 to 362.87 million at the end of Dec-17. Out of which wired broadband subscribers are 17.86 million and wireless broadband subscribers are 345.01 million.

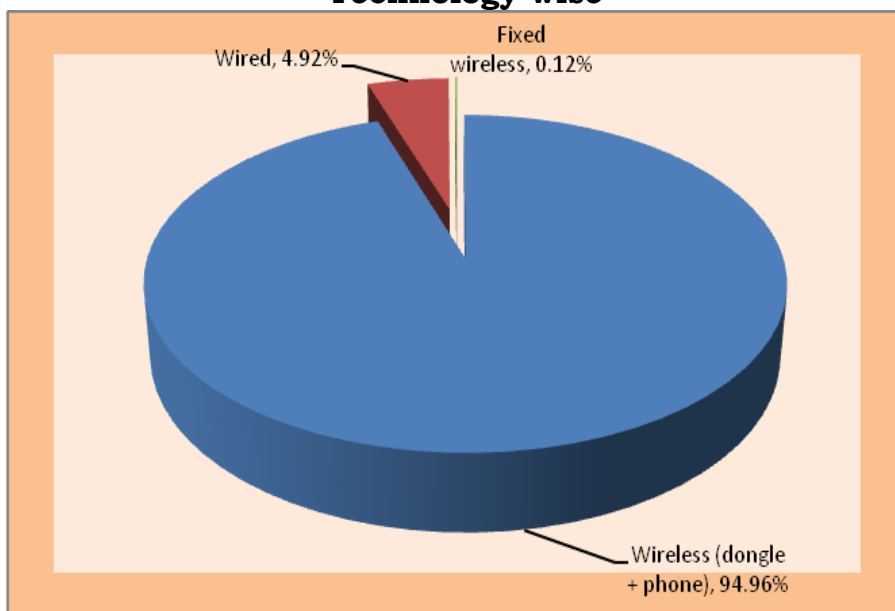
1.47 Top five broadband (wired+wireless) service providers in term of subscribers are Reliance Jio (160.09 million), Bharti (71.09 million), Vodafone (52.44 million), Idea Cellular (34.81 million) and BSNL (21.95 million).

1.48 In wired broadband segment, BSNL holds 52.53% market share with 9.38 million subscribers followed by Bharti with 2.15 million subscribers.

1.49 In wireless broadband segment, Reliance Jio holds 37.70% market share with 160.09 million subscribers followed by Bharti (16.23%) with 68.94 million subscribers.

1.50 Top five service areas in respect of broadband subscriptions are Maharashtra (31.75 million), Andhra Pradesh including Telengana (28.40 million), Tamil Nadu including Chennai (28.30 million), Karnataka (25.43 million) and Gujarat (25.04 million).

Chart 1.23 : Composition of Broadband subscription – Technology wise

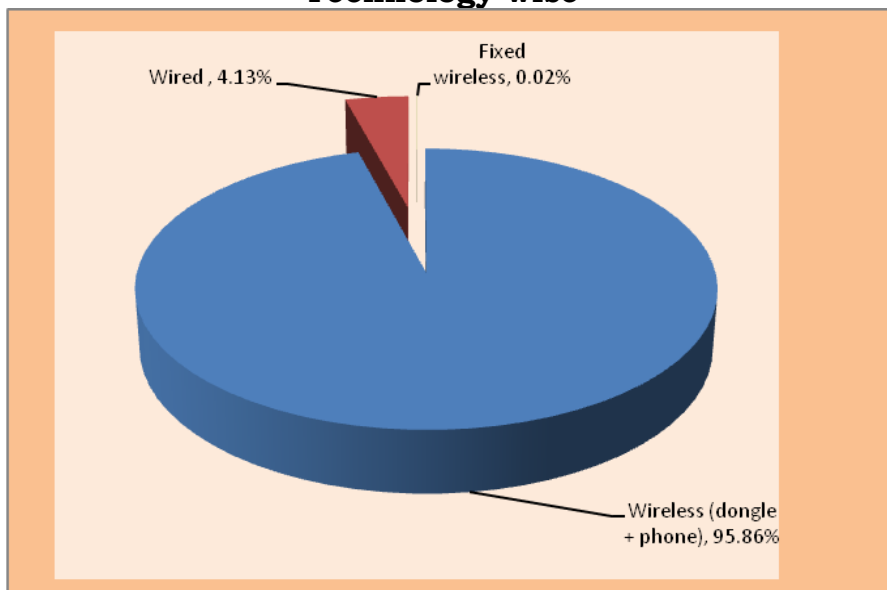


1.51 Mobile Device Users (dongle+phone) constitute 94.96% of total broadband subscribers at the end of Dec-17.

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

- 1.52 Total number of narrowband subscribers declined from 104.36 million at the end of Sep-17 to 83.09 million at the end of Dec-17 with the quarterly decline rate of 20.37%. Out of 83.09 million narrowband subscribers, Wired Narrowband subscribers are 3.43 million and Wireless Narrowband subscribers are 79.66 million.
- 1.53 The top five narrowband (wired + wireless) service providers in term of subscriber base are Bharti (27.54 million), Vodafone (17.50 million), BSNL (10.23 million), Aircel Ltd (10.03 million) and Idea Cellular (7.81 million).
- 1.54 In wired narrowband segment, BSNL holds 93.18% market share with 3.195 million subscribers followed by You Broadband India Pvt Ltd. with 0.151 million.
- 1.55 In wireless narrowband segment, Bharti holds 34.80% market share with 27.54 million subscribers followed by Vodafone (17.54 million).

Chart 1.24 : Composition of Narrowband subscription – Technology wise



Section E : Other Value Added Services - PMRTS & VSAT

Public Mobile Radio Trunk Services (PMRTS)

1.56 The subscriber base of PMRTS increased from 52,810 at the end of Sep-17 to 54,233 at the end of Dec-17 with quarterly growth rate of 2.69%.

Table 1.33 : PMRTS Subscriber base - Service Provider wise

Sr. No .	Name of the Service Provider	Subscriber Base as on 30.09.2017	Subscriber Base as on 31.12.2017	Growth in Subscribers	% Growth in subscribers in QE Dec-17
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	44039	45290	1251	2.84
4	Procall Ltd.	3005	3054	49	1.63
2	Inative Networks Pvt Ltd	1820	1820	0	0.00
3	Quick Call	1490	1618	128	8.59
5	Smartlink Pvt Ltd	986	968	-18	-1.83
6	Bhilwara Telenet Services Pvt Ltd	811	818	7	0.86
7	Wiwonet Solutions Pvt Ltd	345	361	16	4.64
8	Airtalk Solutions & Services Pvt Ltd	314	304	-10	-3.18
	Total	52810	54233	1423	2.69

1.57 Detailed table on Service Area wise subscriber base of PMRTS is available at Annexure-1.7.

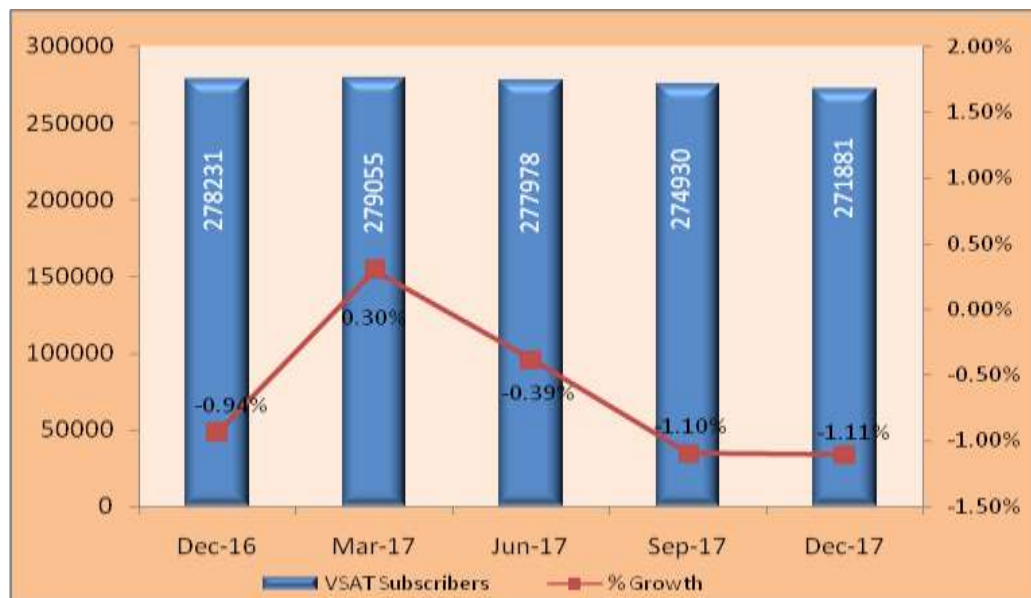
Chart 1.25 : Number of PMRTS subscribers & Rate of Growth (%)



Very Small Aperture Terminal (VSAT)

1.58 The total number of VSAT subscribers declined from 2,74,930 at the end of Sep-17 to 2,71,881 at the end of Dec-17. Net decline during the quarter has been 3,049 at the decline rate of 1.11%.

Chart 1.26 : Number of VSAT Subscribers & Rate of Growth (%)



**Table 1.34 : 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 (%) Dec-17
		Sep-17	Dec-17			
1	Hughes Communications Ltd.	100579	98995	-1584	-1.57	36.41
2	Bharti Airtel Limited	72002	72933	931	1.29	26.83
3	Tatanet Services	56871	55973	-898	-1.58	20.59
4	HCL Comnet	23506	21961	-1545	-6.57	8.08
5	BSNL	19239	19254	15	0.08	7.08
6	Infotel Satcom	2659	2691	32	1.20	0.99
7	Planetcast Media Services Ltd	74	74	0	0.00	0.03
	Total	274930	271881	-3049	-1.11	100

1.59 Hughes Communication Limited continues to be the market leader in VSAT with subscriber base of 98,995 followed by Bharti Airtel Ltd (72,933) at the end of Dec-17.

1.60 M/s Bharti Airtel added maximum number of VSAT i.e. 931 subscribers in QE Dec-17, with maximum growth rate of 1.29% in its VSAT subscribers. M/s HCL Comnet showed maximum decline rate of 6.57% in VSAT subscribers during the quarter.

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 October, 2017 to 31st December, 2017 in the various service areas.

Section A: GSM and LTE Services

Table 2.1: Key Indicators - GSM and LTE Services

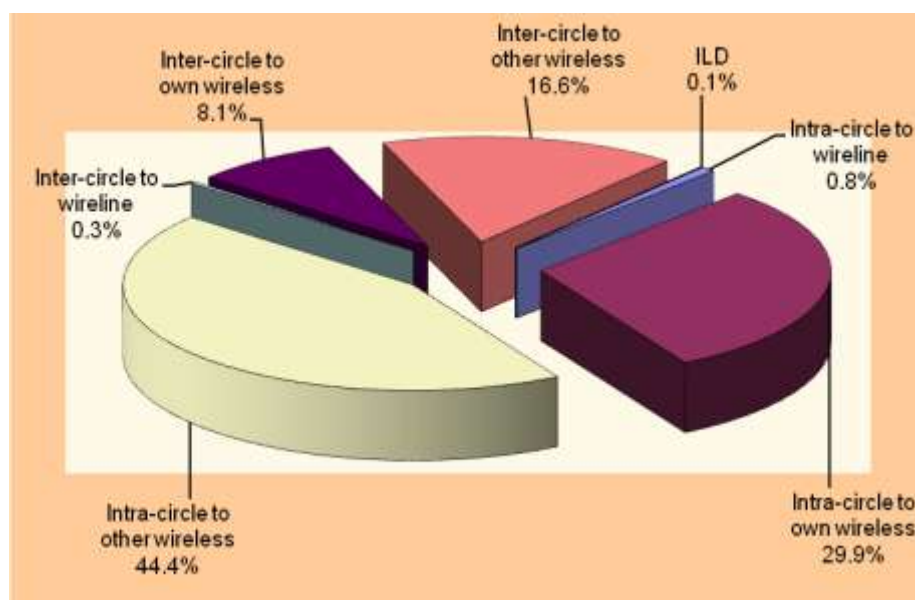
Parameter	Dec-17	Sep-17	Dec-16	QoQ %age change	YoY %age change
Subscriber Base* (million)	1149.81#	1173.20	1112.48	-1.99	3.36
Share of Prepaid (%)	95.61%	95.59%	95.22%	0.02	0.41
Incoming MOU* per subscriber per month	247.16	220.88	191.28	11.90	29.22
Outgoing MOU* per subscriber per month	247.95	215.73	168.54	14.93	47.12
No. of Outgoing SMS per subscriber per month	16.58	15.29	18.31	8.41	-9.48
Average Revenue Per User (ARPU) per month (₹)	79.39	83.89	103.92	-5.37	-23.61

* Subscriber figures are closing figures as on last day of the quarter.

Subscriber figures for 4G LTE is also included.

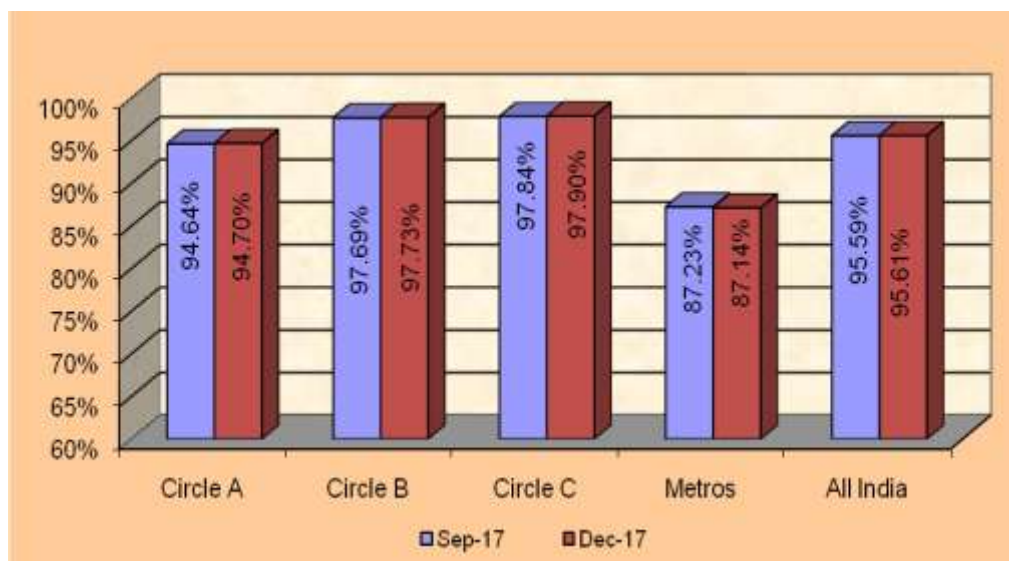
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Dec-17.

Chart 2.1: Break-up of Outgoing minutes from Home Service Area (HSA) - GSM and LTE Services



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



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

2.3 Market share of prepaid segment increased from 95.59% at the end of Sep-17 to 95.61% at the end of Dec-17.

2.4 The ARPU per month (all India, blended) increased from ₹84 in Q.E. Sep-17 to ₹79 in Q.E. Dec-17. 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 and LTE Services in QE Dec-17

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	377	73	89
Circle B	386	67	74
Circle C	241	67	71
Metros	314	42	77
All India	348	67	79
All private SPs	354	68	82
BSNL/MTNL	274	51	59

2.5 The ARPU per month for pre-paid segment declined from ₹71 in QE Sep-17 to ₹67 in QE Dec-17, and ARPU per month for postpaid segment declined from ₹361 in QE Sep-17 to ₹348 in QE Dec-17.

2.6 The following table presents the composition of ARPU per month in the QE Dec-17.

Table 2.3: Composition of ARPU per month - GSM and LTE Services

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	20.51	22.4%
1.2.	Revenue from calls	24.16	26.4%
1.3.	Revenue from SMS	1.73	1.9%
1.4.	Revenue from data usage	36.43	39.7%
1.5.	Revenue from other VAS	3.37	3.7%
1.6.	Other revenue	2.40	2.6%
2	Usage outside Home Service Area		
2.1.	Revenue from outroamers	3.05	3.3%
3	Total revenue from subscribers (1+2)	91.65	100%
4	Net inter-operator settlement charges receivable *	-12.27	
5	Net Revenue (ARPU) per month(3+4)	79.39	

* 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 (₹12.27) accounts for 13.38% 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 437 in QE Sep-17 to 495 in QE Dec-17.

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 and LTE Services in QE Dec-17

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	426	394	820	226	202	427	236	212	448
Circle B	431	382	813	231	255	486	236	258	494
Circle C	400	254	654	253	316	569	257	314	571
Metro	408	351	760	311	207	517	323	226	549
All India	419	366	786	240	242	481	248	247	495

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-17 is 50.1:49.9.

2.11 Number of outgoing SMS per subscriber per month increased from 15 in Q.E. Sep-17 to 17 in Q.E. Dec-17. 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 and LTE Services in QE Dec-17

Circle category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Circle A	111	16	22
Circle B	28	15	16
Circle C	17	11	11
Metro	19	9	11
All India	59	15	17

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

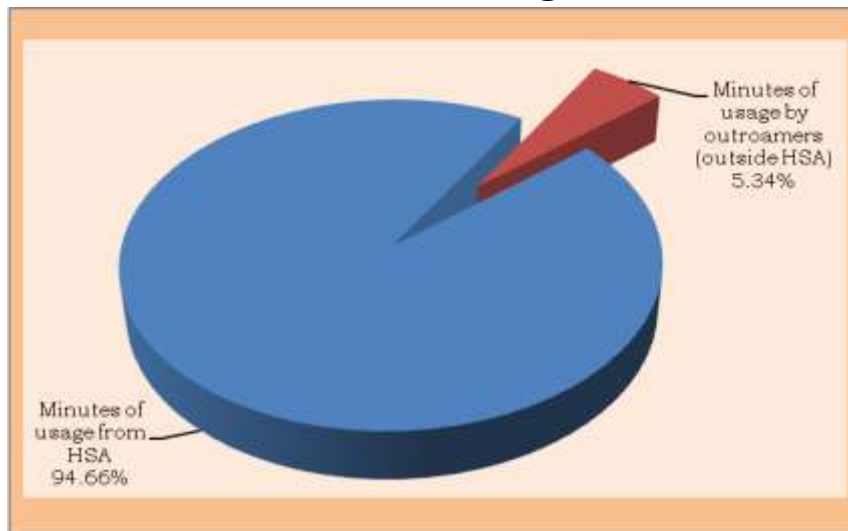
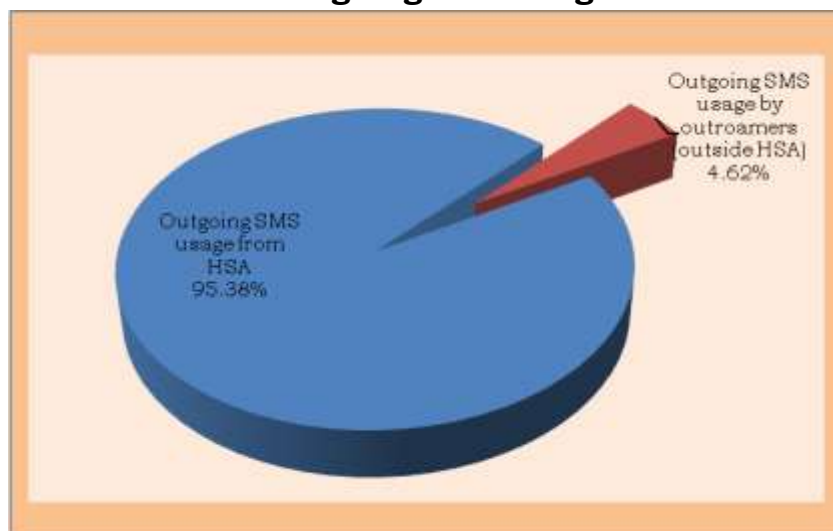


Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage



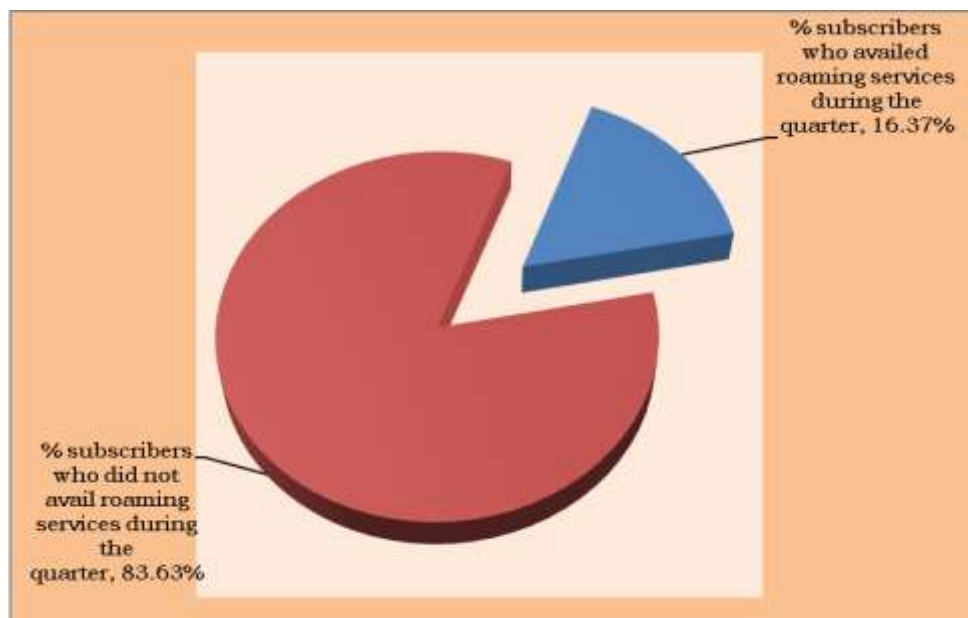
2.12 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks.

Table 2.6: %Break-up of Outgoing minutes from Home Service Area (HSA)

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	0.94	29.43	46.32	0.29	6.72	16.24	0.06
Circle B	0.56	32.67	45.38	0.21	7.16	13.97	0.04
Circle C	0.32	35.08	44.26	0.23	6.34	13.75	0.02
Metros	1.38	16.27	36.31	0.46	16.94	28.52	0.13
All India	0.75	29.86	44.37	0.27	8.13	16.56	0.06

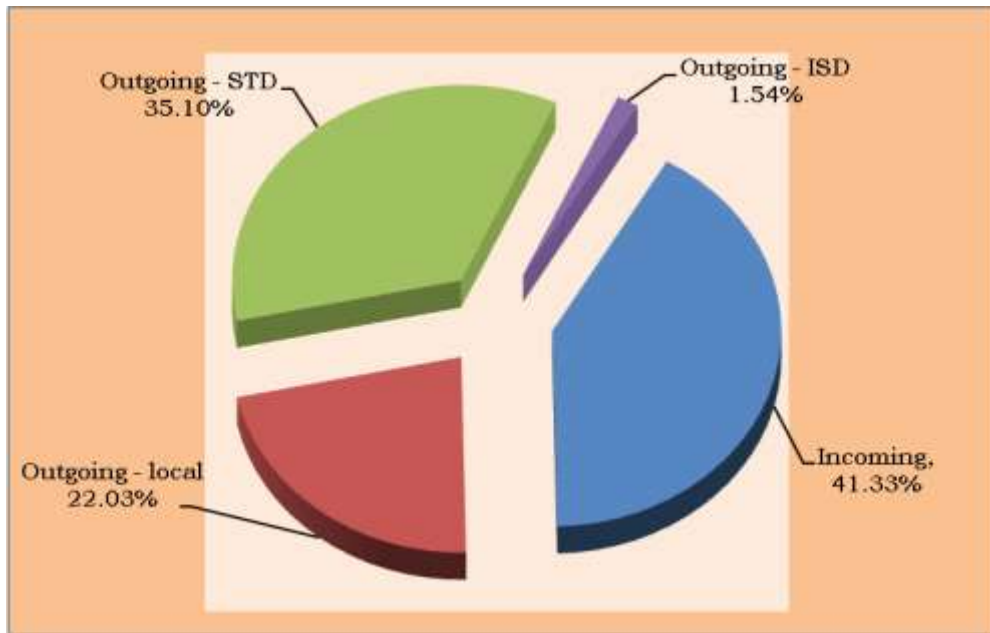
2.13 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter ending Dec-17.

