



Telecom Regulatory Authority of India

The Indian Telecom Services Performance Indicators January – March, 2018

New Delhi, India
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Snapshot

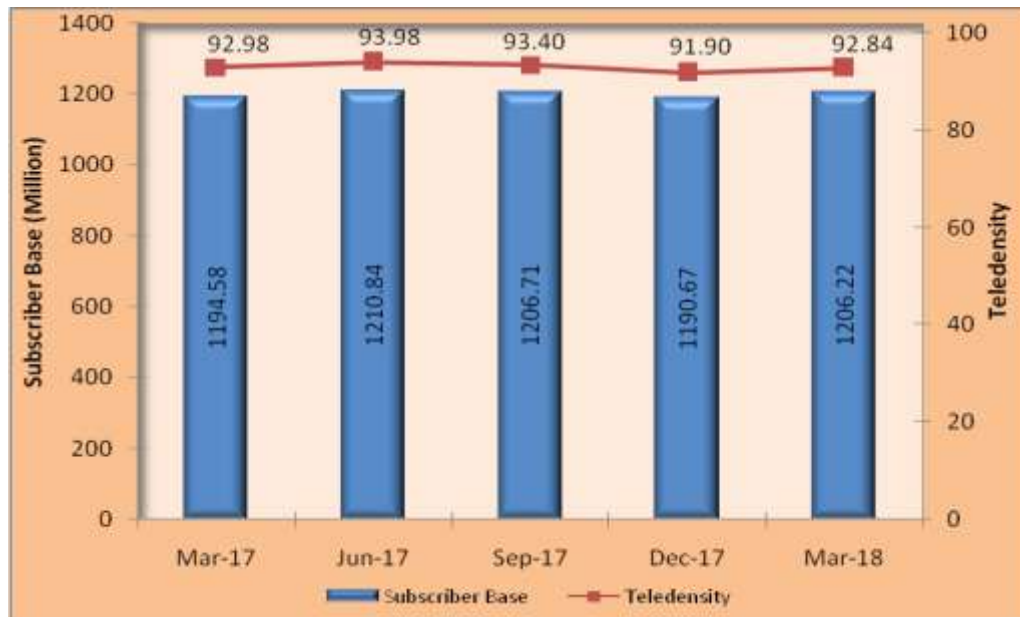
(Data As on Q.E. 31 st March, 2018)	
Telecom Subscribers (Wireless + Wireline)	
Total Subscribers	1,206.22 Million
% change over the previous quarter	1.31%
Urban Subscribers	681.61 Million
Rural Subscribers	524.61 Million
Market share of Private Operators	89.15%
Market share of PSU Operators	10.85%
Teledensity	92.84
Urban Teledensity	165.90
Rural Teledensity	59.05
Wireless Subscribers	
Total Wireless Subscribers	1,183.41 Million
% change over the previous quarter	1.37%
Urban Subscribers	662.18 Million
Rural Subscribers	521.23 Million
GSM Subscribers	1,179.12 Million
CDMA Subscribers	4.29 Million
Market share of Private Operators	90.26%
Market share of PSU Operators	9.74%
Teledensity	91.09
Urban Teledensity	161.17
Rural Teledensity	58.67
Total Wireless Data Usage during the quarter	8,067,633 TB
Wireline Subscribers	
Total Wireline Subscribers	22.81 Million
% change over the previous quarter	-1.82%
Urban Subscribers	19.43 Million
Rural Subscribers	3.38 Million
Market share of Private Operators	31.55%
Market share of PSU Operators	68.45%
Teledensity	1.76
Urban Teledensity	4.73
Rural Teledensity	0.38
No. of Village Public Telephones (VPT)	1,99,057
No. of Public Call Office (PCO)	3,60,053

Telecom Financial Data	
Gross Revenue (GR) during the quarter	₹ 62,198 Crore
% change in GR over the previous quarter	1.82%
Adjusted Gross Revenue (AGR) during the quarter	₹ 35,697 Crore
% change in AGR over the previous quarter	-7.37%
Share of Public sector undertakings in Access AGR	10.25%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 71.62
Internet/Broadband Subscribers	
Total Internet Subscribers	493.96 Million
% change over previous quarter	10.76%
Narrowband subscribers	81.35 Million
Broadband subscribers	412.60 Million
Wired Internet Subscribers	21.24 Million
Wireless Internet Subscribers	472.72 Million
Urban Internet Subscribers	348.13 Million
Rural Internet Subscribers	145.83 Million
Total Internet Subscribers per 100 population	38.02
Urban Internet Subscribers per 100 population	84.74
Rural Internet Subscribers per 100 population	16.41
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/downlinking /uplinking	875
Number of Pay TV Channels as reported by broadcasters	308
Number of private FM Radio Stations (excluding All India Radio)	324
Number of Pay Subscribers net Active with Private DTH Operators	67.53 Million
Number of Operational Community Radio Stations	216
Number of pay DTH Operators	5
Revenue & Usage Parameters	
Monthly ARPU GSM Full Mobility Service including LTE	₹ 76
Monthly ARPU CDMA Full Mobility Service	₹ 79
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service including LTE	584 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	61 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	258 Million
Data Usage of Mobile Users	
Average Data Usage per subscriber per month – GSM including LTE (2G+3G+4G)	2,447 MB
Average Data Usage per subscriber per month - CDMA	173 MB
Average Data Usage per subscriber per month – Total(GSM+CDMA)	2,437 MB
Average outgo per GB data for GSM including LTE (2G+3G+4G)	₹ 14.94
Average outgo per GB data for CDMA	₹ 198

Executive Summary

1. The number of telephone subscribers in India increased from 1,190.67 million at the end of Dec-17 to 1,206.22 million at the end of Mar-18, registering a growth rate of 1.31% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 0.97% over the same quarter of last year. The overall Teledensity in India increased from 91.90 as on QE Dec-17 to 92.84 as on QE Mar-18.

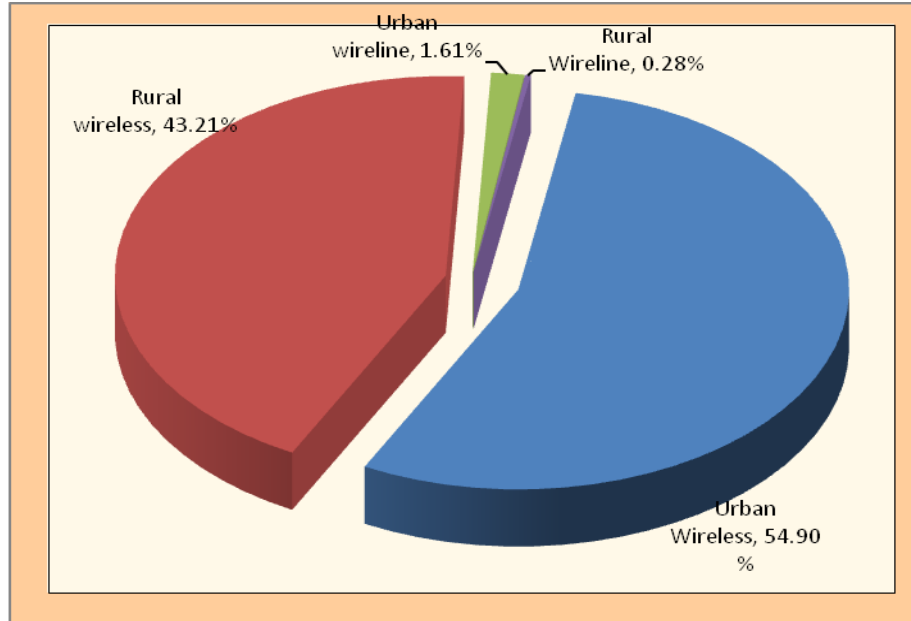
Trends in Telephone subscribers and Teledensity in India



2. Subscription in Urban Areas declined from 688.25 million at the end of Dec-17 to 681.61 million at the end of Mar-18 and Urban Teledensity also declined from 168.29 to 165.90 during the same period.
3. Rural subscription increased from 502.42 million at the end of Dec-17 to 524.61 million at the end of Mar-18 and Rural Teledensity also increased from 56.66 at the end of Dec-17 to 59.05 at the end of Mar-18.

4. Out of the total subscription, the share of Rural subscription increased from 42.20% at the end of Dec-17 to 43.49% at the end of Mar-18.

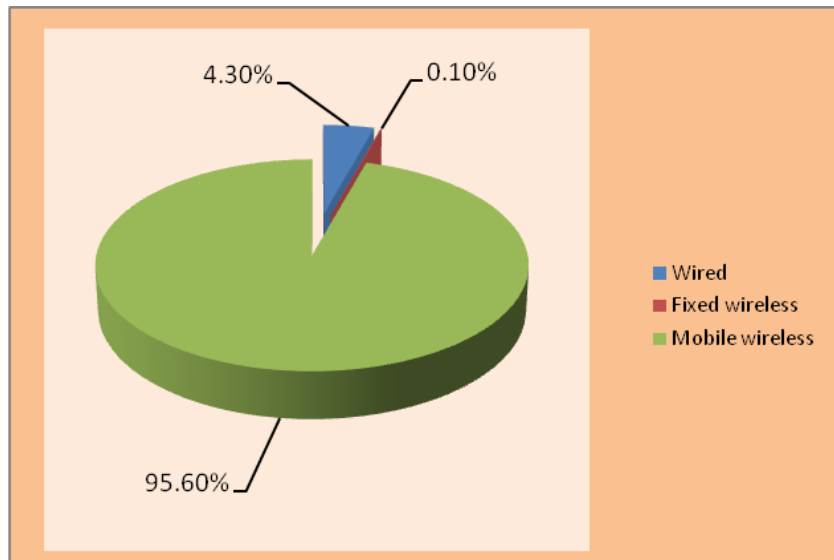
Composition of Telephone Subscribers



5. With a net addition of 15.97 million subscribers during the quarter, total wireless (GSM incl. LTE + CDMA) subscriber base increased from 1,167.44 million at the end of Dec-17 to 1,183.41 million at the end of Mar-18, registering a growth rate of 1.37% over the previous quarter. The year-on-year (Y-O-Y) growth rate of wireless subscribers for Mar-18 is 1.33%.
6. Wireless Tele-density increased from 90.11 at the end of Dec-17 to 91.09 at the end of Mar-18.
7. Wireline subscriber declined from 23.23 million at the end of Dec-17 to 22.81 million at the end of Mar-18 with quarterly decline rate of 1.82%. The year-on-year (Y-O-Y) decline rate in wireline subscribers for Mar-18 is 6.52%.
8. Wireline Teledensity declined from 1.79 at the end of Dec-17 to 1.76 at the end of Mar-18.

9. Total number of Internet subscribers increased from 445.96 million at the end of Dec-17 to 493.96 million at the end of Mar-18, registering a quarterly growth rate of 10.76%. Out of 493.96 million internet subscribers, Wired Internet subscribers are 21.24 million and Wireless Internet subscribers are 472.72 million.

Composition of internet subscription

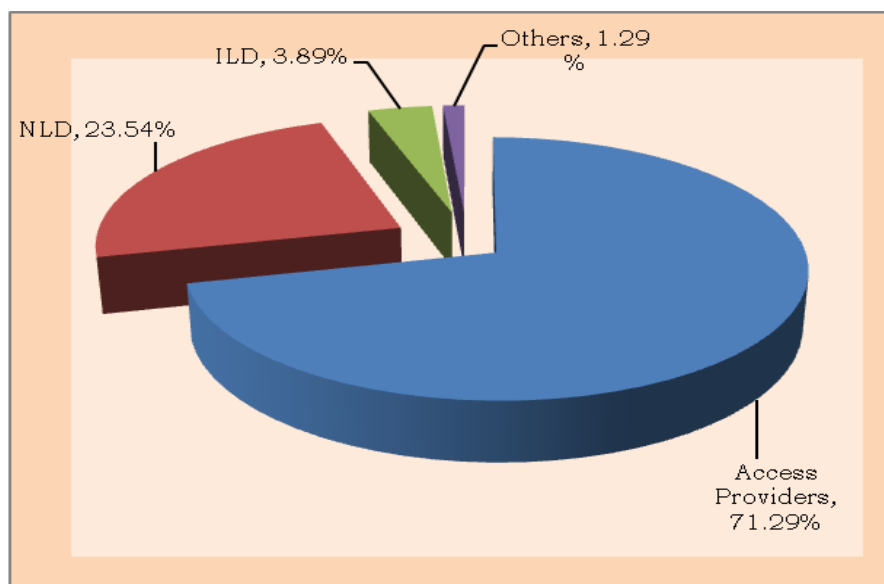


10. The Internet subscriber base is comprised of Broadband Internet subscriber base of 412.60 million and Narrowband Internet subscriber base of 81.35 million.
11. The broadband Internet subscriber base grew by 13.71% from 362.87 million at the end of Dec-17 to 412.60 million at the end of Mar-18. On the other hand, the narrowband Internet subscriber base declined by 2.09% from 83.09 million at the end of Dec-17 to 81.35 million at the end of Mar-18.
12. Monthly Average Revenue per User (ARPU) for GSM service (including LTE) declined by 4.22%, from ₹79 in QE Dec-17 to ₹76 in QE Mar-18. Monthly ARPU for GSM service (including LTE) declined by 8.03% on Y-O-Y in this quarter.

13. Prepaid ARPU for GSM service per month declined from ₹67 in QE Dec-17 to ₹62 in QE Mar-18, however Postpaid ARPU per month increased from ₹348 in QE Dec-17 to ₹360 in QE Mar-18.
14. On an all India average, the overall MOU per subscriber per month for GSM service increased by 17.97% from 495 for QE Dec-17 to 584 in QE Mar-18.
15. Prepaid MOU per subscriber for GSM service increased from 481 in QE Dec-17 to 575 in QE Mar-18, however postpaid MOU declined from 786 in QE Dec-17 to 776 in QE Mar-18.
16. Monthly ARPU for CDMA full mobility service declined by 28.54%, from ₹111 in QE Dec-17 to ₹79 in QE Mar-18 and Y-O-Y basis Monthly ARPU for CDMA full mobility service declined by 39.61% in this quarter.
17. The total MOU per subscriber per month for CDMA full mobility service declined by 46.42%, from 112 in QE Dec-17 to 61 in QE Mar-18. The outgoing MOUs declined from 73 in QE Dec-17 to 39 in QE Mar-18, and incoming MOUs also declined from 40 in QE Dec-17 to 22 in QE Mar-18.
18. Gross Revenue (GR) and Adjusted Gross Revenue (AGR) of Telecom Service Sector for the QE Mar-18 has been ₹62,198 Crore and ₹35,697 Crore respectively. GR increased by 1.82%, however AGR declined by 7.37% in QE Mar-18 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 -1.76% and -12.57% respectively.

20. Pass-through charges increased from ₹22,552 Crore in QE Dec-17 to ₹26,501 in QE Mar-18. The quarterly and the year-on-year (Y-O-Y) growth rates of pass-through charges for QE Mar-18 are 17.51% and 17.87% respectively.
21. The License Fee declined from ₹3,104 Crore for the QE Dec-17 to ₹2,932 Crore for the QE Mar-18. The quarterly and the year-on-year (Y-O-Y) growth rates of license fee are -5.54% and -12.76% respectively in this quarter.
22. Access services contributed 71.29% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR) and Pass Through Charges increased by 1.82% and 17.51% respectively in QE Mar-18. However, Adjusted Gross Revenue (AGR), License Fee and Spectrum Usage Charges(SUC) declined by 7.37%, 5.54% and 8.79% respectively during the quarter.

Composition of Adjusted Gross Revenue in access services



23. Monthly Average Revenue per User (ARPU) for Access Services based on AGR, declined from ₹80.77 in QE Dec-17 to ₹71.62 in QE Mar-18.

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"> • BS Accumulated down-time (not available for service) (%) • Worst affected BTSs due to downtime (%age) • TCH, RAB and E-RAB Congestion (%age) • Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)] (%age) • Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)] (%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 • %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"> • %age of calls answered by the operators (voice to voice) within 90 sec

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

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • Fault incidences (No. of faults per 100 subscribers per month) • %age of calls answered by the operators (voice to voice) within 90 seconds • Termination/Closure of service 100% within 7 days 	<ul style="list-style-type: none"> • Response time to the customer for Assistance – Accessibility of call centre/customer care

26. A total number of 875 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking/uplinking, as on 31st March, 2018.
27. During the quarter ending 31st March, 2018, there were 308 pay channels as reported by 49 broadcasters as compared to 304 pay channels reported in the previous quarter. 308 pay channels include 213 SD pay TV channels and 95 HD Pay TV channels. During the quarter ending 31st March, 2018, as per the reporting, five new pay channels were commenced, one FTA channel was converted into pay channel and two pay channels were reported to be discontinued.
28. Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. During the QE 31st March, 2018, there are 5 pay DTH service providers as compared to 6 pay DTH service providers reported in the previous quarter. During the quarter, intimation of merger of M/s Videocon d2h Ltd with M/s DISH TV India Ltd w.e.f. 22.03.2018 has been received.
29. DTH has attained net pay active subscriber base of around 67.53 million in QE 31st March, 2018. This is in addition the subscribers of free DTH services of Doordarshan.
30. Apart from the radio Stations operated by All India Radio, the public broadcaster, as on 31st March, 2018, there are 324 operational private FM Radio stations and 86 existing cities with operational 34 FM Radio broadcasters as compared to 326 private FM Radio Stations 86 cities with operational 34 FM Radio broadcasters in the previous quarter.
31. As per data received from MIB, as on 31st March, 2018, there are 216 Community Radio Stations are operational.

Trends at a Glance

A. Access Service (Wireline + Wireless)

	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	QE Mar 2018	%age change over Mar-2017	%age change over Jun-2017	%age change over Sep-2017	%age change over Dec-2017
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber Base (in million)									
Wireline	24.40	24.00	23.67	23.23	22.81	-6.52%	-4.95%	-3.63%	-1.82%
Wireless	1170.18	1186.84	1183.04	1167.44	1183.41	1.13%	-0.29%	0.03%	1.37%
Total	1194.58	1210.84	1206.71	1190.67	1206.22	0.97%	-0.38%	-0.04%	1.31%
Rural	501.61	509.88	501.82	502.42	524.61	4.59%	2.89%	4.54%	4.42%
Urban	692.97	700.96	704.89	688.25	681.61	-1.64%	-2.76%	-3.30%	-0.97%
2) Teledensity									
Wireline	1.90	1.86	1.83	1.79	1.76	-7.55%	-5.74%	-4.17%	-2.10%
Wireless	91.08	92.12	91.56	90.11	91.09	0.01%	-1.12%	-0.52%	1.09%
Total	92.98	93.98	93.40	91.90	92.84	-0.15%	-1.21%	-0.59%	1.03%
Rural	56.91	57.73	56.71	56.66	59.05	3.77%	2.29%	4.13%	4.21%
Urban	171.80	172.98	173.15	168.29	165.90	-3.43%	-4.09%	-4.18%	-1.42%
3) Service Provider wise Subscribers Base (in Million) (wireless+wireline)									
Bharti	277.51	284.53	285.95	294.03	308.12	11.03%	8.29%	7.75%	4.79%
Vodafone	209.20	212.09	207.63	212.73	222.92	6.56%	5.10%	7.37%	4.79%
Idea	195.37	196.28	190.16	196.50	211.21	8.11%	7.61%	11.07%	7.49%
Reliance Jio	108.68	123.36	138.62	160.09	186.56	71.66%	51.23%	34.59%	16.53%
BSNL	114.68	117.37	118.61	120.35	123.95	8.08%	5.61%	4.50%	2.99%
Aircel	90.90	90.32	88.82	85.00	74.15	-18.42%	-17.90%	-16.52%	-12.76%
Reliance	84.68	82.50	73.31	34.30	1.11	-98.69%	-98.66%	-98.49%	-96.77%
Tata	50.74	45.54	46.76	38.55	33.07	-34.84%	-27.39%	-29.29%	-14.24%
Telenor	50.49	47.34	46.01	41.91	37.98	-24.77%	-19.76%	-17.45%	-9.37%
MTNL	7.09	7.06	7.01	6.96	6.90	-2.62%	-2.17%	-1.53%	-0.82%
Sistema	4.97	4.19	3.57	-	-	-	-	-	-
Quadrant	0.26	0.27	0.26	0.25	0.24	-7.25%	-8.53%	-7.41%	-2.62%
Total	1194.58	1210.84	1206.71	1190.67	1206.22	0.97%	-0.38%	-0.04%	1.31%

B. Internet Services

	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	QE Mar 2018	%age change over Mar-2017 (12 months)	%age change over Jun-2017 (9 months)	%age change over Sep-2017 (6 months)	%age change over Dec-2017 (3 months)
	1) Subscriber's Base (in million)								
A. Wired Internet Subscribers	21.58	21.67	21.35	21.28	21.24	-1.56%	-1.97%	-0.54%	-0.21%
B. Wireless Internet Subscribers	400.62	409.55	407.88	424.67	472.72	18.00%	15.42%	15.90%	11.31%
i. Mobile Wireless (Mobile & Dongle)	400.04	409.01	407.41	424.22	472.25	18.05%	15.46%	15.92%	11.32%
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.58	0.54	0.47	0.45	0.47	-19.15%	-12.56%	-0.24%	3.47%
Total Internet Subscribers	422.19	431.21	429.23	445.96	493.96	17.00%	14.55%	15.08%	10.76%
2) No. of Internet Subs per 100 Population	32.86	33.47	33.22	34.42	38.02	15.70%	13.60%	14.44%	10.46%

C. Usage and Revenue for Full Mobility Services

1. Traffic (MOU) (minutes of use/subscriber/month)									
i) GSM	405	428	437	495	584	44.21%	36.40%	33.82%	18.01%
ii) CDMA	250	246	206	112	60	-75.88%	-75.54%	-70.71%	-46.43%
2) ARPU (₹/sub/ month)									
i) GSM	82.68	79.58	83.89	79.39	76.04	-8.03%	-4.45%	-9.36%	-4.22%
ii) CDMA	131.34	124.49	125.24	110.62	79.32	-39.61%	-36.28%	-36.67%	-28.30%

D. Telecom Financial Data

	QE Mar 2017	QE Jun 2017	QE Sep 2017	QE Dec 2017	QE Mar-2018	%age change over Mar-2017 (12 months)	%age change over Jun-2017 (9 months)	%age change over Sep-2017 (6 months)	%age change over Dec-2017 (3 months)
	1. Telecom Sector								
i) Gross Revenue (₹ in Crores)	63315.18	64889.47	66361.70	61088.65	62198.26	-1.76%	-4.15%	-6.27%	1.82%
ii) Adjusted Gross Revenue (₹ in Crores)	40831.33	39777.55	41668.84	38536.22	35697.24	-12.57%	-10.26%	-14.33%	-7.37%
2. Access Services									
Adjusted Gross Revenue (₹ in Crores)	31594.91	30082.33	31968.03	28967.93	25448.09	-19.46%	-15.41%	-20.40%	-12.15%
ARPU per month (AGR/ Average subscribers/3)	89.34	83.41	88.09	80.77	71.62	-19.84%	-14.14%	-18.70%	-11.33%

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending March, 2018. 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 increased from 1,190.67 million at the end of Dec-17 to 1,206.22 million at the end of Mar-18, registering a growth rate of 1.31% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 0.97% over the same quarter of last year. The overall Teledensity in India increased from 91.90 as on QE Dec-17 to 92.84 as on QE Mar-18.

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

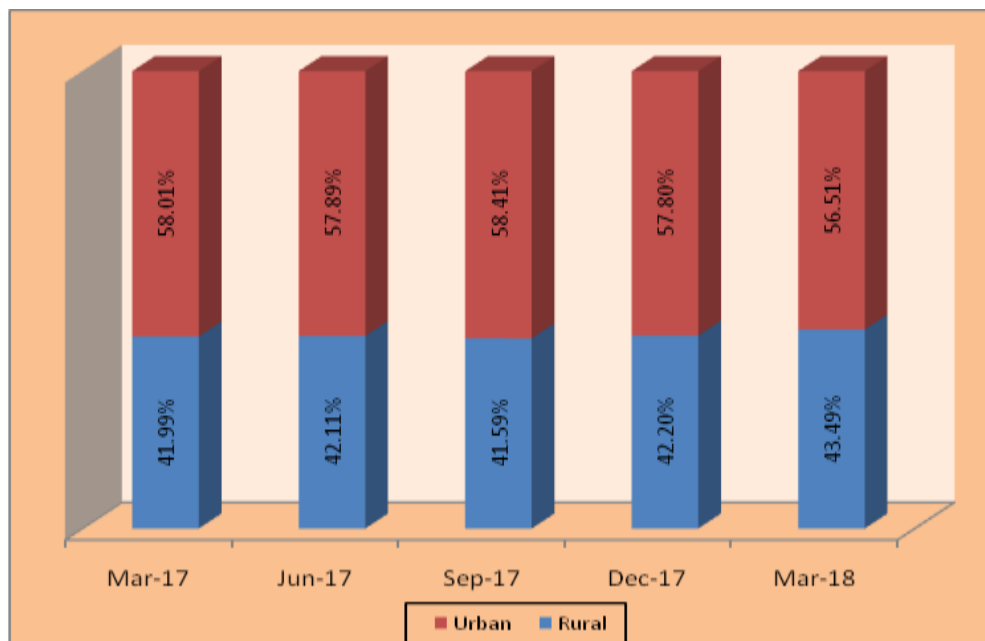


Table 1.1: Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Mar-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
Mar-18	524.61	681.61	59.05	165.90

- 1.2 Subscription in Urban Areas declined from 688.25 million at the end of Dec-17 to 681.61 million at the end of Mar-18, and Urban Tele-density also declined from 168.29 to 165.90 during the quarter.
- 1.3 Rural subscription increased from 502.42 million at the end of Dec-17 to 524.61 million at the end of Mar-18 and Rural Tele-density also increased from 56.66 to 59.05 at the end of Mar-18.
- 1.4 The year-on-year (Y-O-Y) growth rate of Urban and Rural telephone subscription from Mar-17 to Mar-18 is -3.43% and 3.77% respectively. Year-on-year (Y-o-Y) growth rate of Urban and Rural Tele-density from Mar-17 to Mar-18 is -1.64% and 4.59% respectively.

Chart 1.2: Market Share - Rural & Urban Subscribers



- 1.5 Share of subscription of rural areas in total telephone subscription increased from 42.20% at the end of Dec-17 to 43.49% at the end of Mar-18.

Chart 1.3: Composition of Access subscription - Wireline & Wireless

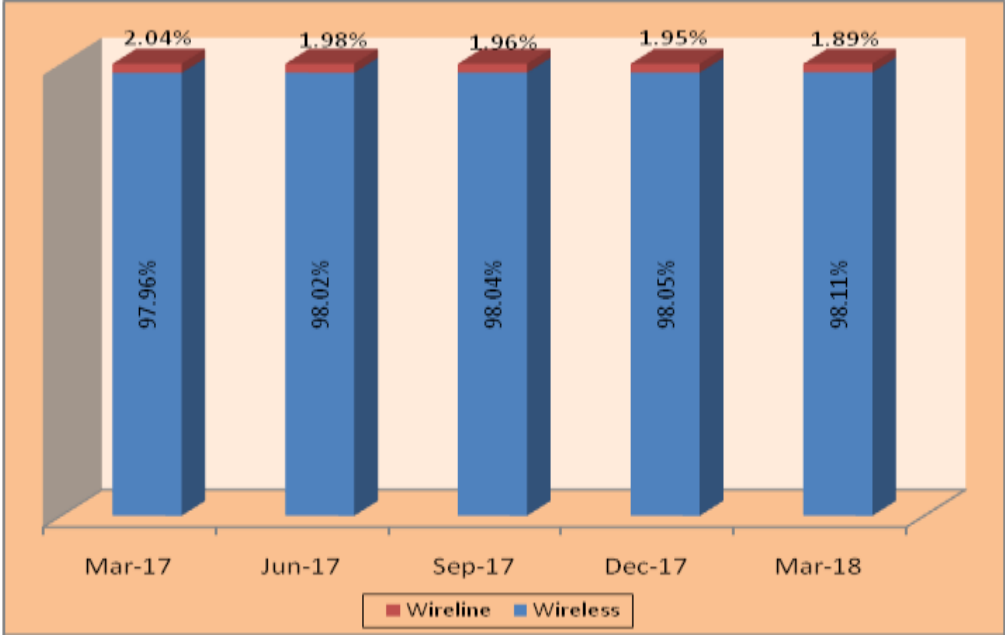


Chart 1.4: Composition of Rural-Urban Telephone Subscribers at the end of the quarter

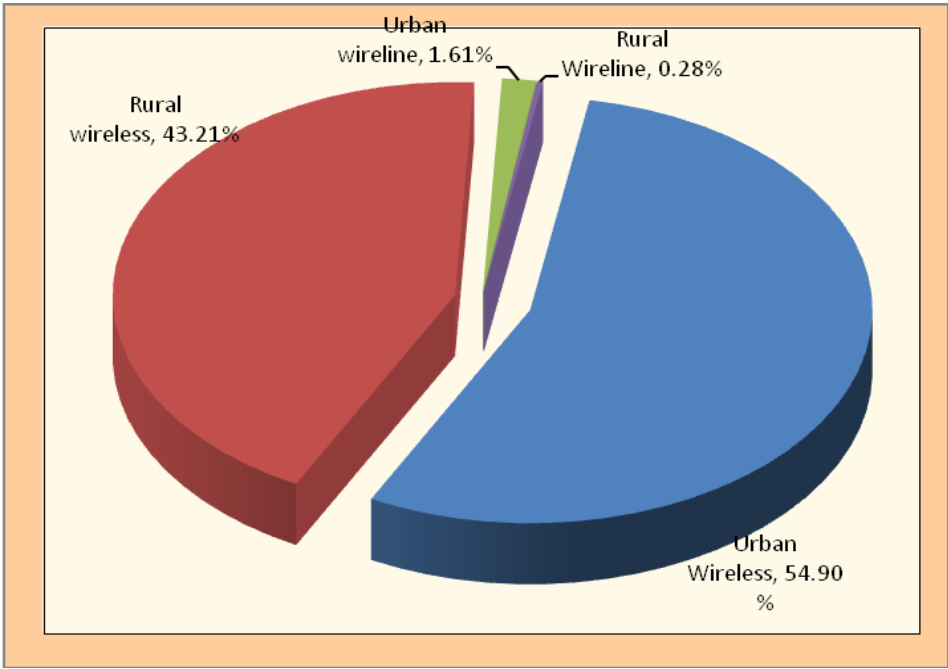


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

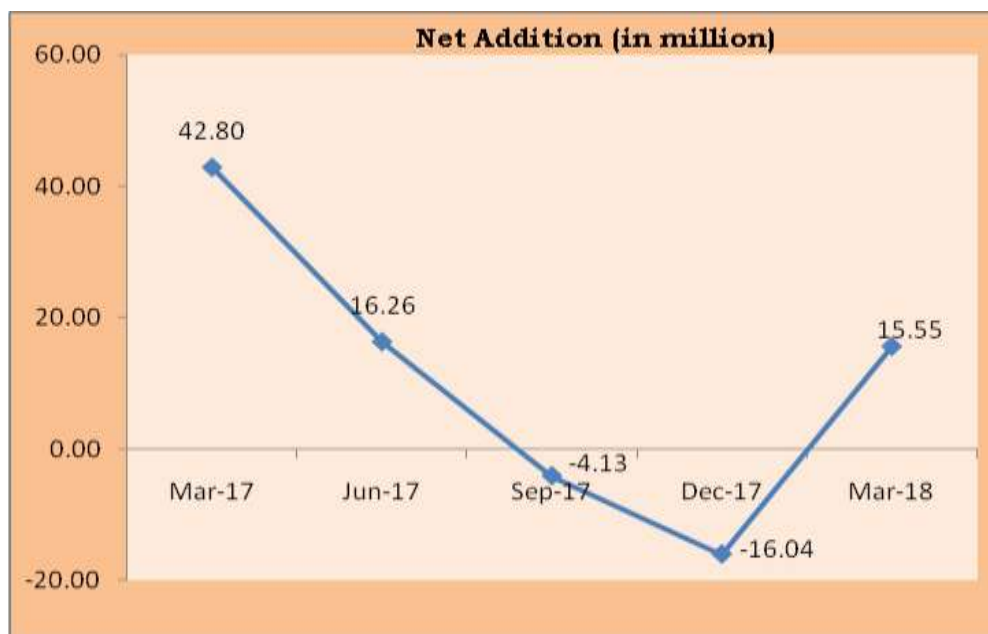
Service Area	Subscribers (million)			
	Dec-17	Mar-18	Net Additions	Rate of Growth(%)
Andhra Pradesh	85.84	87.11	1.27	1.48
Assam	22.74	24.77	2.03	8.94
Bihar	84.56	88.87	4.31	5.10
Delhi	58.77	57.10	-1.67	-2.83
Gujarat	71.89	73.19	1.31	1.82
Haryana	25.77	26.69	0.92	3.57
Himachal Pradesh	10.70	9.77	-0.93	-8.67
Jammu & Kashmir	13.24	13.77	0.53	4.00
Karnataka	69.45	69.20	-0.26	-0.37
Kerala	43.00	43.97	0.97	2.26
Madhya Pradesh	74.08	71.44	-2.64	-3.56
Maharashtra	95.15	96.33	1.18	1.24
Mumbai	41.35	39.37	-1.99	-4.81
North East	12.93	13.88	0.96	7.39
Orissa	34.30	34.62	0.33	0.95
Punjab	38.96	38.96	0.00	0.00
Rajasthan	66.42	64.97	-1.45	-2.19
T.N. (incl. Chennai)	89.41	96.39	6.98	7.81
U.P.(E)	101.26	104.31	3.05	3.01
U.P.(W)	62.68	63.75	1.07	1.70
Kolkata	29.89	28.97	-0.92	-3.07
West Bengal	58.29	58.78	0.50	0.85
All India	1,190.67	1,206.22	15.55	1.31

1.6 Assam service areas showed highest growth rate of 8.947% followed by Tamilnadu (incl. Chennai) with 7.81% in their subscriber base during the quarter ending Mar-18. Himachal Pradesh service area recorded maximum decline rate of 8.67% 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	87.11	39.65	47.46	45.51
Assam	24.77	15.74	9.03	63.54
Bihar	88.87	53.26	35.61	59.93
Delhi	57.10	2.97	54.13	5.21
Gujarat	73.19	28.40	44.79	38.81
Haryana	26.69	11.58	15.11	43.39
Himachal Pradesh	9.77	7.18	2.59	73.50
Jammu & Kashmir	13.77	7.04	6.73	51.11
Karnataka	69.20	23.63	45.56	34.15
Kerala	43.97	20.30	23.67	46.17
Madhya Pradesh	71.44	33.75	37.68	47.25
Maharashtra	96.33	45.56	50.77	47.30
Mumbai	39.37	1.85	37.52	4.69
North East	13.88	7.16	6.72	51.56
Orissa	34.62	21.83	12.79	63.05
Punjab	38.96	14.12	24.83	36.25
Rajasthan	64.97	33.84	31.13	52.08
T.N. (incl. Chennai)	96.39	28.62	67.77	29.69
U.P.(E)	104.31	56.28	48.03	53.95
U.P.(W)	63.75	28.39	35.36	44.53
Kolkata	28.97	3.22	25.75	11.11
West Bengal	58.78	40.23	18.55	68.44
All India	1,206.22	524.61	681.61	43.49

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



1.7 The net addition in telephone subscribers is 15.55 million in QE Mar-18 as against the net decline of 16.04 million in QE Dec-17.

