



Telecom Regulatory Authority of India

The Indian Telecom Services Performance Indicators January – March, 2021

New Delhi, India

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Snapshot

(Data as on Q.E. 31 st March, 2021)	
Telecom Subscribers (Wireless+Wireline)	
Total Subscribers	1,201.20 Million
% change over the previous quarter	2.33%
Urban Subscribers	663.77 Million
Rural Subscribers	537.42 Million
Market share of Private Operators	89.05%
Market share of PSU Operators	10.95%
Tele-density	88.17%
Urban Tele-density	141.03%
Rural Tele-density	60.27%
Wireless Subscribers	
Total Wireless Subscribers	1,180.96 Million
% change over the previous quarter	2.36%
Urban Subscribers	645.20 Million
Rural Subscribers	535.75 Million
Market share of Private Operators	89.68%
Market share of PSU Operators	10.32%
Tele-density	86.68%
Urban Tele-density	137.08%
Rural Tele-density	60.08%
Total Wireless Data Usage during the quarter	27,799 PB
Number of Public Mobile Radio Trunk Services (PMRTS)	64,175
Number of Very Small Aperture Terminals (VSAT)	2,93,632
Wireline Subscribers	
Total Wireline Subscribers	20.24 Million
% change over the previous quarter	0.94%
Urban Subscribers	18.57 Million
Rural Subscribers	1.67 Million
Market share of PSU Operators	47.20%
Market share of Private Operators	52.80%
Tele-density	1.49%
Rural Tele-density	0.19%
Urban Tele-density	3.95%
No. of Village Public Telephones (VPT)	68,606
No. of Public Call Office (PCO)	126,108

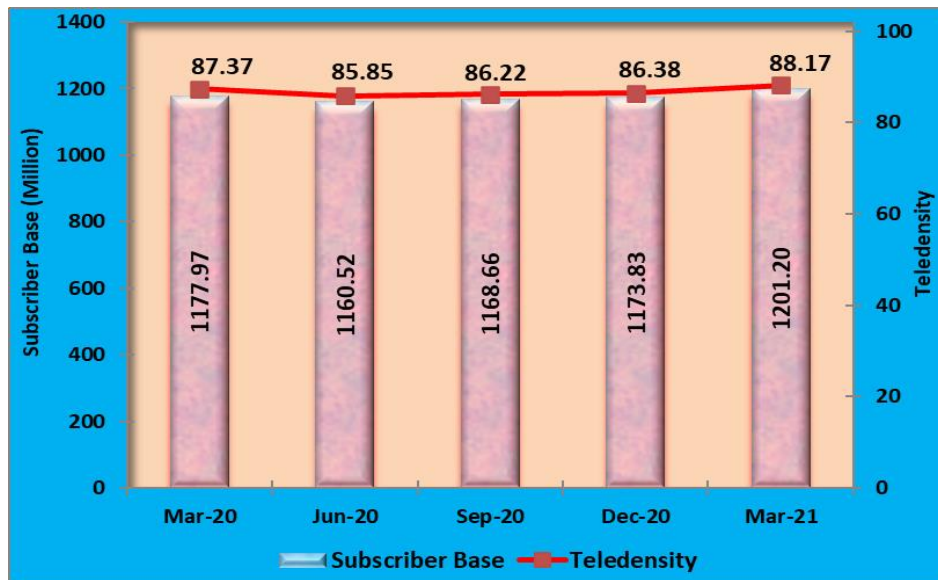
Telecom Financial Data	
Gross Revenue (GR) during the quarter	Rs.66,784 Crore
% change in GR over the previous quarter	-6.71%
Adjusted Gross Revenue (AGR) during the quarter	Rs.48,587 Crore
% change in AGR over the previous quarter	2.03%
Share of Public sector undertakings in Access AGR	5.93%
Internet/Broadband Subscribers	
Total Internet Subscribers	825.30 Million
% change over previous quarter	3.79%
Narrowband subscribers	47.21 Million
Broadband subscribers	778.09 Million
Wired Internet Subscribers	25.99 Million
Wireless Internet Subscribers	799.30 Million
Urban Internet Subscribers	502.53 Million
Rural Internet Subscribers	322.77 Million
Total Internet Subscribers per 100 population	60.73
Urban Internet Subscribers per 100 population	107.30
Rural Internet Subscribers per 100 population	36.24
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/downlinking only/both uplinking and downlinking	901
Number of Pay TV Channels as reported by broadcasters	327
Number of private FM Radio Stations (excluding All India Radio)	366
Number of total active subscribers with pay DTH operators	69.57 Million
Number of Operational Community Radio Stations	324
Number of pay DTH Operators	4
Revenue & Usage Parameters	
Monthly ARPU of Wireless Service	Rs.103.58
Minutes of Usage (MOU) per subscriber per month - Wireless Service	818 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	174.89 Million
Wireless Data Usage	
Average Wireless Data Usage per wireless data subscriber per month	12.33 GB
Average revenue realization per subscriber per GB wireless data during the quarter	Rs.10.77

* For ARPU explanation please refer to footnote on Page 52

Executive Summary

1. The number of telephone subscribers in India increased from 1,173.83 million at the end of Dec-20 to 1,201.20 million at the end of Mar-21, registering a growth rate of 2.33% over the previous quarter. This reflects Year-On-Year (Y-O-Y) growth rate of 1.97% over the same quarter of the last year. The overall Tele-density in India also increased from 86.38% as in QE Dec-20 to 88.17% as in QE Mar-21.

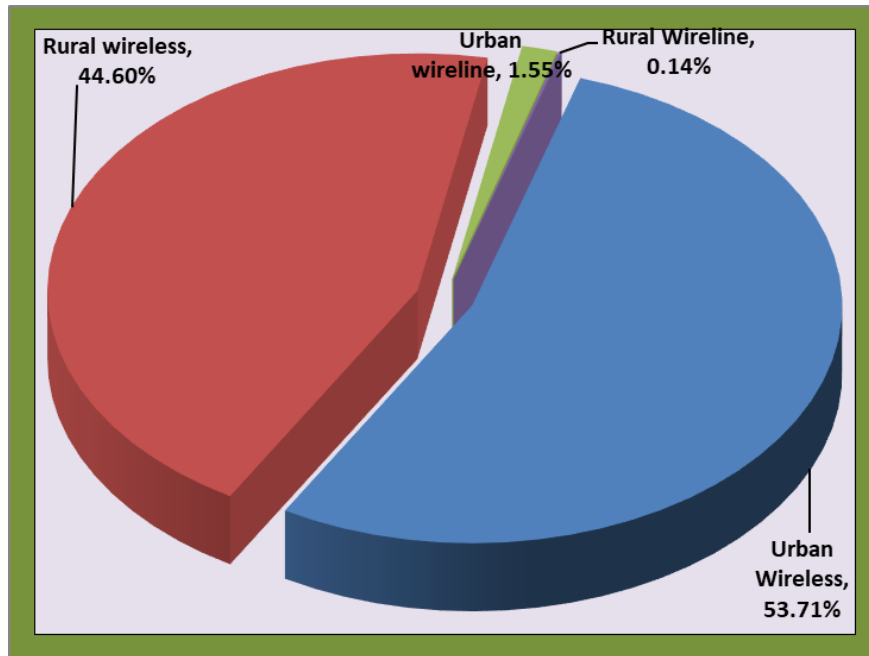
Trends in Telephone subscribers and Tele-density in India



2. Telephone subscribers in Urban areas increased from 647.91 million at the end of Dec-20 to 663.77 million at the end of Mar-21 and Urban Tele-density also increased from 138.34% to 141.03% during the same period.
3. Rural telephone subscribers increased from 525.92 million at the end of Dec-20 to 537.42 million at the end of Mar-21 and Rural Tele-density also increased from 59.05% to 60.27% during the same period.

4. Out of the total subscription, the share of Rural subscription decreased from 44.80% at the end of Dec-20 to 44.74% at the end of Mar-21.

Composition of Telephone Subscribers

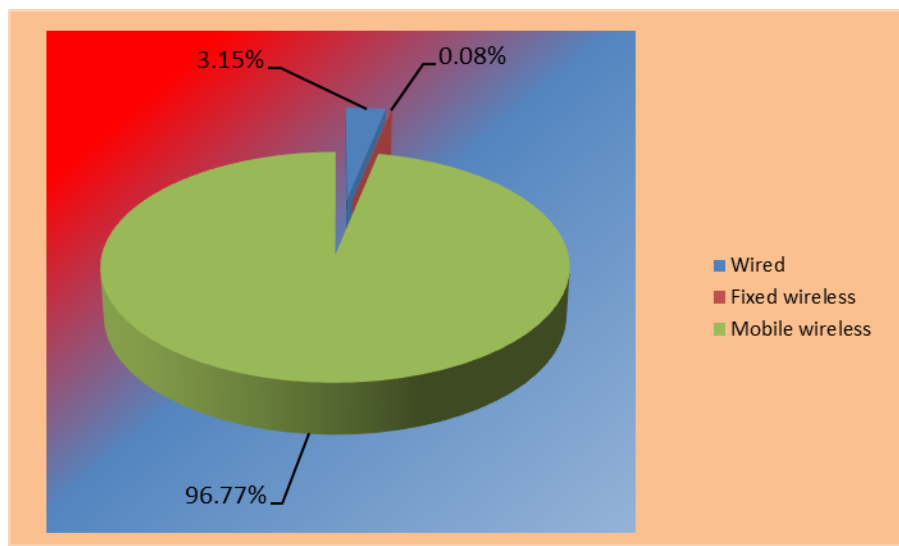


5. With a net increase of 27.18 million subscribers during the quarter, the total wireless subscriber base increased from 1,153.77 million at the end of Dec-20 to 1,180.96 million at the end of Mar-21, registering a growth rate of 2.36% over the previous quarter. On Y-O-Y basis, wireless subscriptions also increased at the rate of 2% during the year.
6. Wireless Tele-density increased from 84.90% at the end of Dec-20 to 86.68% at the end of Mar-21 with quarterly growth rate of 2.10%.
7. Wireline subscribers increased from 20.05 million at the end of Dec-20 to 20.24 million at the end of Mar-21 with a quarterly

growth rate of 0.94% and, on Y-O-Y basis, wireline subscriptions also increased by 0.11% at the end of QE Mar-21.

8. Wireline Tele-density increased from 1.48% at the end of Dec-20 to 1.49% at the end of Mar-21 with quarterly growth rate of 0.68%.
9. Total number of Internet¹ subscribers increased from 795.18 million at the end of Dec-20 to 825.30 million at the end of Mar-21, registering a quarterly growth rate of 3.79%. Out of 825.30 million internet subscribers, number of Wired Internet subscribers are 26 million and number of Wireless Internet subscribers are 799.31 million.

Composition of internet subscription



10. The Internet subscriber base is comprised of Broadband² Internet subscriber base of 778.09 million and Narrowband³ Internet subscriber base of 47.21 million.

¹ Internet: Interconnected global networks that use the internet protocol.

² Broadband: Internet access with a minimum capacity of greater or equal 512 Kbit/s in one or both directions.

³ Narrowband: Internet access with a capacity of less than 512 Kbit/s in one or both directions.

(Source-ITU)

11. The broadband Internet subscriber base increased by 4.11% from 747.41 million at the end of Dec-20 to 778.09 million at the end of Mar-21. However, the narrowband Internet subscriber base declined by 1.18% from 47.77 million at the end of Dec-20 to 47.21 million at the end of Mar-21.
12. Monthly Average Revenue per User (ARPU)⁴ for wireless service increased by 1.90%, from Rs.101.65 in QE Dec-20 to Rs.103.58 in QE Mar-21. On Y-O-Y basis, monthly ARPU for wireless service increased by 13.21% in this quarter.
13. Prepaid ARPU per month increased from Rs.95 in QE Dec-20 to Rs.97 in QE Mar-21, however, Postpaid ARPU per month decreased from Rs.227 in QE Dec-20 to Rs.226 in QE Mar-21.
14. On all India average, the overall Minutes of Usage (MOU)⁵ per subscriber per month for wireless service increased by 4.12% from 785 in QE Dec-20 to 818 in QE Mar-21.
15. Prepaid MOU per subscriber per month increased from 793 in QE Dec-20 to 829 in QE Mar-21. Postpaid MOU per subscriber per month decreased from 631 in QE Dec-20 to 597 in QE Mar-21.
16. Gross Revenue⁶ (GR) and Adjusted Gross Revenue⁷ (AGR) of Telecom Service Sector for the Q.E. Mar-21 has been Rs.66,784

⁴ ARPU per month is calculated by dividing net subscribers' revenue by average number of subscribers.

⁵ MOU per subscriber per month is calculated by dividing total minutes of usage (incoming & outgoing) by average number of subscribers.

⁶ Gross Revenue is inclusive of installation charges, late fees, sale proceeds of handsets (or any other terminal equipment etc.), revenue on account of interest, dividend, value added services, supplementary services, access or interconnection charges, roaming charges, revenue from permissible sharing of infrastructure and any other miscellaneous revenue, without any set-off for related item of expense etc.

⁷ Adjusted Gross Revenue: The following shall be excluded from the Gross Revenue to arrive at the AGR:

I. PSTN related call charges (Access Charges) actually paid to other eligible/entitled telecommunication service providers within India;

- Crore and Rs.48,587 Crore respectively. GR decreased by 6.17% and AGR increased by 2.03% in Q.E. Mar-21, as compared to previous quarter.
17. The Y-O-Y growth in GR and AGR in Q.E. Mar-21 over the same quarter in last year has been -1.11% and 8.12% respectively.
 18. Pass-through⁸ charges decreased from Rs.23,966 Crore in QE Dec-20 to Rs.18,196 Crore in QE Mar-21 with quarterly decline rate of 24.07%. The Y-O-Y decline rate of 19.46% has been recorded in pass-through charges for QE Mar-21.
 19. The License Fee⁹ increased from Rs.3,809 Crore for the QE Dec-20 to Rs.3,979 Crore for the QE Mar-21. The quarterly and the Y-O-Y growth rates of license fee are 4.44% and 10.40% respectively in this quarter.

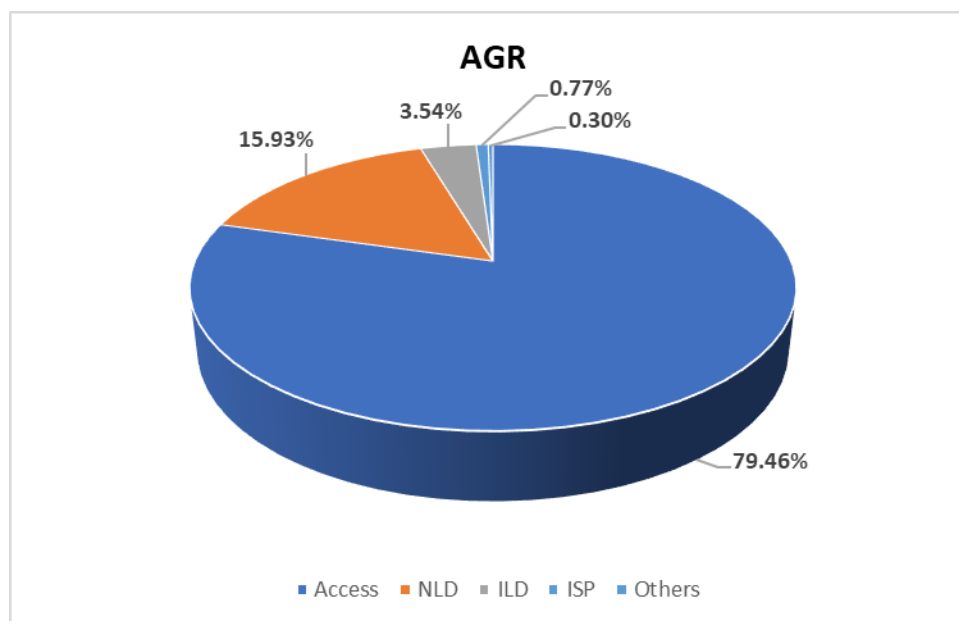
II. Roaming revenues actually passed on to other eligible/entitled telecommunication service providers;
and

III. Service Tax on provision of service and Sales Tax actually paid to the Government if gross revenue had included as component of Sales Tax and Service Tax

⁸ Pass through charges means the charges excluded from gross revenue to arrive at adjusted gross revenue for the purpose of levying licence fee.

⁹ License Fee means a fee payable by Licensee at prescribed intervals and rates for the period of the Licence.

Service-wise composition of Adjusted Gross Revenue



20. Access services contributed 79.46% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee Spectrum Usage Charges (SUC)¹⁰ and Pass Through Charges increased by -5.99%, 0.88%, 3.12%, 0.14% and -23.06% respectively in QE Mar-21.
21. The performance of wireline service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given below: -

¹⁰ Spectrum Usage Charge is payable by the licensees providing mobile access services, as a percentage of their Adjusted Gross Revenue (AGR).

(Source – DoT License Agreement)

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> ❖ “Mean time to Repair” (MTTR) ≤10 Hrs ❖ Accessibility of call centre/customer care 95% ❖ “%age of calls answered by the operators (voice to voice) within 90 seconds ≥ 95% 	<ul style="list-style-type: none"> ❖ “%Fault repaired by next working day (for urban areas) ≥ 85%

22. The performance of Cellular Mobile service providers in terms of Quality of Service (QoS) during the quarter vis-à-vis that in the previous quarter is given as below: -

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> ❖ Worst affected BSs due to down-time %age) ❖ Accessibility of call centre/ customer care ❖ 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 Seconds

23. A total number of 901 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking only/both uplinking and downlinking, as on 31st March, 2021.

24. As per the reporting done by broadcasters in pursuance of the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3rd March 2017, as amended, there are 327 satellite pay channels as on 31st March 2021, which include 235 SD (standard definition) satellite pay TV channels and 92 HD (high definition) satellite Pay TV channels.

25. Since the introduction of DTH Sector in the year 2003, Indian DTH (direct-to-home) services have displayed a phenomenal growth. During the QE 31st March 2021, there were 4 pay DTH service providers in the country.

26. Pay DTH has attained total active subscriber base of around 69.57 million in QE 31st March 2021. This is in addition the subscribers of DTH Free Dish (free DTH services of Doordarshan).
27. Apart from the radio stations operated by All India Radio – the public broadcaster, as on 31st March 2021, there are 366 operational private FM Radio stations in 105 cities with operational 30 Private FM Radio broadcasters.
28. The reported advertisement revenue during the quarter ending 31st March 2021 in respect of 365 private FM Radio stations is Rs.321.52 crore as against Rs.323.01 crore in respect of 366 private FM Radio stations for the previous quarter.
29. As per data received from MIB, as on 31st March 2021, 324 Community Radio Stations are operational in the country.

Trends at a Glance

A. Access Service (Wireline + Wireless)									
	QE Mar 2020	QE Jun 2020	QE Sep 2020	QE Dec 2020	QE Mar 2021	%age change over Mar-2020	%age change over Jun-2020	%age change over Sep-2020	%age change over Dec-2020
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber Base (in million)									
Wireline	20.22	19.81	20.08	20.05	20.24	0.11	2.17	0.81	0.94
Wireless	1157.75	1140.71	1148.58	1153.77	1180.96	2.00	3.53	2.82	2.36
Total	1177.97	1160.52	1168.66	1173.83	1201.20	1.97	3.51	2.78	2.33
Rural	521.51	523.69	524.39	525.92	537.42	3.05	2.62	2.48	2.19
Urban	656.46	636.83	644.26	647.91	663.77	1.11	4.23	3.03	2.45
2) Tele-density									
Wireline	1.50	1.47	1.48	1.48	1.49	-0.93	1.38	0.30	0.68
Wireless	85.87	84.38	84.74	84.90	86.68	0.95	2.73	2.29	2.10
Total	87.37	85.85	86.22	86.38	88.17	0.92	2.71	2.26	2.08
Rural	58.79	58.96	58.96	59.05	60.27	2.51	2.22	2.22	2.06
Urban	142.31	137.35	138.25	138.34	141.03	-0.90	2.68	2.01	1.95
3) Service Provider wise Subscribers Base (in Million) (wireless+wireline)									
Bharti Airtel	332.21	320.94	331.03	343.27	357.17	7.52	11.29	7.90	4.05
Vodafone Idea	319.62	305.56	296.00	284.78	284.23	-11.07	-6.98	-3.98	-0.19
Reliance Jio	388.61	398.70	406.21	411.53	426.25	9.69	6.91	4.93	3.58
BSNL	128.60	126.48	126.73	125.88	125.28	-2.58	-0.95	-1.15	-0.48
MTNL	6.45	6.44	6.37	6.28	6.20	-3.94	-3.74	-2.65	-1.24
Tata Tele.	1.77	1.73	1.71	1.66	1.63	-8.11	-5.73	-4.79	-1.79
Reliance Com.	0.52	0.48	0.43	0.23	0.22	-58.06	-54.16	-48.95	-5.40
Quadrant	0.18	0.18	0.19	0.20	0.22	18.74	22.25	16.60	6.66
Total	1177.97	1160.52	1168.66	1173.83	1201.20	1.97	3.51	2.78	2.33

B. Internet Services									
	QE Mar 2020	QE Jun 2020	QE Sep 2020	QE Dec 2020	QE Mar 2021	%age change over Mar-2020 (12 months)	%age change over Jun-2020 (9 months)	%age change over Sep-2020 (6 months)	%age change over Dec-2020 (3 months)
1) Subscriber's Base (in million)									
A. Wired Internet Subscribers	22.42	23.06	24.36	25.54	26.00	15.97	12.74	6.71	1.80
B. Wireless Internet Subscribers	720.78	726.01	752.09	769.64	799.31	10.90	10.10	6.28	3.85
i. Mobile Wireless (Mobile & Dongle)	720.17	725.38	751.45	768.99	798.63	10.90	10.10	6.28	3.85
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.61	0.63	0.64	0.66	0.68	10.73	6.78	5.63	2.96
Total Internet Subscribers	743.19	749.07	776.45	795.18	825.30	11.05	10.18	6.29	3.79
2) No. of Internet Subs per 100 Population	55.12	55.41	57.29	58.51	60.73	10.18	9.60	6.01	3.79
C. Usage and Revenue for Wireless Services									
Traffic (MOU) (minutes of uses/subscriber/month)	750	744	761	785	818	9.04	9.94	7.39	4.12
ARPU (Rs./sub/month)	91	90	97	102	104	13.21	14.94	6.93	1.90
D. Telecom Financial Data									
	QE Mar 2020	QE Jun 2020	QE Sep 2020	QE Dec 2020	QE Mar 2021	%age change over Mar-2020 (12 months)	%age change over Jun-2020 (9 months)	%age change over Sep-2020 (6 months)	%age change over Dec-2020 (3 months)
1. Telecom Sector									
i) Gross Revenue (Rs.in Crores)	67534	66858	68228	71588	66784	-1.11	-0.11	-2.12	-6.71
ii) Adjusted Gross Revenue (Rs. in Crores)	44940	44128	45707	47623	48587	8.11	10.10	6.30	2.02
2. Access Services									
Adjusted Gross Revenue (Rs. in Crores)	34496	34328	36318	38273	38608	11.92	12.47	6.31	0.88

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending 31st March, 2021. 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: mptangirala@traigov.in

Chapter 1 :

Subscription Data

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- In this report, Tele-density figures are derived from the subscriber data provided by the operators and projection of population from the 'Report of the Technical Group on Population Projections for India and States 2011 – 2036', which is available under the link https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-%20upload_compressed_0.pdf

Section A : Access Service - An Overview

1.1 The number of telephone subscribers in India increased from 1,173.83 million at the end of Dec-20 to 1,201.20 million at the end of Mar-21, registering a growth rate of 2.33% over the previous quarter. This reflects year-on-year (Y-O-Y) growth rate of 1.97% over the same quarter of last year. The overall Tele-density in India also increased from 86.38% as on 31st December, 2020 to 88.17% as on 31st March, 2021 with quarterly growth rate of 2.08%.

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

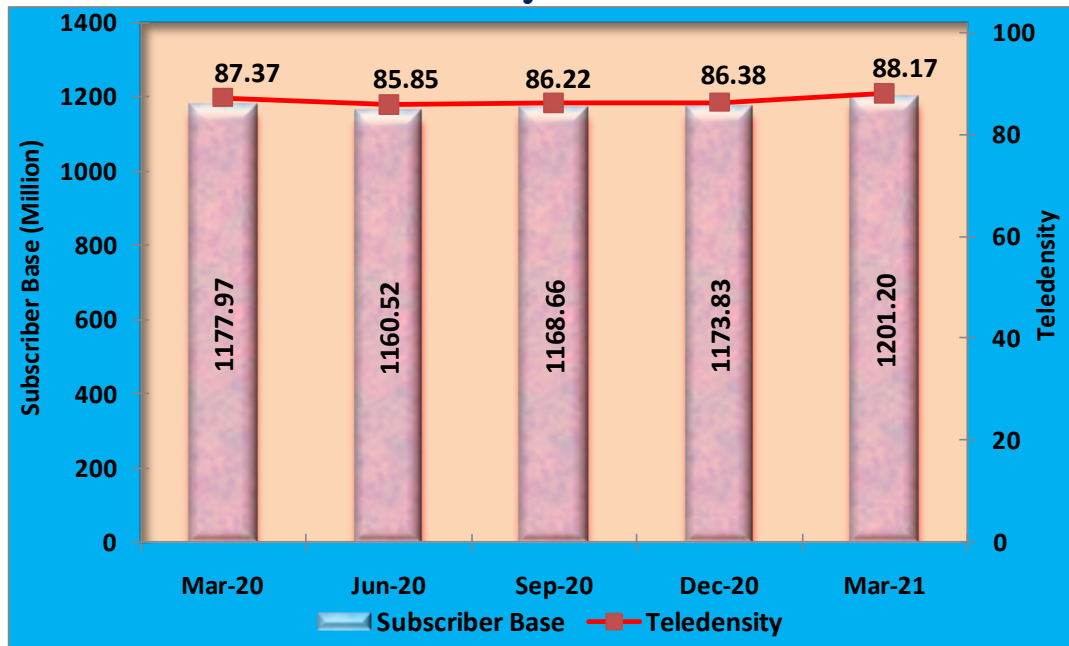
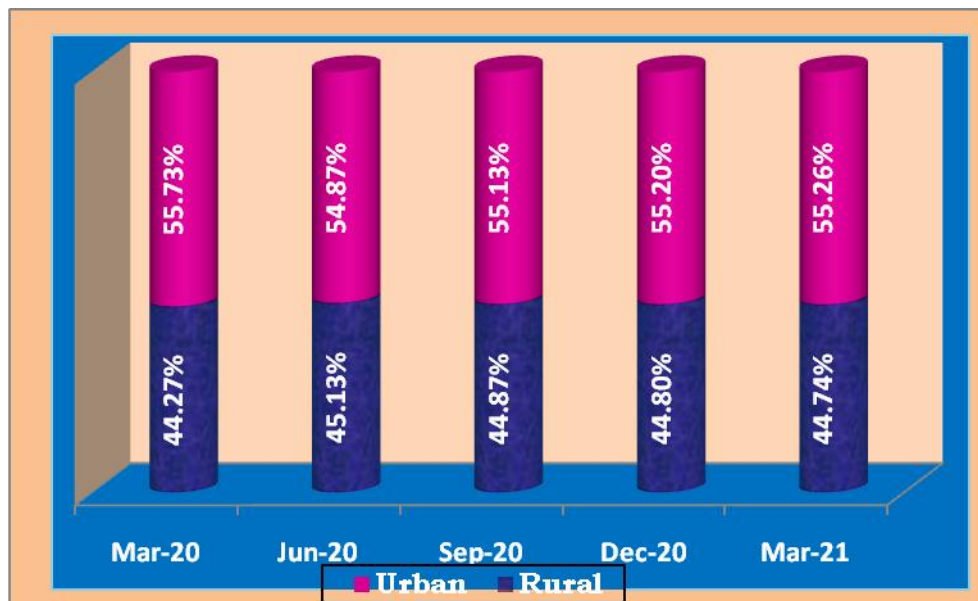


Table 1.1: Subscriber Base & Tele-density - Rural & Urban

Quarter ending	Subscriber Base (million)		Tele-density (%)	
	Rural	Urban	Rural	Urban
Mar-20	521.51	656.46	58.79	142.31
Jun-20	523.69	636.83	58.96	137.35
Sep-20	524.39	644.26	58.96	138.25
Dec-20	525.92	647.91	59.05	138.34
Mar-21	537.42	663.77	60.27	141.03

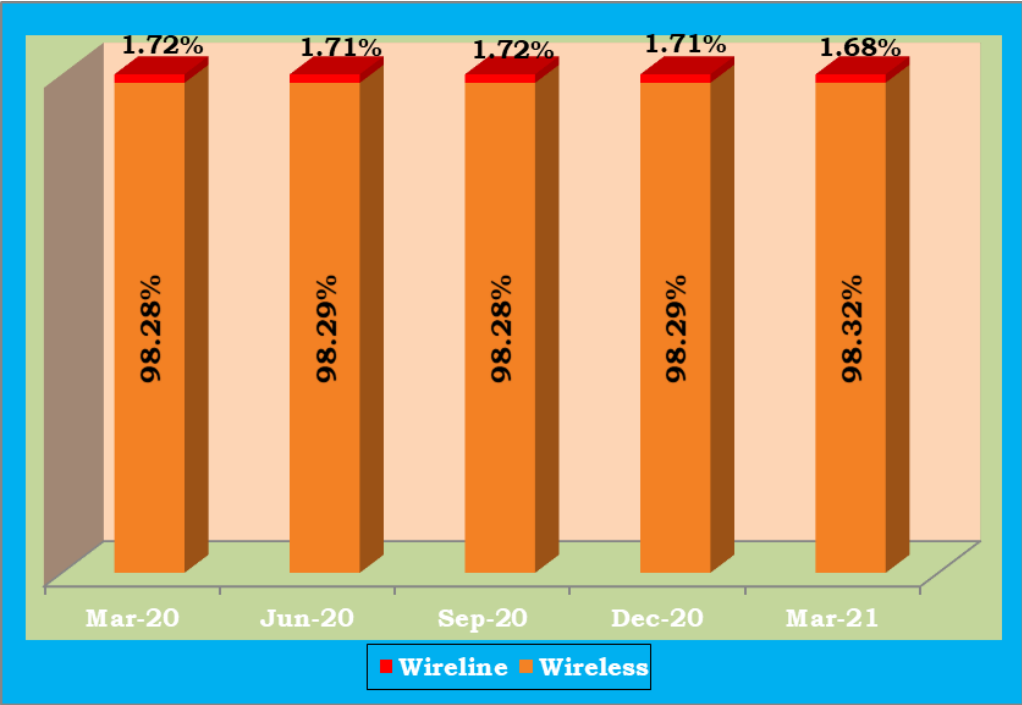
- 1.2 Telephone subscription in Urban areas increased from 647.91 million at the end of Dec-20 to 663.77 million at the end of Mar-21 and Urban Tele-density also increased from 138.34% to 141.03% at the end of the quarter.
- 1.3 Rural telephone subscription increased from 525.92 million at the end of Dec-20 to 537.42 million at the end of Mar-21 and Rural Tele-density also increased from 59.05% to 60.27% at the end of the quarter.
- 1.4 The Y-O-Y growth rates of Urban and Rural telephone subscriptions from Mar-20 to Mar-21 are 1.11% and 3.05% respectively. The Y-O-Y growth rates of Urban and Rural Tele-density from Mar-20 to Mar-21 are -0.90% and 2.51% respectively.

Chart 1.2: Market Share - Rural & Urban Subscribers



- 1.5 Share of subscriptions of rural areas in the total telephone subscriptions decreased from 44.80% at the end of Dec-20 to 44.74% at the end of Mar-21.

Chart 1.3: Composition of Access subscription - Wireline & Wireless



1.6 Share of wireline subscription in total telephone subscription decreased from 1.71% at the end of Dec-20 to 1.68% at the end of Mar-21.

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

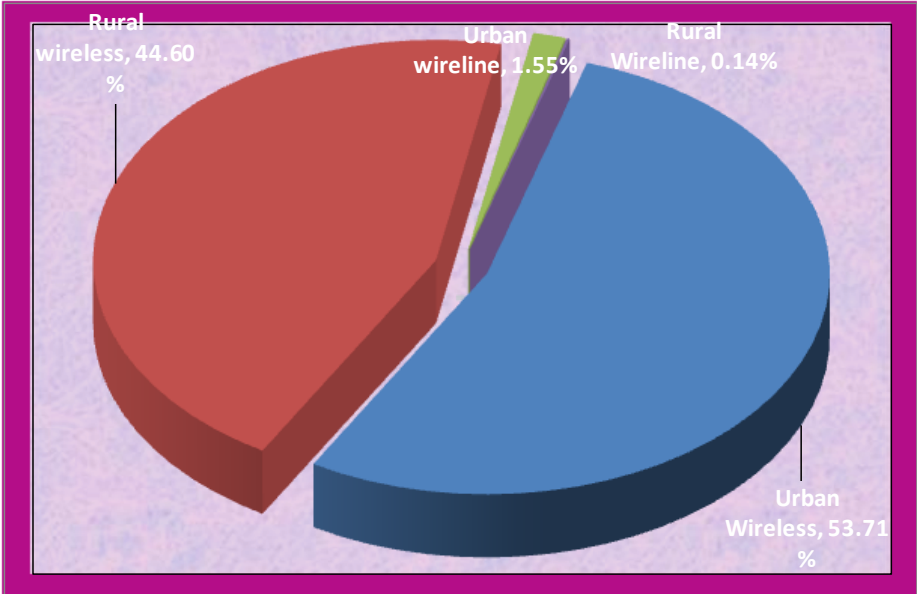


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

Service Area	Subscribers (million)			
	Dec-20	Mar-21	Net Additions	Rate of Growth
Andhra Pradesh	89.00	90.14	1.15	1.29%
Assam	24.17	24.85	0.68	2.81%
Bihar	85.10	86.71	1.60	1.88%
Delhi	55.90	57.95	2.05	3.66%
Gujarat	68.75	70.36	1.61	2.35%
Haryana	27.44	28.19	0.75	2.74%
Himachal Pradesh	11.14	11.28	0.14	1.24%
Jammu & Kashmir	11.96	12.21	0.25	2.06%
Karnataka	69.41	70.79	1.39	2.00%
Kerala	45.98	46.04	0.07	0.15%
Madhya Pradesh	76.20	78.59	2.40	3.14%
Maharashtra	94.54	96.17	1.64	1.73%
Mumbai	38.01	40.71	2.70	7.09%
North East	12.31	12.55	0.24	1.95%
Odisha	33.72	34.56	0.83	2.48%
Punjab	38.42	39.54	1.13	2.93%
Rajasthan	65.63	66.77	1.14	1.74%
Tamil Nadu	82.39	84.65	2.26	2.75%
U.P.(E)	98.98	101.17	2.19	2.21%
U.P.(W)	62.80	64.03	1.23	1.96%
Kolkata	26.83	27.35	0.52	1.92%
West Bengal	55.15	56.57	1.42	2.58%
All India	1,173.83	1,201.20	27.37	2.33%

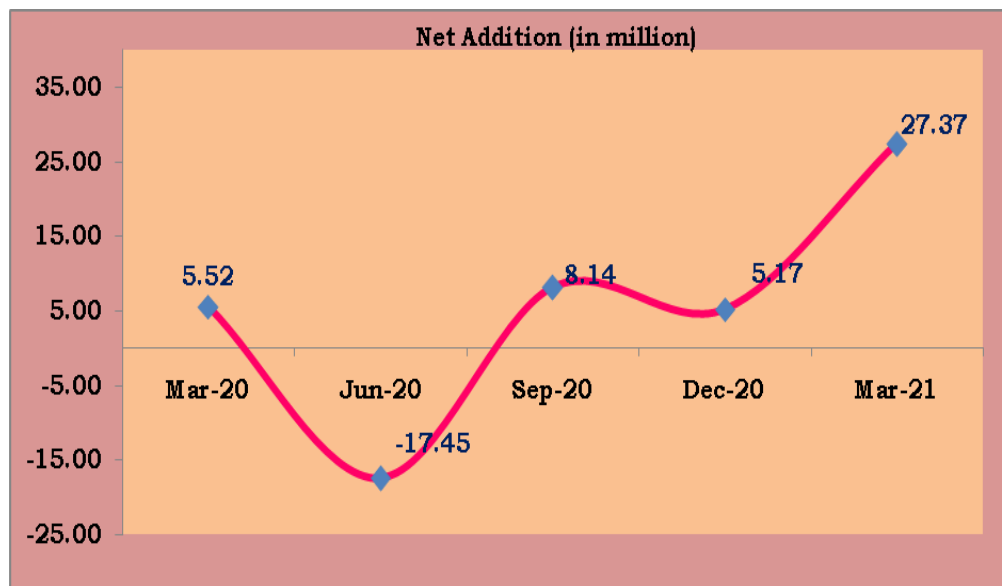
1.7 All service areas showed growth in their subscriber base during the quarter ending Mar-21. Mumbai service area showed maximum growth of 7.09% during the quarter.