Chart 2.5: % subscribers who availed roaming services during the QE Dec-17



2.14 The usage pattern of out-roamers i.e. usage from outside the home service area shows that incoming minutes accounts for 41.33% of the total minutes of usage by out-roamers in QE Dec-17 as against 44.05% in the previous quarter. The chart given below presents the break-up of minutes of usage of out-roamers during the QE Dec-17.

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



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 outgo per outgoing minute for usage from Home Service Area (HSA*) as defined below would be a realistic indicator of average tariff.

*Average 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 outgo per outgoing minute from HSA for GSM and LTE Services

Circle Category	(₹ per minute)		
	Postpaid	Prepaid	Blended
Circle A	0.39	0.20	0.22
Circle B	0.39	0.18	0.19
Circle C	0.31	0.15	0.16
Metros	0.39	0.14	0.18
All India	0.38	0.18	0.19

2.16 All India average outgo per outgoing minute declined from ₹0.23 in the QE Sep-17 to ₹0.19 in the QE Dec-17.

Table 2.8: Trends of Key Parameters - GSM and LTE Services

Parameter	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17
1. ARPU (₹ Per month)	104	83	80	84	79
3. Average Revenue from data usage per subscriber per month (in ₹)	24	19	21	33	36
3. MOU per subscriber per month	360	405	428	437	495
4. Outgoing MOU per subscriber per month					
4.1 Local (Intra-circle)	133	149	160	157	180
4.2 NLD (inter-circle)	36	48	53	59	67
4.3 ILD	0.2	0.2	0.2	0.2	0.5
5. No. of Outgoing SMS per subscriber per month	18	17	16	15	17
6. Average Outgo per outgoing minute from HSA (in ₹)	0.44	0.31	0.27	0.23	0.19

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

Section B: CDMA - Full Mobility Service

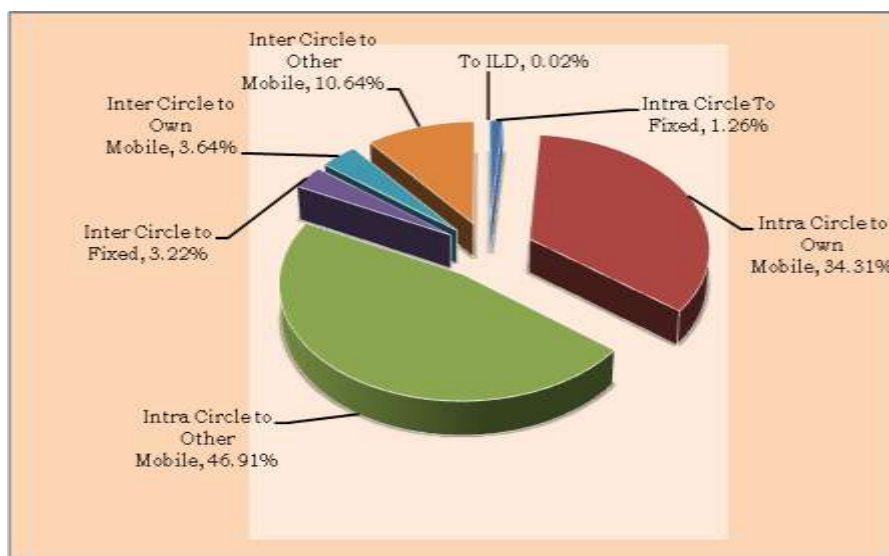
Table 2.9: Key Indicators - CDMA Full Mobility Service

Parameters	QE Dec-17	QE Sep-17	QE Dec-16	QoQ change (%)	YoY change (%)
Subscriber Base (in Millions*)	4.04	8.14	11.40	-50.33	-64.55
Share of Prepaid (%)	84%	88%	86%	-4.47	-1.86
Incoming MOUs per subscriber per month	40	123	127	-67.65	-68.59
Outgoing MOUs per subscriber per month	73	83	129	-12.24	-43.56
Outgoing SMS per subs per month	1	2	3	-38.52	-60.29
ARPU (₹ per month)	111	125	141	-11.68	-21.78

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

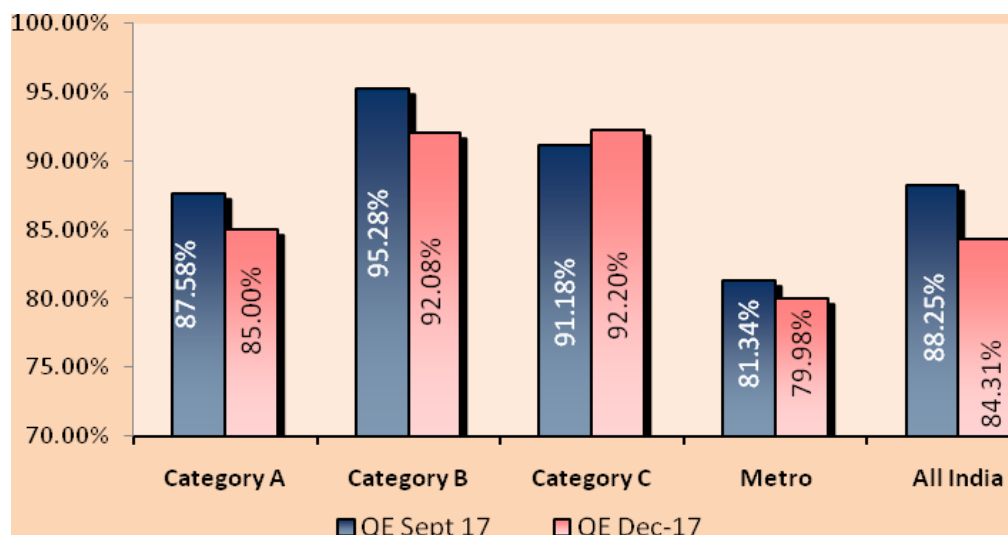
2.18 The following chart depicts % break-up of outgoing minutes from home service area (HSA).

Chart 2.7: % Break-up of Outgoing Minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Dec-17



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

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



2.20 Market share of Prepaid segment declined from 88.25% in QE Sep-17 to 84.31% in QE Dec-17.

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 Dec-17

(₹per month)

Circle category	Postpaid	Prepaid	Blended ARPU
Circle A	578	33	119
Circle B	475	20	58
Circle C	470	27	63
Metro	495	34	132
All India	517	30	111

2.22 The All India blended Average Revenue Per User (ARPU) per month has shown a decline of 11.68% from ₹125 in QE Sep-17 to ₹111 in QE Dec-17.

2.23 ARPU for Prepaid service declined from ₹68 in QE Sep-17 to ₹30 in QE Dec-17, and ARPU for Postpaid service declined from ₹524 in QE Sep-17 to ₹517 in QE Dec-17.

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	25.27	21.59
1.2	Revenue from Calls	20.86	17.82
1.3	Revenue from SMS#	0.25	0.21
1.4	Revenue from data usage	60.16	51.40
1.5	Revenue from other VAS	0.18	0.15
1.6	Other Revenue#	9.25	7.91
2	Usage Outside Home Service Area		
2.1	Revenue from Out-roamers	1.07	0.92
3	Total Revenue from Subscribers (1+2)	117.05	100
4	Net inter-operator settlement charges receivable*	-6.43	
5	Net Revenue (ARPU) (3+4)	110.62	

* Includes Interconnect Usage Charges and roaming settlement charges

2.24 Revenue from data usage per subscriber per month (for usage from HSA) increased from ₹59.35 in QE Sep-17 to ₹60.16 in QE Dec-17.

2.25 The total MOUs per subscriber per month declined by 45.33%, from 206 in QE Sep-17 to 112 in QE Dec-17. Outgoing MOUs declined from 83 in QE Sep-17 to 73 in QE Dec-17, and incoming MOUs also declined from 123 in QE Sep-17 to 40 in QE Dec-17.

2.26 Prepaid MOUs per subscriber per month declined from 196 in QE Sep-17 to 142 in QE Dec-17, however postpaid MOUs per subscriber per month increased from 223 in QE Sep-17 to 240 in QE Dec-17.

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	110	71	181	36	86	121	64	38	102
Circle B	251	105	355	16	83	100	45	25	71
Circle C	184	81	264	31	115	146	62	31	92
Metro	140	112	252	54	124	177	91	49	140
All India	142	98	240	39	103	142	73	40	112

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

Table 2.13 : Outgoing SMS per subscriber per month in QE Dec-17 – CDMA Full Mobility Service

Category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Category A	1	2	2
Category B	1	0	0
Category C	5	1	1
Metro	1	1	1
All India	1	1	1

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 Dec-17

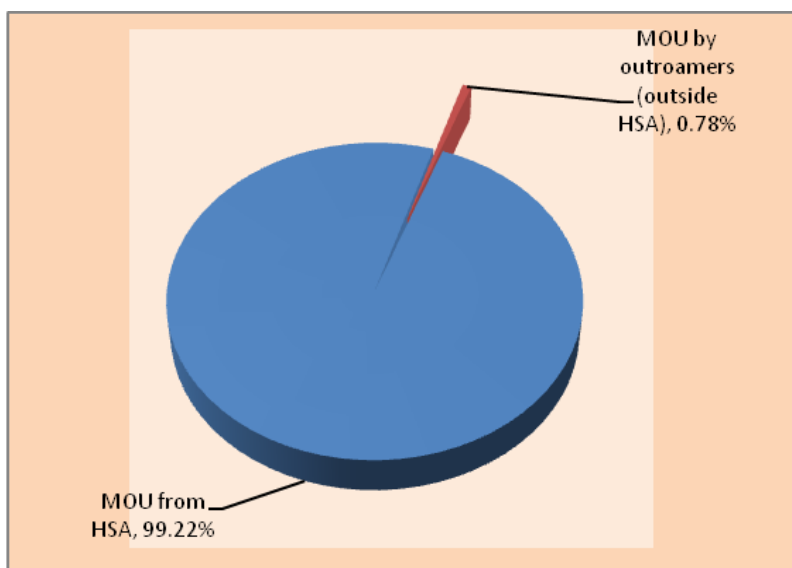


Table 2.14: %Break-up of Outgoing minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Dec-17

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	1.04	28.05	34.91	1.73	0.25	1.08	0.03
Circle B	0.67	26.98	34.31	3.68	0.48	3.72	0.02
Circle C	0.26	15.45	39.77	1.67	0.42	4.76	0.02
Metro	0.94	23.09	32.01	2.37	4.37	11.94	0.02
All India	0.90	24.47	33.50	2.30	2.59	7.63	0.02

2.27 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 Dec-17

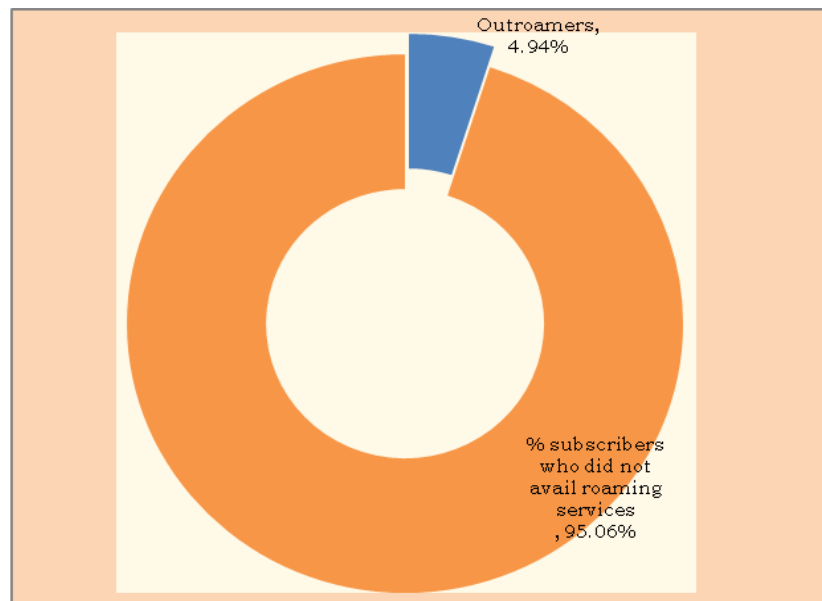


Chart 2.11: Percentage breakup of minutes of usage of Out-roamers (usage from outside the Home Service Area) in QE Dec-17

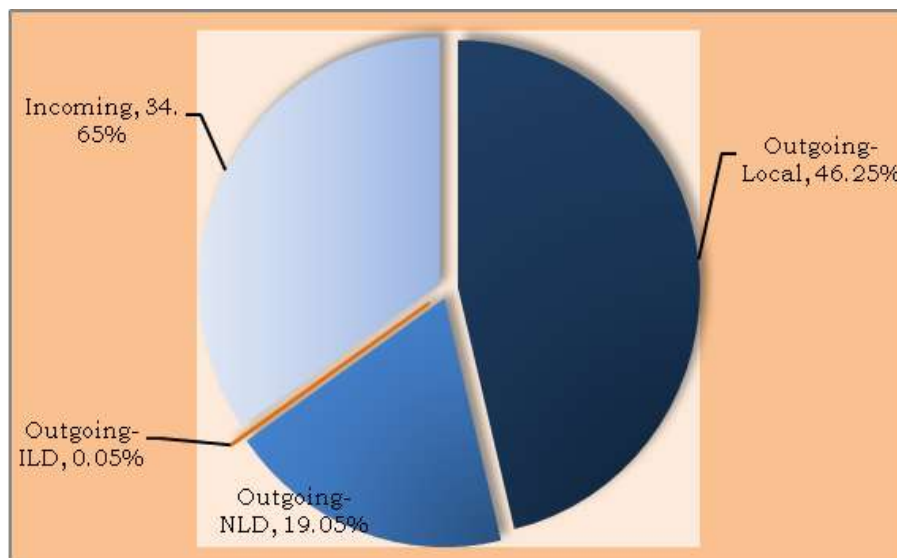


Table 2.15: Average subscriber outgo per outgoing minute from HSA* for CDMA Full Mobility Service in QE Dec-17

[₹ Per min]			
Circle Category	Postpaid	Prepaid	Blended
Circle A	1.84	0.63	0.79
Circle B	0.64	0.72	0.53
Circle C	0.98	0.60	0.51
Metros	1.13	0.50	0.60
All India	1.21	0.56	0.64

*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	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17
1. ARPU (₹ Per month)	141	131	124	125	111
2. Average revenue from data usage per subscriber per month (in ₹)	82	75	69	59	60
3. MOU per subscriber per month	255	249	247	206	112
4. Outgoing MOU per subscriber per month	129	112	105	83	73
5. No. of Outgoing SMS per subscriber per month	2.89	2.66	2.23	2.17	1.14
6. Average subscriber Outgo per outgoing minute from HSA (₹)	0.41	0.43	0.44	0.47	0.64

2.28 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 Dec-16 (₹ in Crore)	QE Sep-17 (₹ in Crore)	QE Dec-17 (₹ in Crore)	Q-O-Q % Change	Y-O-Y % Change
Gross Revenue (GR)	66,532	66,362	61,089	-7.95	-8.18
Adjusted Gross Revenue (AGR)	45,905	41,669	38,536	-7.52	-16.05
Pass Through Charges (GR-AGR)	20,627	24,693	22,552	-8.67	9.33
License Fee	3,698	3,249	3,104	-4.46	-16.04
Spectrum Usage Charges	1,639	1,256	1,152	-8.31	-29.72

3.1 Gross Revenue (GR) quarterly declined by 7.95% in QE Dec-17, and on annual basis, it declined by 8.18%. Adjusted Gross Revenue (AGR) quarterly and yearly declined by 7.52% and 16.05% respectively in QE Dec-17.

3.2 Pass through charges quarterly declined by 8.67% in the QE Dec-17, however, it increased by 9.33% on annual basis.

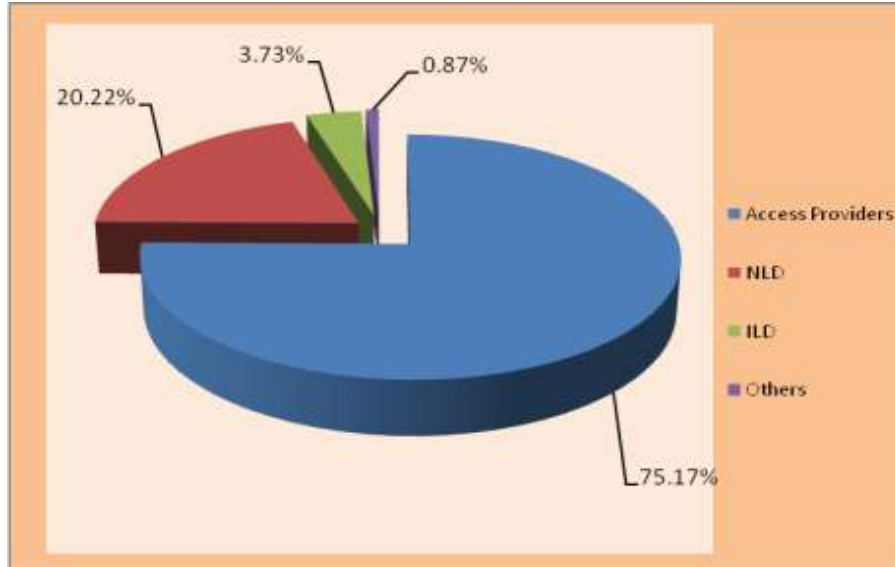
3.3 Pass-through charges as a percentage of Gross Revenue are 36.92% in QE Dec-17 as against 37.21% in the previous quarter.

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

(in ₹ Crore)

Service	GR	AGR	LF	Spectrum Usage Charges
Access Providers	44,229	28,968	2,338	1,148
NLD	9,477	7,794	629	-
ILD	3,389	1,438	115	-
Others	3,994	336	22	4
Total	61,089	38,536	3,104	1152

Chart 3.1: Composition of Adjusted Gross Revenue



3.4 Access services contributed 75.17% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue(AGR), License Fee, Spectrum Usage Charges(SUC) and Pass Through Charges declined by 7.95%, 7.52%, 4.46%, 8.31% and 8.67% respectively in QE Dec-17.

3.5 Monthly Average Revenue per User (ARPU) for Access Services based on AGR declined from ₹88.09 in Q.E. Sep-17 to ₹80.77 in Q.E. Dec-17.

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 Dec-17	QE Sep-17	% Change
Bharti	7825.36	8846.63	-11.54
Vodafone	5656.48	6304.40	-10.28
Idea	4746.13	5307.81	-10.58
BSNL	1800.28	2431.97	-25.97
Tata	1202.79	1665.45	-27.78
Aircel	1011.65	1285.62	-21.31
Reliance Com.	371.21	827.82	-55.16
Telenor	355.07	536.17	-33.78
MTNL	556.87	402.95	38.20
Sistema Shyam	23.03	81.01	-71.58
Quadrant	11.86	4.61	157.08
Reliance Jio	5407.19	4273.59	26.53
Grand Total (Access)	28967.93	31968.03	-9.38

3.6 Public Sector Undertakings' share in the Access AGR of telecom services is 8.14% in the QE Dec-17.

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

Category	AGR of Access Services for QE Dec-17 (in ₹ crore)	%age share of AGR
Metro	3735.85	12.90
A	11360.25	39.22
B	10280.56	35.49
C	3591.27	12.40
Total	28967.93	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

Table 4.1: QoS Summary - Wireless Service

S. No.	Parameters	Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q.E. Sep-17		Q.E. Dec-17	
			Out Of 162 for Network and Out of 167 for Customer (Nos.)	Out Of 162 for Network and Out of 167 for Customer (%)	*Out Of 158 (Nos.)	*Out Of 158 (%)
I.	Network Related Parameters					
1	Network Availability					
(i)	BTSs Accumulated downtime (not available for service)/ BS Accumulated down-time (not available for service) (%age)	≤ 2%	1	0.62%	2	1.27%
(ii)	Worst affected BTSs due to downtime/ Worst affected BSs due to down-time (%age)	≤ 2%	9	5.56%	6	3.80%
2	Connection Establishment (Accessibility)					
(i)	Call Set-up Success Rate (within licensee's own network)/ Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable(within licensee's own network)	≥ 95%	2	1.23%	0	0
(ii)	SDCCH/ Paging Chl. Congestion/ SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	≤ 1%	2	1.23%	1	0.63%
(iii)	TCH Congestion/ TCH, RAB and E-RAB Congestion (%age)	≤ 2%	3	1.85%	5	3.16%
3	Connection Maintenance (Retain ability)					
(i)	Call Drop Rate	≤ 2%	0	0	Was applicable till 30 th September, 2017	
(ii)	Worst affected cells having more than 3% TCH drop (call drop) rate	≤ 3%	20	12.35%	Was applicable till 30 th September, 2017	
(iii)	Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	Applicable from 1st October, 2017	42	26.58%	
(iv)	Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	Applicable from 1st October, 2017	31	19.62%	

S. No.	Parameters	Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
			Q.E. Sep-17		Q.E. Dec-17	
			Out Of 162 for Network and Out of 167 for Customer (Nos.)	Out Of 162 for Network and Out of 167 for Customer (%)	*Out Of 158 (Nos.)	*Out Of 158 (%)
4	Connection with good voice quality/Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality	≥ 95%	2	1.23%	0	0
5	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	0	0	4	2.53%
II.	Customer Service Quality Parameters					
6	Metering and Billing/					
(i)	Metering and billing credibility - post paid	≤ 0.1%	11	6.59%	11	6.96%
(ii)	Metering and billing credibility - pre paid	≤ 0.1%	6	3.59%	1	0.63%
(iii)	Resolution of billing/charging/validity complaints	98% within 4 weeks	0	0	0	0
	Resolution of billing/charging/ validity complaints	100% within 6 weeks	1	0.60%	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	0	0	1	0.63%
7	Response time to the customer for assistance					
(i)	Accessibility of call centre/ customer care	≥ 95%	7	4.19%	7	4.43%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	41	24.55%	34	21.52%
8	Termination /closure of service					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	17	10.18%	10	6.33%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	25	14.97%	3	1.90%

*Total number of License Service area has been reduced to 158 due to closure of services of M/s MTS, M/s RCOM, M/S RTL. M/s TATA has submitted combined PMR for GSM and CDMA Technology.