Table 1.4 : Service Area wise Teledensity

Service Area/ States	As on 31 st December, 2017			As on 31 st March, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	59.52	189.15	95.82	61.37	188.79	97.07
Assam	51.68	154.74	68.69	56.84	164.20	74.63
Bihar	40.78	181.06	60.22	43.91	182.36	63.12
Delhi	-	-	262.14	-	-	252.93
Gujarat	72.98	161.91	110.74	75.94	161.74	112.44
Haryana	63.41	139.02	91.43	65.19	143.66	94.38
Himachal Pradesh	118.86	367.89	148.66	113.19	299.21	135.52
J&K	70.60	191.27	104.70	77.44	187.62	108.63
Karnataka	59.31	186.89	109.64	61.57	181.58	109.01

Service Area/ States	As on 31 st December, 2017			As on 31 st March, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Kerala	73.11	255.17	119.08	75.10	259.39	121.61
Madhya Pradesh	43.54	137.83	69.69	43.83	127.21	66.99
Maharashtra (incl. Mumbai)*	71.78	148.38	109.42	74.65	143.31	108.46
North East	62.51	173.66	90.93	67.51	184.15	97.40
Orissa	58.14	176.96	79.61	61.78	163.55	80.22
Punjab	80.90	176.18	123.63	81.26	174.72	123.30
Rajasthan	58.33	184.28	88.89	59.61	171.08	86.67
Tamil Nadu (incl. Chennai)	94.37	143.37	124.55	104.34	152.48	134.11
Uttar Pradesh (incl. UPE & UPW)	44.91	152.25	69.72	46.68	152.65	71.21
West Bengal (incl. Kolkata)*	61.82	165.28	91.65	63.34	159.31	91.02
All India	56.66	168.29	91.90	59.05	165.90	92.84

* 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 113.19 followed by Tamil Nadu service area (104.34). Madhya Pradesh (incl. Chhatishgarh) service area has the lowest Rural Tele-density of 43.83.

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

Sl.No.	States/UT	Total Telephone Subscribers (million)		
		Total	Rural	Urban
1	Andhra Pradesh	47.30	23.82	23.48
2	Arunachal Pradesh	1.27	0.60	0.67
3	Assam	24.77	15.74	9.03
4	Bihar	67.10	42.28	24.82
5	Chhattisgarh	17.56	8.33	9.23
6	Goa	2.65	1.15	1.50
7	Gujarat	72.14	28.13	44.01
8	Haryana	34.34	12.20	22.15
9	Himachal Pradesh	9.77	7.18	2.59
10	Jammu & Kashmir	13.77	7.04	6.73
11	Jharkhand	21.77	10.97	10.80
12	Karnataka	69.20	23.63	45.56
13	Kerala	43.89	20.22	23.67
14	Madhya Pradesh	53.88	25.42	28.45
15	Maharashtra Incl. Mumbai	133.05	46.26	86.79
16	Manipur	5.24	3.10	2.14
17	Meghalaya	1.79	0.89	0.91
18	Mizoram	1.05	0.36	0.69
19	Nagaland	1.42	0.59	0.83
20	Odisha	34.62	21.83	12.79
21	Punjab	36.33	13.90	22.43
22	Rajasthan	64.97	33.84	31.13
23	Sikkim	0.71	0.37	0.34
24	Tamil Nadu (incl. Chennai)	95.11	28.30	66.81
25	Telangana	39.81	15.83	23.98
26	Tripura	3.11	1.62	1.49
27	Uttar Pradesh (UPE +UPW)	163.74	79.76	83.98
28	Uttarakhand	12.13	5.53	6.60
29	West Bengal Incl. Kolkata	86.52	42.82	43.70
	Union Territories			
1	Andaman & Nicobar Islands	0.53	0.26	0.27
2	Chandigarh	2.44	0.22	2.22
3	Dadar & Nagar Haweli	0.65	0.20	0.45
4	Daman & Diu	0.41	0.08	0.33
5	Delhi	41.83	1.74	40.09
6	Lakshdweep	0.08	0.08	0.003
7	Puduchery	1.28	0.32	0.96
	Total	1206.22	524.61	681.61

Table 1.6 : State/UT wise total Teledensity

Sl.No.	State/UT	Total Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	52.71	61.37	188.79
2	Arunachal Pradesh	94.50	76.28	120.19
3	Assam	74.63	56.84	164.20
4	Bihar	63.13	44.48	221.06
5	Chhattisgarh	66.24	42.12	137.13
6	Goa	127.97	156.94	112.04
7	Gujarat	112.22	76.07	161.17
8	Haryana	121.42	68.65	210.54
9	Himachal Pradesh	135.52	113.19	299.21
10	Jammu & Kashmir	108.63	77.44	187.62
11	Jharkhand	63.07	41.86	130.03
12	Karnataka	109.01	61.57	181.58
13	Kerala	121.66	74.97	259.98
14	Madhya Pradesh	67.23	44.41	124.30
15	Maharashtra Incl. Mumbai	108.13	73.69	144.01
16	Manipur	197.87	155.91	323.64
17	Meghalaya	63.29	39.80	149.53
18	Mizoram	96.65	75.40	113.56
19	Nagaland	58.33	29.39	196.43
20	Odisha	80.22	61.78	163.55
21	Punjab	122.55	80.92	179.95
22	Rajasthan	86.67	59.61	171.08
23	Sikkim	106.98	65.36	336.92
24	Tamil Nadu (incl. Chennai)	135.73	105.20	154.76
26	Tripura	79.58	52.14	186.35
27	Uttar Pradesh (UPE +UPW)	72.74	45.89	163.64
28	Uttarakhand	111.30	72.87	199.46
29	West Bengal Incl. Kolkata	90.91	63.23	159.17
Union Territories				
1	Andaman & Nicobar Islands	91.79	81.77	104.51
2	Chandigarh	125.26	110.48	126.93
3	Dadar & Nagar Haweli	143.41	138.74	145.60
4	Daman & Diu	112.70	27.52	436.66
5	Delhi	185.28	225.19	183.87
6	Lakshdweep	98.78	129.39	13.34
7	Puduchery	70.89	60.55	75.17
	Total	92.84	59.05	165.90

*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 Dec-17 (%)	Market Share in QE Mar-18 (%)
	Dec-17	Mar-18	Net Additions			
Bharti	294.03	308.12	14.10	4.79	24.69	25.54
Vodafone	212.73	222.92	10.19	4.79	17.87	18.48
IDEA	196.50	211.21	14.71	7.49	16.50	17.51
Reliance Com.	34.30	1.11	-33.19	-96.77	2.88	0.09
Tata	38.55	33.07	-5.49	-14.24	3.24	2.74
Aircel	85.00	74.15	-10.85	-12.76	7.14	6.15
Quadrant	0.25	0.24	-0.01	-2.62	0.02	0.02
Telenor	41.91	37.98	-3.93	-9.37	3.52	3.15
Reliance Jio	160.09	186.56	26.47	16.53	13.45	15.47
BSNL	120.35	123.95	3.60	2.99	10.11	10.28
MTNL	6.96	6.90	-0.06	-0.82	0.58	0.57
Total	1,190.67	1,206.22	15.55	1.31	100	100

1.9 Bharti Airtel is the leading service provider in access segment in terms of number of subscribers with 308.12 million subscribers followed by Vodafone (222.92 million) at the end of Mar-18.

1.10 Reliance Jio Infocom Ltd. recorded the highest net addition of 26.47 million subscribers during the QE Mar-18, however Reliance Communications Group showed maximum net decline of 33.19 million subscribers during the same period.

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	308.12	156.95	50.94	29.92
Vodafone	222.92	120.31	53.97	22.93
IDEA	211.21	114.74	54.33	21.87
Reliance Com.	1.11	0.02	2.08	0.004
Tata	33.07	4.87	14.73	0.93
Aircel	74.15	28.04	37.81	5.34
Quadrant	0.24	0.05	21.27	0.01
Telenor	37.98	10.76	28.32	2.05
Reliance Jio	186.56	49.73	26.66	9.48
BSNL	123.95	39.09	31.54	7.45
MTNL	6.90	0.05	0.69	0.01
Total	1,206.22	524.61	43.49	100

1.11 M/s Vodafone is the telecom service provider with highest proportion of rural telephone subscribers (54.94%), followed by Idea Cellular (54.33%) to their total telephone subscribers at the end of Mar-18.

Section B : Wireless Service

Table 1.9: List of Cellular Mobile (GSM, LTE & CDMA) Service Providers currently providing service [As on 31st March, 2018]

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

Source : DoT website

#Delhi, HP & UP(E) – CMTS.

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

1.12 Total Wireless (GSM including LTE+CDMA) subscriber base increased from 1,167.44 million at the end of Dec-17 to 1,183.41 million at the end of Mar-18, thereby showing a quarterly growth rate of 1.37%. During the quarter, net addition of 15.97 million wireless subscribers was recorded. Total wireless subscribers showed year-on-year (Y-O-Y) growth rate of 1.13% in QE Mar-18.

1.13 Wireless Teledensity increased from 90.11 at the end of Dec-17 to 91.09 at the end of Mar-18.

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
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
Mar-18	521.23	662.18	58.67	161.17

1.14 The Rural Wireless subscribers increased from 499.00 million at the end of Dec-17 to 521.23 million at the end of Mar-18, however the urban wireless subscribers declined from 668.44 million to 662.18 million during the quarter.

1.15 Quarterly Growth rates of Rural and Urban wireless subscriptions are 4.61% and -1.04% respectively in QE Mar-18.

1.16 The share of rural wireless subscription increased from 42.68% to 44.04% in total wireless subscription in this quarter.

Chart 1.7: Wireless Market Share - Rural & Urban

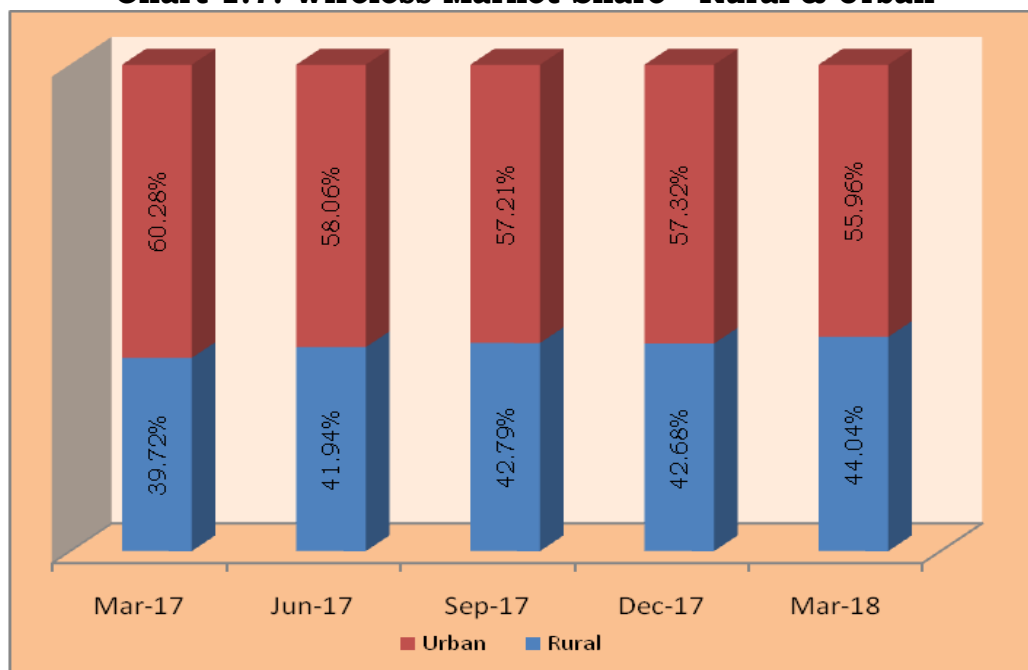


Table 1.11: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share □ Dec-17 (%)	Market Share □ Mar-18 (%)
	Dec-17	Mar-18	Net Additions			
Bharti	290.11	304.19	14.08	4.85	24.85	25.70
Vodafone	212.53	222.70	10.17	4.78	18.20	18.82
IDEA	196.50	211.21	14.71	7.49	16.83	17.85
Reliance Com.	33.17	0.19	-32.98	-99.44	2.84	0.02
Tata	36.69	31.19	-5.50	-15.00	3.14	2.64
Aircel	84.93	74.15	-10.78	-12.69	7.28	6.27
Telenor	41.91	37.98	-3.93	-9.37	3.59	3.21
BSNL	107.92	111.68	3.76	3.49	9.24	9.44
MTNL	3.58	3.56	-0.03	-0.77	0.31	0.30
Reliance Jio	160.09	186.56	26.47	16.53	13.71	15.76
Total	1,167.44	1,183.41	15.97	1.37	100	100

1.17 Bharti remains the leading service provider with 304.19 million wireless subscribers at the end of Mar-18, followed by Vodafone (222.70 million).

1.18 In terms of net additions during the quarter ending Mar-18, Reliance Jio (26.47 million) has added the highest number of subscribers, however, Reliance Communications Group showed maximum decline of 32.98 million in its wireless subscribers during the quarter.

Table 1.12: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Dec-17	Mar-18	Net Additions	Rate of change (%)
Andhra Pradesh	84.32	85.63	1.32	1.56
Assam	22.60	24.64	2.04	9.01
Bihar	84.29	88.59	4.30	5.10
Delhi	55.55	53.91	-1.64	-2.95
Gujarat	70.59	71.92	1.33	1.89
Haryana	25.47	26.39	0.93	3.63
Himachal Pradesh	10.57	9.64	-0.93	-8.76
Jammu & Kashmir	13.12	13.65	0.53	4.05
Karnataka	67.20	66.98	-0.22	-0.33
Kerala	41.01	42.00	0.99	2.42
Madhya Pradesh	73.10	70.49	-2.61	-3.57
Maharashtra	93.38	94.60	1.22	1.31
Mumbai	38.33	36.38	-1.95	-5.10
North East	12.81	13.77	0.96	7.46
Orissa	34.02	34.34	0.32	0.95
Punjab	38.07	38.09	0.02	0.07
Rajasthan	65.81	64.37	-1.44	-2.18
T.N. (incl. Chennai)	87.03	94.07	7.05	8.10
U.P.(E)	100.77	103.84	3.07	3.04
U.P.(W)	62.32	63.40	1.08	1.73
Kolkata	29.07	28.18	-0.89	-3.06
West Bengal	58.00	58.51	0.51	0.87
All India	1,167.44	1,183.41	15.97	1.37

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	85.63	39.39	46.24	46.01
Assam	24.64	15.72	8.92	63.80
Bihar	88.59	53.18	35.41	60.03
Delhi	53.91	2.97	50.94	5.51
Gujarat	71.92	28.22	43.70	39.23
Haryana	26.39	11.52	14.87	43.67
Himachal Pradesh	9.64	7.11	2.54	73.67
Jammu & Kashmir	13.65	7.02	6.63	51.45
Karnataka	66.98	23.47	43.51	35.05
Kerala	42.00	19.11	22.90	45.49
Madhya Pradesh	70.49	33.65	36.84	47.73
Maharashtra	94.60	45.26	49.35	47.84
Mumbai	36.38	1.85	34.53	5.08
North East	13.77	7.13	6.64	51.81
Orissa	34.34	21.77	12.58	63.38
Punjab	38.09	13.93	24.17	36.56
Rajasthan	64.37	33.75	30.62	52.43
T.N. (incl. Chennai)	94.07	28.30	65.78	30.08
U.P.(E)	103.84	56.20	47.64	54.13
U.P.(W)	63.40	28.35	35.05	44.72
Kolkata	28.18	3.22	24.96	11.43
West Bengal	58.51	40.11	18.39	68.56
All India	1,183.41	521.23	662.18	44.04

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 31 st December, 2017			As on 31 st March, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	59.11	184.12	94.12	60.98	183.91	95.42
Assam	51.59	152.63	68.27	56.76	162.14	74.22
Bihar	40.71	180.05	60.03	43.85	181.33	62.92
Delhi	-	-	247.78	-	-	238.80
Gujarat	72.49	157.89	108.75	75.45	157.83	110.50
Haryana	63.09	136.61	90.34	64.87	141.32	93.30
H.P.	117.64	362.03	146.89	111.98	293.45	133.76
J&K	70.46	188.37	103.77	77.30	184.76	107.72
Karnataka	58.89	178.51	106.08	61.15	173.38	105.52
Kerala	68.65	246.50	113.56	70.68	250.87	116.16
M.P.	43.40	134.88	68.77	43.69	124.37	66.10
Maharashtra (incl. Mumbai)*	71.29	141.07	105.58	74.17	136.15	104.69
North East	62.30	171.18	90.13	67.30	181.72	96.61
Orissa	57.97	174.23	78.98	61.60	160.80	79.58
Punjab	79.72	171.35	120.81	80.12	170.04	120.57
Rajasthan	58.17	181.40	88.07	59.45	168.27	85.87
Tamil Nadu (incl. Chennai)	93.17	138.75	121.24	103.15	148.00	130.89
Uttar Pradesh (incl. UPE&UPW)*	44.85	150.89	69.36	46.62	151.36	70.86
West Bengal (incl. Kolkata)*	61.64	161.74	90.50	63.17	155.90	89.91
All India	56.28	163.44	90.11	58.67	161.17	91.09

* 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 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 1.15 : State/UT wise Wireless Subscriber Base

Sl.No.	States/UT	Wireless Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	46.48	23.62	22.86
2	Arunachal Pradesh	1.24	0.59	0.65
3	Assam	24.64	15.72	8.92
4	Bihar	66.95	42.22	24.73
5	Chhattisgarh	17.37	8.31	9.06
6	Goa	2.54	1.12	1.42
7	Gujarat	70.88	27.94	42.93
8	Haryana	33.98	12.14	21.84
9	Himachal Pradesh	9.64	7.11	2.54
10	Jammu & Kashmir	13.65	7.02	6.63
11	Jharkhand	21.64	10.96	10.68
12	Karnataka	66.98	23.47	43.51
13	Kerala	41.93	19.03	22.90
14	Madhya Pradesh	53.11	25.34	27.78
15	Maharashtra	128.44	45.99	82.45
16	Manipur	5.22	3.09	2.13
17	Meghalaya	1.78	0.88	0.89
18	Mizoram	1.03	0.36	0.67
19	Nagaland	1.41	0.59	0.82
20	Odisha	34.34	21.77	12.58
21	Punjab	35.65	13.71	21.94
22	Rajasthan	64.37	33.75	30.62
23	Sikkim	0.70	0.37	0.33
24	Tamil Nadu	92.85	27.98	64.87
25	Telangana	39.15	15.77	23.38
26	Tripura	3.09	1.61	1.47
27	Uttar Pradesh	162.99	79.66	83.32
28	Uttarakhand	12.02	5.52	6.50
29	West Bengal	85.47	42.71	42.76
Union Territories				
1	Andaman & Nicobar Islands	0.51	0.26	0.26
2	Chandigarh	2.26	0.22	2.04
3	Dadar & Nagar Haweli	0.65	0.20	0.45
4	Daman & Diu	0.40	0.08	0.32
5	Delhi	38.75	1.74	37.01
6	Lakshdweep	0.08	0.08	0.00
7	Puduchery	1.22	0.31	0.91
Total		1183.41	521.23	662.18

Table 1.16 : State/UT wise Wireless Tele-density

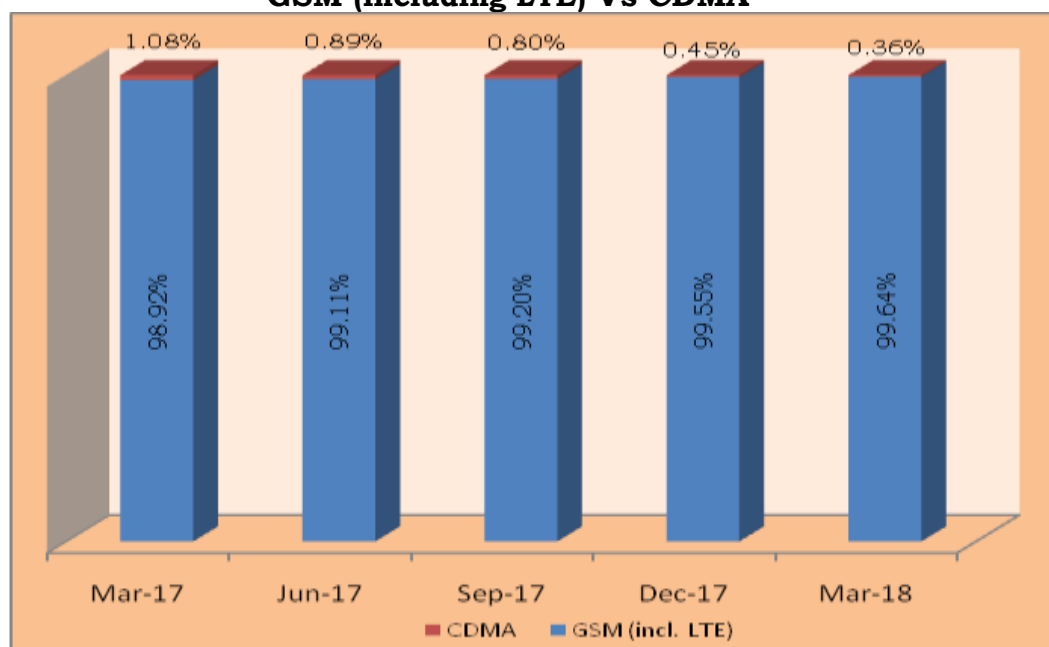
Sl.No.	State/UT	Wireless Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh*	95.42	60.98	183.91
2	Arunachal Pradesh	92.72	75.43	117.09
3	Assam	74.22	56.76	162.14
4	Bihar	63.00	44.41	220.32
5	Chhattisgarh	65.53	42.02	134.64
6	Goa	122.45	152.14	106.14
7	Gujarat	110.27	75.58	157.23
8	Haryana	120.13	68.33	207.61
9	Himachal Pradesh	133.76	111.98	293.45
10	Jammu & Kashmir	107.72	77.30	184.76
11	Jharkhand	62.69	41.81	128.59
12	Karnataka	105.52	61.15	173.38
13	Kerala	116.22	70.56	251.47
14	Madhya Pradesh	66.28	44.26	121.35
15	Maharashtra	104.39	73.26	136.81
16	Manipur	197.08	155.65	321.30
17	Meghalaya	62.64	39.70	146.87
18	Mizoram	95.26	75.19	111.23
19	Nagaland	57.84	29.33	193.89
20	Odisha	79.58	61.60	160.80
21	Punjab	120.25	79.78	176.06
22	Rajasthan	85.87	59.45	168.27
23	Sikkim	105.97	65.26	330.84
24	Tamil Nadu	132.51	104.02	150.27
25	Tripura	79.01	51.92	184.44
26	Uttar Pradesh	72.40	45.84	162.36
27	Uttarakhand	110.32	72.70	196.58
28	West Bengal	89.81	63.07	155.77
	Union Territories			
1	Andaman & Nicobar Islands	88.92	79.79	100.51
2	Chandigarh	115.92	109.47	116.65
3	Dadar & Nagar Haweli	142.53	137.70	144.79
4	Daman & Diu	111.03	26.66	431.89
5	Delhi	171.62	225.19	169.72
6	Lakshdweep	91.28	123.98	0.00
7	Puduchery	67.74	58.91	71.40
	All India Teledensity	91.09	58.67	161.17

*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	304.19	156.95	51.59	30.11
Vodafone	222.70	120.31	54.02	23.08
IDEA	211.21	114.74	54.33	22.01
Reliance Com.	0.19	0.02	11.51	0.004
Tata	31.19	4.81	15.44	0.92
Aircel	74.15	28.04	37.81	5.38
Telenor	37.98	10.76	28.32	2.06
BSNL	111.68	35.82	32.07	6.87
MTNL	3.56	0.05	1.34	0.01
Reliance Jio	186.56	49.73	26.66	9.54
Total	1,183.41	521.23	44.04	100

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

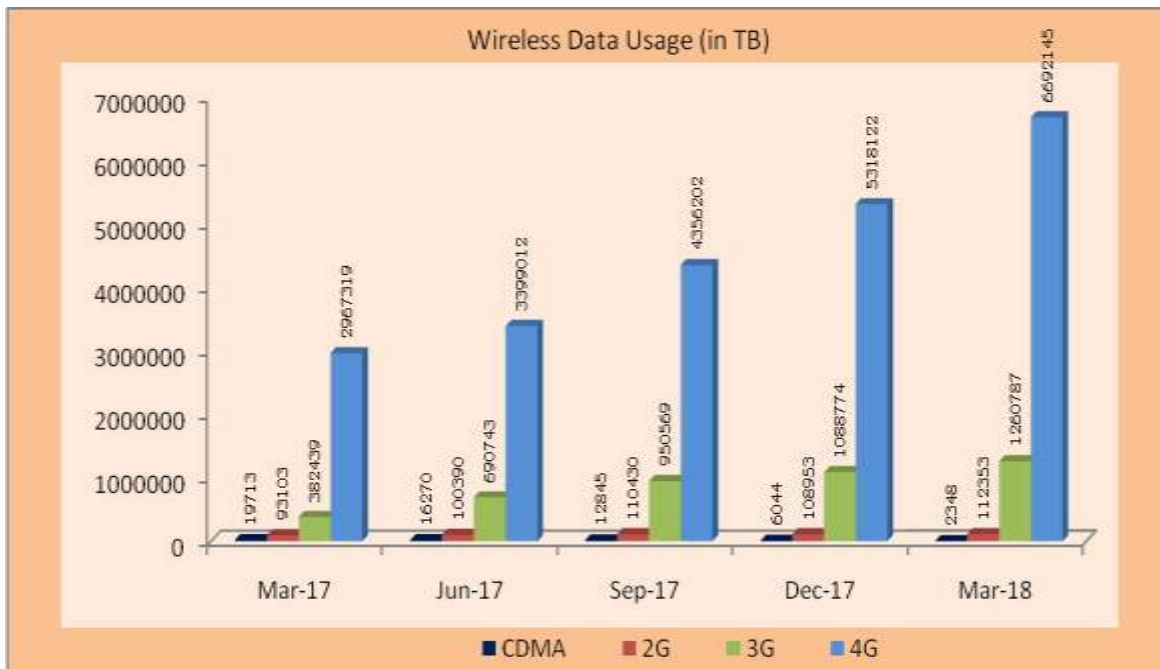


1.20 At the end of Mar-18, GSM (including LTE) subscribers constituted 99.64% share of the wireless market as compare to 99.55% in previous quarter.

Wireless Data Usage

1.21 Total wireless data usage increased from 6,521,893 terabytes during Q.E. Dec-17 to 8,067,633 terabytes during Q.E. Mar-18. Out of total data usage, 2G data usage was 112,353 terabytes, 3G data usage was 1,260,787 terabyte, 4G data usage was 6,692,145 terabytes and CDMA data usage was 2,348 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 83% respectively during the Q.E. Mar-18.

Section C : Wireline Service

Table 1.18 : Service Providers providing Wireline Service

[As on 31st March, 2018]

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 23.23 million at the quarter ending Dec-17 to 22.81 at the end of Mar-18 with quarterly decline rate of 1.82%. Overall Wireline Teledensity also declined from 1.79 at the end of Dec-17 to 1.76 at the end of Mar-18.

1.24 Rural subscriber base has shown decline of 1.23%, from 3.42 Million at the end of Dec-17 to 3.38 Million at the end of Mar-18. Urban wireline subscription also recorded decline rate of 1.93%, from 19.81 million to 19.43 million during the same period.