Table 1.3: Service Area wise Rural-Urban Subscribers at QE Mar-21

Service Area	Number of Subscribers (in million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	90.14	44.88	45.26	49.79
Assam	24.85	15.68	9.17	63.11
Bihar	86.71	56.88	29.83	65.60
Delhi	57.95	2.21	55.74	3.82
Gujarat	70.36	28.13	42.23	39.98
Haryana	28.19	12.51	15.68	44.38
Himachal Pradesh	11.28	7.56	3.72	67.01
Jammu & Kashmir	12.21	5.68	6.53	46.51
Karnataka	70.79	27.57	43.22	38.95
Kerala	46.04	20.41	25.64	44.32
Madhya Pradesh	78.59	35.61	42.98	45.31
Maharashtra	96.17	44.25	51.93	46.01
Mumbai	40.71	1.52	39.19	3.73
North East	12.55	6.56	5.99	52.28
Odisha	34.56	22.51	12.04	65.15
Punjab	39.54	13.59	25.95	34.38
Rajasthan	66.77	36.45	30.32	54.59
Tamil Nadu	84.65	25.08	59.57	29.63
U.P.(E)	101.17	63.50	37.67	62.76
U.P.(W)	64.03	30.48	33.55	47.60
Kolkata	27.35	1.50	25.85	5.49
West Bengal	56.57	34.86	21.72	61.61
All India	1,201.20	537.42	663.77	44.74

1.8 Only eight service areas have more than 50% share of rural subscribers in their total number of subscribers. Himachal Pradesh service area has maximum share of rural subscribers (67.01%) in its total telephone subscribers.

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



1.9 The net increase in telephone subscription is 27.37 million during QE Mar-21 as compared to the net addition of 5.17 million during QE Dec-20.

Table 1.4 : Service Area wise Tele-density

Service Area/ States	As on 31 st December, 2020			As on 31 st March, 2021		
	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)
Andhra Pradesh	81.58	123.87	98.42	82.59	125.04	99.56
Assam	51.28	167.79	69.10	52.82	170.52	70.86
Bihar	40.76	119.14	52.80	41.56	119.81	53.61
Delhi	-	-	272.59	-	-	281.25
Gujarat	74.42	121.83	97.23	76.62	123.36	99.18
Haryana	69.22	128.17	93.29	71.82	129.69	95.53
Himachal Pradesh	113.45	478.12	150.86	113.88	490.11	152.50
J&K	58.23	155.61	87.38	59.23	158.50	89.01
Karnataka	72.92	144.51	103.97	72.96	148.59	105.85

Service Area/ States	As on 31 st December, 2020			As on 31 st March, 2021		
	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)
Kerala	203.98	98.50	129.42	199.49	101.18	129.45
Madhya Pradesh	42.10	130.49	66.99	43.46	133.59	68.87
Maharashtra (incl. Mumbai)*	68.86	144.50	105.36	70.25	149.54	108.57
North East	63.69	111.80	79.75	63.81	115.38	81.11
Orissa	61.08	145.27	76.63	62.74	147.63	78.46
Punjab	73.71	185.14	121.94	76.05	189.54	125.27
Rajasthan	60.99	144.50	82.96	62.36	145.05	84.14
Tamil Nadu	65.29	141.54	105.75	68.67	143.64	108.53
Uttar Pradesh (incl. UPE & UPW)*	49.69	120.72	66.91	51.18	120.96	68.12
West Bengal (incl. Kolkata)*	56.61	129.22	82.73	57.31	132.84	84.56
All India	59.05	138.34	86.38	60.27	141.03	88.17

* 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 are taken from projection of population from the 'Report of the Technical Group on Population Projections for India and States 2011 - 2036', which is available under the link https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-%20upload_compressed_0.pdf
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.

1.10 Kerala service area has the highest Rural Tele-density of 199.49 followed by Himachal Pradesh service area of 113.88. Bihar service area has the lowest Rural Tele-density of 41.56 followed by Madhya Pradesh service area with rural tele-density of 43.46 in QE Mar-21.

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

Sl. No.	States/UT	Total Telephone Subscription (million)		
		Total	Rural	Urban
1	Andhra Pradesh	47.12	26.37	20.75
2	Arunachal Pradesh	1.36	0.85	0.51
3	Assam	24.85	15.68	9.17
4	Bihar	63.90	44.58	19.32
5	Chhattisgarh	21.36	10.49	10.87
6	Goa	2.32	0.82	1.50
7	Gujarat	69.57	27.88	41.69
8	Haryana	34.31	12.57	21.75
9	Himachal Pradesh	11.28	7.56	3.72
10	Jharkhand	22.81	12.29	10.51
11	Karnataka	70.79	27.57	43.22
12	Kerala	45.96	20.37	25.59
13	Madhya Pradesh	57.24	25.13	32.11
14	Maharashtra Incl. Mumbai	134.56	44.95	89.62
15	Manipur	2.42	1.08	1.34
16	Meghalaya	2.41	1.43	0.98
17	Mizoram	1.42	0.65	0.77
18	Nagaland	1.69	0.97	0.72
19	Odisha	34.56	22.51	12.04
20	Punjab	37.76	13.56	24.21
21	Rajasthan	66.77	36.45	30.32
22	Sikkim	0.95	0.54	0.41
23	Tamil Nadu	83.47	24.74	58.73
24	Telangana	43.02	18.52	24.51
25	Tripura	3.26	1.59	1.67
26	Uttar Pradesh (UPE + UPW)	160.19	87.32	72.86
27	Uttarakhand	13.25	6.66	6.59
28	West Bengal Incl. Kolkata	82.50	35.65	46.85
Union Territories				
1	Andaman & Nicobar Islands	0.47	0.17	0.31
2	Chandigarh	1.77	0.04	1.74
3	Dadra and Nagar Haveli and Daman and Diu	0.79	0.25	0.54
4	Delhi	43.60	2.15	41.45
5	Jammu & Kashmir	12.21	5.68	6.53
6	Ladakh			
7	Lakshdweep	0.08	0.04	0.046
8	Puduchery	1.18	0.34	0.84
Total		1201.20	537.42	663.77

Table 1.6 : State/UT wise total Tele-density

Sl.No.	State/UT	Total Tele-density (%)		
		Total	Rural	Urban
1	Andhra Pradesh	89.24	131.42	242.68
2	Arunachal Pradesh	88.66	73.96	132.29
3	Assam	70.86	52.82	170.52
4	Bihar	51.85	41.17	129.26
5	Chhattisgarh	72.34	48.33	138.91
6	Goa	148.60	200.35	130.16
7	Gujarat	99.58	76.41	124.91
8	Haryana	116.26	72.12	179.87
9	Himachal Pradesh	152.50	113.88	490.11
10	Jharkhand	59.22	43.05	105.62
11	Karnataka	105.85	72.96	148.59
12	Kerala	129.47	199.17	101.26
13	Madhya Pradesh	67.66	41.70	131.88
14	Maharashtra Incl. Mumbai	108.07	69.42	149.92
15	Manipur	76.29	49.99	132.44
16	Meghalaya	73.27	54.58	145.46
17	Mizoram	116.63	117.30	116.08
18	Nagaland	77.02	77.61	76.23
19	Odisha	78.46	62.74	147.63
20	Punjab	124.39	75.85	193.87
21	Rajasthan	84.14	62.36	145.05
22	Sikkim	140.40	145.54	134.14
23	Tamil Nadu (incl. Chennai)	109.22	68.62	145.48
24	Telangana	114.00	91.68	139.69
25	Tripura	79.95	62.05	110.33
26	Uttar Pradesh (UPE +UPW)	69.31	49.55	132.74
27	Uttarakhand	116.12	89.83	164.94
28	West Bengal Incl. Kolkata	84.04	56.74	132.61
Union Territories				
1	Andaman & Nicobar Islands	118.17	72.74	178.29
2	Chandigarh	146.61	-	-
3	Dadra and Nagar Haveli and Daman and Diu	73.11	110.72	63.18
4	Delhi	211.63	-	-
5	Jammu & Kashmir	90.98	60.49	161.97
6	Ladakh			
7	Lakshdweep	121.16	-	-
8	Puduchery	75.16	72.66	76.24
Total		88.17	60.27	141.03

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

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Dec-20 (%)	Market Share in QE Mar-21 (%)
	Dec-20	Mar-21	Net Additions			
Reliance Jio	411.53	426.25	14.72	3.58	35.06	35.49
Bharti Airtel	343.27	357.17	13.90	4.05	29.24	29.73
Vodafone Idea Ltd	284.78	284.23	-0.54	-0.19	24.26	23.66
BSNL	125.88	125.28	-0.60	-0.48	10.72	10.43
MTNL	6.28	6.20	-0.08	-1.24	0.53	0.52
Tata Teleservices	1.66	1.63	-0.03	-1.79	0.14	0.14
Reliance Com.	0.23	0.22	-0.01	-5.40	0.02	0.02
Quadrant	0.20	0.22	0.014	6.66	0.02	0.02
Total	1,173.83	1,201.20	27.37	2.33	100	100

Note: 1. M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd.

2. M/s BSNL includes number of subscribers of its Virtual Network Operator (VNO).

1.11 M/s Reliance Jio Infocomm Ltd is the market leader with 35.49% in the access segment in terms of number of subscribers with 426.25 million subscribers at the end of Mar-21 followed by M/s Bharti Airtel Ltd with 357.17 million subscribers.

1.12 In term of net addition, Reliance Jio Infocomm Ltd became the biggest gainer with net addition of 14.72 million telephone subscribers during the QE Mar-21.

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 (%)
Vodafone Idea Ltd	284.23	149.93	52.75	27.90
Bharti Airtel	357.17	168.63	47.21	31.38
Reliance Jio	426.25	179.34	42.07	33.37
BSNL	125.28	39.41	31.46	7.33
Quadrant	0.22	0.03	12.99	0.01
Tata Teleservices	1.63	0.04	2.47	0.01
MTNL	6.20	0.05	0.73	0.01
Reliance Com.	0.22	0.00	0.08	0.00
Total	1,201.20	537.42	44.74	100

1.13 M/s Vodafone Idea Ltd is the telecom service provider with highest proportion of rural telephone subscribers of 52.75% followed by Bharti Airtel of 47.21% to their total telephone subscribers at the end of Mar-21.

Section B : Wireless Service

Table 1.9: List of Wireless Access Service Providers currently providing service [As on 31st March, 2021]

Sl.No.	Service Provider	Licensed Service Areas
1	Bharti Airtel Ltd	All India
2	Reliance Jio Infocom Ltd	All India
3	Vodafone Idea Ltd	All India
4	BSNL	All India (except Delhi & Mumbai)
5	MTNL	Delhi & Mumbai
6	Reliance Communications Ltd / Reliance Telecom Ltd	All India (except Assam & NE) / Kolkata, MP, WB, HP, Bihar, Odisha, Assam & NE

Source : DoT website

UL Access Services Licensees Virtual Network Operators (VNOs) who are providing services as on 31st March, 2021

1	Surftelecom Pvt. Ltd (Formerly Plintron India Pvt. Ltd.	All India
2	AdPay Mobile Payment India Pvt. Ltd	Tamil Nadu including Chennai

Source : As reported by telecom service providers

1.14 Number of total Wireless subscribers increased from 1,153.77 million at the end of Dec-20 to 1,180.96 million at the end of Mar-21, thereby showing a quarterly growth rate of 2.36%. During the quarter, net addition of 27.18 million wireless subscribers has been recorded.

1.15 The total wireless subscriber base recorded a Y-O-Y growth rate of 2% in QE Mar-21 over the same quarter in the previous year.

1.16 Wireless Teledensity in the country increased from 84.90% at the end of Dec-20 to 86.68% at the end of Mar-21.

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

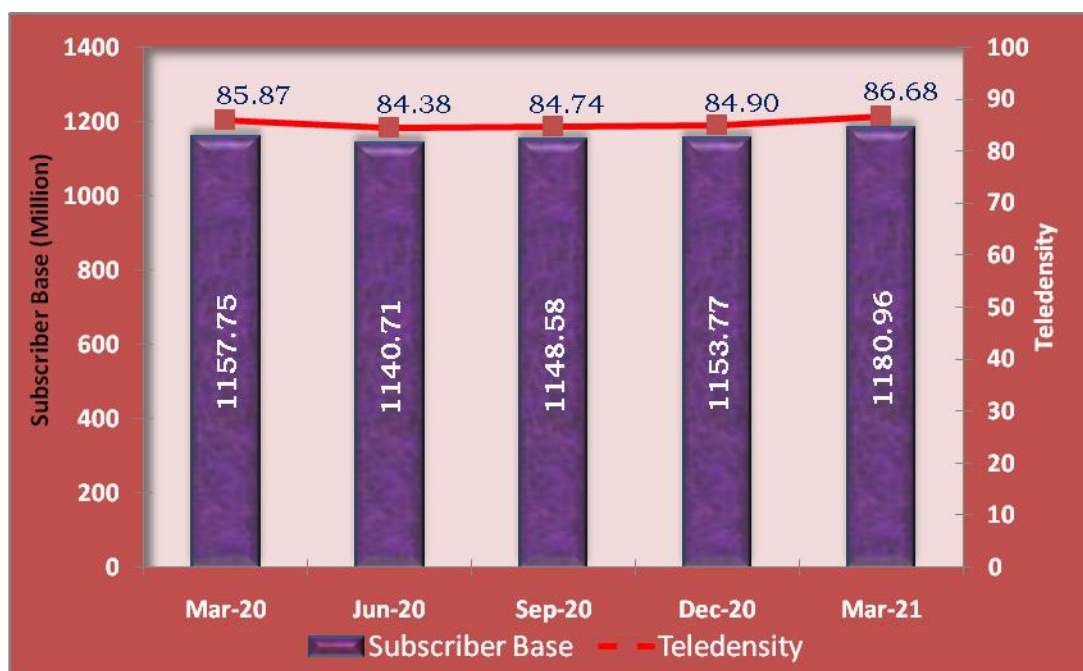


Table 1.10: Wireless Subscriber Base & Tele-density - Rural & Urban

Quarter ending	Subscriber Base (million)		Tele-density (%)	
	Rural	Urban	Rural	Urban
Mar-20	519.27	638.48	58.54	138.41
Jun-20	521.60	619.11	58.72	133.53
Sep-20	522.42	626.16	58.74	134.37
Dec-20	524.11	629.67	58.85	134.44
Mar-21	535.75	645.20	60.08	137.08

1.18 Number of Rural Wireless subscribers increased from 524.11 million at the end of Dec-20 to 535.75 million at the end of Mar-21 and number of urban wireless subscribers also increased from 629.67 million to 645.20 million during the quarter. Quarterly growth rates of Rural and Urban wireless subscriptions are 2.22% and 2.47% respectively during QE Mar-21.

1.19 The share of rural wireless subscription decreased from 45.43% to 45.37% in total wireless subscription in this quarter.

Chart 1.7: Wireless Market Share - Rural & Urban

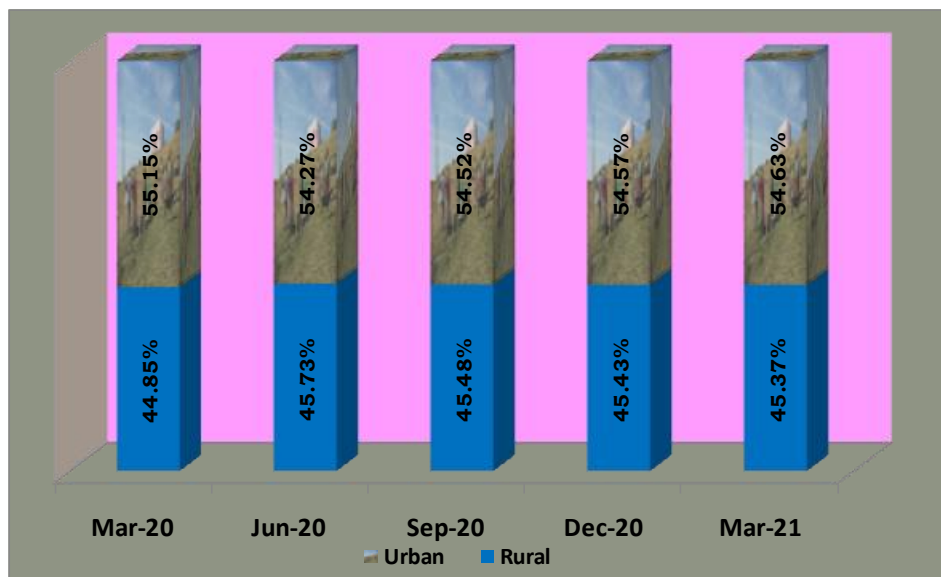


Table 1.11: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Dec-20 (%)	Market Share Mar-21 (%)
	Dec-20	Mar-21	Net Additions			
Reliance Jio	408.77	422.92	14.14	3.46	35.43	35.81
Bharti Airtel	338.71	352.39	13.69	4.04	29.36	29.84
Vodafone Idea Ltd	284.26	283.71	-0.54	-0.19	24.64	24.02
BSNL	118.71	118.63	-0.08	-0.07	10.29	10.05
MTNL	3.32	3.30	-0.02	-0.65	0.29	0.28
Reliance Com.	0.01	0.01	0.00	-13.07	0.001	0.001
Total	1153.77	1180.96	27.18	2.36	100	100

1.20 M/s RJIL Limited is the market leader with a wireless subscriber base of 422.92 million which translates into market share of 35.81% w.r.t total wireless subscriber base. M/s Bharti Airtel Ltd. is at 2nd position with a total subscriber base of 352.39 million and market

share of 29.84%. M/s RJIL Limited has reported the net additions of 14.14 Million.

- 1.21 In terms of net additions during QE Mar-21, except M/s Bharti Airtel Limited and M/s RJIL Limited all service providers have showed negative growth in their wireless subscribers.

Table 1.12: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Dec-20	Mar-21	Net Additions	Rate of change (%)
Andhra Pradesh	87.62	88.73	1.12	1.27
Assam	24.05	24.72	0.67	2.79
Bihar	84.89	86.47	1.58	1.86
Delhi	52.59	54.55	1.96	3.73
Gujarat	67.78	69.41	1.63	2.40
Haryana	27.13	27.88	0.75	2.75
Himachal Pradesh	11.05	11.19	0.14	1.25
Jammu & Kashmir	11.80	12.04	0.24	2.00
Karnataka	67.23	68.64	1.41	2.09
Kerala	44.68	44.84	0.16	0.36
Madhya Pradesh	75.51	77.87	2.37	3.14
Maharashtra	93.27	94.91	1.64	1.76
Mumbai	34.99	37.65	2.66	7.60
North East	12.21	12.45	0.24	1.94
Orissa	33.51	34.34	0.83	2.48
Punjab	37.73	38.84	1.11	2.94
Rajasthan	65.16	66.30	1.14	1.74
Tamil Nadu	80.46	82.76	2.30	2.86
U.P.(E)	98.59	100.76	2.16	2.20
U.P.(W)	62.43	63.62	1.19	1.90
Kolkata	26.17	26.67	0.51	1.94
West Bengal	54.91	56.31	1.41	2.56
All India	1,153.77	1,180.96	27.18	2.36

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	88.73	44.78	43.95	50.46
Assam	24.72	15.67	9.05	63.39
Bihar	86.47	56.85	29.61	65.75
Delhi	54.55	2.21	52.34	4.05
Gujarat	69.41	28.07	41.34	40.44
Haryana	27.88	12.48	15.40	44.77
Himachal Pradesh	11.19	7.51	3.68	67.13
Jammu & Kashmir	12.04	5.67	6.37	47.08
Karnataka	68.64	27.50	41.14	40.06
Kerala	44.84	19.77	25.07	44.09
Madhya Pradesh	77.87	35.59	42.28	45.71
Maharashtra	94.91	44.09	50.82	46.46
Mumbai	37.65	1.52	36.13	4.03
North East	12.45	6.55	5.90	52.64
Orissa	34.34	22.48	11.86	65.46
Punjab	38.84	13.49	25.34	34.75
Rajasthan	66.30	36.42	29.88	54.93
T.N. (incl. Chennai)	82.76	24.88	57.89	30.06
U.P.(E)	100.76	63.47	37.29	62.99
U.P.(W)	63.62	30.46	33.16	47.88
Kolkata	26.67	1.50	25.17	5.63
West Bengal	56.31	34.78	21.53	61.77
All India	1,180.96	535.75	645.20	45.37

1.22 Detailed table on service provider wise wireless 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, 2020			As on 31 st March, 2021		
	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density(%)
A.P.	81.37	120.37	96.90	82.39	121.44	98.00
Assam	51.23	165.72	68.74	52.77	168.32	70.48
Bihar	40.74	118.36	52.67	41.54	118.94	53.46
Delhi	-	-	256.46	-	-	264.78
Gujarat	74.23	119.21	95.87	76.46	120.76	97.84
Haryana	69.02	125.90	92.24	71.64	127.35	94.46
H.P.	112.74	472.52	149.66	113.19	484.37	151.30
J&K	58.12	151.99	86.22	59.13	154.64	87.78
Karnataka	72.69	137.28	100.71	72.75	141.45	102.63
Kerala	197.20	96.14	125.76	193.27	98.93	126.06
M.P.	42.08	128.39	66.38	43.43	131.41	68.24
Maharashtra (incl. Mumbai)*	68.60	137.71	101.95	70.01	142.71	105.14
North East	63.58	110.08	79.11	63.72	113.59	80.45
Orissa	60.99	143.15	76.16	62.64	145.43	77.98
Punjab	73.12	180.84	119.75	75.49	185.11	123.04
Rajasthan	60.93	142.40	82.36	62.31	142.93	83.55
Tamil Nadu	64.69	137.42	103.28	68.12	139.58	106.11
Uttar Pradesh (incl. UPE&UPW)*	49.66	119.52	66.60	51.15	119.63	67.78
West Bengal (incl. Kolkata)*	56.50	126.87	81.81	57.20	130.43	83.62
All India	58.85	134.44	84.90	60.08	137.08	86.68

* 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 projection of population from the 'Report of the Technical Group on Population Projections for India and States 2011 - 2036', which is available under the link https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-%20upload_compressed_0.pdf
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 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	46.37	26.29	20.08
2	Arunachal Pradesh	1.34	0.85	0.50
3	Assam	24.72	15.67	9.05
4	Bihar	63.79	44.57	19.22
5	Chhattisgarh	21.20	10.48	10.72
6	Goa	2.25	0.80	1.45
7	Gujarat	68.62	27.82	40.80
8	Haryana	33.99	12.53	21.45
9	Himachal Pradesh	11.19	7.51	3.68
10	Jharkhand	22.68	12.29	10.39
11	Karnataka	68.64	27.50	41.14
12	Kerala	44.76	19.74	25.02
13	Madhya Pradesh	56.67	25.11	31.56
14	Maharashtra	130.32	44.81	85.51
15	Manipur	2.40	1.08	1.32
16	Meghalaya	2.39	1.42	0.96
17	Mizoram	1.41	0.65	0.76
18	Nagaland	1.68	0.97	0.71
19	Odisha	34.34	22.48	11.86
20	Punjab	37.22	13.46	23.76
21	Rajasthan	66.30	36.42	29.88
22	Sikkim	0.95	0.54	0.41
23	Tamil Nadu	81.62	24.54	57.08
24	Telangana	42.37	18.49	23.87
25	Tripura	3.23	1.59	1.64
26	Uttar Pradesh	159.46	87.28	72.18
27	Uttarakhand	13.13	6.65	6.48
28	West Bengal	81.59	35.58	46.00
Union Territories				
1	Andaman & Nicobar Islands	0.46	0.16	0.30
2	Chandigarh	1.61	0.04	1.57
3	Dadra and Nagar Haveli and Daman and Diu	0.79	0.25	0.54
4	Delhi	40.23	2.15	38.08
5	Jammu & Kashmir	11.53	5.47	6.06
6	Ladakh	0.50	0.19	0.31
7	Lakshdweep	0.08	0.04	0.04
8	Puduchery	1.15	0.34	0.81
Total		1180.96	535.75	645.20

Table 1.16 : State/UT wise Wireless Tele-density

Sl.No.	State/UT	Wireless Tele-density (%)		
		Total	Rural	Urban
1	Andhra Pradesh	87.81	76.97	107.67
2	Arunachal Pradesh	87.39	73.65	128.20
3	Assam	70.48	52.77	168.32
4	Bihar	51.76	41.16	128.63
5	Chhattisgarh	71.82	48.30	137.03
6	Goa	143.98	195.19	125.74
7	Gujarat	98.23	76.25	122.25
8	Haryana	115.16	71.94	177.44
9	Himachal Pradesh	151.30	113.19	484.37
10	Jharkhand	58.88	43.02	104.38
11	Karnataka	102.63	72.75	141.45
12	Kerala	126.08	192.96	99.01
13	Madhya Pradesh	66.99	41.68	129.60
14	Maharashtra	104.66	69.21	143.04
15	Manipur	75.74	49.93	130.84
16	Meghalaya	72.63	54.52	142.58
17	Mizoram	115.63	117.17	114.34
18	Nagaland	76.64	77.58	75.39
19	Odisha	77.98	62.64	145.43
20	Punjab	122.62	75.30	190.34
21	Rajasthan	83.55	62.31	142.93
22	Sikkim	139.75	145.49	132.75
23	Tamil Nadu	106.80	68.07	141.38
24	Telangana	112.26	91.56	136.08
25	Tripura	79.36	61.99	108.87
26	Uttar Pradesh	69.00	49.53	131.50
27	Uttarakhand	115.13	89.73	162.30
28	West Bengal	83.11	56.63	130.21
Union Territories				
1	Andaman & Nicobar Islands	114.10	69.88	172.62
2	Chandigarh	132.82	-	-
3	Dadra and Nagar Haveli and Daman and Diu	72.72	109.99	62.88
4	Delhi	195.26	-	-
5	Jammu & Kashmir	85.97	58.33	150.30
6	Ladakh	175.21	96.87	352.78
7	Lakshdweep	114.97	-	-
8	Puduchery	72.82	71.55	73.38
All India Tele-density		86.68	60.08	137.08

Table 1.17 : Rural Wireless Subscriber base and Market Share as on 31.03.2021

Service Provider	Total number of wireless Subscribers (in millions)	Rural Subscribers (in millions)	% of Rural subscribers in total	Market Share of Rural Subscribers (%)
Reliance Jio	422.92	179.31	42.40	33.47
Bharti Airtel*	352.39	168.63	47.85	31.47
Vodafone Idea Ltd	283.71	149.93	52.85	27.98
BSNL	118.63	37.84	31.90	7.06
MTNL	3.30	0.05	1.37	0.01
Reliance Com.	0.00	0.00	0.00	0.00
Total	1,180.96	535.75	45.37	100

Note: 1. M/s Reliance Com. has not reported number of its rural wireless subscribers and hence its rural wireless subscription has been taken as NIL.

2. M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd for QE March, 2021.

Wireless Data Usage

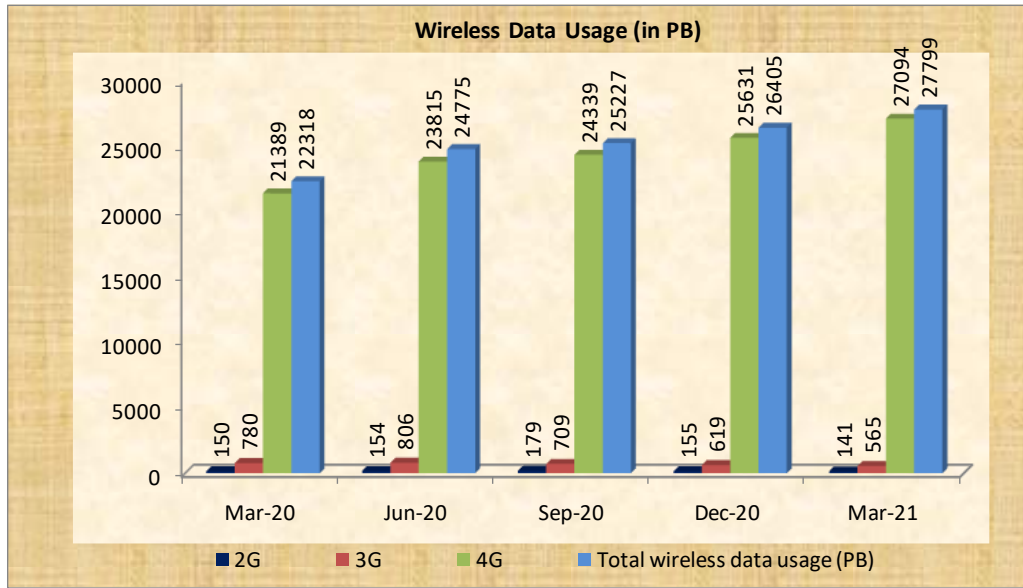
1.23 Volume of total wireless data usage increased from 26,405 PB during Q.E. Dec-20 to 27,799 PB during Q.E. Mar-21 with quarterly growth rate of 5.28%. Out of total data wireless usage, 2G data usage was 141 PB, 3G data usage was 565 PB and 4G data usage was 27,094 PB during the quarter.

1.24 Total number of wireless data subscribers increased from 769 million at the end of Dec-20 to 798.65 million at the end of Mar-21.

1.25 The contribution of 2G, 3G and 4G data usage in total volume of wireless data usage are about 0.51%, 2.03% and 97.46% respectively during the QE Mar-21.

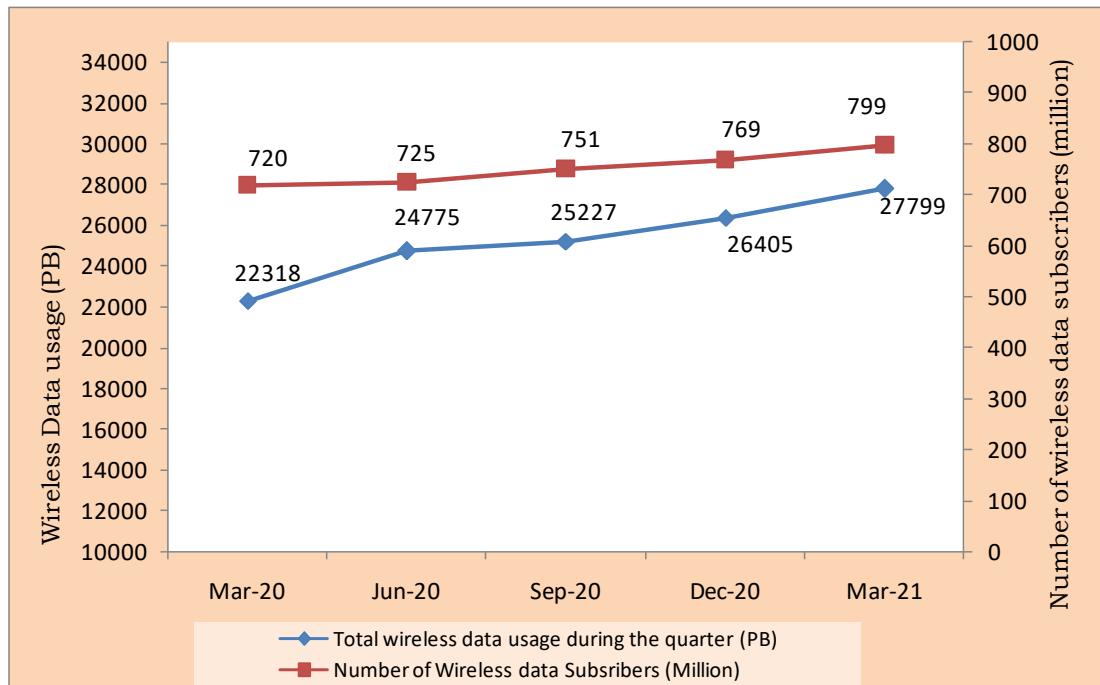
1.26 Technology-wise trend of growth in volume of wireless data usage is depicted in the following chart.

Chart 1.8: Trend of technology wise wireless data usase (in PB)



1.27 The following chart depicts the trend of number of wireless data subscribers and volume of wireless data usage in QE Mar-21.

Chart 1.9: Trend of Wireless data subscribers (million) and volume of wireless data usage (PB)



Section C : Wireline Service

Table 1.18 : Service Providers providing Wireline Service

[As on 31st March, 2021]

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

1.28 Total number of Wireline subscribers increased from 20.05 million at the end of Dec-20 to 20.24 million at the end of Mar-21 with quarterly growth rate of 0.94%. Overall Wireline Teledensity in the country increased from 1.48% at the end of Dec-20 to 1.49% at the end of Mar-21.

1.29 Urban wireline subscriber base increased by 1.83% from 18.24 million at the end of Dec-20 to 18.57 million at the end of Mar-21. Rural wireline subscription declined by 8.10%, from 1.81 million to 1.67 million during the same period.