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

- a. Worst affected BTSs due to downtime
- b. Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)
- c. SDCCH/ Paging Chl. Congestion/ RCC Congestion (%age)
- d. Connection with good voice quality, circuit switched voice quality and VoLTE quality
- e. Metering and billing credibility- pre-paid
- f. Resolution of billing/ charging/ validity complaints (100% within 6 weeks)
- g. %age of calls answered by the operators (voice to voice) within 90 sec
- h. %age requests for Termination / Closure of service complied within 7 days
- i. Time taken for refund of deposits after closures

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

- a. BS Accumulated Down-time (not available for service) (%age)
- b. TCH, RAB and E-RAB Congestion (%age)
- c. Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)
- d. Metering and billing credibility - post paid
- e. Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints
- f. Accessibility of call centre/customer care

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

Parameter	Bench mark	Service Provider	Service Area	Performance
BS Accumulated down-time (not available for service) (%age)	≤ 2%	Aircel	North East	4.22
			UP-West	4.01
Worst affected BSs due to down-time (%age)	≤ 2%	Aircel	Assam	11.45
			Bihar	2.59
			Jammu &Kashmir	9.15
			North East	25.63
			UP-East	3.92
			UP-West	11.13
SDCCH/ Paging Channel Congestion/RRC Congestion (%age)	≤ 1%	Aircel	Assam	1.22
TCH, RAB and E-RAB Congestion (%age)	≤ 2%	Aircel	Assam	11.40
			Bihar	4.95
			Jammu &Kashmir	2.31
		idea	Madhya Pradesh	2.76
		UP(W)	2.90	
Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	Aircel	Assam	5.59
			Bihar	3.43
			Delhi	3.16
			Himachal Pradesh	5.99
			Jammu &Kashmir	4.79
			Karnataka	2.11
			Kolkata	2.49
			Mumbai	2.96
			North East	7.77
			Orissa	4.87
			Punjab	2.35
			Rajasthan	2.79
			Tamil Nadu	3.36
			UP-East	2.50
			UP-West	2.17
		West Bengal	5.36	
		BSNL	Bihar	4.08
		West Bengal	2.94	
		Idea	Andhra Pradesh	2.48
		Assam	2.27	
		Bihar	2.79	
		Himachal Pradesh	2.79	
		Jammu &Kashmir	2.73	
Madhya Pradesh	2.30			
Maharashtra	2.33			

Parameter	Bench mark	Service Provider	Service Area	Performance
Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%		Mumbai	2.58
			North East	2.47
			Rajasthan	2.56
			UP(W)	2.03
			UP-East	2.63
		Tata	Andhra Pradesh	2.06
			Haryana	2.08
			UP-East	2.32
		Telenor	Andhra Pradesh	2.07
			Maharashtra	2.82
			Bihar	2.17
			UP-East	3.13
		Vodafone	Bihar	2.67
			Delhi	2.33
			Himachal Pradesh	2.32
			Orissa	2.20
UP-West	2.26			
Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	Aircel	Assam	7.35
			Bihar	4.48
			Delhi	3.77
			Gujarat	3.57
			Himachal Pradesh	7.64
			Jammu &Kashmir	7.39
			Kerala	3.70
			Kolkata	3.16
			Mumbai	3.84
			North East	10.50
			Orissa	5.88
			Punjab	3.22
			Rajasthan	3.23
		Tamil Nadu	3.96	
		Aircel	UP-West	3.33
			West Bengal	6.25
	BSNL	Bihar	5.19	
		West Bengal	3.72	
	idea	≤ 3%	Assam	3.33
			Bihar	3.62
			Himachal Pradesh	3.48
			Jammu &Kashmir	3.43
			North East	4.34
Tata	UP-East	3.54		
	Haryana	3.50		
	Punjab	3.16		

Parameter	Bench mark	Service Provider	Service Area	Performance
			UP-East	4.00
			UP-West	3.44
		Telenor	Maharashtra	3.29
			Bihar	3.35
			UP-East	3.83
Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	Reliance Jio	Assam	1
			Jammu &Kashmir	1
			Tamil Nadu	1
			UP-East	1
Metering and billing credibility - post paid	≤ 0.1%	Airtel	Delhi	0.15
			Gujarat	0.61
			Haryana	0.15
			Jammu &Kashmir	0.32
			Kerala	0.26
			Kolkata	0.12
			Madhya Pradesh	0.26
			Maharashtra	0.50
			Mumbai	0.26
			UP-West	0.11
		Idea	Delhi	0.11
Metering and billing credibility - pre paid	≤ 0.1%	Airtel	Jammu &Kashmir	0.14
Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	Idea	Andhra Pradesh	99.93
Accessibility of call centre/ customer care	≥ 95%	Aircel	Assam	93.40
		Airtel	Assam	88.76
			Kolkata	86.41
			West Bengal	92.68
		Idea	Jammu &Kashmir	92.85
		Reliance Jio	Andhra Pradesh	83.07
			Karnataka	94.07
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Aircel	Assam	91.82
			Kolkata	94.43
			West Bengal	93.05
		Airtel	Assam	90.50
			Kerala	94.83
			Tamil Nadu	86.09
		Idea	Tamil Nadu	90.75
		Reliance Jio	Andhra Pradesh	82.84
			Assam	65.15
			Bihar	60.94

Parameter	Bench mark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Reliance Jio	Delhi	61.14
			Gujarat	87.09
			Haryana	53.57
			Himachal Pradesh	58.64
			Jammu &Kashmir	54.10
			Karnataka	83.97
			Kerala	89.31
			Kolkata	58.36
			Madhya Pradesh	60.24
			Maharashtra	87.35
			Mumbai	74.84
			North East	65.64
			Orissa	80.12
			Punjab	75.82
			Rajasthan	58.82
			Tamil Nadu	94.86
		UP-East	58.70	
		UP-West	58.12	
		West Bengal	56.55	
				Tata
			Tamil Nadu	94.81
		Vodafone	Bihar	94.11
			Mumbai	91.26
			Rajasthan	91.63
%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	Aircel	Karnataka	92.00
			Mumbai	99.34
			Tamil Nadu	99.47
		idea	Assam	88.15
			Delhi	99.97
			Haryana	99.99
		Reliance Jio	Delhi	99.94
			Jammu &Kashmir	99.94
		Vodafone	Mumbai	99.39
Time taken for refund of deposits after closures	100% within 60 days	Aircel	Kolkata	99.39
			UP-East	97.03
			West Bengal	87.50

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

Section B: Quality of Service Performance of Wireline Service Providers

Table 4.3: QoS Summary - Wireline Service

S. No.	Parameters	Benchmark	No of license areas where operators not meeting the benchmarks			
			QE September, 2017		QE December, 2017	
			Out of 103 In Nos.	Out of 103 In %age	Out of 102 In Nos.	Out of 102 In %age
(i)	Fault incidences per 100 subs/month	≤ 7	1	1%	1	1%
(ii)	% Fault repaired by next working day for urban areas	≥ 85%	4	4%	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	3	3%	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%	1	1%	0	0%
	Metering and Billing credibility -pre-paid	≤ 0.1%	0	0%	0	0%
(vii)	Resolution of billing/ charging /Credit & validity complaints	98% within 4 weeks	0	0%	0	0%
	Resolution of billing/ charging / Credit & validity complaints	100% within 6 weeks	0	0%	0	0%
(viii)	Period of applying credit /waiver/adjustment to customer's	1 week of resolution of complaint	0	0%	0	0%
(ix)	Accessibility of call centre/ customer care	≥ 95%	0	0%	0	0%

S. No.	Parameters	Benchmark	No of license areas where operators not meeting the benchmarks			
			QE September, 2017		QE December, 2017	
			Out of 103 In Nos.	Out of 103 In %age	Out of 102 In Nos.	Out of 102 In %age
	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	20	19%	4	4%
(x)	%age of request for Termination / closure of service complied within 7 days	100% within 7 days	5	5%	5	5%
(xi)	Time taken for refund of deposits after closures	100% within 60 days	0	0%	0	0%

NOTE: Most of the SPs have not reported for the parameter “Metering and billing credibility - prepaid” due to not providing pre-paid service in Basic (Wire line) service.

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

- a. Fault repaired by next working day for urban areas
- b. Mean Time to Repair (MTTR)
- c. Metering and Billing Credibility – Post paid
- d. %age of calls answered by the operators (voice to voice) within 90 seconds.

4.5 It is observed that the performance has no deteriorated in this quarter as compared to the previous quarter.

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

Parameters	Bench marks	Service Provider	Service areas	Parameters not met
Fault incidence (No. Of faults/ 100 subs/months)	≤ 7	TATA	AP	7.58
%age of fault repaired within 5 days (<i>for urban areas</i>)	$\geq 100\%$	MTNL	DEL	99.00%
			MUM	99.89%
Response time to the customer for assistance - Percentage of calls answered by the operators (voice to voice) within 90 seconds	$\geq 95\%$	Bharti Airtel Ltd.	KRL	91.00%
			GUJ	94.00%
		TATA	AP	92.69%
			GUJ	92.80%
<u>Termination/Closure of service</u>	100% within 7 days	MTNL	MUM	99.99%
%age requests for termination /Closure of service complied within 7 days		TATA	GJ	99.12%
			KTK	95.19%
			MUM	99.52%
			MH	99.97%

4.6 Detailed table containing QoS parameters for all the Wireline Service Providers is given in Annexure-4.2.

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

4.7 There are 185 Internet Service Providers (ISPs) providing broadband (wireline) service at the end of December, 2017. Out of these 185 ISPs, 40 Service Providers are having broadband subscriber base >10,000 and market share of these 40 SPs is 98.78% of total subscriber base. This report covers performance of top 39 broadband Service Providers vis-à-vis the QoS benchmarks prescribed by TRAI, for the QE December, 2017.

**Table 4.5 : Summary of Performance of Broadband Service Providers
against identified parameters**

S. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending September, 2017		Quarter Ending December, 2017	
			Out of 64 (No.)	Out of 64 (%)	Out of 65 (No.)	Out of 65 (%)
1	Service Provisioning	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	1	1.56%	1	1.54%
2	Faults Repair					
2.2	% of faults repaired by next working day (>90%)	>90%	4	6.25%	2	3.08%
2.3	% of faults repaired within 3 working day	=>99%	3	4.69%	3	4.62%
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	0	0.00%	0	0.00%
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	0	0.00%	0	0.00%
4	Response Time to the Customer for assistance					
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	1	1.56%	0	0.00%
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	4	6.25%	1	1.54%

S. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending September, 2017		Quarter Ending December, 2017	
			Out of 64 (No.)	Out of 64 (%)	Out of 65 (No.)	Out of 65 (%)
5	Bandwidth utilisation/ throughput					
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	1	1.54%
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	1	1.54%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	0	0.00%	1	1.54%
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%	1	1.56%	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%

Note: M/s Planet E-Shop Holdings India Ltd. has not submitted PMR for the quarter ending December, 2017.

Table 4.6: 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		
1.2	%age of connections provided within 15 days of registration of demand	100%	You Broadband - All India (99.84%)
2	Faults Repair		
2.2	% of faults repaired by next working day (>90%)	>90%	Honesty Net Solution (I) Pvt. Ltd. - Mumbai (84.00%) TATA (TTML) -Maharashtra & Goa (80.00%)
2.3	% of faults repaired within 3 working day	=>99%	MTNL - Delhi & Mumbai (98.06%), Honesty Net Solution (I) Pvt. Ltd. - Mumbai (95.63%) TATA(TTML) - Maharashtra & Goa (93.00%)
3	Response Time to the Customer for assistance		
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	Citycom Networks - All India (68.60%)
4	Bandwidth utilisation/throughput		
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	IKF Technologies Ltd - All India (19)
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	Limras Eronet Broadband Service Pvt Ltd. - All India (95)
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	Airlink Communications Pvt. Ltd - All India (97.95%),

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

Chapter 5 :

Performance of Cable TV, DTH and Radio Broadcasting Services

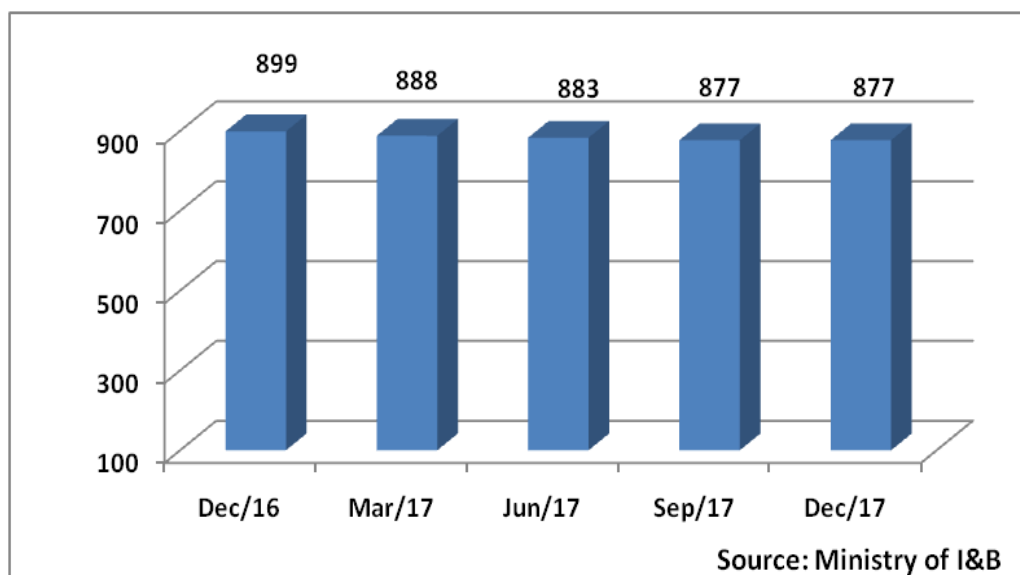
Table 5.1: Key Parameters - Broadcasting & Cable Services

S.No	Parameter	QE Sep-17	QE Dec-17
1	Number of Private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	877	877
2	Number of Pay TV Channels	300	304
3	Number of FM Radio Stations (excluding All India Radio)	322	326
4	Private DTH Operators	6	6
5	Number of Active DTH Subscribers	66.09 Million	67.56 Million
6	Operational community radio stations	210	214

A. Satellite TV Channels

5.1 A total of 877 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking/uplinking, as on 31st December, 2017.

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



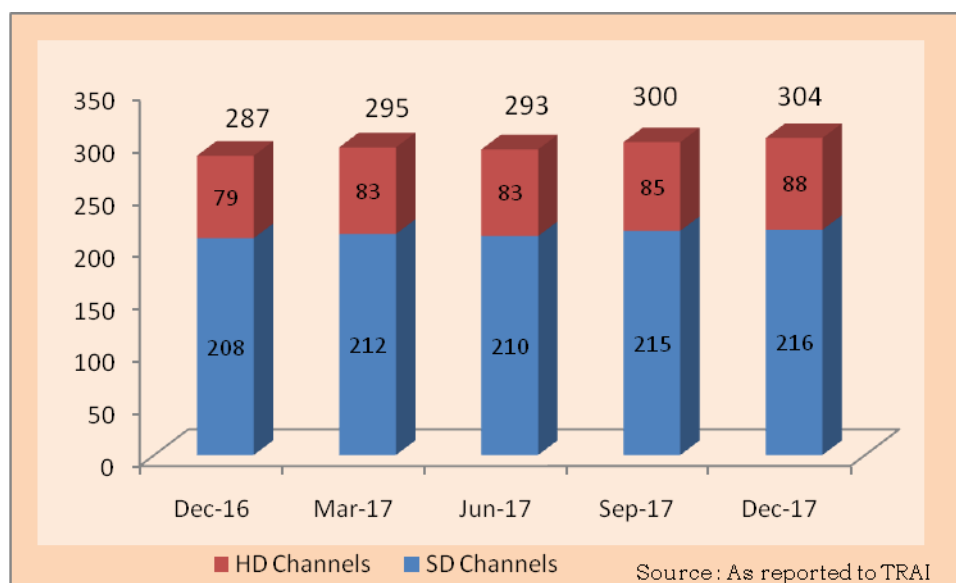
B. Pay TV Channels

5.2 During the quarter ending December 2017, there are 304 pay channels as reported by 49 broadcasters as compared to 300 pay channels reported in the previous quarter. These 304 pay channels include 216 SD pay TV channels and 88 HD Pay TV channels. The list of Pay TV Channels is placed at **Annexure-5.1**.

5.3 During the quarter ending December, 2017, as per the reporting, **three** new pay channels commenced. One FTA channel namely “JAN TV PLUS” converted into Pay channel. The details of pay channels launched during the quarter are as under:

S.No	Name of the Broadcaster	Channel's name
1	M/s AETN 18 Media Pvt Ltd	History TV 18 HD
2	M/s Zee Media Corporation Limited	Zee Tamil HD
3	M/s Zee Entertainment Enterprises Limited	Zee Uttar Pradesh Uttarakhand

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



C. Cable TV Sector

5.4 Digitization with addressability, of cable TV sector has been executed. As reported by MSOs providing Cable TV services through Digital Addressable System (DAS), details about number of reported channels being carried by the MSOs in areas served by Digital addressable system as on 31.12.2017 are as under:-

Table 5.2 : Areas served by Digital Addressable Systems (DAS)

Particulars	MSO	Number
Maximum number of TV channels (FTA+Pay+Local) carried	GTPL Kolkata Cable & Broadband Pariseva Limited & Siti Cable Network Limited	437
Minimum of TV channels (FTA+Pay+Local) carried	Digicable Network India Private Limited	261
Maximum number of FTA channels carried	Siti Cable Network Limited	198
Maximum number of Pay channels carried	Kal Cable Private Limited	254
Maximum number of Local channels carried	Hathway Sukhamrit Cable & Datacom Private Limited & Fastway Transmissions Private Limited	87

D. Direct-to-Home (DTH) Sector

5.5 Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. DTH has attained net pay active subscriber base of around 67.56 million at the end of December, 2017. As on December 2017, there are 6 pay DTH service providers. This is in addition the viewership of the free DTH services of Doordarshan.

5.6 Quarterly growth in the DTH sector in terms of the net active subscriber base and Market Share of DTH operator in terms of the percentage of net active subscribers during the quarter is depicted in the following charts.

Chart 5.3 : Quarterly growth in Net Active subscribers of pay DTH

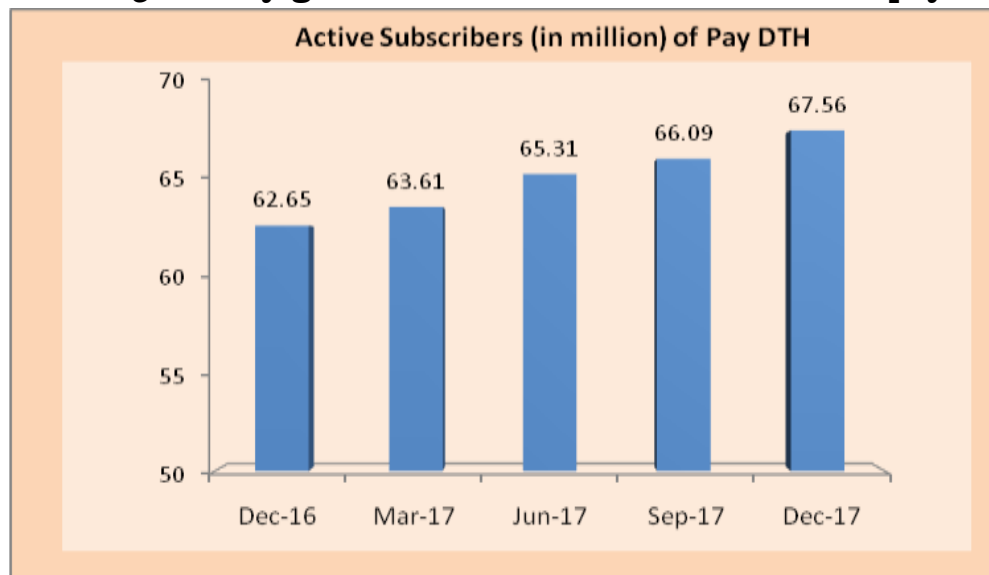
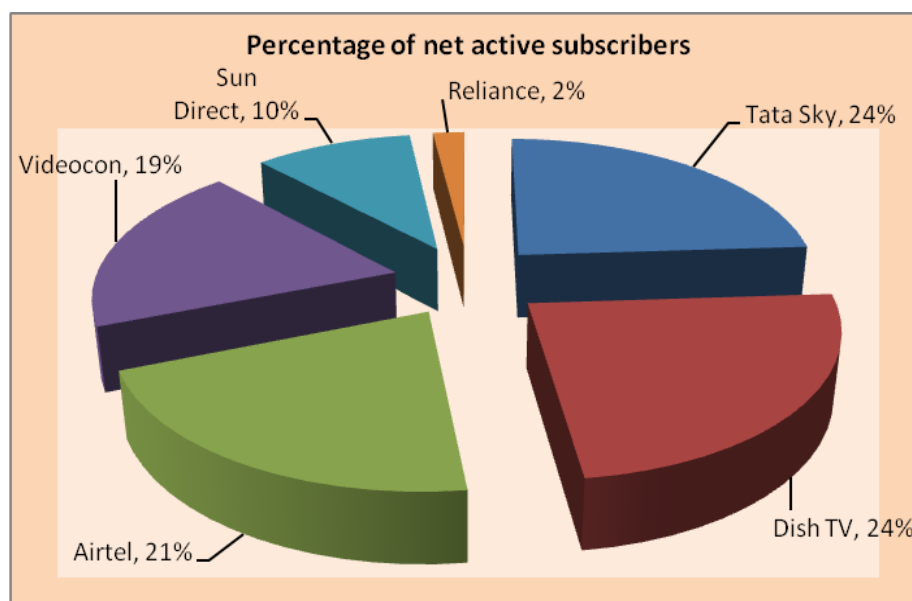


Chart 5.4 : Market share of DTH Operators



Source : As reported to TRAI

E. FM Radio Services

5.7 Apart from the radio Stations operated by All India Radio, the public broadcaster, as on 31st December 2017, there are 326 operational private FM Radio stations in 86 existing cities with operational 34 FM Radio broadcaster as compared to 322 private FM Radio Stations in

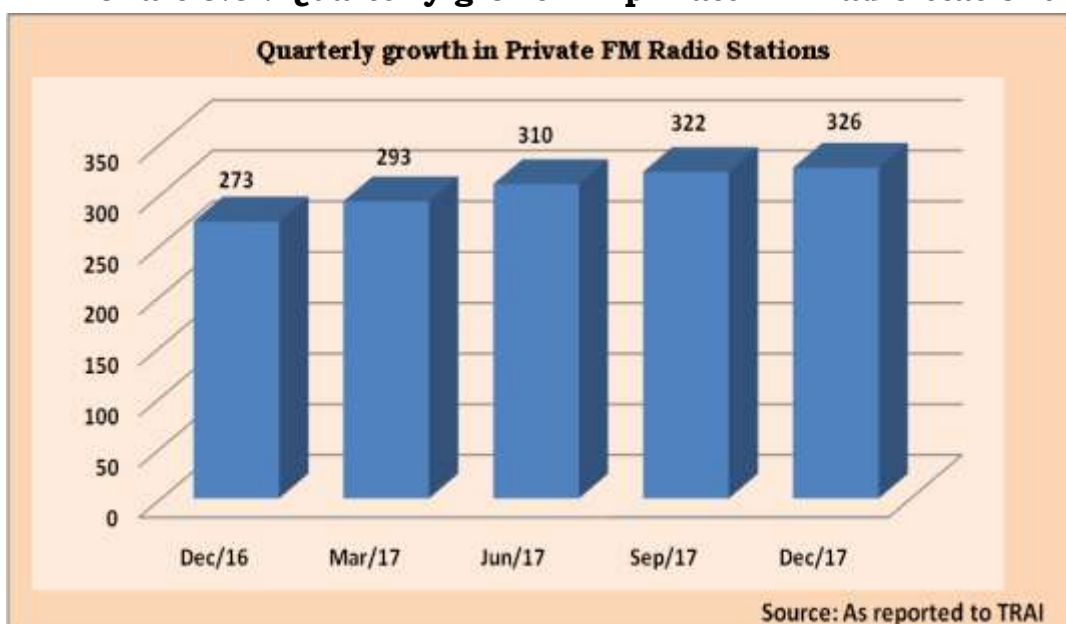
86 cities with operational 34 FM Radio broadcasters in the previous quarter. A list of 86 existing cities with operational FM radio channels is placed at Annexure 5.3.