Chart 1.10: Wireline Subscriber Base and Teledensity



Table 1.19 : Wireline Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
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
Mar-18	3.38	19.43	0.38	4.73

Table 1.20 : Service Provider wise Subscriber base (Rural - Urban)

Service Provider	Subscriber Base (million)			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	3.27	9.00	12.27	26.66
Bharti	--	3.93	3.93	--
MTNL	--	3.35	3.35	--
Tata	0.05	1.82	1.88	2.92
Reliance	0.002	0.92	0.92	0.18
Quadrant	0.05	0.19	0.24	21.27
Vodafone	--	0.22	0.22	--
Total	3.38	19.43	22.81	14.81

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

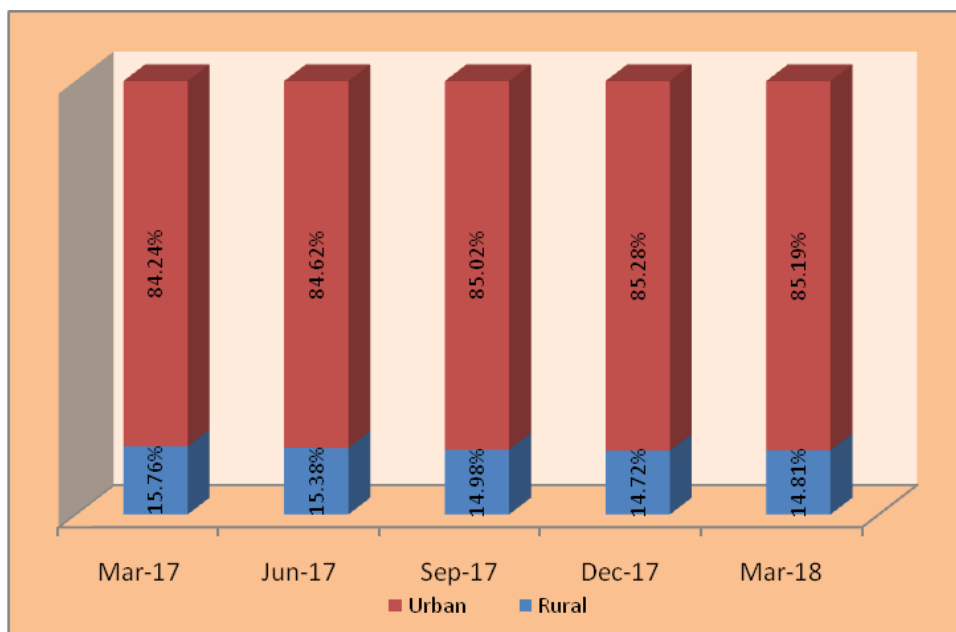


Table 1.21 : Service Provider wise growth in Wireline Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share-Dec-17(%)	Market share-Mar-18(%)
	Dec-17	Mar-18	Net Addition			
BSNL	12.43	12.27	-0.16	-1.31	53.50	53.78
Bharti	3.91	3.93	0.02	0.50	16.84	17.24
MTNL	3.38	3.35	-0.03	-0.88	14.53	14.67
Tata	1.86	1.88	0.01	0.80	8.01	8.22
Reliance	1.14	0.92	-0.21	-18.86	4.90	4.05
Quadrant	0.25	0.24	-0.01	-2.62	1.08	1.07
Vodafone	0.20	0.22	0.02	11.89	0.85	0.97
Aircel	0.07	-	-0.07	-	0.29	-
Total	23.23	22.81	-0.42	-1.82	100	100

Table 1.22: Service Area wise Wireline Subscriber base & Net Additions (in million)

Service Area	Dec-17	Mar-18	Net Additions	Rate of Change (%)
Andhra Pradesh	1.52	1.48	-0.045	-2.94
Assam	0.14	0.14	-0.003	-2.48
Bihar	0.27	0.28	0.007	2.45
Delhi	3.22	3.19	-0.029	-0.89
Gujarat	1.29	1.27	-0.025	-1.94
Haryana	0.31	0.30	-0.004	-1.43
Himachal Pradesh	0.13	0.13	-0.001	-1.12
Jammu & Kashmir	0.12	0.12	-0.001	-0.97
Karnataka	2.25	2.22	-0.036	-1.58
Kerala	1.99	1.97	-0.022	-1.12
Madhya Pradesh	0.98	0.95	-0.028	-2.91
Maharashtra	1.76	1.73	-0.036	-2.02
Mumbai	3.03	2.99	-0.036	-1.19
North East	0.11	0.11	-0.001	-0.87
Orissa	0.27	0.28	0.005	1.75
Punjab	0.89	0.86	-0.026	-2.98
Rajasthan	0.62	0.60	-0.015	-2.44
T.N. (incl. Chennai)	2.38	2.32	-0.062	-2.59

Service Area	Dec-17	Mar-18	Net Additions	Rate of Change (%)
U.P.(E)	0.49	0.46	-0.022	-4.56
U.P.(W)	0.36	0.35	-0.008	-2.17
Kolkata	0.82	0.79	-0.027	-3.33
West Bengal	0.28	0.28	-0.007	-2.61
All India	23.23	22.81	-0.424	-1.82

1.26 All service areas showed decline in wireline subscriber base during the QE Mar-18.

Table 1.23: Service Area wise Wireline Rural-Urban Subscriber Base (in million)

Service Area	Total Subscribers	Rural Subscribers	Urban Subscribers	% of Rural Subscribers
Andhra Pradesh	1.48	0.25	1.23	17.06
Assam	0.14	0.02	0.11	17.49
Bihar	0.28	0.08	0.20	27.27
Delhi	3.19	-	3.19	-
Gujarat	1.27	0.19	1.08	14.67
Haryana	0.30	0.06	0.25	18.78
Himachal Pradesh	0.13	0.08	0.05	60.60
Jammu & Kashmir	0.12	0.01	0.10	11.25
Karnataka	2.22	0.16	2.06	7.19
Kerala	1.97	1.19	0.78	60.53
Madhya Pradesh	0.95	0.11	0.84	11.33
Maharashtra	1.73	0.31	1.42	17.69
Mumbai	2.99	-	2.99	-
North East	0.11	0.02	0.09	20.61
Orissa	0.28	0.06	0.22	22.62
Punjab	0.86	0.20	0.67	22.95
Rajasthan	0.60	0.09	0.51	14.95
T.N. (incl. Chennai)	2.32	0.33	1.99	14.15
U.P.(E)	0.46	0.07	0.39	15.35
U.P.(W)	0.35	0.04	0.31	10.18
Kolkata	0.79	-	0.79	-
West Bengal	0.28	0.12	0.16	42.97
All India	22.81	3.38	19.43	14.81

Table 1.24: Service Area wise Wireline Teledensity

Service Area	As on 31 st December, 2017			As on 31 st March, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.41	5.03	1.70	0.39	4.88	1.65
Assam	0.09	2.11	0.43	0.09	2.06	0.41
Bihar	0.06	1.01	0.19	0.06	1.04	0.20
Delhi	-	-	14.37	-	-	14.14
Gujarat	0.49	4.03	1.99	0.50	3.91	1.95
Haryana	0.32	2.40	1.09	0.32	2.34	1.07
Himachal Pradesh	1.22	5.86	1.78	1.21	5.76	1.75
Jammu & Kashmir	0.15	2.90	0.92	0.14	2.86	0.91
Karnataka	0.42	8.38	3.56	0.42	8.20	3.49
Kerala	4.46	8.66	5.52	4.41	8.52	5.45
Madhya Pradesh	0.14	2.94	0.92	0.14	2.84	0.89
Maharashtra (incl. Mumbai)*	0.49	7.30	3.84	0.48	7.16	3.77
North East	0.22	2.48	0.80	0.22	2.44	0.79
Orissa	0.17	2.73	0.63	0.18	2.75	0.64
Punjab	1.19	4.83	2.82	1.14	4.68	2.73
Rajasthan	0.16	2.88	0.82	0.16	2.81	0.80
Tamil Nadu (incl. Chennai)	1.20	4.63	3.31	1.19	4.47	3.22
Uttar Pradesh (incl. UPE & UPW)	0.06	1.36	0.36	0.06	1.29	0.34
West Bengal (incl. Kolkata)*	0.18	3.54	1.15	0.17	3.42	1.11
All India	0.39	4.84	1.79	0.38	4.73	1.76

* 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 1.25: State/UT wise Wireline Subscriber base

Sl.No.	States/UT	Wireline Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	0.82	0.20	0.62
2	Arunachal Pradesh	0.02	0.01	0.02
3	Assam	0.14	0.02	0.11
4	Bihar	0.15	0.06	0.08
5	Chhattisgarh	0.19	0.02	0.17
6	Goa	0.11	0.04	0.08
7	Gujarat	1.26	0.18	1.08
8	Haryana	0.36	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	0.12
12	Karnataka	2.22	0.16	2.06
13	Kerala	1.96	1.19	0.77
14	Madhya Pradesh	0.76	0.09	0.67
15	Maharashtra Incl. Mumbai	4.61	0.27	4.33
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	0.28	0.06	0.22
21	Punjab	0.68	0.20	0.48
22	Rajasthan	0.60	0.09	0.51
23	Sikkim	0.01	0.00	0.01
24	Tamil Nadu (incl. Chennai)	2.26	0.32	1.94
25	Telangana	0.66	0.05	0.61
26	Tripura	0.02	0.01	0.02
27	Uttar Pradesh (UPE +UPW)	0.75	0.09	0.66
28	Uttarakhand	0.11	0.01	0.10
29	West Bengal Incl. Kolkata	1.05	0.11	0.93
	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	3.09	0.00	3.09
6	Lakshdweep	0.01	0.003	0.003
7	Puduchery	0.06	0.01	0.05
	Total	22.81	3.38	19.43

Table 1.26: State/UT wise Wireline Teledensity

Sl.No.	State/UT	Wireline Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	1.65	0.39	4.88
2	Arunachal Pradesh	1.78	0.85	3.10
3	Assam	0.41	0.09	2.06
4	Bihar	0.14	0.07	0.74
5	Chhattisgarh	0.71	0.10	2.49
6	Goa	5.52	4.81	5.91
7	Gujarat	1.96	0.49	3.94
8	Haryana	1.29	0.32	2.93
9	Himachal Pradesh	1.75	1.21	5.76
10	Jammu & Kashmir	0.91	0.14	2.86
11	Jharkhand	0.38	0.05	1.44
12	Karnataka	3.49	0.42	8.20
13	Kerala	5.45	4.41	8.51
14	Madhya Pradesh	0.95	0.15	2.95
15	Maharashtra Incl. Mumbai	3.74	0.43	7.19
16	Manipur	0.78	0.26	2.35
17	Meghalaya	0.65	0.11	2.66
18	Mizoram	1.39	0.21	2.33
19	Nagaland	0.48	0.05	2.55
20	Odisha	0.64	0.18	2.75
21	Punjab	2.30	1.14	3.89
22	Rajasthan	0.80	0.16	2.81
23	Sikkim	1.01	0.10	6.08
24	Tamil Nadu (incl. Chennai)	3.22	1.19	4.49
25	Tripura	0.56	0.22	1.91
26	Uttar Pradesh (UPE + UPW)	0.33	0.05	1.28
27	Uttarakhand	0.99	0.16	2.88
28	West Bengal incl. Kolkata	1.10	0.17	3.40
	Union Territories			
1	Andaman & Nicobar Islands	2.87	1.98	4.00
2	Chandigarh	9.35	1.02	10.29
3	Dadar & Nagar Haweli	0.88	1.04	0.80
4	Daman & Diu	1.67	0.86	4.77
5	Delhi	13.67	0.00	14.15
6	Lakshdweep	7.50	5.40	13.34
7	Puduchery	3.15	1.64	3.77
	Total	1.76	0.38	4.73

*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 3,93,483 at the end of Dec-17 to 3,60,053 at the end of Mar-18. Detailed table of service provider wise PCOs is available at Annexure -1.3.

Chart 1.11: Trend of Number of PCOs



Table 1.27 : Rate of change & Market share of PCOs

Service Provider	Dec-17	Mar-18	Rate of change (%)	Market share (%) (Mar-18)
BSNL	2,36,188	2,22,721	-5.70	61.86
MTNL	1,21,118	97,802	-19.25	27.16
Bharti	12,624	11,943	-5.39	3.32
Quadrant	1,420	1,420	0.00	0.39
Tata	22,133	26,167	18.23	7.27
Total	3,93,483	3,60,053	-8.50	100

1.28 Number of PCOs continued shows declining trend. At the Q.E. Mar-18, it has recorded a overall decline of 8.50%. The year-on-year (Y-O-Y) decline rate over the same quarter of the last year is 20.35%.

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, 33.53% of the total inhabited villages in India have been connected by VPTs.

1.30 Number of VPTs declined from 2,02,395 at the end of Dec-17 to 1,99,057 at the end of Mar-18.

1.31 As per the information received in TRAI, at the end of Mar-18, only M/s BSNL was providing VPT in the country. Service area wise detailed table of VPT is available at Annexure -1.4.

Chart 1.12: Trend of number of VPTs



Section D: Internet Service

1.32 This section summarizes information submitted by 262 internet service providers for the quarter ending Mar-18. **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 445.96 million at the end of Dec-17 to 493.96 million at the end of Mar-18 with quarterly growth rate of 10.76%.

1.34 Wired Internet subscribers declined from 21.28 million at the end of Dec-17 to 21.24 million at the end of Mar-18 with quarterly decline rate of 0.21%. However, Wireless Internet subscribers increased from 424.67 million at the end of Dec-17 to 472.72 million at the end of Mar-18 with quarterly growth rate of 11.31%.

1.35 Number of Broadband subscribers increased from 362.87 million at the end of Dec-17 to 412.60 million at the end of Mar-18 with quarterly growth rate of 13.71%. However, the number of Narrowband subscribers declined from 83.09 million at the end of Dec17 to 81.35 million at the end of Mar-18 with quarterly decline rate of 2.09%.

Table 1.28: Trend of Internet subscriber base

Segment	Mode of Access								Total Subscribers (in million)	
	Wired Subscribers (in million)		Wireless Subscribers (in million)							
			Fixed Wireless (Wi-Fi, Wi-Max, Radio & VSAT)		Mobile Wireless (Phone + Dongle)		Total Wireless			
	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18
Broadband	17.86	17.95	0.441	0.457	344.57	394.19	345.01	394.65	362.87	412.60
Narrowband	3.43	3.28	0.013	0.014	79.65	78.06	79.66	78.07	83.09	81.35
Total	21.28	21.24	0.455	0.471	424.22	472.25	424.67	472.72	445.96	493.96

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

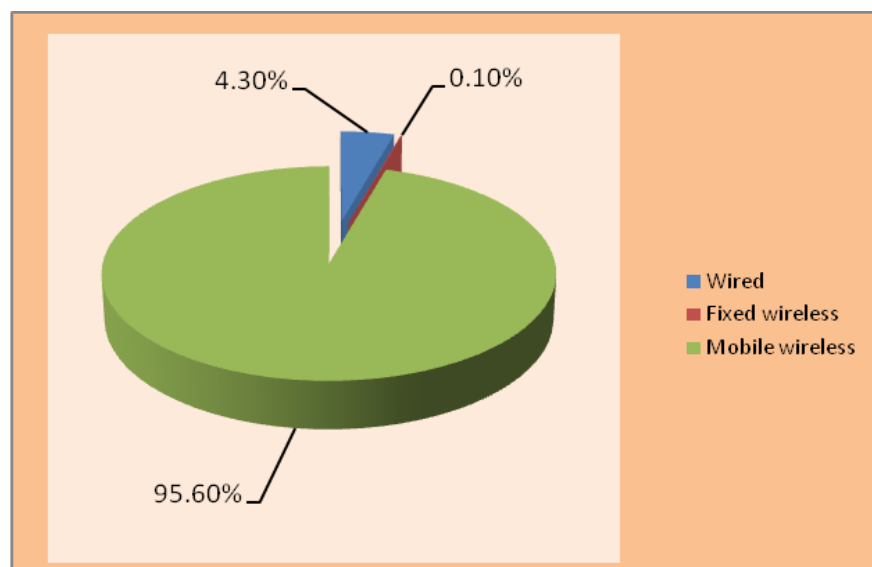
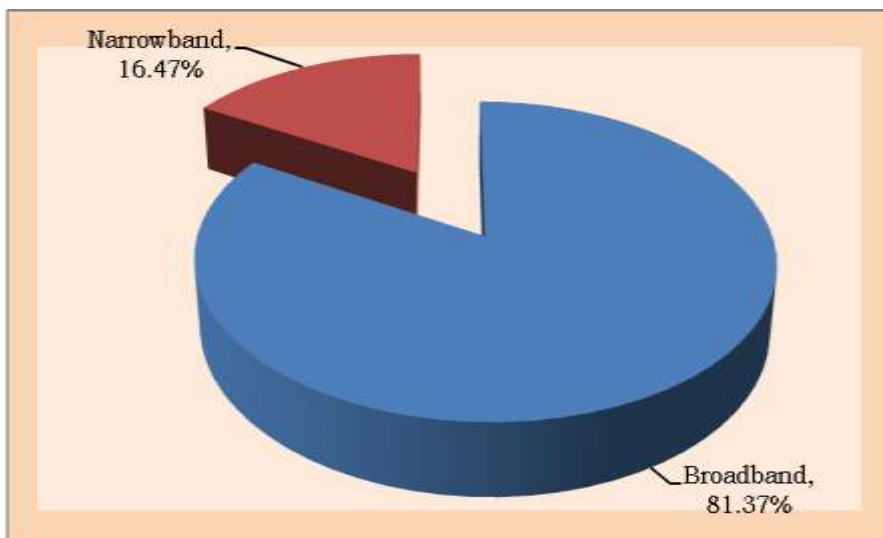
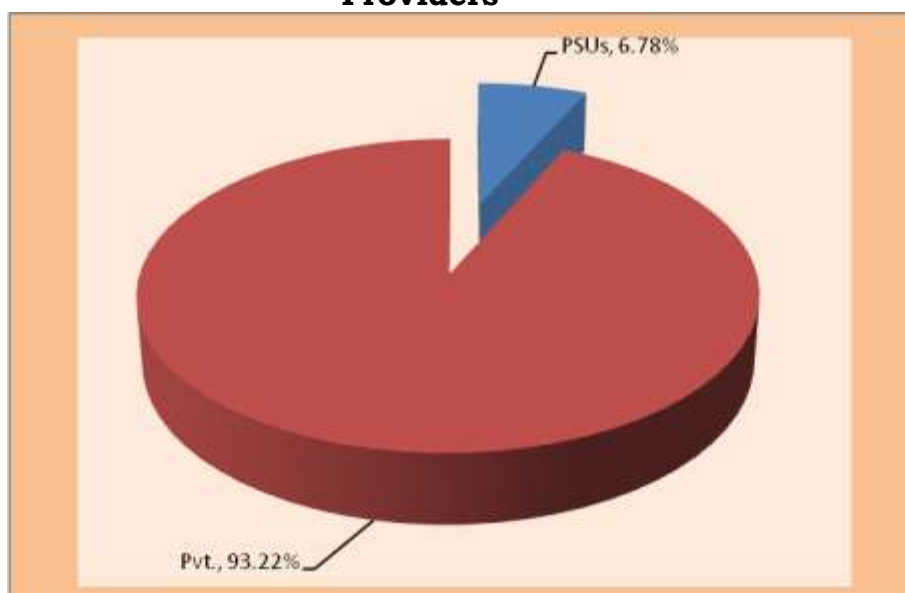


Chart 1.14 : Composition of Broadband & Narrowband subscription



1.37 Private internet service providers hold 93.22% market share of total internet subscribers at the Q.E. Mar-18. 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 1.29: Break up of Rural-Urban internet subscriber base

Telecom Service Area	Narrowband		Broadband		Total Internet	
	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	2.55	3.00	10.28	21.79	12.83	24.79
Assam	1.92	0.63	3.12	4.14	5.04	4.77
Bihar	5.14	2.74	8.36	12.16	13.51	14.90
Delhi	0.24	3.54	0.48	26.89	0.72	30.43
Gujarat	1.35	2.03	6.92	21.12	8.27	23.15
Haryana	0.55	0.50	3.25	4.73	3.80	5.22
Himachal Pradesh	0.42	0.26	1.62	4.64	2.04	4.90
Jammu & Kashmir	0.78	0.48	1.13	3.41	1.91	3.89
Karnataka	1.79	2.46	4.90	22.99	6.69	25.45
Kerala	0.90	1.16	6.60	11.15	7.49	12.31
Kolkata	0.13	1.81	0.88	10.54	1.00	12.35
Madhya Pradesh	2.37	2.49	4.57	16.46	6.94	18.95
Maharashtra	2.16	2.60	10.63	24.12	12.79	26.72
Mumbai	0.12	2.66	0.63	19.07	0.75	21.72
North East	0.85	0.53	1.53	3.03	2.38	3.56
Orissa	1.93	1.13	3.73	5.38	5.67	6.51
Punjab	1.04	1.20	3.54	12.85	4.58	14.05
Rajasthan	2.86	2.53	6.61	14.46	9.47	16.99
Tamil Nadu	1.94	4.21	7.37	26.04	9.31	30.25
Uttar Pradesh(East)	5.43	3.11	9.03	17.18	14.46	20.29
Uttar Pradesh(West)	2.32	1.89	4.71	14.86	7.03	16.75
West Bengal	2.49	1.10	6.65	9.07	9.14	10.17
Total	39.30	42.05	106.52	306.08	145.83	348.13

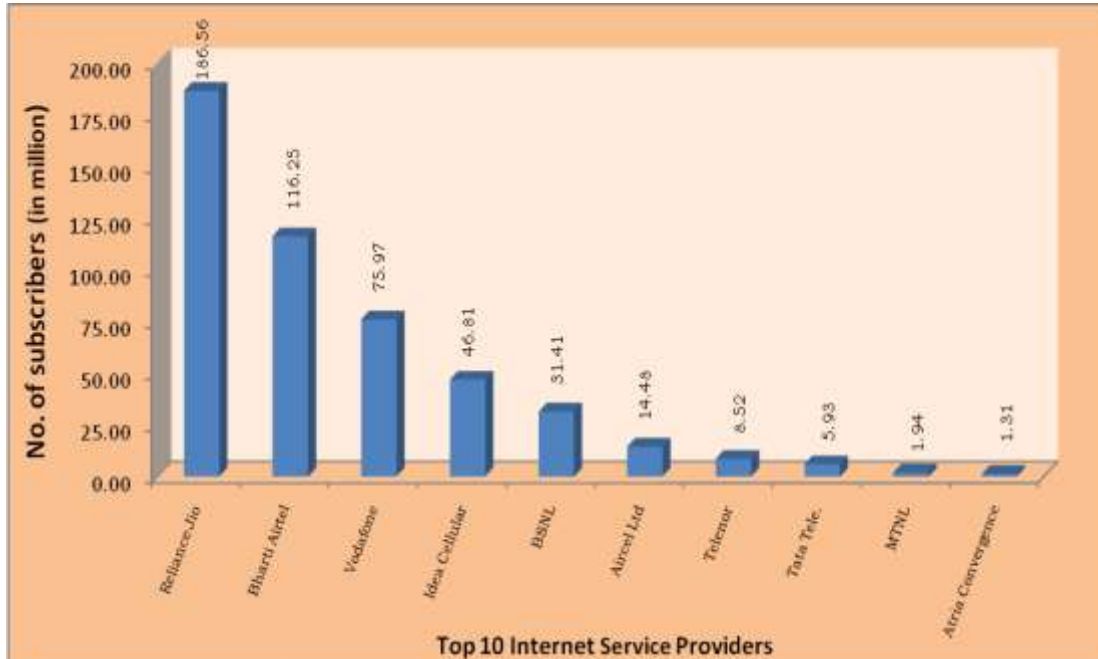
Table 1.30: Internet Subscriber Base and Market Share of top 10 Service Providers

S.No	ISP	No. of Subscribers	Share (%)
1	RJIL	186560828	37.77
2	Bharti Airtel	116247911	23.53
3	Vodafone	75972080	15.38
4	Idea Cellular	46810406	9.48
5	BSNL	31414218	6.36
6	Aircel	14479648	2.93
7	Telenor	8524483	1.73
8	Tata	5925794	1.20
9	MTNL	1940405	0.39
10	Atria Convergence Technology	1305767	0.26
	Total of Top 10 ISPs	489181540	99.03
	Others	4777077	0.97
	Grand Total	493958617	100

1.39 Reliance Jio holds the top position with 37.77% of market share of internet subscribers followed by Bharti Airtel with 23.53%. Top 10 Service Providers together hold 99.03% of total internet subscriber base at the QE Mar-18. Detailed table of number of internet subscriber base (broadband and narrowband) of all the service providers is available at Annexure-1.5.

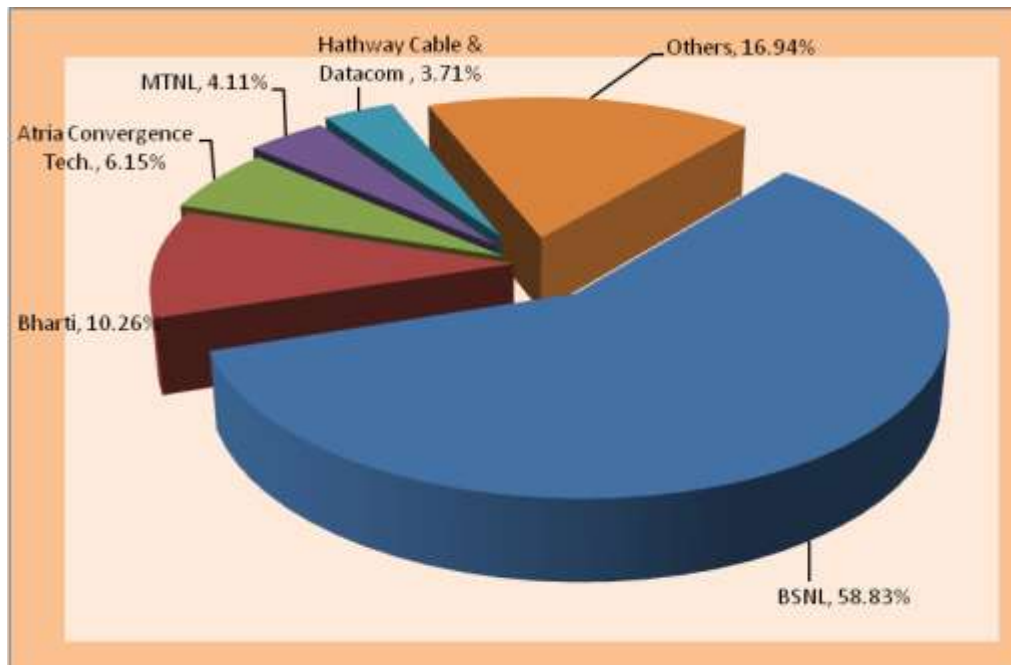
1.40 The following chart depicts the internet subscriber base of top ten Internet Service Providers (ISPs) in the QE Mar-18.

Chart 1.17 : Subscriber base of top ten ISPs



1.41 In wired internet segment, BSNL holds 58.83% market share with 12.50 million subscribers, followed by Bharti with 2.18 million subscribers. Total number of wired internet subscriber is 21.24 million at the end of Mar-18.

Chart 1.18 : Composition of Wired Internet subscribers



1.42 In wireless internet segment, Reliance Jio holds 37.77% market share with 186.56 million subscribers followed by Bharti Airtel with 114.07 million wireless internet subscribers at the QE Mar-18.

Chart 1.19 : Composition of Wireless Internet subscription

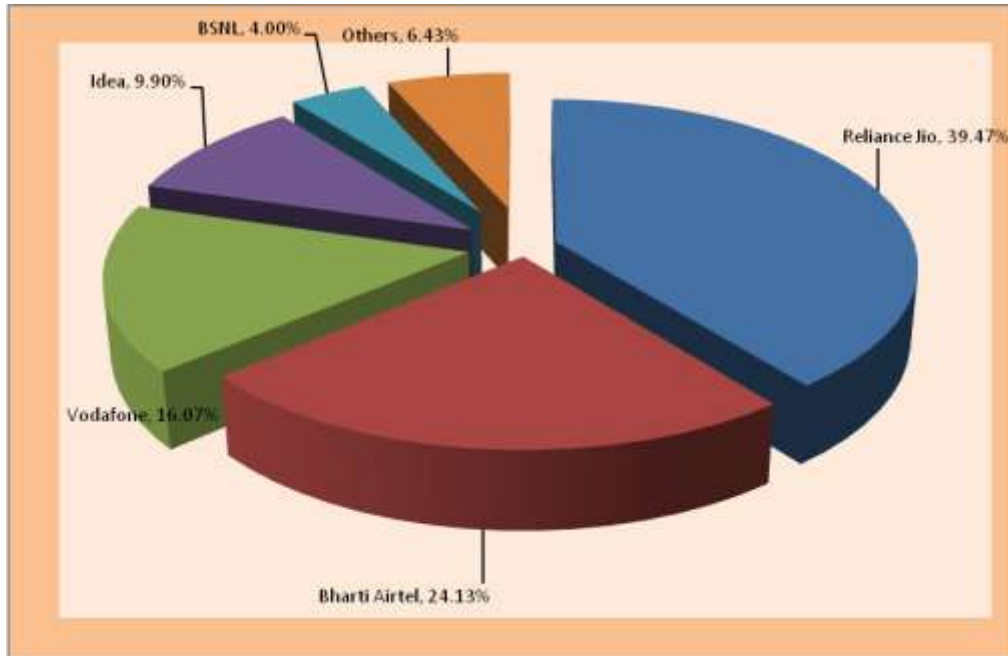


Chart 1.20 : Technology trend for Wireless Internet Access

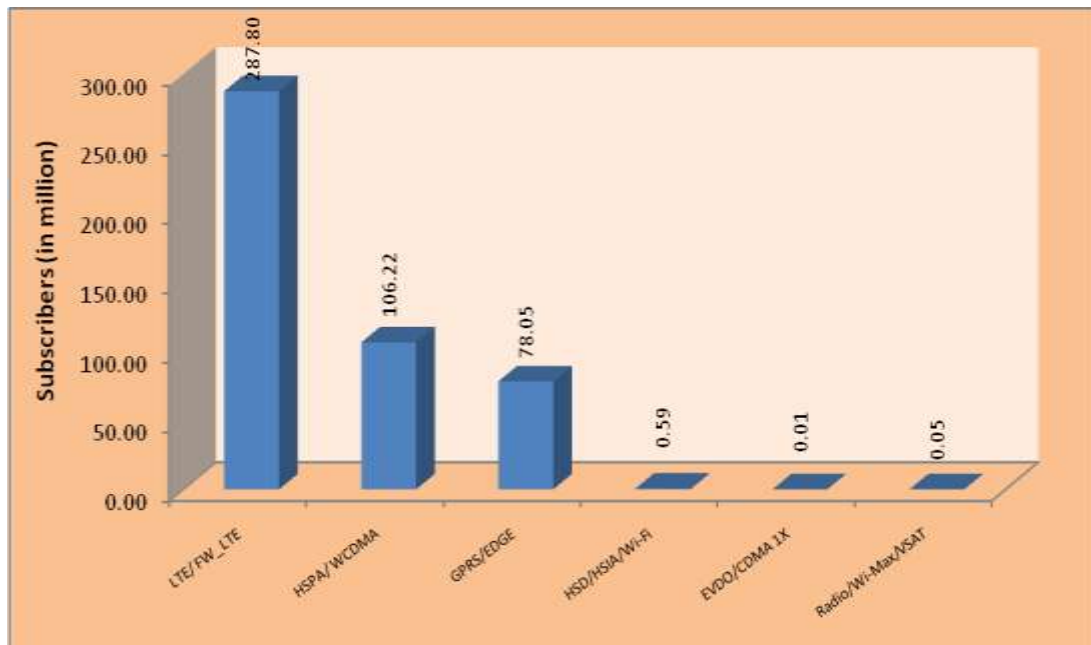
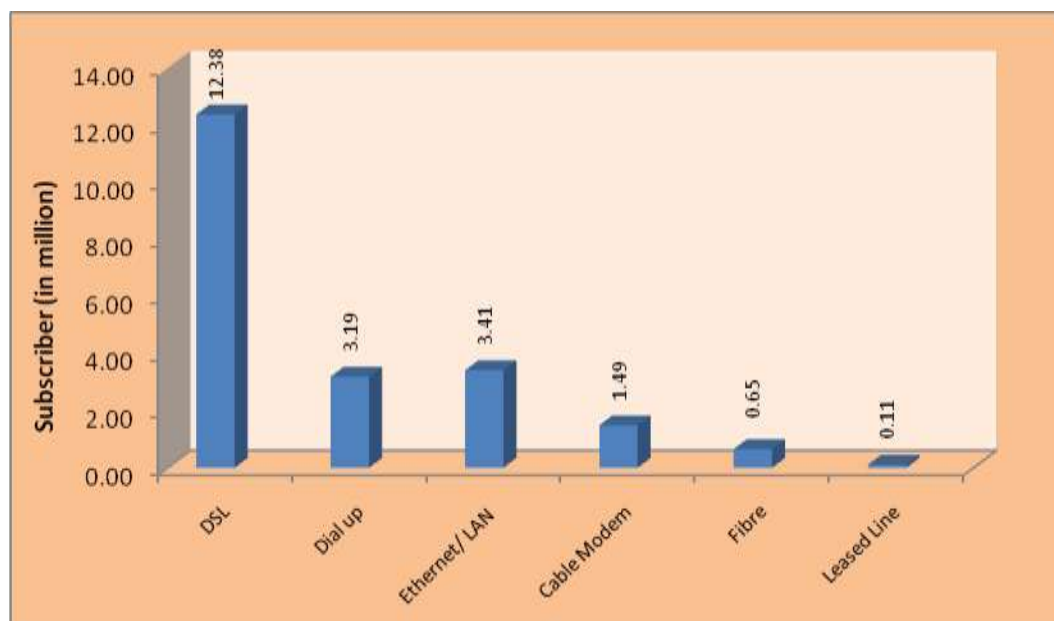


Chart 1.21 : Technology trend for Wired Internet Access



1.43 Top five service areas in terms of internet subscriptions (wired+ wireless) are Tamil Nadu including Chennai (39.56 million), Maharashtra (39.51 million), Andhra Pradesh (37.62 million), U.P.(E) (34.75 million) and Karnataka (32.14 million).

Table 1.31 : Service Area wise number of Internet Subscribers per 100 population at the end of Mar-18

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	12.83	24.79	37.62	19.86	98.62	41.92
Assam	5.04	4.77	9.81	18.19	86.78	29.56
Bihar	13.51	14.90	28.40	11.14	76.29	20.17
Delhi	0.72	30.43	31.15	93.09	139.57	137.99
Gujarat	8.27	23.15	31.42	22.11	83.60	48.27
Haryana	3.80	5.22	9.02	21.39	49.67	31.91
Himachal Pradesh	2.04	4.90	6.94	32.19	565.81	96.24
Jammu & Kashmir	1.91	3.89	5.80	21.05	108.38	45.77
Karnataka	6.69	25.45	32.14	17.44	101.41	50.63

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Kerala	7.49	12.31	19.80	27.71	134.91	54.77
Madhya Pradesh	6.94	18.95	25.89	9.01	63.98	24.28
Maharashtra	12.79	26.72	39.51	21.32	78.63	49.54
Mumbai	0.75	21.72	22.47			
North East	2.38	3.56	5.94	22.44	97.61	41.70
Orissa	5.67	6.51	12.18	16.04	83.28	28.22
Punjab	4.58	14.05	18.63	26.35	98.84	58.96
Rajasthan	9.47	16.99	26.46	16.68	93.36	35.30
Tamil Nadu	9.31	30.25	39.56	33.94	68.07	55.04
UP (East)	14.46	20.29	34.75	11.85	67.80	24.80
UP (West)	7.03	16.75	23.79			
Kolkata	1.00	12.35	13.35	14.79	80.97	33.88
West Bengal	9.14	10.17	19.31			
Total	145.83	348.13	493.96	16.41	84.74	38.02

* 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.