Chart 1.10: Wireline Subscriber Base and Tele-density

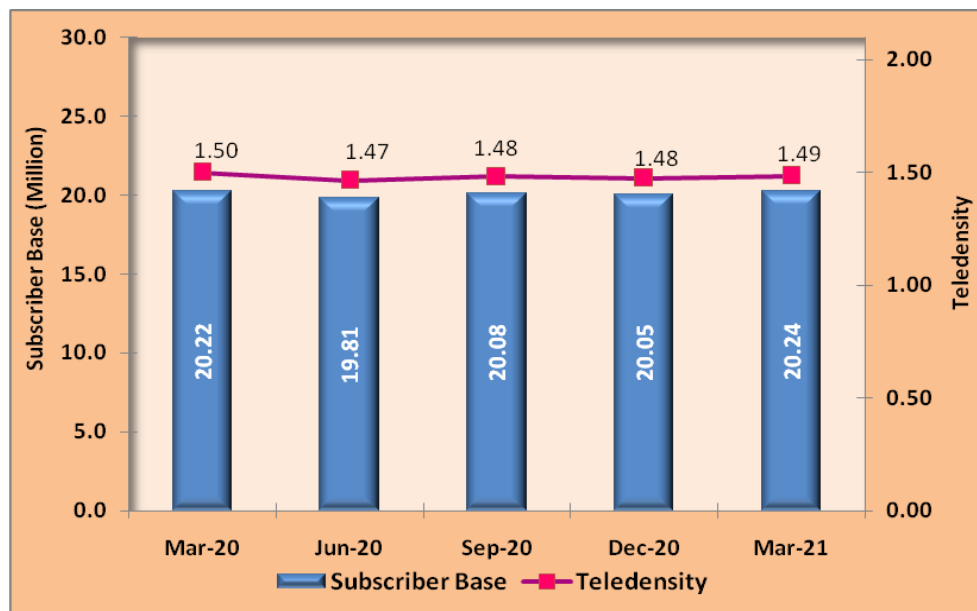


Table 1.19: Wireline Subscriber Base & Tele-density - Rural & Urban

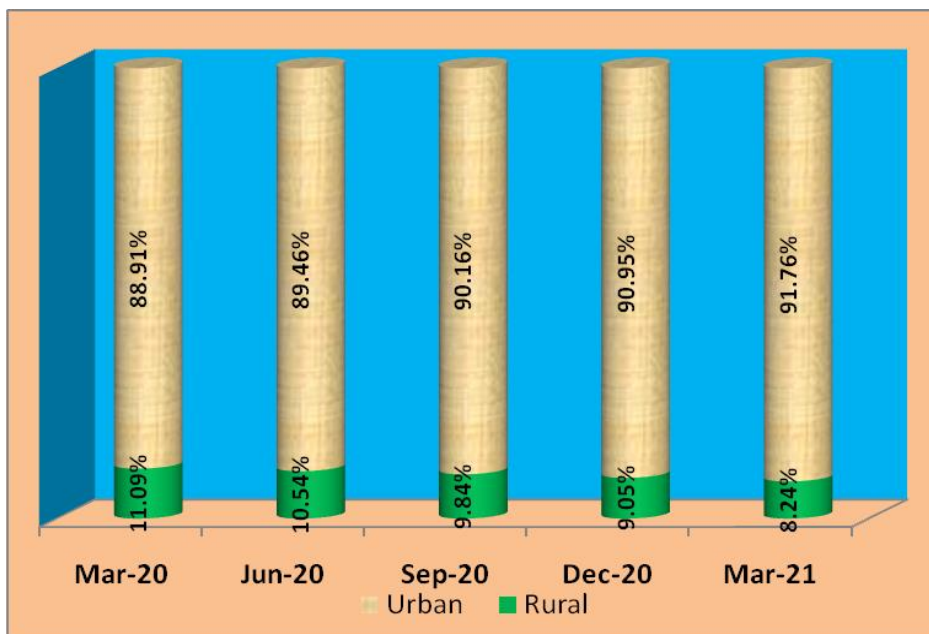
Quarter ending	Subscriber Base (million)		Tele-density (%)	
	Rural	Urban	Rural	Urban
Mar-20	2.24	17.97	0.25	3.90
Jun-20	2.09	17.72	0.24	3.82
Sep-20	1.98	18.10	0.22	3.88
Dec-20	1.81	18.24	0.20	3.89
Mar-21	1.67	18.57	0.19	3.95

**Table 1.20 : Service Provider wise Wireline Subscriber base
(Rural - Urban) – As on 31.03.2021**

Service Provider	Subscriber Base (million)			Percentage of Rural subscribers	Share of Rural subscription
	Rural	Urban	Total		
BSNL	1.58	5.07	6.65	23.69%	94.44%
Bharti	0.00	4.78	4.78	--	0.00%
MTNL	0.00	2.90	2.90	--	0.00%
Tata Tele.	0.04	1.59	1.63	2.47%	2.41%
Reliance Com.	0.0002	0.21	0.21	0.09%	0.01%
Quadrant	0.03	0.19	0.22	12.99%	1.69%
Vodafone Idea	0.00	0.52	0.52	--	0.00%
Reliance Jio	0.02	3.31	3.33	0.73%	1.46%
Total	1.67	18.57	20.24	8.24%	100.00%

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

Chart 1.11: Composition of Wireline Subscriber base - Rural & Urban



1.31 Market Share of Rural wireline subscription declined from 9.05% in QE Dec-20 to 8.24% in QE Mar-21.

Table 1.21 : Service Provider wise growth in Wireline Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share- Dec-20(%)	Market share- Mar-21(%)
	Dec-20	Mar-21	Net Addition			
Reliance Jio	2.75	3.33	0.58	21.01	13.74	16.47
Quadrant	0.20	0.22	0.01	6.66	1.01	1.07
Bharti	4.57	4.78	0.21	4.64	22.77	23.61
Vodafone Idea	0.52	0.52	0.0002	-0.03	2.60	2.58
MTNL	2.96	2.90	-0.06	-1.91	14.76	14.35
Tata Tele.	1.66	1.63	-0.03	-1.79	8.26	8.04
BSNL	7.17	6.65	-0.52	-7.24	35.75	32.85
Reliance Com	0.22	0.21	-0.01	-5.03	1.10	1.04
Total	20.05	20.24	0.19	0.94	100	100

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

Service Area	Dec-20	Mar-21	Net Additions	Rate of Change (%)
Andhra Pradesh	1.38	1.41	0.03	2.35
Assam	0.13	0.13	0.01	5.61
Bihar	0.21	0.24	0.03	12.38
Delhi	3.31	3.39	0.09	2.59
Gujarat	0.96	0.95	-0.01	-1.17
Haryana	0.31	0.32	0.01	2.43
Himachal Pradesh	0.09	0.09	0.00	-0.27
Jammu & Kashmir	0.16	0.17	0.01	6.30
Karnataka	2.18	2.16	-0.02	-1.03
Kerala	1.30	1.21	-0.09	-7.14
Madhya Pradesh	0.69	0.72	0.03	3.82
Maharashtra	1.27	1.26	0.00	-0.27
Mumbai	3.02	3.06	0.04	1.21
North East	0.10	0.10	0.00	2.79
Orissa	0.21	0.21	0.01	2.54
Punjab	0.69	0.71	0.02	2.23
Rajasthan	0.47	0.47	0.00	0.78
Tamil Nadu	1.92	1.89	-0.04	-1.86
U.P.(E)	0.39	0.41	0.03	6.48
U.P.(W)	0.37	0.41	0.05	12.30
Kolkata	0.67	0.67	0.01	1.37
West Bengal	0.24	0.26	0.01	6.06
All India	20.05	20.24	0.19	0.94

1.32 Bihar service area showed maximum growth of 12.38% and Kerala service area showed maximum decline of 7.14% in their wireline subscriber base during the quarter ending Mar-21.

**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	1.41	0.11	1.30	7.51
Assam	0.13	0.01	0.12	11.14
Bihar	0.24	0.02	0.22	9.27
Delhi	3.39	0.00	3.39	0.00
Gujarat	0.95	0.06	0.89	6.41
Haryana	0.32	0.03	0.28	9.99
Himachal Pradesh	0.09	0.05	0.04	51.06
Jammu & Kashmir	0.17	0.01	0.16	5.41
Karnataka	2.16	0.08	2.08	3.58
Kerala	1.21	0.64	0.57	52.72
Madhya Pradesh	0.72	0.02	0.70	2.48
Maharashtra	1.26	0.16	1.11	12.41
Mumbai	3.06	0.00	3.06	0.01
North East	0.10	0.01	0.09	9.15
Orissa	0.21	0.03	0.18	15.37
Punjab	0.71	0.10	0.61	14.05
Rajasthan	0.47	0.03	0.44	5.83
Tamil Nadu	1.89	0.20	1.69	10.70
U.P.(E)	0.41	0.03	0.38	6.69
U.P.(W)	0.41	0.02	0.39	4.68
Kolkata	0.67	0.00	0.67	0.00
West Bengal	0.26	0.07	0.19	27.94
All India	20.24	1.67	18.57	8.24

1.33 Kerala service area has the maximum share 52.72% of rural wireline subscriber in its total wireline subscriber base at the end of Mar-21.

Table 1.24: Service Area wise Wireline Tele-density

Service Area	As on 31 st December, 2020			As on 31 st March, 2021		
	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)	Rural Tele-density (%)	Urban Tele-density (%)	Total Tele-density (%)
Andhra Pradesh	0.21	3.51	1.52	0.19	3.60	1.56
Assam	0.05	2.07	0.36	0.05	2.20	0.38
Bihar	0.02	0.77	0.13	0.02	0.87	0.15
Delhi	-	-	16.13	-	-	16.47
Gujarat	0.19	2.63	1.36	0.17	2.60	1.34
Haryana	0.20	2.27	1.05	0.18	2.34	1.07
Himachal Pradesh	0.71	5.59	1.21	0.68	5.74	1.20
Jammu & Kashmir	0.10	3.62	1.16	0.09	3.86	1.23
Karnataka	0.23	7.23	3.26	0.20	7.15	3.22
Kerala	6.78	2.36	3.66	6.22	2.25	3.39
Madhya Pradesh	0.02	2.11	0.61	0.02	2.18	0.63
Maharashtra (incl. Mumbai)*	0.25	6.79	3.41	0.24	6.83	3.43
North East	0.11	1.72	0.65	0.09	1.79	0.66
Orissa	0.10	2.12	0.47	0.09	2.19	0.48
Punjab	0.59	4.30	2.19	0.56	4.44	2.24
Rajasthan	0.05	2.10	0.59	0.05	2.12	0.59
Tamil Nadu (incl. Chennai)	0.60	4.12	2.47	0.55	4.06	2.42
Uttar Pradesh (incl. UPE & UPW)*	0.03	1.20	0.31	0.03	1.32	0.34
West Bengal (incl. Kolkata)*	0.12	2.35	0.92	0.11	2.41	0.94
All India	0.20	3.89	1.48	0.19	3.95	1.49

* Population data/projections are available state-wise only

- Note: -
1. Tele-density figures are derived from the subscriber data provided by the operators and projection of population from the 'Report of the Technical Group on Population Projections for India and States 2011 - 2036', which is available under the link https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-%20upload_compressed_0.pdf
 2. 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.

Table 1.25: State/UT wise Wireline Subscriber base

Sl. No.	States/UT	Wireline Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	0.75	0.08	0.67
2	Arunachal Pradesh	0.02	0.00	0.02
3	Assam	0.13	0.01	0.12
4	Bihar	0.11	0.01	0.09
5	Chhattisgarh	0.15	0.01	0.15
6	Goa	0.07	0.02	0.05
7	Gujarat	0.95	0.06	0.89
8	Haryana	0.32	0.03	0.29
9	Himachal Pradesh	0.09	0.05	0.04
10	Jharkhand	0.13	0.01	0.12
11	Karnataka	2.16	0.08	2.08
12	Kerala	1.20	0.63	0.57
13	Madhya Pradesh	0.57	0.01	0.56
14	Maharashtra Incl. Mumbai	4.25	0.14	4.11
15	Manipur	0.02	0.00	0.02
16	Meghalaya	0.02	0.002	0.02
17	Mizoram	0.01	0.001	0.01
18	Nagaland	0.01	0.000	0.01
19	Odisha	0.21	0.03	0.18
20	Punjab	0.54	0.10	0.44
21	Rajasthan	0.47	0.03	0.44
22	Sikkim	0.004	0.00	0.00
23	Tamil Nadu	1.85	0.20	1.65
24	Telangana	0.66	0.02	0.63
25	Tripura	0.02	0.00	0.02
26	Uttar Pradesh (UPE+UPW)	0.72	0.04	0.69
27	Uttarakhand	0.11	0.01	0.11
28	West Bengal Incl. Kolkata	0.91	0.07	0.85
Union Territories				
1	Andaman & Nicobar Islands	0.02	0.01	0.01
2	Chandigarh	0.17	0.001	0.17
3	Dadra and Nagar Haveli and Daman and Diu	0.004	0.002	0.003
4	Delhi	3.37	0.00	3.37
5	Jammu & Kashmir	0.17	0.01	0.16
6	Ladakh			
7	Lakshdweep	0.004	0.002	0.003
8	Puduchery	0.04	0.01	0.03
Total		20.24	1.67	18.57

Table 1.26: State/UT wise Wireline Tele-density

Sl.No.	State/UT	Wireline Tele-density		
		Total (%)	Rural (%)	Urban (%)
1	Andhra Pradesh	2.67	0.31	6.99
2	Arunachal Pradesh	1.27	0.32	4.09
3	Assam	0.38	0.05	2.20
4	Bihar	0.09	0.01	0.63
5	Chhattisgarh	0.52	0.03	1.88
6	Goa	4.62	5.16	4.42
7	Gujarat	1.36	0.16	2.66
8	Haryana	1.10	0.18	2.42
9	Himachal Pradesh	1.20	0.68	5.74
10	Jharkhand	0.34	0.03	1.24
11	Karnataka	3.22	0.20	7.15
12	Kerala	3.39	6.20	2.25
13	Madhya Pradesh	0.67	0.02	2.28
14	Maharashtra Incl. Mumbai	3.41	0.21	6.88
15	Manipur	0.55	0.06	1.61
16	Meghalaya	0.64	0.07	2.87
17	Mizoram	1.01	0.12	1.74
18	Nagaland	0.38	0.03	0.85
19	Odisha	0.48	0.09	2.19
20	Punjab	1.78	0.55	3.54
21	Rajasthan	0.59	0.05	2.12
22	Sikkim	0.66	0.06	1.39
23	Tamil Nadu	2.42	0.55	4.10
24	Telengana	1.74	0.12	3.60
25	Tripura	0.58	0.07	1.46
26	Uttar Pradesh (UPE + UPW)	0.31	0.02	1.25
27	Uttarakhand	0.99	0.11	2.64
28	West Bengal incl. Kolkata	0.93	0.10	2.40
Union Territories				
1	Andaman & Nicobar Islands	4.07	2.86	5.68
2	Chandigarh	13.79	26.32	13.75
3	Dadra and Nagar Haveli and Daman and Diu	0.39	0.73	0.30
4	Delhi	16.37	0.00	16.48
5	Jammu & Kashmir	0.63	0.05	1.97
6	Ladakh			
7	Lakshdweep	6.19	83.22	3.96
8	Puduchery	2.33	1.11	2.86
Total		1.49	0.19	3.95

Public Call Offices (PCO)

1.34 Total number of PCOs in the country decreased from 137,015 at the end of Dec-20 to 126,108 at the end of Mar-21. Detailed table of service provider wise PCOs is available at **Annexure-1.3**.

Chart 1.12: Trend of Number of PCOs



1.35 Number of PCOs continued show declining trend over the year. It has recorded a overall quarterly decline rate of 7.96% and on Y-O-Y basis decline rate of 28.96% at the QE Mar-21.

Table 1.27: Rate of change & Market share of PCOs

Service Provider	Dec-20	Mar-21	Rate of change (%)	Market share (%) (Mar-21)
BSNL	78,722	68,826	-12.57	54.58
MTNL	53,713	52,771	-1.75	41.85
Bharti	4,058	4,005	-1.31	3.18
Quadrant	522	506	-3.07	0.40
Total	137,015	126,108	-7.96	100

Village Public Telephones (VPTs)

- 1.36 There are 5,93,731 inhabited villages in India as per census 2001. During the Q.E. Mar-21, there are 68,606 villages having Village Public Telephones (VPTs).
- 1.37 Number of VPTs remained same i.e. 68,606 at the end of Mar-21 as were at the end of Dec-20.
- 1.38 As per the information received in TRAI, at the end of Mar-21, only M/s BSNL was providing VPT in the country. Service area wise detailed table of VPT is available at **Annexure-1.4**.

Chart 1.13: Trend of number of VPTs



Section D: Internet Service

1.39 This section summarizes information submitted by internet service providers for the quarter ending Mar-21. **Part-I** consists of information of Internet service (narrowband+broadband), **Part-II** consists of broadband service and **Part-III** covers narrowband service.

Part-I: Internet Service (broadband + narrowband)

1.40 As per reports received from 449 operators as compared to 396 operators in last quarter, total number of internet subscribers increased from 795.18 million at the end of Dec-20 to 825.30 million at the end of Mar-21 with quarterly growth rate of 3.79%. Out of total 825.30 million internet subscribers, 778.09 million were broadband subscribers and 47.21 million were narrowband subscribers.

1.41 Wired Internet subscribers increased from 25.54 million at the end of Dec-20 to 25.99 million at the end of Mar-21 with quarterly growth rate of 1.80%. Wireless Internet subscribers increased from 769.64 million at the end of Dec-20 to 799.31 million at the end of Mar-21 with quarterly growth rate of 3.85%.

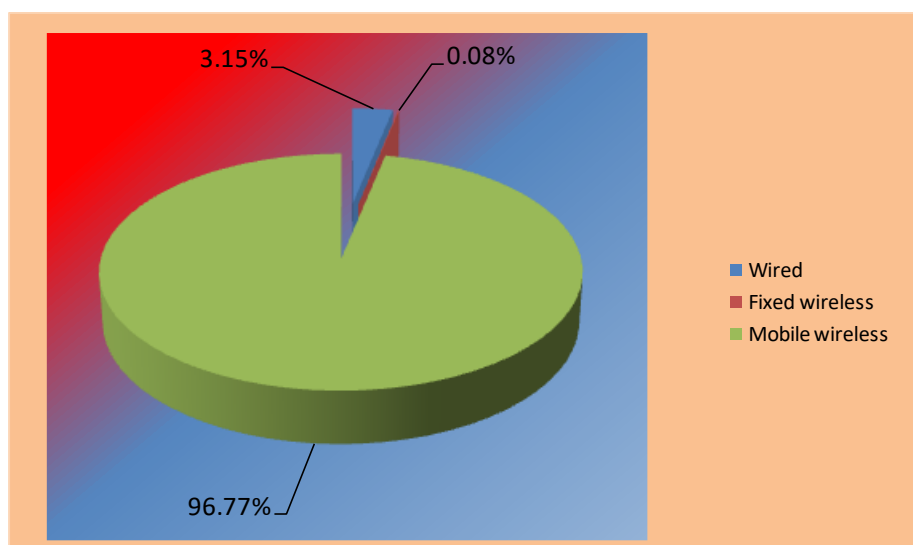
1.42 The number of Broadband subscribers increased from 747.41 million at the end of Dec-20 to 778.09 million at the end of Mar-21 with quarterly growth rate of 4.11%. However, the number of Narrowband subscribers declined from 47.77 million at the end of Dec-20 to 47.21 million at the end of Mar-21 with quarterly decline rate of 1.18%.

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-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21
Broadband	22.29	22.75	0.65	0.67	724.46	754.67	725.12	755.35	747.41	778.09
Narrowband	3.24	3.25	0.004	0.01	44.52	43.96	44.53	43.96	47.77	47.21
Total	25.54	25.99	0.66	0.68	768.99	798.63	769.64	799.31	795.18	825.30

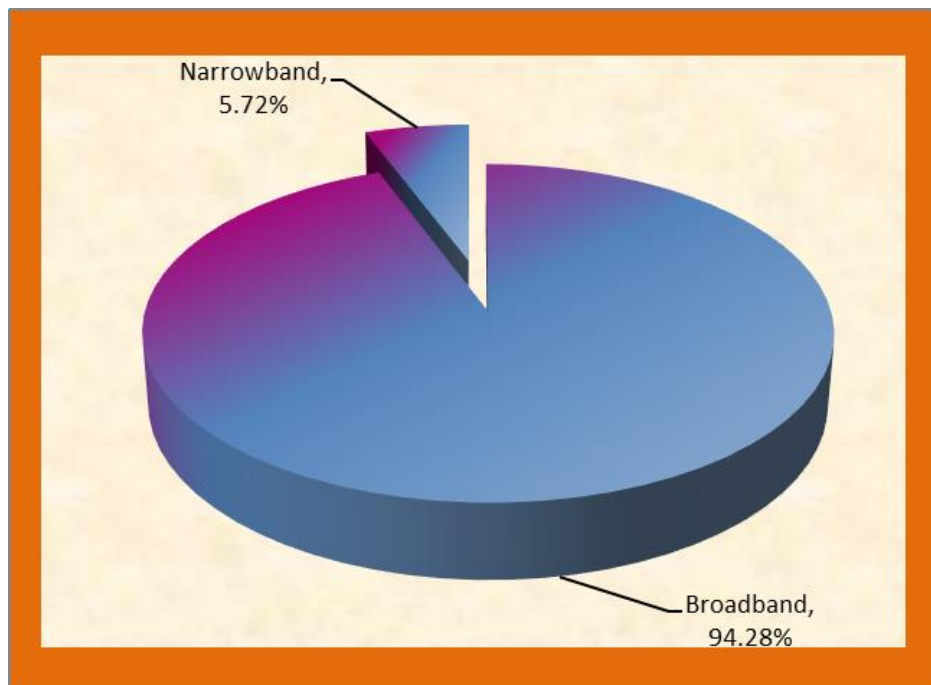
1.43 The following charts present the composition of Internet Subscribers by mode of access and composition of Broadband & Narrowband subscription as on 31st March, 2021.

Chart 1.14: Composition of Internet subscription



1.44 Out of total internet subscribers, 96.77% subscribers are using Mobile devices for access of internet service. Wired internet subscribers are only 3.15% in total internet subscribers at the end of Mar-21.

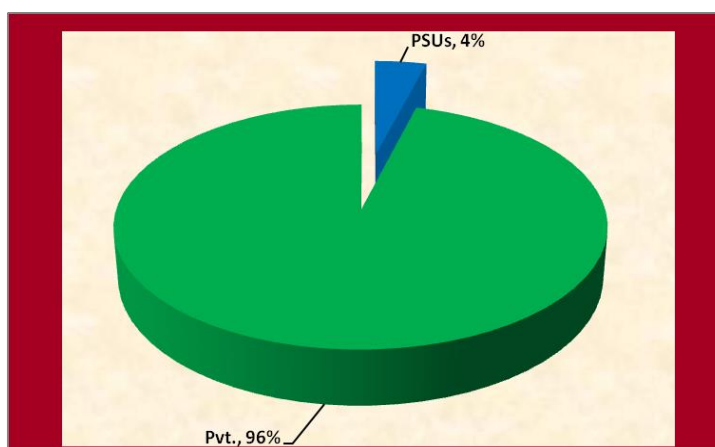
Chart 1.15 : Composition of Broadband & Narrowband subscription



1.45 Out of total internet subscribers, 94.28% subscribers are using broadband for access of internet.

1.46 Share of private internet service providers in total internet subscriber base remained same i.e. 96%, at QE Mar-21. The following charts present the composition of market share of PSUs and Private Internet service providers.

Chart 1.16 : Market share of PSUs and Private Internet Service Providers



1.47 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 (in millions)

Telecom Service Area	Narrowband		Broadband		Total (Mar-21)		Total (Dec-2020)	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	1.71	1.65	26.37	34.49	28.08	36.14	27.35	35.24
Assam	0.61	0.30	9.08	6.22	9.69	6.52	9.12	6.31
Bihar	2.97	1.11	31.65	19.68	34.62	20.79	33.01	20.00
Delhi	0.11	3.11	0.65	41.09	0.76	44.20	0.71	42.50
Gujarat	0.75	0.95	14.72	34.13	15.47	35.08	14.76	34.05
Haryana	0.38	0.45	7.31	10.41	7.69	10.86	7.00	10.77
Himachal Pradesh	0.16	0.14	4.09	2.33	4.25	2.47	4.18	2.39
Jammu & Kashmir	0.28	0.17	3.35	4.55	3.64	4.72	3.50	4.54
Karnataka	1.30	1.40	16.64	30.75	17.94	32.15	17.61	31.30
Kerala	0.66	0.87	11.81	17.08	12.46	17.95	12.05	17.59
Kolkata	0.10	1.17	1.34	16.51	1.44	17.68	1.44	17.15
Madhya Pradesh	1.73	1.57	20.90	31.22	22.63	32.79	21.46	31.45
Maharashtra	1.70	1.86	27.19	40.38	28.88	42.24	27.88	41.14
Mumbai	0.07	1.88	1.82	28.53	1.89	30.41	1.90	29.54
North East	0.24	0.19	4.41	4.23	4.65	4.41	4.49	4.24
Orissa	0.85	0.28	13.08	7.39	13.94	7.66	13.27	7.38
Punjab	0.46	0.69	8.70	18.64	9.16	19.34	8.80	18.80
Rajasthan	1.40	1.15	20.08	22.78	21.47	23.93	20.70	23.15
Tamil Nadu	1.59	1.69	13.68	39.78	15.26	41.46	14.61	39.85
UP (East)	3.24	1.33	30.33	26.53	33.57	27.87	31.33	27.27
UP (West)	1.19	1.11	15.30	24.14	16.49	25.25	15.33	24.76
West Bengal	1.78	0.84	17.00	17.78	18.78	18.62	17.69	17.61
Grand Total	23.29	23.92	299.48	478.61	322.77	502.53	308.17	487.01
	47.21		778.09		825.30		795.18	

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

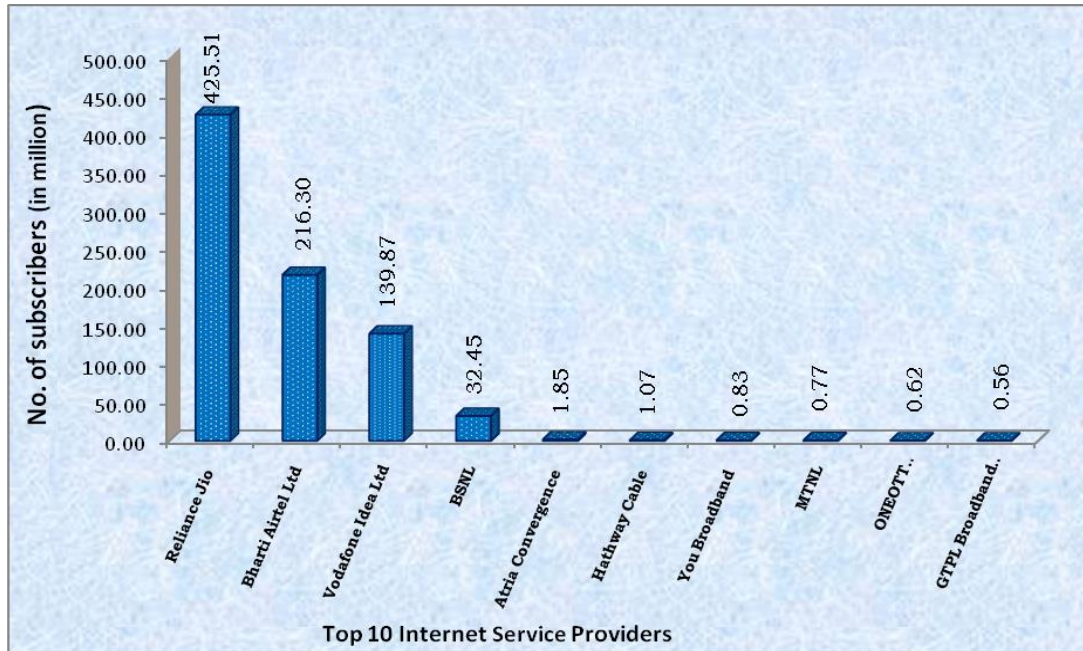
S.No	ISP	No. of Subscribers (In million)	Share (%)
1	Reliance Jio Infocomm Ltd	425.51	51.56
2	Bharti Airtel Ltd.	216.30	26.21
3	Vodafone Idea Limited	139.87	16.95
4	Bharat Sanchar Nigam Ltd.	32.45	3.93
5	Atria Convergence Technologies Pvt. Ltd.	1.85	0.22
6	Hathway Cable & Datacom Pvt. Ltd.	1.07	0.13
7	You Broadband India Pvt. Ltd.	0.83	0.10
8	Mahanagar Telephone Nigam Ltd.	0.77	0.09
9	ONEOTT iENTERTAINMENT LTD	0.62	0.07
10	GTPL Broadband Pvt. Ltd.	0.56	0.07
Total of Top 10 ISPs		819.83	99.34
Others		5.47	0.66
Grand Total		825.30	100

1.48 Reliance Jio holds the top position with 51.56% of market share of internet subscribers followed by Bharti Airtel Ltd with 26.21% at the QE Mar-21. M/s Vodafone Idea Ltd held the third position in respect of internet subscriber base with market share of 16.95%.

1.49 Out of total 449 internet service providers, top 10 Service Providers together hold 99.34% of total internet subscriber base at the QE Mar-21. Detailed table of number of internet subscriber base (broadband and narrowband) of all the service providers is available at **Annexure-1.5**.

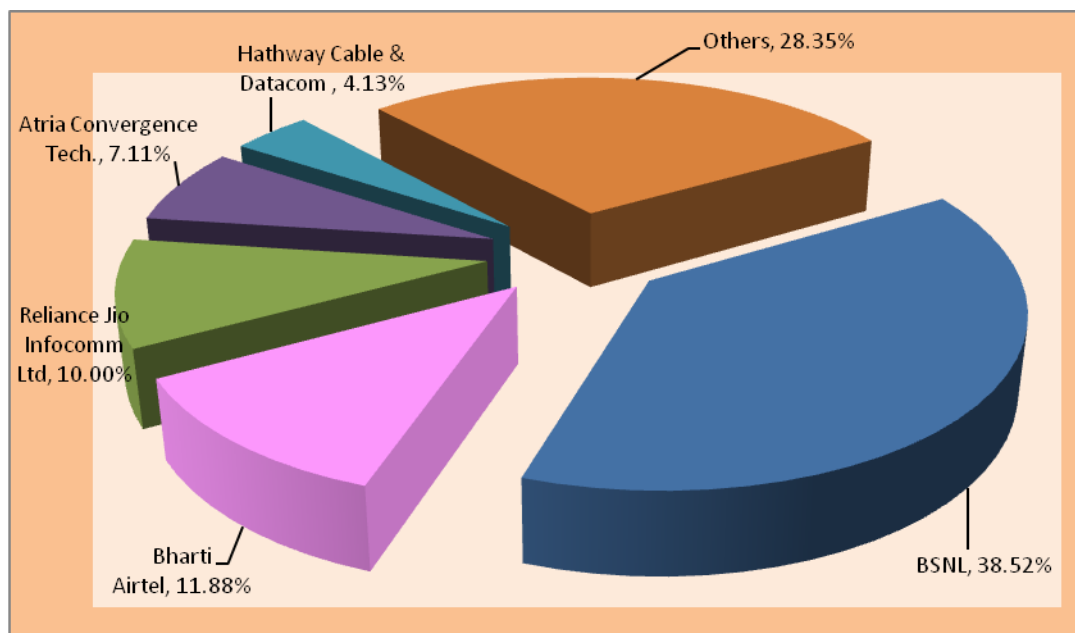
1.50 The following chart depicts the internet subscriber base of top ten Internet Service Providers (ISPs) in the QE Mar-21.

Chart 1.17 : Subscriber base of top ten ISPs



1.51 Out of total 26 million wired internet subscribers, BSNL holds 38.52% market share with 10.02 million subscribers, followed by Bharti with 3.09 million subscribers.

Chart 1.18 : Composition of Wired Internet subscribers



1.52 In wireless internet segment, Reliance Jio holds 52.91% market share with 422.92 million subscribers followed by Bharti Airtel Ltd with 26.68% of wireless internet subscribers at the QE Mar-21.

Chart 1.19 : Composition of Wireless Internet subscription

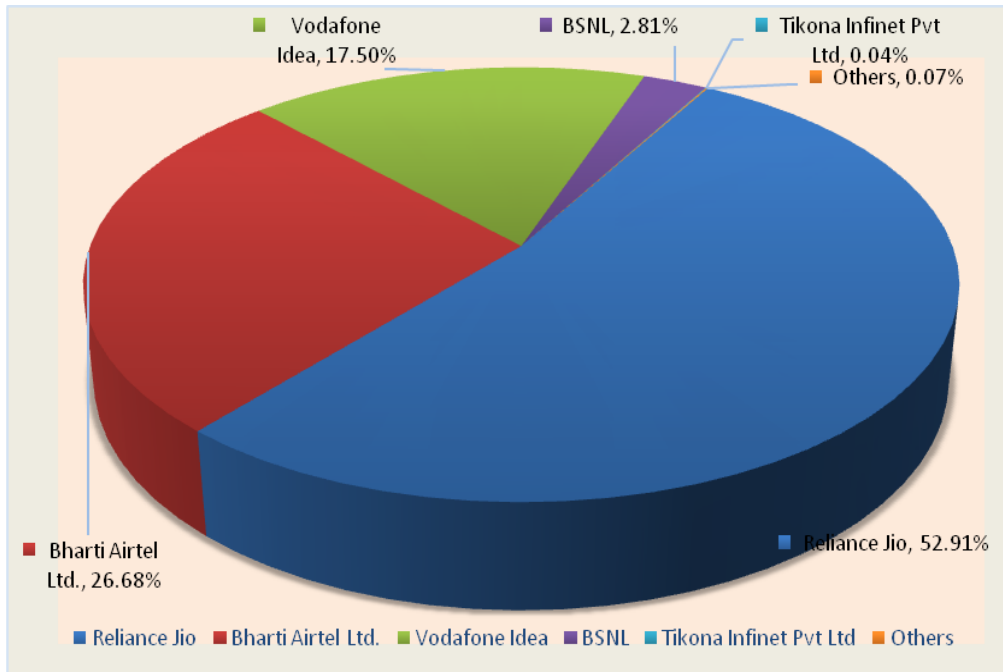


Chart 1.20 : Technology trend for Wireless Internet Access

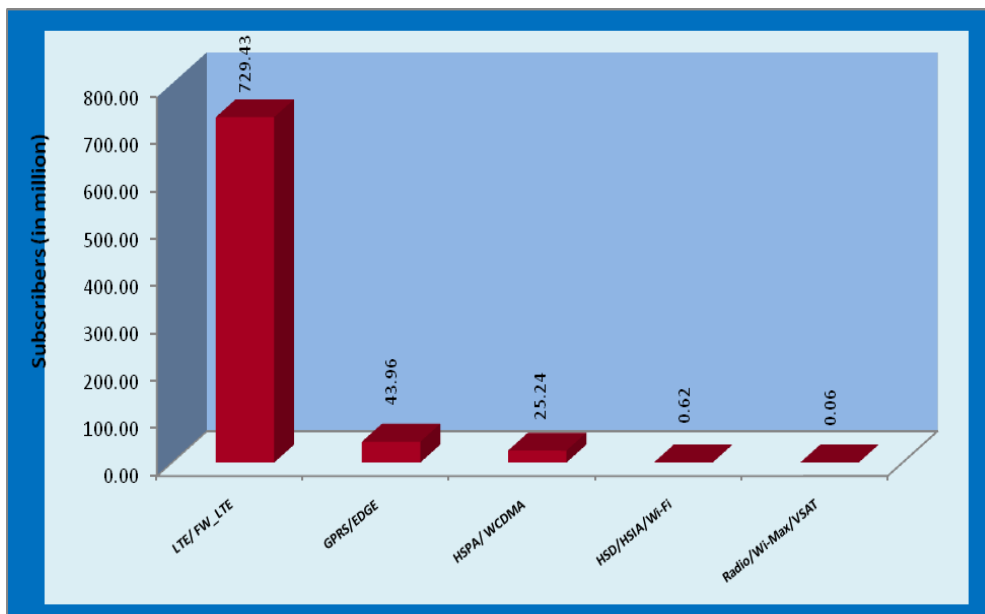
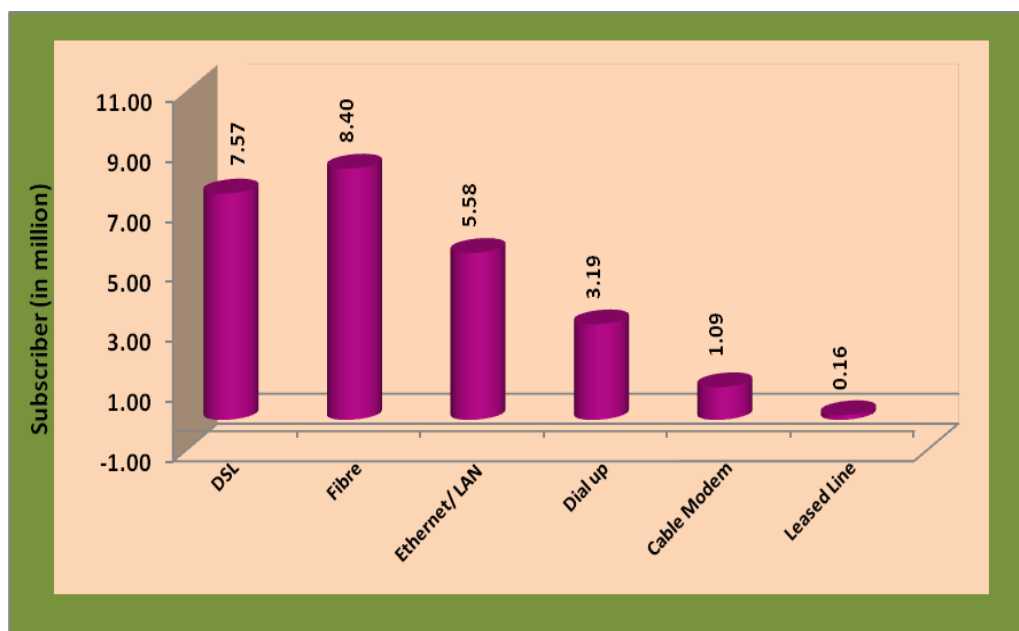


Chart 1.21: Technology trend for Wired Internet Access



1.53 Top five service areas in terms of internet subscriptions (wired+ wireless) are Maharashtra (71.13 million), Andhra Pradesh including Telengana (64.22 million), U.P.(East) (61.44 million) Tamil Nadu (56.73 million) and Madhya Pradesh (55.42 million).