5.8 According to the reporting of advertisement revenue provided by the 34 FM Radio broadcasters, it has emerged that during the quarter ending 31st December 2017, 04 new private FM Radio Stations have become operational, details of which are as under:-

S.No	Name of FM Radio Operator	No of stations	Name of the cities
1	South Asia FM Limited (existing operator)	01	1) Varanasi
2	Rajasthan Patrika Private Limited (existing operator)	03	1) Aligarh 2) Muzaffarpur 3) Jammu
	Total	04	

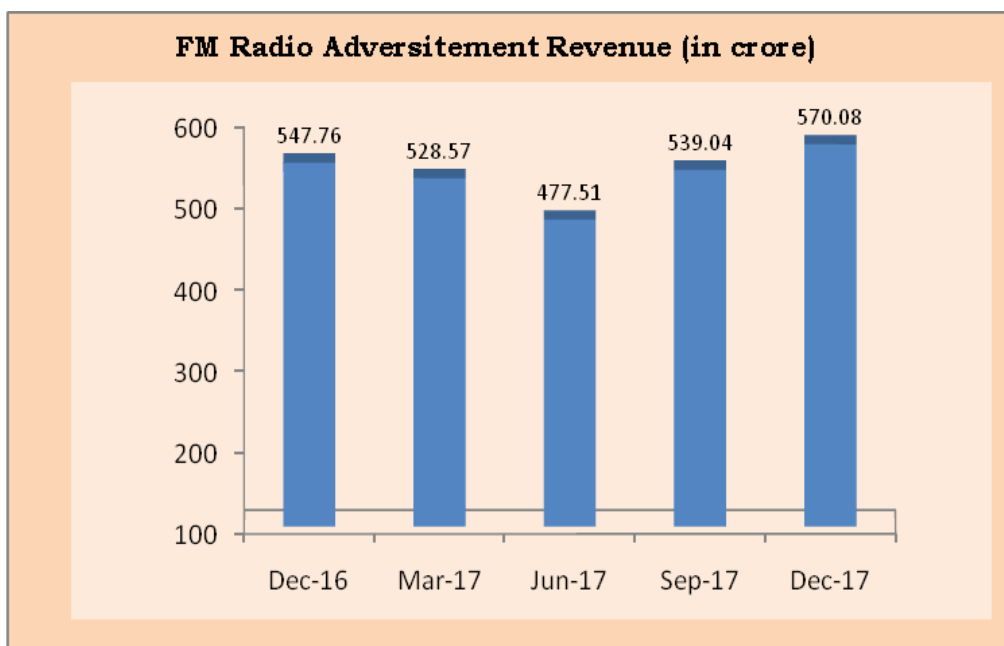
5.9 The following chart depicts the Quarterly growth in number of operational private FM Radio Stations reported by the FM Radio broadcasters during last four quarters.

Chart 5.5 : Quarterly growth in private FM Radio stations



5.10 The reported advertisement revenue during the quarter ending December, 2017 in respect of 325 private FM Radio stations is Rs 570.08 crore as against Rs 539.04 crore in respect of 322 private FM Radio stations for the previous quarter. The following chart is based on the details of Advertisement Revenue submitted by the FM Radio broadcasters to TRAI during last one year.

Chart 5.6 : Quarterly growth in FM Radio Advertisement Revenue



F. Community Radio

5.11 As on December 2017, 214 Community Radio stations are operational. The quarterly growth in the number of operational community radio stations is depicted in the chart below.

Chart 5.7 : Quarterly Growth in number of Community Radio Stations

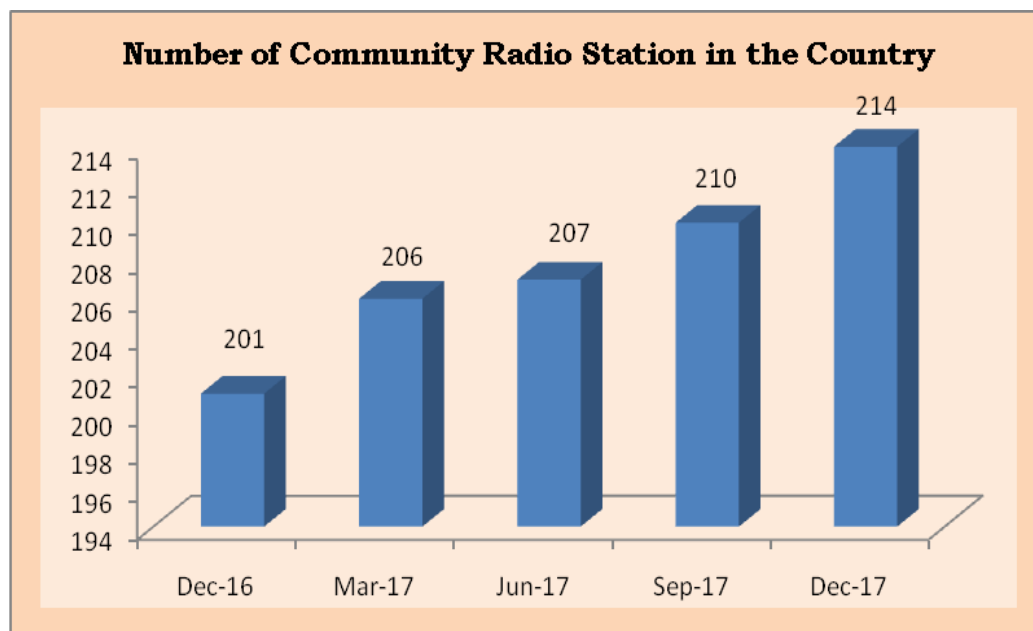


Table 5.3 : Number of application received/Letters of Intent issued/ Licenses issued in respect of Community Radio Stations

Sl. No.	Items	As on 31.12.2017
1	Total No. of Applications Received	2,141
2	No. of Letters of Intent (LOIs) issued	562
3	No. of Applications rejected	1,130
4	No. of Licenses issued (GOPA signed)	294
5	No. of Stations Operational	214

Source: Ministry of Information & Broadcasting (MIB)

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Annexures

Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone (GSM)		Bharti (GSM)		Idea (GSM)		Aircel (GSM)		Reliance (GSM)	
	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17
Andhra Pradesh	6,753,714	6,689,828	26,656,836	27,184,997	16,517,052	16,626,241	2,569,213	2,455,229	3,282,701	747,146
Assam	3,762,838	3,787,049	6,643,180	6,766,210	1,164,256	1,151,178	5,891,209	5,892,499	850,144	569,804
Bihar	9,398,899	9,550,764	31,003,522	31,181,437	12,028,613	12,047,235	7,559,227	7,549,103	2,500,183	1,003,168
Delhi	11,086,576	11,617,410	12,192,751	12,877,050	6,518,715	6,794,793	6,876,667	6,763,176	5,225,300	4,389,205
Gujarat	20,213,238	20,537,804	9,371,440	9,652,110	12,789,920	13,378,193	17,005	-	1,021,116	890,477
Haryana	5,974,021	6,272,831	3,636,294	3,943,506	4,823,039	5,084,778	3,092	2,092	1,244,181	178,794
Himachal Pradesh	625,529	592,849	3,105,098	3,361,346	804,733	880,211	1,043,503	496,715	1,452,766	1,031,862
Jammu & Kashmir	916,941	862,593	3,818,739	4,084,556	609,990	572,422	3,273,367	3,422,896	814,284	726,412
Karnataka	7,636,144	7,667,041	23,399,788	24,251,336	9,151,098	9,300,939	3,182,214	3,051,390	5,030,050	1,092,687
Kerala	7,801,358	7,877,602	4,767,107	4,799,436	11,375,246	11,590,307	338,076	292,060	1,180,359	180,987
Madhya Pradesh	6,430,131	6,544,311	14,109,599	15,039,063	24,187,200	26,420,511	20,623	552	8,634,119	6,144,470
Maharashtra	19,430,890	20,120,081	14,579,113	14,700,063	27,147,341	28,506,515	2,253,416	1,404,799	3,317,012	415,822
Mumbai	8,954,979	9,639,460	7,089,123	7,659,322	4,251,906	4,472,581	2,686,544	2,526,680	4,241,048	2,957,240
North East	1,567,287	1,570,490	4,435,501	4,426,986	507,184	474,695	3,445,833	3,292,595	212,125	148,351
Orissa	4,289,238	4,293,210	11,796,328	11,949,613	1,754,886	1,713,464	4,237,088	4,030,336	2,013,914	1,283,869
Punjab	5,064,811	4,943,452	9,382,768	9,767,310	7,068,108	7,417,252	1,103,195	904,542	1,506,306	1,144,604
Rajasthan	11,497,700	11,709,525	21,263,496	21,710,763	7,723,296	7,812,272	6,518,691	6,239,272	5,320,052	3,587,447
Tamil Nadu (incl. Chennai)	16,177,171	16,531,883	19,240,750	19,899,546	5,863,207	5,902,784	20,852,231	20,492,085	5,327,780	954,122
UP(E)	21,389,366	22,422,483	24,598,194	25,210,561	11,767,665	11,736,184	6,595,444	6,520,776	7,027,296	886,914
UP(W)	12,179,223	12,295,907	8,992,267	9,121,232	15,902,510	16,466,929	866,583	566,634	5,259,290	682,203
Kolkata	5,697,018	6,021,446	5,214,089	5,606,347	2,430,737	2,443,926	4,361,550	4,254,927	3,729,489	2,282,737
West Bengal	20,596,943	20,980,344	16,751,486	16,920,289	5,768,462	5,704,764	5,057,207	4,776,300	2,974,504	1,868,028
Total	207,444,015	212,528,363	282,047,469	290,113,079	190,155,164	196,498,174	88,751,978	84,934,658	72,164,019	33,166,349

Annexure 1.1 (contd.)

Service Area	Tata (GSM)		Tata (CDMA)		BSNL (GSM)		BSNL (CDMA)		MTNL (GSM)	
	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17
Andhra Pradesh	3,048,461	2,661,109	444,556	382,714	10,023,581	10,056,216	13,404	11,805	-	-
Assam	-	-	-	-	1,492,076	1,567,658	63,033	62,553	-	-
Bihar	914,224	662,247	236,676	185,932	3,997,238	4,147,876	-	-	-	-
Delhi	-	-	1,424,478	1,366,540	-	-	-	-	2,312,983	2,299,685
Gujarat	2,243,524	1,746,703	196,255	163,489	5,229,730	5,515,259	31,980	29,533	-	-
Haryana	2,053,825	1,464,887	81,005	78,353	4,061,981	4,251,802	2,969	-	-	-
Himachal Pradesh	18,801	11,713	13,601	11,086	2,311,890	2,463,075	6,300	6,291	-	-
Jammu & Kashmir	-	-	-	-	1,513,445	1,528,195	21,296	20,762	-	-
Karnataka	5,812,873	5,190,732	142,909	126,906	6,993,841	7,219,725	41,402	39,561	-	-
Kerala	1,117,026	853,994	69,937	57,961	9,841,190	10,216,449	75,036	68,874	-	-
Madhya Pradesh	4,076,909	3,228,218	112,182	92,049	5,481,446	5,762,169	66,295	65,195	-	-
Maharashtra	3,638,018	3,109,019	893,573	794,752	6,763,223	6,965,299	34,218	31,574	-	-
Mumbai	1,934,653	1,636,910	564,822	499,205	-	-	-	-	1,293,805	1,285,081
North East	-	-	-	-	1,385,588	1,358,347	159,216	158,836	-	-
Orissa	1,579,916	1,156,241	74,610	62,918	5,188,240	5,258,673	12,138	11,141	-	-
Punjab	1,871,965	1,393,540	90,070	81,514	4,995,631	5,143,003	-	-	-	-
Rajasthan	423,236	268,603	275,858	199,290	5,674,459	5,458,187	48,249	46,547	-	-
Tamil Nadu (incl. Chennai)	3,468,167	2,658,747	96,062	78,132	9,838,665	9,894,687	30,915	27,856	-	-
UP(E)	2,824,089	2,322,511	77,379	56,435	11,795,111	11,654,457	7,987	6,755	-	-
UP(W)	2,397,975	1,926,644	177,125	143,539	5,720,098	5,832,197	-	-	-	-
Kolkata	2,107,412	1,702,295	207,662	176,582	1,156,138	1,300,590	703	703	-	-
West Bengal	179,322	120,777	26,921	20,668	1,659,772	1,660,882	72,273	72,599	-	-
Total	39,710,396	32,114,890	5,205,681	4,578,065	105,123,343	107,254,746	687,414	660,585	3,606,788	3,584,766

Annexure 1.1 (contd.)

Service Area	Sistema (CDMA)		Reliance Jio (LTE)		Telenor (GSM)		Total		Net Additions
	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	
Andhra Pradesh			11,466,889	13,276,818	4,509,364	4,223,046	85,285,771	84,315,149	(970,622)
Assam			2,289,606	2,804,544			22,156,342	22,601,495	445,153
Bihar			8,429,632	10,105,860	8,535,033	7,855,226	84,603,247	84,288,848	(314,399)
Delhi	382,111		8,732,876	9,440,273			54,752,457	55,548,132	795,675
Gujarat	72,501		10,111,962	11,546,414	7,762,084	7,132,006	69,060,755	70,591,988	1,531,233
Haryana			3,602,426	4,188,177			25,482,833	25,465,220	(17,613)
Himachal Pradesh			1,429,106	1,715,932			10,811,327	10,571,080	(240,247)
Jammu & Kashmir			1,595,096	1,904,180			12,563,158	13,122,016	558,858
Karnataka	522,340		8,568,111	9,260,031			70,480,770	67,200,348	(3,280,422)
Kerala	180,928		4,507,395	5,072,047			41,253,658	41,009,717	(243,941)
Madhya Pradesh			8,364,354	9,802,824			71,482,858	73,099,362	1,616,504
Maharashtra			9,965,772	11,594,705	6,585,229	5,741,125	94,607,805	93,383,754	(1,224,051)
Mumbai			6,449,427	7,651,459			37,466,307	38,327,938	861,631
North East			1,190,395	1,382,810			12,903,129	12,813,110	(90,019)
Orissa			3,515,820	4,263,579			34,462,178	34,023,044	(439,134)
Punjab			6,266,623	7,272,099			37,349,477	38,067,316	717,839
Rajasthan	848,103		7,203,025	8,776,476			66,796,165	65,808,382	(987,783)
Tamil Nadu (incl. Chennai)	380,530		9,580,098	10,589,205			90,855,576	87,029,047	(3,826,529)
UP(E)			8,635,919	10,134,487	10,963,546	9,823,240	105,681,996	100,774,803	(4,907,193)
UP(W)	76,372		7,326,032	8,153,481	7,657,191	7,136,085	66,554,666	62,324,851	(4,229,815)
Kolkata	281,998		4,568,090	5,278,886			29,754,886	29,068,439	(686,447)
West Bengal	771,424		4,817,250	5,876,955			58,675,564	58,001,606	(673,958)
Total	3,516,307	-	138,615,904	160,091,242	46,012,447	41,910,728	1,183,040,925	1,167,435,645	(15,605,280)

Annexure 1.2: Wireline Subscriber Base

Service Area	Bharti		Reliance		Quadrant		Sistema		Tata		MTNL		BSNL		Vodafone		Aircel		Total		Net Additions
	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	Sep-17	Dec-17	
Andhra Pradesh	164,472	164,994	74,169	73,284					174,368	174,331			1,129,657	1,080,608	25,380	26,010	4,011	5,347	1,572,057	1,524,574	-47,483
Assam													143,061	138,036	2,520	2,700			145,581	140,736	-4,845
Bihar			6,408	6,246					12,129	12,087			256,099	251,263	1,950	2,010			276,586	271,606	-4,980
Delhi	1,306,057	1,311,798	166,211	162,689					139,933	143,514	1,570,235	1,555,478			30,320	32,070	32,264	14,909	3,245,020	3,220,458	-24,562
Gujarat	77,746	78,553	71,187	70,177					90,529	92,421			1,054,207	1,041,619	9,097	9,797	58	1,063	1,302,824	1,293,630	-9,194
Haryana	22,489	22,559	3,724	3,627					37,618	38,414			251,827	243,298					315,658	307,898	-7,760
Himachal Pradesh			3,891	3,889					2,527	2,389			127,257	121,623	60	60			133,735	127,961	-5,774
Jammu & Kashmir													121,908	116,807					121,908	116,807	-5,101
Karnataka	633,104	640,466	156,577	153,214					265,196	270,557			1,161,390	1,127,253	29,510	33,625	25,902	28,622	2,271,679	2,253,737	-17,942
Kerala	57,636	58,236	32,510	30,828					19,029	18,799			1,912,397	1,882,601	2,160	2,430			2,023,732	1,992,894	-30,838
Madhya Pradesh	268,995	263,865	19,514	19,335					15,280	15,346			694,783	679,047	570	600			999,142	978,193	-20,949
Maharashtra	79,492	80,552	78,567	76,883					309,673	307,763			1,325,697	1,283,293	14,909	15,395	644	585	1,808,982	1,764,471	-44,511
Mumbai	359,565	357,551	252,279	248,775					553,699	558,877	1,833,980	1,820,673			25,365	29,582	4,604	11,010	3,029,492	3,026,468	-3,024
North East													115,109	113,002	120	120			115,229	113,122	-2,107
Orissa			3,235	3,188					8,198	8,100			261,775	260,470	1,350	1,530			274,558	273,288	-1,270
Punjab	119,463	120,048	19,818	18,956	263,320	250,373			15,797	15,924			511,064	483,142	1,110	1,110		30	930,572	889,583	-40,989
Rajasthan	49,208	49,915	19,425	29,500			54,086		12,033	12,652			539,879	514,592	5,700	5,880	3,560	3,551	683,891	616,090	-67,801
Tamil Nadu (incl. Chennai)	556,478	555,742	130,688	127,374					112,670	113,535			1,617,284	1,565,517	13,970	14,950			2,431,090	2,377,118	-53,972
U.P.(E)	64,092	64,156	34,217	33,804					13,484	13,570			367,235	365,061	9,070	9,100	2	2	488,100	485,693	-2,407
U.P.(W)	22,873	22,568	7,042	6,967					9,888	9,593			324,616	313,711	4,050	4,050	131		368,600	356,889	-11,711
Kolkata	121,142	122,138	68,191	67,394					50,209	50,239			581,228	569,979	5,610	6,420	568	2,592	826,948	818,762	-8,186
West Bengal			1,908	1,862					3,591	3,051			299,484	279,736	60	60			305,043	284,709	-20,334
Total	3,902,812	3,913,141	1,149,561	1,137,992	263,320	250,373	54,086	0	1,845,851	1,861,162	3,404,215	3,376,151	12,795,957	12,430,658	182,881	197,499	71,744	67,711	23,670,427	23,234,687	-435,740

Annexure 1.3: Service Area and Operator wise details of PCOs

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/decrease as on 31.12.2017	Growth/Decline as on 31.12.2017 (%)
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	17,356	16,362	-994	-5.73
	Bharti Group	368	181	-187	-50.82
	Tata Group	4,092	5,223	1,131	27.64
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	17,356	16,362	-994	-5.73
	Bharti Group	368	181	-187	-50.82
	Tata Group	4,092	5,223	1,131	27.64
Assam	Bharat Sanchar Nigam Ltd.	5,841	5,805	-36	-0.62
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,641	1,507	-134	-8.17
	Tata Group	6	27	21	350.00
Jharkhand	Bharat Sanchar Nigam Ltd.	2,691	2,701	10	0.37
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	4,332	4,208	-124	-2.86
	Tata Group	6	27	21	350.00
Delhi	Bharti Group	660	330	-330	-50.00
	Mahanagar Telephone Nigam Ltd./MTNL	49,564	48,368	-1,196	-2.41
	Tata Group	1,516	1,341	-175	-11.54
Gujarat	Bharat Sanchar Nigam Ltd.	21,055	20,120	-935	-4.44
	Bharti Group	28	14	-14	-50.00
	Tata Group	1,556	1,232	-324	-20.82
Haryana	Bharat Sanchar Nigam Ltd.	1,751	1,663	-88	-5.03
	Bharti Group	310	150	-160	-51.61
	Tata Group	43	39	-4	-9.30
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	1,345	1,240	-105	-7.81
	Tata Group	2	2	0	0
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,935	1,811	-124	-6.41
Karnataka	Bharat Sanchar Nigam Ltd.	23,060	21,756	-1,304	-5.65
	Bharti Group	7,772	3,737	-4,035	-51.92
	Tata Group	613	501	-112	-18.27
Kerala	Bharat Sanchar Nigam Ltd.	17,785	17,425	-360	-2.02

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/decrease as on 31.12.2017	Growth/Decline as on 31.12.2017 (%)
Kerala	Bharti Group	956	465	-491	-51.36
	Tata Group	29	32	3	10.34
Kolkata	Bharat Sanchar Nigam Ltd.	4,612	4,468	-144	-3.12
	Bharti Group	52	26	-26	-50.00
	Tata Group	168	138	-30	-17.86
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	18,596	17,761	-835	-4.49
	Bharti Group	3,856	1,841	-2,015	-52.26
	Tata Group	547	487	-60	-10.97
Chhattisgarh	Bharat Sanchar Nigam Ltd.	1,543	1,371	-172	-11.15
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	20,139	19,132	-1,007	-5.00
	Bharti Group	3,856	1,841	-2,015	-52.26
	Tata Group	547	487	-60	-10.97
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	45,760	44,321	-1,439	-3.14
	Tata Group	6,682	8,833	2,151	32.19
Mumbai	Bharti Group	80	41	-39	-48.75
	Mahanagar Telephone Nigam Ltd./MTNL	73,377	72,750	-627	-0.85
	Tata Group	3,796	3,439	-357	-9.40
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	45,760	44,321	-1,439	-3.14
	Bharti Group	80	41	-39	-48.75
	Mahanagar Telephone Nigam Ltd./MTNL	73,377	72,750	-627	-0.85
	Tata Group	10,478	12,272	1,794	17.12
Arunachal Pradesh	Bharat Sanchar Nigam Ltd.	1,124	1,114	-10	-0.89
Mizoram	Bharat Sanchar Nigam Ltd.	0	2,406	2,406	0
Nagaland	Bharat Sanchar Nigam Ltd.	2,409	0	-2,409	-100.00
Orissa	Bharat Sanchar Nigam Ltd.	2,161	2,094	-67	-3.10
	Tata Group	59	26	-33	-55.93
Punjab	Bharat Sanchar Nigam Ltd.	2,568	2,168	-400	-15.58
	Bharti Group	94	37	-57	-60.64

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/decrease as on 31.12.2017	Growth/Decline as on 31.12.2017 (%)
Punjab	Quadrant Televentures Ltd.	1,513	1,420	-93	-6.15
	Tata Group	226	261	35	15.49
Rajasthan	Bharat Sanchar Nigam Ltd.	6,446	5,910	-536	-8.32
	Bharti Group	418	209	-209	-50.00
	Tata Group	223	200	-23	-10.31
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	39,170	37,301	-1,869	-4.77
	Bharti Group	11,896	5,457	-6,439	-54.13
	Tata Group	121	104	-17	-14.05
Chennai	Bharat Sanchar Nigam Ltd.	9,562	9,268	-294	-3.07
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	48,732	46,569	-2,163	-4.44
	Bharti Group	11,896	5,457	-6,439	-54.13
	Tata Group	121	104	-17	-14.05
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	10,154	10,185	31	0.31
	Bharti Group	172	86	-86	-50.00
	Tata Group	7	14	7	100.00
Uttarakhand	Bharat Sanchar Nigam Ltd.	1,191	1,138	-53	-4.45
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,205	2,042	-163	-7.39
	Bharti Group	118	50	-68	-57.63
	Tata Group	154	192	38	24.68
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,396	3,180	-216	-6.36
	Bharti Group	118	50	-68	-57.63
	Tata Group	154	192	38	24.68
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,034	4,109	75	1.86
	Tata Group	45	42	-3	-6.67
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	142	142	0	0
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,176	4,251	75	1.80
	Tata Group	45	42	-3	-6.67
Total		417,256	393,483	-23,773	-5.70

Annexure 1.4: Service Area & Operator wise details of Village Public Telephones

Name of Circle/Service Area	Service Provider	Number of VPTs as on 30.9.2017	Number of VPTs as on 31.12.2017	Net VPTs increase/ decreased as on 31.12.2017	Percentage Growth/ Decline as on 31.12.2017
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	10,113	9,977	-136	-0.01
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	10,113	9,977	-136	-0.01
Assam	Bharat Sanchar Nigam Ltd.	2,810	2,810	0	0
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	6,768	6,768	0	0
Jharkhand	Bharat Sanchar Nigam Ltd.	490	490	0	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	7,258	7,258	0	0
Gujarat	Bharat Sanchar Nigam Ltd.	10,035	8,750	-1,285	-0.13
Haryana	Bharat Sanchar Nigam Ltd.	1,440	1,272	-168	-0.12
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	6,368	5,028	-1,340	-0.21
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	2,248	2,244	-4	-0.00
Karnataka	Bharat Sanchar Nigam Ltd.	7,586	7,512	-74	-0.01
Kerala	Bharat Sanchar Nigam Ltd.	415	405	-10	-0.02
Kolkata	Bharat Sanchar Nigam Ltd.	130	130	0	0
Madhya Pradesh (excl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	39,528	39,692	164	0.00
Chhattisgarh	Bharat Sanchar Nigam Ltd.	8,394	8,391	-3	-0.00
Madhya Pradesh (incl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	47,922	48,083	161	0.00
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	23,827	22,217	-1,610	-0.07
	Tata Group	0	1,282	1,282	0
Maharashtra (incl. Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	23,827	22,217	-1,610	-0.07
	Tata Group	0	1,282	1,282	0
Orissa	Bharat Sanchar Nigam Ltd.	6,205	6,205	0	0
Punjab	Bharat Sanchar Nigam Ltd.	6,001	5,938	-63	-0.01

Annexure 1.5 (contd.)