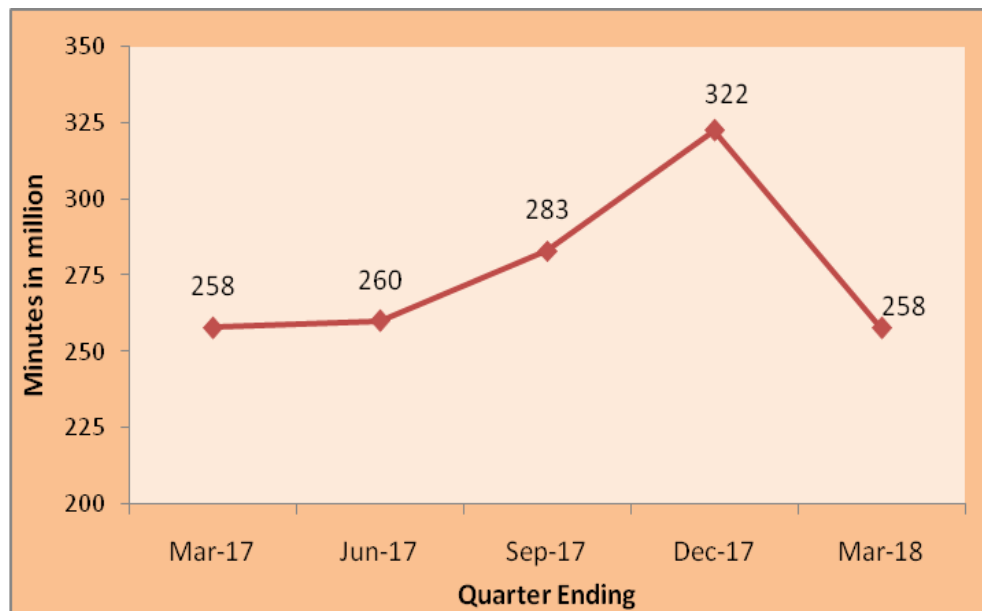
ISP Connectivity

1.44 The International Internet bandwidth owned by various service providers is reported to be 3,160 Gbps during the quarter ending Mar-18 as compared to 3,054 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 258 million during the Q.E. Mar-18 as compare to 322 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 362.87 million at the end of Dec-17 to 412.60 million at the end of Mar-18. Out of which wired broadband subscribers are 17.95 million and wireless broadband subscribers are 394.65 million.

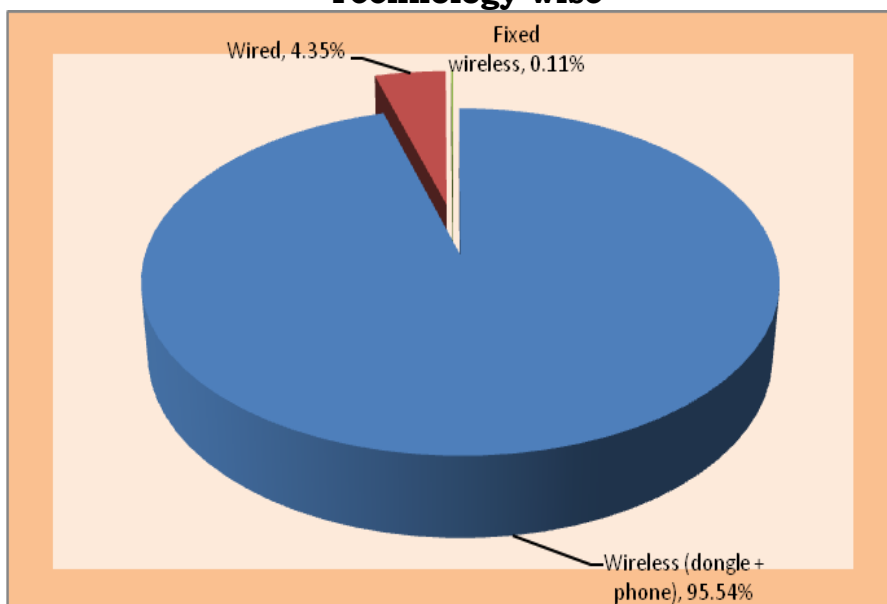
1.47 Top five broadband (wired+wireless) service providers in term of subscribers are Reliance Jio (186.56 million), Bharti Airtel (85.67 million), Vodafone (59.77 million), Idea Cellular (39.84 million) and BSNL (21.08 million).

1.48 In wired broadband segment, BSNL holds 51.81% market share with 9.30 million subscribers followed by Bharti with 2.18 million subscribers.

1.49 In wireless broadband segment, Reliance Jio holds 39.47% market share with 186.56 million subscribers followed by Bharti (17.66%) with 83.49 million subscribers.

1.50 Top five service areas in respect of broadband subscriptions are Maharashtra (34.69 million), Tamil Nadu including Chennai (33.38 million), Andhra Pradesh including Telengana (32.06 million), Gujarat (28.03 million) and Karnataka (27.89 million).

Chart 1.23 : Composition of Broadband subscription – Technology wise

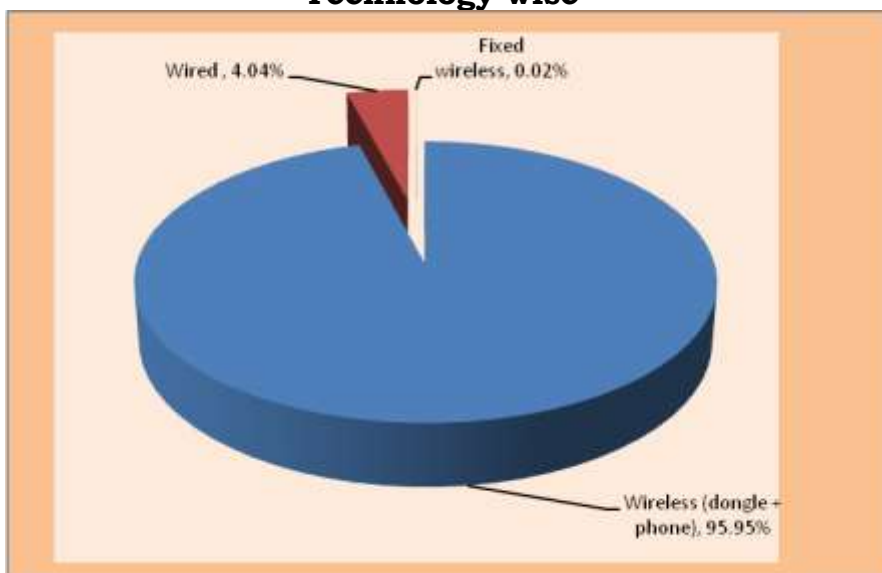


1.51 Mobile Device Users (dongle+phone) constitute 95.54% of total broadband subscribers at the end of Mar-18.

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

- 1.52 Total number of narrowband subscribers declined from 83.09 million at the end of Dec-17 to 81.35 million at the end of Mar-18 with the quarterly decline rate of 2.09%. Out of 81.35 million narrowband subscribers, Wired Narrowband subscribers are 3.28 million and Wireless Narrowband subscribers are 78.07 million.
- 1.53 The top five narrowband (wired + wireless) service providers in term of subscriber base are Bharti (30.58 million), Vodafone (16.20 million), BSNL (10.34 million), Aircel Ltd (8.89 million) and Idea Cellular (6.97 million).
- 1.54 In wired narrowband segment, BSNL holds 97.25% market share with 3.195 million subscribers followed by Ishan Netsol Pvt Ltd with 0.015 million.
- 1.55 In wireless narrowband segment, Bharti holds 39.18% market share with 30.58 million subscribers followed by Vodafone (16.20 million).

Chart 1.24 : Composition of Narrowband subscription – Technology wise



Section E : Other Value Added Services - PMRTS & VSAT

Public Mobile Radio Trunk Services (PMRTS)

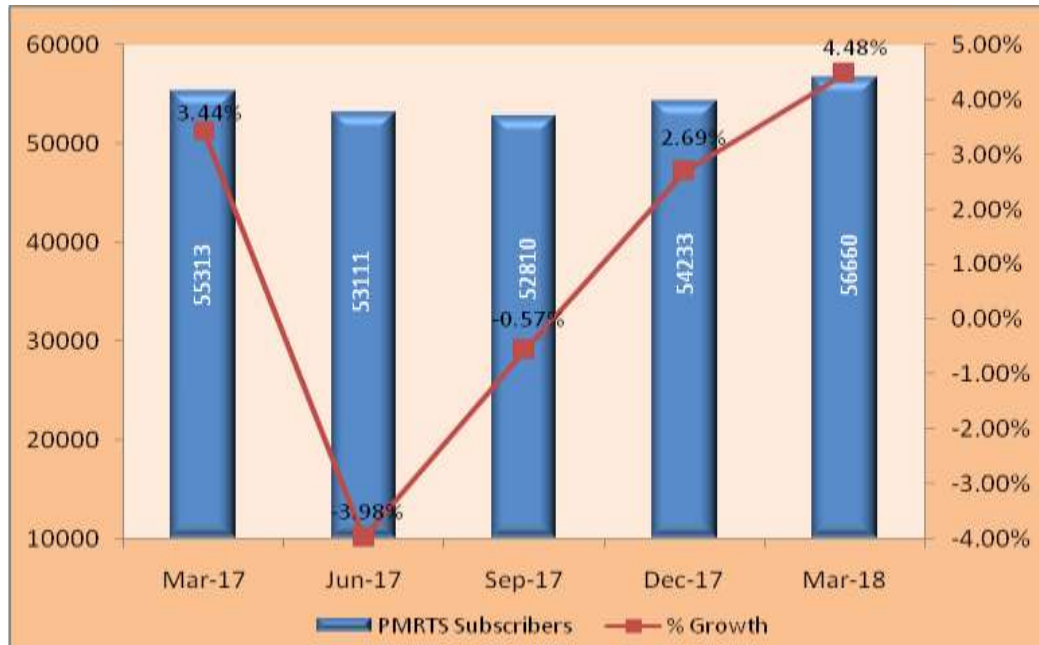
1.56 The subscriber base of PMRTS increased from 54,233 at the end of Dec-17 to 56,660 at the end of Mar-18 with quarterly growth rate of 4.48%.

Table 1.32 : PMRTS Subscriber base - Service Provider wise

Sl. No	Name of the Service Provider	Subscriber Base as on 31.12.2017	Subscriber Base as on 31.03.2018	Growth in Subscribers	% Growth in subscribers in QE Mar-18
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	45290	47272	1982	4.38
4	Procall Ltd.	3054	3188	134	4.39
2	Inative Networks Pvt Ltd	1820	1820	0	0.00
3	Quick Call	1618	1956	338	20.89
5	Smartlink Pvt Ltd	968	931	-37	-3.82
6	Bhilwara Telenet Services Pvt Ltd	818	818	0	0.00
7	Wiwonet Solutions Pvt Ltd	361	361	0	0.00
8	Airtalk Solutions & Services Pvt Ltd	304	314	10	3.29
	Total	54233	56660	2427	4.48

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 increased from 2,71,881 at the end of Dec-17 to 2,73,161 at the end of Mar-18. Net addition during the quarter has been 1,280 at the growth rate of 0.47%.

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



**Table 1.33 : VSAT Service Providers currently providing service
& their subscriber base**

Sr. No	Name of Service Providers	Subscriber base at the Quarter ending		Net Addition	%age Growth	Market Share (%) Mar-18
		Dec-17	Mar-18			
1	Hughes Communications Ltd.	98995	99702	707	0.71	36.50
2	Bharti Airtel Limited	72933	74123	1190	1.63	27.14
3	Tatanet Services	55973	58136	2163	3.86	21.28
4	HCL Comnet	21961	20666	-1295	-5.90	7.57
5	BSNL	19254	17852	-1402	-7.28	6.54
6	Infotel Satcom	2691	2608	-83	-3.08	0.95
7	Planetcast Media Services Ltd	74	74	0	0.00	0.03
	Total	2,71,881	2,73,161	1,280	0.47	100

1.59 Hughes Communication Limited continues to be the market leader in VSAT with subscriber base of 99,702 followed by Bharti Airtel Ltd (74,123) at the end of Mar-18.

1.60 M/s Tatanet Services added maximum number of VSAT i.e. 2,163 subscribers in QE Mar-18, with maximum growth rate of 3.86% in its VSAT subscribers. M/s BSNL showed maximum decline of 1,402 VSAT subscribers with decline rate of 7.28% 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 January, 2018 to 31st March, 2018 in the various service areas.

Section A: GSM and LTE Services

Table 2.1: Key Indicators - GSM and LTE Services

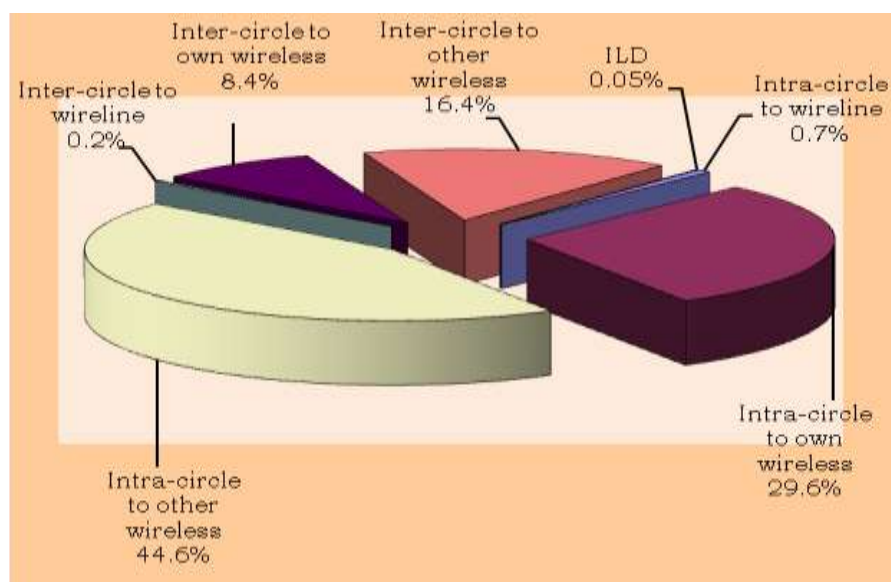
Parameter	Mar-18	Dec-17	Mar-17	QoQ %age change	YoY %age change
Subscriber Base* (million)	1066.86#	1149.81	1156.37	-7.21	-7.74
Share of Prepaid (%)	95.50	95.61	95.41	-0.11	0.09
Incoming MOU* per subscriber per month	288.87	247.16	208.06	16.87	38.84
Outgoing MOU* per subscriber per month	295.41	247.95	197.10	19.14	49.88
No. of Outgoing SMS per subscriber per month	20.08	16.58	16.82	21.14	19.42
Average Revenue Per User (ARPU) per month (₹)	76.04	79.39	82.68	-4.22	-8.03

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

Subscriber figures for 4G LTE is also included.

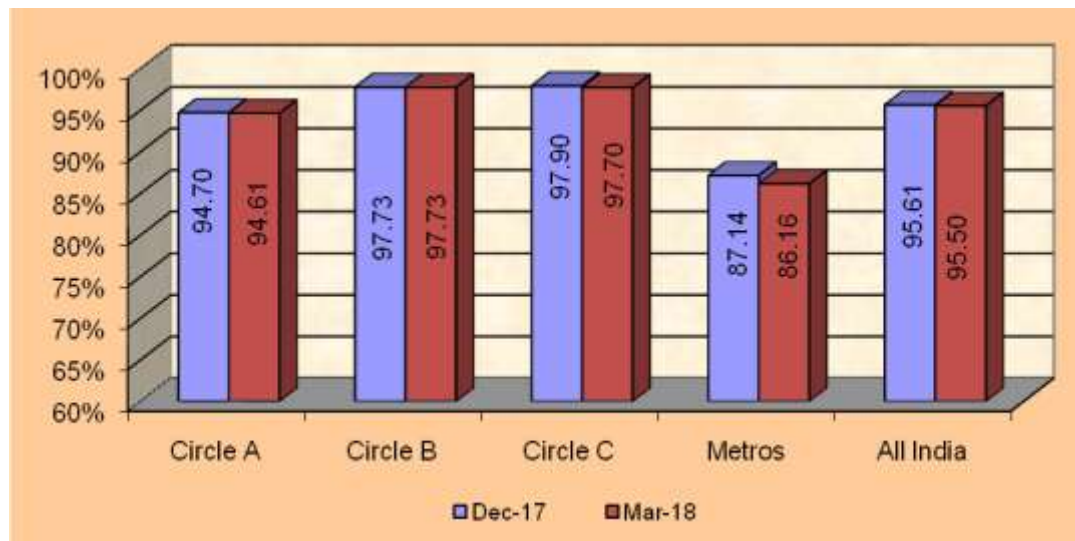
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Mar-18.

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 declined from 95.61% at the end of Dec-17 to 95.50% at the end of Mar-18.

2.4 The ARPU per month (all India, blended) declined from ₹79 in Q.E. Dec-17 to ₹76 in Q.E. Mar-18. 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 Mar-18

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	387	71	89
Circle B	373	60	68
Circle C	317	69	75
Metros	324	25	68
All India	360	62	76
All private SPs	360	64	79
BSNL/MTNL	357	44	52

2.5 The ARPU per month for pre-paid segment declined from ₹67 in QE Dec-17 to ₹62 in QE Mar-18, however ARPU per month for postpaid segment increased from ₹348 in QE Dec-17 to ₹360 in QE Mar-18.

2.6 The following table presents the composition of ARPU per month in the QE Mar-18.

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	22.95	25.0%
1.2.	Revenue from calls	19.12	20.9%
1.3.	Revenue from SMS	1.70	1.9%
1.4.	Revenue from data usage	40.05	43.7%
1.5.	Revenue from other VAS	3.09	3.4%
1.6.	Other revenue	2.55	2.8%
2	Usage outside Home Service Area		
2.1.	Revenue from outroamers	2.19	2.4%
3	Total revenue from subscribers (1+2)	91.65	100%
4	Net inter-operator settlement charges receivable *	-15.61	
5	Net Revenue (ARPU) per month(3+4)	76.04	

* 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 (₹15.61) accounts for 17.03% 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 495 in QE Dec-17 to 584 in QE Mar-18.

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 Mar-18

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	402	354	756	268	238	506	276	245	520
Circle B	414	392	806	276	301	577	279	303	582
Circle C	526	344	870	314	367	681	319	367	686
Metro	399	363	762	400	258	659	400	274	674
All India	412	364	776	290	285	575	295	289	584

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 Mar-18 is 50.6:49.4.

2.11 Number of outgoing SMS per subscriber per month increased from 17 in Q.E. Dec-17 to 20 in Q.E. Mar-18. 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 Mar-18

Circle category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Circle A	114	21	26
Circle B	30	18	19
Circle C	24	13	13
Metro	19	13	14
All India	61	18	20

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

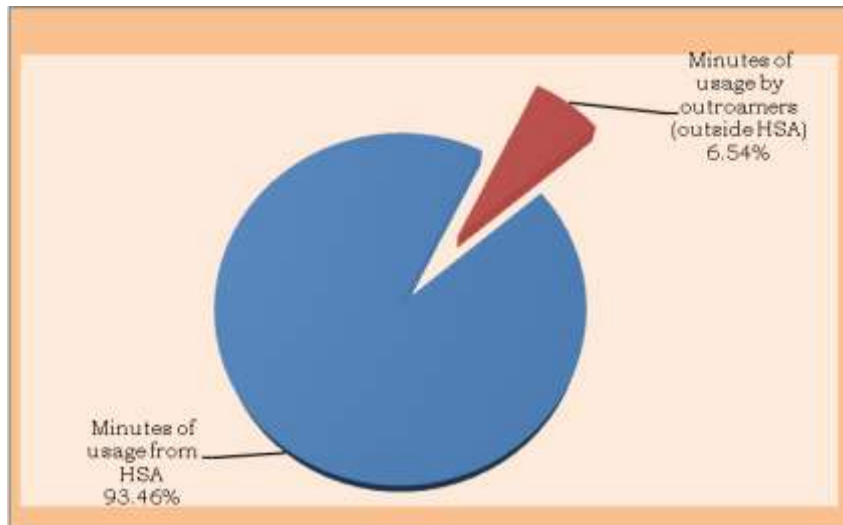
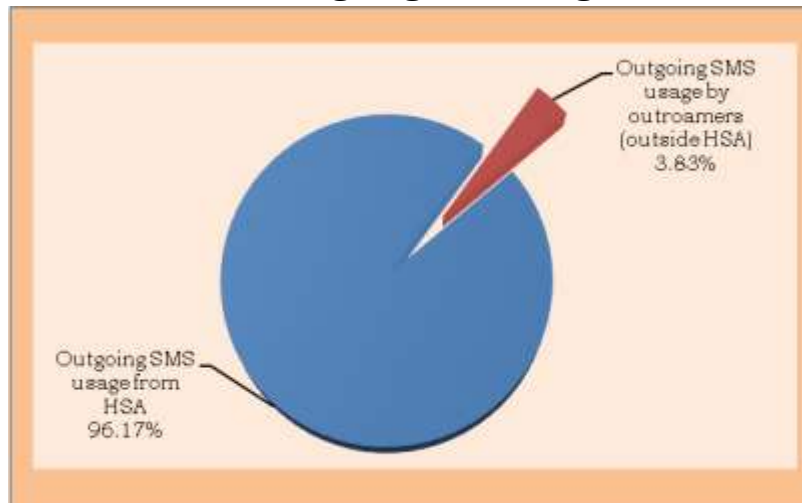


Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage



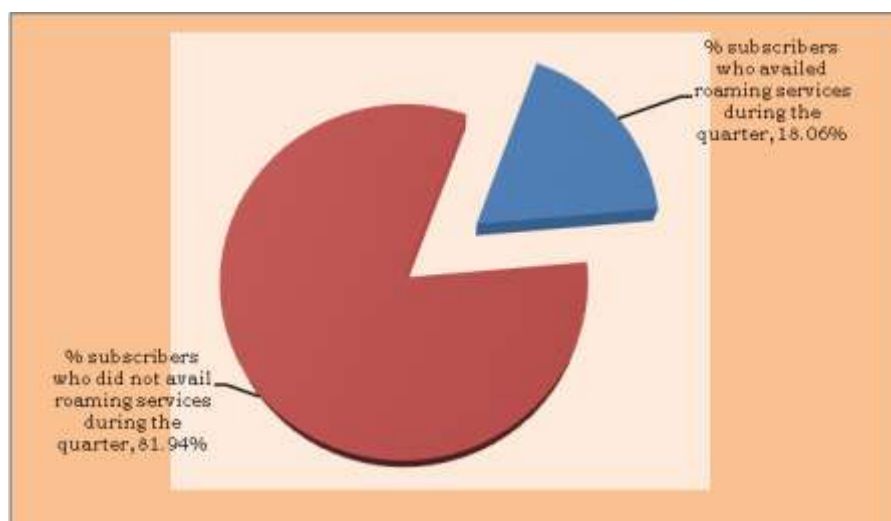
2.12 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks.

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	0.88	29.91	46.49	0.24	6.85	15.59	0.05
Circle B	0.58	31.55	46.30	0.18	7.30	14.06	0.03
Circle C	0.31	34.44	44.05	0.31	6.99	13.90	0.02
Metros	1.28	16.96	35.46	0.37	17.62	28.20	0.11
All India	0.73	29.57	44.62	0.24	8.43	16.36	0.05

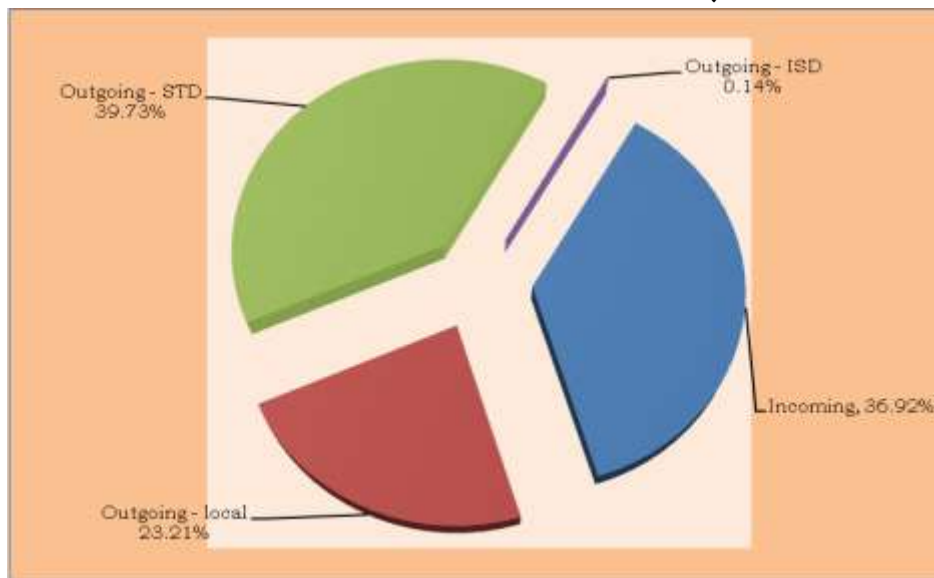
2.13 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter ending Mar-18.

Chart 2.5: % subscribers availed roaming services during the QE Mar-18



2.14 The usage pattern of out-roamers i.e. usage from outside the home service area shows that incoming minutes accounts for 36.92% of the total minutes of usage by out-roamers in QE Mar-18 as against 41.33% in the previous quarter. The chart given below presents the break-up of minutes of usage of out-roamers during the QE Mar-18.

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	0.36	0.16	0.18
Circle B	0.37	0.14	0.15
Circle C	0.23	0.12	0.12
Metros	0.35	0.11	0.14
All India	0.35	0.14	0.16

2.16 All India average outgo per outgoing minute declined from ₹0.19 in the QE Dec-17 to ₹0.16 in the QE Mar-18.

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

Parameter	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18
1. ARPU (₹ Per month)	83	80	84	79	76
3. Average Revenue from data usage per subscriber per month (in ₹)	19	21	33	36	40
3. MOU per subscriber per month	405	428	437	495	584
4. Outgoing MOU per subscriber per month					
4.1 Local (Intra-circle)	149	160	157	180	212
4.2 NLD (inter-circle)	48	53	59	67	83
4.3 ILD	0.2	0.2	0.2	0.5	0.2
5. No. of Outgoing SMS per subscriber per month	17	16	15	17	20
6. Average Outgo per outgoing minute from HSA (in ₹)	0.31	0.27	0.23	0.19	0.16

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

Section B: CDMA - Full Mobility Service

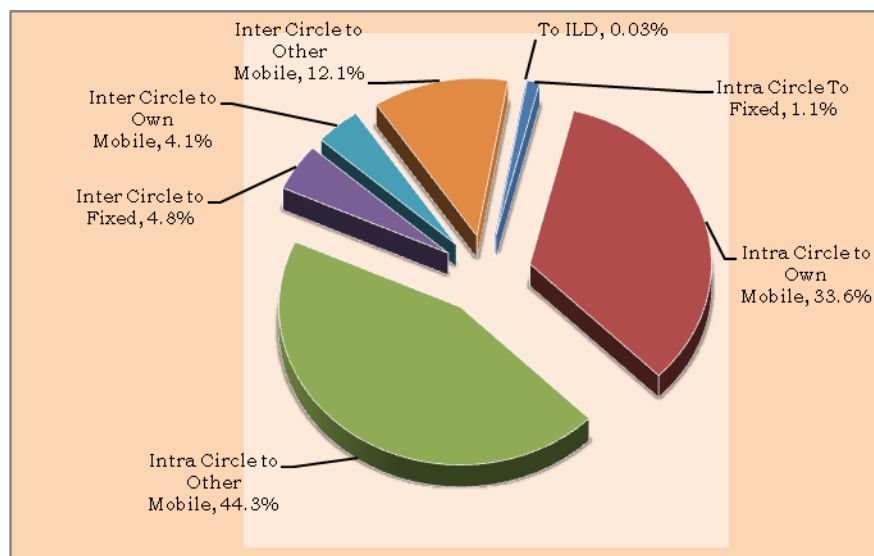
Table 2.9: Key Indicators - CDMA Full Mobility Service

Parameters	QE Mar-18	QE Dec-17	QE Mar-17	QoQ change (%)	YoY change (%)
Subscriber Base (in Millions*)	3.18	4.04	9.78	-21.34	-67.51
Share of Prepaid (%)	87%	84%	86%	3.51	1.50
Incoming MOUs per subscriber per month	21.63	40.00	137.40	-45.93	-84.26
Outgoing MOUs per subscriber per month	38.64	73.00	112.43	-47.07	-65.63
Outgoing SMS per subs per month	0.51	1.00	2.66	-49.20	-80.90
ARPU (₹ per month)	79.32	111.00	131.00	-28.54	-39.61

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

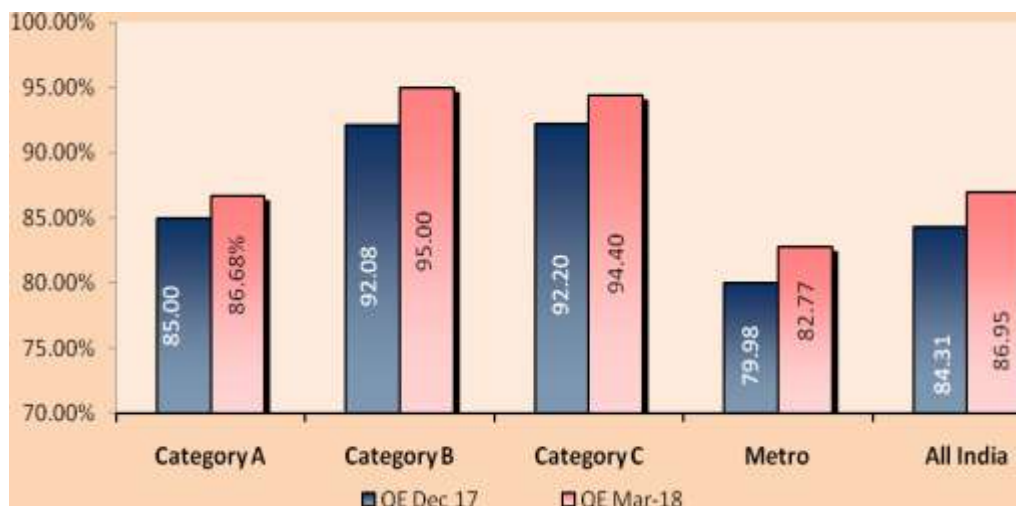
2.18 The following chart depicts % break-up of outgoing minutes from home service area (HSA).

Chart 2.7: % Break-up of Outgoing Minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Mar-18



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

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



2.20 Market share of Prepaid segment increased from 84.31% in QE Dec-17 to 86.95% in QE Mar-18.

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

Table 2.10: Monthly ARPU - CDMA Full Mobility Service in QE Mar-18

(₹per month)

Circle category	Postpaid	Prepaid	Blended ARPU
Circle A	452	23	86
Circle B	215	18	33
Circle C	298	18	38
Metro	391	27	94
All India	393	24	79

2.22 The All India blended Average Revenue Per User (ARPU) per month has shown a decline of 28.54% from ₹111 in QE Dec-17 to ₹79 in QE Mar-18.

2.23 ARPU for Prepaid service declined from ₹30 in QE Dec-17 to ₹24 in QE Mar-18, and ARPU for Postpaid service declined from ₹517 in QE Dec-17 to ₹393 in QE Mar-18.

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	28.59	21.80
1.2	Revenue from Calls	11.36	8.66
1.3	Revenue from SMS#	0.15	0.11
1.4	Revenue from data usage	44.66	34.04
1.5	Revenue from other VAS	0.14	0.11
1.6	Other Revenue#	45.84	34.94
2	Usage Outside Home Service Area		
2.1	Revenue from Out-roamers	0.45	0.34
3	Total Revenue from Subscribers (1+2)	131.19	100
4	Net inter-operator settlement charges receivable*	-51.87	
5	Net Revenue (ARPU) (3+4)	79.32	

* Includes Interconnect Usage Charges and roaming settlement charges

2.24 Revenue from data usage per subscriber per month (for usage from HSA) declined from ₹60.16 in QE Dec-17 to ₹44.66 in QE Mar-18.

2.25 The total MOUs per subscriber per month declined by 46.42%, from 112 in QE Dec-17 to 61 in QE Mar-18. Outgoing MOUs declined from 73 in QE Dec-17 to 39 in QE Mar-18, and incoming MOUs also declined from 40 in QE Dec-17 to 22 in QE Mar-18.