Table 1.31 : Service Area wise number of Internet Subscribers per 100 population at the end of Mar-21

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	28.08	36.14	64.22	51.60	100.38	71.02
Assam	9.69	6.52	16.21	32.71	121.76	46.33
Bihar	34.62	20.79	55.42	25.38	83.95	34.38
Delhi	0.76	44.20	44.96	555.65	216.98	219.24
Gujarat	15.47	35.08	50.55	42.17	103.11	71.50
Haryana	7.69	10.86	18.55	44.17	90.44	63.06
Himachal Pradesh	4.25	2.47	6.72	64.11	325.49	90.93
Jammu & Kashmir	3.64	4.72	8.36	37.98	115.03	61.05

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Karnataka	17.94	32.15	50.09	47.46	111.04	75.03
Kerala	12.46	17.95	30.42	119.70	71.49	85.62
Madhya Pradesh	22.63	32.79	55.42	27.69	102.38	48.72
Maharashtra	28.88	42.24	71.13	47.28	119.67	82.21
Mumbai	1.89	30.41	32.30			
North East	4.65	4.41	9.06	45.23	85.59	58.71
Orissa	13.94	7.66	21.60	38.85	94.29	49.09
Punjab	9.16	19.34	28.50	51.26	141.81	90.45
Rajasthan	21.47	23.93	45.40	36.83	114.99	57.39
Tamil Nadu	15.26	41.46	56.73	41.74	100.29	72.81
UP (East)	33.57	27.87	61.44	27.33	90.63	42.67
UP (West)	16.49	25.25	41.74			
Kolkata	1.44	17.68	19.11	31.85	101.81	57.02
West Bengal	18.78	18.62	37.39			
Total	322.77	502.53	825.30	36.24	107.30	60.73

* 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 from the Report of the technical group on population projections published by National Commission on Population, Ministry of Health & Family Welfare. (Based on Census of India 2011)
2. 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.

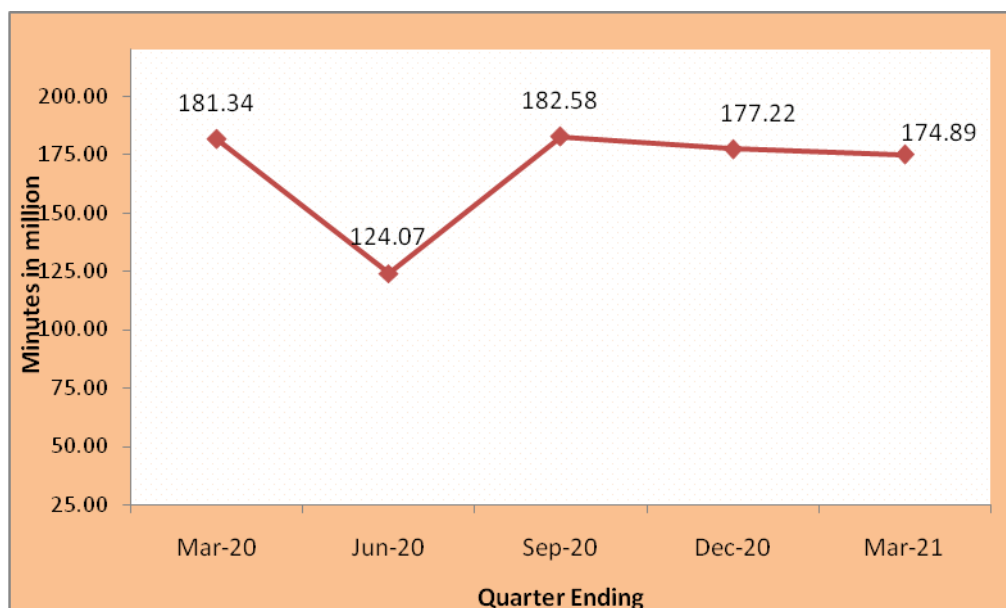
ISP Connectivity

1.54 The International Internet bandwidth owned by various service providers is reported to be 21,719 Gbps during the quarter ending Mar-21 as compare to 20,811 Gbps during the previous quarter.

Internet Telephony

1.55 As per the reports received from 13 service providers, providing Internet Telephony services, the total outgoing minutes of usage for internet telephony decreased from 177.22 million minutes at the end of Dec-20 to 174.89 million minutes at the end of Mar-21. 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)

1.56 The total number of broadband subscribers increased from 747.41 million at the end of Dec-20 to 778.09 million at the end of Mar-21. Out of which number of wired broadband subscribers are 22.75 million and wireless broadband subscribers are 755.35 million.

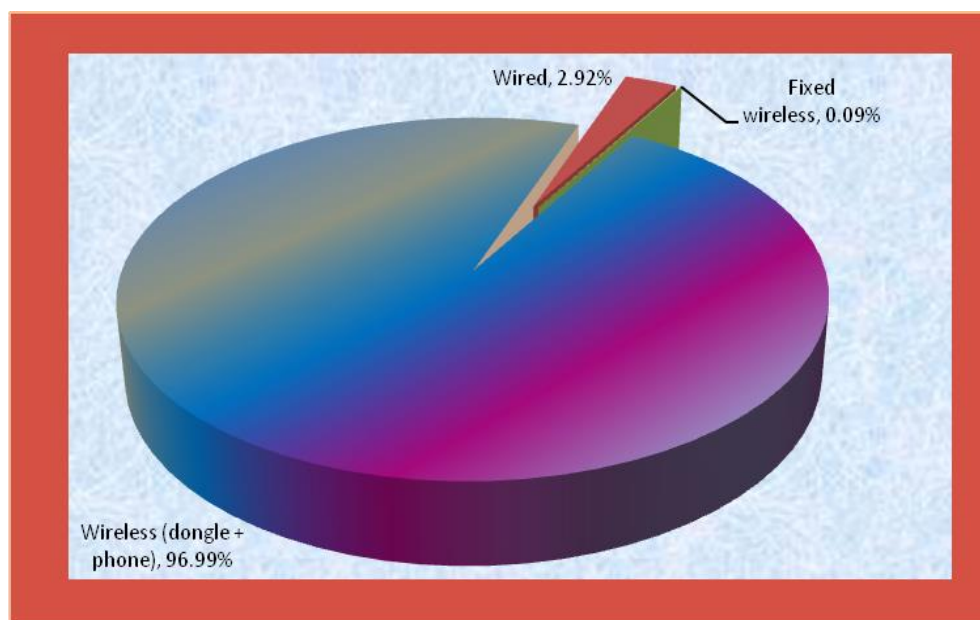
1.57 Top five broadband (wired+wireless) service providers in term of subscribers are Reliance Jio (425.51 million), Bharti Airtel (191.93 million), Vodafone Idea Ltd (123.61 million), BSNL (26.04 million) and Atria Convergence (1.85 million).

1.58 In wired broadband segment, BSNL holds 29.98% market share with 6.82 million subscribers followed by Bharti with 3.09 million subscribers in QE Mar-21.

1.59 In wireless broadband segment, Reliance Jio holds 55.99% market share with 422.92 million subscribers followed by Bharti Airtel Ltd (25%) with 188.84 million subscribers in QE Mar-21.

1.60 Top five service areas in respect of broadband subscriptions at Q.E. Mar-21 are Maharashtra (67.56 million), Andhra Pradesh including Telengana (60.86 million), U.P.-East (56.87 million), Tamil Nadu (53.45 million) and Madhya Pradesh (52.11 million).

Chart 1.23 : Composition of Broadband subscription – Technology wise

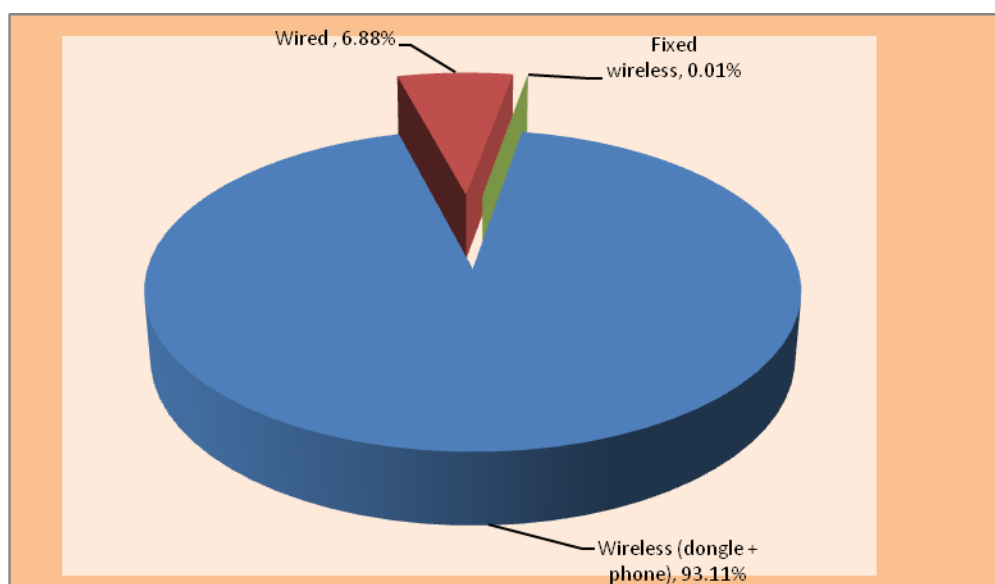


1.61 Mobile Device Users (dongle+phone) constitute 96.99% of total broadband subscribers at the end of Mar-21.

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

- 1.62 Total number of narrowband subscribers declined from 47.77 million at the end of Dec-20 to 47.21 million at the end of Mar-21 with the quarterly decline rate of 1.18%. Out of 47.21 million narrowband subscribers, Wired Narrowband subscribers are 3.25 million and Wireless Narrowband subscribers are 43.96 million.
- 1.63 The top five narrowband (wired+wireless) service providers in term of subscriber base are Bharti Airtel (24.38 million), Vodafone Idea Ltd (16.26 million), BSNL (6.41 million), MTNL (0.10 million) and You Broadband (0.02 million) at the end of Mar-21.
- 1.64 In wired narrowband segment, BSNL holds 98.41% market share with 3.20 million subscribers followed by You Broadband India Pvt Ltd with 0.02 million subscribers.
- 1.65 In wireless narrowband segment, Bharti Airtel holds 55.46% market share with 24.38 million subscribers followed by Vodafone Idea Ltd with 16.26 million subscribers.

Chart 1.24 : Composition of Narrowband subscription – Technology wise



**Section E : Other Value Added Services - PMRTS &
Public Mobile Radio Trunk Services (PMRTS)**

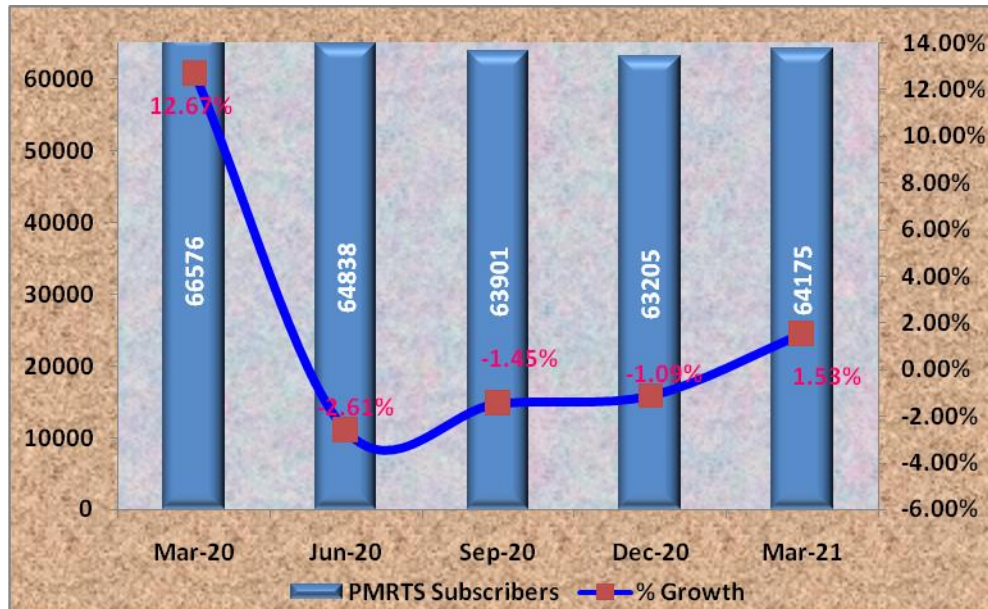
1.66 The subscriber base of PMRTS increased from 63,205 at the end of Dec-20 to 64,175 at the end of Mar-21 with quarterly growth rate of 1.53%.

Table 1.32 : PMRTS Subscriber base - Service Provider wise

Sl. No	Name of the Service Provider	Subscriber Base as on 31.12.2020	Subscriber Base as on 31.03.2021	Net Addition	% Growth in subscribers in QE Mar-21
1	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	52,516	53345	829	1.58
2	Procall Ltd.	3,369	3395	26	0.77
3	Quick Call	2,029	2040	11	0.54
4	Inative Networks Pvt Ltd	1,820	1820	0	0.00
5	Smartalk Pvt Ltd	1,486	1502	16	1.08
6	Bhilwara Telenet Services Pvt Ltd	864	871	7	0.81
7	Wiwonet Solutions Pvt Ltd	690	751	61	8.84
8	Airtalk Solutions & Services Pvt Ltd	431	451	20	4.64
Total		63,205	64,175	970	1.53

1.67 Detailed table on Service Area wise subscriber base of PMRTS as on 31st March, 2021 is available at **Annexure-1.7**.

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



Very Small Aperture Terminal (VSAT)

1.68 The total number of VSAT subscribers decreased from 296,079 at the end of Dec-20 to 293,632 at the end of Mar-21. Net decrease during the quarter has been 2,447 at the decline rate of 0.83%.

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-21
		Dec-20	Mar-21			
1	Hughes Communications Ltd.	125,371	127,380	2,009	1.60	43.38
2	Bharti Airtel Limited	75,978	74,024	-1954	-2.57	25.21
3	Tatanet Services	75,743	73,927	-1816	-2.40	25.18
4	BSNL	8,322	7,899	-423	-5.08	2.69
5	HCL Comnet	8,036	7,784	-252	-3.14	2.65
6	Infotel Satcom	2,579	2,568	-11	-0.43	0.87
7	Cloudcast Digital Ltd	50	50	0	0.00	0.02
Total		296,079	293632	-2447	-0.83	100

1.69 Hughes Communication Limited continues to be the market leader with 43.38% share in VSAT with subscriber base of 127,380 followed by Bharti Airtel Ltd with 74,024 at the end of Mar-21.

1.70 In term of net addition, Hughes Communication Limited added maximum number of VSAT subscribers (2,009 subscribers) during the QE Mar-21. Bharti Airtel Limited, Tatanet Services, BSNL, HCL Comnet and Infotel Satcom have registered decline in their VSAT subscribers during the quarter.

Chapter 2 :

Revenue and Usage

Wireless Services

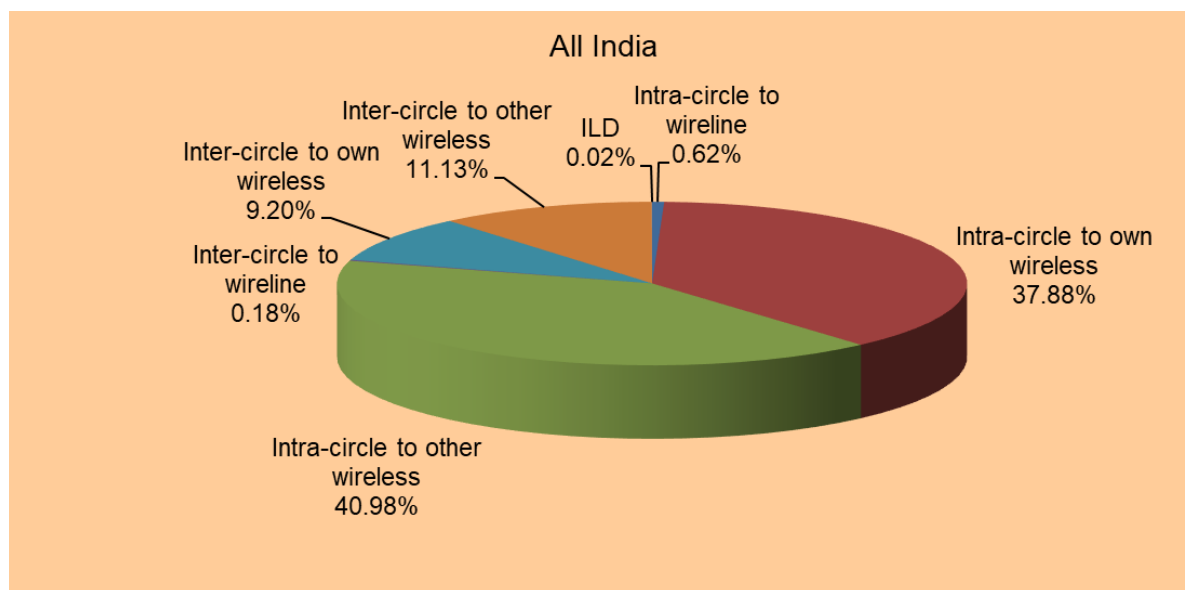
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- For all the parameters, Metros indicate data for Delhi, Mumbai & Kolkata. Data for Chennai service area has been included in Circle A, as part of TN.
 - ARPU arrived after adjusting interconnect usage charges and roaming settlement charges.
 - The data contained in this section covers the licensees, who have been providing service during the entire period from 1st January, 2021 to 31st March, 2021 in the various service areas.

Table 2.1: Key Indicators – Wireless Services

Parameter	Mar-21	Dec-20	Mar-20	QoQ %age change	YoY %age change
Share of Prepaid (%)	95.04%	95.21%	95.35%	-0.19%	-0.33%
Incoming MOU per subscriber per month	411.42	393.32	376.07	4.60%	9.40%
Outgoing MOU per subscriber per month	406.28	392.06	373.86	3.63%	8.67%
No. of Outgoing SMS per subscriber per month	15.68	15.85	17.26	-1.08%	-9.13%
Average Revenue Per User (ARPU) per month (₹)	103.58	101.65	91.49	1.90%	13.21%

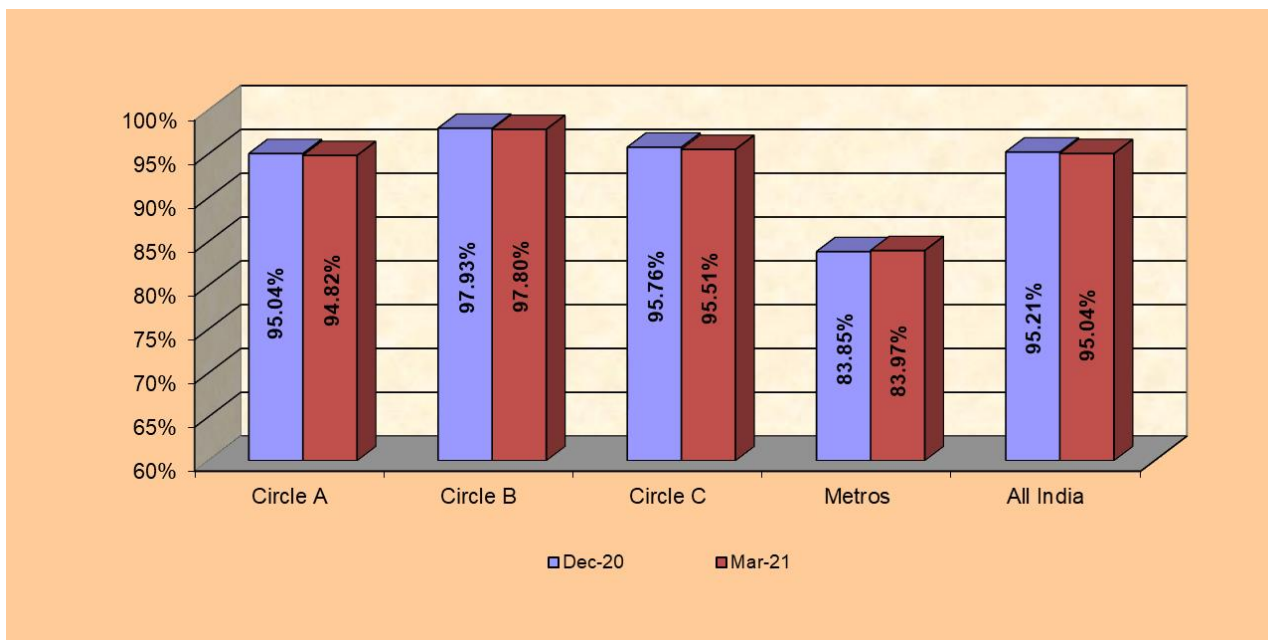
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Mar-21.

Chart 2.1: % Break-up of Outgoing minutes from Home Service Area (HSA)



2.2 The following chart presents pre-paid 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 The market share of pre-paid segment has decreased from 95.21% at the end of Dec-20 to 95.04% at the end of Mar-21.
- 2.4 The ARPU per month (all India blended) increased from Rs.101.65 in QE Dec-20 to Rs.103.58 in QE Mar-21 with quarterly growth rate of 1.90%. Year-on-Year basis, ARPU per month increased by 13.21% in this quarter.
- 2.5 The ARPU per month for pre-paid segment is Rs.97 and ARPU per month for postpaid segment is Rs.226 in QE Mar-21.
- 2.6 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 – Wireless Services in QE Mar-21

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	266	110	118
Circle B	232	92	95
Circle C	196	97	101
Metros	192	72	91
All India	226	97	104
All private SPs	230	104	110
BSNL/MTNL	166	42	46

2.7 The following table presents the composition of ARPU per month for QE Mar-21.

Table 2.3: Composition of ARPU per month - Wireless 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#	0.39	0.3%
1.2.	Revenue from calls	17.84	15.6%
1.3.	Revenue from SMS	0.31	0.3%
1.4.	Revenue from data usage	89.81	78.7%
1.5.	Revenue from other VAS	1.66	1.5%
1.6.	Other revenue	3.49	3.1%
2	Usage outside Home Service Area		
2.1.	Revenue from out-roamers	0.63	0.5%
3	Total revenue from subscribers (1+2)	114.13	100%
4	Net inter-operator settlement charges receivable *	-10.54	
5	Net Revenue (ARPU) per month (3+4)	103.58	

* includes Interconnect Usages Charges and roaming settlement charges

Starting from QE March-20 the TSPs started bifurcating rental revenue amongst revenue from calls and data usage

There is a difference in ARPU calculated by TRAI and the figures published by TSPs in their financial statements. This is because each TSP has a different methodology to calculate the ARPU. For example, one of the TSPs calculated ARPU by dividing the service revenue by the average number of subscribers during the quarter. Another TSP calculated ARPU by dividing operating revenue as given in the P&L account for the quarter by the average subscriber base for the current and previous quarters. Further, TRAI calculates Average Revenue Per User (ARPU) per month as Quarterly Revenue adjusted for interconnect usage charges and roaming settlement charges divided by average subscribers during the quarter for its own regulatory analysis. Therefore, the different methods result in a TRAI ARPU figure being less than what a TSP would declare in its quarterly financial results or presents to investors/Credit rating agencies.

- 2.8 From the above table, it may be seen that the net inter-operator settlement charges payable (Rs.10.54) accounted for 9.24% of the total revenue from subscribers in the Q.E. Mar - 2021.
- 2.9 On an all India average, the overall MOU per subscriber per month increased by 4.12% from 785 in Q.E. Dec-20 to 818 in Q.E. Mar-21.
- 2.10 The following table presents the total MOU (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 during Q.E. Mar-21.

Table 2.4: MOU per subscriber per month - QE Mar-21

Circle category	MOU per subscriber per month								
	Post-paid			Pre-paid			Blended		
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU
Circle A	330	299	629	369	359	729	367	356	724
Circle B	325	310	635	409	424	833	407	422	829
Circle C	411	388	799	491	536	1027	487	530	1017
Metro	254	206	460	444	408	852	413	376	789
All India	315	282	597	411	418	829	406	411	818

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

- 2.11 The overall ratio of incoming MOUs and outgoing MOUs for the Q.E. Mar-21 is 50.3:49.7.
- 2.12 Average number of Outgoing SMS per subscriber per month is 16 in QE Mar - 2021. 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 categories of subscribers viz. post-paid and pre-paid during Q.E. Mar - 2021.

Table 2.5: No. of Outgoing SMS per subscriber per month during QE Mar-21

Circle category	Outgoing SMS per subscriber per month		
	Post-paid	Pre-paid	Blended
Circle A	48	15	17
Circle B	51	13	14
Circle C	19	18	18
Metro	32	12	15
All India	39	14	16

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 during Q.E. Mar-2021

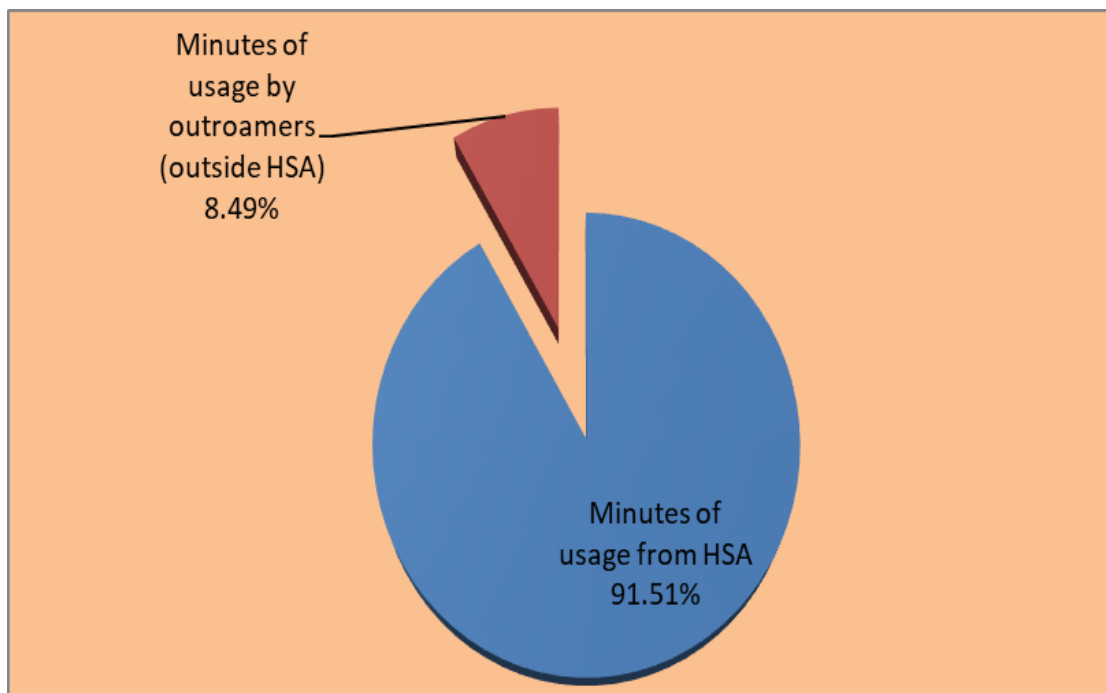
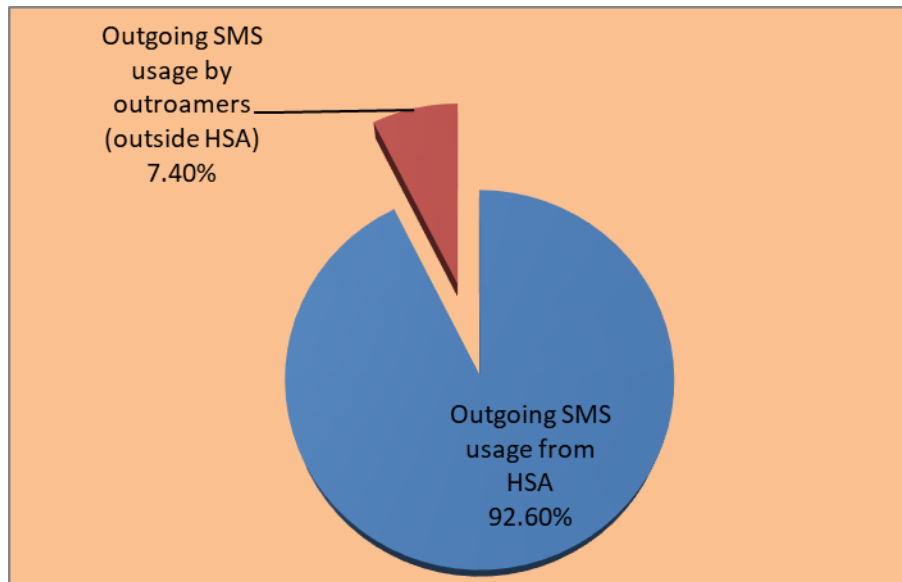


Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage during Q.E. Mar-2021



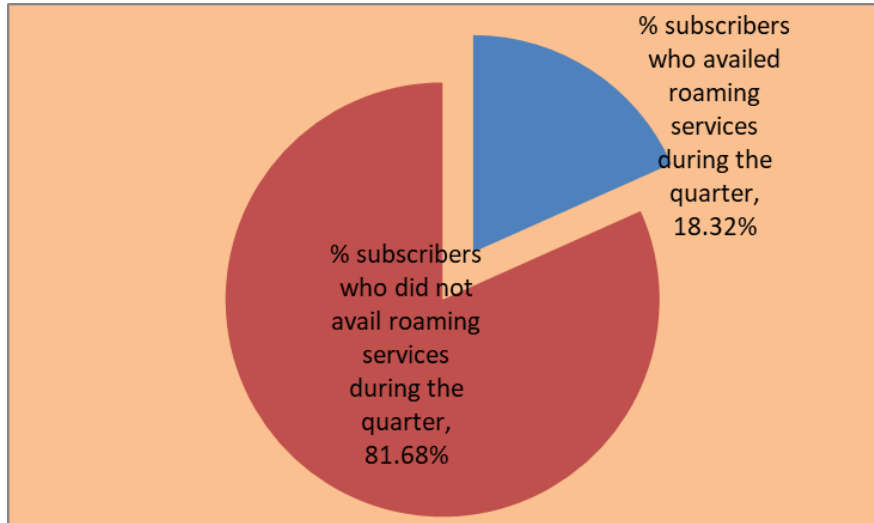
2.13 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks in the Q.E. Mar-21.

Table 2.6: %Break-up of Outgoing minutes from Home Service Area (HSA) during the Q.E. Mar - 2021

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	0.74%	39.33%	45.40%	0.16%	6.46%	7.90%	0.02%
Circle B	0.56%	37.51%	41.90%	0.16%	8.77%	11.09%	0.01%
Circle C	0.34%	41.59%	35.65%	0.17%	10.67%	11.58%	0.01%
Metros	0.97%	27.33%	32.41%	0.34%	17.50%	21.40%	0.04%
All India	0.62%	37.88%	40.98%	0.18%	9.20%	11.13%	0.02%

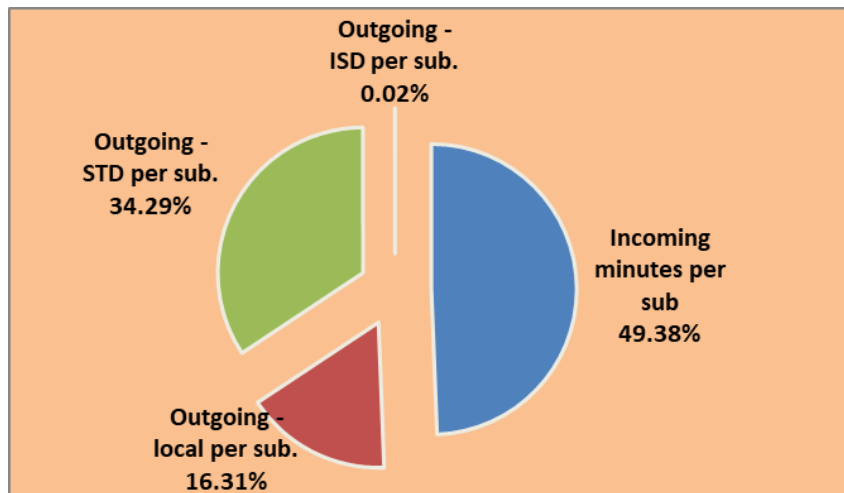
2.14 The following chart presents the percentage of subscribers who availed roaming services (out-roamers) during the QE Mar-21.

Chart 2.5: % subscribers availed roaming services during the QE Mar-21



2.15 The usage pattern of outroamers i.e. usage from outside the home service area shows that incoming minutes accounts for 49.38% of the total minutes of usage by outroamers in QE Mar - 2021 as against 45.91% in the Dec-20 quarter. The chart given below presents the break-up of minutes of usage of outroamers.

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



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

8. Average Revenue per Outgoing Minute of usage from HSA

$$= \frac{\text{Revenue from Calls}}{\text{No. of outgoing minutes from HAS}}$$

Table 2.7: Average revenue per outgoing minute from HSA in QE Mar-21

(In Rs. per minute)

Circle Category	Postpaid	Prepaid	Blended
Circle A	0.08	0.05	0.05
Circle B	0.07	0.05	0.05
Circle C	0.03	0.05	0.05
Metros	0.07	0.04	0.04
All India	0.07	0.05	0.05

2.17 All India average revenue per outgoing minute has not changed from Re. 0.05 in the previous quarter to Re. 0.05 in Q.E. Mar-21.

Table 2.8: Trends of Key Parameters - Wireless Services

Parameter	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21
1. ARPU (₹ Per month)	91	90	97	102	104
2. Average revenue Realization per subscriber per GB wireless data (in ₹)	11.23	10.55	10.95	11.01	10.77
3. MOU per subscriber per month	750	744	761	785	818
4. Outgoing MOU per subscriber per month					
4.1 Local (Intra-circle)	276	282	296	300	306
4.2 NLD (inter-circle)	98	90	84	92	100
4.3 ILD	0.10	0.09	0.07	0.06	0.06
5. Average no. of Outgoing SMS per subscriber per month	17	15	16	16	16
6. Average revenue per outgoing minute from HSA (in ₹)	0.06	0.05	0.05	0.05	0.05

2.18 Service Area wise statistics are available at **Annexure-2.1**.

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-20 (Rs. in Crore)	QE Dec-20 (Rs. in Crore)	QE Mar-21 (Rs. in Crore)	Q-O-Q % Change	Y-O-Y % Change
Gross Revenue (GR)	67,534	71,588	66,784	-6.71	-1.11
Adjusted Gross Revenue (AGR)	44,940	47,623	48,587	2.03	8.12
Pass Through Charges (GR-AGR)	22,593	23,966	18,196	-24.07	-19.46
License Fee	3,604	3,809	39,79	4.44	10.40
Spectrum Usage Charges	1,424	1,538	1,540	0.19	8.18

3.1 Gross Revenue (GR) decreased by 6.71% and Adjusted Gross Revenue (AGR) increased by 2.03% during QE Mar-21. On YoY basis GR also decreased by 1.11% and AGR increased by 8.12% in QE Mar-21.