Name of Circle/Service Area	Service Provider	Number of VPTs as on 30.9.2017	Number of VPTs as on 31.12.2017	Net VPTs increase/decreased as on 31.12.2017	Percentage Growth/Decline as on 31.12.2017
Rajasthan	Bharat Sanchar Nigam Ltd.	10,728	9,329	-1,399	-0.13
Tamilnadu (excluding Chennai)	Bharat Sanchar Nigam Ltd.	11,542	11,457	-85	-0.01
Chennai	Bharat Sanchar Nigam Ltd.	165	144	-21	-0.13
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	11,707	11,601	-106	-0.01
Uttar Pradesh- East	Bharat Sanchar Nigam Ltd.	1,217	1,119	-98	-0.08
Uttarakhand	Bharat Sanchar Nigam Ltd.	3,462	3,473	11	0.00
Uttar Pradesh – West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,394	3,394	0	0
Total	Bharat Sanchar Nigam Ltd.	6856	6867	11	0.002
Total(in Lakhs)	Bharat Sanchar Nigam Ltd.	36958	36958	0	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	340	340	0	0
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	37,298	37,298	0	0
Total		207,632	202,395	-5,237	-2.52

Annexure 1.5 : Internet Service Provider(ISP) wise Internet Subscriber base

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
1	Reliance Jio Infocomm Ltd (Infotel Broadband Services Limited)	0	160091242	160091242
2	Bharti Airtel Limited	27544982	71091070	98636052
3	Vodafone	17503782	52439606	69943388
4	Idea Cellular	7806266	34808447	42614713
5	Bharat Sanchar Nigam Ltd.	10229609	21949301	32178910
6	Aircel	10034993	6024354	16059347
7	Telenor	6256415	3188671	9445086
8	Tata	2989749	4317961	7307710
9	Reliance Communications	15782	1972828	1988610
10	Mahanagar Telephone Nigam Ltd.	492031	1371743	1863774
11	Atria Convergence Technologies Pvt. Ltd.	0	1282127	1282127
12	Hathway Cable & Datacom Pvt. Ltd.	13727	731497	745224
13	You Broadband India Pvt. Ltd.	151159	566546	717705
14	Tikona	1614	256879	258493
15	GTPL Broadband Pvt. Ltd.	3	254792	254795
16	D-Vois Broadband Private Limited	0	227808	227808
17	Quadrant Televentures Ltd.	254	208289	208543
18	Excitel Broadband Private Limited	0	191999	191999
19	Syscon Infoway Pvt Ltd	14073	174887	188960
20	Asianet Satellite Communications Ltd.	0	187447	187447
21	Alliance Broadband Services Pvt. Ltd.	0	184558	184558
22	Indinet Service Pvt Ltd	0	136227	136227
23	DEN Networks Ltd	2	106625	106627
24	RailTel Corporation of India Ltd.	0	98907	98907
25	Planet E-Shop Holdings India Ltd.	1060	75989	77049
26	Airlink Communications Pvt. Ltd	0	66153	66153
27	Five Network Solution (India) Ltd.	0	65932	65932
28	Honesty Net Solutions (I) Pvt Ltd	139	61391	61530
29	Ortel Communication Ltd.	0	55393	55393
30	Nextra Teleservices Pvt. Ltd.	0	49350	49350
31	SITI Broadband Services Pvt. Ltd.	0	43857	43857
32	Wish Net Pvt. Ltd.	0	37524	37524
33	Wan and Lan Internet Pvt. Ltd.	0	36051	36051
34	Citycom Networks Pvt. Ltd.	0	34923	34923

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
35	Limras Eronet Broadband Service Pvt Ltd	7197	25751	32948
36	Vasai Cable Pvt. Ltd.	0	26521	26521
37	DNA Infotel Pvt Ltd	0	22627	22627
38	Ishan Netsol Pvt Ltd	17364	4739	22103
39	Chandra Net Pvt. Limited	0	20426	20426
40	Broadband Pacenet (I) Pvt. Ltd.	0	17698	17698
41	IKF Technologies Ltd	0	17169	17169
42	Geocity Network Solutions Pvt. Ltd.	0	15621	15621
43	Quest Consultancy Pvt. Ltd.	0	13852	13852
44	City Online Services Ltd	0	13162	13162
45	Apna Telelink Ltd.	0	12566	12566
46	Rajesh Multi Channel Pvt. Ltd.	108	12172	12280
47	CSC e-Governance Services India Ltd.	0	11985	11985
48	Fusionnet Web Services Pvt. Ltd.	0	11969	11969
49	Meghbela Cable & Broadband Servies(P)Ltd	0	10206	10206
50	Yashash Cable Network Pvt Ltd	0	10191	10191
51	SmartLink Broadband Services	0	9462	9462
52	GBPS Networks Pvt. Ltd.	0	9319	9319
53	Pioneerelabs	301	8905	9206
54	World Phone Internet Services Pvt Ltd	0	8978	8978
55	Digital Cloud Technologies Pvt. Ltd.	0	8876	8876
56	Kappa Internet Services Pvt Ltd.	0	8794	8794
57	Sampark Infotainment Pvt Ltd	0	8157	8157
58	North East Dataa Network Pvt Ltd.	0	7907	7907
59	RI Networks Pvt Ltd	0	7713	7713
60	Swiftnet Broadband Pvt Ltd	0	7000	7000
61	Southern Online Bio Technologies Ltd.	71	6711	6782
62	Digital Network associates Pvt. Ltd	276	6439	6715
63	Lotus Broadband Pvt Ltd	0	6642	6642
64	United Telecoms Ltd.	187	6061	6248
65	Sifi OnlinePvt. Ltd.	0	6137	6137
66	Readylink Internet Services Pvt Ltd	339	5488	5827
67	Shri Omkar Infocom Pvt. Ltd.	0	5527	5527
68	Intermedia Cable Communication Pvt Ltd	0	5049	5049
69	Swiftmail Communications Ltd.	1369	3595	4964

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
70	Narmada Cyberzone Pvt Ltd	1858	3097	4955
71	Netplus Broadband Services Pvt. Ltd	0	4810	4810
72	CJM Consultancy Services Pvt. Ltd.	0	4698	4698
73	Siliguri Internet & Cable TV Pvt. Ltd.	0	4527	4527
74	Spacenet Internet Services Pvt Ltd	0	4472	4472
75	Sikka Broadband(P) Ltd.(Gomti Cable Network Pvt. Ltd.)	0	4175	4175
76	Cityzone Infonet Pvt. Ltd	0	4091	4091
77	Blazenet Ltd.	0	3977	3977
78	Multinet (Udaipur) Pvt. Ltd.	0	3649	3649
79	Airgenie Communications Pvt. Ltd.	0	3639	3639
80	F/X Wireless Technology Services Pvt. Ltd.	0	2870	2870
81	Star Broadband Services (I) Pvt Ltd	0	2816	2816
82	CJ Online Pvt. Ltd.	0	2743	2743
83	Kaizen Infonet Pvt Ltd	7	2526	2533
84	Speed Online.net Pvt. Ltd.	0	2483	2483
85	Nettlinx Ltd.	26	2343	2369
86	Aerocast Networks Pvt Ltd.	0	2352	2352
87	Rajesh Patel Net Services Pvt. Ltd.	79	2079	2158
88	VIVA Communications Pvt Ltd(Mylai Karpagambal Information Systems (P) Ltd)	0	2158	2158
89	S.S.Netcom Pvt Ltd	0	2019	2019
90	Capture Network Systems Pvt. Ltd.	286	1519	1805
91	Jetspot Networks Pvt. Ltd.	0	1805	1805
92	Wnet Telecom Private Limited	0	1804	1804
93	Sphier Infotech Pvt. Ltd.	0	1750	1750
94	Hughes Communications India Ltd.	519	1035	1554
95	Touch Net India Pvt. Ltd.	0	1547	1547
96	Aeroway Networks Pvt Ltd.	0	1287	1287
97	Sify Technologies Ltd.	675	581	1256
98	Harisree CableNet Pvt. Ltd.	0	1234	1234
99	Symbois Creations Pvt. Ltd.	6	1167	1173
100	delDSL Internet Pvt Ltd	0	1058	1058
101	Correl IT Services Pvt. Ltd.	0	948	948
102	Elyzium Technologies Pvt. Ltd.	0	847	847
103	STN Communication & Advertising Pvt Ltd.	8	839	847

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
104	Daksh Broadband Services Pvt Ltd	0	801	801
105	NetMagic Solutions(P) Ltd.	0	783	783
106	Japra Tele Link Pvt. Ltd.	0	713	713
107	Data Infosys Ltd.	0	640	640
108	Barani Data Solutions Private Limited	372	246	618
109	Tata Sky Broadband Private Limited	0	594	594
110	Gorakhpur Net Services Pvt. Ltd.	0	575	575
111	Primenet Global Ltd.	0	575	575
112	Digital2Virtual ISP Pvt. Ltd.	0	549	549
113	Datawave IT solutions Pvt. Ltd.	0	544	544
114	Suncity Broadband Pvt Ltd.	0	536	536
115	Rajdhani Telecom Pvt. Ltd.	33	471	504
116	Rida Communication Pvt. Ltd.	0	493	493
117	Oasis Cable Pvt Ltd.	0	434	434
118	Tamana Winet Pvt. Ltd.	0	418	418
119	Oistel Telecom Pvt. Ltd.	207	207	414
120	Power Grid Corporation of India Ltd.	0	405	405
121	WE INTERNET LIMITED (Nivyah Infrastructure & Telecom Services Ltd.)	0	403	403
122	Conjoinix Technologies Pvt Ltd	0	378	378
123	Singh Internet Services Pvt. Ltd.	0	359	359
124	Gleam Worldwide Services Pvt. Ltd.	0	286	286
125	Reticule Infotech Pvt. Ltd.	0	269	269
126	Pulse Telesystems Pvt. Ltd.	0	254	254
127	Khetan Cable Network (P) Ltd	0	208	208
128	Sistema Shyam	0	202	202
129	Bhiwani Communications Pvt. Ltd.	89	106	195
130	Microsense Pvt. Ltd.	0	168	168
131	ERNET India	92	56	148
132	QBC Infotech Pvt. Ltd.	0	134	134
133	Sab Infotech (Sab Industries)	0	132	132
134	Shri Vinayagaa Internet Pvt Ltd	26	78	104
135	Angel Air Network Solutions Private Limited	0	90	90
136	Trans Virtual Pvt. Ltd.	16	72	88
137	Dream Plus Multi Services Pvt. Ltd.	0	80	80
138	Telestra Telecommunications Pvt. Ltd.	0	73	73

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
139	Sanyog Networks Pvt Ltd	0	66	66
140	Edge Telecommunications Pvt. Ltd.	0	65	65
141	Verizon Communications India Pvt. Ltd. (Worldcom Communications)	0	65	65
142	Airmesh Communications Limited	0	61	61
143	Pacific Internet India Pvt. Ltd.	0	60	60
144	AT&T Global Network Services India Pvt Ltd	0	59	59
145	HCL Comnet Systems & Services Ltd.	22	14	36
146	West Bengal Electronics Industry Development Corp. Ltd.	0	33	33
147	Dreamnet Pvt.Ltd.	0	30	30
148	Adya Tech One Services Pvt Ltd	0	28	28
149	Orange Business Services India Network Pvt. Ltd.	0	22	22
150	Novanet India Ltd.	0	16	16
151	Vcare Call Centres India Pvt. Ltd.	0	12	12
152	Financial Technologies Communications Ltd	10	0	10
153	Essel Shyam Communications Limited	3	6	9
154	Nelco Ltd.	1	6	7
155	Tatanet Services Ltd	0	6	6
156	ABT Ltd.	3	2	5
	Total	83087190	362869617	445956807

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

**Annexure 1.6: List of Service Providers which reported IP
Telephony Minutes for Q.E. Dec-17**

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 Limited
13	Trikon Electronics Pvt. Ltd.
14	VIVA Communications Pvt. Ltd.
15	World Phone Internet Services Pvt. Ltd.
16	You Broadband & Cable India Pvt. Ltd.

Annexure 1.7: Service Area wise PMRTS subscriber Base

SNo.	Operative Area	Service Provider	Subscriber Base	
			30.09.2017	31.12.2017
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5112	5817
		Procall(Delhi)	2711	2768
		Procall (Faridabad)		
		Procall (Gurgaon)		
		Total	7823	8585
2	Mumbai (Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7729	7755
		Smartalk (Mumbai)	517	526
		Bhilwara Telenet(Mumbai)	811	818
		Airtalk Solutions & Services Pvt. Ltd	314	304
		Total	9371	9403
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2429	2388
		Total	2429	2388
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6711	7058
		Quick Calls	371	408
		Total	7082	7466
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6874	6795
		Quick Calls	415	506
		Total	7289	7301
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	4968	5130
		Quick Calls (Hyderabad Urban)	704	704
		Total	5672	5834
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1255	1302
		Total	1255	1302
8	Rajasthan (Jaipur)	Procall	294	286
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	431	448
		Total	725	734

Annexure- 1.7 (Contd.)

SNo.	Operative Area	Service Provider	Subscriber Base	
			30.09.2017	31.12.2017
9	Gujarat (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej/ Kutch/Amrela / Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej)	6249	6196
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		Total	8069	8016
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1607	1615
		Smartalk	469	442
		Total	2076	2057
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	345	361
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	674	786
		Total	1019	1147
Grand Total			52810	54233

Annexure 2.1: GSM Service - Service Area wise Statistics for QE Dec-17

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	95.38	98	17	250	237	488
Gujarat	94.61	75	7	237	184	420
Karnataka	93.30	93	20	252	226	478
MH	95.20	84	31	220	193	413
TN (incl. Chennai)	94.65	95	28	227	220	447

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	97.25	71	26	285	250	535
Kerala	96.68	125	11	218	222	440
MP	97.65	74	11	231	230	461
Punjab	94.60	86	50	283	234	518
Rajasthan	97.40	67	6	244	244	488
UP(E)	98.69	66	6	225	310	535
UP(W)	98.13	66	10	233	253	485
WB	99.19	62	32	212	268	479

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	97.33	81	22	247	289	536
Bihar	99.28	67	5	251	355	606
HP	98.14	73	5	257	223	480
J&K	87.23	85	7	330	295	625
NE	98.19	81	29	233	224	457
Orissa	98.88	67	17	260	296	556

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	93.22	81	10	239	225	463
Delhi	87.15	66	10	357	234	590
Mumbai	82.83	91	12	336	214	550

**Annexure 2.2: CDMA Full Mobility Service - Service Area wise Statistics for
QE Dec-17**

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	91.01	84	3	68	89	157
Gujarat	82.51	121	1	67	85	153
TN (incl. Chennai)	52.00	351	0	56	37	94
Karnataka	51.42	370	0	70	62	132
AP	88.36	79	1	55	85	140

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	98.38	10	0	10	47	57
Rajasthan	94.35	47	1	57	120	178
UP(E)	84.93	92	0	28	38	66
MP	92.43	52	0	55	97	152
Kerala	80.45	140	0	58	43	100
UP(W)	93.41	53	1	52	106	158
Haryana	98.71	21	0	22	45	67
Punjab	86.66	82	0	30	43	73

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	88.58	78	1	54	87	142
Bihar	94.21	57	1	66	124	190
HP	77.79	97	0	19	27	46
North East			NA			
Assam			NA			
J&K			NA			

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	70.84	162	0.5	65	97	161
Delhi	85.51	107	1	111	139	250
Mumbai	66.49	195	1	42	78	120

Annexure 4.1: Performance of QoS Parameters for Cellular Mobile Service

Performance Monitoring Report on Quality of Service of Cellular Mobile Service Providers for quarter ending, December, 2017																			
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		
		BS Accumulated down-time (not available for service) (%age)	Worst affected BSs due to down-time (%age)	Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)	SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	TCH, RAB and E-RAB Congestion (%age)	Network QoS DCR Spatial Distribution Measure [Network QSD(90,90)]	Network QoS DCR Temporal Distribution Measure [Network QTD(97,90)]	Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	Metering and billing credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/charging complaints		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
The achievement of benchmark against each parameter is to be averaged over a period of one quarter for 2G, 3G and 4G VoLTE Services (combined) as per the measurement methodology explained in Explanatory Memorandum to regulations																			
Andhra Pradesh	Aircel	0.11	0.16	99.02	0.09	0.19	2.00	2.81	99.50	0	0.00	0.00	100.00	100.00	100.00	96.48	97.79	100.00	100.00
	Reliance Jio	0.05	0.04	99.45	0.00	0.20	0.92	1.19	99.63	0	0.00	0.00	100.00	100.00	100.00	83.07	82.84	100.00	100.00
	Tata	0.05	0.04	99.49	0.11	0.01	2.06	2.78	98.29	0	0.00	0.00	100.00	100.00	100.00	97.72	93.19	100.00	100.00
	Vodafone	0.05	0.15	99.85	0.08	0.15	1.92	2.44	99.13	0	0.07	0.06	100.00	100.00	100.00	99.67	99.00	100.00	100.00
	Airtel	0.11	0.20	97.21	0.94	1.06	1.85	2.39	97.76	0	0.09	0.02	100.00	100.00	100.00	98.18	95.65	100.00	100.00
	BSNL	1.10	1.90	98.50	0.80	1.20	2.00	1.90	98.60	0	0.00	0.00	100.00	100.00	100.00	97.00	98.00	100.00	100.00
	idea	0.04	0.01	98.80	0.61	0.68	2.48	2.72	97.26	0	0.02	0.01	99.79	100.00	99.93	98.25	98.56	100.00	100.00
Telenor	0.10	0.37	99.80	0.05	0.03	2.07	2.67	98.92	0	NA	0.00	100.00	100.00	NA	99.44	99.29	NA	NA	
Assam	BSNL	1.81	1.97	98.60	0.80	1.37	1.89	2.45	96.20	0	0.01	0.00	100.00	100.00	100.00	97.00	98.73	100.00	100.00
	Airtel	0.79	1.38	98.50	0.92	0.93	1.95	2.25	99.03	0	0.02	0.01	100.00	100.00	100.00	88.76	90.50	100.00	100.00
	idea	1.24	1.05	96.14	0.30	1.86	2.27	3.33	95.47	0	0.03	0.04	100.00	100.00	100.00	96.22	98.70	88.15	100.00
	Aircel	1.95	11.45	97.45	1.22	11.40	5.59	7.35	98.72	0	0.00	0.00	100.00	100.00	100.00	93.40	91.82	100.00	100.00
	Reliance Jio	0.39	1.47	99.51	0.00	0.08	0.86	1.10	99.47	1	0.00	0.00	100.00	100.00	100.00	97.48	65.15	100.00	100.00
	Vodafone	0.62	1.40	99.29	0.60	0.67	1.97	2.70	98.09	0	0.03	0.04	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Bihar	Airtel	0.10	0.57	99.20	0.29	1.26	1.82	1.94	97.36	0	0.05	0.02	100.00	100.00	100.00	99.96	97.59	100.00	100.00
	idea	0.82	1.64	97.51	0.35	1.02	2.79	3.62	95.79	0	0.02	0.00	100.00	100.00	100.00	98.62	96.82	100.00	100.00
	Telenor	0.11	0.24	99.07	0.42	0.69	2.17	3.35	97.93	0	NA	0.00	100.00	100.00	NA	99.73	98.64	NA	NA
	Aircel	0.41	2.59	97.12	0.61	4.95	3.43	4.48	98.22	0	0.00	0.00	100.00	100.00	100.00	95.93	99.18	100.00	100.00
	Reliance Jio	0.43	1.78	99.22	0.00	0.26	1.12	1.35	99.41	0	0.00	0.00	100.00	100.00	100.00	97.65	60.94	100.00	100.00
	Tata	0.20	0.03	98.82	0.60	0.03	1.81	2.99	98.27	0	0.00	0.00	100.00	100.00	100.00	96.69	99.57	100.00	100.00
	Vodafone	0.44	1.90	99.59	0.14	0.41	2.67	2.86	97.90	0	0.01	0.09	100.00	100.00	100.00	100.00	94.11	100.00	100.00
	BSNL	1.89	1.88	95.75	0.40	0.58	4.08	5.19	97.32	0	0.00	0.00	100.00	100.00	100.00	99.50	98.25	100.00	100.00

Annexure 4.1 (Contd.)