2.26 Prepaid MOUs per subscriber per month declined from 142 in QE Dec-17 to 90 in QE Mar-18, and postpaid MOUs per subscriber per month also declined from 240 in QE Dec-17 to 181 in QE Mar-18.

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	66	49	115	11	42	52	24	13	38
Circle B	129	51	180	4	34	38	16	9	25
Circle C	100	43	143	9	61	70	20	10	30
Metro	109	106	215	35	101	136	57	33	90
All India	98	83	181	21	69	90	39	22	61

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

Table 2.13 : Outgoing SMS per subscriber per month in QE Mar-18 – CDMA Full Mobility Service

Category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Category A	0	0	0
Category B	0	0	0
Category C	3	0	0
Metro	1	1	1
All India	1	0	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 Mar-18

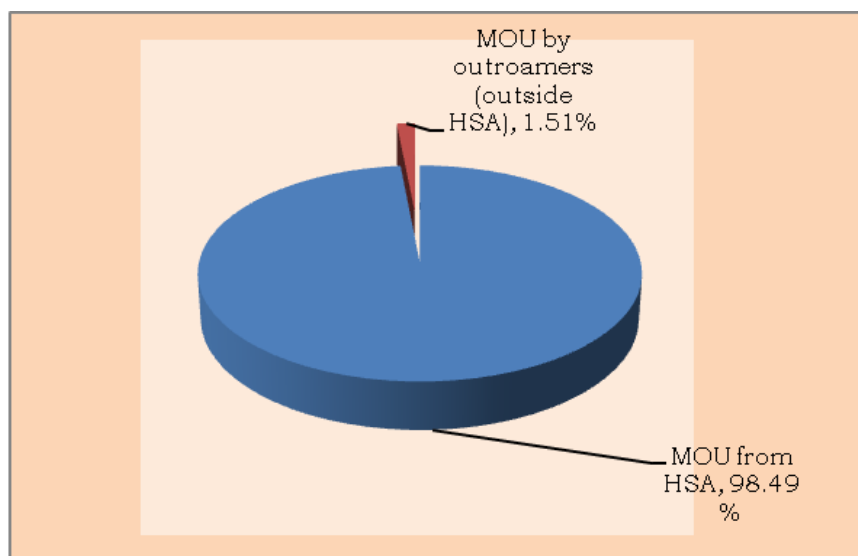


Table 2.14: %Break-up of Outgoing minutes from Home Service Area (HSA) - CDMA Full Mobility Service in QE Mar-18

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	1.28	30.82	33.93	3.06	0.43	0.74	0.04
Circle B	0.63	41.96	28.70	4.23	0.27	1.79	0.02
Circle C	0.29	16.01	41.83	3.76	0.26	3.27	0.04
Metro	0.87	25.43	36.84	4.14	4.45	13.18	0.03
All India	0.91	27.20	35.93	3.94	3.31	9.83	0.03

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 Mar-18

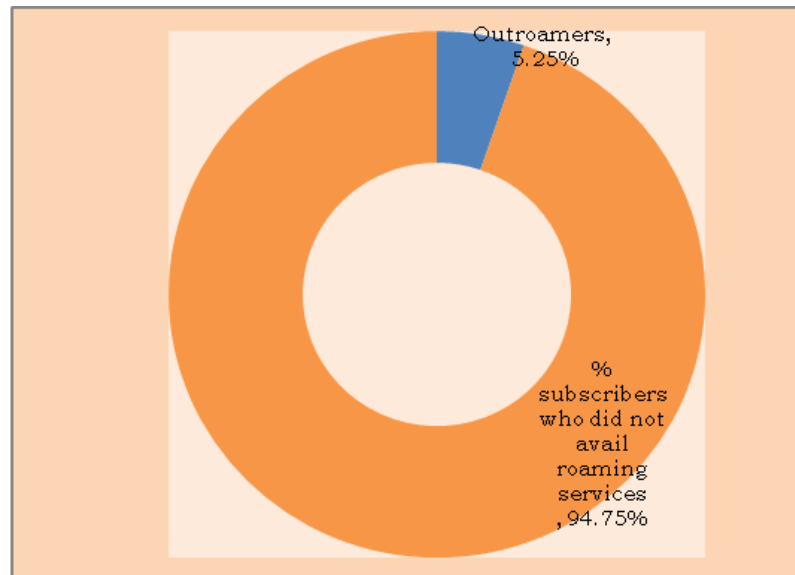


Chart 2.11: Percentage breakup of minutes of usage of Out-roamers (usage from outside the Home Service Area) in QE Mar-18

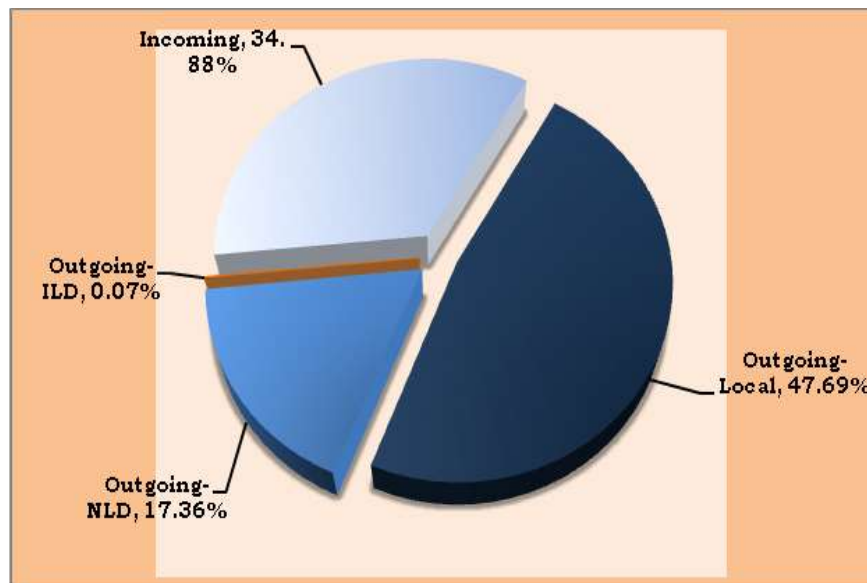


Table 2.15: Average subscriber outgo per outgoing minute from HSA* for CDMA Full Mobility Service in QE Mar-18

Circle Category	[₹ Per min]		
	Postpaid	Prepaid	Blended
Circle A	4.89	0.75	2.26
Circle B	0.53	0.73	0.49
Circle C	1.15	0.91	0.77
Metros	1.55	0.46	0.79
All India	2.00	0.52	1.04

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

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

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

Parameter	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18
1. ARPU (₹ Per month)	131	124	125	111	79
2. Average revenue from data usage per subscriber per month (in ₹)	75	69	59	60	45
3. MOU per subscriber per month	249	247	206	112	61
4. Outgoing MOU per subscriber per month	112	105	83	73	39
5. No. of Outgoing SMS per subscriber per month	2.66	2.23	2.17	1.14	0.51
6. Average subscriber Outgo per outgoing minute from HSA (₹)	0.43	0.44	0.47	0.64	1.04

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 Mar-17 (₹ in Crore)	QE Dec-17 (₹ in Crore)	QE Mar-18 (₹ in Crore)	Q-O-Q % Change	Y-O-Y % Change
Gross Revenue (GR)	63,315	61,089	62,198	1.82	-1.76
Adjusted Gross Revenue (AGR)	40,831	38,536	35,697	-7.37	-12.57
Pass Through Charges (GR-AGR)	22,484	22,552	26,501	17.51	17.87
License Fee	3,361	3,104	2,932	-5.54	-12.76
Spectrum Usage Charges	1,372	1,152	1,051	-8.79	-23.40

3.1 Gross Revenue (GR) quarterly increased by 1.82% in QE Mar-18, however, on annual basis, it declined by 1.76%. Adjusted Gross Revenue (AGR) quarterly and yearly declined by 7.37% and 12.57% respectively in QE Mar-18.

3.2 Pass through charges quarterly and on annual basis increased by 17.51% and 17.87% respectively in the QE Mar-18.

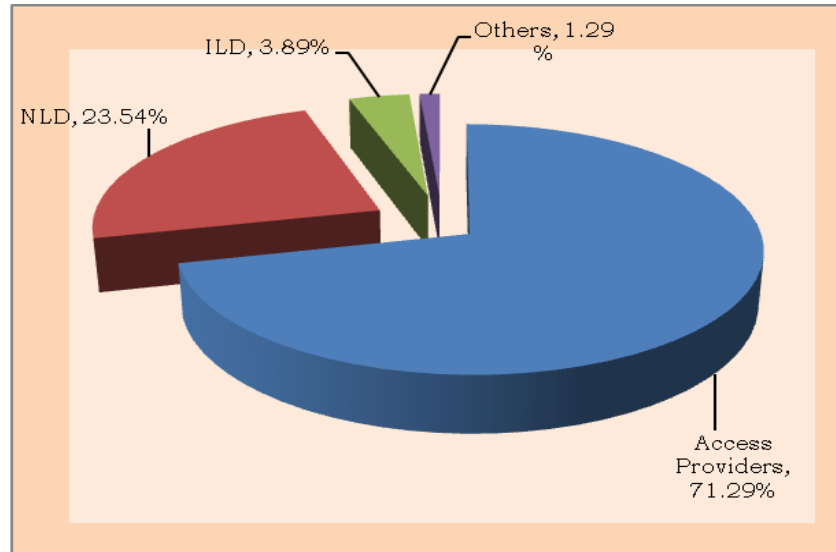
3.3 Pass-through charges as a percentage of Gross Revenue are 42.61% in QE Mar-18 as against 36.92% in the previous quarter.

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	44,574	25,448	2,113	1,046
NLD	10,070	8,402	673	-
ILD	3,160	1,388	111	-
Others	4,393	459	35	4
Total	62,198	35,697	2,932	1,051

Chart 3.1: Composition of Adjusted Gross Revenue



3.4 Access services contributed 71.29% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR) and Pass Through Charges increased by 1.82% and 17.51% respectively in QE Mar-18. However, Adjusted Gross Revenue (AGR), License Fee and Spectrum Usage Charges(SUC) declined by 7.37%, 5.54% and 8.79% respectively during the quarter.

3.5 Monthly Average Revenue per User (ARPU) for Access Services based on AGR declined from ₹80.77 in QE Dec-17 to ₹71.62 in QE Mar-18.

Chart 3.2: Trend in ARPU per month for Access Services



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

			(in ₹ Crore)
Service	QE Mar-18	QE Dec-17	% Change
Bharti	7086.49	7825.36	-9.44
Vodafone	4937.26	5656.48	-12.71
Idea	4033.39	4746.13	-15.02
BSNL	2128.67	1800.28	18.24
Tata	271.00	1202.79	-77.47
Aircel	-	1011.65	-
Reliance Com.	81.08	371.21	-78.16
Telenor	208.03	355.07	-41.41
MTNL	478.61	556.87	-14.05
Sistema Shyam	-	23.03	-
Quadrant	5.92	11.86	-50.09
Reliance Jio	6217.64	5407.19	14.99
Grand Total (Access)	25448.09	28967.93	-12.15

3.6 Public Sector Undertakings' share in the Access AGR of telecom services is 10.18% in the QE Mar-18.

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

Category	AGR of Access Services for QE Mar-18 (in ₹ crore)	%age share of AGR
Metro	2900.43	11.40
A	10323.11	40.57
B	8908.11	35.01
C	3316.45	13.03
Total	25448.09	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

Sl. No.	Parameters	Bench mark	No. of CMTS Licensees not Meeting the Benchmarks			
			For QE December, 2017		For QE March, 2018	
			Out Of 158 (Nos.)	Out Of 158 (%)	*Out Of 136 (Nos.)	*Out Of 136 (%)
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%	2	1.27%	0	0
(ii)	Worst affected BTSs due to downtime/ Worst affected BSs due to down-time (%age)	≤ 2%	6	3.80%	0	0
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%	0	0	0	0
(ii)	SDCCH/ Paging Chl. Congestion/ SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	≤ 1%	1	0.63%	1	0.74%
(iii)	TCH Congestion/ TCH, RAB and E-RAB Congestion (%age)	≤ 2%	5	3.16%	0	0
3	Connection Maintenance (Retain ability)					
(i)	Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	42	26.58%	13	9.56%
(ii)	Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%	31	19.62%	12	8.82%
4	Connection with good voice quality/Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality					
5	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	4	2.53%	3	2.21%

Sl. No.	Parameters	Benchmark	No. of CMTS Licensees not Meeting the Benchmarks			
			For QE December, 2017		For QE March, 2018	
			Out Of 158 (Nos.)	Out Of 158 (%)	*Out Of 136 (Nos.)	*Out Of 136 (%)
II.	Customer Service Quality Parameters					
6	Metering and Billing					
(i)	Metering and billing credibility - post paid	≤ 0.1%	11	6.96%	4	2.94%
(ii)	Metering and billing credibility - pre paid	≤ 0.1%	1	0.63%	1	0.74%
(iii)	Resolution of billing/charging/validity complaints	98% within 4 weeks	0	0	0	0
	Resolution of billing/charging/validity complaints	100% within 6 weeks	0	0	0	0
(iv)	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	1	0.63%	0	0
7	Response time to the customer for assistance					
(i)	Accessibility of call centre/ customer care	≥ 95%	7	4.43%	3	2.21%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	34	21.52%	45	33.09 %
8	Termination / closure of service					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	10	6.33%	2	1.47%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	3	1.90%	0	0

* Total number of License Service area has been reduced to 136 nos. due to closure of services of M/s Aircel Ltd.

4.1 The performance has improved 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. Worst affected BTSs due to downtime (%age)
- c. TCH, RAB and E-RAB Congestion (%age)
- d. QoS DCR Spatial Distribution Measure [Network_QSD(90,90)] (%age)
- e. Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]
- f. Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark)
- g. Metering and billing credibility - post paid
- h. Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints
- i. Accessibility of call centre/customer care
- j. %age requests for Termination/Closure of service complied within 7 days
- k. 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. %age of calls answered by the operators (voice to voice) within 90 sec

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

Parameter	Benchmark	Service Provider	Service Area	Performance
SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	$\leq 1\%$	Telenor	Bihar	1.30
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	$\leq 2\%$	BSNL	West Bengal	2.96
		Idea	Assam	2.77
			Bihar	2.63
			Himachal Pradesh	2.62
			Jammu And Kashmir	2.48
			North East	2.55
		TATA	Haryana	3.85
			Punjab	2.17
			Rajasthan	2.55
			UP-East	5.00
			UP-West	3.33
		Telenor	Maharashtra	2.52
			UP-East	2.67
Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	$\leq 3\%$	BSNL	West Bengal	3.81
		Idea	Assam	4.18
			North East	4.81
		TATA	Gujarat	3.90
			Haryana	5.29
			Mumbai	3.86
			Punjab	4.79
			Rajasthan	3.86
			UP-East	7.69
			UP-West	6.78
		Telenor	Maharashtra	3.10
UP-East	3.32			
Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	$\leq 0.5\%$	RJio	Gujarat	1
			Jammu And Kashmir	1
			Tamil Nadu	1

Parameter	Benchmark	Service Provider	Service Area	Performance
Metering and billing credibility - post paid	≤ 0.1%	Airtel	Gujarat	0.25
			Haryana	0.11
			Jammu And Kashmir	0.12
			Maharashtra	0.22
Metering and billing credibility - pre paid	≤ 0.1%	Vodafone	Delhi	0.14
Accessibility of call centre/ customer care	≥ 95%	Airtel	Assam	84.91
			Kolkata	91.38
		RJio	Tamil Nadu	87.19
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Airtel	Delhi	94.79
			Kolkata	87.02
			Tamil Nadu	87.07
			West Bengal	85.48
		Idea	Rajasthan	94.98
		RJio	Andhra Pradesh	63.03
			Assam	27.46
			Bihar	22.89
			Delhi	39.87
			Gujarat	78.53
			Haryana	30.46
			Himachal Pradesh	31.24
			Jammu And Kashmir	33.23
			Karnataka	42.34
			Kerala	83.33
			Kolkata	27.37
			Madhya Pradesh	22.25
			Maharashtra	61.44
			Mumbai	55.64
			North East	51.86
Odisha	39.48			
Punjab	43.60			
Rajasthan	32.60			
Tamil Nadu	56.16			

Parameter	Benchmark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%		U P-East	21.31
			U P-West	20.54
			West Bengal	18.90
		TATA	Andhra Pradesh	86.17
			Delhi	85.34
			Gujarat	91.60
			Haryana	90.03
			Karnataka	90.25
			Maharashtra	86.57
			Madhya Pradesh	79.61
			Mumbai	90.03
		TATA	Orissa	92.77
			Punjab	94.52
			Tamilnadu	93.05
			UP-East	91.03
			UP-West	90.54
Vodafone	Bihar	94.58		
	Karnataka	91.98		
	Kolkata	94.14		
	Orissa	84.48		
	Tamilnadu	90.94		
%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	Idea	Delhi	99.81
		Vodafone	Mumbai	99.55

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

Sl. No.	Parameters	Bench mark	No of license areas where operators not meeting the benchmarks			
			QE December, 2017		QE March, 2018	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 82 (in Nos.)	Out of 82 (in %age)
(i)	Fault incidences No. of faults per 100 subs/month)	≤ 7	1	1%	0	0%
(ii)	% Fault repaired by next working day (for urban areas)	$\geq 85\%$	0	0%	0	0%
	% Fault repaired within 5 days (for urban areas)	$\geq 100\%$	2	2%	2	2%
(iii)	% Fault repaired by next working day (for rural and hilly areas)	$\geq 75\%$	0	0%	0	0%
	% Fault repaired within 7 days (for rural and hilly areas)	$\geq 100\%$	0	0%	0	0%
(iv)	Mean time to Repair(MTTR)	$\leq 10\text{Hs}$	0	0%	0	0%
(v)	Point of Interconnection (POI) Congestion (No. of PoIs not meeting benchmark)	$\leq 0.5\%$	0	0%	0	0%
(vi)	Metering and Billing credibility - post-paid	$\leq 0.1\%$	0	0%	0	0%
	Metering and Billing credibility - pre-paid	$\leq 0.1\%$	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%

Sl. No.	Parameters	Bench mark	No of license areas where operators not meeting the benchmarks			
			QE December, 2017		QE March, 2018	
			Out of 103 (in Nos.)	Out of 103 (in %age)	Out of 82 (in Nos.)	Out of 82 (in %age)
(ix)	Accessibility of call centre/ customer care	≥ 95%	0	0%	2	2%
	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	4	4%	0	0%
(x)	%age of request for Termination / closure of service complied within 7 days	100% within 7 days	5	5%	2	2%
(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 incidences (No. of faults per 100 subscribers per month)
- b. %age of calls answered by the operators (voice to voice) within 90 seconds
- c. Termination/closure of service 100% within 7 days.

4.5 It is observed that the performance has deteriorated in this quarter as compared to the previous quarter.

- a. Response time to the customer for Assistance – Accessibility of call centre/customer care.

**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 repaired within 5 days (<i>for urban areas</i>)	≥100%	MTNL	DEL	99.37%
			MUM	99.95%
Response time to the customer for assistance- Accessibility of call centre/customer care	≥ 95%	BSNL	JH	94.86%
			KOL	88.21%
%age of request for Termination / closure of service complied within 7 days	100% within 7 days	MTNL	MUM	99.93%
		TATA	WB	99.15%

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 March, 2018. Out of these 185 ISPs, 42 Service Providers are having broadband subscriber base >10,000 and market share of these 42 SPs is 98.96% of total subscriber base. This report covers performance of 42 broadband Service Providers vis-à-vis the QoS benchmarks prescribed by TRAI, for the QE March, 2018.

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

Sl. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending December, 2017		Quarter Ending March, 2018	
			Out of 65	Out of 65	Out of 68	Out of 68
1	Service Provisioning	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	1	1.54%	1	1.47%
2	Faults Repair					
2.2	% of faults repaired by next working day (>90%)	>90%	2	3.08%	1	1.47%
2.3	% of faults repaired within 3 working day	=>99%	3	4.62%	2	2.94%
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%	0	0.00%	0	0.00%

Sl. No.	Parameter	Benchmark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending December, 2017		Quarter Ending March, 2018	
			Out of 65	Out of 65	Out of 68	Out of 68
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	1	1.54%	0	0.00%
5	Bandwidth utilisation/ throughput					
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	1	1.54%	0	0.00%
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	1	1.54%	1	1.47%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	1	1.54%	0	0.00%
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	0	0.00%	0	0.00%
6	Service availability /uptime (for all users) in %age					
6.3	Service availability /uptime (for all users) in %age	>98%	0	0.00%	0	0.00%
7	Packet loss (for wired broadband access) in %age					
		<1%	0	0.00%	0	0.00%
8	Network latency (for wired broadband access)					
8.1	User reference point at POP/ISP Gateway node to IGSP/NIXI	<120 ms	0	0.00%	0	0.00%
8.2	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	<350 ms	0	0.00%	0	0.00%
8.3	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)	<800 ms	0	0.00%	0	0.00%

Table 4.6: Parameter-wise Analysis of non-compliance of QoS benchmarks for Broadband Service Providers

Sl. No.	Parameters	Benchmark	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 (99.93%)
2	Faults Repair		
2.2	% of faults repaired by next working day (>90%)	>90%	TATA (TTML) -Maharashtra & Goa (86.00%)
2.3	% of faults repaired within 3 working day	=>99%	TATA(TTSL) - All India (98.00%), TATA(TTML) - Maharashtra & Goa (96.00%)
4	Bandwidth utilisation/ throughput		
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 (10)

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

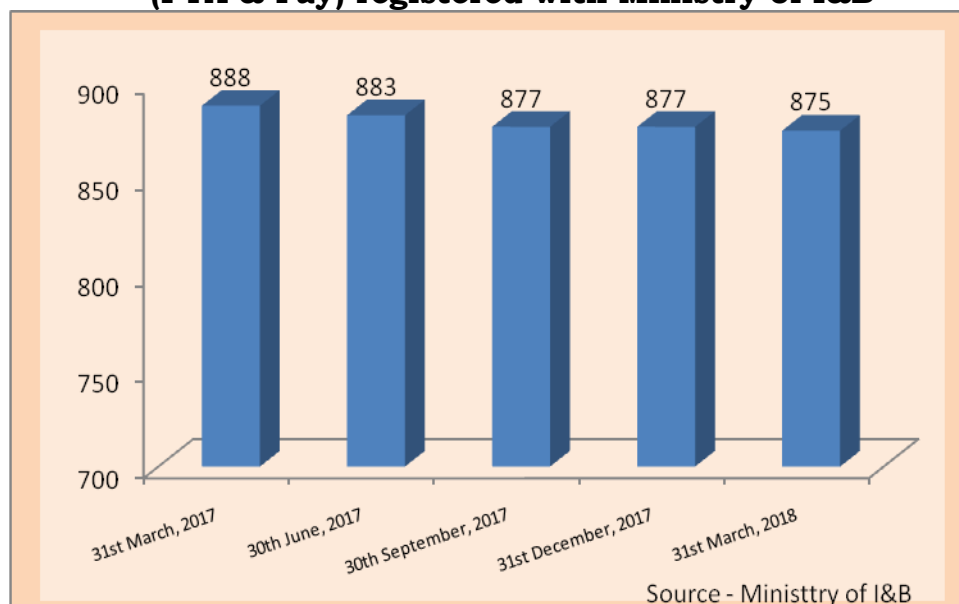
Table 5.1: Key Parameters - Broadcasting & Cable TV Services

S.No	Parameter	QE Dec-17	QE Mar-18
1	Number of Private satellite TV channels permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking	877	875
2	Number of Pay TV Channels as reported by broadcasters	304	308
3	Number of FM Radio Stations (excluding All India Radio)	326	324
4	Number of pay DTH Operators	6	5
5	Number of pay subscribers net active with private DTH service providers	67.56 Million	67.53 Million
6	Number of Operational Community Radio Stations	214	216

A. Satellite TV Channels

5.1 A total of 875 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking/uplinking, as on 31st March, 2018. The quarter-wise figures in the total number of TV channels depicted in below chart.

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



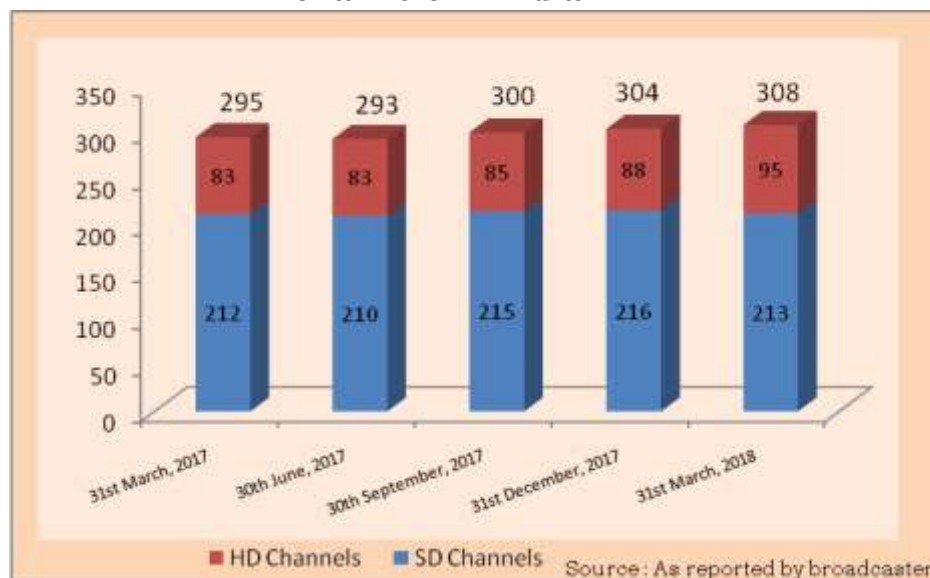
B. Pay TV Channels

5.2 During the quarter ending 31st March, 2018, there are 308 pay channels as reported by 49 broadcasters as compared to 304 pay channels reported in the previous quarter. These 308 pay channels include 213 SD pay TV channels and 95 HD Pay TV channels. List of Broadcasters and their Pay TV Channels as reported to TRAI as on 31st March 2018 is placed at **Annexure-5.1**.

5.3 During the quarter ending 31st March, 2018, as per the reporting, five new pay channels commenced. One FTA channel namely “Zee Tamil” converted into Pay channel. Further, two pay channels namely “Granada TV HD” & “Trace Sports HD” were reported to be discontinued. The details of pay channels launched during the quarter ending 31st March 2018 are as under:

S.No	Name of the Broadcaster	Channel's name
1	Zee Entertainment Enterprises Pvt Ltd	Zee Cinemalu HD
2	Zee Entertainment Enterprises Pvt Ltd	Zee Telugu HD
3	Zee Entertainment Enterprises Pvt Ltd	Zee Kannada HD
4	Viacom 18 Media Pvt Ltd	Colors Tamil HD
5	Discovery Communications India	Discovery Jeet HD

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 31st March, 2018 are as under:-

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

Particulars	Number of channels	Name of MSO
Maximum number of TV channels (FTA+Pay+Local) carried	436	GTPL Hathway Pvt Limited
Minimum of TV channels (FTA+Pay+Local) carried	261	Digicable Network India Private Limited
Maximum number of FTA channels carried	195	Siti Cable Network Limited
Maximum number of Pay channels carried	243	GTPL Kolkata Cable & Broadband Pariseva Ltd
Maximum number of Local channels carried	93	Fastway Transmissions Pvt Limited

D. Direct-to-Home (DTH) Sector

5.5 Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. During the quarter ending 31st March 2018, there are 5 pay DTH service providers as compared to 6 pay DTH service providers reported in the previous quarter. During the quarter, intimation of merger of Videocon d2h Limited with DISH TV India Limited w.e.f. 22.03.2018 has been received.

5.6 DTH has attained net pay active subscriber base of around 67.53 million. As on 31st March 2018, there are 5 pay DTH service providers. This is in addition to the subscribers of the free DTH services of Doordarshan. Quarterly growth in the DTH sector in terms of the net active subscriber base and Market Share of DTH

operators 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 (in million) of pay DTH

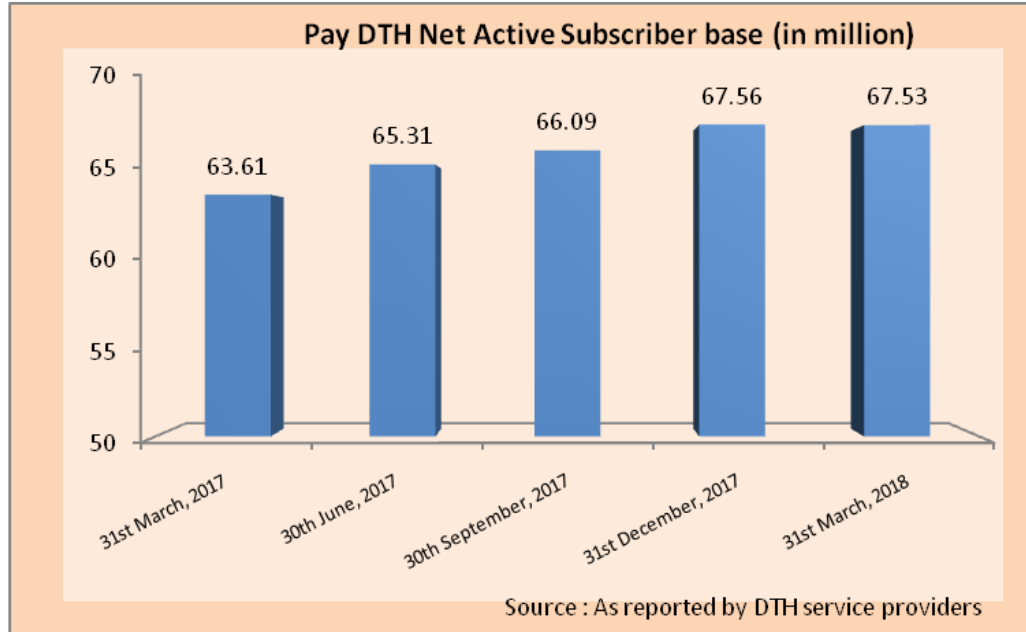
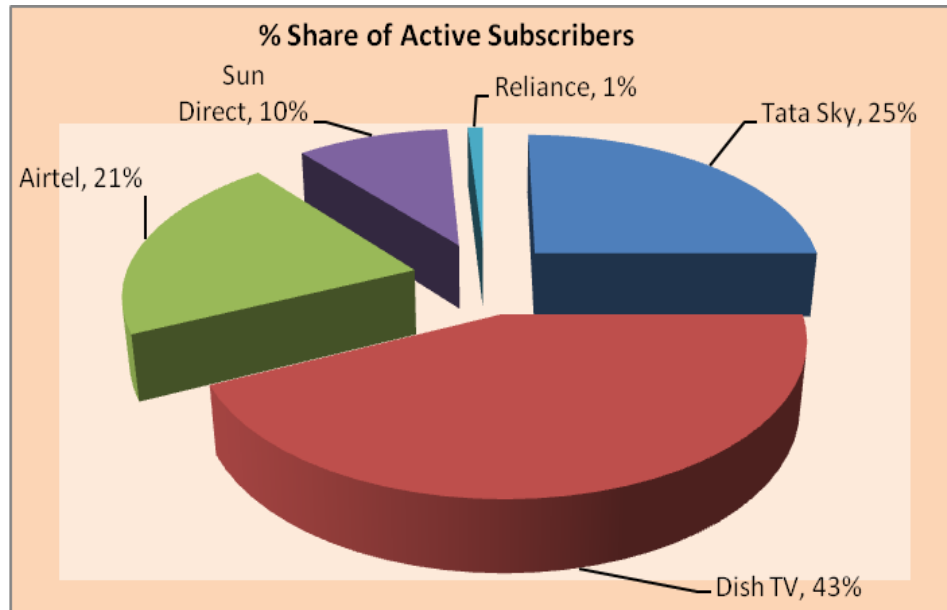


Chart 5.4 : Market share of DTH Operators



Source : As reported by DTH service providers

E. FM Radio Services

5.7 Apart from the radio stations operated by All India Radio- the public broadcaster, as on 31st March, 2018, there are 324 operational private FM Radio stations in 86 existing cities with operational 34 private FM Radio broadcaster as compared to 326 private FM Radio Stations in 86 cities with operational 34 private FM Radio broadcasters in the previous quarter. A list of 86 existing cities with operational private FM radio channels in India as on 31st March 2018 is placed at Annexure 5.3.