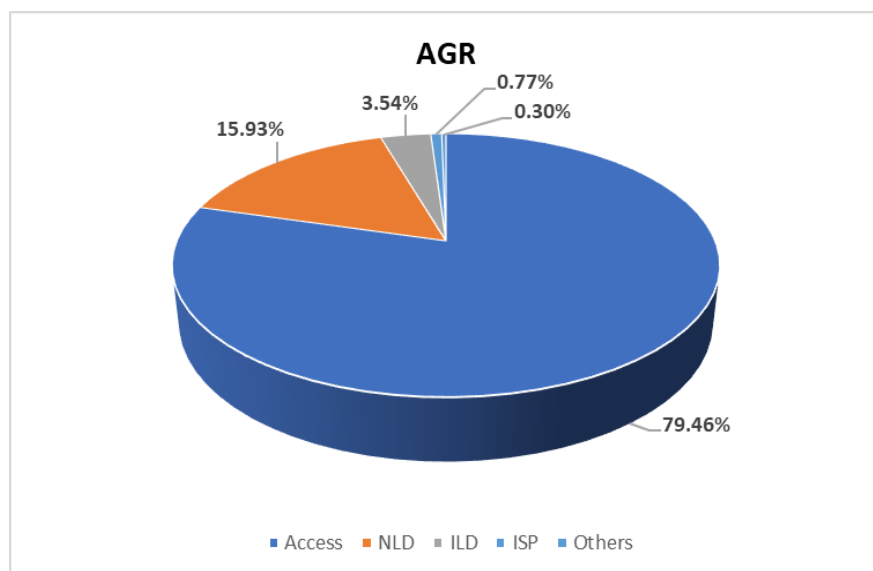
3.2 Pass through charges decreased on both quarterly and yearly basis by 24.07% and 19.46% respectively in the QE Mar-21.

3.3 Pass-through charges as a percentage of Gross Revenue are 27.25% in QE Mar-21 as against 33.48% in the previous quarter.

Table 3.2: Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges for QE Mar-21
(in Rs. Crore)

Service	GR	AGR	LF	Spectrum Usage Charges
Access Providers	50,454.99	38,607.95	3,157.94	1,536.62
NLD	8,094.36	7,739.42	643.39	-
ILD	3,502.99	1,719.67	137.90	-
ISP	4,572.39	372.89	29.79	-
Others	159.02	147.48	9.63	3.79
Total	66,783.75	48,587.40	3,978.64	1,540.40

Chart 3.1: Composition of Adjusted Gross Revenue



3.4 Access services contributed 79.46% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR) and Pass Through Charges decreased by 5.99% and 23.06% respectively, however, Adjusted Gross Revenue (AGR), License Fee and Spectrum Usage Charges (SUC)††† increased by 0.88%, 3.12% and 0.14% respectively in QE Mar-21.

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

(in Crore)

Service Provider	QE Mar-21	QE Dec-20	% Change
Reliance Jio	16422.83	17,181.65	-4.42
Bharti Airtel	13049.44	11,340.19	15.07
Vodafone Idea	6152.25	6,588.46	-6.62
BSNL	1987.31	2,135.17	-6.92
Tata Tele.	582.74	584.10	-0.23

††† Spectrum Usage Charge is payable by the licensees providing mobile access services, as a percentage of their Adjusted Gross Revenue (AGR).

(Source – DoT License Agreement)

Service Provider	QE Mar-21	QE Dec-20	% Change
MTNL	302.53	369.84	-18.20
Reliance Com.	104.97	69.82	50.35
Quadrant	3.88	-0.24	1716.67
V-Con Mobile & Infra Pvt. Ltd.	1.99	3.78	-47.37
Grand Total (Access)	38607.95	38272.76	0.88

3.5 Public Sector Undertakings' share in the Access AGR of telecom services is 5.93% in the QE Mar-21.

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

Category	AGR of Access Services for QE Mar-21 (in crore)	%age share of AGR
Metro	4,183.37	10.84
A	14,994.44	38.84
B	13,887.56	35.97
C	5,542.58	14.36
Total	38,607.95	100

Notes: -

1. Figures are **un-audited** and as submitted by the TSPs.
2. A copy of quarterly Statement(s) of Revenue and Licence Fee and Spectrum Charges filed with the licensor(DoT) is submitted by Telecom Service Providers to TRAI in reference to TRAI's Order No.14-11/2009-FA, dated 9th August, 2010.
3. The figures have been re-grouped wherever considered necessary for analysis purpose.
4. Percentage of contribution of Five TSPs of Public Sector (BSNL, MTNL, Rail Tel, Power Grid, Oil India and Bharat Broadband) to AGR in NLD Service and two TSPs of Public Sector (BSNL/MTNL) in Access Services and BSNL in ILD Services.
5. For all the parameters metros indicate data for Delhi, Mumbai and Kolkata. Data for Chennai Service Area has been included as part of Tamil Nadu
6. From this quarter onwards ISPs is not included in 'Others'.

Chapter 4 : Quality of Service (QoS)

Section A: Quality of Service Performance of Wireless Service Providers

Table 4.1: QoS Summary - Wireless Service

Summary of Performance of Service providers comparative to the previous quarter against identified parameters

S.No.	Parameters	Benchmark	Performance in respect of UASL/CMTS Licensees for the Parameters and Benchmarks			
			For Quarter Ending Dec, 2020		For Quarter Ending Mar, 2021	
			Out Of 88 (Nos.)	Out Of 88 (Nos.)	Out Of 88 (Nos.)	Out Of 88 (%)
I.	Network Related Parameters					
1	Network Availability					
(i)	BS Accumulated down-time (not available for service) (%age)	≤ 2%	0	0%	0	0%
(ii)	Worst affected BSs due to down-time (%age)	≤ 2%	1	1.14%	0	0%
2	Connection Establishment (Accessibility)					
(i)	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 Channel Congestion/ RRC Congestion (%age)	≤ 1%	0	0%	0	0%
(iii)	TCH, RAB and E-RAB congestion (%age)	≤ 2%	0	0%	0	0%
3	Connection Maintenance (Retain ability)					
(i)	Network QoS DCR Spatial Distribution Measure [Network_ QSD (90,90)]	≤ 2%	2	2.27%	2	2.27%
(ii)	Network QoS DCR Temporal Distribution Measure [Network_ QTD (97,90)]	≤ 3%	2	2.27%	2	2.27%
4	Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality					
		≥ 95%	0	0%	0	0%
5	Point of Interconnection (POI) Congestion (No. of POIs not meeting the					
		≤ 0.5%	0	0%	0	0%

	benchmark) (Averaged over a period of quarter)					
6	Down Link (DL) Packet Drop Rate or DL-PDR	≤ 2%	0	0%	0	0%
7	Up Link (UL) Packet Drop Rate or UL-PDR	≤ 2%	1	1.14%	1	1.14%
II.	Customer Service Quality Parameters					
6	Metering and Billing/					
(i)	Metering and billing credibility - post paid	≤ 0.1%	0	0%	0	0%
(ii)	Metering and billing credibility - pre paid	≤ 0.1%	0	0%	0	0%
(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	0	0%	0	0%
7	Response time to the customer for assistance					
(i)	Accessibility of call centre/ customer care	≥ 95%	5	5.68%	0	0%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	13	14.77%	20	22.73%
8	Termination / closure of service					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	0	0%	0	0%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	6	6.82%	0	0%

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

- a. Worst affected BSs due to down-time %age)
- b. Accessibility of call centre/ customer care
- c. 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: -

- l. %age of calls answered by the operators (voice to voice) within 90 Seconds

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

Parameter	Benchmark	Service Provider	Service Area	Performance in QE March 2021 (in %)
Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	BSNL	West Bengal	6.94
Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	VIL	Jammu & Kashmir	2.22
Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	BSNL	West Bengal	8.33
Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	VIL	Jammu & Kashmir	3.58
Up Link (UL) Packet Drop Rate or UL-PDR	≤ 2%	BSNL	West Bengal	2.32
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Airtel	Assam	89.00
			Bihar	89.00
			Delhi	90.00
			Gujarat	90.00
			Haryana	82.00
			Himachal Pradesh	92.00
			Jammu And Kashmir	93.00
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Airtel	Kolkata	78.00
			Madhya Pradesh	92.00
			Maharashtra	91.00
			Mumbai	93.00
			North East	87.00

Parameter	Benchmark	Service Provider	Service Area	Performance in QE March 2021 (in %)
			Odisha	91.00
			Punjab	91.00
			Rajasthan	92.00
			Tamil Nadu	84.00
			Uttar Pradesh (East)	89.00
			Uttar Pradesh (West)	90.00
			West Bengal	66.00
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	BSNL	Karnataka	94.08

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

Summary of Performance of service providers against identified parameters

S.N.	Parameters	Benchmark	No of license areas where operators not meeting the benchmarks			
			December, 2020		March, 2021	
			Out of 98 In Nos.	Out of 98 In %age	Out of 98 In Nos.	Out of 98 In %age
(i)	“Fault repair” Fault incidences No. of faults per 100 subs/month)	≤ 7	1	1.02%	1	1.02%
(ii)	% Fault repaired by next working day (for urban areas)	≥ 85%	5	5.10%	8	8.16%
	% Fault repaired within 5 days (for urban areas)	≥100%	2	2.04%	2	2.04%
(iii)	% Fault repaired by next working day (for rural and hilly areas)	≥ 75%	0	0.00%	0	0.00%
	% Fault repaired within 7 days (for rural and hilly areas)	≥100%	0	0.00%	0	0.00%
(iv)	“Mean time to Repair” (MTTR)	≤10Hs	6	6.12%	5	5.10%
(v)	“Point of Interconnection” (POI) Congestion (No. of PoIs not meeting benchmark)	≤ 0.5%	0	0.00%	0	0.00%
(vi)	“Metering and Billing” Metering and billing credibility - post-paid	≤ 0.1%	0	0.00%	0	0.00%
	Metering and Billing credibility -pre-paid	≤ 0.1%	0	0.00%	0	0.00%
(vii)	Resolution of billing/charging /Credit & validity complaints	98% within 4 weeks	0	0.00%	0	0.00%
	Resolution of billing/charging / Credit & validity complaints	100% within 6 weeks	0	0.00%	0	0.00%

(viii)	Period of applying credit /waiver/adjustment to customer's	1 week of resolution of complaint	0	0.00%	0	0.00%
(ix)	“Response time to the customer for assistance” Accessibility of call centre/ customer care	≥ 95%	28	28.57%	0	0.00%
	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	16	16.33%	1	1.02%
(x)	“Termination / closure of service”- %age of request for Termination / closure of service complied within 7 days	100% within 7 days	1	1.02%	1	1.02%
(xi)	Time taken for refund of deposits after closures	100% within 60 days	1	1.02%	1	1.02%

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

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

- ❖ “Mean time to Repair” (MTTR) ≤ 10Hs
- ❖ Accessibility of call centre/ customer care ≥ **95%**
- ❖ %age of calls answered by the operators (voice to voice) within 90 seconds ≥ **95%**

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

- ❖ %Fault repaired by next working day (for urban areas) ≥ 85%

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

Parameters	Benchmarks	Service Provider	Service areas	Parameters not met
Faults incidences (No. of faults/ 100 Subs./ month)	≤7	TTSL	Madhya Pradesh	11.06
% of faults repaired by next working day	For urban areas by next working day: ≥85%	MTNL	Delhi	65.46%
		MTNL	Mumbai	63.90%
		TTSL	Andhra Pradesh	84.17%
		TTSL	Haryana	50.00%
		TTSL	Kerala	60.00%
		TTSL	Karnataka	83.33%
		TTSL	Punjab	80.95%
		TTSL	Tamil Nadu	84.89%
% of faults repaired within 5 days	For urban areas: ≥ 100%	MTNL	Delhi	90.00%
% of faults repaired within 5 days	For urban areas: ≥ 100%	MTNL	Mumbai	81.40%
Mean Time to Repair (MTTR)	≤ 10 Hrs	MTNL	Delhi	15.22
	≤ 10 Hrs	MTNL	Mumbai	51.99
	≤ 10 Hrs	TTSL	Haryana	30.49
	≤ 10 Hrs	TTSL	Kerala	11.75
Mean Time to Repair (MTTR)	≤ 10 Hrs	TTSL	Karnataka	10.75
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥95%	MTNL	Mumbai	54.11%
%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	MTNL	Mumbai	93.25%
Time taken for refund of deposits after closures	100% within 60 days	MTNL	Mumbai	7.63%

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 384 Internet Service Providers (ISPs) providing broadband (wireline) service at the end of March, 2021. Out of these 384 ISPs, only 69 Service Providers are having broadband subscriber base more than 10,000 and market share of these 69 SPs is 98.23% of total broadband subscriber base. This report covers performance of 57—broadband Service Providers vis-à-vis the QoS benchmarks prescribed by TRAI, for the QE March, 2021. Service providers namely M/s. Dwan Supports Pvt. Ltd., M/s. Signum Digital Networks Pvt. Ltd., (new entrants), M/s. Airnet Cable and Datacom Pvt. Ltd., M/s. Ethernet Xpress India Pvt. Ltd., M/s. GTPL KCBPL Broadband Pvt. Ltd., M/s. IKF Technologies Ltd., M/s. Joister Inforserve Pvt. Ltd., M/s. Nextra Teleservices Pvt. Ltd., M/s. Nuron Networks India Pvt. Ltd., M/s. Readylink Internet Services Pvt. Ltd., M/s. Super Sonic Broadband Pvt. Ltd. and M/s. Wan and Lan Internet Pvt. Ltd has not submitted their Performance Monitoring Report (PMR) in this quarter

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

S. No.	Parameters	Benchmark	Quarter Ending		Quarter Ending	
			December, 2020		March, 2021	
			Out of 114	Out of 114	Out of 112	Out of 112
1	Service Provisioning	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	9	7.89%	6	5.36%
2	Faults Repair					
2.2	% of faults repaired by next working day (>90%)	>90%	3	2.63%	4	3.57%

S. No.	Parameters	Benchmark	Quarter Ending		Quarter Ending	
			December, 2020		March, 2021	
			Out of 114	Out of 114	Out of 112	Out of 112
2.3	% of faults repaired within 3 working day	=>99%	3	2.63%	4	3.57%
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%	1	0.89%
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	1	0.88%	1	0.89%
4	Response Time to the Customer for assistance					
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	1	0.88%	0	0.00%
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	2	1.75%	0	0.00%
5	Bandwidth utilisation/ throughput					
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	1	0.89%
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	0	0.00%	0	0.00%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	0	0.00%	0	0.00%
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	0	0.00%	1	0.89%
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%

S. No.	Parameters	Benchmark	Quarter Ending		Quarter Ending	
			December, 2020		March, 2021	
			Out of 114	Out of 114	Out of 112	Out of 112
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%	1	0.89%
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	Name of the Service Provider not meeting the Benchmark
1	Service Provisioning		
1.2	%age of connections provided within 15 days of registration of demand	100%	MTNL - Delhi & Mum (83.48%) GTPL - All India (99.70%) Intermedia Cable - Mumbai (Pune)- (99.00%) TTML - Mah. & Mumbai (95.00%) United - Mah. (83.00%) You Broadband - All India (99.90%)
2	Faults Repair		
2.2	% of faults repaired by next working day (>90%)	>90%	MTNL - Delhi & Mum (65.46%), Tata (TTSL) - All India(except MH) (86.00%) Tata (TTML) - Mah. & Mumbai (83.50%), World Phone - All India (82.00%)
2.3	% of faults repaired within 3 working day	=>99%	MTNL - Delhi & Mumbai (82.07%), Intermedia Cable - Mumbai (Pune)- (0.50%) Tata (TTSL) - All India(except MH) (96.00%), TATA(TTML) - Mah. & Mumbai. (94.50%)
3	Billing Performance		

3.4	%age of billing complaints resolved within 4 weeks	100%	Multicraft Digital - PAN India (1%)
3.5	%age of cases to whom refund of deposit is made within 60 days of closures	100%	MTNL - Delhi & Mum (54.37%)
5	Bandwidth utilisation/throughput		
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	B2H Infonet - Mumbai (1)
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	Shri Omkar Infocom- Mumbai (1)
6	Network latency (for wired broadband access)		
8.1	User reference point at POP/ISP Gateway node to International gateway (IGSP/NIXI)	<120 ms	Atria - All India (140)

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	Dec-20	Mar-21
1	Number of Private satellite TV channels permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking only/both uplinking and downlinking	907	901
2	Number of Pay TV Channels as reported by broadcasters	326	327
3	Number of FM Radio Stations (excluding All India Radio)	367	366
4	Number of pay DTH Operators	4	4
5	Number of Operational Community Radio Stations	315	324
6.	Number of total active Subscribers with pay DTH operators (in million)	70.99	69.57

A. Satellite TV Channels

5.1 A total of **901** private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking only/both uplinking & downlinking, as on 31st March 2021. The total number of satellite TV channels is depicted in **Chart 5.1**. Further, the permission-wise number of permitted satellite TV channels is given in the **Table 5.2**.

Chart5.1- : Number of Satellite TV channels in India

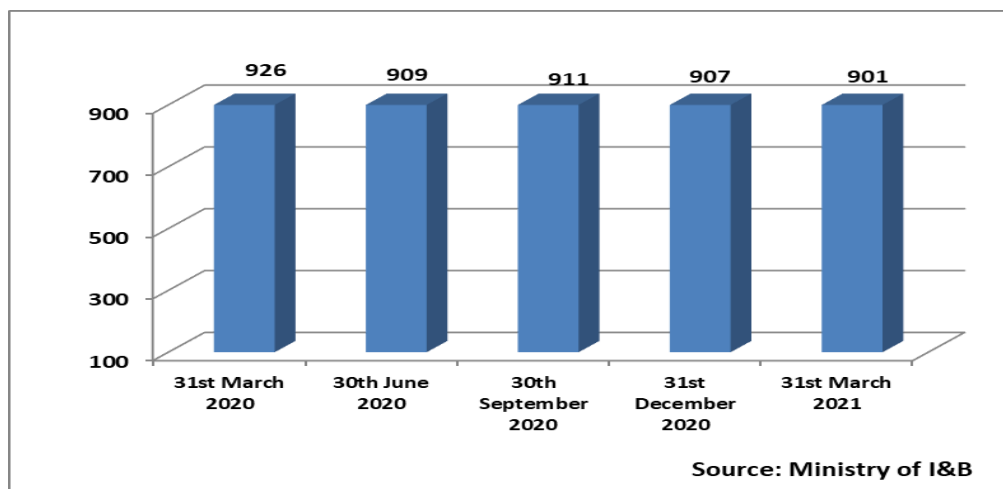


Table 5.2: Permission-wise number of permitted satellite TV channels

Type of Permission	Number of channels	Remarks
Uplinking only	16	TV channels uplinked from India but downlinked abroad only
Downlinking only	71	TV channels uplinked from abroad but downlinked only in India
Both Uplinking & downlinking	814	TV channels uplinked from India and also downlinked only in India
Total	901	

Pay TV Channels

5.2 As per the reporting done by broadcasters in pursuance of the Tariff Order dated 3rd March 2017 as amended, there are **327** satellite pay TV channels, as on 31st March 2021 which includes **235** SD satellite pay TV channels and **92** HD satellite pay TV channels. Apart from these pay channels reported to TRAI, all other channels permitted by MIB may be considered as Free to Air (FTA) channels. A list of pay TV channels offered by broadcasters for subscribers as reported to TRAI is attached as **Annexure-5.1**. **Chart-5.2** depicts total number of Pay satellite TV channels and FTA satellite TV channels during last one year. **Chart-5.3** depicts total number of SD satellite Pay TV channels and HD satellite Pay TV channels during last one year.

Chart5.2: Number of Pay and FTA channels

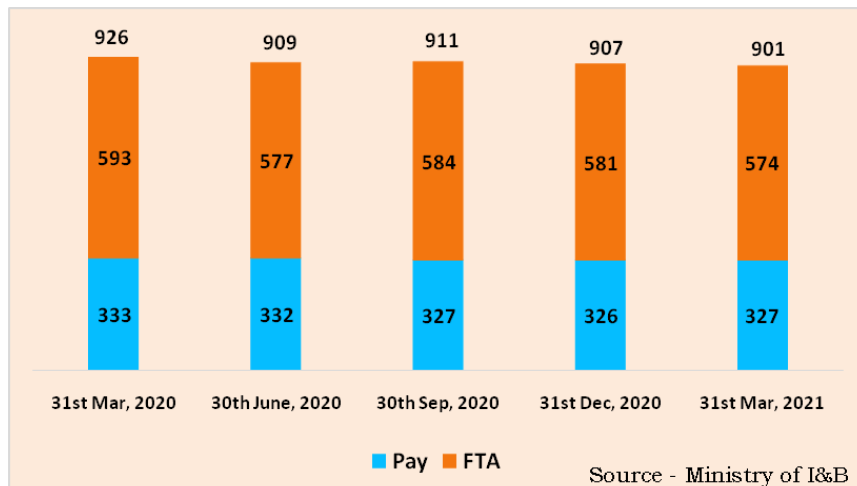
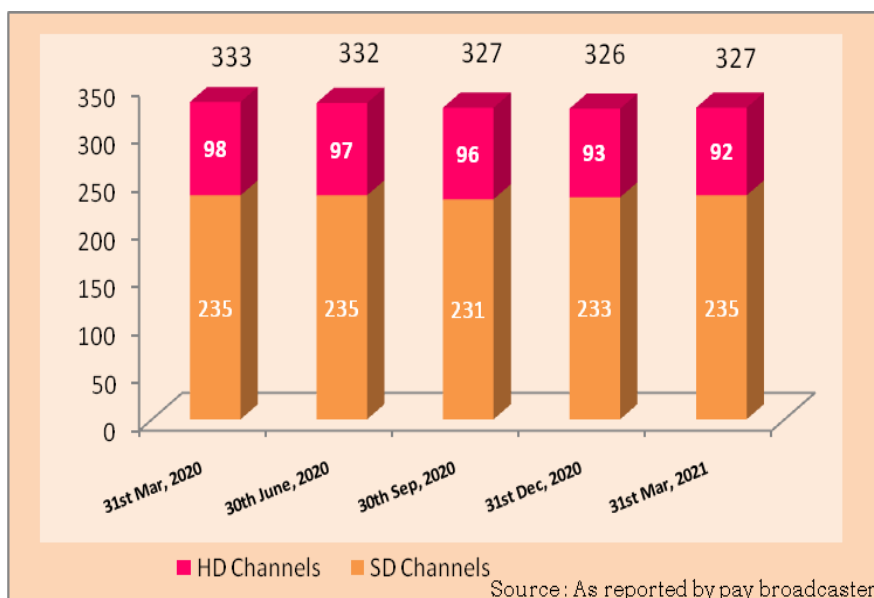


Chart 5.3 : Numbers of SD satellite pay TV channels and HD satellite pay TV channels



B. Cable TV Sector

5.3 The country has achieved 100% digitization of Cable TV network. This is a stupendous achievement making India as the only large country where 100% digital cable has been achieved through mandatory regulations.

5.4 As on 31st March 2021, there are 1726 MSOs registered with MIB. Further, as per the data reported by MSOs/HITS operators, there are 12 MSOs & 1 HITS operator who have subscriber base greater than one million. A list of Major MSOs/HITS Operators is attached as **Annexure 5.2**. Details of the total active subscriber base of these 12 MSOs and 1 HITS operator are given in following table 5.2.

Table 5.3: Subscriber base of major MSOs/HITS operators at the end of March, 2021 (more than one million subscribers)

Sl. No.	Name of the operator	Total Active Subscriber Base (includes subscribers who have been inactive or temporarily suspended for not more than last 90 days)
1.	Siti Networks	8,253,493
2.	GTPL Hathway	7,745,881
3.	Hathway Digital	5,659,809
4.	Den Networks	4,521,821
5.	Thamizhaga Cable TV Communication Pvt Ltd (TCCL)	3,534,199
6.	Kerala Communicators Cable Ltd (KCCL)	3,051,680
7.	Tamil Nadu Arasu Cable TV	2,937,729
8.	Fastway Transmissions Pvt Ltd	2,225,223
9.	NXT Digital Ltd (HITS)	2,051,633
10.	KAL Cables	2,022,165
11.	VK Digital	1,761,232
12.	Asianet Digital Network	1,220,983
13.	NXT Digital Ltd (Cable TV)	1,172,420

C. 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, 2021, there were 4 pay DTH service providers in India. A list of DTH Operators is attached as **Annexure 5.3**.

5.6 Pay DTH has attained Total active subscriber base of around 69.57 million. This is in addition to the subscribers of the DD Free Dish (free DTH services of Doordarshan). The total active subscriber base has decreased from 70.99 million in December 2020 to 69.57 million in March 2021.

5.7 Quarterly growth in the DTH sector in terms of the total active subscriber base and market share of DTH operators in terms of percentage of total active subscribers during the quarter ending 31st March 2021 is depicted in the following charts: -

Chart 5.4: - Total active subscriber base of pay DTH sector (in millions)

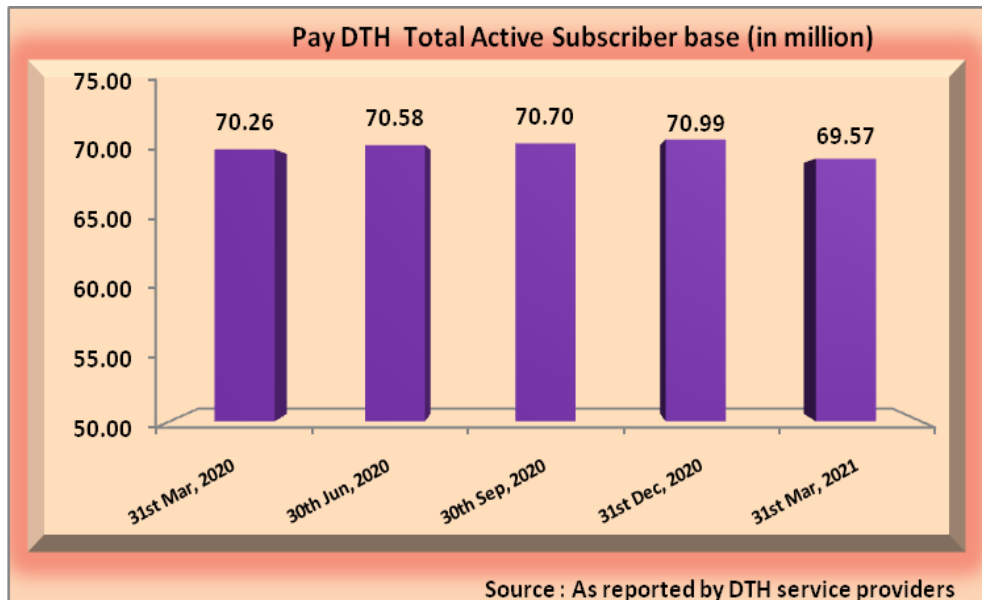
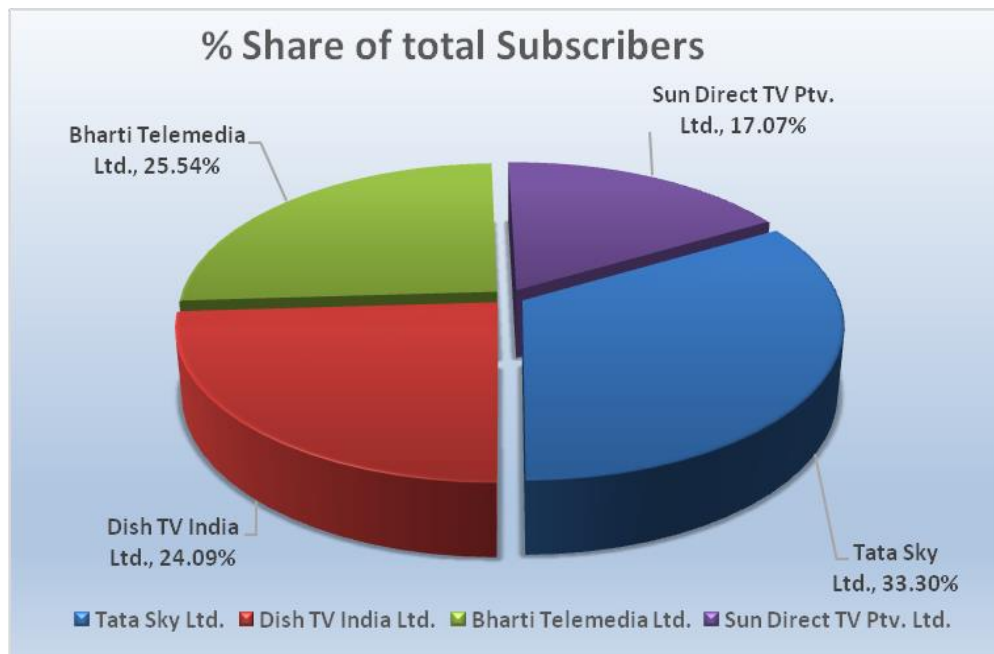


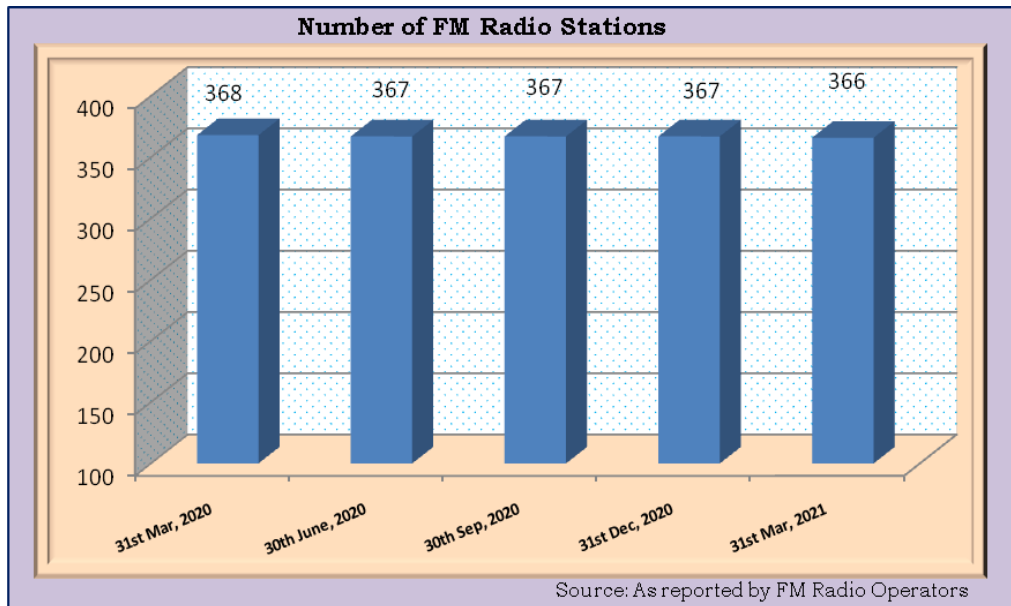
Chart 5.5 : Market share of DTH Operators



D. FM Radio Services

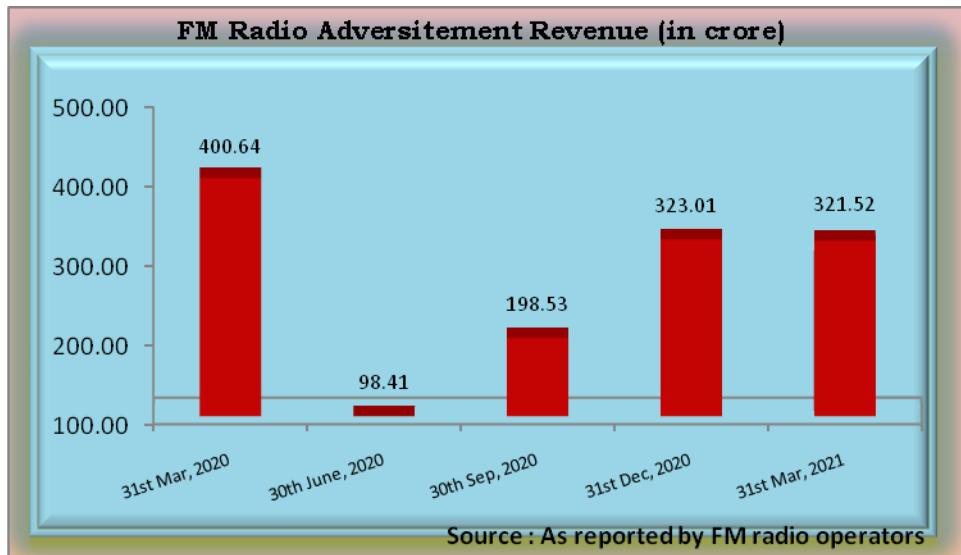
5.8 Apart from the radio channels operated by All India Radio – the public broadcaster, as per the data available with TRAI, there are **366** operational private FM Radio channels in **105** cities with operational **30** Private FM Radio broadcasters, at the end of 31st March 2021 as compared to **367** private FM Radio channels in **105** cities with operational **31** FM Radio broadcasters in the previous quarter. During the quarter ending 31st March 2021, M/s Odisha Television Limited has ceased the operation of its single FM Radio station in the city of Rourkela, Odisha. A list of 105 existing cities with operational private FM radio channels in India, as on 31st March, 2021 is placed at **Annexure 5.4**. The following chart 5.5 depicts the quarterly growth in private FM Radio stations.

Chart 5.6 : Number of Private FM Radio channels



5.9 The advertisement revenue reported by FM Radio Broadcasters during the quarter end 31st March 2021 in respect of 365 private FM Radio channels is Rs 321.52 crore as against Rs 323.01 crore in respect of 366 private FM Radio channels for the previous quarter i.e. 31st December 2020.

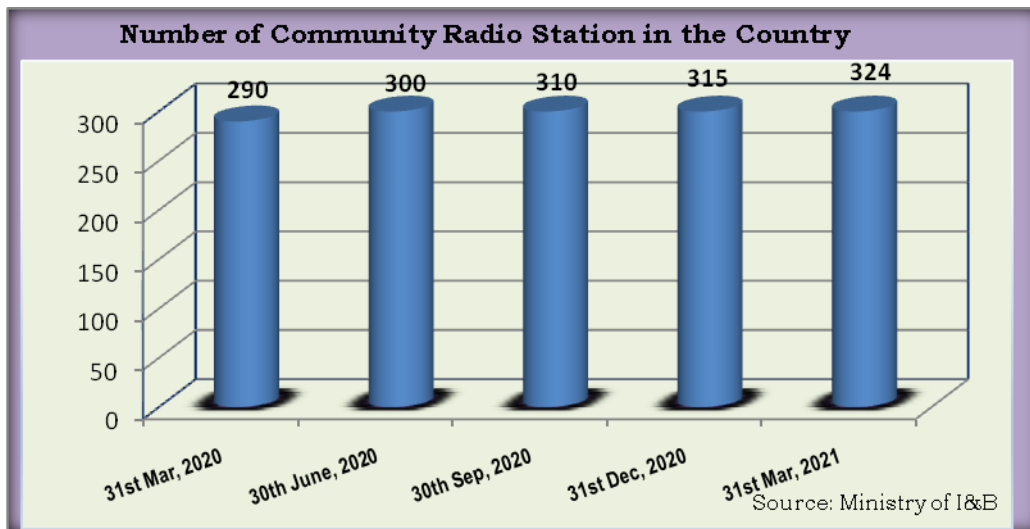
Chart 5.7: Details of Advertisement Revenue submitted by the private FM Radio broadcasters



F. Community Radio

5.10 As on 31st March, 2021, there are 324 Community Radio stations are operational. The quarterly growth in the number of operational community radio stations during last one year is depicted in the following chart 5.7.