Chennai	BSNL	0.36	1.41	97.78	0.56	1.52	1.19	2.21	97.72	0	0.01	0.00	99.00	100.00	100.00	100.00	96.40	100.00	100.00
	Aircel	0.31	1.54	98.15	0.15	0.61	3.16	3.77	97.11	0	0.00	0.00	100.00	100.00	100.00	97.90	97.67	100.00	100.00
Delhi	Reliance Jio	0.12	0.33	99.35	0.01	0.17	0.74	0.97	99.77	0	0.00	0.00	100.00	100.00	100.00	95.99	61.14	99.94	100.00
	Tata	0.06	0.00	99.40	0.00	0.08	1.34	2.04	99.26	0	0.00	0.00	100.00	100.00	100.00	98.96	96.52	100.00	100.00
	Vodafone	0.11	0.59	99.39	0.26	0.00	2.33	2.50	98.16	0	0.06	0.08	100.00	100.00	100.00	100.00	95.60	100.00	100.00
	MTNL	0.06	1.02	97.59	0.37	1.66	1.82	2.81	97.90	0	0.01	0.00	100.00	100.00	100.00	99.93	99.36	100.00	100.00
	Airtel	0.08	0.00	99.21	0.06	0.13	1.85	2.50	98.24	0	0.15	0.04	99.99	100.00	100.00	99.98	95.18	100.00	100.00
	idea	0.06	0.11	98.92	0.22	0.44	1.92	2.34	98.13	0	0.11	0.04	100.00	100.00	100.00	99.45	99.26	99.97	100.00
Gujarat	BSNL	1.50	1.27	97.65	0.18	0.35	1.75	2.22	100.00	0	0.01	0.00	100.00	100.00	100.00	98.00	97.05	100.00	100.00
	Airtel	0.11	0.13	99.08	0.09	0.58	1.96	2.29	98.29	0	0.61	0.04	99.99	100.00	100.00	100.00	97.56	100.00	100.00
	idea	0.04	0.07	98.22	0.46	1.23	2.00	2.31	97.71	0	0.02	0.04	100.00	100.00	100.00	97.66	99.51	100.00	100.00
	Telenor	0.15	0.77	99.39	0.06	0.08	1.88	2.44	98.92	0	NA	0.00	100.00	100.00	NA	99.66	98.84	NA	NA
	Aircel	0.03	0.00	99.68	0.01	0.00	1.80	3.57	98.18	0	0.00	0.00	100.00	100.00	100.00	98.46	98.81	100.00	100.00
	Reliance Jio	0.13	0.38	99.45	0.00	0.09	0.96	1.33	99.62	0	0.01	0.00	100.00	100.00	100.00	95.61	87.09	100.00	100.00
	Tata	0.05	0.06	99.34	0.02	0.08	1.26	2.44	97.03	0	0.00	0.00	100.00	100.00	100.00	98.27	97.87	100.00	100.00
	Vodafone	0.03	0.23	99.68	0.25	0.24	1.97	2.64	98.50	0	0.08	0.03	100.00	100.00	100.00	100.00	96.12	100.00	100.00
Haryana	Aircel	0.67	0.00	99.64	0.02	0.00	0.00	0.00	99.92	0	0.00	0.00	100.00	100.00	100.00	98.54	100.00	100.00	100.00
	Reliance Jio	0.29	1.07	99.53	0.00	0.04	1.33	1.64	99.74	0	0.00	0.00	100.00	100.00	100.00	96.25	53.57	100.00	100.00
	Tata	0.29	1.61	99.60	0.08	0.04	2.08	3.50	98.61	0	0.00	0.00	100.00	100.00	100.00	98.15	96.72	100.00	100.00
	Vodafone	0.19	1.69	99.66	0.29	0.23	1.97	2.68	99.02	0	0.06	0.01	100.00	100.00	100.00	99.96	96.81	100.00	100.00
	Airtel	0.09	0.05	98.95	0.11	0.22	0.84	1.05	98.53	0	0.15	0.02	100.00	100.00	100.00	100.00	98.14	100.00	100.00
	BSNL	0.72	0.36	99.15	0.21	0.41	1.86	2.08	98.06	0	0.03	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	idea	0.07	0.22	98.31	0.39	0.54	1.95	2.63	98.31	0	0.05	0.02	100.00	100.00	100.00	98.82	98.84	99.99	100.00
Himachal Pradesh	Aircel	0.09	0.05	99.41	0.07	0.34	5.99	7.64	95.89	0	0.00	0.00	100.00	100.00	100.00	98.23	97.85	100.00	100.00
	Reliance Jio	0.09	0.08	99.38	0.00	0.11	1.09	1.37	99.41	0	0.00	0.00	100.00	100.00	100.00	96.59	58.64	100.00	100.00
	Tata	0.02	0.00	98.88	0.00	0.01	0.00	0.00	97.60	0	0.00	0.00	100.00	100.00	100.00	99.13	98.94	100.00	100.00
	Vodafone	0.04	0.00	99.98	0.86	0.02	2.32	2.65	97.73	0	0.05	0.04	100.00	100.00	100.00	100.00	97.78	100.00	100.00
	Airtel	0.10	0.06	98.20	0.10	0.09	1.23	1.49	98.79	0	0.04	0.05	100.00	100.00	100.00	99.04	98.65	100.00	100.00
	BSNL	1.80	1.96	98.30	0.51	1.00	1.95	2.38	95.03	0	0.01	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	idea	0.18	1.61	99.35	0.05	0.12	2.79	3.48	97.15	0	0.02	0.02	100.00	100.00	100.00	99.06	99.28	100.00	100.00
Jammu & Kashmir	Airtel	0.18	0.60	98.82	0.10	0.41	0.95	1.36	98.64	0	0.32	0.14	100.00	100.00	100.00	99.97	98.70	100.00	100.00
	idea	0.36	1.01	98.58	0.17	0.78	2.73	3.43	97.04	0	0.03	0.03	100.00	100.00	100.00	92.85	99.33	100.00	100.00
	Aircel	1.37	9.15	98.21	0.27	2.31	4.79	7.39	99.12	0	0.00	0.00	100.00	100.00	100.00	97.88	95.50	100.00	100.00
	Vodafone	0.15	1.36	99.96	0.03	0.04	2.00	2.63	98.80	0	0.01	0.06	100.00	100.00	100.00	100.00	97.94	100.00	100.00
	Reliance Jio	0.19	0.36	99.60	0.00	0.01	1.22	1.52	99.79	1	0.00	0.00	100.00	100.00	100.00	96.78	54.10	99.94	100.00
	BSNL	1.47	0.75	98.11	0.51	1.06	1.93	2.80	97.10	0	0.02	0.00	100.00	100.00	100.00	100.00	99.99	100.00	100.00
Karnataka	Aircel	0.30	0.57	99.35	0.04	0.10	2.11	2.94	99.51	0	0.00	0.00	100.00	100.00	100.00	96.09	98.47	92.00	100.00
	Reliance Jio	0.21	0.80	99.47	0.00	0.09	1.25	1.67	99.71	0	0.00	0.00	100.00	100.00	100.00	94.07	83.97	100.00	100.00
	Tata	0.11	0.27	99.67	0.19	0.08	1.96	2.78	98.89	0	0.00	0.00	100.00	100.00	100.00	98.33	96.06	100.00	100.00
	Vodafone	0.21	0.55	99.90	0.10	0.04	1.56	2.02	99.64	0	0.03	0.06	100.00	100.00	100.00	100.00	95.15	100.00	100.00
	BSNL	0.36	1.62	98.22	0.54	1.16	1.96	2.95	98.18	0	0.00	0.00	99.79	100.00	100.00	99.00	96.64	100.00	100.00
	Airtel	0.14	0.48	99.52	0.61	0.29	1.80	2.21	98.25	0	0.09	0.04	100.00	100.00	100.00	100.00	97.60	100.00	100.00
	idea	0.08	0.18	99.54	0.22	0.12	1.99	2.56	97.02	0	0.07	0.01	100.00	100.00	100.00	99.88	99.14	100.00	100.00
Kerala	Aircel	0.26	0.57	99.62	0.05	0.11	2.00	3.70	98.09	0	0.00	0.00	100.00	100.00	100.00	96.99	98.17	100.00	100.00
	Reliance Jio	0.06	0.05	99.61	0.00	0.02	1.28	1.69	99.60	0	0.00	0.00	100.00	100.00	100.00	95.12	89.31	100.00	100.00
	Vodafone	0.05	0.00	99.88	0.05	0.07	1.53	2.10	99.54	0	0.08	0.08	100.00	100.00	100.00	100.00	97.33	100.00	100.00
	Tata	0.05	0.00	99.74	0.01	0.02	1.44	2.77	99.26	0	0.00	0.00	100.00	100.00	100.00	97.64	95.10	100.00	100.00
	BSNL	0.22	1.52	99.10	0.26	0.90	1.00	1.70	99.95	0	0.00	0.00	100.00	100.00	100.00	98.00	95.86	100.00	100.00
	idea	0.08	0.46	99.79	0.05	0.07	1.06	1.67	99.34	0	0.06	0.04	99.90	100.00	100.00	98.83	99.05	100.00	100.00
	Airtel	0.11	0.35	98.20	0.04	0.16	1.98	2.50	98.27	0	0.26	0.04	100.00	100.00	100.00	100.00	94.83	100.00	100.00

Annexure 4.1 (Contd.)

Kolkata	Airtel	0.00	0.00	99.52	0.04	0.08	1.57	1.72	99.48	0	0.12	0.06	100.00	100.00	100.00	86.41	98.15	100.00	100.00
	idea	0.07	0.19	99.61	0.15	0.26	1.83	2.24	98.04	0	0.09	0.01	100.00	100.00	100.00	98.00	97.36	100.00	100.00
	Aircel	0.22	0.75	97.99	0.24	0.26	2.49	3.16	98.39	0	0.00	0.00	100.00	100.00	100.00	98.98	94.43	100.00	99.39
	BSNL	1.63	1.78	99.39	0.69	0.85	1.85	2.17	98.91	0	0.03	0.02	100.00	100.00	100.00	95.00	97.07	100.00	100.00
	Reliance Jio	0.04	0.11	99.41	0.00	0.30	0.40	0.71	99.88	0	0.00	0.00	100.00	100.00	100.00	97.54	58.36	100.00	100.00
	Vodafone	0.16	0.87	99.51	0.16	0.45	1.85	2.52	98.66	0	0.05	0.05	100.00	100.00	100.00	100.00	96.24	100.00	100.00
Tata	0.14	0.41	99.51	0.05	0.04	1.43	2.50	99.33	0	0.00	0.00	100.00	100.00	100.00	98.18	99.26	100.00	100.00	
Madhya Pradesh	Aircel	0.29	0.00	96.86	0.11	0.00	0.00	0.00	99.47	0	0.00	0.00	100.00	100.00	100.00	98.60	99.10	100.00	100.00
	Reliance Jio	0.16	0.37	99.57	0.00	0.07	0.84	1.10	99.58	0	0.01	0.00	100.00	100.00	100.00	97.54	60.24	100.00	100.00
	Tata	0.07	0.01	99.45	0.07	0.02	1.62	2.50	99.77	0	0.00	0.00	100.00	100.00	100.00	97.77	98.10	100.00	100.00
	Vodafone	0.06	0.20	99.86	0.05	0.14	1.81	2.34	98.84	0	0.03	0.05	100.00	100.00	100.00	100.00	98.38	100.00	100.00
	Airtel	0.06	0.03	99.24	0.18	0.89	1.96	2.22	97.95	0	0.26	0.02	100.00	100.00	100.00	100.00	97.90	100.00	100.00
	BSNL	1.57	1.58	96.85	0.67	1.14	1.51	2.02	96.63	0	0.01	0.02	100.00	100.00	100.00	97.50	98.93	100.00	100.00
idea	0.12	0.37	97.04	0.40	2.76	2.30	2.77	98.12	0	0.03	0.01	100.00	100.00	100.00	97.95	98.85	100.00	100.00	
Maharashtra	Telenor	0.21	1.23	99.28	0.07	0.08	2.82	3.29	98.34	0	NA	0.00	100.00	100.00	NA	99.54	98.12	NA	NA
	Aircel	0.64	1.98	99.39	0.02	0.05	1.63	2.50	97.68	0	0.00	0.01	100.00	100.00	100.00	97.88	97.98	100.00	100.00
	Reliance Jio	0.26	1.15	99.44	0.00	0.11	0.88	1.16	99.68	0	0.00	0.00	100.00	100.00	100.00	95.94	87.35	99.90	100.00
	Tata	0.08	0.04	99.75	0.02	0.14	1.47	2.38	99.19	0	0.00	0.00	100.00	100.00	100.00	97.64	95.98	100.00	100.00
	Vodafone	0.17	0.57	99.63	0.26	0.21	1.97	2.50	98.20	0	0.05	0.04	100.00	100.00	100.00	99.85	95.98	100.00	100.00
	Airtel	0.03	0.00	98.10	0.21	0.50	1.59	1.75	96.99	0	0.50	0.01	100.00	100.00	100.00	99.94	98.51	100.00	100.00
	BSNL	1.80	1.80	95.69	0.62	1.77	1.98	2.99	95.12	0	0.01	0.00	100.00	100.00	100.00	100.00	97.04	100.00	100.00
idea	0.14	0.53	97.84	0.78	1.20	2.33	2.67	98.00	0	0.04	0.02	100.00	100.00	100.00	99.84	99.33	100.00	100.00	
Mumbai	Airtel	0.06	0.01	99.20	0.14	0.06	1.97	2.56	98.11	0	0.26	0.02	99.99	100.00	100.00	99.62	97.83	100.00	100.00
	idea	0.13	0.36	98.91	0.39	0.61	2.58	2.89	96.82	0	0.02	0.04	100.00	100.00	100.00	98.62	98.37	100.00	100.00
	Aircel	0.11	0.20	98.27	0.04	0.19	2.96	3.84	97.68	0	0.00	0.00	100.00	100.00	100.00	98.54	96.68	99.34	100.00
	Reliance Jio	0.14	0.52	99.27	0.01	0.26	0.78	0.99	99.89	0	0.01	0.00	100.00	100.00	100.00	96.10	74.84	100.00	100.00
	Tata	0.14	0.00	99.69	0.03	0.15	1.71	2.50	99.13	0	0.00	0.00	100.00	100.00	100.00	98.50	96.89	100.00	100.00
	Vodafone	0.31	0.00	98.81	0.23	1.07	1.57	1.96	98.69	0	0.09	0.10	99.99	100.00	100.00	99.90	91.26	99.39	100.00
	MTNL	0.70	1.20	97.69	0.40	0.23	1.96	2.73	98.04	0	0.03	0.01	99.32	100.00	100.00	100.00	96.99	100.00	100.00
North East	Airtel	1.19	1.63	97.59	0.90	1.04	1.96	2.27	99.00	0	0.02	0.07	100.00	100.00	100.00	99.77	99.16	100.00	100.00
	BSNL	1.80	1.90	97.39	0.80	1.83	1.86	2.82	97.15	0	0.03	0.03	99.50	100.00	100.00	97.50	96.50	100.00	100.00
	idea	1.78	1.15	98.50	0.07	0.61	2.47	4.34	96.90	0	0.00	0.02	100.00	100.00	100.00	100.00	97.71	100.00	100.00
	Aircel	4.22	25.63	96.15	0.56	1.86	7.77	10.50	98.83	0	0.00	0.00	100.00	100.00	100.00	96.15	96.71	100.00	100.00
	Reliance Jio	0.85	1.30	99.50	0.00	0.03	1.61	2.70	99.60	0	0.00	0.00	100.00	100.00	100.00	97.27	65.64	100.00	100.00
	Vodafone	1.24	1.20	98.45	0.82	1.32	1.75	2.57	98.40	0	0.02	0.06	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Orissa	Reliance Jio	0.13	0.20	99.21	0.01	0.40	0.96	1.25	99.52	0	0.01	0.00	100.00	100.00	100.00	97.75	80.12	100.00	100.00
	Tata	0.04	0.00	99.44	0.08	0.01	1.90	2.70	98.57	0	0.00	0.00	100.00	100.00	100.00	97.64	97.49	100.00	100.00
	Airtel	0.03	0.05	98.40	0.39	1.56	1.91	2.20	97.81	0	0.06	0.01	100.00	100.00	100.00	99.02	99.22	100.00	100.00
	BSNL	1.13	1.85	98.85	0.85	1.15	1.17	2.06	97.65	0	0.03	0.01	100.00	100.00	100.00	98.00	97.15	100.00	100.00
	idea	0.14	0.18	99.46	0.10	0.24	1.27	1.50	96.09	0	0.00	0.02	100.00	100.00	100.00	97.54	97.68	100.00	100.00
	Aircel	0.47	1.42	98.13	0.53	1.27	4.87	5.88	98.76	0	0.00	0.00	100.00	100.00	100.00	96.44	97.55	100.00	100.00
Vodafone	0.12	0.17	99.60	0.18	0.39	2.20	2.75	98.27	0	0.08	0.08	100.00	100.00	100.00	99.93	97.31	100.00	100.00	

Annexure 4.1 (Contd.)

Punjab	Airtel	0.04	0.00	98.83	0.09	0.07	1.54	1.79	99.11	0	0.10	0.03	100.00	100.00	100.00	99.06	97.41	100.00	100.00
	BSNL	0.40	1.50	97.83	0.41	0.46	1.92	2.27	97.80	0	0.01	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	idea	0.08	0.13	99.11	0.12	0.12	1.48	1.92	99.09	0	0.04	0.02	100.00	100.00	100.00	99.93	99.35	100.00	100.00
	Aircel	0.16	0.35	99.38	0.02	0.11	2.35	3.22	98.90	0	0.02	0.00	100.00	100.00	100.00	97.42	98.36	100.00	100.00
	Reliance Jio	0.21	0.96	99.53	0.00	0.03	0.71	1.02	99.84	0	0.00	0.00	100.00	100.00	100.00	96.07	75.82	100.00	100.00
	Tata	0.06	0.15	99.79	0.06	0.02	1.80	3.16	98.82	0	0.00	0.00	100.00	100.00	100.00	98.26	97.19	100.00	100.00
Rajasthan	Vodafone	0.08	0.48	99.82	0.06	0.17	1.97	2.85	98.07	0	0.05	0.05	100.00	100.00	100.00	100.00	98.41	100.00	100.00
	Airtel	0.09	0.24	98.41	0.44	1.40	1.30	1.61	98.80	0	0.05	0.01	100.00	100.00	100.00	99.74	96.85	100.00	100.00
	Aircel	0.24	0.85	97.74	0.20	1.30	2.79	3.23	97.32	0	0.00	0.00	100.00	100.00	100.00	98.04	97.24	100.00	100.00
	Reliance Jio	0.08	0.09	99.46	0.00	0.05	1.18	1.45	99.71	0	0.00	0.00	100.00	100.00	100.00	96.08	58.82	100.00	100.00
	Tata	0.09	0.00	99.28	0.04	0.06	1.60	2.57	99.53	0	0.00	0.00	100.00	100.00	100.00	97.23	99.65	100.00	100.00
	Vodafone	0.16	0.70	99.21	0.20	0.76	1.92	2.44	98.01	0	0.08	0.04	100.00	100.00	100.00	100.00	91.63	100.00	100.00
Tamil Nadu	BSNL	1.06	1.71	98.66	0.56	1.34	1.63	2.12	97.90	0	0.04	0.02	98.83	100.00	100.00	95.00	100.00	100.00	100.00
	idea	0.05	0.06	99.46	0.11	0.33	2.56	2.76	99.19	0	0.05	0.04	100.00	100.00	100.00	97.95	96.94	100.00	100.00
	Aircel	0.40	1.99	97.79	0.32	0.98	3.36	3.96	97.27	0	0.00	0.00	100.00	100.00	100.00	97.47	98.27	99.47	100.00
	Reliance Jio	0.05	0.05	99.52	0.00	0.09	0.85	1.16	99.71	1	0.00	0.00	100.00	100.00	100.00	95.52	94.86	100.00	100.00
	Tata	0.11	0.49	99.57	0.06	0.02	1.47	2.17	98.85	0	0.00	0.00	100.00	100.00	100.00	98.34	94.81	100.00	100.00
	Vodafone	0.11	0.52	99.68	0.18	0.28	1.94	2.81	98.85	0	0.08	0.05	100.00	100.00	100.00	100.00	96.30	100.00	100.00
UP-East	Airtel	0.02	0.11	99.61	0.13	0.20	1.76	2.27	98.84	0	0.10	0.05	100.00	100.00	100.00	100.00	86.09	100.00	100.00
	BSNL	0.49	1.90	98.84	0.09	0.48	1.93	2.74	97.91	0	0.01	0.00	100.00	100.00	100.00	100.00	98.00	100.00	100.00
	idea	0.03	0.03	99.82	0.06	0.07	1.60	1.89	99.10	0	0.06	0.02	100.00	100.00	100.00	97.56	90.75	100.00	100.00
	idea	0.20	0.95	99.14	0.54	0.65	2.63	3.54	98.13	0	0.07	0.01	100.00	100.00	100.00	99.90	99.55	100.00	100.00
	Aircel	0.77	3.92	99.16	0.42	0.23	2.50	2.86	99.56	0	0.00	0.00	100.00	100.00	100.00	98.17	98.50	100.00	97.03
	Airtel	0.43	1.72	95.69	0.72	0.84	1.72	2.56	98.66	0	0.06	0.01	100.00	100.00	100.00	99.89	97.28	100.00	100.00
UP-West	BSNL	1.83	1.91	97.50	0.82	1.07	1.32	2.25	96.50	0	0.09	0.09	98.60	100.00	100.00	98.00	97.62	100.00	100.00
	Tata	0.24	1.19	99.11	0.07	0.18	2.32	4.00	98.19	0	0.00	0.00	100.00	100.00	100.00	98.41	97.52	100.00	100.00
	Telenor	0.07	0.17	99.44	0.12	0.19	3.13	3.83	97.71	0	NA	0.00	100.00	100.00	NA	99.71	99.66	NA	NA
	Vodafone	0.10	1.19	99.43	0.29	0.50	1.99	2.61	98.54	0	0.08	0.02	100.00	100.00	100.00	100.00	96.47	100.00	100.00
	Reliance Jio	0.28	1.20	99.47	0.00	0.06	1.21	1.53	99.54	1	0.00	0.00	100.00	100.00	100.00	97.76	58.70	100.00	100.00
	Aircel	4.01	11.13	99.72	0.13	0.14	2.17	3.33	98.16	0	0.00	0.00	100.00	100.00	100.00	98.03	97.50	100.00	100.00
	Airtel	1.19	1.26	97.59	0.60	0.56	1.89	2.35	98.24	0	0.11	0.02	100.00	100.00	100.00	100.00	95.65	100.00	100.00
	BSNL	1.64	1.75	97.40	0.76	1.14	1.72	2.74	96.23	0	0.01	0.00	100.00	100.00	100.00	100.00	97.61	100.00	100.00
West Bengal	idea	0.10	0.21	95.73	0.77	2.90	2.03	2.94	97.67	0	0.02	0.00	99.94	100.00	100.00	99.32	99.16	100.00	100.00
	Tata	0.07	0.19	99.14	0.05	0.24	1.91	3.44	98.54	0	0.00	0.00	100.00	100.00	100.00	97.98	96.32	100.00	100.00
	Telenor	0.13	0.13	99.53	0.14	0.22	1.81	2.42	98.57	0	NA	0.00	100.00	100.00	NA	99.62	99.49	NA	NA
	Vodafone	0.11	1.00	97.44	0.26	1.74	2.26	2.80	97.30	0	0.06	0.02	100.00	100.00	100.00	100.00	97.12	100.00	100.00
	Reliance Jio	0.14	0.35	99.51	0.00	0.02	1.41	1.61	99.68	0	0.00	0.00	100.00	100.00	100.00	97.70	58.12	100.00	100.00
	Airtel	0.04	0.00	99.14	0.10	0.80	1.84	2.00	97.48	0	0.07	0.06	100.00	100.00	100.00	92.68	97.61	100.00	100.00
	BSNL	0.35	0.67	97.16	0.84	1.29	2.94	3.72	96.05	0	0.02	0.02	100.00	100.00	100.00	98.00	99.43	100.00	100.00
	idea	0.11	0.52	99.61	0.06	0.06	1.72	2.62	97.36	0	0.03	0.01	100.00	100.00	100.00	95.40	99.58	100.00	100.00
Aircel	0.29	1.24	97.69	0.29	0.74	5.36	6.25	97.94	0	0.00	0.00	100.00	100.00	100.00	98.87	93.05	100.00	87.50	
	Reliance Jio	0.18	0.67	99.33	0.00	0.24	1.18	1.49	99.32	0	0.00	0.00	100.00	100.00	100.00	97.48	56.55	100.00	100.00
	Tata	0.07	0.00	98.67	0.14	0.01	0.00	1.25	97.64	0	0.00	0.00	100.00	100.00	100.00	96.94	99.67	100.00	100.00
	Vodafone	0.08	0.19	98.91	0.67	1.05	1.98	2.52	97.60	0	0.05	0.06	100.00	100.00	100.00	100.00	97.13	100.00	100.00