5.8 During the quarter ending 31st March, 2018, three new private FM Radio Stations have become operational and five private FM Radio Stations have discontinued operations. The details are as under:-

New Private FM Radio Stations

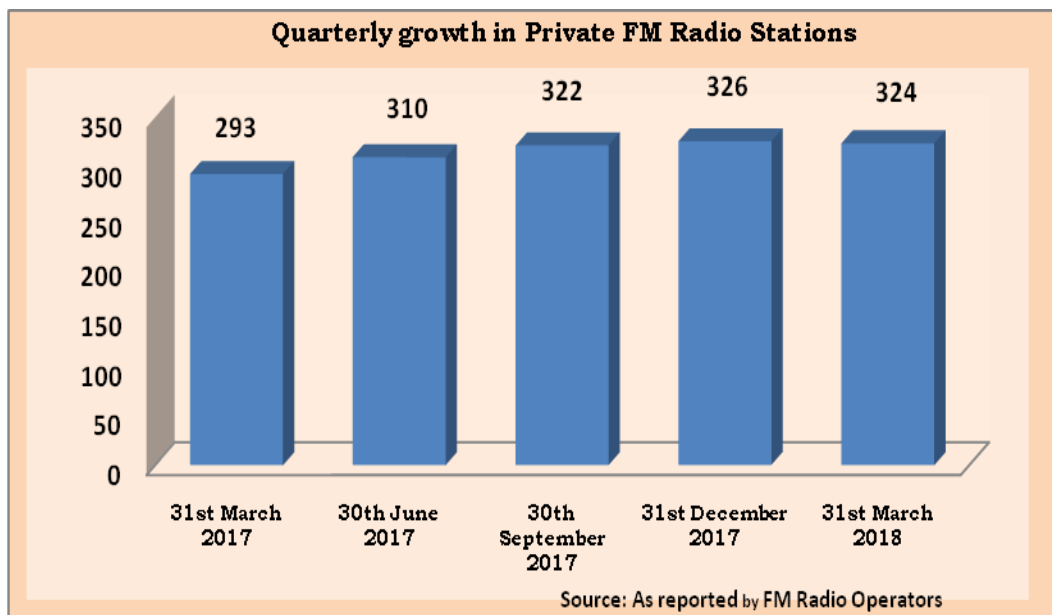
Sl. No.	Name of FM Radio Operator	No of station	Name of City
1	Sarthak Films Pvt Ltd	01	1) Rourkela
2	The Mathrubhumi Printing & Publishing Co. Ltd	01	2) Kozhikode
3	Odisha Television Limited	01	3) Rourkela
	Total	03	

Private FM Radio Stations who have stopped operations

Sl. No.	Name of FM Radio Operator	No of station	Name of City
1	Entertainment Network (India) Limited	01	1) Panaji
2	Reliance Broadcast Network Limited	01	1)Visakapatnam
3	India Radio Ventures Pvt. Ltd.	02	1)Kannur 2)Thrissur
4	Raneka Fincom Pvt. Ltd.	01	1) Raipur
	Total	05	

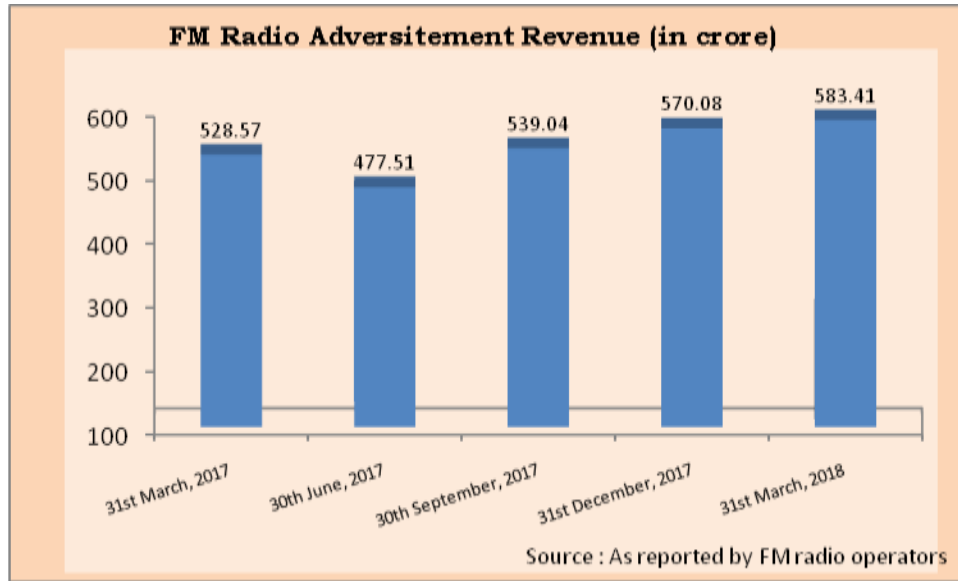
5.9 The following chart depicts the Quarterly growth in number of operational private FM Radio Stations reported by the FM Radio broadcasters during last four quarters.

Chart 5.5 : Quarterly growth in private FM Radio stations



5.10 The reported advertisement revenue during the quarter ending 31st March, 2018 in respect of 323 private FM Radio stations is Rs 583.41 crore as against Rs 570.08 crore in respect of 325 private FM Radio stations for the previous quarter. One FM Radio Broadcaster, M/s Gwalior Firm Private Limited, operating in the city of Guwahati, has not submitted the advertisement revenue. The following chart is based on the details of Advertisement Revenue submitted by the FM Radio broadcasters to TRAI during last one year.

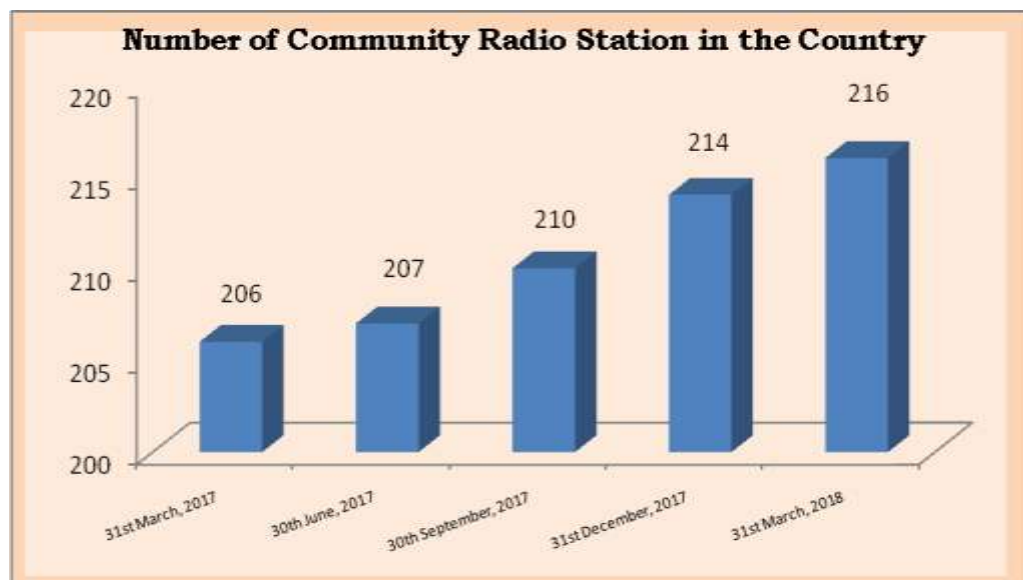
Chart 5.6 : Quarterly growth in FM Radio Advertisement Revenue



F. Community Radio

5.11 As on 31st March, 2018, 216 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 Operational Community Radio Stations



Source : Ministry of I&B

Annexures

Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone (GSM)		Bharti (GSM)		Idea (GSM)		Aircel (GSM)		Reliance (GSM)		Tata (GSM)		Tata (CDMA)	
	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18
Andhra Pradesh	6,689,828	6,397,411	27,184,997	27,318,827	16,626,241	17,745,682	2,455,229	2,152,478	747,146	8,609	2,661,109	2,374,102	382,714	322,009
Assam	3,787,049	4,220,244	6,766,210	7,803,873	1,151,178	1,396,473	5,892,499	5,723,781	569,804	38	-	-	-	-
Bihar	9,550,764	10,302,695	31,181,437	32,317,362	12,047,235	14,188,931	7,549,103	7,240,203	1,003,168	1,293	662,247	524,898	185,932	148,959
Delhi	11,617,410	12,281,591	12,877,050	13,916,959	6,794,793	7,378,006	6,763,176	6,112,896	4,389,205	48,804	-	-	1,366,540	1,058,125
Gujarat	20,537,804	20,787,332	9,652,110	9,700,460	13,378,193	14,569,508	-	-	890,477	2,690	1,746,703	1,469,029	163,489	123,500
Haryana	6,272,831	6,455,744	3,943,506	4,002,935	5,084,778	5,363,143	2,092	-	178,794	313	1,464,887	1,249,794	78,353	71,747
Himachal Pradesh	592,849	589,785	3,361,346	3,522,199	880,211	981,637	496,715	-	1,031,862	323	11,713	7,901	11,086	9,957
Jammu & Kashmir	862,593	894,705	4,084,556	4,814,170	572,422	702,137	3,422,896	3,378,318	726,412	4	-	-	-	-
Karnataka	7,667,041	7,759,965	24,251,336	24,823,003	9,300,939	9,539,659	3,051,390	2,690,193	1,092,687	13,220	5,190,732	4,459,950	126,906	101,693
Kerala	7,877,602	7,930,931	4,799,436	4,916,310	11,590,307	12,229,356	292,060	233,179	180,987	2,705	853,994	620,371	57,961	46,288
Madhya Pradesh	6,544,311	6,541,449	15,039,063	15,326,157	26,420,511	27,982,096	552	-	6,144,470	59,809	3,228,218	2,866,779	92,049	78,055
Maharashtra	20,120,081	20,605,324	14,700,063	14,616,112	28,506,515	30,650,020	1,404,799	-	415,822	6,084	3,109,019	2,717,652	794,752	590,231
Mumbai	9,639,460	9,861,178	7,659,322	7,940,801	4,472,581	4,697,339	2,526,680	2,182,118	2,957,240	15,944	1,636,910	1,450,206	499,205	426,023
North East	1,570,490	1,751,795	4,426,986	4,904,098	474,695	549,196	3,292,595	3,292,069	148,351	-	-	-	-	-
Orissa	4,293,210	4,537,996	11,949,613	12,382,689	1,713,464	1,988,323	4,030,336	3,911,300	1,283,869	151	1,156,241	941,995	62,918	48,032
Punjab	4,943,452	4,915,088	9,767,310	9,870,037	7,417,252	7,673,236	904,542	754,818	1,144,604	692	1,393,540	1,190,759	81,514	75,440
Rajasthan	11,709,525	12,203,525	21,710,763	22,538,857	7,812,272	8,271,627	6,239,272	5,288,258	3,587,447	3,604	268,603	196,168	199,290	174,775
Tamil Nadu (incl. Chennai)	16,531,883	20,191,218	19,899,546	24,078,948	5,902,784	6,090,040	20,492,085	17,828,645	954,122	13,772	2,658,747	2,190,282	78,132	60,503
UP(E)	22,422,483	23,762,086	25,210,561	26,099,036	11,736,184	12,611,655	6,520,776	5,836,979	886,914	2,425	2,322,511	2,004,907	56,435	59,151
UP(W)	12,295,907	12,495,605	9,121,232	9,466,403	16,466,929	17,516,176	566,634	-	682,203	1,052	1,926,644	1,705,296	143,539	123,102
Kolkata	6,021,446	6,625,667	5,606,347	6,193,156	2,443,926	2,846,495	4,254,927	3,479,087	2,282,737	3,725	1,702,295	1,479,684	176,582	120,614
West Bengal	20,980,344	21,586,423	16,920,289	17,639,414	5,704,764	6,238,868	4,776,300	4,047,977	1,868,028	711	120,777	85,731	20,668	15,517
Total	212,528,363	222,697,757	290,113,079	304,191,806	196,498,174	211,209,603	84,934,658	74,152,299	33,166,349	185,968	32,114,890	27,535,504	4,578,065	3,653,721

Annexure 1.1 (contd.)

Service Area	BSNL (GSM)		BSNL (CDMA)		MTNL (GSM)		Reliance Jio (LTE)		Telenor (GSM)		Total		Net Additions
	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	
Andhra Pradesh	10,056,216	10,115,949	11,805	10,860	-	-	13,276,818	15,438,785	4,223,046	3,745,847	84,315,149	85,630,559	1,315,410
Assam	1,567,658	1,902,223	62,553	62,178	-	-	2,804,544	3,528,197			22,601,495	24,637,007	2,035,512
Bihar	4,147,876	4,430,024	-	-	-	-	10,105,860	12,365,309	7,855,226	7,071,067	84,288,848	88,590,741	4,301,893
Delhi	-	-	-	-	2,299,685	2,279,634	9,440,273	10,835,450			55,548,132	53,911,465	(1,636,667)
Gujarat	5,515,259	5,782,647	29,533	27,599	-	-	11,546,414	13,199,987	7,132,006	6,259,935	70,591,988	71,922,687	1,330,699
Haryana	4,251,802	4,476,401	-	-	-	-	4,188,177	4,770,299			25,465,220	26,390,376	925,156
Himachal Pradesh	2,463,075	2,571,438	6,291	-	-	-	1,715,932	1,961,525			10,571,080	9,644,765	(926,315)
Jammu & Kashmir	1,528,195	1,573,943	20,762	19,893	-	-	1,904,180	2,269,867			13,122,016	13,653,037	531,021
Karnataka	7,219,725	7,180,972	39,561	37,999	-	-	9,260,031	10,372,149			67,200,348	66,978,803	(221,545)
Kerala	10,216,449	10,457,803	68,874	64,112	-	-	5,072,047	5,502,172			41,009,717	42,003,227	993,510
Madhya Pradesh	5,762,169	5,955,208	65,195	64,386	-	-	9,802,824	11,614,091			73,099,362	70,488,030	(2,611,332)
Maharashtra	6,965,299	7,081,685	31,574	28,636	-	-	11,594,705	13,483,734	5,741,125	4,823,593	93,383,754	94,603,071	1,219,317
Mumbai	-	-	-	-	1,285,081	1,277,426	7,651,459	8,524,091			38,327,938	36,375,126	(1,952,812)
North East	1,358,347	1,433,939	158,836	158,347	-	-	1,382,810	1,679,684			12,813,110	13,769,128	956,018
Orissa	5,258,673	5,409,656	11,141	10,058	-	-	4,263,579	5,114,718			34,023,044	34,344,918	321,874
Punjab	5,143,003	5,346,523	-	-	-	-	7272098	8265631			38,067,315	38,092,224	24,909
Rajasthan	5,458,187	5,495,366	46,547	43,609	-	-	8,776,476	10,155,612			65,808,382	64,371,401	(1,436,981)
Tamil Nadu (incl. Chennai)	9,894,687	11,085,399	27,856	26,403	-	-	10,589,205	12,509,414			87,029,047	94,074,624	7,045,577
UP(E)	11,654,457	11,845,483	6,755	5,490	-	-	10,134,487	12,302,576	9,823,240	9,312,386	100,774,803	103,842,174	3,067,371
UP(W)	5,832,197	5,777,895	-	-	-	-	8,153,481	9,543,111	7,136,085	6,771,754	62,324,851	63,400,394	1,075,543
Kolkata	1,300,590	1,461,353	703	703	-	-	5,278,886	5,967,064			29,068,439	28,177,548	(890,891)
West Bengal	1,660,882	1,662,538	72,599	72,765	-	-	5,876,955	7,157,362			58,001,606	58,507,306	505,700
Total	107,254,746	111,046,445	660,585	633,038	3,584,766	3,557,060	160,091,241	186,560,828	41,910,728	37,984,582	1,167,435,644	1,183,408,611	15,972,967

Annexure 1.2: Wireline Subscriber Base

Sl. No	Service Area	Bharti		Reliance		Quadrant		Tata		MTNL		BSNL		Vodafone		Aircel		Total		Net Additions
		Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	Dec-17	Mar-18	
1	Andhra Pradesh	164,994	168,154	73,284	53,373			174,331	174,396			1,080,608	1,054,324	26,010	29,490	5,347		1,524,574	1,479,737	-44,837
2	Assam											138,036	134,580	2,700	2,670			140,736	137,250	-3,486
3	Bihar			6,246	5,792			12,087	11,426			251,263	258,955	2,010	2,100			271,606	278,273	6,667
4	Delhi	1,311,798	1,320,229	162,689	156,272			143,514	144,715	1,555,478	1,538,377			32,070	32,240	14,909		3,220,458	3,191,833	-28,625
5	Gujarat	78,553	80,744	70,177	29,886			92,421	94,004			1,041,619	1,050,516	9,797	13,427	1,063		1,293,630	1,268,577	-25,053
6	Haryana	22,559	22,169	3,627	3,239			38,414	38,082			243,298	239,944		60			307,898	303,494	-4,404
7	Himachal Pradesh			3,889	3,650			2,389	2,374			121,623	120,440	60	60			127,961	126,524	-1,437
8	Jammu & Kashmir											116,807	115,678					116,807	115,678	-1,129
9	Karnataka	640,466	647,602	153,214	157,210			270,557	272,695			1,127,253	1,104,785	33,625	35,925	28,622		2,253,737	2,218,217	-35,520
10	Kerala	58,236	58,335	30,828	22,061			18,799	18,761			1,882,601	1,868,937	2,430	2,550			1,992,894	1,970,644	-22,250
11	Madhya Pradesh	263,865	254,043	19,335	13,688			15,346	15,673			679,047	665,705	600	660			978,193	949,769	-28,424
12	Maharashtra	80,552	82,822	76,883	62,322			307,763	309,046			1,283,293	1,258,265	15,395	16,417	585		1,764,471	1,728,872	-35,599
13	Mumbai	357,551	360,902	248,775	221,476			558,877	562,828	1,820,673	1,808,191			29,582	37,112	11,010		3,026,468	2,990,509	-35,959
14	North East											113,002	111,924	120	210			113,122	112,134	-988
15	Orissa			3,188	3,112			8,100	8,282			260,470	265,031	1,530	1,650			273,288	278,075	4,787
16	Punjab	120,048	121,841	18,956	12,874	250,373	243,820	15,924	15,524			483,142	467,488	1,110	1,560	30		889,583	863,107	-26,476
17	Rajasthan	49,915	50,155	29,500	26,265			12,652	13,391			514,592	504,786	5,880	6,450	3,551		616,090	601,047	-15,043
18	Tamil Nadu (incl. Chennai)	555,742	555,991	127,374	86,417			113,535	117,849			1,565,517	1,539,528	14,950	15,720			2,377,118	2,315,505	-61,613
19	U.P.(E)	64,156	63,815	33,804	11,735			13,570	12,806			365,061	363,772	9,100	11,400	2		485,693	463,528	-22,165
20	U.P.(W)	22,568	22,196	6,967	5,244			9,593	8,905			313,711	308,642	4,050	4,170			356,889	349,157	-7,732
21	Kolkata	122,138	123,535	67,394	46,902			50,239	52,091			569,979	561,941	6,420	7,050	2,592		818,762	791,519	-27,243
22	West Bengal			1,862	1,896			3,051	3,161			279,736	272,150	60	60			284,709	277,267	-7,442
	Total	3,913,141	3,932,533	1,137,992	923,414	250,373	243,820	1,861,162	1,876,009	3,376,151	3,346,568	12,430,658	12,267,391	197,499	220,981	67,711	0	23,234,687	22,810,716	-423,971

Annexure 1.3: Service Area and Operator wise details of PCOs

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.03.2018	Net PCO increase/ decrease as on 31.03.2018
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	16,362	14,889	-1,473
	Bharti Group	181	81	-100
	Tata Group	5,223	11,661	6,438
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	16,362	14,889	-1,473
	Bharti Group	181	81	-100
	Tata Group	5,223	11,661	6,438
Assam	Bharat Sanchar Nigam Ltd.	5,805	5,379	-426
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,507	1,247	-260
	Tata Group	27	23	-4
Jharkhand	Bharat Sanchar Nigam Ltd.	2,701	2,687	-14
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	4,208	3,934	-274
	Tata Group	27	23	-4
Delhi	Bharti Group	330	330	0
	Mahanagar Telephone Nigam Ltd.	48,368	47,073	-1,295
	Tata Group	1,341	946	-395
Gujarat	Bharat Sanchar Nigam Ltd.	20,120	19,504	-616
	Bharti Group	14	14	0
	Tata Group	1,232	1,887	655
Haryana	Bharat Sanchar Nigam Ltd.	1,663	1,637	-26
	Bharti Group	150	147	-3
	Tata Group	39	46	7
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	1,240	1,194	-46
	Tata Group	2	0	-2
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,811	1,784	-27
Karnataka	Bharat Sanchar Nigam Ltd.	21,756	20,537	-1,219
	Bharti Group	3,737	3,598	-139
	Tata Group	501	360	-141
Kerala	Bharat Sanchar Nigam Ltd.	17,425	16,995	-430
	Bharti Group	465	450	-15
	Tata Group	32	38	6
Kolkata	Bharat Sanchar Nigam Ltd.	4,468	4,330	-138
	Bharti Group	26	26	0
	Tata Group	138	67	-71
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	17,761	17,477	-284
	Bharti Group	1,841	1,752	-89
	Tata Group	487	787	300

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.03.2018	Net PCO increase/ decrease as on 31.03.2018
Chhatisgarh	Bharat Sanchar Nigam Ltd.	1,371	1,238	-133
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	19,132	18,715	-417
	Bharti Group	1,841	1,752	-89
	Tata Group	487	787	300
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	44,321	37,556	-6,765
	Tata Group	8,833	7,793	-1,040
Mumbai	Bharti Group	41	40	-1
	Mahanagar Telephone Nigam Ltd./MTNL	72,750	50,729	-22,021
	Tata Group	3,439	1,674	-1,765
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	44,321	37,556	-6,765
	Bharti Group	41	40	-1
	Mahanagar Telephone Nigam Ltd./MTNL	72,750	50,729	-22,021
	Tata Group	12,272	9,467	-2,805
Arunachal Pradesh	Bharat Sanchar Nigam Ltd.	1,114	1,106	-8
Mizoram	Bharat Sanchar Nigam Ltd.	2,406	2,363	-43
Orissa	Bharat Sanchar Nigam Ltd.	2,094	1,903	-191
	Tata Group	26	21	-5
Punjab	Bharat Sanchar Nigam Ltd.	2,168	2,041	-127
	Bharti Group	37	29	-8
	Quadrant Televentures Ltd.	1,420	1,420	0
	Tata Group	261	278	17
Rajasthan	Bharat Sanchar Nigam Ltd.	5,910	5,740	-170
	Bharti Group	209	209	0
	Tata Group	200	255	55
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	37,301	36,536	-765
	Bharti Group	5,457	5,143	-314
	Tata Group	104	119	15
Chennai	Bharat Sanchar Nigam Ltd.	9,268	9,022	-246
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	46,569	45,558	-1,011
	Bharti Group	5,457	5,143	-314
	Tata Group	104	119	15
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	10,185	9,655	-530
	Bharti Group	86	82	-4
	Tata Group	14	12	-2
Uttarakhand	Bharat Sanchar Nigam Ltd.	1,138	1,108	-30

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.03.2018	Net PCO increase/ decrease as on 31.03.2018
Uttar Pradesh - West (excl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,042	1,927	-115
	Bharti Group	50	42	-8
	Tata Group	192	167	-25
Uttar Pradesh - West (incl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,180	3,035	-145
	Bharti Group	50	42	-8
	Tata Group	192	167	-25
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,109	4,724	615
	Tata Group	42	33	-9
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	142	142	0
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,251	4,866	615
	Tata Group	42	33	-9
Total		3,93,483	3,60,053	-33,430

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

Name of Circle/Service Area	Service Provider	Number of VPTs as on 31.12.2017	Number of VPTs as on 31.03.2018	Net VPTs increase/ decreased as on 31.3.2018
Andhra Pradesh (Excl. Telangana)	Bharat Sanchar Nigam Ltd.	9,977	9,977	0
Andhra Pradesh (Incl. Telangana)	Bharat Sanchar Nigam Ltd.	9,977	9,977	0
Assam	Bharat Sanchar Nigam Ltd.	2,810	2,810	0
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	6,768	6,768	0
Jharkhand	Bharat Sanchar Nigam Ltd.	490	490	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	7,258	7,258	0
Gujarat	Bharat Sanchar Nigam Ltd.	8,750	8,693	-57
Haryana	Bharat Sanchar Nigam Ltd.	1,272	1,272	0
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	5,028	5,028	0
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	2,244	2,236	-8
Karnataka	Bharat Sanchar Nigam Ltd.	7,512	7,250	-262
Kerala	Bharat Sanchar Nigam Ltd.	405	399	-6
Kolkata	Bharat Sanchar Nigam Ltd.	130	130	0
Madhya Pradesh (excl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	39,692	39,692	0
Chhattisgarh	Bharat Sanchar Nigam Ltd.	8,391	8,391	0
Madhya Pradesh (incl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	48,083	48,083	0
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	22,217	22,109	-108
	Tata Group	1,282	0	-1,282
Maharashtra (incl. Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	22,217	22,109	-108
	Tata Group	1,282	0	-1,282
Orissa	Bharat Sanchar Nigam Ltd.	6,205	6,205	0
Punjab	Bharat Sanchar Nigam Ltd.	5,938	5,938	0
Rajasthan	Bharat Sanchar Nigam Ltd.	9,329	7,857	-1,472
Tamilnadu (excl. chennai)	Bharat Sanchar Nigam Ltd.	11,457	11,456	-1
Chennai	Bharat Sanchar Nigam Ltd.	144	144	0
Tamil Nadu (incl. Chennai)	Bharat Sanchar Nigam Ltd.	11,601	11,600	-1
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	1,119	1,061	-58
Uttarakhand	Bharat Sanchar Nigam Ltd.	3,473	3,473	0
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,394	3,394	0

Annexure 1.5 (contd.)

Name of Circle/Service Area	Service Provider	Number of VPTs as on 31.12.2017	Number of VPTs as on 31.03.2018	Net VPTs increase/ decreased as on 31.3.2018
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	6867	6867	0
West Bengal (excluding Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	36958	36958	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	340	340	0
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	37,298	37,298	0
Total		202,395	199,057	-3,338

**Annexure 1.5 : Internet Service Provider(ISP) wise Internet Subscriber base
as on 31.03.2018**

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
1	Reliance Jio Infocomm Ltd (Infotel Broadband Services Limited)	0	186560828	186560828
2	Bharti Airtel Limited	30580187	85667724	116247911
3	Vodafone	16199270	59772810	75972080
4	Idea Cellular	6972603	39837803	46810406
5	Bharat Sanchar Nigam Ltd.	10336667	21077551	31414218
6	Aircel	8885040	5594608	14479648
7	Telenor	5648139	2876344	8524483
8	Tata	2088630	3837164	5925794
9	Mahanagar Telephone Nigam Ltd.	541299	1399106	1940405
10	Atria Convergence Technologies Pvt Ltd	0	1305767	1305767
11	Hathway Cable & Datacom Pvt. Ltd.	12942	782444	795386
12	You Broadband India Pvt. Ltd.	15156	629102	644258
13	GTPL Broadband Pvt. Ltd.	0	250497	250497
14	Tikona	666	235701	236367
15	D-Vois Broadband Private Limited	0	235051	235051
16	Excitel Broadband Private Limited	0	209228	209228
17	Quadrant Televentures Ltd.	219	202701	202920
18	Asianet Satellite Communications Ltd.	0	189729	189729
19	Alliance Broadband Services Pvt. Ltd.	0	189640	189640
20	Syscon Infoway Pvt Ltd	5618	174971	180589
21	Indinet Service Pvt Ltd	0	138888	138888
22	DEN Networks Ltd	6	106553	106559
23	RailTel Corporation of India Ltd.	0	101613	101613
24	Planet E-Shop Holdings India Ltd.	1111	80845	81956
25	Reliance Communications	15247	64890	80137
26	Airlink Communications Pvt. Ltd	0	68802	68802
27	Honesty Net Solutions (I) Pvt Ltd	193	59576	59769
28	Ortel Communication Ltd.	0	52899	52899
29	Nextra Teleservices Pvt. Ltd.	0	49921	49921
30	Five Network Solution (India) Ltd.	0	49819	49819
31	CSC e-Governance Services India Ltd.	0	40003	40003
32	Wish Net Pvt. Ltd.	0	39072	39072
33	INTECH ONLINE PVT LTD	0	37515	37515
34	SITI Broadband Services Pvt. Ltd.	0	37365	37365
35	Limras Eronet Broadband Service Pvt Ltd	7377	29363	36740
36	Wan and Lan Internet Pvt. Ltd.	0	35368	35368

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
37	Citycom Networks Pvt. Ltd.	0	33834	33834
38	Vasai Cable Pvt. Ltd.	0	26400	26400
39	DNA Infotel Pvt Ltd	0	22009	22009
40	Ishan Netsol Pvt Ltd	17714	2458	20172
41	Chandra Net Pvt. Limited	5986	13879	19865
42	K NET SOLUTIONS PVT LTD	0	18897	18897
43	Broadband Pacenet (I) Pvt. Ltd.	0	17319	17319
44	Geocity Network Solutions Pvt. Ltd.	0	16070	16070
45	Fusionnet Web Services Pvt. Ltd.	0	15935	15935
46	Quest Consultancy Pvt. Ltd.	0	13666	13666
47	City Online Services Ltd	0	13644	13644
48	Digital Cloud Technologies Pvt. Ltd.	0	12581	12581
49	Rajesh Multi Channel Pvt. Ltd.	31	11917	11948
50	IKF Technologies Ltd	0	11755	11755
51	Apna Telelink Ltd.	0	11652	11652
52	Digital Network associates Pvt. Ltd	0	11624	11624
53	FOXTEL TELECOMMUNICATIONS PVT LTD	11529	0	11529
54	Meghbela Cable & Broadband Servies(P)Ltd	0	11438	11438
55	Yashash Cable Network Pvt Ltd	0	10125	10125
56	SIFI ONLINE PVT LTD	0	9907	9907
57	SmartLink Broadband Services	0	9756	9756
58	Sampark Infotainment Pvt Ltd	0	9729	9729
59	Multicraft Digital Technologies Pvt Ltd	0	9553	9553
60	Sikka Broadband (P) Ltd. (Gomti Cable Network Pvt. Ltd.)	0	9117	9117
61	World Phone Internet Services Pvt Ltd	0	9090	9090
62	Pioneerelabs	317	8737	9054
63	Kappa Internet Services Pvt Ltd.	0	8052	8052
64	RI Networks Pvt Ltd	0	8006	8006
65	North East Dataa Network Pvt Ltd.	0	7618	7618
66	Net 9 Online Hathway Private Limited	0	7350	7350
67	GBPS Networks Pvt. Ltd.	0	6876	6876
68	United Telecoms Ltd.	185	6494	6679
69	Lotus Broadband Pvt Ltd	0	6642	6642
70	Swiftnet Broadband Pvt Ltd	0	6516	6516
71	Readylink Internet Services Pvt Ltd	194	6076	6270
72	Netplus Broadband Services Pvt. Ltd	0	6267	6267
73	DL GTPL BROADBAND PVT LTD	0	5354	5354

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
74	Swiftmail Communications Ltd.	1409	3659	5068
75	Intermedia Cable Communication Pvt Ltd	0	5030	5030
76	Southern Online Bio Technologies Ltd.	7	4949	4956
77	Cityzone Infonet Pvt. Ltd	0	4725	4725
78	Shri Omkar Infocom Pvt. Ltd.	0	4640	4640
79	Ethernet Xpress India Pvt. Ltd	0	4496	4496
80	Siliguri Internet & Cable TV Pvt. Ltd.	0	4221	4221
81	Spacenet Internet Services Pvt Ltd	0	4164	4164
82	Blazenet Ltd.	0	3977	3977
83	Zoram Business Enterprise Private Limited	0	3933	3933
84	TGN NETWORKS PVT LTD	0	3892	3892
85	Multinet (Udaipur) Pvt. Ltd.	0	3848	3848
86	TRANSMEDIA TECHNOLOGIES (AP) PVT LTD	0	3792	3792
87	CJM Consultancy Services Pvt. Ltd.	0	3606	3606
88	AIRMAX INTERNET PVT LTD	1307	2185	3492
89	Bittel Telecom Pvt.Ltd	0	3488	3488
90	Star Broadband Services (I) Pvt Ltd	0	2920	2920
91	GIGATEL NETWORKS PVT LTD	0	2910	2910
92	Aerocast Networks Pvt Ltd.	0	2894	2894
93	F/X Wireless Technology Services Pvt. Ltd.	0	2858	2858
94	Airgenie Communications Pvt. Ltd.	0	2675	2675
95	Narmada Cyberzone Pvt Ltd	503	2082	2585
96	Kaizen Infonet Pvt Ltd	7	2526	2533
97	Speed Online.net Pvt. Ltd.	0	2504	2504
98	CJ Online Pvt. Ltd.	0	2400	2400
99	Spiderlink Networks Pvt. Ltd.	0	2176	2176
100	S.S.Netcom Pvt Ltd	0	2051	2051
101	Rainbow Internet teleservices Pvt Ltd	35	2004	2039
102	SMARTLINK SOLUTIONS PVT. LTD.	0	1965	1965
103	Nettlinx Ltd.	15	1942	1957
104	Rajesh Patel Net Services Pvt. Ltd.	51	1859	1910
105	Jetspot Networks Pvt. Ltd.	0	1908	1908
106	Wnet Telecom Private Limited	0	1904	1904
107	Sphier Infotech Pvt. Ltd.	0	1808	1808
108	Capture Network Systems Pvt. Ltd.	288	1519	1807
109	SCUD COMMUNICATION PVT LTD	0	1783	1783
110	Assistive Networks & Technologie Pvt Ltd	0	1701	1701