Chart 5.8: Number of operational Community Radio Stations



Annexures

Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone Idea		Bharti Airtel (including Tata Teleservices)		Reliance Com.		BSNL		MTNL		Reliance Jio		Total		Net Additions
	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	
Andhra Pradesh	16142823	15752480	30433618	31320614	1177	1029	9670536	9686428			31369643	31972495	87,617,797	88,733,046	1115249
Assam	3354187	3203509	8881995	9238358			2959676	3033066			8851010	9243798	24,046,868	24,718,731	671863
Bihar	12378262	12113773	35117840	35992515	190	169	5946966	5845757			31448264	32515243	84,891,522	86,467,457	1575935
Delhi	15602750	16219011	15847702	16429584	513	473			2169449	2161329	18974028	19743775	52,594,442	54,554,172	1959730
Gujarat	25021411	25254129	11444492	12097288	271	196	5891420	5906595			25426122	26151330	67,783,716	69,409,538	1625822
Haryana	8052103	8256208	5079438	5479581	89	84	5094145	5055231			8907509	9087484	27,133,284	27,878,588	745304
Himachal Pradesh	711847	674361	3327293	3363193	97	96	3010300	3021606			4004237	4132426	11,053,774	11,191,682	137908
Jammu & Kashmir	524869	499253	5548416	5623564	0	0	1264351	1270192			4464159	4645034	11,801,795	12,038,043	236248
Karnataka	9583667	9219033	29491199	30624712	1938	1776	7257790	7214006			20894958	21577501	67,229,552	68,637,028	1407476
Kerala	17317452	16934704	6487239	6793854	489	461	10960864	10912516			9911644	10196287	44,677,688	44,837,822	160134
Madhya Pradesh	21372271	21630851	14711874	15417273	518	358	6271291	6310875			33150116	34515319	75,506,070	77,874,676	2368606
Maharashtra	32852288	32234994	17904801	19104894	463	413	6933418	6824196			35578402	36747170	93,269,372	94,911,667	1642295
Mumbai	9330964	11327047	9856523	10082609	952	869			1148184	1134692	14652911	15103932	34,989,534	37,649,149	2659615
North East	1467590	1407306	5312862	5430407	0	0	1366913	1370848			4067072	4242689	12,214,437	12,451,250	236813
Orissa	2536251	2364640	10858137	11177746	219	201	6414057	6476145			13705976	14325397	33,514,640	34,344,129	829489
Punjab	8711158	8683278	10666819	11651761	353	345	5855940	5759876			12490810	12739934	37,725,080	38,835,194	1110114
Rajasthan	12229571	12248986	21562650	21955246	332	309	6364204	6398967			25004662	25693559	65,161,419	66,297,067	1135648
Tamil Nadu	19066507	19285654	26051251	27090503	1248	762	11016854	11097611			24328225	25288818	80,464,085	82,763,348	2299263
UP(E)	23421596	22693255	33434345	35273025	431	409	11644758	11480009			30092918	31311492	98,594,048	100,758,190	2164142
UP(W)	20332967	19763003	15801717	16936781	270	261	5883811	5876920			20410003	21039748	62,428,768	63,616,713	1187945
Kolkata	6957077	7003470	5904209	5916041	28	28	2448590	2536248			10857344	11218010	26,167,248	26,673,797	506549
West Bengal	17287656	16944652	14983747	15394227	976	936	2453707	2551390			20183313	21423645	54,909,399	56,314,850	1405451
Total	284,255,267	#####	338,708,167	352,393,776	10,554	9,175	118,709,591	118,628,482	3,317,633	3,296,021	408,773,326	422,915,086	1,153,774,538	1,180,956,137	27181599

Annexure 1.2: Wireline Subscriber Base

Sl. No	Service Area	Bharti Airtel		Reliance Com.		Quadrant		Tata Tele.		MTNL		BSNL		Vodafone Idea		Reliance Jio		Total		Net Additions
		Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	Dec-20	Mar-21	
1	Andhra Pradesh	246692	259061	21834	22340			153579	159486			606606	561771	62310	51180	286558	356143	1,377,579	1,409,981	32,402
2	Assam											84922	82206	3450	3390	37495	47332	125,867	132,928	7,061
3	Bihar			19	20			7421	7469			132134	130408	1830	1740	71741	99896	213,145	239,533	26,388
4	Delhi	1494955	1556389	36827	34006			142655	137712	1337088	1319143			76847	86514	219994	260128	3,308,366	3,393,892	85,526
5	Gujarat	116751	121065	3734	4567			81225	79722			512515	466470	33437	39767	214473	239304	962,135	950,895	-11,240
6	Haryana	28229	31502	13	2			36637	35504			136906	127004	330	360	105429	120641	307,544	315,013	7,469
7	Himachal Pradesh		0	3	3			1747	1709			79352	75707	30	30	8143	11586	89,275	89,035	-240
8	Jammu & Kashmir		0	0	0			0	0			92451	87435	0	0	65858	80841	158,309	168,276	9,967
9	Karnataka	803607	812574	27087	26395			260894	249104			780432	721542	103002	86462	203107	259694	2,178,129	2,155,771	-22,358
10	Kerala	64547	67176	5438	5699			19128	18969			1145302	1033144	6120	8390	58634	73093	1,299,169	1,206,471	-92,698
11	Madhya Pradesh	260190	271690	5	5			11692	11220			273161	255109	3585	2360	144815	179532	693,448	719,916	26,468
12	Maharashtra	141296	159620	11732	12530			231376	226181			769408	737346	29353	26998	82652	99663	1,265,817	1,262,338	-3,479
13	Mumbai	383653	403492	75997	64202			494995	488125	1623003	1584446	0		95971	120041	346561	396414	3,020,180	3,056,720	36,540
14	North East											73283	67455	270	330	26189	34738	99,742	102,523	2,781
15	Orissa			6	6			8115	8116			155552	148145	6210	6540	36440	48756	206,323	211,563	5,240
16	Punjab	142858	152738	2228	1995	202915	216428	12870	12381			242734	227116	3240	2175	84121	93576	690,966	706,409	15,443
17	Rajasthan	71438	82247	4715	4576			11590	11746			266161	246388	16490	7510	96716	118267	467,110	470,734	3,624
18	Tamil Nadu	554373	573648	24465	26289			120947	118390			948714	857270	39955	35300	234581	276314	1,923,035	1,887,211	-35,824
19	U.P.(E)	74102	81891	25	23			7540	7642			173983	162235	20020	20460	111337	139826	387,007	412,077	25,070
20	U.P.(W)	43370	51871	8	8			4480	4450			156018	145503	5220	6760	159845	205746	368,941	414,338	45,397
21	Kolkata	140369	153326	7330	7659			46980	46249			338083	316756	13740	14930	119138	135866	665,640	674,786	9,146
22	West Bengal			13	3			2322	2350			201006	200429	120	120	40974	56357	244,435	259,259	14,824
	Total	4,566,430	4,778,290	221,479	210,328	#####	216,428	1,656,193	1,626,525	2,960,091	2,903,589	7,168,723	6,649,439	521,530	521,357	2,754,801	3,333,713	#####	#####	187,507

Annexure 1.3: Service Area and Service Provider-wise details of PCOs

Name of Telecom Service Area	Service Provider	Number of PCOs as on 31.12.2020	Number of PCOs as on 31.03.2021	Net PCO increase/ decrease as on 31.03.2021	Percentage Growth/ Decline as on 31.03.2021
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Limited	3,616	3,196	-420	-11.62%
	Bharti Airtel	0	0	0	0.00%
Telangana	Bharat Sanchar Nigam Limited	3,993	3,579	-414	-10.37%
	Bharti Airtel	181	181	0	0.00%
Assam	Bharat Sanchar Nigam Limited	624	605	-19	-3.04%
Bihar (Excluding Jharkhand)	Bharat Sanchar Nigam Limited	591	504	-87	-14.72%
Jharkhand	Bharat Sanchar Nigam Limited	2,410	2,410	0	0.00%
Delhi	Bharti Airtel	330	330	0	0.00%
	MTNL	38,936	38,688	-248	-0.64%
Gujarat	Bharat Sanchar Nigam Limited	4,680	4,572	-108	-2.31%
	Bharti Airtel	16	15	-1	-6.25%
Haryana	Bharat Sanchar Nigam Limited	415	354	-61	-14.70%
	Bharti Airtel	134	133	-1	-0.75%
Himachal Pradesh	Bharat Sanchar Nigam Limited	618	547	-71	-11.49%
Jammu & Kashmir	Bharat Sanchar Nigam Limited	372	343	-29	-7.80%
Karnataka	Bharat Sanchar Nigam Limited	8,752	6,695	-2,057	-23.50%
	Bharti Airtel	2,713	2,664	-49	-1.81%
Kerala	Bharat Sanchar Nigam Limited	10,326	9,636	-690	-6.68%
	Bharti Airtel	382	380	-2	-0.52%
Kolkata	Bharat Sanchar Nigam Limited	1,884	1,746	-138	-7.32%
	Bharti Airtel	26	26	0	0.00%
Madhya Pradesh (Excluding Chhattisgarh)	Bharat Sanchar Nigam Limited	5,476	5,188	-288	-5.26%
	Bharti Airtel	0	0	0	-
Chhattisgarh	Bharat Sanchar Nigam Limited	182	180	-2	-1.10%
Maharashtra (Excluding Mumbai & Goa)	Bharat Sanchar Nigam Limited	6,664	5,808	-856	-12.85%
	Bharti Airtel	0	1	1	100.00%
Mumbai	Bharti Airtel	50	50	0	0.00%
	MTNL	14,777	14,083	-694	-4.70%
Goa	Bharat Sanchar Nigam Limited	246	282	36	14.63%
Arunachal Pradesh	Bharat Sanchar Nigam Limited	9	9	0	0.00%

Annexure 1.3 (contd.)

Name of Telecom Service Area	Service Provider	Number of PCOs as on 31.12.2020	Number of PCOs as on 31.03.2021	Net PCO increase/decrease as on 31.03.2021	Percentage Growth/Decline as on 31.03.2021
Manipur	Bharat Sanchar Nigam Limited	772	90	-682	-88.34%
Meghalaya	Bharat Sanchar Nigam Limited	94	94	0	0.00%
Mizoram	Bharat Sanchar Nigam Limited	105	93	-12	-11.43%
Nagaland	Bharat Sanchar Nigam Limited	0	0	0	-
Tripura	Bharat Sanchar Nigam Limited	472	470	-2	-0.42%
Odisha	Bharat Sanchar Nigam Limited	1,044	893	-151	-14.46%
Punjab	Bharat Sanchar Nigam Limited	1,182	1,147	-35	-2.96%
	Bharti Airtel	4	1	-3	-75.00%
	Quadrant	522	506	-16	-3.07%
Rajasthan	Bharat Sanchar Nigam Limited	991	900	-91	-9.18%
	Bharti Airtel	209	209	0	0.00%
Tamil Nadu (Excluding Chennai)	Bharat Sanchar Nigam Limited	10,813	9,667	-1,146	-10.60%
	Bharti Airtel	0	0	0	-
Chennai	Bharat Sanchar Nigam Limited	6,841	4,842	-1,999	-29.22%
Uttar Pradesh East	Bharat Sanchar Nigam Limited	3,602	3,373	-229	-6.36%
	Bharti Airtel	0	0	0	-
Uttar Pradesh West (Excluding Uttarakhand)	Bharat Sanchar Nigam Limited	1,157	1,072	-85	-7.35%
	Bharti Airtel	13	15	2	15.38%
Uttarakhand	Bharat Sanchar Nigam Limited	368	293	-75	-20.38%
West Bengal (Excluding Andaman & Nicobar and Sikkim)	Bharat Sanchar Nigam Limited	391	208	-183	-46.80%
Andaman & Nicobar	Bharat Sanchar Nigam Limited	32	30	-2	-6.25%
Sikkim	Bharat Sanchar Nigam Limited	0	0	0	-
Total		137,015	126,108	-10,907	-7.96%
Total (In Lakhs)		1.37	1.26	-0.11	-7.96%

Annexure 1.4: Service Area and Service Provider wise details of Village Public Telephones (VPTs)

S.No	Name of Telecom Service Area	Service Provider	Number of VPTs as on 31.12.2020	Number of VPTs as on 31.03.2021	Net VPTs increase/ decrease as on 31.03.2021
1	Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Limited	2,052	2,052	0
2	Telangana	Bharat Sanchar Nigam Limited	844	844	0
3	Assam	Bharat Sanchar Nigam Limited	105	105	0
4	Bihar (Excluding Jharkhand)	Bharat Sanchar Nigam Limited	5,893	5,893	0
5	Jharkhand	Bharat Sanchar Nigam Limited	221	221	0
6	Gujarat	Bharat Sanchar Nigam Limited	5,278	5,278	0
7	Haryana	Bharat Sanchar Nigam Limited	462	462	0
8	Himachal Pradesh	Bharat Sanchar Nigam Limited	1,875	1,875	0
9	Jammu & Kashmir	Bharat Sanchar Nigam Limited	810	810	0
10	Karnataka	Bharat Sanchar Nigam Limited	3,656	3,656	0
11	Kerala	Bharat Sanchar Nigam Limited	331	331	0
12	Kolkata	Bharat Sanchar Nigam Limited	130	130	0
13	Madhya Pradesh (Excluding Chhatisgarh)	Bharat Sanchar Nigam Limited	9,907	9,907	0
14	Chhatisgarh	Bharat Sanchar Nigam Limited	193	193	0
15	Maharashtra (Excluding Mumbai & Goa)	Bharat Sanchar Nigam Limited	7,615	7,615	0
16	Goa	Bharat Sanchar Nigam Limited	231	231	0
17	Arunachal Pradesh	Bharat Sanchar Nigam Limited	623	623	0
18	Manipur	Bharat Sanchar Nigam Limited	93	93	0
19	Meghalaya	Bharat Sanchar Nigam Limited	207	207	0

Annexure 1.4 (contd.)

S.No	Name of Telecom Service Area	Service Provider	Number of VPTs as on 31.12.2020	Number of VPTs as on 31.03.2021	Net VPTs increase/ decrease as on 31.03.2021
20	Mizoram	Bharat Sanchar Nigam Limited	12	12	0
21	Nagaland	Bharat Sanchar Nigam Limited	25	25	0
22	Tripura	Bharat Sanchar Nigam Limited	222	222	0
23	Orissa	Bharat Sanchar Nigam Limited	1,554	1,554	0
24	Punjab	Bharat Sanchar Nigam Limited	4,493	4,493	0
25	Rajasthan	Bharat Sanchar Nigam Limited	0	0	0
26	Tamil Nadu (Excluding Chennai)	Bharat Sanchar Nigam Limited	5,478	5,478	0
27	Uttar Pradesh East	Bharat Sanchar Nigam Limited	568	568	0
28	Uttar Pradesh West (Excluding Uttarakhand)	Bharat Sanchar Nigam Limited	1,637	1,637	0
29	Uttarakhand	Bharat Sanchar Nigam Limited	2,121	2,121	0
30	West Bengal (Excluding Andaman & Nicobar and Sikkim)	Bharat Sanchar Nigam Limited	11,557	11,557	0
31	Andaman & Nicobar	Bharat Sanchar Nigam Limited	93	93	0
32	Sikkim	Bharat Sanchar Nigam Limited	320	320	0
	Total		68,606	68,606	0.00
	Total (In Lakh)		0.69	0.69	0.00

**Annexure 1.5 : Internet Service Provider(ISP) wise Internet Subscriber base
as on 31.03.2021**

S.No.	Name of the Service Provider:	Narrowband	Broadband	Total
1	Reliance Jio Infocomm Ltd	0	425513757	425513757
2	Bharti Airtel Ltd.	24377358	191926570	216303928
3	Vodafone Idea Limited	16260920	123606126	139867046
4	Bharat Sanchar Nigam Ltd.	6413251	26036891	32450142
5	Atria Convergence Technologies Pvt. Ltd.	0	1848966	1848966
6	Hathway Cable & Datacom Pvt. Ltd.	0	1074356	1074356
7	You Broadband India Pvt. Ltd.	14538	812471	827009
8	Mahanagar Telephone Nigam Ltd.	98219	666969	765188
9	ONEOTT iNTERENTAINMENT LTD (Planet E-Shop Holdings India Ltd.)	0	616221	616221
10	GTPL Broadband Pvt. Ltd.	0	563353	563353
11	Excitel Broadband Private Limited	0	537659	537659
12	Alliance Broadband Services Pvt. Ltd.	0	422413	422413
13	Netplus Broadband Services Pvt. Ltd	0	331076	331076
14	Tikona Infinet Pvt Ltd	0	316224	316224
15	RailTel Corporation of India Ltd.	0	308791	308791
16	Asianet Satellite Communications Ltd.	0	292797	292797
17	D-Vois Broadband Private Limited	0	265770	265770
18	INTECH ONLINE PVT LTD	0	257545	257545
19	Quadrant Televentures Ltd.	75	217400	217475
20	Joister Infoserve Pvt. Ltd.	0	186152	186152
21	Tata Sky Broadband Private Limited	0	179695	179695
22	Indinet Service Pvt Ltd	0	129865	129865
23	DEN Broadband Limited	0	106112	106112
24	Wish Net Pvt. Ltd.	0	89335	89335
25	Five Network Solution (India) Ltd.	0	85105	85105
26	ANI network Pvt Ltd	0	72010	72010
27	Fusionnet Web Services Pvt. Ltd.	0	62299	62299
28	AIRNET CABLE AND DATACOM PVT LTD	0	58240	58240
29	SITI Broadband Services Pvt. Ltd.	0	55619	55619
30	GTPL KCBPL Broadband Private Limited	0	50957	50957
31	Ishan Netsol Pvt Ltd	0	49269	49269
32	Tata Teleservices Limited	138	48569	48707
33	Digital Satellite Connect Pvt. Ltd.	0	46476	46476
34	Honesty Net Solutions (I) Pvt Ltd	36	42299	42335
35	K Net Solutions Pvt. Ltd.	0	42061	42061
36	Limras Eronet Broadband Service Pvt Ltd	0	40957	40957
37	Dwan Supports Pvt.Ltd.	0	37023	37023
38	Wan and Lan Internet Pvt. Ltd.	0	33900	33900
39	INSTANET TECHNOLOGIES PRIVATE LIMITED	0	31585	31585

40	DNA Infotel Pvt Ltd	0	28847	28847
41	Shyam Spectra Private Limited	0	28573	28573
42	MICROSCAN COMPUTERS PVT LTD	0	27477	27477
43	Nextra Teleservices Pvt. Ltd.	0	26830	26830
44	Sikka Broadband(P) Ltd.	0	23886	23886
45	World Phone Internet Services Pvt Ltd	0	23565	23565
46	Airlink Communications Pvt. Ltd	0	22375	22375
47	Ortel Communication Ltd.	0	22127	22127
48	Digital Network associates Pvt. Ltd	0	21910	21910
49	Ethernet Xpress India Pvt. Ltd	0	19958	19958
50	Rajesh Digital & Data Com Pvt. Ltd.	17	19565	19582
51	City Online Services Ltd	0	19144	19144
52	LM Energy and Software Pvt. Ltd.	0	19083	19083
53	Tachyon Communications Pvt. Ltd.	0	17987	17987
54	B2H Infonet Pvt Ltd	0	17509	17509
55	RI Networks Pvt Ltd	0	17131	17131
56	ESTO BROADBAND Pvt. Ltd.	0	16866	16866
57	Sai Prasad Internet Services Pvt. Ltd.	0	16720	16720
58	Quest Consultancy Pvt. Ltd.	0	16246	16246
59	CSC e-Governance Services India Ltd.	0	16160	16160
60	Yashash Cable Network Pvt Ltd	0	15981	15981
61	Shree Omkar Infocom Pvt. Ltd.	0	15110	15110
62	United Telecoms Ltd.	0	15079	15079
63	Tata Communications Limited	106	14755	14861
64	SUPER SONIC BROADBAND PVT LTD	0	14506	14506
65	Readylink Internet Services Pvt Ltd	0	14228	14228
66	Meghbela Cable & Broadband Servies (P) Ltd	0	13803	13803
67	Nuron Networks India Private Limited	0	12484	12484
68	Intermedia Cable Communication Pvt Ltd	0	11667	11667
69	Multicraft Digital Technologies Private Limited	0	11575	11575
70	Airconnect Internet Services Pvt. Ltd.	5583	5583	11166
71	Spiderlink Networks Pvt. Ltd.	0	10887	10887
72	Signum Digital Networks Pvt. Ltd	0	10739	10739
73	Radinet Info Solutions Pvt Ltd	0	10489	10489
74	North East Dataa Network Pvt Ltd.	0	9907	9907
75	DL GTPL BROADBAND PVT LTD	0	9814	9814
76	Cityzone Infonet Pvt. Ltd	0	8995	8995
77	Veloxr Telecom Pvt. Ltd. (Shree Balaji Infoway Pvt Ltd.)	0	8861	8861
78	Net 9 Online Hathway Private Limited	0	8783	8783
79	Angel Air Network Solutions Private Limited	0	8589	8589
80	Kernel Fibernet Online Network Pvt Ltd	0	8430	8430
81	Jetway Broadband India Pvt.Ltd.	0	8403	8403
82	Apna Telelink Ltd.	0	8326	8326

83	SSCN PVT LTD	0	7507	7507
84	Kappa Internet Services Pvt Ltd.	0	7437	7437
85	AT Broadband Pvt. Ltd.	0	7412	7412
86	FOXTEL TELECOMMUNICATIONS PVT LTD	7325	0	7325
87	Reliance Communications Limited	192	7062	7254
88	Swiftmail Communications Ltd.	369	6690	7059
89	Siliguri Internet & Cable TV Pvt. Ltd.	0	6947	6947
90	Broadband Pacenet (I) Pvt. Ltd.	0	6648	6648
91	Juweriyah Networks Pvt Ltd	0	6549	6549
92	OM-ASHANet Pvt. Ltd.	0	5750	5750
93	Deepnetwork Pvt. Ltd.	0	5259	5259
94	WSNS Pvt. Ltd.	0	5251	5251
95	Skymax Broadband Services Pvt. Ltd.	0	4957	4957
96	Multinet (Udaipur) Pvt. Ltd.	0	4940	4940
97	Shine Communications Pvt. Ltd.	0	4877	4877
98	Pink Broadband Services Pvt. Ltd.	2386	2386	4772
99	IAXN Telecom Pvt. Ltd.	0	4766	4766
100	SONALI INTERNET SERVICES PVT LTD	0	4730	4730
101	Bittel Telecom Pvt.Ltd	0	4317	4317
102	City Broadband Network Pvt. Ltd.	2055	2120	4175
103	S.S.Netcom Pvt Ltd	0	4111	4111
104	GBPS Networks Pvt. Ltd.	0	4053	4053
105	Mukand Infotel Pvt. Ltd.	4038	0	4038
106	Blazenet Ltd.	0	4017	4017
107	Geocity Network Solutions Pvt. Ltd.	0	3971	3971
108	Ani Broadband Service Pvt. Ltd.	3941	0	3941
109	Five Net Service Provider Pvt. Ltd.	0	3848	3848
110	Swiftnet Broadband Pvt Ltd	0	3721	3721
111	WOW SOLUTIONS & SYSTEM PVT LTD	0	3628	3628
112	Kumar Cable Digital Network Pvt. Ltd.	0	3610	3610
113	Dsouza Infotainment Pvt. Ltd.	0	3576	3576
114	GETWAY BROADBAND PVT LTD	0	3475	3475
115	Rainbow Internet teleservices Pvt Ltd	16	3184	3200
116	CHANNEL III INTERNET PVT LTD	0	2991	2991
117	INET FIBER INDIA PVT LTD	0	2959	2959
118	AS Broadband Pvt Ltd	0	2958	2958
119	VRD Web Services Private Limited	0	2914	2914
120	Airgenie Communications Pvt. Ltd.	0	2877	2877
121	Spacenet Internet Services Pvt Ltd	0	2811	2811
122	CANDOR INFOSOLUTION PVT LTD	2784	0	2784
123	City Online AP Pvt. Ltd.	0	2753	2753
124	Symbois Creations Pvt. Ltd.	0	2736	2736
125	NETVISION AWADH NETWORKS PVT LTD	0	2709	2709
126	CLASSIC INTERNET AND CABLE SERVICES	2708	0	2708

	PVT LTD			
127	TGN NETWORKS PVT LTD	0	2679	2679
128	ADRI INFOCOM PVT. LTD.	0	2648	2648
129	TRANSMEDIA TECHNOLOGIES (AP) PVT LTD	0	2602	2602
130	Deenet Services Pvt Ltd	0	2554	2554
131	NISS INTERNET SERVICES PVT. LTD.	0	2507	2507
132	Chandra Net Pvt. Limited	0	2435	2435
133	Fiberzone Communications Pvt. Ltd.	0	2400	2400
134	Blu Ultraband Internet Services Private Limited	0	2327	2327
135	Sifi Online Pvt. Ltd.	0	2291	2291
136	Country Online Services Pvt. Ltd.	1080	1080	2160
137	Jetspot Networks Pvt. Ltd.	0	2149	2149
138	Smart Net India Pvt Ltd	0	2122	2122
139	Vision Smartlink Networking Pvt. Ltd.	0	2048	2048
140	Limerick Technologies Pvt Ltd	0	1993	1993
141	SMARTLINK SOLUTIONS PVT. LTD.	0	1965	1965
142	delDSL Internet Pvt Ltd	0	1960	1960
143	Speed Online.net Pvt. Ltd.	0	1946	1946
144	STN Infotech Pvt. Ltd	0	1923	1923
145	Lbs Infoway India Pvt Ltd	0	1869	1869
146	Capture Network Systems Pvt. Ltd.	288	1517	1805
147	Exnet Broadband Pvt. Ltd.	0	1780	1780
148	Antarjal IT Communication Pvt. Ltd.	0	1770	1770
149	GALAXYNET CONNECTIONS PVT LTD	0	1770	1770
150	Elyzium Technologies Pvt. Ltd.	0	1739	1739
151	Correl IT Services Pvt. Ltd.	1705	0	1705
152	DNS SKYLINK PVT. LTD.	0	1704	1704
153	Assistive networks & technologie Pvt Ltd	0	1701	1701
154	Wnet Telecom Private Limited	0	1700	1700
155	Southern Online Bio Technologies Ltd.	0	1652	1652
156	Real Wire Express Network Pvt. Ltd.	0	1610	1610
157	ULTRANET INFOTECH SOLUTION PRIVATE LIMITED	0	1600	1600
158	Click4Net Internet Services Private Limited	0	1594	1594
159	Nettlinx Ltd.	0	1591	1591
160	E I DOT Com Pvt. Ltd.	0	1588	1588
161	F/X Wireless Technology Services Pvt. Ltd.	0	1545	1545
162	Venessa Internet Pvt. Ltd.	0	1537	1537
163	Sphier Infotech Pvt. Ltd.	0	1515	1515
164	Speednet Unique Network Pvt. Ltd.	0	1506	1506
165	Karunay Internet Private Limited	0	1490	1490
166	Shaildhar Telecom Services Pvt. Ltd.	0	1429	1429
167	Netfirre Communications Pvt. Ltd.	0	1408	1408
168	SCUD COMMUNICATION PVT LTD	0	1407	1407

169	Bakcom Networks India Pvt Ltd	0	1398	1398
170	CJ Online Pvt. Ltd.	0	1365	1365
171	Wi-Link Network Pvt. Ltd	614	737	1351
172	GIGACAST NETWORK PVT LTD	0	1328	1328
173	Skyline Infonet Pvt. Ltd.	0	1289	1289
174	DA Smartzone Pvt Ltd	0	1285	1285
175	SS FIBER NET OPTICAL COMMUNICATION PVT. LTD	0	1271	1271
176	NGC Broadband Pvt. Ltd.	1266	0	1266
177	MAKS COMMUNICATIONS PVT.LTD.	0	1248	1248
178	Net Access Internet India Private Limited	0	1247	1247
179	UNITED STARS NETWORK PRIVATE LIMITED	0	1221	1221
180	Amar Broadband Private Limited	0	1219	1219
181	Aeroway Networks Pvt Ltd.	0	1197	1197
182	Shrisai Shavenk Technologies Pvt. Ltd.	0	1173	1173
183	JB Jain Broadband Solutions Private Limited.	0	1136	1136
184	Southnet Broadband Pvt. Ltd.	0	1135	1135
185	ACN Fiber Pvt. Ltd.	0	1100	1100
186	Rida Communication Pvt. Ltd.	0	1079	1079
187	SEFARO NETWORKS PRIVATE LTD	0	1055	1055
188	RK Broadband Hifi Services Pvt Ltd	0	1048	1048
189	Skynet Datacom Pvt. Ltd.	0	1048	1048
190	RTEL INTERNET SERVICES PVT LTD	0	1047	1047
191	Neton Icom Pvt. Ltd.	25	987	1012
192	JBN Online Private Limited.	0	1008	1008
193	Flashcom Network Pvt Ltd	0	983	983
194	Speedmaxx Digital Networks Pvt Ltd	0	979	979
195	HOSTAXIS NETWORKS PVT LTD	0	975	975
196	AHM Digital Network Pvt Ltd	0	970	970
197	Aerocast Networks Pvt Ltd.	0	960	960
198	Al-Mairah Braodband Pvt. Ltd.	0	950	950
199	Grace Teleinfra Pvt Ltd	0	927	927
200	NetMagic Solutions(P) Ltd.	0	916	916
201	Sanchit Infocom Pvt Ltd	0	909	909
202	FASTNET COMMUNICATION PVT LTD	0	904	904
203	Datawave IT solutions Pvt. Ltd.	0	900	900
204	Uzaina Business India Pvt Ltd	0	900	900
205	Japra Tele Link Pvt. Ltd.	0	895	895
206	ALWAR ONLINE PVT LTD	12	868	880
207	Touch Net India Pvt. Ltd.	0	879	879
208	Ficus Telecom Pvt. Ltd.	0	873	873
209	SKY ONLINE TECHNOSYSTEM PVT LTD	0	863	863
210	KGS NETWORKS PRIVATE LIMITED	0	860	860
211	Rajesh Patel Net Services Pvt. Ltd.	5	848	853

212	DREAMLINK TECHNOLOGIES PVT LTD	0	848	848
213	TOUCHNET BROADBAND SERVICES PVT LTD	0	835	835
214	BLITS GLOBAL TECHNOLOGIES PVT LTD	830	0	830
215	Nandini Broadband Pvt Ltd	0	825	825
216	Telosy Telecom Pvt. Ltd.	801	0	801
217	MORE WIFI INTERNET PRIVATE LIMITED	0	800	800
218	REVOLUTION BROADBAND PVT LTD	0	799	799
219	Darer Internet Services Pvt. Ltd.	0	792	792
220	Jiffy Cable & Datacom Pvt. Ltd.	0	784	784
221	Fttx Broadband Pvt. Ltd.	0	761	761
222	CNS INFOTEL SERVICES PVT LTD	0	753	753
223	Neonet Communications Pvt. Ltd.	0	749	749
224	Kosmic Broadband Pvt Ltd	748	0	748
225	Spirenet Digital Communications Pvt. Ltd.	0	720	720
226	Bandwidth Infinity Pvt Ltd	0	718	718
227	CLOUDNET COMMUNICATIONS PVT LTD	0	714	714
228	CATLA IT&ENGG. CO. PVT LTD.	0	710	710
229	Packenet Solutions Pvt. Ltd.	0	703	703
230	Unitel Media Pvt Ltd	0	702	702
231	Smart Wi5 Pvt. Ltd.	0	686	686
232	Skyonline Technosystem Pvt. Ltd.	0	679	679
233	Software Technology Parks of India	4	674	678
234	DATAMAX TECHNOLOGY PVT LTD	0	676	676
235	HPS DIGITAL BROADBAND PVT LTD	0	672	672
236	Craze IT Solutions Pvt Ltd	0	667	667
237	Digital Telco Network India Pvt. Ltd.	0	652	652
238	Primenet Global Ltd.	0	646	646
239	Bass Networks Pvt Ltd	0	641	641
240	Acegen Broadband Pvt. Ltd	0	638	638
241	Daksh Broadband Services Pvt Ltd	0	638	638
242	iAIRONET COMMUNICATION PVT LTD	0	631	631
243	Anish Infoline Pvt. Ltd.	0	610	610
244	VIVA Communications Pvt Ltd	0	596	596
245	Reticule Infotech Pvt. Ltd.	0	595	595
246	SVD DIGITAL NETWORKS PVT LTD	0	594	594
247	WEBRIDERS INTERNET PVT LTD	0	594	594
248	Power Grid Corporation of India Ltd.	0	573	573
249	Alphanet Broadband Pvt Ltd	0	571	571
250	Gazillio Technologies Pvt. Ltd.	0	557	557
251	Alegra Communication Pvt Ltd	0	552	552
252	Digital2Virtual ISP Pvt. Ltd.	0	549	549
253	Panav Network and Communications Private Limited	0	548	548
254	Mega Hertz Network Solutions Pvt Ltd	0	546	546

255	Fastx Broadband Private Limited	0	545	545
256	Lotus Broadband Pvt Ltd	0	544	544
257	Goodwill Smartlink Pvt. Ltd.	0	541	541
258	Amityhua Electronics Pvt. Ltd.	0	535	535
259	Data Ingenious Global Ltd	3	519	522
260	Hughes Communications India Ltd.	53	468	521
261	ANUSHREE DIGITAL NETWORK PVT LTD	0	515	515
262	Sarva Air World Network Pvt Ltd	12	500	512
263	Shree Manoranjan Broadband Pvt. Ltd.	0	507	507
264	VARESHA AIR WORLD NETWORKS PVT LTD	11	494	505
265	BPS Communication & Services Pvt.Ltd.	0	491	491
266	Imperium Digital Network Pvt. Ltd.	0	487	487
267	Tamana Winet Pvt. Ltd.	0	480	480
268	Global India Tele Infra Pvt. Ltd.	0	472	472
269	Gleam Worldwide Services Pvt. Ltd.	0	465	465
270	Sysnet Broadband Services Pvt. Ltd.	0	460	460
271	Quick Link Broadband And Services Pvt. Ltd	0	458	458
272	Rocketwire Internet Solutions Pvt. Ltd.	0	457	457
273	Allied IT Infrastructures & Services Pvt. Ltd.	0	450	450
274	Stackbit Internet Services Pvt. Ltd.	0	447	447
275	Varsha Datacom Services Pvt Ltd	0	444	444
276	STN Communication & Advertising Pvt Ltd.	1	423	424
277	MORADABAD INTERNET SERVICES PVT LTD	0	420	420
278	Briskcom Infoway Pvt. Ltd.	0	405	405
279	Shineplus Networks Pvt Ltd	0	403	403
280	Pulse Telesystems Pvt. Ltd.	0	399	399
281	Citylink Broadband Services Pvt. Ltd.	0	390	390
282	Vardaan Netservices Pvt. Ltd.	0	388	388
283	VENKATA SAI INTERNET PRIVATE LIMITED	0	384	384
284	Skylink Fibernet Pvt. Ltd.	0	378	378
285	ELECON INFOTMATION TECHNOLOGY LTD	0	377	377
286	Bhiwani Communications Pvt. Ltd.	0	375	375
287	WINDSOR INTERNET PVT LTD	0	374	374
288	Voxterra Innovtions Pvt Ltd	169	202	371
289	Gorakhpur Net Services Pvt. Ltd.	0	370	370
290	Netsat Communications Pvt Ltd	0	366	366
291	ARJUN BROADBAND PRIVATE LIMITED	0	362	362
292	Sify Technologies Ltd.	187	170	357
293	Spider Broadband and Cable Pvt Ltd	0	348	348
294	KSK Broadband Pvt Ltd	0	345	345
295	Oistel Telecom Pvt. Ltd.	166	166	332
296	Sai Akshay Internet Services Pvt Ltd.	0	332	332
297	HELM CONSULTANTS PVT LTD	328	0	328
298	Twincity Communication Private Limited	0	325	325

299	WAVETREE NETWORKS PVT LTD	0	320	320
300	DEVELOPMENT LOGICS SOLUTIONS PVT LTD	0	319	319
301	Raycom Fibers Pvt Ltd	0	311	311
302	VISPUTES INTERNET PRIVATE LIMITED	0	305	305
303	Sense Connect IT Pvt. Ltd.	0	296	296
304	SHEEN TELECOM CONSULTANTS PVT LTD	0	292	292
305	ANTARIKSH BROADBAND & WIRELESS SOLUTIONS PVT LTD	291	0	291
306	POWERNET TELECOM PVT LTD	145	145	290
307	Dhanam Internet Services India Pvt. Ltd.	0	289	289
308	Mall and Mall Digiworld Pvt. Ltd.	0	281	281
309	Nanjil Internet Services Pvt. Ltd.	0	280	280
310	Light Air Transmission Pvt. Ltd.	138	138	276
311	A-Net Communication India Pvt.Ltd.	146	123	269
312	SmartLink Broadband Services	0	267	267
313	Verizon Communications India Pvt. Ltd.	0	267	267
314	Kataria Net Solutions Pvt. Ltd.	0	266	266
315	Singh Internet Services Pvt. Ltd.	0	260	260
316	Cityline Networks Pvt Ltd	0	251	251
317	Suncity Broadband Pvt Ltd.	0	248	248
318	Faiconet Internet Pvt Ltd	0	245	245
319	SNT Broadband Pvt. Ltd.	0	238	238
320	Oasis Cable Pvt Ltd.	235	0	235
321	S.V.C CABLE NET PRIVATE LIMITED	231	0	231
322	Khetan Cable Network (P) Ltd	0	228	228
323	VMO BROADBAND PVT LTD	225	0	225
324	ACEBROWSE PVT LTD	0	219	219
325	Barani Data Solutions Private Limited	217	0	217
326	CIT SOLUTIONS PVT. LTD.	0	217	217
327	Achiever Communication and Services Pvt. Ltd.	0	214	214
328	Veer Point Pvt. Ltd.	0	211	211
329	Magnuss Broadband Service Pvt. Ltd.	0	210	210
330	Microsense Pvt. Ltd.	0	209	209
331	PROLINE DATATECH SERVICVES PVT LTD	0	208	208
332	Way2Air Net Solution Pvt Ltd	0	207	207
333	Saibaba Broadband Pvt. Ltd.	0	206	206
334	NEXTGEN COMPUSOFT PVT LTD	0	203	203
335	Ishani Broadband Pvt Ltd	0	200	200
336	KKM Broadband Internet Pvt Ltd	0	191	191
337	Netrexo Communications Pvt. Ltd.	0	191	191
338	Wi5 Internet Services P Limited	0	191	191
339	HIPOINT CONNECT PRIVATE LIMITED	0	185	185
340	BSL Technologies Pvt. Ltd.	0	170	170
341	Vrednus Network Pvt. Ltd.	0	170	170