Annexure 4.2 : Performance of QoS Parameters for Basic (Wire-line) Service

Quarterly Performance Monitoring Report (PMR) on QoS of Basic Telephone Service (Wireline) for QE December,2017

Sl. No.	Name of Service Area	Name of Service Provider	Faults incidences (No. of faults/100 Subs./ month)	Fault Repair				Rent Rebate	Mean Time to Repair (MTTR)	POI	Metering and Billing				Response time to the customer for Assistance		Termination / closure of service			
				% of faults repaired by next working day	% of faults repaired within 5 days	% of faults repaired by next working day	% of faults repaired within 7 days				Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)	Metering and Billing/credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/charging/va lidity 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 completed within 7 days	Time taken for refund of deposits after closures	
																				≤7
1	A&N	BSNL	5.00	88.00%	100.00%	88.00%	100%	134	7.00	0.00%	0.00%	0.00%	98.00%	100.00%	100.00%	98.73%	99.67%	100.00%	100.00%	
2	AP	Reliance	2.23	100.00%	100.00%	NA	NA	NA	4.30	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
3		TTSL	7.58	96.05%	100.00%	100.00%	100.00%	136	4.44	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.72%	92.69%	100.00%	100.00%	
4		Vodafone	0.30	100.00%	100.00%	NA	NA	NA	2.47	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA	
5		Bharti	3.56	92.00%	100.00%	NA	NA	232	3.67	0.00%	0.04%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%	100.00%
6		BSNL	4.00	99.00%	100.00%	99.00%	100%	234	7.00	0.00%	0.01%	0.00%	100.00%	100.00%	100.00%	98.24%	98.22%	100.00%	100.00%	
7		Vodafone	1.79	100.00%	100.00%	NA	NA	NA	1.46	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA	
8	ASM	BSNL	3.00	94.00%	100.00%	94.00%	100%	73	3.00	0.00%	0.03%	0.00%	100.00%	100.00%	100.00%	98.43%	99.00%	100.00%	100.00%	
9	BH	Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
10		TTSL	0.86	97.44%	100.00%	100.00%	100.00%	6	2.47	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	96.69%	98.61%	100.00%	100.00%	
11		Vodafone	2.24	100.00%	100.00%	NA	NA	NA	0.52	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
12		BSNL	4.00	95.00%	100.00%	94.00%	100%	0	5.00	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.60%	99.33%	100.00%	100.00%	
13	Chattisgarh	BSNL	3.00	97.00%	100.00%	96.00%	100%	700	6.00	0.00%	0.01%	0.00%	99.00%	100.00%	100.00%	96.37%	97.26%	100.00%	100.00%	
14	CN	Reliance	0.27	100.00%	100.00%	NA	NA	NA	4.60	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
15		BSNL	4.00	96.00%	100.00%	96.00%	100%	838	5.00	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.73%	98.74%	100.00%	100.00%	
16	DEL	Reliance	0.78	100.00%	100.00%	NA	NA	NA	4.70	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
17		TTSL	1.39	93.47%	100.00%	100.00%	100.00%	8	4.91	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.96%	96.13%	100.00%	100.00%	
18		Vodafone	0.47	100.00%	100.00%	NA	NA	NA	3.13	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA	
19		Bharti	2.76	91.00%	100.00%	NA	NA	1234	4.61	0.00%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%	100.00%
20		MTNL	4.22	91.07%	99.00%	NA	NA	7352	3.83	0.00%	0.01%	0.00%	99.71%	100.00%	100.00%	99.85%	99.93%	100.00%	100.00%	
21	GUJ	Reliance	1.92	100.00%	100.00%	NA	NA	NA	4.50	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
22		TTSL	1.42	95.01%	100.00%	100.00%	100.00%	17	5.63	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.27%	92.80%	99.12%	100.00%	
23		Vodafone	0.44	100.00%	100.00%	NA	NA	NA	2.35	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
24		Bharti	1.80	95.00%	100.00%	NA	NA	69	5.12	0.00%	0.03%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%	
25	BSNL	5.00	96.00%	100.00%	92.00%	100%	420	5.00	0.00%	0.03%	0.00%	100.00%	100.00%	100.00%	97.27%	97.17%	100.00%	100.00%		
26	HP	Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
27		Vodafone	0.00	100.00%	100.00%	NA	NA	NA	0.00	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
28		BSNL	5.00	89.00%	100.00%	90.00%	100%	483	6.00	0.00%	0.02%	0.00%	98.22%	100.00%	100.00%	97.11%	100.00%	100.00%	100.00%	

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29	HR	Vodafone	0.00	100.00%	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
30		Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
31		TTSL	0.23	87.50%	100.00%	100.00%	100.00%	0	9.08	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.15%	95.42%	100.00%	100.00%
32		Bharti	4.57	94.00%	100.00%	NA	NA	38	3.31	0.00%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
33		BSNL	5.00	97.00%	100.00%	96.00%	100%	271	6.00	0.00%	0.06%	0.00%	100.00%	100.00%	100.00%	97.63%	100.00%	100.00%	100.00%
34	J&K	BSNL	4.00	95.00%	100.00%	93.00%	100%	45	7.00	0.00%	0.01%	0.00%	98.00%	100.00%	100.00%	97.72%	100.00%	100.00%	100.00%
35	JHAR	BSNL	2.00	99.00%	100.00%	97.00%	100%	470	5.00	0.00%	0.09%	0.00%	98.00%	100.00%	100.00%	98.77%	99.33%	100.00%	100.00%
36	KER	Vodafone	1.22	100.00%	NA	NA	NA	NA	1.37	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
37		Reliance	1.97	100.00%	100.00%	NA	NA	NA	4.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
38		TTSL	1.11	88.14%	100.00%	100.00%	100.00%	17	9.13	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.64%	96.21%	100.00%	100.00%
39		Bharti	4.49	94.00%	100.00%	NA	NA	455	6.74	0.00%	0.05%	NA	100.00%	100.00%	100.00%	100.00%	91.00%	100.00%	100.00%
40		BSNL	4.00	93.00%	100.00%	92.00%	100%	744	7.00	0.00%	0.04%	0.00%	99.82%	100.00%	100.00%	96.27%	97.40%	100.00%	100.00%
41	KOL	Vodafone	0.77	100.00%	100.00%	NA	NA	NA	3.47	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
42		Reliance	0.57	100.00%	100.00%	NA	NA	NA	4.40	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
43		Bharti	3.57	89.00%	100.00%	NA	NA	140	5.42	0.00%	0.01%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
44		BSNL	7.00	90.00%	100.00%	NA	NA	390	8.00	0.00%	0.00%	0.00%	98.17%	100.00%	100.00%	99.29%	99.33%	100.00%	100.00%
45	KTK	Vodafone	0.37	100.00%	100.00%	NA	NA	NA	1.50	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
46		Reliance	1.24	100.00%	100.00%	NA	NA	NA	4.50	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
47		TTSL	0.50	89.82%	100.00%	100.00%	100.00%	40	7.74	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.33%	95.85%	95.19%	100.00%
48		Bharti	3.65	86.00%	100.00%	NA	NA	3493	3.40	0.00%	0.06%	NA	100.00%	100.00%	100.00%	100.00%	98.00%	100.00%	100.00%
49		BSNL	4.00	95.00%	100.00%	97.00%	100%	5229	7.00	0.00%	0.10%	0.00%	98.00%	100.00%	100.00%	97.39%	97.40%	100.00%	100.00%
50	MH	Bharti	1.15	96.00%	100.00%	NA	NA	34	3.72	0.00%	0.01%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%
51		BSNL	5.00	92.00%	100.00%	87.00%	100%	1018	7.00	0.00%	0.01%	0.00%	100.00%	100.00%	100.00%	96.62%	96.58%	100.00%	100.00%
52		Reliance	1.16	100.00%	100.00%	NA	NA	NA	4.20	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
53		Vodafone	0.35	100.00%	100.00%	NA	NA	NA	1.17	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
54		TTSL	1.36	88.96%	100.00%	100.00%	100.00%	310	8.02	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.64%	97.20%	99.97%	100.00%
55	MP	Vodafone	0.78	100.00%	100.00%	NA	NA	NA	0.44	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
56		Reliance	1.10	100.00%	100.00%	NA	NA	NA	4.10	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
57		TTSL	3.40	100.00%	100.00%	100.00%	100.00%	1	1.75	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.77%	96.00%	100.00%	100.00%
58		Bharti	4.75	89.00%	100.00%	NA	NA	805	4.73	0.00%	0.05%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
59		BSNL	5.00	91.00%	100.00%	91.00%	100%	284	5.00	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.85%	97.81%	100.00%	100.00%
60	MUM	Vodafone	0.43	100.00%	100.00%	NA	NA	NA	2.52	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA
61		Bharti	1.01	96.00%	100.00%	NA	NA	122	4.00	0.00%	0.01%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
62		MTNL	3.82	94.99%	99.89%	NA	NA	33283	6.52	0.00%	0.04%	NA	99.44%	100.00%	100.00%	95.71%	95.19%	99.99%	100.00%
63		Reliance	0.49	100.00%	100.00%	NA	NA	NA	4.10	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%
64		TTSL	3.75	87.92%	100.00%	100.00%	100.00%	754	8.55	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.50%	97.60%	99.52%	100.00%
65	NE	Vodafone	0.00	100.00%	100.00%	NA	NA	NA	0.00	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA
66	NE-I	BSNL	4.00	92.00%	100.00%	96.00%	100%	51	7.00	0.00%	0.04%	0.00%	98.00%	100.00%	100.00%	98.88%	99.67%	100.00%	100.00%
67	NE-II	BSNL	2.00	94.00%	100.00%	100.00%	100%	197	5.00	0.00%	0.01%	0.00%	100.00%	100.00%	100.00%	98.26%	99.33%	100.00%	100.00%

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68	OR	Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
69		TTSL	0.93	100.00%	100.00%	100.00%	100.00%	0	1.88	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.64%	98.23%	100.00%	100.00%	
70		BSNL	6.00	93.00%	100.00%	92.00%	100%	223	5.00	0.00%	0.07%	0.00%	99.00%	100.00%	100.00%	99.01%	99.67%	100.00%	100.00%	
71		Vodafone	1.05	100.00%	100.00%	NA	NA	NA	1.35	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
72	PB	Vodafone	0.42	100.00%	100.00%	NA	NA	NA	0.34	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
73		Reliance	0.48	100.00%	100.00%	NA	NA	NA	4.50	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
74		TTSL	0.34	100.00%	100.00%	100.00%	100.00%	5	3.29	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.26%	96.60%	100.00%	100.00%	
75		Bharti	3.55	88.00%	100.00%	NA	NA	287	4.68	0.00%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%	100.00%
76		Quadrant	4.04	97.62%	100.00%	100.00%	100%	0	4.10	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	99.00%	95.00%	100.00%	100.00%	
77		BSNL	5.00	93.00%	100.00%	92.00%	100%	383	6.00	0.00%	0.03%	0.00%	98.00%	100.00%	100.00%	95.59%	100.00%	100.00%	100.00%	
78	RAJ	Reliance	0.40	100.00%	100.00%	NA	NA	NA	4.10	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
79		TTSL	0.78	100.00%	100.00%	100.00%	100.00%	0	2.19	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.23%	96.23%	100.00%	100.00%	
80		Vodafone	0.39	100.00%	100.00%	NA	NA	NA	2.42	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
81		Bharti	2.89	85.00%	100.00%	NA	NA	130	5.27	0.00%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%	100.00%
82	BSNL	5.00	97.00%	100.00%	98.00%	100%	386	6.00	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.95%	100.00%	100.00%	100.00%		
83	TN	Reliance	1.98	100.00%	100.00%	NA	NA	NA	4.60	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
84		TTSL	0.88	96.06%	100.00%	100.00%	100.00%	11	4.01	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.34%	96.05%	100.00%	100.00%	
85		Vodafone	0.80	100.00%	100.00%	NA	NA	NA	1.57	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	100.00%	NA	
86		Bharti	6.31	92.00%	100.00%	NA	NA	6846	7.15	0.00%	0.08%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%	100.00%
87	BSNL	4.00	92.00%	100.00%	90.00%	100%	2110	8.00	0.00%	0.09%	0.00%	100.00%	100.00%	100.00%	98.17%	98.17%	100.00%	100.00%		
88	UPE	Reliance	0.45	100.00%	100.00%	NA	NA	NA	4.30	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
89		TTSL	3.37	99.07%	100.00%	100.00%	100.00%	0	2.10	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.41%	100.00%	100.00%	100.00%	
90		Vodafone	0.26	100.00%	100.00%	NA	NA	NA	2.22	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
91		Bharti	4.19	87.00%	100.00%	NA	NA	214	5.23	0.00%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%	100.00%
92	BSNL	4.00	91.00%	100.00%	93.00%	100%	750	5.00	0.00%	0.09%	0.00%	100.00%	100.00%	100.00%	97.21%	100.00%	100.00%	100.00%		
93	UPW	Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
94		TTSL	0.00	100.00%	100.00%	100.00%	100.00%	0	0.00	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	97.98%	100.00%	100.00%	100.00%	
95		Vodafone	0.55	100.00%	100.00%	NA	NA	NA	1.40	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	
96		Bharti	5.65	87.00%	100.00%	NA	NA	109	5.03	0.00%	0.03%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%	100.00%
97	BSNL	5.00	97.00%	100.00%	97.00%	100%	371	5.00	0.00%	0.04%	0.00%	100.00%	100.00%	100.00%	96.55%	100.00%	100.00%	100.00%		
98	Uttaranchal	BSNL	5.00	94.00%	100.00%	98.00%	100%	192	5.00	0.00%	0.00%	0.00%	98.00%	100.00%	100.00%	97.55%	100.00%	100.00%	100.00%	
99	West Bengal	Reliance	0.00	NA	NA	NA	NA	NA	0.00	0.00%	0.00%	NA	100.00%	100.00%	100.00%	96.09%	97.02%	100.00%	100.00%	
100		BSNL	5.00	93.00%	100.00%	93.00%	100%	944	4.00	0.00%	0.01%	0.00%	100.00%	100.00%	100.00%	98.70%	99.33%	100.00%	100.00%	
101		TTSL	0.85	99.66%	100.00%	100.00%	100.00%	6	2.57	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	98.18%	96.43%	100.00%	100.00%	
102		Vodafone	1.11	100.00%	100.00%	NA	NA	NA	0.27	0.00%	0.00%	NA	NA	NA	NA	99.00%	100.00%	NA	NA	

Annexure 4.3: Quality of Service Performance of Broadband Service Providers

Performance Monitoring Report on Quality of Service of Service Providers providing broadband (wireline) service for Quarter Ending December 2017																					
Sl. No.	Service Provider	Service area	Service Provisioning	Faults Repair		Billing Performance			Response Time to the Customer for assistance		Bandwidth utilisation/throughput				Service availability /uptime (for all users) in %age	Packet Loss (for wired broadband access) in %age	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 MKTG) <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
1	BSNL	All India	100.00%	93.81%	99.75%	51239	0.07%	100.00%	100.00%	98.65%	99.09%	NA	0	61.70%	91.09%	99.63%	0.10%	17	179	NA	
2	Bharti Airtel	Andhra Pradesh	100.00%	91.95%	100.00%	0	0.03%	100.00%	100.00%	93.87%	96.58%	0	0	0.49%	100.59%	99.97%	0.00%	38	47	NA	
		Delhi	100.00%	91.11%	99.35%	712	0.03%	100.00%	100.00%	91.83%	95.00%	0	0	0.83%	109.41%	99.98%	0.00%	43	72	NA	
		Gujarat	100.00%	94.16%	99.41%	91	0.03%	100.00%	100.00%	93.53%	96.46%	0	NA	NA	100.00%	100.00%	0.10%	35	NA	NA	
		Haryana	100.00%	95.08%	99.52%	10	0.01%	100.00%	100.00%	91.83%	95.52%	0	NA	NA	110.00%	99.98%	0.00%	29	NA	NA	
		Karnataka	100.00%	90.46%	99.68%	1832	0.06%	100.00%	100.00%	96.03%	98.33%	0	0	0.72%	101.38%	99.94%	0.00%	33	56	NA	
		Kerala	100.00%	93.29%	100.00%	224	0.05%	100.00%	100.00%	85.31%	90.90%	0	NA	NA	98.94%	99.95%	0.00%	47	35	NA	
		Kolkata	100.00%	94.57%	99.97%	95	0.01%	100.00%	100.00%	90.79%	93.90%	0	0	0.53%	100.00%	100.00%	0.00%	69	68	NA	
		Madhya Pradesh	100.00%	92.81%	99.09%	111	0.02%	100.00%	100.00%	91.00%	94.35%	0	0	0.72%	109.41%	99.92%	0.00%	76	66	NA	
		Maharashtra	100.00%	95.56%	99.46%	95	0.01%	100.00%	100.00%	93.00%	96.00%	0	NA	NA	100.00%	99.99%	0.29%	37	NA	NA	
		Mumbai	100.00%	96.15%	99.23%	146	0.02%	100.00%	100.00%	92.00%	95.00%	0	0	0.83%	100.00%	99.98%	0.15%	27	53	NA	
		Punjab	100.00%	91.03%	99.16%	99	0.01%	100.00%	100.00%	92.54%	95.50%	0	0	0.65%	100.00%	99.99%	0.00%	50	83	NA	
		Rajasthan	100.00%	90.13%	99.61%	12	0.01%	100.00%	100.00%	92.00%	95.00%	0	NA	NA	100.00%	99.98%	0.00%	46	NA	NA	
		Tamilnadu	100.00%	95.94%	99.97%	2144	0.06%	100.00%	100.00%	93.52%	96.88%	0	0	0.77%	100.65%	99.95%	0.00%	40	35	NA	
Uttar Pradesh - East	100.00%	90.59%	99.05%	57	0.01%	100.00%	100.00%	93.13%	95.95%	0	0	0.66%	103.00%	99.99%	0.00%	47	81	NA			
Uttar Pradesh - West	100.00%	90.44%	99.17%	29	0.02%	100.00%	100.00%	91.87%	95.16%	0	NA	NA	105.00%	99.93%	0.00%	30	NA	NA			
3	MTNL	Delhi & Mumbai	100.00%	91.70%	98.06%	10700	0.110%	100.00%	100.00%	97.96%	98.61%	Nil	0	72.28%	89.82%	99.70%	0.53%	45	271	NA	
4	Airlink Communications Pvt. Ltd.	All India	100.00%	91.24%	99.19%	0	NA	100.00%	NA	76.38%	100.00%	0	0	97.95%	96.66%	99.90%	0.14%	120	350	NA	
5	Alliance Broadband	Kolkata	100.00%	94.77%	99.57%	Nil	1.24%	100.00%	Nil	76.00%	93.30%	0	0	71.42%	98.60%	99.25%	0.46%	75	230	472	
6	Asianet Satellite	Kerala	100.00%	99.66%	99.34%	Nil	1.91%	100.00%	100.00%	60.80%	80.72%	Nil	0	65.51%	90.00%	99.40%	1.00%	50	270	NA	
7	Atria Convergence	All India	100.00%	93.29%	99.56%	27678	0.43%	100.00%	Nil	66.00%	82.00%	0	0	56.42%	90.00%	99.97%	1.00%	50	300	NA	
8	Broadband Pacenet India Pvt. Ltd.	All India	100.00%	90.40%	99.50%	15	1.00%	100.00%	0.00	87.00%	90.00%	0	0	57.00%	92.00%	99.40%	0.45%	75	260	0	
9	Citycom Networks	All India	100.00%	90.40%	99.10%	2032	0.39%	100.00%	100.00%	64.20%	68.60%	0	0	25.30%	91.40%	99.40%	0.00%	35	163	NA	
10	DEN Networks Ltd.	All India	100.00%	96.80%	99.79%	Nil	NA	NA	NA	93.00%	95.00%	Nil	Nil	69.24%	99.00%	98.23%	0.00%	NA	227	NA	
11	DNA Infotel Pvt. Ltd.	Maharashtra	100.00%	90.38%	99.10%	0	0.03%	100.00%	NA	60.42%	80.47%	0	0	80.00%	80.00%	99.64%	1.00%	4	255	600	
12	D-VoiS Broadband	All India	100.00%	94.53%	100.00%	-	0.00%	Nil	Nil	88.10%	95.93%	0	Nil	Nil	90.00%	99.99%	0.10%	120	350	800	

Annexure 4.4 (Contd.)