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
111	Touch Net India Pvt. Ltd.	0	1655	1655
112	ULTRANET INFOTECH SOLUTION PRIVATE LIMITED	0	1600	1600
113	Hughes Communications India Ltd.	520	1030	1550
114	Netfirre Communications Pvt Ltd	0	1310	1310
115	Harisree CableNet Pvt. Ltd.	0	1280	1280
116	FIBERZONE COMMUNICATION (P) LTD	0	1260	1260
117	Aeroway Networks Pvt Ltd.	0	1254	1254
118	MAKS COMMUNICATIONS PVT.LTD.	0	1248	1248
119	LM ENERGY & SOFTWARE PVT LTD	0	1236	1236
120	Tata Sky Broadband Private Limited	0	1222	1222
121	Micronova Network Solutions Ltd	68	1129	1197
122	Symbois Creations Pvt. Ltd.	0	1099	1099
123	Sify Technologies Ltd.	571	512	1083
124	HARDWORK CABLE & INTERNET SERVICES PVT LTD	0	1081	1081
125	deIDSL Internet Pvt Ltd	0	1074	1074
126	NISS INTERNET SERVICES PVT. LTD.	0	1016	1016
127	Conjoinix Technologies Pvt Ltd	0	982	982
128	Elyzium Technologies Pvt. Ltd.	0	960	960
129	Correl IT Services Pvt. Ltd.	0	957	957
130	GIGACAST NETWORK PVT LTD	0	924	924
131	SS FIBER NET OPTICAL COMMUNICATION PVT. LTD	0	918	918
132	DREAMLINK TECHNOLOGIES PVT LTD	0	848	848
133	Datawave IT solutions Pvt. Ltd.	0	834	834
134	ESTO BORADNAD PVT LTD./ESTO INTERNET PVT LTD	0	824	824
135	NetMagic Solutions(P) Ltd.	0	819	819
136	STN Communication & Advertising Pvt Ltd.	6	810	816
137	ANTARIKSH BROADBAND & WIRELESS SOLUTIONS PVT LTD	800	0	800
138	Daksh Broadband Services Pvt Ltd	0	784	784
139	Japra Tele Link Pvt. Ltd.	0	749	749
140	VIVA Communications Pvt Ltd(Mylai Karpagambal Information Systems (P) Ltd)	0	737	737
141	SVD DIGITAL NETWORKS PVT LTD	0	720	720
142	CLOUDNET COMMUNICATIONS PVT LTD	0	704	704
143	HPS DIGITAL BROADBAND PVT LTD	0	672	672

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
144	TOUCHNET BROADBAND SERVICES PVT LTD	0	642	642
145	CIT SOLUTIONS PVT. LTD.	627	0	627
146	Click4Net Internet Services Private Limited	0	606	606
147	Suncity Broadband Pvt Ltd.	0	605	605
148	Primenet Global Ltd.	0	602	602
149	Data Infosys Ltd.	0	600	600
150	WEBRIDERS INTERNET PVT LTD	0	594	594
151	DATAMAX TECHNOLOGY PVT LTD	0	560	560
152	Digital2Virtual ISP Pvt. Ltd.	0	549	549
153	Panav Network and Communications Private Limited	0	547	547
154	HOSTAXIS NETWORKS PVT LTD	0	540	540
155	Gorakhpur Net Services Pvt. Ltd.	0	539	539
156	Alphanet Broadband Pvt Ltd	0	532	532
157	Wi5 Internet Services P Limited	0	519	519
158	Barani Data Solutions Private Limited	378	126	504
159	FASTNET COMMUNICATION PVT LTD	110	394	504
160	Rida Communication Pvt. Ltd.	0	503	503
161	CATLA IT&ENGG. CO. PVT LTD.	0	501	501
162	ELECON INFOTMATION TECHNOLOGY LTD	0	487	487
163	VARESHA AIR WORLD NETWORKS PVT LTD	483	0	483
164	WSNS PVT LTD	0	470	470
165	HELM CONSULTANTS PVT LTD	187	263	450
166	Oasis Cable Pvt Ltd.	0	445	445
167	Tamana Winet Pvt. Ltd.	0	440	440
168	NETTECH INFOVISION PVT LTD	0	436	436
169	INFINITY WIRELESS SERVICES PVT. LTD.	0	426	426
170	Power Grid Corporation of India Ltd.	0	405	405
171	WINDSOR INTERNET PVT LTD	0	403	403
172	Oistel Telecom Pvt. Ltd.	194	194	388
173	DEVELOPMENT LOGICS SOLUTIONS PVT LTD	0	383	383
174	Singh Internet Services Pvt. Ltd.	0	346	346
175	Alegra Communication Pvt Ltd	0	333	333
176	Sai Akshay Internet Services Pvt Ltd.	0	316	316
177	Reticule Infotech Pvt. Ltd.	0	289	289
178	SONALI INTERNET SERVICES PVT LTD	0	288	288

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
179	Pulse Telesystems Pvt. Ltd.	0	285	285
180	Gleam Worldwide Services Pvt. Ltd.	0	281	281
181	SG IT Infotech Pvt. Ltd.	0	276	276
182	Wi-Link Network Pvt. Ltd	0	273	273
183	SRINAGAR TECHNOLOGY CONSULTANTS LTD	256	0	256
184	Cityline Networks Pvt Ltd	0	251	251
185	Rajdhani Telecom Pvt. Ltd.	8	240	248
186	SEFARO NETWORKS PRIVATE LTD	0	233	233
187	SUPER SONIC BROADBAND PVT LTD	0	229	229
188	NEXTGEN COMPUSOFT PVT LTD	0	215	215
189	VMO BROADBAND PVT LTD	106	106	212
190	Bhiwani Communications Pvt. Ltd.	83	128	211
191	PMG NETWORKD PVT LTD	0	210	210
192	CERALINK COMMUNICATION PVT LTD	0	196	196
193	AirFiber IT Solutions Pvt. Ltd	4	191	195
194	ANUSHREE DIGITAL NETWORK PVT LTD	0	194	194
195	Shree Balaji Infoway Pvt Ltd	0	192	192
196	WAVETREE NETWORKS PVT LTD	0	190	190
197	WE INTERNET LIMITED (Nivyah Infrastructure & Telecom Services Ltd.)	0	182	182
198	PROLINE DATATECH SERVICVES PVT LTD	0	176	176
199	STN Infotech Pvt. Ltd	0	175	175
200	BASS JOKERNET PRIVATE LIMITED	0	171	171
201	Microsense Pvt. Ltd.	0	168	168
202	Khetan Cable Network (P) Ltd	0	161	161
203	PANCHSHEEL BROADBAND SERVICES'S PVT LTD.	0	160	160
204	NETVISION AWADH NETWORKS PVT LTD	0	153	153
205	NETWIRE INTERNET SOLUTIONS PVT LTD	0	151	151
206	ERNET India	91	54	145
207	Shri Vinayagaa Internet Pvt Ltd	26	117	143
208	Unitel Media Pvt Ltd	0	142	142
209	Cheetah Networks Pvt Ltd	0	140	140
210	MLC INTERNET PVT LTD	0	137	137
211	Shineplus Networks Pvt Ltd	0	128	128
212	QBC Infotech Pvt. Ltd.	0	124	124
213	Global India Tele Infra Pvt. Ltd.	9	104	113
214	Sifi OnlinePvt. Ltd.	0	112	112

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
215	SHRI RAM BRAOADBAND SERVICES PVT LTD	0	112	112
216	IWAVE TELECOMMUNICATIONS PVT LTD	0	105	105
217	SOUTHNET BROADBAND PVT LTD	0	97	97
218	Angel Air Network Solutions Private Limited	0	93	93
219	SATH TECHNOLOGIES PVT LTD	0	87	87
220	TRIPLE LINK PVT LTD	0	84	84
221	DigiStar Info Solutions Pvt Ltd	40	40	80
222	Achiever Communication and Services Pvt. Ltd.	1	78	79
223	Airmesh Communications Limited	0	77	77
224	Verizon Communications India Pvt. Ltd. (Worldcom Communications).	0	75	75
225	Airtechzone Services India Pvt Ltd	21	52	73
226	Dream Plus Multi Services Pvt. Ltd.	0	72	72
227	Telestra Telecommunications Pvt. Ltd.	0	71	71
228	Sanyog Networks Pvt Ltd	0	70	70
229	Trans Virtual Pvt. Ltd.	9	58	67
230	Malang Solutions Pvt. Ltd.	0	67	67
231	Edge Telecommunications Pvt. Ltd.	0	62	62
232	AT&T Global Network Services India Private Limited	0	60	60
233	Satpar Infotech Pvt Ltd	0	57	57
234	Pacific Internet India Pvt. Ltd.	0	56	56
235	DRONAGIRI INFOTECH PVT LTD	0	53	53
236	City Broadband Pvt. Ltd.	0	52	52
237	TOUCHOUS COMMUNICATION PVT LTD	0	51	51
238	V NET NETWORKS PVT. LTD	0	48	48
239	S A INTERNET SOLUTION PVT LTD	0	45	45
240	HCL Comnet Systems & Services Ltd.	22	14	36
241	Navariya Satellite Services Pvt.Ltd.	33	0	33
242	West Bengal Electronics Industry Development Corp. Ltd.	0	32	32
243	Dreamnet Pvt.Ltd.	0	30	30
244	SUN BOARDBAND AND DATA SERVICES PVT LTD	0	28	28
245	Adya Tech One Services Pvt Ltd	0	23	23
246	Orange Business Services India Network Pvt. Ltd.	0	22	22
247	UBERCORE DATA LABS PVT LTD	0	18	18

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
248	GETWAY BROADBAND PVT LTD	0	18	18
249	FASTHOOK NETWORKS PVT LTD	0	18	18
250	Novanet India Ltd.	0	16	16
251	ADRI INFOCOM PVT. LTD.	0	16	16
252	A TO Z INFOLINK PVT.LTD.	0	15	15
253	Essel Shyam Communications Limited	3	7	10
254	Financial Technologies Communications Ltd.	10	0	10
255	Sab Infotech (Sab Industries)	0	10	10
256	ARP INFONET PVT. LTD.	0	10	10
257	Tatanet Services Ltd	0	8	8
258	ABT Ltd.	3	2	5
259	Nelco Ltd.	0	5	5
260	NATRAJ INTERNET SERVICE PVT LTD	0	5	5
261	Texas Connect Private Limited	0	4	4
262	KIIRUS INFONET PVT. LTD.	0	3	3
	Total	81354617	412604000	493958617

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. Mar-18**

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

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			31.12.2017	31.03.2018
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5817	5986
		Procall(Delhi)	2768	2902
		Procall (Faridabad)		
		Procall (Gurgaon)		
		Total	8585	8888
2	Mumbai (Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7755	8220
		Smartalk (Mumbai)	526	526
		Bhilwara Telenet(Mumbai)	818	818
		Airtalk Solutions & Services Pvt. Ltd	304	314
		Total	9403	9878
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2388	2406
		Total	2388	2406
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7058	7246
		Quick Calls	408	554
		Total	7466	7800
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6795	6960
		Quick Calls	506	546
		Total	7301	7506
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5130	5445
		Quick Calls (Hyderabad Urban)	704	856
		Total	5834	6301
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1302	1371
		Total	1302	1371
8	Rajasthan (Jaipur)	Procall	286	286
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	448	607
		Total	734	893

Annexure- 1.7 (Contd.)

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			31.12.2017	31.03.2018
9	Gujarat (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej/ Kutch/Amrela / Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej)	6196	6481
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		Total	8016	8301
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1615	1772
		Smartalk	442	405
		Total	2057	2177
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	361	361
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	786	778
		Total	1147	1139
Grand Total			54,233	56,660

Annexure 2.1: GSM Service - Service Area wise Statistics for QE Mar-18

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	95.19	96	23	282	268	550
Gujarat	94.56	75	10	272	211	483
Karnataka	93.44	88	25	288	257	545
MH	95.05	86	36	259	227	486
TN (incl. Chennai)	94.54	97	35	281	259	540

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	97.15	50	27	330	290	620
Kerala	96.87	105	14	232	233	466
MP	97.86	66	15	260	262	522
Punjab	94.90	74	57	311	256	567
Rajasthan	97.27	67	10	317	313	630
UP(E)	98.58	63	8	284	390	674
UP(W)	98.00	64	17	274	295	569
WB	99.21	57	25	251	306	557

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	97.29	91	29	334	359	693
Bihar	99.19	70	8	317	434	750
HP	98.63	55	7	235	209	444
J&K	82.93	96	14	437	371	808
NE	98.02	82	33	302	280	582
Orissa	98.81	73	12	317	299	616

Key parameters for service areas of category-Metro

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Kolkata	92.87	79	13	278	250	528
Delhi	85.71	51	13	459	302	761
Mumbai	81.88	84	15	405	252	657

**Annexure 2.2: CDMA Full Mobility Service - Service Area wise Statistics for
QE Mar-18**

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	91.02%	55	1	23	12	35
Gujarat	86.75%	71	0	23	11	34
TN (incl. Chennai)	62.38%	193	0	27	19	46
Karnataka	56.77%	355	0	47	34	81
AP	90.25%	61	0	20	11	31

Key parameters for service areas of Category B

Service Area	% of Prepaid in total subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
WB	99.64	10	0	2	0	2
Rajasthan	97.56	15	0	17	7	24
UP(E)	90.20	63	0	14	10	24
MP	95.37	41	0	24	17	41
Kerala	85.35	93	0	17	8	25
UP(W)	95.76	29	0	20	11	31
Haryana	98.36	22	0	9	7	16
Punjab	91.11	42	0	11	7	18

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	91.66	38	0	20	12	32
Bihar	95.70	39	1	21	10	31
HP	87.72	21	0	5	2	7
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	70.51	159	0	37	20	58
Delhi	88.49	60	1	69	41	110
Mumbai	70.37	173	0	26	15	41

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, March, 2018																			
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 (%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	Airtel	0.13	0.34	96.86	0.87	1.16	1.95	2.44	97.67	0	0.07	0.01	99.97	100.00	100.00	98.80	97.30	100.00	100.00
	BSNL	1.01	1.96	98.65	0.76	1.54	1.81	1.91	99.55	0	0.00	0.00	100.00	100.00	100.00	97.00	95.67	100.00	100.00
	Idea	0.01	0.00	98.17	0.74	0.98	1.98	2.42	97.35	0	0.02	0.01	99.83	100.00	100.00	98.51	98.32	100.00	100.00
	Rjio	0.05	0.02	99.57	0.01	0.05	0.68	1.04	99.40	0	0.00	0.00	100.00	100.00	100.00	97.52	63.03	100.00	100.00
	TATA	0.33	0.73	99.10	0.74	0.38	0.00	0.51	98.19	0	0.00	0.00	100.00	100.00	100.00	96.04	86.17	100.00	100.00
	Telenor	0.17	0.52	99.84	0.03	0.02	1.54	1.86	99.05	0	NA	0.00	100.00	100.00	NA	99.42	98.57	NA	NA
Assam	Vodafone	0.04	0.06	99.88	0.11	0.12	1.34	1.55	99.22	0	0.07	0.02	100.00	100.00	100.00	100.00	99.00	100.00	100.00
	Airtel	0.27	1.37	97.93	0.78	1.43	1.89	2.22	98.94	0	0.02	0.01	99.87	100.00	100.00	84.91	97.51	100.00	100.00
	BSNL	1.84	1.97	98.58	0.82	1.42	1.84	2.78	96.70	0	0.01	0.00	100.00	100.00	100.00	97.00	97.83	100.00	100.00
	Idea	0.01	0.00	95.47	0.59	1.95	2.77	4.18	95.31	0	0.04	0.01	100.00	100.00	100.00	98.01	95.46	100.00	100.00
	Rjio	0.27	0.83	99.54	0.00	0.01	0.58	0.91	99.36	0	0.01	0.00	100.00	100.00	100.00	97.43	27.46	100.00	100.00
	Vodafone	0.53	1.24	99.04	0.58	0.90	1.66	2.92	98.28	0	0.03	0.03	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Bihar	Airtel	0.12	0.69	98.53	0.62	1.43	1.82	1.96	97.37	0	0.05	0.01	100.00	100.00	100.00	99.36	96.00	100.00	100.00
	BSNL	1.88	1.82	95.97	0.40	0.61	1.99	2.81	97.23	0	0.00	0.00	100.00	100.00	100.00	99.50	98.16	100.00	100.00
	Idea	0.26	1.48	97.45	0.73	1.00	2.63	2.96	99.65	0	0.02	0.00	100.00	100.00	100.00	98.67	95.99	100.00	100.00
	Rjio	0.30	1.49	99.47	0.00	0.05	0.85	1.18	99.24	0	0.00	0.00	100.00	100.00	100.00	97.54	22.89	100.00	100.00
	TATA	0.35	1.02	98.05	0.83	0.04	0.00	0.80	98.26	0	0.00	0.00	100.00	100.00	100.00	96.82	99.31	100.00	100.00
	Telenor	0.09	0.14	98.88	1.30	0.90	1.67	2.36	98.09	0	NA	0.00	100.00	100.00	NA	99.69	99.53	NA	NA
Chennai	Vodafone	0.42	1.72	99.33	0.17	0.67	1.90	2.63	98.02	0	0.01	0.07	100.00	100.00	100.00	100.00	94.58	100.00	100.00
	BSNL	0.34	1.31	98.46	0.40	1.57	1.67	2.64	97.19	0	0.01	0.00	99.00	100.00	100.00	100.00	95.81	100.00	100.00

Annexure 4.1 (Contd.)

Delhi	Airtel	0.10	0.00	99.02	0.08	0.11	1.87	2.50	99.01	0	0.08	0.02	99.97	100.00	100.00	100.00	94.79	100.00	100.00
	Idea	0.05	0.07	98.70	0.20	0.66	1.83	2.22	98.12	0	0.07	0.03	100.00	100.00	100.00	99.49	98.54	99.81	100.00
	MTNL	0.07	0.78	97.47	0.22	1.34	1.69	1.86	98.36	0	0.03	0.01	100.00	100.00	100.00	99.19	95.28	100.00	100.00
	Rjio	0.09	0.41	99.49	0.00	0.05	0.41	0.82	99.66	0	0.01	0.00	100.00	100.00	100.00	97.33	39.87	100.00	100.00
	TATA	0.02	0.00	99.29	0.00	0.19	1.34	2.45	99.49	0	0.00	0.00	100.00	100.00	100.00	99.06	85.34	100.00	100.00
Vodafone	0.11	0.36	99.27	0.15	0.61	1.81	2.01	99.18	0	0.04	0.14	99.98	100.00	100.00	100.00	97.09	100.00	100.00	
Gujarat	Airtel	0.07	0.19	98.76	0.06	0.66	1.96	2.27	98.14	0	0.25	0.01	99.99	100.00	100.00	100.00	97.47	100.00	100.00
	BSNL	1.42	1.11	97.11	0.19	0.33	1.92	2.31	100.00	0	0.01	0.00	100.00	100.00	100.00	98.00	97.73	100.00	100.00
	Idea	0.04	0.10	97.77	0.57	1.70	1.98	2.35	97.73	0	0.01	0.04	100.00	100.00	100.00	97.59	99.82	100.00	100.00
	Rjio	0.11	0.31	99.53	0.00	0.04	0.65	1.03	99.45	1	0.02	0.00	100.00	100.00	100.00	97.31	78.53	100.00	100.00
	TATA	0.03	0.00	95.55	0.09	1.22	1.67	3.90	99.74	0	0.00	0.00	100.00	100.00	100.00	98.56	91.60	100.00	100.00
	Telenor	0.13	0.38	99.39	0.06	0.18	1.64	2.07	98.98	0	NA	0.00	100.00	100.00	NA	99.71	98.36	NA	NA
Vodafone	0.03	0.13	98.88	0.28	1.00	1.47	1.72	98.60	0	0.08	0.03	100.00	100.00	100.00	100.00	95.74	100.00	100.00	
Haryana	Airtel	0.07	0.03	99.29	0.19	0.31	1.16	1.43	99.21	0	0.11	0.01	100.00	100.00	100.00	100.00	97.09	100.00	100.00
	BSNL	0.74	0.38	98.92	0.17	0.24	1.73	1.83	97.69	0	0.01	0.00	100.00	100.00	100.00	100.00	99.95	100.00	100.00
	Idea	0.06	0.12	98.41	0.33	0.53	1.92	2.48	98.22	0	0.03	0.01	100.00	100.00	100.00	98.86	99.23	100.00	100.00
	Rjio	0.14	0.33	99.59	0.00	0.02	1.04	1.45	99.73	0	0.00	0.00	100.00	100.00	100.00	97.18	30.46	100.00	100.00
	TATA	1.65	1.77	99.38	0.21	0.58	3.85	5.29	98.07	0	0.00	0.00	100.00	100.00	100.00	97.08	90.03	100.00	100.00
Vodafone	0.19	0.68	99.56	0.38	0.36	1.83	2.34	99.00	0	0.05	0.01	100.00	100.00	100.00	100.00	98.62	100.00	100.00	
Himachal Pradesh	Airtel	0.06	0.00	98.46	0.15	0.18	1.25	1.50	98.78	0	0.01	0.02	100.00	100.00	100.00	95.70	97.57	100.00	100.00
	BSNL	1.79	1.92	98.43	0.63	0.99	1.93	2.32	96.27	0	0.00	0.00	100.00	100.00	100.00	100.00	99.90	100.00	100.00
	Idea	0.16	0.39	99.09	0.13	0.38	2.62	2.88	96.89	0	0.01	0.04	100.00	100.00	100.00	98.78	99.49	100.00	100.00
	Rjio	0.07	0.16	99.48	0.00	0.03	0.71	1.20	99.25	0	0.00	0.00	100.00	100.00	100.00	97.57	31.24	100.00	100.00
	TATA	0.01	0.00	98.96	0.00	0.00	0.00	0.00	97.13	0	0.00	0.00	100.00	100.00	100.00	99.38	99.23	100.00	100.00
Vodafone	0.05	0.81	99.90	0.01	0.10	1.92	2.41	97.87	0	0.05	0.03	100.00	100.00	100.00	100.00	99.90	100.00	100.00	
Jammu & Kashmir	Airtel	0.18	0.23	98.30	0.52	0.76	0.95	1.31	98.54	0	0.12	0.02	100.00	100.00	100.00	99.26	95.45	100.00	100.00
	BSNL	1.36	0.45	98.35	0.49	1.16	1.92	2.78	98.65	0	0.01	0.00	100.00	100.00	100.00	100.00	99.91	100.00	100.00
	Idea	0.54	1.93	98.46	0.20	1.11	2.48	2.90	96.42	0	0.03	0.03	100.00	100.00	100.00	97.39	99.18	100.00	100.00
	Rjio	0.16	0.58	99.59	0.00	0.02	1.04	1.47	99.66	1	0.00	0.00	100.00	100.00	100.00	97.68	33.23	100.00	100.00
	Vodafone	0.18	0.65	99.98	0.02	0.02	1.83	2.46	98.75	0	0.01	0.05	100.00	100.00	100.00	100.00	97.34	100.00	100.00
Karnataka	Airtel	0.06	0.71	98.78	0.82	0.36	1.44	1.73	98.26	0	0.05	0.01	99.97	100.00	100.00	100.00	98.67	100.00	100.00
	BSNL	1.13	1.72	97.30	0.40	1.27	1.97	2.86	96.54	0	0.00	0.00	99.79	100.00	100.00	99.00	96.70	100.00	100.00
	Idea	0.00	0.01	99.64	0.39	0.18	1.86	2.54	97.26	0	0.07	0.01	100.00	100.00	100.00	99.87	98.88	100.00	100.00
	Rjio	0.18	0.75	99.59	0.00	0.02	0.74	1.28	99.52	0	0.00	0.00	100.00	100.00	100.00	97.30	42.34	100.00	100.00
	TATA	0.34	0.82	97.98	0.31	0.50	1.60	2.87	99.04	0	0.00	0.00	100.00	100.00	100.00	98.27	90.25	100.00	100.00
	Vodafone	0.26	1.24	99.74	0.17	0.10	1.18	1.40	99.58	0	0.03	0.02	99.96	100.00	100.00	100.00	91.98	100.00	100.00
Kerala	Airtel	0.04	0.00	98.37	0.08	0.22	1.98	2.50	98.30	0	0.09	0.03	100.00	100.00	100.00	99.92	96.18	100.00	100.00
	BSNL	0.17	1.13	99.40	0.33	0.58	1.69	1.93	99.90	0	0.01	0.00	100.00	100.00	100.00	98.00	96.99	100.00	100.00
	Idea	0.08	0.16	99.53	0.26	0.43	1.81	2.23	98.27	0	0.07	0.02	99.88	100.00	100.00	98.48	99.06	100.00	100.00
	Rjio	0.04	0.06	99.64	0.00	0.01	0.92	1.64	99.47	0	0.02	0.00	100.00	100.00	100.00	97.58	83.33	100.00	100.00
	TATA	0.57	0.00	99.44	0.01	0.09	0.00	0.00	99.14	0	0.00	0.00	100.00	100.00	100.00	97.46	95.16	100.00	100.00
Vodafone	0.04	0.07	99.62	0.08	0.09	1.04	1.26	99.54	0	0.09	0.04	100.00	100.00	100.00	100.00	95.41	100.00	100.00	

Annexure 4.1 (Contd.)

Kolkata	Airtel	0.00	0.00	99.49	0.17	0.06	1.87	2.50	98.52	0	0.04	0.03	99.92	100.00	100.00	91.38	87.02	100.00	100.00
	BSNL	1.16	1.79	99.06	0.49	0.56	1.56	1.85	98.79	0	0.01	0.00	100.00	100.00	100.00	95.00	95.29	100.00	100.00
	Idea	0.02	0.29	99.63	0.08	0.10	1.04	1.50	99.34	0	0.06	0.01	100.00	100.00	100.00	97.91	98.43	100.00	100.00
	Rjio	0.02	0.04	99.56	0.00	0.09	0.20	0.33	99.80	0	0.00	0.00	100.00	100.00	100.00	97.63	27.37	100.00	100.00
	TATA	0.52	1.55	99.25	0.12	0.20	0.00	2.96	99.52	0	0.00	0.00	100.00	100.00	100.00	98.29	97.79	100.00	100.00
	Vodafone	0.12	0.52	99.11	0.12	0.79	1.35	1.83	98.67	0	0.05	0.06	100.00	100.00	100.00	99.99	94.14	100.00	100.00
Madhya Pradesh	Airtel	0.09	0.29	98.76	0.23	1.57	1.96	2.27	97.90	0	0.08	0.01	99.95	100.00	100.00	100.00	97.19	100.00	100.00
	BSNL	1.69	1.77	96.56	0.67	1.13	1.33	2.06	97.81	0	0.01	0.02	100.00	100.00	100.00	98.00	98.33	100.00	100.00
	Idea	0.11	0.23	96.45	0.78	1.89	1.88	2.34	96.79	0	0.03	0.02	100.00	100.00	100.00	98.95	98.41	100.00	100.00
	Rjio	0.13	0.52	99.54	0.00	0.04	0.60	0.98	99.46	0	0.00	0.00	100.00	100.00	100.00	97.68	22.25	100.00	100.00
	TATA	0.59	0.00	98.30	0.07	1.51	1.25	2.95	99.67	0	0.00	0.00	100.00	100.00	100.00	97.43	79.61	100.00	100.00
	Vodafone	0.07	0.17	99.78	0.06	0.22	1.53	1.79	98.86	0	0.02	0.02	100.00	100.00	100.00	99.97	98.73	100.00	100.00
Maharashtra	Airtel	0.04	0.00	97.90	0.34	0.62	1.60	1.75	97.65	0	0.22	0.01	99.98	100.00	100.00	99.95	98.28	100.00	100.00
	BSNL	1.59	1.99	97.89	0.33	0.96	2.00	2.84	95.23	0	0.01	0.00	100.00	100.00	100.00	100.00	96.69	100.00	100.00
	Idea	0.18	0.64	97.70	0.87	1.34	1.88	2.52	97.92	0	0.03	0.01	100.00	100.00	100.00	99.12	99.57	100.00	100.00
	Rjio	0.23	0.80	99.53	0.00	0.04	0.60	1.04	99.59	0	0.00	0.00	100.00	100.00	100.00	97.63	61.44	100.00	100.00
	TATA	0.46	0.14	98.58	0.18	0.54	1.72	2.99	99.71	0	0.00	0.00	100.00	100.00	100.00	99.50	86.57	100.00	100.00
	Telenor	0.25	1.21	99.39	0.19	0.07	2.52	3.10	98.42	0	NA	0.00	100.00	100.00	NA	99.51	98.01	NA	NA
	Vodafone	0.14	0.28	99.58	0.32	0.35	1.54	1.93	99.11	0	0.05	0.04	100.00	100.00	100.00	99.96	97.96	100.00	100.00
Mumbai	Airtel	0.05	0.18	98.71	0.31	0.16	1.82	1.89	98.86	0	0.06	0.00	99.96	100.00	100.00	99.65	98.33	100.00	100.00
	Idea	0.13	0.01	98.18	0.68	1.10	1.95	2.76	96.43	0	0.01	0.01	100.00	100.00	100.00	98.56	98.00	100.00	100.00
	MTNL	0.76	1.23	97.63	0.49	0.27	1.71	2.14	97.75	0	0.02	0.00	98.84	100.00	100.00	100.00	97.25	100.00	100.00
	Rjio	0.15	0.67	99.42	0.01	0.11	0.39	0.73	99.79	0	0.01	0.00	100.00	100.00	100.00	97.55	55.64	100.00	100.00
	TATA	0.18	0.00	99.17	0.16	0.72	1.62	3.86	99.09	0	0.00	0.00	100.00	100.00	100.00	98.73	90.03	100.00	100.00
	Vodafone	1.00	0.00	98.38	0.59	1.44	1.45	2.31	98.49	0	0.07	0.04	100.00	100.00	100.00	99.96	95.44	99.55	100.00
North East	Airtel	0.41	1.70	96.61	0.86	1.85	1.98	2.26	98.88	0	0.02	0.01	100.00	100.00	100.00	100.00	99.04	100.00	100.00
	BSNL	1.81	1.93	97.33	0.78	1.81	1.86	2.76	97.22	0	0.03	0.03	99.50	100.00	100.00	98.50	96.80	100.00	100.00
	Idea	0.01	0.01	98.06	0.33	1.50	2.55	4.81	97.14	0	0.05	0.00	100.00	100.00	100.00	97.53	96.25	100.00	100.00
	Rjio	0.73	1.61	99.51	0.00	0.01	1.15	2.15	99.44	0	0.07	0.00	100.00	100.00	100.00	97.61	51.86	100.00	100.00
	Vodafone	1.03	1.29	98.58	0.73	1.28	1.99	2.91	98.34	0	0.02	0.06	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Orissa	Airtel	0.03	0.05	99.20	0.36	1.30	1.89	1.96	98.27	0	0.04	0.03	99.98	100.00	100.00	99.85	98.93	100.00	100.00
	BSNL	1.22	1.80	98.99	0.83	1.15	1.97	2.95	98.09	0	0.03	0.02	100.00	100.00	100.00	98.00	97.31	100.00	100.00
	Idea	0.04	0.04	99.27	0.14	0.29	1.16	1.35	96.22	0	0.00	0.01	99.92	100.00	100.00	97.39	95.81	100.00	100.00
	Rjio	0.11	0.35	99.44	0.00	0.14	0.60	1.08	99.42	0	0.09	0.00	100.00	100.00	100.00	97.64	39.48	100.00	100.00
	TATA	0.06	0.00	99.37	0.41	0.03	0.00	2.67	98.34	0	0.00	0.00	100.00	100.00	100.00	97.63	92.77	100.00	100.00
	Vodafone	0.12	0.11	98.91	0.41	1.08	1.88	2.46	98.40	0	0.05	0.08	100.00	100.00	100.00	99.78	84.48	100.00	100.00

Annexure 4.1 (Contd.)