342	White Stallion Networks Pvt. Ltd.	0	169	169
343	Optisky Fibernet Pvt. Ltd.	0	168	168
344	PMG NETWORKD PVT LTD	0	164	164
345	CERALINK COMMUNICATION PVT LTD	0	160	160
346	Zoram Infonet Pvt Ltd	0	157	157
347	Shreepad Communication Pvt. Ltd.	0	140	140
348	Shree Siddhivinayak Cable and Internet Service Provider Pvt. Ltd.	138	0	138
349	AT&T Global Network Services India Private Limited	0	134	134
350	Satpar Infotech Pvt Ltd	0	133	133
351	AIRMAX INTERNET PVT LTD	130	0	130
352	SATH TECHNOLOGIES PVT LTD	127	0	127
353	Malang Solutions Pvt. Ltd.	0	126	126
354	MLC INTERNET PVT LTD	0	126	126
355	Mediatech Communication Pvt. Ltd.	0	125	125
356	M-TEL Networks (P) Ltd	0	125	125
357	Vanshika Broadband Pvt. Ltd.	2	121	123
358	Shri Vinayagaa Internet Pvt Ltd	0	120	120
359	V NET NETWORKS PVT. LTD	0	118	118
360	NR DATA SERVICE PVT LTD	0	110	110
361	Pronoc Technologies Pvt. Ltd.	0	107	107
362	Hipath Netcom Services Pvt. Ltd.	0	105	105
363	Telstra Telecommunications Pvt. Ltd.	0	104	104
364	ROYAL WIRELESS SERVICES PVT LTD	0	102	102
365	Invensys Networks Pvt.Ltd.	0	101	101
366	Sri Ram Broadband Services Pvt. Ltd.	0	99	99
367	Marutham Networks Pvt. Ltd.	0	98	98
368	Cheetah Networks Pvt. Ltd.	0	94	94
369	Omkar Net Services Pvt. Ltd.	0	93	93
370	FLIX BROADBAND SERVICES PRIVATE LIMITED	0	92	92
371	SHRI RAM BRAOADBAND SERVICES PVT LTD	0	92	92
372	Micronova Network Solutions Ltd	1	90	91
373	Clicknet Communication Pvt Ltd	90	0	90
374	INFINITY WIRELESS SERVICES PVT. LTD.	0	89	89
375	Rae Internet Service Provider Pvt Ltd	7	82	89
376	Ezeenet Internet Solutions Pvt. Ltd.	0	87	87
377	Airtechzone Services India Pvt Ltd	85	0	85
378	Wireline Solution(India) Pvt. Ltd.	0	85	85
379	ARP INFONET PVT. LTD.	0	84	84
380	AirFiber IT Solutions Pvt. Ltd	0	83	83
381	Dream Plus Multi Services Pvt. Ltd.	0	82	82
382	NETWIRE INTERNET SOLUTIONS PVT. LTD.	0	82	82
383	NT CYBRONET PRIVATE LIMITED	0	80	80

384	G-Max IT Services Pvt. Ltd.	0	79	79
385	S A INTERNET SOLUTION PVT LTD	0	78	78
386	TRIPLE LINK PVT LTD	0	74	74
387	Durga Broadband Pvt. Ltd.	0	68	68
388	Highnet Broadband & Technologies Pvt. Ltd.	0	66	66
389	ERNET India	31	32	63
390	Delix Net Solutions Pvt Ltd	0	62	62
391	Wifi Inter-connect Pvt. Ltd.	0	60	60
392	ASVISH TECHNOLOGY PARTNER (OPC) PVT LTD	0	58	58
393	Ekdant Communication Pvt Ltd	0	56	56
394	GigHz IT Solutions Pvt Ltd	0	56	56
395	Infiber Broadnet Pvt. Ltd.	0	56	56
396	Divine Broadband Services Pvt Ltd	0	53	53
397	City Broadband Pvt. Ltd.	0	52	52
398	YNET TELECOM SOLUTIONS PVT LTD	51	0	51
399	AUSPICE INFRATAL PVT LTD	0	47	47
400	Sanavi Infotech (OPC) Pvt. Ltd.	0	46	46
401	QBC Infotech Pvt. Ltd.	0	45	45
402	Mesh Infranet Pvt Ltd	0	41	41
403	Gigalo Communication Pvt. Ltd.	40	0	40
404	Edge Telecommunications Pvt. Ltd.	0	39	39
405	RAJNET CARE PRIVATE LIMITED	0	39	39
406	Prompt infracom Pvt Ltd	0	35	35
407	Navariya Satellite Services Pvt.Ltd.	33	0	33
408	JAI MATA DI TELETRONIX PVT LTD	0	32	32
409	Orange Business Services India Network Pvt. Ltd.	0	32	32
410	Promptnet Broadband Pvt. Ltd.	0	32	32
411	Spacetrade Internet Pvt Ltd	0	32	32
412	Praveen Telecom Pvt. Ltd.	0	31	31
413	Dreamnet Pvt.Ltd.	0	30	30
414	YOTTA NETWORK SERVICES PRIVATE LIMITED	0	30	30
415	Airmesh Communications Limited	0	29	29
416	GURU NETCOMM PVT LTD	0	28	28
417	SKYNETZONE WIFI SERVICES PVT LTD	0	27	27
418	WE INTERNET LIMITED	0	27	27
419	DRONAGIRI INFOTECH PVT LTD	0	26	26
420	Speednet Infomedia Pvt. Ltd	0	26	26
421	Pacific Internet India Pvt. Ltd.	0	23	23
422	Vidarbha Wi-Fi & Network Services Pvt. Ltd.	23	0	23
423	Pintwire Infomatics Pvt. Ltd.	0	19	19
424	FASTHOOK NETWORKS PVT LTD	0	18	18
425	Sun Broadband and Data Services PVT. LTD.	0	17	17

426	Angrow Netcomm Pvt. Ltd.	16	0	16
427	Hienet Internet Services Pvt Ltd	0	15	15
428	Microtel Internet Network Pvt. Ltd.	0	15	15
429	Tatanet Services Ltd	0	14	14
430	Adya Tech One Services Pvt Ltd	0	13	13
431	NR IT Service Pvt Ltd	0	12	12
432	A TO Z INFOLINK PVT.LTD.	0	11	11
433	Airlink Broadband Pvt Ltd	0	10	10
434	UBERCORE DATA LABS PVT LTD	0	9	9
435	Rajdhani Telecom Pvt. Ltd.	2	6	8
436	Clear Beam Communication Pvt Ltd	7	0	7
437	Essel Shyam Communications Limited	0	7	7
438	Financial Technologies Communications Ltd.	0	7	7
439	Kartik Network Pvt. Ltd.	3	3	6
440	Uttradoon Networks Pvt. Ltd.	2	4	6
441	Mastek Infosystems OPC Pvt. Ltd.	0	5	5
442	Cloudcast Digital Ltd	0	4	4
443	Texas Connect Private Limited	0	4	4
444	Aristo Telenet Pvt Ltd	0	3	3
445	Critel Technologies Pvt. Ltd.	0	3	3
446	ESP Fibernet Pvt. Ltd.	0	2	2
447	Hybrid Hash Pvt. Ltd.	1	1	2
448	Sabse Internet Services Provider Pvt Ltd	0	2	2
449	Sahiba Silk Mills Pvt. Ltd.	1	0	1
	Total	47206781	778094602	825301383

Annexure 1.6: List of Service Providers which reported IP Telephony Minutes for Q.E. Mar-21

S. No.	Name of Service Providers reported IP Telephony Minutes as on 31st March 2021
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	delDSL Internet Pvt Ltd
7	Pulse Telesystems Pvt. Ltd.
8	Sify Technologies Ltd.
9	Tata Communications Limited
10	Trikon Electronics Pvt. Ltd.
11	World Phone Internet Services Pvt. Ltd.
12	You Broadband & Cable India Pvt. Ltd.
13	Warmconnect Internet Services Pvt. Ltd.

Annexure 1.7: Service Area wise PMRTS subscriber Base

S.No.	DOT Licensed Service Area	Area Served	Service Provider	Subscriber Base	
				31.12.2020	31.03.2021
1	Andhra Pradesh	Hyderabad	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2,657	2,699
			QuickCall	1,010	1,021
		Visakhapatnam	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	4,014	4,137
			Total	7,681	7,857
2	Delhi	Delhi	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7,715	7,440
			Procall Ltd.	2,988	2,999
		Total	10,703	10,439	
3	Gujarat	Ahmedabad	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,089	1,096
		Amrela	Inative Networks Pvt. Ltd.	-	-
		Bharuch	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,491	1,498
			Inative Networks Pvt. Ltd.	-	-
		Dahej	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,112	1,241
		Jamnagar	Inative Networks Pvt. Ltd.	360	360
		Kutch	Inative Networks Pvt. Ltd.	205	205
		Surat	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,652	1,644
			Inative Networks Pvt. Ltd.	895	895
		Vadodara	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,712	1,844
Inative Networks Pvt. Ltd.	360		360		
Total	8,876	9,143			
4	Karnataka	Bangalore	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7,195	7,047
			QuickCall	532	528
		Total	7,727	7,575	
5	Kerala	Ernakulam	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,034	1,025
		Kerala	Wiwanet Solutions Pvt. Ltd	690	751
		Total	1,724	1,776	
6	Kolkata	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,743	1,763
7	Madhya Pradesh	Indore	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1,646	1,651
8	Maharashtra	Pune	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2,025	2,004
			Smartalk Pvt Ltd.	670	674
		Total	2,695	2,678	
9	Mumbai	Mumbai	Airtalk Solutions & Services Pvt. Ltd.	431	451
			Arya Omnitalk Radio Trunking Services Pvt.Ltd.	8,886	9,527
			Bhilwara Telenet Services Pvt.Ltd.	864	871
			Smartalk Pvt Ltd.	816	828
			Total	10,997	11,677
10	Rajasthan	Jaipur	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	890	984
			Procall Ltd.	381	396
		Total	1,271	1,380	
11	Tamil Nadu	Chennai	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7,655	7,745
			QuickCall	487	491
		Total	8,142	8,236	
Grand Total				63,205	64,175

**Annexure 2.1: Wireless Revenue Service - Service Area wise Statistics for
QE March, 2021**

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	95.56%	124	16	376	375	752
Gujarat	95.35%	111	18	354	312	666
Karnataka	93.59%	115	19	392	384	777
MH	95.69%	116	17	351	340	691
TN (incl. Chennai)	93.60%	123	15	367	368	735

Key parameters for service areas of category-B

Service Area	% of pre-paid in total Subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Haryana	96.91%	84	10	362	358	720
Kerala	97.32%	117	9	289	294	583
MP	98.09%	101	18	407	412	820
Punjab	96.18%	116	10	360	351	711
Rajasthan	97.65%	99	18	392	398	790
UP(E)	97.96%	77	13	482	529	1011
UP(W)	97.86%	89	13	413	421	834
WB	99.18%	98	17	432	456	887

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	98.05%	112	29	425	452	877
Bihar	98.79%	92	13	543	613	1156
HP	98.62%	100	10	343	345	688
J&K	51.97%	112	25	542	523	1065
NE	98.57%	124	32	389	398	787
Odisha	98.59%	104	17	455	486	941

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	94.65%	77	13	357	353	710
Delhi	81.50%	89	17	447	406	853
Mumbai	80.00%	105	14	403	348	752

Annexure 4.1: Performance of QoS Parameters for Cellular Mobile Service

Name of Service Area	Name of Service Provider	Network Related Parameters											Customer Service Quality Parameters								
		Network		Connection			Connection Maintenance		POI			Metering and billing			Response time		Termination /				
		BS Accumulated down-time (not available for service) (%age)	Worst affected BSs due to down-time (%age)	Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)	SOCCH/Paging Channel Congestion/RRC Congestion (%age)	TCH, RAB and E-RAB Congestion (%age)	Network QoS DCR Spatial Distribution Measure [Network QSD(0,90)]	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)	Down Link (DL) Packet Drop Rate or DL-PDR	Up Link (UL) Packet Drop Rate or UL-PDR	Metering and billing credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/charging complaints	Period of applying credit waiver/ adjustment to customers' account from the date of resolution of complaints	Accessibility of call center/ 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%	≤ 2%	≤ 2%	≤ 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	0.11	0.40	99.40	0.16	0.17	0.94	1.25	96.93	0	0.18	0.16	0.02	0.00	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	BSNL	1.20	1.86	98.12	0.76	0.84	1.70	1.84	98.53	0	0.12	0.17	0.00	0.00	100.00	100.00	100.00	96.00	98.35	100.00	100.00
	RJIL	0.03	0.04	99.65	0.01	0.00	0.23	0.35	99.96	0	0.00	0.09	0.00	0.00	100.00	100.00	100.00	97.49	99.43	100.00	100.00
	VIL	0.03	0.37	99.34	0.24	0.42	1.92	2.63	99.23	0	0.01	0.12	0.00	0.00	100.00	100.00	100.00	99.69	100.00	100.00	100.00
Assam	Airtel	0.32	1.44	98.45	0.36	0.59	1.95	2.18	96.91	0	0.23	0.20	0.01	0.00	100.00	100.00	100.00	100.00	89.00	100.00	100.00
	BSNL	1.77	1.34	98.71	0.81	1.70	1.90	2.38	98.20	0	0.00	0.00	0.01	0.00	100.00	100.00	100.00	97.00	97.70	100.00	100.00
	RJIL	0.25	1.03	99.62	0.00	0.00	0.59	0.69	99.93	0	0.01	0.14	0.00	0.00	100.00	100.00	100.00	98.18	99.49	100.00	100.00
	VIL	0.17	1.82	98.86	0.84	1.05	1.96	2.86	98.78	0	0.17	0.16	0.00	0.00	100.00	100.00	100.00	99.87	99.98	100.00	100.00
Bihar	Airtel	0.17	0.21	97.81	0.30	1.21	1.63	1.74	97.86	0	0.10	0.34	0.01	0.00	100.00	100.00	100.00	100.00	89.00	100.00	100.00
	BSNL	1.89	1.87	95.79	0.31	0.37	1.84	2.39	98.30	0	0.00	0.00	0.00	0.00	100.00	100.00	100.00	99.00	96.69	100.00	100.00
	RJIL	0.12	0.35	99.29	0.00	0.00	0.41	0.53	99.95	0	0.00	0.11	0.00	0.00	100.00	100.00	100.00	98.43	98.67	100.00	100.00
	VIL	0.39	1.83	99.35	0.33	0.37	1.61	2.00	99.00	0	0.01	0.02	0.00	0.00	100.00	100.00	100.00	96.15	99.98	100.00	100.00
Delhi	Airtel	0.10	0.00	98.92	0.27	0.33	1.69	2.08	95.39	0	0.93	0.20	0.01	0.00	100.00	100.00	100.00	100.00	90.00	100.00	100.00
	BSNL	0.10	0.32	99.62	0.00	0.00	0.14	0.26	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	98.24	97.74	100.00	100.00
	RJIL	0.08	0.06	99.81	0.12	0.17	1.10	1.52	99.68	0	0.27	0.36	0.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	MTNL	0.06	0.37	97.58	0.06	0.88	1.29	1.48	97.97	0	NA	NA	0.00	0.00	100.00	100.00	100.00	99.98	99.80	100.00	100.00
Gujarat	Airtel	0.08	0.22	99.55	0.29	0.36	1.47	1.86	95.15	0	0.11	0.18	0.01	0.00	100.00	100.00	100.00	100.00	90.00	100.00	100.00
	BSNL	1.21	1.19	97.99	0.12	0.53	1.69	2.33	98.45	0	0.08	0.15	0.00	0.00	100.00	100.00	100.00	99.68	97.51	100.00	100.00
	RJIL	0.10	0.30	99.59	0.00	0.00	0.20	0.31	99.95	0	0.00	0.09	0.00	0.00	100.00	100.00	100.00	98.75	99.40	100.00	100.00
	VIL	0.03	0.12	99.39	0.16	0.41	1.49	2.18	98.68	0	0.14	0.13	0.00	0.00	100.00	100.00	100.00	97.37	100.00	100.00	100.00
Haryana	Airtel	0.11	0.27	99.73	0.16	0.23	1.10	1.62	97.59	0	0.14	0.32	0.02	0.00	100.00	100.00	100.00	100.00	82.00	100.00	100.00
	BSNL	0.57	0.29	98.81	0.19	0.51	1.62	1.75	97.98	0	0.19	0.44	0.00	0.00	100.00	100.00	100.00	96.00	96.30	100.00	100.00
	RJIL	0.12	0.56	99.45	0.00	0.00	0.31	0.53	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	97.48	99.49	100.00	100.00
	VIL	0.29	0.06	99.29	0.32	0.68	1.56	2.17	98.63	0	0.14	0.78	0.00	0.00	100.00	100.00	100.00	99.39	99.95	100.00	100.00
Himachal Pradesh	Airtel	0.12	0.59	99.54	0.13	0.12	1.12	1.52	95.58	0	0.16	0.14	0.01	0.00	100.00	100.00	100.00	100.00	92.00	100.00	100.00
	BSNL	1.82	0.83	99.00	0.52	0.64	1.90	2.04	97.62	0	0.00	0.00	0.01	0.00	100.00	100.00	100.00	97.83	95.78	100.00	100.00
	RJIL	0.12	0.53	99.63	0.00	0.00	0.16	0.28	99.98	0	0.00	0.05	0.00	0.00	100.00	100.00	100.00	97.22	99.58	100.00	100.00
	VIL	0.05	0.21	99.66	0.05	0.11	1.97	2.90	98.32	0	0.28	0.42	0.00	0.00	100.00	100.00	100.00	99.24	99.85	100.00	100.00
Jammu & Kashmir	BSNL	1.88	1.73	97.82	0.84	1.01	1.99	2.48	96.17	0	0.02	0.09	0.00	0.00	100.00	100.00	100.00	96.00	95.97	100.00	100.00
	VIL	0.27	1.69	99.56	0.09	0.14	2.22	3.58	98.66	0	0.23	0.25	0.00	0.00	100.00	100.00	100.00	98.29	99.99	100.00	100.00
	Airtel	0.11	0.20	99.27	0.06	0.07	1.49	2.44	95.10	0	0.22	0.22	0.00	0.00	100.00	100.00	100.00	100.00	93.00	100.00	100.00
	RJIL	0.17	0.82	99.71	0.00	0.00	0.26	0.39	99.97	0	0.00	0.06	0.00	0.00	100.00	100.00	100.00	96.95	99.69	100.00	100.00
Karnataka	Airtel	0.15	0.36	99.70	0.14	0.14	1.02	1.34	95.09	0	0.22	0.12	0.02	0.00	100.00	100.00	100.00	100.00	97.00	100.00	100.00
	BSNL	1.47	1.72	97.47	0.59	1.12	1.49	1.64	97.59	0	0.58	0.66	0.00	0.00	99.78	100.00	100.00	97.00	94.08	100.00	100.00
	RJIL	0.06	0.07	99.72	0.00	0.00	0.18	0.31	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	97.44	99.36	100.00	100.00
	VIL	0.15	0.56	99.35	0.29	0.64	1.31	2.14	99.21	0	0.19	0.44	0.00	0.00	100.00	100.00	100.00	99.44	99.99	100.00	100.00
Kerala	Airtel	0.06	0.13	99.76	0.25	0.29	1.96	2.60	99.04	0	0.17	0.19	0.02	0.00	100.00	100.00	100.00	100.00	98.00	100.00	100.00
	BSNL	0.31	0.57	98.59	0.47	1.29	1.56	1.93	98.73	0	0.08	0.19	0.00	0.00	100.00	100.00	100.00	96.00	96.80	100.00	100.00
	RJIL	0.04	0.05	99.70	0.00	0.00	0.00	0.32	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	98.49	99.68	100.00	100.00
	VIL	0.82	0.63	99.84	0.14	0.12	0.65	1.05	99.59	0	0.14	0.19	0.00	0.00	100.00	100.00	100.00	99.96	99.96	100.00	100.00
Kolkata	Airtel	0.05	0.00	99.77	0.37	0.44	1.55	2.00	98.17	0	0.41	0.66	0.02	0.00	100.00	100.00	100.00	100.00	78.00	100.00	100.00
	BSNL	0.96	1.67	98.57	0.44	0.19	1.46	1.66	96.21	0	0.00	0.00	0.02	0.01	100.00	100.00	100.00	96.00	97.60	100.00	100.00
	RJIL	0.02	0.04	99.69	0.00	0.00	0.10	0.20	99.98	0	0.00	0.05	0.00	0.00	100.00	100.00	100.00	98.09	99.08	100.00	100.00
	VIL	0.10	0.64	99.90	0.08	0.10	0.67	1.00	97.79	0	0.06	0.12	0.00	0.00	100.00	100.00	100.00	98.79	100.00	100.00	100.00
Madhya Pradesh	Airtel	0.06	0.09	99.27	0.22	0.28	1.96	2.33	95.61	0	0.11	0.18	0.01	0.00	100.00	100.00	100.00	100.00	92.00	100.00	100.00
	BSNL	1.20	1.13	98.81	0.42	1.30	1.91	2.05	98.21	0	0.00	0.00	0.00	0.00	100.00	100.00	100.00	96.00	97.31	100.00	100.00
	RJIL	0.16	0.55	99.63	0.01	0.00	0.34	0.46	99.94	0	0.00	0.13	0.00	0.00	100.00	100.00	100.00	98.70	98.55	100.00	100.00
	VIL	0.20	0.89	98.32	0.53	1.10	1.60	2.17	97.39	0	0.23	0.26	0.00	0.00	100.00	100.00	100.00	96.27	99.99	100.00	100.00
Maharashtra	Airtel	0.04	0.05	99.50	0.12	0.18	1.39	1.75	95.08	0	0.11	0.17	0.01	0.00	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	BSNL	1.62	1.94	97.08	0.69	1.08	1.86	2.56	96.32	0	0.09	0.21	0.01	0.00	100.00	100.00	100.00	100.00	95.48	1	

Annexure 4.1 (Contd.)

North East	Airtel	0.40	1.36	98.02	0.60	0.75	1.90	2.11	96.35	0	0.27	0.24	0.01	0.00	100.00	100.00	100.00	100.00	100.00	87.00	100.00	100.00
	BSNL	1.94	1.77	97.90	0.85	0.98	1.79	1.86	97.00	0	0.00	0.00	0.05	0.05	100.00	100.00	100.00	100.00	97.00	95.66	100.00	100.00
	RJIL	0.99	1.71	99.53	0.00	0.00	0.87	1.11	99.94	0	0.01	0.13	0.00	0.00	100.00	100.00	100.00	100.00	98.04	99.59	100.00	100.00
	VIL	0.37	1.86	99.35	0.52	1.28	1.78	2.17	98.66	0	0.33	0.18	0.00	0.00	100.00	100.00	100.00	100.00	99.98	99.99	100.00	100.00
Odisha	Airtel	0.12	0.09	98.58	0.23	0.50	1.67	1.80	96.77	0	0.08	0.20	0.01	0.00	100.00	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	RJIL	0.07	0.11	99.54	0.00	0.00	0.28	0.38	99.95	0	0.00	0.10	0.00	0.00	100.00	100.00	100.00	100.00	97.88	99.63	100.00	100.00
	BSNL	0.75	1.93	95.66	0.92	1.62	1.99	2.01	95.97	0	0.00	0.00	0.00	0.01	100.00	100.00	100.00	100.00	96.00	96.02	100.00	100.00
	VIL	0.44	0.98	99.75	0.16	0.21	1.87	2.44	98.75	0	0.07	0.26	0.00	0.00	100.00	100.00	100.00	100.00	98.53	99.98	100.00	100.00
Punjab	Airtel	0.12	0.45	99.78	0.18	0.20	0.54	0.75	98.38	0	0.09	0.37	0.02	0.00	100.00	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	BSNL	0.29	1.49	98.34	0.17	0.24	1.70	1.86	98.20	0	0.01	0.02	0.00	0.00	100.00	100.00	100.00	100.00	97.97	96.98	100.00	100.00
	RJIL	0.10	0.30	99.56	0.00	0.00	0.12	0.25	99.97	0	0.00	0.05	0.00	0.00	100.00	100.00	100.00	100.00	97.54	98.88	100.00	100.00
	VIL	0.03	0.06	99.78	0.10	0.05	0.88	1.47	99.44	0	0.13	0.33	0.00	0.00	100.00	100.00	100.00	100.00	99.83	99.98	100.00	100.00
Rajasthan	Airtel	0.19	0.67	98.28	0.21	0.56	1.28	1.63	97.78	0	0.41	0.37	0.01	0.00	100.00	100.00	100.00	100.00	100.00	92.00	100.00	100.00
	BSNL	1.10	1.49	98.34	0.73	1.66	1.59	2.42	98.47	0	0.00	0.00	0.02	0.01	99.00	100.00	100.00	100.00	96.00	99.80	100.00	100.00
	RJIL	0.06	0.12	99.64	0.00	0.00	0.30	0.40	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	100.00	98.27	98.92	100.00	100.00
	VIL	0.22	1.46	99.36	0.17	0.40	1.87	2.70	98.99	0	0.20	0.31	0.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tamil Nadu	Airtel	0.10	0.68	99.81	0.25	0.27	1.52	2.33	96.85	0	0.19	0.13	0.02	0.00	100.00	100.00	100.00	100.00	100.00	84.00	100.00	100.00
	BSNL	0.64	1.51	99.29	0.24	0.41	1.92	2.89	97.97	0	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	98.00	96.46	100.00	100.00
	RJIL	0.02	0.02	99.67	0.00	0.00	0.17	0.29	99.96	0	0.00	0.08	0.00	0.00	100.00	100.00	100.00	100.00	98.19	99.53	100.00	100.00
	VIL	0.16	0.72	99.16	0.63	0.81	1.40	2.17	98.97	0	0.10	0.20	0.00	0.00	100.00	100.00	100.00	100.00	99.24	99.97	100.00	100.00
Uttar Pradesh (East)	Airtel	0.20	0.81	98.07	0.16	1.34	1.32	1.72	96.53	0	0.18	0.25	0.01	0.00	100.00	100.00	100.00	100.00	100.00	89.00	100.00	100.00
	BSNL	1.19	1.41	98.40	0.84	0.68	1.82	2.85	97.96	0	0.01	0.02	0.09	0.08	100.00	100.00	100.00	100.00	98.00	95.80	100.00	100.00
	RJIL	0.28	1.32	99.09	0.00	0.00	0.35	0.47	99.95	0	0.00	0.11	0.00	0.00	100.00	100.00	100.00	100.00	98.49	98.53	100.00	100.00
	VIL	0.25	0.83	98.59	0.80	1.25	1.97	2.94	98.59	0	0.07	0.17	0.00	0.00	100.00	100.00	100.00	100.00	98.83	100.00	100.00	100.00
Uttar Pradesh (West)	Airtel	0.59	0.86	99.85	0.13	0.12	1.68	2.13	95.61	0	0.16	0.27	0.02	0.00	100.00	100.00	100.00	100.00	100.00	90.00	100.00	100.00
	BSNL	1.76	1.91	97.37	0.81	1.18	1.75	1.93	96.69	0	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	97.98	96.35	100.00	100.00
	RJIL	0.17	1.02	99.32	0.03	0.00	0.34	0.45	99.95	0	0.00	0.09	0.00	0.00	100.00	100.00	100.00	100.00	98.61	98.44	100.00	100.00
	VIL	0.13	0.57	98.46	0.84	1.22	1.67	2.74	98.13	0	0.06	0.10	0.00	0.00	100.00	100.00	100.00	100.00	99.29	100.00	100.00	100.00
West Bengal	Airtel	0.13	0.14	98.13	0.76	1.14	1.82	2.86	97.53	0	0.33	0.47	0.02	0.00	100.00	100.00	100.00	100.00	100.00	66.00	100.00	100.00
	BSNL	0.48	1.79	97.31	0.98	1.55	6.94	8.33	97.40	0	0.45	2.32	0.00	0.00	98.00	100.00	100.00	100.00	95.00	95.99	100.00	100.00
	RJIL	0.07	0.23	99.55	0.00	0.00	0.45	0.56	99.94	0	0.00	0.12	0.00	0.00	100.00	100.00	100.00	100.00	98.45	99.08	100.00	100.00
	VIL	0.10	0.59	99.83	0.10	0.16	1.41	1.90	97.48	0	0.06	0.13	0.00	0.00	100.00	100.00	100.00	100.00	98.90	100.00	100.00	100.00

Note:

NA=Not applicable

M/s MTNL has not reported for the parameters * Down Link Packet Drop Rate and Up Link Packet Drop Rate* as these parameters are for LTE based networks and it is not offering 4G services.

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

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/ validity complaints	Period of applying credit waiver/ adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/ customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures			
																				Benchmarks		
				≤7	For urban areas by next working day: ≥85%	For urban areas: ≥ 100%	For rural and hilly areas: ≥ 75%				For rural and hilly areas: ≥ 100%	≤ 10 Hrs	≤0.5%	≤0.1%	≤0.1%	98% within 4 weeks	100% within 6 weeks	1 week of resolution of complaint	≥95%	≥95%	100% within 7 days	100% within 60 days
1	Andhra Pradesh	Bharti Airtel	0.61	85.07%	100.00%	NA	NA	84	4.55	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	96.74%	100.00%	100.00%			
2		BSNL	5	98.00%	100.00%	97.00%	100.00%	16	6	0%	0.00%	0.00%	100.00%	100.00%	100.00%	98.28%	98.21%	100.00%	100.00%			
3		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	95.29%	99.54%	100.00%	100.00%			
4		TTSL	4.20	84.17%	100.00%	NA	NA	379	9.72	0%	0.00%	NA	100.00%	100.00%	100.00%	97.86%	95.78%	100.00%	100.00%			
5		VIL	0.27	100.00%	100.00%	NA	NA	NA	1.49	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA			
6	Assam	BSNL	3	97.00%	100.00%	80.00%	100.00%	429	4	0%	0.00%	0.00%	100.00%	100.00%	100.00%	99.35%	98.00%	100.00%	100.00%			
7		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%			
8		VIL	1.80	100.00%	100.00%	NA	NA	NA	4.8	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA			
9	Bihar	BSNL	3	94.00%	100.00%	96.00%	100.00%	643	4	0%	0.05%	0.00%	98.00%	100.00%	100.00%	99.39%	98.51%	100.00%	100.00%			
10		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	97.44%	99.67%	100.00%	100.00%			
11		TTSL	1.56	97.25%	100.00%	NA	NA	2	2.42	0%	NA	NA	NA	NA	NA	95.24%	100.00%	100.00%	100.00%			
12		VIL	1.84	100.00%	100.00%	NA	NA	NA	1.50	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA			
13	Delhi	Bharti Airtel	0.85	92.50%	100.00%	NA	NA	280	4.56	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.67%	100.00%	100.00%			
14		MTNL	2.83	65.46%	90.00%	NA	NA	4468	15.22	0%	0.01%	0.00%	100.00%	100.00%	100.00%	100.00%	99.93%	100.00%	100.00%			
15		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.32%	99.81%	100.00%	100.00%			
16		TTSL	1.79	98.95%	100.00%	NA	NA	1	3.41	0%	0.00%	NA	100.00%	100.00%	100.00%	99.27%	95.57%	100.00%	100.00%			
17		VIL	0.36	100.00%	100.00%	NA	NA	NA	3.56	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA			
18	Gujarat	Bharti Airtel	0.26	91.36%	100.00%	NA	NA	54	6.23	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.99%	100.00%	100.00%			
19		BSNL	4	95.00%	100.00%	94.00%	100.00%	100	4	0%	0.01%	0.00%	100.00%	100.00%	100.00%	98.11%	99.98%	100.00%	100.00%			
20		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.49%	97.92%	100.00%	100.00%			
21		TTSL	1.73	93.17%	100.00%	NA	NA	52	5.09	0%	NA	NA	NA	NA	NA	98.44%	99.10%	100.00%	100.00%			
22		VIL	0.31	100.00%	100.00%	NA	NA	NA	3.9	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA			

Annexure 4.2 (Contd.)

23	Himachal Pradesh	BSNL	6	89.00%	100.00%	93.00%	100.00%	175	7	0%	0.02%	0.00%	98.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
24		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%	
25		VIL	0.00	100.00%	100.00%	NA	NA	NA	0.00	0.00	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA	
26	Haryana	Bharti Airtel	0.96	93.99%	100.00%	NA	NA	21	3.80	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.83%	100.00%	100.00%	
27		BSNL	5	91.00%	100.00%	90.00%	100.00%	220	6	0%	0.05%	0.00%	100.00%	100.00%	100.00%	98.37%	100.00%	100.00%	100.00%	
28		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%	
29		TTSL	1.15	50.00%	100.00%	NA	NA	2	30.49	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%	
30		VIL	4.81	100.00%	100.00%	NA	NA	NA	0.42	NA	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA	
31	Jammu & Kashmir	BSNL	5	98.00%	100.00%	95.00%	100.00%	142	7	0%	0.01%	0.00%	98.00%	100.00%	100.00%	98.46%	100.00%	100.00%	100.00%	
32		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	95.24%	100.00%	100.00%	100.00%	
33	Kerala	Bharti Airtel	1.75	94.13%	100.00%	NA	NA	118	7.05	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	96.61%	100.00%	100.00%	
34		BSNL	4	91.00%	100.00%	91.00%	100.00%	713	7	0%	0.03%	0.00%	100.00%	100.00%	100.00%	97.93%	97.85%	100.00%	100.00%	
35		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	97.50%	100.00%	100.00%	100.00%	
36		TTSL	0.10	60.00%	100.00%	NA	NA	0	11.75	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%	
37		VIL	0.55	100.00%	100.00%	NA	NA	NA	3.23	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
38	Kolkata	Bharti Airtel	0.85	93.39%	100.00%	NA	NA	61	7.69	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	96.93%	100.00%	100.00%	
39		BSNL	7	91.00%	100.00%	NA	NA	3474	8	0%	0.00%	0.00%	98.00%	100.00%	100.00%	99.74%	99.00%	100.00%	100.00%	
40		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	97.66%	98.09%	100.00%	100.00%	
41		VIL	0.55	100.00%	100.00%	NA	NA	NA	2.6	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
42	Karnataka	Bharti Airtel	0.89	94.68%	100.00%	NA	NA	548	7.28	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.31%	100.00%	100.00%	
43		BSNL	5	90.00%	100.00%	98.00%	100.00%	4248	7	0%	0.09%	0.00%	98.00%	100.00%	100.00%	99.43%	99.41%	100.00%	100.00%	
44		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%	
45		TTSL	0.33	83.33%	100.00%	NA	NA	68	10.75	0%	0.00%	NA	100.00%	100.00%	100.00%	99.39%	98.16%	100.00%	100.00%	
46	Maharashtra	VIL	0.25	100.00%	100.00%	NA	NA	NA	4.10	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
47		Bharti Airtel	0.10	91.78%	100.00%	NA	NA	108	7.33	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	96.11%	100.00%	100.00%	
48		BSNL	6	89.00%	100.00%	78.00%	100.00%	24943	8	0%	0.01%	0.00%	100.00%	100.00%	100.00%	97.50%	99.96%	100.00%	100.00%	
49		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	97.70%	99.43%	100.00%	100.00%	
50		TTSL	1.31	87.89%	100.00%	NA	NA	209	8.31	0%	0.00%	NA	100.00%	100.00%	100.00%	95.67%	96.27%	100.00%	100.00%	
51	VIL	0.60	100.00%	100.00%	NA	NA	NA	4.15	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA		
52	Madhya Pradesh	Bharti Airtel	1.51	90.70%	100.00%	NA	NA	208	2.68	0%	0.01%	NA	100.00%	100.00%	100.00%	100.00%	98.82%	100.00%	100.00%	
53		BSNL	6	90.00%	100.00%	90.00%	100.00%	775	4	0%	0.09%	0.00%	100.00%	100.00%	100.00%	97.39%	100.00%	100.00%	100.00%	
54		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	96.92%	100.00%	100.00%	
55		TTSL	11.06	98.57%	100.00%	NA	NA	0	1.89	0%	NA	NA	NA	NA	NA	98.18%	98.11%	100.00%	100.00%	
56	VIL	0.58	100.00%	100.00%	NA	NA	NA	3.41	NA	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA		
57	Mumbai	Bharti Airtel	0.21	91.38%	100.00%	NA	NA	212	6.52	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.06%	100.00%	100.00%	
58		MTNL	3.40	63.90%	81.40%	NA	NA	159,132	51.99	0%	0.05%	NA	99.39%	100.00%	100.00%	100.00%	98.06%	54.11%	93.25%	7.63%
59		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.77%	100.00%	100.00%	100.00%	
60		TTSL	3.79	88.57%	100.00%	NA	NA	615	5.71	0%	0.00%	NA	100.00%	100.00%	100.00%	96.35%	95.80%	100.00%	100.00%	
61	VIL	0.22	100.00%	100.00%	NA	NA	NA	2.54	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA		

Annexure 4.2 (Contd.)