13	Excitel Broadband Private Limited	Delhi	100.00%	94.00%	99.46%	1056	NA	NA	NA	89.05%	92.64%	Nil	Nil	80.70%	98.60%	98.50%	0.00%	4	199	NA
14	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
15	Fusionnet Web Services Pvt. Ltd.	All India	100.00%	97.80%	99.70%	0	0.00%	100.00%	100.00%	94.10%	96.40%	0	0	83.00%	100.00%	100.00%	1.00%	120	350	NA
16	GBPS Networks Pvt. Ltd.	Pune, Maharashtra	100.00%	90.00%	99.00%	Nil	2.00%	100.00%	Nil	61.67%	85.06%	0	0	80.00%	80.00%	99.68%	1.00%	4	255	600
17	Geocity Network Solutions	Delhi	100.00%	94.67%	100.00%	0	0.00%	100.00%	100.00%	66.00%	85.33%	0	0	89.33%	87.67%	99.30%	0.50%	60	300	400
18	GTPL Broadband Pvt.Ltd.	All India	100.00%	96.00%	99.00%	94	0.05%	100.00%	NA	95.00%	99.00%	0	0	79.58%	91.00%	99.63%	0.00%	11	300	NA
19	Hathway Cable & Datacom Ltd.	Andhra Pradesh	100.00%	92.70%	99.37%	0	1.60%	100.00%	100.00%	69.00%	83.00%	0	0	83.00%	90.00%	99.64%	0.28%	88	290	NA
		Delhi	100.00%	96.67%	99.00%	0	0.28%	100.00%	100.00%	73.67%	87.00%	0	0	87.00%	85.00%	99.99%	0.42%	115	325	NA
		Gujarat	100.00%	93.13%	99.44%	0	NA	NA	NA	87.20%	97.55%	0	0	71.00%	91.33%	99.39%	0.46%	85	260	NA
		Karnataka	100.00%	90.73%	99.57%	0	1.89%	100.00%	100.00%	94.70%	97.60%	0	0	88.00%	90.00%	99.78%	0.31%	86	275	NA
		Maharashtra & Goa	100.00%	95.00%	99.40%	0	1.11%	100.00%	100.00%	92.00%	93.00%	0	0	83.00%	90.00%	99.68%	0.27%	84	270	NA
		Madhya Pradesh	100.00%	99.00%	100.00%	0	NA	NA	NA	92.00%	94.00%	0	0	83.00%	100.00%	99.77%	0.27%	100	295	NA
		Punjab	100.00%	98.00%	100.00%	0	NA	NA	NA	100.00%	100.00%	0	0	86.00%	85.00%	99.64%	0.40%	110	325	NA
		Uttar Pradesh - West	100.00%	97.67%	99.00%	0	0.58%	100.00%	100.00%	74.00%	87.00%	0	0	87.25%	85.00%	99.60%	0.40%	115	310	NA
	Kolkata	100.00%	92.00%	99.25%	0	NA	NA	NA	86.00%	92.00%	0	0	82.83%	100.00%	99.73%	0.40%	10	256	NA	
	Chennai	100.00%	93.00%	99.43%	0	NA	NA	NA	72.00%	86.00%	0	0	77.00%	100.00%	99.77%	0.27%	80	287	NA	
20	Honesty Net Solutions (I) Pvt. Ltd.	Mumbai	100.00%	84.00%	95.63%	0	Nil	100.00%	0.00	NA	NA	0	NA	NA	89.00%	100.00%	0.00%	30	65.97	NA
21	IKF Technologies Ltd	All India	100.00%	91.60%	100.00%	0	0.80%	100.00%	0.00	67.00%	90.60%	19	0	83.60%	85.60%	98.16%	0.50%	85	318	NA
22	Indinet Service Pvt Ltd	All India	100.00%	91.33%	100.00%	0	0.00%	100.00%	100.00%	91.00%	92.00%	0	0	85.00%	99.00%	98.49%	0.50%	43	261	0
23	Limras Eronet Broadband	All India	100.00%	99.00%	100.00%	0	1.00%	100.00%	0.00	85.00%	100.00%	0	95	0.00%	90.00%	99.00%	1.00%	45	241	-
24	Meghbela Cable & Broadband		100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	95.00%	100.00%	0	0	0.00%	100.00%	99.90%	0.00%	60	150	0
25	Nextra Teleservices Pvt. Ltd.	Delhi	100.00%	94.03%	99.45%	4873	0.99%	100.00%	100.00%	88.00%	93.00%	0	0	77.00%	100.00%	100.00%	1.00%	120	350	NA
26	Ortel Communications	All India	100.00%	94.65%	99.42%	NA	NA	NA	NA	100.00%	100.00%	0	0	50.56%	92.00%	99.48%	0.00%	82	227	NA
27	Quadrant Televentures	Punjab	100.00%	98.90%	100.00%	0	0.00%	100.00%	100.00%	87.00%	90.67%	Nil	Nil	71.00%	100.00%	99.90%	0.00%	80	280	NA
28	Quest Consultancy Pvt Ltd.	Gujarat	100.00%	95.00%	100.00%	Nil	Nil	100.00%	Nil	99.00%	99.00%	0	Nil	82.00%	99.00%	99.00%	0.30%	13	267	NA
29	RailTel Corporation	All India (Pan India)	100.00%	97.60%	100.00%	Nil	0.00%	Nil	Nil	86.10%	96.50%	0	0	38.17%	100.00%	99.95%	1.00%	120	350	NA
30	Rajesh Multichannel	Mumbai	100.00%	98.00%	100.00%	0	0.00%	100.00%	100.00%	97.00%	98.00%	0	0	87.00%	86.00%	99.00%	0.00%	46	250	500
31	Reliance Com. (RCL)	All India	100.00%	100.00%	100.00%	Nil	Nil	100.00%	100.00%	93.00%	91.00%	0	Nil	69.37%	91.00%	99.00%	0.60%	85	180	0
32	Siti Broadband	All India	100.00%	91.58%	99.05%	0	NA	NA	NA	92.00%	93.00%	0	0	84.67%	87.70%	99.63%	0.00%	86	217	NA
33	Joister Infoserve Pvt. Ltd.(Formerly Syscon Infoway	Maharashtra	100.00%	96.00%	100.00%	Nil	0.00%	100.00%	NA	79.00%	87.67%	0	0	47.00%	99.00%	100.00%	1.00%	1	47	80
		Mumbai	100.00%	93.33%	100.00%	Nil	0.00%	100.00%	0.00	82.33%	88.00%	0	0	66.00%	99.00%	100.00%	0.00%	1	47	80
34	Tata Tele.Ltd. (TTSL)	All India (Pan India)	100.00%	90.00%	100.00%	681	0.20%	100.00%	100.00%	82.93%	88.07%	0	0	72.00%	92.00%	99.75%	0.00%	58	63	0
35	Tata Tele.(Mah) Ltd. (TTML)	Maharashtra & Goa	100.00%	80.00%	93.00%	2427	0.27%	100.00%	100.00%	86.50%	90.38%	0	0	68.84%	91.25%	99.86%	0.00%	48	178	0
36	Vasai Cable	Mumbai	100.00%	94.50%	100.00%	Nil	0.13%	100.00%	Nil	81.53%	89.77%	Nil	0	63.00%	90.00%	100.00%	1.00%	4	255	NA
37	Wan and Lan Internet Pvt. Ltd.	Mumbai	100.00%	100.00%	100.00%	0.00%	0.00%	100.00%	0.00	90.00%	90.00%	0	0	90.00%	90.00%	99.90%	0.00%	20	40	80
38	Wish Net Pvt. Ltd.	West Bengal	100.00%	98.86%	100.00%	0	0.03%	100.00%	NA	81.67%	97.67%	0	0	61.11%	100.00%	99.88%	1.00%	20	NA	NA
		Kolkata	100.00%	98.87%	100.00%	0	0.01%	100.00%	NA	81.67%	97.67%	0	0	57.16%	100.00%	99.88%	1.00%	40	NA	NA
39	Yashash Cable Network Pvt Ltd	Karnataka	100.00%	92.25%	99.64%	9	0.00%	NA	NA	79.61%	80.58%	0	0	0.00%	80.00%	99.00%	1.00%	30	280	NA
40	You Broadband	All India	100.00%	95.18%	99.29%	594	0.00%	NA	100.00%	90.22%	94.68%	0	0	69.88%	87.16%	99.72%	0.00%	8	240	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	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
1	9X Media Private Limited	1	9XM	SD
2	ABP News Network Pvt Limited	2	ABP Ananda	SD
		3	ABP Majha	SD
3	AETN 18 Media Pvt Limited	4	The History Channel	SD
		5	FY1 TV18	HD
		6	Histry TV 18 HD	HD
4	Asianet Communications Limited	7	Asianet	SD
		8	Asianet Plus	SD
		9	Asianet Movies	SD
		10	Suvarna Plus	SD
		11	Star Suvarna	HD
		12	Asianet HD	HD
5	AXN Networks India Private Limited	13	Star Suvarna (Earlier name "Suvarna")	SD
		14	SONY ESPN (Earlier name "SONY KIX")	SD
6	Bangla Entertainment Private Limited	15	AXN HD	HD
		16	AATH	SD
7	BBC Global News India Private Limited	17	BBC World News	SD
8	Bennett, Coleman & Company Limited	18	Zoom	SD
		19	Romedy Now	SD
		20	MN +(Earlier name "Movies Now +")	HD
		21	Mirror Now (Earlier name "Magicbricks Now")	SD
		22	ET NOW	SD
		23	Times Now	SD
		24	Romedy Now HD	HD
		25	Movies Now HD	HD
		26	MNX HD (Earlier name "Movies Now 2 HD")	HD
		27	MNX (Earlier name "Movies Now 2")	SD
9	Business Broadcast News Private Limited	28	Times Now HD	HD
		29	BTVi (Earlier name "Bloomberg TV India")	SD
10	Celebrities Management Pvt Limited	30	Travel XP HD (Earlier name "Travel XP")	HD
		31	Travel XP Tamil	SD
11	CLS Info Media Private Ltd	32	JAN TV PLUS	SD
12	Discovery Communications India	33	Animal Planet	SD
		34	Discovery Channel	SD
		35	Discovery Channel – Tamil	SD
		36	Discovery Kids Channel	SD
		37	Discovery Science	SD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		38	Discovery Turbo	SD
		39	ID Investigation Discovery	SD
		40	Discovery HD World (earlier name "Discovery HD")	HD
		41	Animal Planet HD World (earlier name "Discovery Home and Health")	HD
		42	TLC HD world (earlier name "Military Channel")	HD
		43	TLC	SD
		44	Dsport	SD
13	Disney Broadcasting (India) Limited	45	Disney Junior (Earlier name "UTV Comedy")	SD
		46	UTV Movies	SD
		47	Disney XD (Earlier name "UTV World Movies")	SD
		48	Disney International HD (Earlier name "Bindass Play")	HD
		49	The Disney Channel	SD
14	E-24 Glamour Limited	50	E 24	SD
15	Eenadu Televisoin Private Limited	51	ETV Telugu	SD
		52	ETV Andhra Pradesh (earlier name "ETV-2")	SD
		53	ETV - Telangana (earlier name "ETV-3")	SD
		54	ETV Cinema	SD
		55	ETV Life	SD
		56	ETV Plus	SD
		57	ETV Abhiruchi	SD
		58	ETV HD	HD
16	EPIC Television Networks Pvt Limited	59	EPIC TV (HD Distribution)	HD
17	Genx Entertainment Limited	60	UTV Bindass	SD
		61	UTV Action	SD
18	Greycells18 Media Limited	62	Topper TV (#)	SD
19	IBN Lokmat News Private Ltd	63	News 18 Lokmat (earlier name "IBN Lokmat")	SD
20	Living Entertainment Enterprises Private Ltd	64	Living Foodz HD	HD
21	Mavis Satcom Limited	65	J Movies	SD
		66	Jaya Max	SD
		67	Jaya Plus	SD
		68	Jaya TV HD	HD
22	MSM World Wide Factual Media Private Limited	69	SONY BBC EARTH	SD
		70	SONY BBC EARTH HD	HD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
23	NDTV Life style Limited	71	NDTV Good Times	SD
24	Neo Sports Broadcast Pvt Limited	72	NEO Prime (Earlier name "Neo Cricket")	SD
		73	Neo Sports	SD
25	New Delhi Television Limited	74	NDTV 24*7	SD
		75	Granada TV (HD)	HD
		76	Trace Sports HD	HD
		77	NDTV Profit	SD
26	NGC Network (India) Pvt Limited	78	Fox Life	SD
		79	National Geographic Channel (NGC)	SD
		80	Fox Life HD	HD
		81	Nat Geo Wild	SD
		82	National Geographic HD	HD
		83	Nat Geo Music HD	HD
		84	Nat Geo Wild HD	HD
		85	Nat Geo People HD	HD
86	Baby TV HD	HD		
27	NOIDA Software Technology Park Limited	87	NHK World Premium (HD Distribution)	HD
28	Odisha Television Limited	88	Prarthana	SD
		89	Tarang	SD
		90	Tarang Music	SD
		91	Alankar	SD
29	Panorama Television Private Limited	92	ETV Bihar Jharkhand	SD
		93	ETV MP Chattisgarh	SD
		94	ETV Rajasthan	SD
		95	ETV Uttar Pradesh Uttarachal	SD
		96	ETV Urdu	SD
		97	News 18 Kannada (earlier name "ETV News Kannada")	SD
		98	ETV News Bangla	SD
		99	News 18 Punjab / Haryana / Himanchal Pradesh (Earlier name "ETV Haryana / Himanchal Pradesh")	SD
		100	ETV News Gujarati	SD
		101	ETV News Odia	SD
30	Paul Entertainments Pvt Limited	102	9X Tashan (Earlier name "Purvaiya")	SD
31	Raj Television Network Limited	103	Raj Musix Kannada	SD
		104	Raj Digital Plus	SD
		105	Raj Musix	SD
		106	Raj News	SD
		107	Raj TV	SD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		108	Vissa TV	SD
32	Sahara India Commercial Corporation Ltd	109	Sahara Filmy	SD
		110	Sahara One	SD
33	Sarthak Entertainment Pvt Limited	111	Sarthak TV	SD
34	Silverstar Communications Limited	112	Mega 24	SD
		113	Mega Musiq	SD
		114	Mega TV	SD
35	Sony Pictures Networks India Private Limited	115	Sony YAY! (Earlier name "Animax")	SD
		116	AXN	SD
		117	SET MAX	SD
		118	MIX	SD
		119	SAB	SD
		120	SONY ENTERTAINMENT CHANNEL (SET)	SD
		121	PIX	SD
		122	SIX	SD
		123	MAX 2 (Earlier name "MAX HD")	SD
		124	PAL (Earlier Name "SAB HD")	SD
		125	SET HD	HD
		126	SIX HD	HD
		127	PIX HD	HD
		128	MAX HD	HD
		129	SONY ESPN HD	HD
		130	Le PLEX HD	HD
36	Star India Private Limited	131	Ten 2 HD	HD
		132	Ten 3 HD	HD
		133	SAB HD	HD
		134	SONY ROX HD	HD
		135	Channel (V)	SD
		136	Star Sports 1 Tamil (Earlier name "Star Sports 4")	SD
		137	Star Sports Select 2 (Earlier name "FX")	SD
		138	Star Bharat (earlier name "Life Ok")	SD
		139	Movies OK (earlier name "Gold Action")	SD
		140	Star Sports 1 Hindi (Earlier name "Star Sports 3")	SD
		141	Star Gold	SD
		142	Star Jalsha	SD
		143	Star Movies	SD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		144	Star Gold Select (Earlier name "Star Movies Action")	SD
		145	Star Plus	SD
		146	Star Pravah	SD
		147	Star Sports 1	SD
		148	Star Sports 2	SD
		149	Star World	SD
		150	Jalsha Movies (Earlier name "Star Bengali")	SD
		151	Star Sports HD 2	HD
		152	Star Sports HD 1	HD
		153	Star Bharat HD (earlier name "Life Ok HD")	HD
		154	Star Gold HD	HD
		155	Star Movies HD	HD
		156	Star Plus HD	HD
		157	Star World Prmiere HD	HD
		158	Star Sports 1 HD Hindi (Earlier name "Star Sports HD 3")	HD
		159	Star Sports Select 1 (Earlier name "Star Sports HD 4")	SD
		160	Star Movies Select HD	HD
		161	Star World HD	HD
		162	Star Sports First (Earlier Name "FX HD")	SD
		163	MAA Gold	SD
		164	MAA Movies	SD
		165	MAA Music	SD
		166	MAA TV	SD
		167	Star Pravah HD	HD
		168	Star Jalsha HD	HD
		169	Jalsha Movies HD	HD
		170	Star Sports Select HD 1	HD
		171	Star Sports Select HD 2	HD
		172	MAA HD	HD
		173	Star Gold Select HD	HD
		174	MAA Movies HD	HD
37	SUN TV Network Limited	175	Adithya TV	SD
		176	Chintu TV	SD
		177	Chutti TV	SD
		178	Gemini Comedy	SD
		179	Gemini Life	SD
		180	Gemini Movies	SD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		181	Gemini Music	SD
		182	Gemini News	SD
		183	Gemini TV	SD
		184	KTV	SD
		185	Kiran TV	SD
		186	Kushi TV	SD
		187	SUN Life	SD
		188	Sun Music	SD
		189	Sun News	SD
		190	Surya Music (Earlier name "Sun News English")	SD
		191	SUN TV	SD
		192	SUN TV RI	SD
		193	Surya TV	SD
		194	Udaya Comedy	SD
		195	Udaya Movies	SD
		196	Udaya Music	SD
		197	Udaya News	SD
		198	Udaya TV	SD
		199	Kochu TV	SD
		200	Sun TV HD	HD
		201	KTV HD	HD
		202	Sun Music HD	HD
		203	Gemini TV HD	HD
		204	Sun Action (#)	SD
		205	Gemini Action (#)	SD
		206	Surya Action (#)	SD
		207	Suriyan TV (#)	SD
38	Taj Television India Private Limited	208	Ten 2 (earlier name 'Ten Action')	SD
		209	Ten 1 (earlier name 'Ten Sports')	SD
		210	Ten 3	SD
		211	Ten Golf HD	HD
		212	Ten 1 HD (earlier name 'Ten HD')	HD
39	Turmeric Vision Private Ltd	213	Food Food TV	SD
40	Turner International India Pvt Ltd	214	Cartoon Network	SD
		215	CNN International	SD
		216	HBO	SD
		217	POGO	SD
		218	Toonami (Earlier name "Boomerang")	SD
		219	WB	SD
		220	HBO HD (Earlier name "HBO Hits HD")	HD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
41	TV 18 Broadcast Limited	221	CNN News 18 (earlier name "CNN-IBN")	SD
		222	CNBC Bazaar	SD
		223	CNBC TV 18 Prime HD	HD
		224	CNBC Awaaz	SD
		225	CNBC TV 18	SD
42	TV Today Network Limited	226	Aaj Tak	SD
		227	Delhi Aaj Tak	SD
		228	India Today (Earlier name "Headlines Today")	SD
		229	Aaj Tak Tez	SD
43	United Home Entertainment Pvt Limited	230	Hungama TV	SD
44	Viacom 18 Media Private Limited	231	Colors	SD
		232	Comedy Central (HD Distribution)	HD
		233	MTV	SD
		234	NICK	SD
		235	NICK JR (Earlier name "Nick Jr / Teen Nick")	SD
		236	SONIC	SD
		237	VH 1 (HD Distribution)	HD
		238	Colors Infinity HD	HD
		239	Colors Infinity	SD
		240	Colors HD	HD
		241	NICKS HD+	HD
		242	MTV Indies (HD Distribution)	HD
		243	Rishtey Cineplex	SD
		244	MTV Beats (Earlier name "X Zone")	SD
		245	Colors Kannada HD	HD
		246	Colors Marathi HD	HD
		247	Colors Bangla HD	HD
		248	Colors Super	SD
		249	Colors Bangla (Earlier name "ETV Bangla")	SD
		250	Colors Gujarati (Earlier name "ETV Gujarati")	SD
		251	Colors Kannada (Earlier name "ETV Kannada")	SD
		252	Colors Marathi (Earlier name "ETV Marathi")	SD
		253	Colors Oriya (Earlier name "ETV Oriya")	SD
		254	MTV Beats HD	HD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		255	NXT	SD
		256	Cineplex HD	HD
		257	VH 1	SD
		258	Comedy Central	SD
45	Vijay Television Pvt Limited	259	Vijay TV (except Tamil Nadu)	SD
		260	Vijay Super	SD
		261	Vijay HD	HD
46	Zee Akaash News Pvt Ltd	262	24 Ghanta	SD
47	Zee Entertainment Enterprises Limited	263	Zee ETC Bollywood (Earlier name "Zee Bollywood")	SD
		264	Action Cinema	SD
		265	Zee Bangla Cinema	SD
		266	Zee Café HD	HD
		267	Zee Café	SD
		268	Zee Cinema	SD
		269	Classic Cinema	SD
		270	Zee Studio	SD
		271	Zee Talkies	SD
		272	Zee TV	SD
		273	Zing	SD
		274	& Picture	SD
		275	Zee Bangla	SD
		276	Zee Marathi	SD
		277	Living Foodz (earlier name "Zee Khana Khazana")	SD
		278	Zee TV HD	HD
		279	Zee Cinema HD	HD
		280	Zee Studio HD	HD
		281	& TV	SD
		282	& TV HD	HD
		283	Zee Kannada	SD
		284	Zee Telugu	SD
		285	& Pictures HD	HD
		286	Zee Cinemalu	SD
		287	Zee Yuva	SD
		288	Zee Marathi HD	HD
		289	Living Zen	SD
		290	& Prive HD	HD
		291	Zee Bangla HD	HD
		292	Zee Tamil HD	HD
		293	Zee Talkies HD	HD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
48	Zee Media Corporation Limited	294	Zee 24 Taas	SD
		295	Zee Kalinga (Earlier name "Zee 24 Ghantalu)	SD
		296	Zee Business	SD
		297	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")	SD
		298	Zee Madhya Pradesh Chattisgarh	SD
		299	Zee Salaam	SD
		300	Zee 24 Kalak	SD
		301	WION	SD
		302	Zee Uttar Pradesh Uttrakhand	SD
		303	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")	SD
49	Zoom Entertainment Network Limited	304	Movies Now	SD

(A) List of Pay channels are for information of the stakeholders.

(B) # Advertisement free channels

(C) The reporting of pay channels by the broadcasters in accordance with the Telecommunication (Broadcasting and Cable) Services (Fourth) (Addressable Systems) Tariff Order, 2010 dated 21.07.2010 as amended from time to time.

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 86 existing cities with operational FM Radio Channels in India

S.No.	Name of City	Category	Number of operational channels
1	Agra	B	4
2	Agartala	D	1
3	Ahmedabad	A	7
4	Ahmednagar	C	3
5	Aizwal	D	2
6	Ajmer	C	4
7	Akola	C	3
8	Aligarh	C	3
9	Allahabad	B	4
10	Amritsar	B	4
11	Asansol	B	2
12	Aurangabad	C	4
13	Bareilly	C	4
14	Bengaluru	A	8
15	Bhopal	B	4
16	Bhubaneshwar	C	4
17	Bikaner	C	4
18	Bilaspur	C	3
19	Chandigarh	C	4
20	Chennai	A+	8
21	Cochin	B	4
22	Coimbatore	B	4
23	Delhi	A+	9
24	Dhule	C	2
25	Gangtok	D	2
26	Gorakhpur	C	4
27	Gulbarga	C	1
28	Guwahati	C	4
29	Gwalior	C	4
30	Hissar	D	4
31	Hyderabad	A	7
32	Itanagar	D	1
33	Indore	B	4
34	Jabalpur	B	4
35	Jaipur	A	6
36	Jalandhar	C	4
37	Jalgaon	C	4
38	Jammu	C	3
39	Jamshedpur	B	4
40	Jhansi	C	2
41	Jodhpur	C	4
42	Kannur	C	4
43	Kanpur	A	6
44	Karnal	D	3

Annexure- 5.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
45	Kolhapur	C	4
46	Kolkata	A+	8
47	Kota	C	4
48	Kozhikode	C	3
49	Lucknow	A	6
50	Madurai	B	4
51	Mangalore	C	3
52	Mumbai	A+	9
53	Muzaffarpur	C	3
54	Mysore	C	2
55	Nagpur	A	6
56	Nanded	C	2
57	Nasik	C	4
58	Panaji	D	3
59	Patiala	C	4
60	Patna	B	4
61	Puducherry	C	3
62	Pune	A	6
63	Raipur	C	4
64	Rajahmundry	C	1
65	Rajkot	B	4
66	Ranchi	C	4
67	Rourkela	C	2
68	Sangli	C	3
69	Shillong	D	3
70	Shimla	D	3
71	Sholapur	C	4
72	Siliguri	C	3
73	Srinagar	C	1
74	Surat	A	6
75	Thiruvananthapuram	C	4
76	Thrissur	C	4
77	Tiruchy	C	2
78	Tirunelveli	C	2
79	Tirupati	C	2
80	Tuticorin	C	2
81	Udaipur	C	4
82	Vadodra	B	4
83	Varanasi	B	5
84	Vijayawada	B	2
85	Vishakapatnam	B	4
86	Warrangal	C	1
Total			326

Source:: As reported by Private FM Radio Service Providers to TRAI

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