Punjab	Airtel	0.04	0.01	98.85	0.12	0.07	1.72	2.25	99.00	0	0.07	0.01	100.00	100.00	100.00	99.98	97.95	100.00	100.00
	BSNL	0.37	1.55	98.80	0.23	0.30	1.64	1.91	98.15	0	0.01	0.00	100.00	100.00	100.00	100.00	99.83	100.00	100.00
	Idea	0.07	0.18	99.30	0.11	0.15	1.42	1.74	99.07	0	0.02	0.01	100.00	100.00	100.00	99.85	99.66	100.00	100.00
	Rjio	0.11	0.68	99.56	0.00	0.00	0.33	0.73	99.77	0	0.01	0.00	100.00	100.00	100.00	97.14	43.60	100.00	100.00
	TATA	0.22	0.00	99.39	0.31	0.10	2.17	4.79	99.01	0	0.00	0.00	100.00	100.00	100.00	98.19	94.52	100.00	100.00
	Vodafone	0.06	0.13	99.77	0.05	0.21	1.39	1.79	98.18	0	0.05	0.05	100.00	100.00	100.00	100.00	97.86	100.00	100.00
Rajasthan	Airtel	0.13	0.13	98.04	0.68	1.41	1.29	1.61	98.73	0	0.06	0.00	100.00	100.00	100.00	98.73	96.85	100.00	100.00
	BSNL	1.04	1.47	98.49	0.66	1.51	1.61	2.11	98.10	0	0.04	0.02	99.58	100.00	100.00	96.00	99.45	100.00	100.00
	Idea	0.04	0.07	99.10	0.20	0.67	1.99	2.22	99.29	0	0.04	0.04	100.00	100.00	100.00	97.65	94.98	100.00	100.00
	Rjio	0.04	0.05	99.49	0.00	0.04	0.91	1.39	99.65	0	0.00	0.00	100.00	100.00	100.00	97.39	32.60	100.00	100.00
	TATA	1.03	1.88	99.45	0.01	0.20	2.55	3.86	99.70	0	0.00	0.00	100.00	100.00	100.00	96.64	98.04	100.00	100.00
	Vodafone	0.13	0.34	99.24	0.18	0.73	1.64	2.05	98.00	0	0.07	0.05	100.00	100.00	100.00	100.00	97.22	100.00	100.00
Tamil Nadu	Rjio	0.06	0.17	99.55	0.00	0.03	0.50	1.14	99.47	1	0.00	0.00	100.00	100.00	100.00	87.19	56.16	100.00	100.00
	Airtel	0.05	0.03	99.02	0.29	0.59	1.83	2.38	98.13	0	0.07	0.02	99.97	100.00	100.00	99.78	87.07	100.00	100.00
	BSNL	0.40	1.75	98.98	0.12	0.44	1.93	2.34	97.96	0	0.00	0.00	100.00	100.00	100.00	100.00	96.69	100.00	100.00
	Idea	0.01	0.03	99.88	0.06	0.04	1.30	1.61	99.29	0	0.02	0.02	100.00	100.00	100.00	97.78	99.88	100.00	100.00
	TATA	0.46	1.68	99.60	0.01	0.07	0.00	0.12	98.42	0	0.00	0.00	100.00	100.00	100.00	97.29	93.05	100.00	100.00
	Vodafone	0.05	0.06	99.24	0.29	0.69	1.51	1.89	98.89	0	0.09	0.04	100.00	100.00	100.00	100.00	90.94	100.00	100.00
UP-East	Airtel	0.26	1.91	95.70	0.61	1.23	1.73	2.60	98.19	0	0.05	0.00	99.93	100.00	100.00	99.94	95.53	100.00	100.00
	BSNL	1.66	1.81	96.87	0.88	1.62	1.58	2.04	96.50	0	0.09	0.08	98.30	100.00	100.00	96.00	97.22	100.00	100.00
	Idea	0.16	0.68	98.49	0.59	1.05	1.94	2.86	98.30	0	0.03	0.01	100.00	100.00	100.00	99.43	97.73	100.00	100.00
	Rjio	0.24	0.97	99.49	0.00	0.01	0.64	1.01	99.42	0	0.00	0.00	100.00	100.00	100.00	97.75	21.31	100.00	100.00
	TATA	0.35	0.53	96.57	0.15	1.25	5.00	7.69	98.92	0	0.00	0.00	100.00	100.00	100.00	98.19	91.03	100.00	100.00
	Telenor	0.09	0.16	99.39	0.15	0.28	2.67	3.32	97.96	0	NA	0.00	100.00	100.00	NA	99.71	99.44	NA	NA
	Vodafone	0.09	1.03	98.43	0.94	1.49	1.90	2.50	98.06	0	0.06	0.02	100.00	100.00	100.00	100.00	98.87	100.00	100.00
UP-West	Airtel	1.21	1.20	95.18	0.93	0.36	1.92	2.44	98.86	0	0.09	0.01	100.00	100.00	100.00	99.97	97.39	100.00	100.00
	BSNL	1.50	1.77	98.43	0.83	1.27	1.62	2.76	96.27	0	0.01	0.00	100.00	100.00	100.00	100.00	96.92	100.00	100.00
	Idea	0.11	0.29	95.10	0.98	1.98	1.98	2.79	97.80	0	0.03	0.00	99.98	100.00	100.00	99.18	97.21	100.00	100.00
	Rjio	0.09	0.28	99.53	0.00	0.01	1.02	1.43	99.58	0	0.00	0.00	100.00	100.00	100.00	97.74	20.54	100.00	100.00
	TATA	0.30	0.21	98.45	0.31	0.05	3.33	6.78	99.08	0	0.00	0.00	100.00	100.00	100.00	97.98	90.54	100.00	100.00
	Telenor	0.24	0.62	99.49	0.14	0.22	1.51	2.14	98.53	0	NA	0.00	100.00	100.00	NA	99.63	99.23	NA	NA
	Vodafone	0.18	0.66	98.09	0.27	1.88	1.74	2.26	97.47	0	0.07	0.02	100.00	100.00	100.00	100.00	96.31	100.00	100.00
West Bengal	Airtel	0.09	0.00	95.79	0.51	1.04	1.89	2.20	97.62	0	0.02	0.02	100.00	100.00	100.00	99.17	85.48	100.00	100.00
	BSNL	0.31	0.71	97.40	0.85	1.30	2.96	3.81	96.06	0	0.01	0.03	100.00	100.00	100.00	98.50	99.16	100.00	100.00
	Idea	0.10	0.63	99.41	0.09	0.14	1.88	2.89	96.82	0	0.02	0.03	100.00	100.00	100.00	96.84	99.15	100.00	100.00
	Rjio	0.11	0.41	99.48	0.00	0.05	0.88	1.20	99.07	0	0.00	0.00	100.00	100.00	100.00	97.61	18.90	100.00	100.00
	TATA	0.20	0.00	98.97	0.35	0.31	0.00	0.00	97.76	0	0.00	0.00	100.00	100.00	100.00	97.28	99.25	100.00	100.00
	Vodafone	0.09	0.19	98.95	0.69	0.99	1.87	2.48	97.99	0	0.04	0.07	100.00	100.00	100.00	100.00	97.41	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 March, 2018																				
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/v alidity complaints	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/ customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures	
																				≤7
1	A&N	BSNL	4.00	85.00%	100.00%	85.00%	100%	16	7.00	0.00	0.00%	0.00	98.00%	100.00%	100.00%	96.61%	99.00%	100.00%	100.00%	
2	AP	TTSL	7.00	96.98%	100.00%	NA	NA	93	3.75	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.04%	99.10%	100.00%	100.00%	
3		Vodafone	0.22	100.00%	100.00%	NA	NA	NA	1.44	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
4		Bharti	2.36	91.00%	100.00%	NA	NA	396	3.65	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	98.00%	100.00%	100.00%	100.00%
5		BSNL	4.00	99.00%	100.00%	99.00%	100%	229	8.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	96.28%	96.14%	100.00%	100.00%	
6	ASM	Vodafone	2.10	100.00%	100.00%	NA	NA	NA	3.33	0.00	0.00%	NA	NA	NA	NA	98.00%	NA	NA	NA	
7		BSNL	4.00	91.00%	100.00%	92.00%	100%	189	3.00	0.00	0.03%	0.00	100.00%	100.00%	100.00%	98.43%	99.33%	100.00%	100.00%	
8	BH	TTSL	0.93	100.00%	100.00%	NA	NA	NA	2.26	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.82%	100.00%	100.00%	100.00%	
9		Vodafone	2.51	100.00%	100.00%	NA	NA	NA	2.29	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
10		BSNL	4.00	94.00%	100.00%	93.00%	100%	0	5.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	98.39%	99.67%	100.00%	100.00%	
11	Chattisgarh	BSNL	3.00	97.00%	100.00%	97.00%	100%	483	6.00	0.00	0.01%	0.00	99.00%	100.00%	100.00%	97.85%	97.51%	100.00%	100.00%	
12	CN	BSNL	4.00	96.00%	100.00%	96.00%	100%	760	5.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	96.21%	96.13%	100.00%	100.00%	
13	DL	TTSL	1.49	98.34%	100.00%	NA	NA	5	3.36	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	99.06%	98.52%	100.00%	100.00%	
14		Vodafone	0.51	100.00%	100.00%	NA	NA	NA	2.36	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
15		Bharti	2.08	92.00%	100.00%	NA	NA	651	4.40	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%	100.00%
16		MTNL	3.76	93.33%	99.37%	NA	NA	5778	3.22	0.00	0.01%	0.00%	99.71%	100.00%	100.00%	99.61%	99.75%	100.00%	100.00%	
17	GUJ	TTSL	1.56	95.60%	100.00%	NA	NA	15	5.22	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.56%	99.07%	100.00%	100.00%	
18		Vodafone	0.28	100.00%	100.00%	NA	NA	NA	2.53	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
19		Bharti	1.78	96.00%	100.00%	NA	NA	135	9.94	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
20		BSNL	5.00	96.00%	100.00%	94.00%	100%	296	5.00	0.00	0.03%	0.00	100.00%	100.00%	100.00%	97.28%	97.12%	100.00%	100.00%	
21	HP	Vodafone	0.00	100.00%	100.00%	NA	NA	NA	0.00	0.00	0.00%	NA	NA	NA	NA	98.00%	95.00%	100.00%	NA	
22		BSNL	5.00	86.00%	100.00%	90.00%	100%	391	6.00	0.00	0.03%	0.00	98.17%	100.00%	100.00%	97.07%	100.00%	100.00%	100.00%	
23	HR	Vodafone	6.67	100.00%	100.00%	NA	NA	NA	0.45	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
24		TTSL	0.61	94.29%	100.00%	NA	NA	NA	6.13	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.08%	99.07%	100.00%	NA	
25		Bharti	4.14	93.00%	100.00%	NA	NA	22	3.51	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%	
26		BSNL	5.00	97.00%	100.00%	95.00%	100%	240	6.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	95.87%	100.00%	100.00%	100.00%	
27	J&K	BSNL	4.00	95.00%	100.00%	94.00%	100%	26	7.00	0.00	0.01%	0.00	98.00%	100.00%	100.00%	97.29%	100.00%	100.00%	100.00%	
28	JHAR	BSNL	3.00	99.00%	100.00%	97.00%	100%	681	5.00	0.00	0.09%	0.00	98.00%	100.00%	100.00%	94.86%	99.33%	100.00%	100.00%	
29	KER	Vodafone	0.69	100.00%	100.00%	NA	NA	NA	1.22	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
30		TTSL	1.91	96.97%	100.00%	NA	NA	3	3.27	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.46%	97.96%	100.00%	100.00%	
31		Bharti	3.33	89.00%	100.00%	NA	NA	341	8.68	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	97.00%	100.00%	100.00%
32		BSNL	4.00	94.00%	100.00%	92.00%	100%	601	7.00	0.00	0.02%	0.00	99.82%	100.00%	100.00%	95.46%	95.43%	100.00%	100.00%	

Annexure 4.3 (Contd.)

33	KOL	Vodafone	0.79	100.00%	100.00%	NA	NA	NA	2.42	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
34		Bharti	2.26	93.00%	100.00%	NA	NA	110	6.34	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
35		BSNL	4.00	96.00%	100.00%	NA	NA	388	8.00	0.00	0.00%	0.00	98.17%	100.00%	100.00%	88.21%	99.00%	100.00%	100.00%
36	KTK	Vodafone	0.48	100.00%	100.00%	NA	NA	NA	3.07	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
37		TTSL	0.64	93.90%	100.00%	NA	NA	32	6.29	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.27%	97.99%	100.00%	100.00%
38		Bharti	3.21	86.00%	100.00%	NA	NA	3423	4.18	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
39	MH	BSNL	4.00	95.00%	100.00%	97.00%	100%	4231	6.00	0.00	0.10%	0.00	98.00%	100.00%	100.00%	95.56%	95.58%	100.00%	100.00%
40		Bharti	1.07	96.00%	100.00%	NA	NA	41	9.85	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
41		BSNL	5.00	92.00%	100.00%	88.00%	100%	567	7.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	96.20%	96.13%	100.00%	100.00%
42	MP	Vodafone	0.46	100.00%	100.00%	NA	NA	NA	1.12	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
43		TTSL	1.56	92.01%	100.00%	NA	NA	179	6.46	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	99.50%	98.73%	100.00%	100.00%
44		Vodafone	1.16	100.00%	100.00%	NA	NA	NA	0.54	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
45	MUM	TTSL	5.48	99.14%	100.00%	NA	NA	NA	2.40	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.43%	98.82%	100.00%	NA
46		Bharti	3.75	87.00%	100.00%	NA	NA	1003	5.15	0.00	0.04%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
47		BSNL	5.00	92.00%	100.00%	90.00%	100%	260	4.00	0.00	0.02%	0.00	98.00%	100.00%	100.00%	97.76%	97.61%	100.00%	100.00%
48	NE	Vodafone	0.50	100.00%	100.00%	NA	NA	NA	4.13	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
49		Bharti	1.00	95.00%	100.00%	NA	NA	194	9.81	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
50		MTNL	3.13	95.98%	99.95%	NA	NA	13849	5.82	0.00	0.04%	NA	99.44%	100.00%	100.00%	97.37%	96.88%	99.93%	100.00%
51	NE-I	TTSL	3.93	90.36%	100.00%	NA	NA	749	7.90	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.73%	99.07%	100.00%	100.00%
52		Vodafone	0.00	100.00%	NA	NA	NA	NA	0.00	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
53		BSNL	4.00	93.00%	100.00%	95.00%	100%	44	7.00	0.00	0.05%	0.00	98.00%	100.00%	100.00%	98.08%	99.33%	100.00%	100.00%
54	NE-II	BSNL	2.00	91.00%	100.00%	99.00%	100%	416	5.00	0.00	0.01%	0.00	100.00%	100.00%	100.00%	98.35%	99.33%	100.00%	100.00%
55		TTSL	1.49	100.00%	100.00%	NA	NA	3	2.19	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.63%	99.19%	100.00%	NA
56		BSNL	5.00	93.00%	100.00%	90.00%	100%	0	5.00	0.00	0.07%	0.00	99.00%	100.00%	100.00%	95.36%	99.67%	100.00%	100.00%
57	OR	Vodafone	1.17	100.00%	100.00%	NA	NA	NA	1.45	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
58		Vodafone	0.73	100.00%	100.00%	NA	NA	NA	1.38	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
59		TTSL	0.90	96.43%	100.00%	NA	NA	NA	5.46	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.19%	98.53%	100.00%	100.00%
60	PB	Bharti	3.21	90.00%	100.00%	NA	NA	198	4.46	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
61		Quadrant	4.41	97.32%	100.00%	100.00%	100%	0	4.13	0.00	0.02%	0.00%	100.00%	100.00%	100.00%	99.00%	95.00%	100.00%	100.00%
62		BSNL	5.00	92.00%	100.00%	94.00%	100%	252	6.00	0.00	0.02%	0.00	98.00%	100.00%	100.00%	97.25%	100.00%	100.00%	100.00%
63	RAJ	TTSL	1.34	100.00%	100.00%	NA	NA	NA	2.44	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.64%	98.28%	100.00%	NA
64		Vodafone	0.63	100.00%	100.00%	NA	NA	NA	4.05	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
65		Bharti	2.45	87.00%	100.00%	NA	NA	130	4.95	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
66	TN	BSNL	5.00	97.00%	100.00%	98.00%	100%	450	6.00	0.00	0.00%	0.00	100.00%	100.00%	100.00%	96.62%	100.00%	100.00%	100.00%
67		TTSL	1.03	95.65%	100.00%	NA	NA	1	4.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.29%	98.68%	100.00%	100.00%
68		Vodafone	0.68	100.00%	100.00%	NA	NA	NA	1.33	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
69	UP(E)	Bharti	5.16	92.00%	100.00%	NA	NA	2295	8.66	0.00	0.04%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
70		BSNL	3.00	92.00%	100.00%	91.00%	100%	1851	7.00	0.00	0.08%	0.00	100.00%	100.00%	100.00%	96.71%	96.07%	100.00%	100.00%
71		TTSL	NA	NA	NA	NA	NA	0	0.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.19%	NA	NA	NA
72	UP(W)	Vodafone	0.22	100.00%	100.00%	NA	NA	NA	5.20	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
73		Bharti	3.18	89.00%	100.00%	NA	NA	159	4.57	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
74		BSNL	4.00	89.00%	100.00%	95.00%	100%	718	5.00	0.00	0.09%	0.00	100.00%	100.00%	100.00%	97.21%	100.00%	100.00%	100.00%
75	Uttaranchal	TTSL	NA	NA	NA	NA	0	0.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.98%	NA	NA	NA	
76		Vodafone	0.38	100.00%	100.00%	NA	NA	NA	3.07	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
77		Bharti	4.52	93.00%	100.00%	NA	NA	43	3.84	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	99.00%	100.00%	100.00%
78	West Bengal	BSNL	5.00	93.00%	100.00%	96.00%	100%	470	5.00	0.00	0.07%	0.00	100.00%	100.00%	100.00%	96.38%	100.00%	100.00%	100.00%
79		BSNL	5.00	97.00%	100.00%	96.00%	100%	152	4.00	0.00	0.00%	0.00	98.00%	100.00%	100.00%	97.60%	100.00%	100.00%	100.00%
80		BSNL	4.00	92.00%	100.00%	93.00%	100%	2434	5.00	0.00	0.02%	0.00	100.00%	100.00%	100.00%	98.10%	99.33%	100.00%	100.00%
81	West Bengal	TTSL	1.09	99.14%	100.00%	NA	NA	2	2.81	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	98.29%	98.67%	99.15%	NA
82		Vodafone	4.44	100.00%	100.00%	NA	NA	NA	1.24	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	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 March 2018																					
Sl. No.	Service Provider	Service area	Service Provisioning	Faults Repair		Billing Performance				Response Time to the Customer for assistance		Bandwidth utilisation/throughput				Service availability /uptime (for all users) in %age	Packet Loss	Network latency (for wired broadband access)			
			%age of connections provided within 15 days of registration of demand	% of faults repaired by next working day (>90%)	% of faults repaired within 3 working day	Rent Rebate	%age of bills disputed	%age of billing complaints resolved within 4 weeks	%age of cases to whom refund of deposits is made within 60 days of closures	%age of calls answered by operator (Voice to voice) within 60 sec	%age of calls answered by operator (Voice to voice) within 90 sec	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	Broadband Connection Speed available (download) from ISP node to user			Packet loss (for wired broadband access) in %age	User reference point at POP /ISP Gateway node to International gateway (IGSP/NIXI)	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)
			100%	>90%	=>99%	in nos.	<2%	100% within 4 weeks	100% within 60 days	>60%	>80%	0	0	<90%	>80%			>98%	<1%	<120 ms	<350 ms
1	BSNL	All India (except Delhi & Mumbai)	100.00%	94.09%	99.71%	67592	0.06%	100.00%	100.00%	98.09%	98.64%	NA	0	68.80%	91.37%	99.63%	0.20%	19	182	NA	
2	Bharti Airtel	Andhra Pradesh	100.00%	93.77%	100.00%	449	0.03%	100.00%	100.00%	96.75%	98.58%	0	0	51.00%	100.00%	99.97%	0	40	48	NA	
		Delhi	100.00%	92.01%	99.49%	465	0.02%	100.00%	100.00%	98.26%	99.18%	0	0	87.00%	100.00%	99.99%	0	38	81	NA	
		Gujarat	100.00%	93.10%	99.08%	111	0.03%	100.00%	100.00%	97.78%	99.25%	0	0	NA	100.00%	99.99%	0	21	NA	NA	
		Haryana	100.00%	93.95%	99.39%	11	0.01%	100.00%	100.00%	98.21%	99.17%	0	0	NA	100.00%	99.98%	0	34	NA	NA	
		Karnataka	100.00%	90.18%	99.68%	2486	0.03%	100.00%	100.00%	98.19%	99.38%	0	0	73.00%	100.00%	99.94%	0	32	44	NA	
		Kerala	100.00%	91.21%	100.00%	186	0.02%	100.00%	100.00%	94.63%	96.99%	0	0	NA	100.00%	99.95%	0	48	35	NA	
		Kolkata	100.00%	93.31%	100.00%	58	0.01%	100.00%	100.00%	98.79%	99.56%	0	0	58.00%	100.00%	99.99%	0	86	73	NA	
		Madhya Pradesh	100.00%	91.08%	99.09%	477	0.03%	100.00%	100.00%	98.00%	99.04%	0	0	61.00%	100.00%	99.91%	0	68	70	NA	
		Maharashtra	100.00%	95.63%	99.72%	16	0.02%	100.00%	100.00%	98.00%	99.00%	0	0	NA	100.00%	99.98%	0	11	NA	NA	
		Mumbai	100.00%	94.76%	99.33%	129	0.01%	100.00%	100.00%	98.00%	99.00%	0	0	79.00%	100.00%	99.98%	0	41	55	NA	
		Punjab	100.00%	90.92%	99.40%	148	0.01%	100.00%	100.00%	98.44%	99.34%	0	0	67.00%	100.00%	99.99%	0	57	83	NA	
		Rajasthan	100.00%	90.18%	99.76%	101	0.02%	100.00%	100.00%	98.00%	99.00%	0	0	NA	100.00%	99.99%	0	49	NA	NA	
Tamilnadu	100.00%	91.49%	99.94%	1521	0.04%	100.00%	100.00%	96.91%	98.51%	0	0	60.00%	100.00%	99.96%	0	32	35	NA			
Uttar Pradesh - East	100.00%	91.72%	99.05%	87	0.01%	100.00%	100.00%	98.39%	99.35%	0	0	NA	100.00%	99.98%	0	49	90	NA			
Uttar Pradesh - West	100.00%	92.04%	99.33%	18	0.01%	100.00%	100.00%	98.41%	99.29%	0	0	NA	100.00%	100.00%	0	41	NA	NA			
3	MTNL	Delhi & Mumbai	100.00%	94.44%	99.16%	6208	0.09%	100.00%	100.00%	97.08%	97.93%	Nil	0	76.79%	89.83%	99.78%	0.51%	45	294	NA	
4	Airlink Communications	All India	100.00%	91.79%	99.25%	0	NA	100.00%	NA	87.80%	100.00%	0	0	86.92%	88.32%	99.88%	0.28%	120	350	NA	
5	Alliance Broadband	All India	100.00%	94.77%	99.37%	Nil	1.34%	100.00%	Nil	76.00%	93.30%	0	0	75.98%	98.76%	99.30%	0.49%	75	217	449	
6	Asianet Satellite	All India	100.00%	90.53%	99.37%	Nil	1.87%	100.00%	60.75%	80.35%	Nil	0	0	65.68%	90.00%	99.50%	1.00%	50	270	NA	
7	Atria Convergence	All India	100.00%	95.41%	99.74%	18260	0.38%	100.00%	Nil	78.55%	86.00%	0	0	59.89%	90.00%	99.98%	1.00%	50	300	NA	
8	Broadband Pacenet India Pvt. Ltd.	All India	100.00%	90.40%	99.50%	7	1.00%	100.00%	0.00	87.00%	90.00%	0	0	59.00%	92.00%	99.40%	0.45%	75	260	0	
9	DEN Networks Ltd.	All India	100.00%	96.41%	99.72%	Nil	NA	NA	NA	82.00%	87.00%	Nil	Nil	77.45%	99.00%	98.24%	0.00%	NA	280	NA	
10	Digital Cloud Technologies Pvt. Ltd.	All India	100.00%	90.72%	NA	NA	NA	NA	NA	60.35%	81.16%	0	0	69.00%	90.00%	98.47%	1.00%	2	4	NA	
11	Digital Network Associates Pvt. Ltd	Maharashtra & Goa	100.00%	90.42%	99.54%	None	0.03%	100.00%	Nil	61.40%	82.32%	Nil	0	80.00%	80.00%	99.77%	1.00%	4	255	600	
		Mumbai	100.00%	90.65%	100.00%	None	0.00%	100.00%	Nil	73.68%	95.79%	Nil	0	80.00%	80.00%	99.86%	1.00%	4	255	600	
12	DNA Infotel Pvt. Ltd.	Maharashtra	100.00%	92.99%	99.42%	None	0.10%	100.00%	Nil	60.94%	81.58%	Nil	0	80.00%	80.00%	99.72%	1.00%	4	255	600	
13	D-Vois Broadband	All India	100.00%	93.68%	100.00%	0	1.67%	Nil	Nil	99.56%	100.00%	0	Nil	Nil	90.00%	100.00%	0.10%	120	350	800	

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

S. 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	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	CSL 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

Annexure 5.1(Contd.)

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

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
22	MSM World Wide Factual Media Private Limited	70	SONY BBC EARTH	SD
		71	SONY BBC EARTH HD	HD
23	NDTV Life style Limited	72	NDTV Good Times	SD
24	Neo Sports Broadcast Pvt Limited	73	NEO Prime (Earlier name "Neo Cricket")	SD
		74	Neo Sports	SD
25	New Delhi Television Limited	75	NDTV 24*7	SD
		76	NDTV Profit	SD
26	NGC Network (India) Pvt Limited	77	Fox Life	SD
		78	National Geographic Channel (NGC)	SD
		79	Fox Life HD	HD
		80	Nat Geo Wild	SD
		81	National Geographic HD	HD
		82	Nat Geo Music HD	HD
		83	Nat Geo Wild HD	HD
		84	Nat Geo People HD	HD
		85	Baby TV HD	HD
27	NOIDA Software Technology Park Limited	86	NHK World Premium (HD Distribution)	HD
28	Odisha Television Limited	87	Prarthana	SD
		88	Tarang	SD
		89	Tarang Music	SD
		90	Alankar	SD
29	Panorama Television Private Limited	91	News 18 Bihar Jharkhand (Earlier name "ETV Bihar Jharkhand")	SD
		92	News 18 Madhya Pradesh / Chattisgarh (Earlier name ETV Madhya Pradesh / Chattisgarh")	SD
		93	News 18 Rajasthan (Earlier name "ETV Rajasthan")	SD
		94	News 18 Uttar Pradesh/ Uttaranchal (Earlier name "ETV Uttar Pradesh/ Uttaranchal")	SD
		95	News 18 Urdu (Earlier name "ETV Urdu")	SD
		96	News 18 Kannada (earlier name "ETV News Kannada")	SD
		97	News 18 Bangla (Earlier name "ETV News Bangla")	SD
		98	News 18 Punjab/Haryana/ Himachal Pradesh (Earlier name "ETV Haryana/Himachal Pradesh")	SD
		99	News 18 Gujarati (Earlier name "ETV News Gujarati")	SD
		100	News 18 Odia (Earlier name "ETV News Odia")	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
30	Paul Entertainments Pvt Limited	101	9X Tashan (Earlier name "Purvaiya")	SD
31	Raj Television Network Limited	102	Raj Musix Kannada	SD
		103	Raj Digital Plus	SD
		104	Raj Musix	SD
		105	Raj News	SD
		106	Raj TV	SD
		107	Vissa TV	SD
32	Sahara India Commercial Corporation Ltd	108	Sahara Filmy	SD
		109	Sahara One	SD
33	Sarthak Entertainment Pvt Limited	110	Sarthak TV	SD
34	Silverstar Communications Limited	111	Mega 24	SD
		112	Mega Musiq	SD
		113	Mega TV	SD
35	Sony Pictures Networks India Private Limited	114	Sony YAY! (Earlier name "Animax")	SD
		115	AXN	SD
		116	SET MAX	SD
		117	MIX	SD
		118	SAB	SD
		119	SONY ENTERTAINMENT CHANNEL (SET)	SD
		120	PIX	SD
		121	SIX	SD
		122	MAX 2 (Earlier name "MAX HD")	SD
		123	PAL (Earlier Name "SAB HD")	SD
		124	SET HD	HD
		125	SIX HD	HD
		126	PIX HD	HD
		127	MAX HD	HD
		128	SONY ESPN HD	HD
		129	Le PLEX HD	HD
36	Star India Private Limited	130	Ten 2 HD	HD
		131	Ten 3 HD	HD
		132	SAB HD	HD
		133	SONY ROX HD	HD
		134	Channel (V)	SD
		135	Star Sports 1 Tamil (Earlier name "Star Sports 4")	SD
		136	Star Sports Select 2 (Earlier name "FX")	SD
		137	Star Bharat (earlier name "Life Ok")	SD
		138	Movies OK (earlier name "Gold Action")	SD
		139	Star Sports 1 Hindi (Earlier name "Star Sports 3")	SD

Annexure 5.1(Contd.)

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

Annexure 5.1(Contd.)

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

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		218	WB	SD
		219	HBO HD (Earlier name "HBO Hits HD")	HD
41	TV 18 Broadcast Limited	220	CNN News 18 (earlier name "CNN-IBN")	SD
		221	CNBC Bajaar	SD
		222	CNBC TV 18 Prime HD	HD
		223	CNBC Awaaz	SD
		224	CNBC TV 18	SD
42	TV Today Network Limited	225	Aaj Tak	SD
		226	Delhi Aaj Tak	SD
		227	India Today (Earlier name "Headlines Today")	SD
		228	Aaj Tak Tez	SD
43	United Home Entertainment Pvt Limited	229	Hungama TV	SD
44	Viacom 18 Media Private Limited	230	Colors	SD
		231	Comedy Central (HD Distribution)	HD
		232	MTV	SD
		233	NICK	SD
		234	NICK JR (Earlier name "Nick Jr / Teen Nick")	SD
		235	SONIC	SD
		236	VH 1 (HD Distribution)	HD
		237	Colors Infinity HD	HD
		238	Colors Infinity	SD
		239	Colors HD	HD
		240	NICKS HD+	HD
		241	MTV Indies (HD Distribution)	HD
		242	Rishtey Cineplex	SD
		243	MTV Beats (Earlier name "X Zone")	SD
		244	Colors Kannada HD	HD
		245	Colors Marathi HD	HD
		246	Colors Bangla HD	HD
		247	Colors Super	SD
		248	Colors Bangla (Earlier name "ETV Bangla")	SD
		249	Colors Gujarati (Earlier name "ETV Gujarati")	SD
		250	Colors Kannada (Earlier name "ETV Kannada")	SD
		251	Colors Marathi (Earlier name "ETV Marathi")	SD
		252	Colors Oriya (Earlier name "ETV Oriya")	SD
		253	MTV Beats HD	HD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		254	Colors Tamil (earlier name "NXT")	SD
		255	Cineplex HD	HD
		256	VH 1	SD
		257	Colors Tamil HD	HD
		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 Cinemalu HD	HD		
294	Zee Telugu HD	HD		
295	Zee Tamil	SD		
296	Zee Kannada HD	HD		
297	Zee Talkies HD	HD		

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
48	Zee Media Corporation Limited	298	Zee 24 Taas	SD
		299	Zee Kalinga (Earlier name "Zee 24 Ghantalu)	SD
		300	Zee Business	SD
		301	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")	SD
		302	Zee Madhya Pradesh Chattisgarh	SD
		303	Zee Salaam	SD
		304	Zee 24 Kalak	SD
		305	WION	SD
		306	Zee Uttar Pradesh Uttrakhand	SD
		307	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")	SD
49	Zoom Entertainment Network Limited	308	Movies Now	SD

Note :

(A) # Advertisement free channel

(B) The reporting of pay channels by the broadcasaters 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

Annexure 5.3: List of 86 existing cities with operational FM Radio Channels in India as on 31st March 2018

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

Annexure 5.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
37	Jalgaon	C	4
38	Jammu	C	3
39	Jamshedpur	B	4
40	Jhansi	C	2
41	Jodhpur	C	4
42	Kannur	C	3
43	Kanpur	A	6
44	Karnal	D	3
45	Kolhapur	C	4
46	Kolkata	A+	8
47	Kota	C	4
48	Kozhikode	C	4
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	2
59	Patiala	C	4
60	Patna	B	4
61	Puducherry	C	3
62	Pune	A	6
63	Raipur	C	3
64	Rajahmundry	C	1
65	Rajkot	B	4
66	Ranchi	C	4
67	Rourkela	C	3
68	Sangli	C	4
69	Shillong	D	3
70	Shimla	D	3
71	Sholapur	C	4

Annexure 5.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
72	Siliguri	C	3
73	Srinagar	C	1
74	Surat	A	6
75	Thiruvananthapuram	C	4
76	Thrissur	C	3
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	3
86	Warrangal	C	1
Total			324

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

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