62	North East	RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
63		VIL	0.00	100.00%	100.00%	NA	NA	NA	0.00	NA	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA
64		BSNL	4	95.00%	100.00%	93.00%	100.00%	194	6	0%	0.01%	0.00%	99.00%	100.00%	100.00%	100.00%	98.97%	100.00%	100.00%
65	Odisha	BSNL	4	92.00%	100.00%	89.00%	100.00%	478	7	0%	0.09%	0.00%	99.00%	100.00%	100.00%	99.36%	98.67%	100.00%	100.00%
66		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
67		TTSL	1.40	97.22%	100.00%	NA	NA	2	2.57	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
68		VIL	0.59	100.00%	100.00%	NA	NA	NA	2.15	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA	
69	Punjab	Bharti Airtel	1.01	88.31%	100.00%	NA	NA	181	5.03	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.62%	100.00%	100.00%
70		BSNL	6	91.00%	100.00%	86.00%	100.00%	106	6	0%	0.02%	0.00%	98.00%	100.00%	100.00%	97.27%	100.00%	100.00%	100.00%
71		Quadrant	5.2	90.00%	100.00%	100.00%	100.00%	0	8.32	0%	0.00%	0.00%	100.00%	100.00%	100.00%	96.96%	96.01%	100.00%	100.00%
72		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.30%	100.00%	100.00%	100.00%
73		TTSL	0.60	80.95%	100.00%	NA	NA	1	6.83	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
74		VIL	0.44	100.00%	100.00%	NA	NA	NA	4.25	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
75	Rajasthan	Bharti Airtel	0.81	88.16%	100.00%	NA	NA	23	4.79	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.48%	100.00%	100.00%
76		BSNL	5	95.00%	100.00%	95.00%	100.00%	782	6	0%	0.07%	0.00%	100.00%	100.00%	100.00%	97.35%	100.00%	100.00%	100.00%
77		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.30%	100.00%	100.00%	100.00%
78		TTSL	4.58	100.00%	100.00%	NA	NA	0	2.47	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
79		VIL	0.51	100.00%	100.00%	NA	NA	NA	3.6	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
80	Tamil Nadu	Bharti Airtel	1.81	91.71%	100.00%	NA	NA	1438	8.99	0%	0.02%	NA	100.00%	100.00%	100.00%	100.00%	98.20%	100.00%	100.00%
81		BSNL	5	91.00%	100.00%	94.00%	100.00%	1482	7	0%	0.07%	0.00%	100.00%	100.00%	100.00%	99.30%	99.30%	100.00%	100.00%
82		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	95.40%	100.00%	100.00%	100.00%
83		TTSL	0.54	84.89%	100.00%	NA	NA	28	4.86	0%	NA	NA	NA	NA	NA	98.61%	97.65%	100.00%	100.00%
84		VIL	0.43	100.00%	100.00%	NA	NA	NA	3.26	NA	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
85	UPE	Bharti Airtel	0.69	90.82%	100.00%	NA	NA	30	4.60	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.63%	100.00%	100.00%
86		BSNL	5	89.00%	100.00%	80.00%	100.00%	1450	3	0%	0.01%	0.00%	100.00%	100.00%	100.00%	96.85%	100.00%	100.00%	100.00%
87		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.72%	99.59%	100.00%	100.00%
88		TTSL	3.12	95.74%	100.00%	NA	NA	4	3.12	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
89		VIL	0.24	100.00%	100.00%	NA	NA	NA	5.48	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
90	UPW	Bharti Airtel	0.68	89.03%	100.00%	NA	NA	14	5.02	0%	0.00%	NA	100.00%	100.00%	100.00%	100.00%	98.65%	100.00%	100.00%
91		BSNL	7	93.00%	100.00%	95.00%	100.00%	453	7	0%	0.09%	0.00%	99.00%	100.00%	100.00%	97.93%	100.00%	100.00%	100.00%
92		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.08%	100.00%	100.00%	100.00%
93		TTSL	2.33	100.00%	100.00%	NA	NA	2	1.15	0%	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%	100.00%
94		VIL	1.14	100.00%	100.00%	NA	NA	NA	2.26	NA	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
95	West Bengal	BSNL	3	89.00%	100.00%	83.00%	100.00%	795	6	0%	0.05%	0.00%	100.00%	100.00%	100.00%	99.33%	99.00%	100.00%	100.00%
96		RJIL	0	100.00%	100.00%	100.00%	100.00%	0.00	0.00	0%	0.00%	0.00%	NA	NA	NA	96.30%	98.15%	100.00%	100.00%
97		TTSL	2.29	99.24%	100.00%	NA	NA	7	2.37	0%	NA	NA	NA	NA	NA	99.26%	99.50%	100.00%	100.00%
98		VIL	1.94	100.00%	100.00%	NA	NA	NA	0.24	NA	NA	NA	NA	NA	NA	98.00%	100.00%	NA	NA
Note: NA means Not applicable, and NR means Not reported																			

Annexure 4.3: Quality of Service Performance of Broadband (wireline) Service Providers

Sl. No.	Service Provider	Service area	Service Provisioning			Faults Repair				Billing Performance				Response Time to the Customer for assistance		Bandwidth utilisation/throughput				Service availability /uptime (for all users) in %age	Packet Loss (for wired broadband access) in %age	Network latency (for wired broadband access)		
			%age of connections provided within 15 days of registration of demand	% of faults repaired by next working day (>90%)	% of faults repaired within 3 working day	Rent Rebate	%age of bills disputed	%age of billing complaints resolved within 4 weeks	%age of cases to whom refund of deposits is made within 60 days of closures	%age of calls answered by operator (Voice to voice) within 60 sec	%age of calls answered by operator (Voice to voice) within 90 sec	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	% International bandwidth utilization during peak hours (TCBH) (Enclose 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 (GSP/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%	100%	>60%	>80%	0	0	<90%	>80%	>98%	<1%	<120 ms	<350 ms	<800 ms				
1	Bharat Sanchar Nigam Ltd. (BSNL)	All India (except Delhi & Mumbai)	100.00%	93.85%	99.73%	4484	0.07%	100.00%	100.00%	96.13%	97.17%	NA	0	60.60%	93.51%	99.64%	0.50%	51	150	NA				
2	Mahanagar Telephone Nigam Limited	Delhi & Mumbai	83.48%	65.46%	82.07%	45643	0.00%	100.00%	54.37%	69.05%	80.47%	Nil	0	62.06%	89.96%	99.75%	0.52%	43	301	NA				
3	Airlink Communications Pvt. Ltd.	All India	100.00%	91.22%	99.18%	0	NA	100.00%	NA	97.47%	100.00%	0	0	84.86%	97.53%	99.88%	0.47%	120	350	NA				
4	Alliance Broadband Services Pvt. Ltd.	All India	100.00%	91.07%	100.00%	Nil	0.00%	100.00%	Nil	87.33%	100.00%	0	0	72.33%	96.68%	99.45%	0.00%	50	208	200				
5	ANI Network Pvt. Ltd.	Delhi	100.00%	92.00%	100.00%	0	0.00%	0.00%	0.00%	99.00%	100.00%	0	0	89.00%	100.00%	99.90%	0.40%	20	288	NA				
6	Asianet Satellite Communications Ltd.	All India	100.00%	90.38%	99.70%	Nil	1.71%	100.00%	100.00%	60.86%	80.71%	Nil	0	69.60%	90.00%	99.60%	1.00%	50	270	NA				
7	Atria Convergence Technologies Pvt. Ltd.	All India	100.00%	96.80%	99.75%	21102	1.26%	100.00%	Nil	81.00%	83.00%	0	0	50.00%	94.00%	99.98%	1.00%	140	217	Nil				
8	B2H Infonet Pvt Ltd*	Mumbai	100.00%	100.00%	100.00%	0	0.00%	100.00%	100%	89.00%	100.00%	1	0	0.00%	91.67%	99.00%	NR	NR	NR	NR				
9	Bharti Airtel Ltd.	Andhra Pradesh	100.00%	90.33%	100.00%	283	0.02%	100.00%	100.00%	96.00%	98.00%	0	0	50.00%	100.00%	99.93%	0.00%	19	30	NA				
		Bihar*	100.00%	90.41%	99.19%	31	0.01%	100.00%	100.00%	96.00%	98.00%	0	NA	NA	100.00%	99.60%	0.00%	47	NA	NA				
		Delhi	100.00%	93.73%	99.55%	526	0.02%	100.00%	100.00%	97.00%	99.00%	0	0	47.00%	100.00%	99.98%	0.00%	39	74	NA				
		Gujarat	100.00%	95.25%	99.41%	153	0.02%	100.00%	100.00%	97.00%	98.00%	0	NA	NA	100.00%	99.93%	0.00%	21	NA	NA				
		Haryana	100.00%	93.02%	99.14%	391	0.01%	100.00%	100.00%	97.00%	99.00%	0	NA	NA	100.00%	99.31%	0.00%	67	NA	NA				
		Karnataka	100.00%	94.64%	100.00%	1088	0.01%	100.00%	100.00%	98.00%	99.00%	0	0	38.00%	100.00%	99.92%	0.00%	20	55	NA				
		Kerala	100.00%	93.80%	99.92%	117	0.01%	100.00%	100.00%	96.00%	98.00%	0	NA	NA	100.00%	99.94%	0.00%	24	NA	NA				
		Kolkata	100.00%	95.65%	100.00%	142	0.01%	100.00%	100.00%	96.00%	98.00%	0	0	32.00%	100.00%	99.92%	0.00%	54	64	NA				
		Jammu & Kashmir	100.00%	90.17%	99.76%	740	0.02%	100.00%	100.00%	95.00%	98.00%	0	NA	NA	100.00%	98.99%	0.00%	37	NA	NA				
		Himachal Pradesh*	100.00%	100.00%	100.00%	0	0.00%	100.00%	100.00%	96.00%	98.00%	0	NA	NA	100.00%	99.89%	0.00%	30	NA	NA				
		Madhya Pradesh	100.00%	91.97%	99.07%	237	0.02%	100.00%	100.00%	97.00%	99.00%	0	0	48.00%	100.00%	99.92%	0.00%	40	60	NA				
		Maharashtra	100.00%	93.21%	99.34%	546	0.02%	100.00%	100.00%	95.00%	97.00%	0	0	57.00%	100.00%	99.87%	0.00%	13	53	NA				
		Mumbai	100.00%	94.53%	99.38%	346	0.01%	100.00%	100.00%	97.00%	98.00%	0	0	33.00%	100.00%	99.86%	0.00%	37	58	NA				
		Punjab	100.00%	91.88%	99.40%	413	0.01%	100.00%	100.00%	97.00%	99.00%	0	0	49.00%	100.00%	99.91%	0.00%	61	84	NA				
		Rajasthan	100.00%	91.33%	99.91%	30	0.01%	100.00%	100.00%	97.00%	98.00%	0	0	17.00%	100.00%	99.88%	0.00%	42	71	NA				
		Tamilnadu	100.00%	91.64%	99.42%	2569	0.04%	100.00%	100.00%	97.00%	99.00%	0	0	46.00%	100.00%	99.93%	0.00%	7	26	NA				
Uttar Pradesh - East	100.00%	90.13%	99.07%	151	0.01%	100.00%	100.00%	96.00%	98.00%	0	0	35.00%	100.00%	99.66%	0.00%	16	68	NA						
Uttar Pradesh - West	100.00%	90.57%	99.42%	61	0.02%	100.00%	100.00%	97.00%	98.00%	0	NA	NA	100.00%	99.70%	0.00%	29	NA	NA						
10	City Online Services Ltd.	AP	100.00%	98.00%	99.00%	NA	0.00%	100.00%	100.00%	95.00%	97.60%	0	0	62.00%	98.00%	98.00%	0.50%	25	280	NA				
		Karnataka	100.00%	98.00%	99.00%	NA	0.00%	100.00%	100.00%	95.00%	97.60%	0	0	49.00%	98.00%	98.00%	0.50%	25	280	NA				
11	DEN Broadband Private Limited	All India	100.00%	97.65%	99.72%	0	Nil	Nil	Nil	84.00%	87.00%	0	0	79.10%	92.00%	99.23%	0.62%	83	270	NA				
12	Digital Network Associates Pvt. Ltd	Maharashtra & Goa	100.00%	90.30%	99.33%	Nil	0.00%	100.00%	NA	63.65%	82.57%	Nil	0	80.00%	80.00%	99.68%	1.00%	4	255	600				
		Mumbai	100.00%	98.54%	100.00%	Nil	0.00%	100.00%	NA	91.54%	100.00%	Nil	0	80.00%	80.00%	99.68%	1.00%	4	255	600				
13	Digital Satellite Connect Pvt. Ltd.	Maharashtra	100.00%	90.32%	99.23%	Nil	0.00%	100.00%	NA	62.11%	82.25%	Nil	0	80.00%	80.00%	99.68%	1.00%	4	255	600				
		Mumbai	100.00%	90.27%	99.10%	Nil	0.00%	100.00%	NA	62.09%	82.43%	Nil	0	80.00%	80.00%	99.68%	1.00%	4	255	600				
14	DNA Infotel Pvt. Ltd.	Maharashtra	100.00%	90.33%	99.26%	Nil	0.00%	100.00%	NA	63.22%	84.92%	Nil	0	80.00%	80.00%	99.68%	1.00%	4	255	600				
15	D-Vois Communications Pvt. Ltd.	All India	100.00%	94.99%	99.84%	Nil	0.00%	Nil	Nil	89.66%	94.80%	0	Nil	Nil	90.00%	100.00%	0.10%	24	28	59				
16	ESTO Broadband Pvt. Ltd.	All India	100.00%	97.60%	100.00%	0	0.00%	0.00%	0.00%	87.00%	87.00%	0	0	48.34%	90.00%	98.48%	0.00%	40	100	720				

Annexure 4.3 (Contd.)

17	Excitel Broadband Pvt.Ltd.	Andhra Pradesh	100.00%	91.00%	99.00%	Nil	NA	NA	NA	75.10%	90.00%	0	Nil	79.00%	98.50%	98.48%	0.00%	12	199	Nil	
		Delhi	100.00%	90.10%	99.10%	Nil	NA	NA	NA	60.00%	80.00%	0	Nil	78.60%	98.40%	98.60%	0.00%	4	199	Nil	
		Karnataka	100.00%	90.10%	99.10%	Nil	NA	NA	NA	60.00%	80.00%	0	Nil	76.90%	98.50%	98.48%	0.00%	12	199	Nil	
		Rajasthan	100.00%	90.10%	99.10%	Nil	NA	NA	NA	60.00%	80.00%	0	Nil	79.06%	98.30%	98.48%	0.00%	4	199	Nil	
		UP(East)	100.00%	90.00%	99.00%	Nil	NA	NA	NA	60.00%	80.00%	0	Nil	78.80%	98.50%	98.43%	0.00%	4	199	NA	
18	Five Networks Solution (India) Ltd.	All India	100.00%	99.50%	100.00%	NA	0.00%	100.00%	100.00%	NA	NA	NA	0	NA	90.00%	99.00%	1.00%	NA	NA	NA	
19	Fusionnet Web Services Pvt. Ltd.	All India	100.00%	94.50%	99.50%	0	0.00%	100.00%	100.00%	78.91%	86.20%	0	0	66.00%	100.00%	100.00%	1.00%	120	350	NA	
20	GTPL Broadband Pvt.Ltd.	All India	100.00%	99.70%	91.77%	99.06%	627	0.00%	100.00%	100.00%	93.88%	97.39%	NA	0	57.49%	92.97%	99.16%	0.00%	11	300	NA
21	Hathway Cable & Datacom Ltd.	All India	100.00%	94.25%	99.62%	7554	0.74%	100.00%	100.00%	95.96%	96.09%	0	0	78.20%	90.00%	99.75%	0.25%	75	264	NA	
22	Honesty Net Solutions (I) Pvt. Ltd.	Mumbai	100.00%	93.00%	100.00%	0	Nil	100.00%	0.00%	68.00%	100.00%	0	NA	NA	95.00%	100.00%	1.00%	NA	66	NA	
23	Indinet Service Pvt Ltd	All India	100.00%	91.67%	100.00%	0	0.00%	100.00%	100.00%	77.00%	83.00%	0	0	82.00%	90.00%	99.26%	1.00%	54	250	0	
24	Instanet Technologies Pvt.Ltd.*	Maharashtra	100.00%	94.60%	100.00%	0	0.50%	100.00%	NA	84.92%	92.78%	0	0	63.00%	90.00%	100.00%	1.00%	4	255	NA	
25	Intech Online Pvt.Ltd.	Maharashtra	100.00%	90.54%	99.49%	16	1.06%	100.00%	0.00%	90.42%	90.42%	0	0	82.29%	85.33%	99.44%	1.00%	15	89.33	452	
		Mumbai	100.00%	90.35%	99.23%	26	0.62%	100.00%	0.00%	90.56%	90.56%	0	0	51.81%	85.33%	99.44%	1.00%	1	76	453	
26	Intermedia Cable Communication Pvt. Ltd.	Pune	100.00%	99.00%	98.90%	0.50%	NA	NR	100.00%	100.00%	95.00%	95.00%	NA	NA	NA	90.00%	99.00%	0.00%	35	300	350
27	Ishan Netsol Pvt Ltd	Gujarat	100.00%	94.05%	100.00%	0	0.00%	100.00%	100.00%	68.69%	86.95%	0	0	62.98%	91.00%	99.50%	1.00%	100	250	NA	
28	K NET Solutions Private Limited	Chennai	100.00%	96.61%	99.65%	68	NA	100.00%	100.00%	79.11%	81.98%	0	0	NA	100.00%	99.93%	0.00%	5	236	NA	
		TN	100.00%	95.85%	99.44%	27	NA	100.00%	100.00%	79.11%	81.98%	0	0	NA	100.00%	99.87%	0.00%	17	247	NA	
29	Limras Eronet Broadband Service Pvt.	All India	100.00%	99.00%	100.00%	0	1.00%	100.00%	0.00%	90.00%	100.00%	0	0	0.00%	96.00%	99.40%	1.00%	32	265	0	
30	Meghbela Cable & Broadband Services	All India	100.00%	95.00%	100.00%	0	0.00%	100.00%	100.00%	95.00%	100.00%	Nil	Nil	74.00%	95.00%	99.99%	0.00%	60	150	0	
31	Microscan Infocommtech Pvt. Ltd. (Formerly - Microscan Computers Pvt Ltd)	Mumbai	100.00%	97.00%	100.00%	0	0.00%	0.00%	0.00%	100.00%	100.00%	0	0	31.32%	100.00%	100.00%	0.36%	5	259	NA	
		Maharashtra	100.00%	95.00%	100.00%	0	0.00%	0.00%	0.00%	100.00%	100.00%	0	0	7.27%	100.00%	100.00%	0.54%	5	259	NA	
32	Multicraft Digital Technologies Pvt.Ltd.	PAN India	100.00%	98.67%	100.00%	NA	NA	1.00%	NA	99.00%	99.00%	NA	NA	86.00%	90.33%	99.00%	NA	41	NA	NA	
33	Netplus Broadband Services Pvt. Ltd.	Delhi	100.00%	100.00%	100.00%	0	0.43%	100.00%	100.00%	84.00%	91.00%	0	0	74.73%	95.70%	100.00%	0.10%	98	191	NA	
		Haryana	100.00%	94.14%	100.00%	0	0.65%	100.00%	100.00%	84.00%	91.00%	0	0	78.00%	96.63%	100.00%	0.10%	94	194	NA	
		Himachal Pradesh	100.00%	93.87%	100.00%	0	0.40%	100.00%	100.00%	84.00%	91.00%	0	0	77.00%	96.17%	100.00%	0.10%	91	194	NA	
		Jammu & Kashmir	100.00%	97.11%	100.00%	0	1.45%	100.00%	100.00%	84.00%	91.00%	0	0	76.10%	95.77%	100.00%	0.10%	99	196	NA	
		Punjab	100.00%	92.30%	100.00%	0	0.43%	100.00%	100.00%	84.00%	91.00%	0	0	77.00%	97.23%	100.00%	0.10%	81	155	NA	
		Rajasthan	100.00%	100.00%	100.00%	0	0.53%	100.00%	100.00%	84.00%	91.00%	0	0	76.00%	96.30%	100.00%	0.10%	94	193	NA	
34	Ortel Communications Ltd.	UP-West	100.00%	100.00%	100.00%	0	0.33%	100.00%	100.00%	84.00%	91.00%	0	0	73.62%	96.14%	100.00%	0.10%	95	193	NA	
		All India	100.00%	95.60%	99.42%	0	NA	NA	NA	100.00%	100.00%	0	0	62.81%	91.66%	99.64%	0.00%	98	203	NA	
35	ONEOTT Intertainment Limited	All India	100.00%	97.00%	99.00%	42	1.61%	100.00%	100.00%	100.00%	100.00%	0	0	85.00%	100.00%	99.83%	0.50%	16	227	NA	
36	Quadrant Televentures Ltd.	Punjab	100.00%	96.00%	99.43%	0	0.01%	100.00%	100.00%	92.32%	96.04%	0	0	76.43%	100.00%	99.94%	0.00%	80	280	0	
37	Quest Consultancy Pvt Ltd.	Gujarat	100.00%	95.00%	100.00%	Nil	Nil	100.00%	Nil	89.00%	99.00%	0	Nil	82.00%	99.00%	99.00%	0.30%	13	267	NA	
38	Radinet Info Solutions Pvt Ltd.*	Rajasthan	100.00%	100.00%	100.00%	0	Nil	Nil	Nil	97.03%	87.03%	0	0	73.16%	90.00%	99.21%	0.00%	20	260	NA	
39	RaiTel Corporation of India Ltd.	All India (Pan India)	100.00%	98.67%	100.00%	Nil	0.00%	Nil	Nil	83.00%	100.00%	0	0	50.83%	100.00%	99.95%	1.00%	120	350	NA	
40	Rajesh Digital Datacom Pvt.Ltd.	Mumbai	100.00%	98.00%	100.00%	0	0.00%	100.00%	100.00%	98.00%	98.00%	0	0	87.00%	83.00%	99.00%	0.00%	46	250	500	
41	Reliance Jio Infocomm Ltd.	Andhra Pradesh	100.00%	90.82%	99.96%	0	0.00%	100.00%	100.00%	92.10%	93.55%	0	NA	NA	100.00%	100.00%	0.00%	9.66%	NA	NA	
		Assam	100.00%	90.96%	99.92%	0	0.00%	100.00%	100.00%	90.73%	92.23%	NA	NA	NA	100.00%	100.00%	NA	NA	NA	NA	
		Bihar	100.00%	90.72%	99.94%	0	0.00%	100.00%	100.00%	90.25%	91.77%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Delhi	100.00%	90.92%	99.98%	0	0.00%	100.00%	100.00%	90.52%	92.14%	0	0	39.00%	100.00%	99.99%	0.03%	15.37%	NA	NA	
		Gujarat	100.00%	91.29%	99.18%	0	0.00%	100.00%	100.00%	90.21%	91.95%	0	NA	NA	100.00%	100.00%	0.00%	24.41%	NA	NA	
		Haryana	100.00%	91.15%	99.84%	0	0.00%	100.00%	100.00%	89.99%	91.67%	NA	NA	NA	100.00%	99.98%	NA	NA	NA	NA	
		Himachal Pradesh	100.00%	90.90%	99.58%	0	0.00%	100.00%	100.00%	91.20%	92.49%	NA	NA	NA	100.00%	99.97%	NA	NA	NA	NA	
		Jammu & Kashmir	100.00%	90.78%	99.89%	0	0.00%	100.00%	100.00%	96.47%	97.32%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Karnataka	100.00%	91.00%	99.96%	0	0.00%	100.00%	100.00%	89.68%	91.26%	0	0	4.00%	100.00%	99.99%	0.02%	12.36%	NA	NA	
		Kerala	100.00%	91.01%	99.91%	0	0.00%	100.00%	100.00%	90.79%	92.47%	NA	NA	NA	100.00%	100.00%	NA	NA	NA	NA	
		Kolkata	100.00%	90.98%	99.94%	0	0.00%	100.00%	100.00%	90.81%	92.45%	0	NA	NA	100.00%	100.00%	0.02%	31.00%	NA	NA	
		Madhya Pradesh	100.00%	91.35%	99.22%	0	0.00%	100.00%	100.00%	95.99%	96.88%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Maharashtra	100.00%	90.90%	99.91%	0	0.00%	100.00%	100.00%	96.01%	96.86%	0	NA	NA	100.00%	99.98%	0.09%	17.19%	NA	NA	
		Mumbai	100.00%	90.82%	99.98%	0	0.00%	100.00%	100.00%	90.83%	92.40%	0	0	43.00%	100.00%	99.96%	0.01%	6.86%	101	NA	
		North East	100.00%	91.03%	99.91%	0	0.00%	100.00%	100.00%	89.72%	91.40%	NA	NA	NA	100.00%	99.95%	NA	NA	NA	NA	
		Orissa	100.00%	91.08%	99.95%	0	0.00%	100.00%	100.00%	96.00%	96.82%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Punjab	100.00%	91.95%	99.84%	0	0.00%	100.00%	100.00%	90.77%	92.40%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Rajasthan	100.00%	90.95%	99.97%	0	0.00%	100.00%	100.00%	91.25%	92.73%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA	
		Tamilnadu	100.00%	90.97%	99.97%	0	0.00%	100.00%	100.00%	91.69%	93.02%	0	0	44.00%	100.00%	100.00%	0.01%	4.82%	32	NA	
		Uttar Pradesh - East	100.00%	90.98%	99.99%	0	0.00%	100.00%	100.00%	95.50%	96.56%	0	NA	NA	100.00%	99.98%	0.01%	32.18%	NA	NA	
Uttar Pradesh - West	100.00%	90.28%	99.99%	0	0.00%	100.00%	100.00%	89.49%	90.99%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA			
West Bengal	100.00%	90.95%	99.39%	0	0.00%	100.00%	100.00%	96.19%	97.22%	NA	NA	NA	100.00%	99.99%	NA	NA	NA	NA			

Annexure 4.3 (Contd.)

42	RI Networks Pvt Ltd	All India	100.00%	92.62%	99.05%	1350	NA	NA	100.00%	84.99%	90.11%	0	0	89.00%	100.00%	100.00%	1.00%	120	350	NA
43	Sai Prasad Internet Services Pvt.Ltd.	Maharashtra	100.00%	91.73%	99.35%	0	0.00%	100.00%	Nil	63.71%	83.41%	Nil	0	80.00%	80.00%	99.72%	1.00%	4	255	600
44	Shree Omkar Infocom Pvt. Ltd.	Mumbai	100.00%	98.00%	100.00%	25	0.00%	100.00%	100.00%	91.00%	95.00%	0	0	50.00%	1.00%	99.00%	1.00%	2	125	590
45	Shyam Spectra Pvt. Ltd. (formerly Citycom Networks Pvt. Ltd.)	All India	100.00%	95.99%	99.27%	394	0.76%	100.00%	100.00%	80.30%	83.10%	0	0	18.00%	93.00%	99.71%	0.00%	10	153	NA
46	Sikka Broadband(P) Ltd.	UP (East)	100.00%	91.00%	99.26%	0	0.00%	0.00%	0.00%	88.00%	98.70%	Nil	Nil	80.00%	86.60%	99.50%	1.00%	10	290	400
47	Siti Broadband Services Pvt.Ltd.	All India (Pan India)	100.00%	98.02%	99.39%	136	Nil	Nil	100.00%	97.00%	100.00%	0	0	76.00%	98.00%	99.05%	0.00%	0	132	NA
48	Tachyon Communications Pvt. Ltd.	UP-East (Lucknow)	100.00%	97.00%	100.00%	0	0.00%	100.00%	100.00%	86.00%	93.00%	0	0	78.00%	99.00%	100.00%	0.00%	35	70	NA
49	Tata Communications Ltd. (Ceased broadband services, hence NIL report)	All India	NA	NA	NA	0	NA	NA	0.00	0.00%	0.00%	Nil	Nil	0.00%	NA	NA	0.00%	15	253	NA
50	Tata Sky Broadband Pvt. Ltd.	All India	100.00%	98.40%	99.71%	NA	NA	NA	NA	87.70%	90.50%	0	0	58.00%	100.00%	99.90%	0.00%	1	NA	NA
51	Tata Teleservices Limited (TTSL)	All India (except MH)	100.00%	86.00%	96.00%	0	0.06%	100.00%	100.00%	96.52%	96.24%	0	0	52.00%	95.00%	99.73%	0.00%	44	63	NA
52	Tata Teleservices(Mah) Ltd.(TTML)	Mah. & Mumbai	95.00%	83.50%	94.50%	0	0.13%	100.00%	100.00%	94.54%	95.87%	0	0	65.00%	95.50%	99.79%	0.00%	71	231	NA
53	United Telecoms Ltd.	Maharashtra	83.00%	92.33%	99.00%	32	0.03%	100.00%	100.00%	76.00%	89.00%	0	0	58.73%	100.00%	100.00%	0.00%	23	130	NA
54	Wish Net Pvt. Ltd.	Kolkata	100.00%	99.42%	100.00%	0	0.00%	100.00%	NA	97.00%	98.00%	0	0	51.85%	100.00%	99.94%	1.00%	20	NA	NA
		West Bengal	100.00%	98.05%	100.00%	0	0.00%	100.00%	NA	88.00%	97.00%	0	0	51.85%	100.00%	99.94%	1.00%	20	NA	NA
55	World Phone Internet Services Pvt Ltd	All India	100.00%	82.00%	100.00%	0	0.00%	0.00%	0.00%	98.92%	100.00%	0	NA	NA	85.00%	99.83%	1.00%	25	NA	NA
56	Yashash Cable Network Pvt Ltd	Karnataka	100.00%	91.10%	99.00%	38	0.00%	0.00%	0.00%	89.78%	95.55%	0	0	79.30%	80.00%	99.15%	1.00%	30	303	0
57	You Broadband India Pvt. Ltd.	All India	99.90%	94.46%	99.67%	451	0.00%	0.00%	0.00%	96.65%	98.20%	0	0	77.54%	86.91%	98.91%	0.00%	9	270	0
				DNF= Data not as per Format				NR= Data not reported by the Service Provider						NA = Not Applicable			C/DNF= Complied the parameter but Data is not in the required format			

Note: M/s Tata Communications Ltd. has ceased broadband services, hence, NIL report submitted.

Annexure 5.1: List of pay channels, offered by broadcasters to subscribers as reported to TRAI (New Regulatory Framework) - as on 31st March, 2021)

S.No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
1	AETN 18 Media Pvt Limited	1	The History Channel	SD
		2	History TV 18 HD	HD
2	Asianet Star Communications Private Limited	3	Vijay TV	SD
		4	Vijay Super	SD
		5	Vijay HD	HD
		6	Vijay Music	SD
		7	Asianet	SD
		8	Asianet Plus	SD
		9	Asianet Movies	SD
		10	Suvarna Plus	SD
		11	Star Suvarna HD	HD
		12	Asianet HD	HD
		13	Star Suvarna	SD
3	Bangla Entertainment Private Limited	14	AATH	SD
		15	SONY Marathi	SD
4	BBC Global News India Private Limited	16	BBC World News	SD
		17	Cbeebies	SD
5	Bennett, Coleman & Company Limited	18	Zoom	SD
		19	Romedy Now	SD
		20	MN +	HD
		21	Mirror Now	SD
		22	ET NOW	SD
		23	Times Now	SD
		24	Romedy Now HD	HD
		25	Movies Now HD	HD
		26	MNX HD	HD
		27	MNX	SD
		28	Times Now World	HD
6	Celebrities Management Pvt Limited	29	Travel XP HD	HD
		30	Travel XP Tamil	SD

7	CSL Info Media Private Limited	31	JAN TV PLUS	SD
8	Direct New Private Limited	32	News X	SD
9	Discovery Communications India	33	Animal Planet	SD
		34	Discovery Channel	SD
		35	DTAMIL	SD
		36	Discovery Kids Channel	SD
		37	Discovery Science	SD
		38	Discovery Turbo	SD
		39	Investigation Discovery	SD
		40	Discovery HD	HD
		41	Animal Planet HD World	HD
		42	TLC HD	HD
		43	Investigation Discovery HD	HD
		44	TLC	SD
		45	EUROSPORT HD (Earlier name "Dsport HD")	HD
46	EUROSPORT (Earlier name "Dsport")	SD		
10	Disney Broadcasting (India) Limited	47	Disney Junior	SD
		48	UTV Movies	SD
		49	Marvel HQ	SD
		50	Disney International HD	HD
		51	Hungama TV	SD
		52	The Disney Channel	SD
		53	UTV HD	HD
		54	UTV Bindass	SD
		55	UTV Action	SD
11	Eenadu Televisoin Private Limited	56	ETV	SD
		57	ETV Andhra Pradesh	SD
		58	ETV - Telangana	SD
		59	ETV Cinema	SD
		60	ETV Life	SD
		61	ETV Plus	SD
		62	ETV Abhiruchi	SD

		63	ETV HD	HD
		64	ETV Plus HD	HD
		65	ETV Cinema HD	HD
12	IN 10 Media Private Limited	66	EPIC TV	SD
		67	Filamchi	SD
		68	Gubbare	SD
		69	Ishara TV	SD
13	Information TV Private Limited	70	India News	SD
14	Fame Media Private Limited	71	4tv News	SD
15	Greycells18 Media Limited	72	Topper TV	SD
16	IBN Lokmat News Private Ltd	73	News 18 Lokmat	SD
17	Living Entertainment Enterprises Private Ltd	74	ZEE ZEST HD	HD
		75	Living Travelz	SD
18	Lifestyle and Media Broadcasting Limited	76	Good Times	SD
19	Lex Sportel Vision Private Limited	77	1SPORTS	SD
20	Mavis Satcom Limited	78	J Movies	SD
		79	Jaya Max	SD
		80	Jaya Plus	SD
		81	Jaya TV HD	HD
21	MSM World Wide Factual Media Private Limited	82	SONY BBC EARTH	SD
		83	SONY BBC EARTH HD	HD
22	Media World Wide Limited	84	Travel XP	SD
23	New Delhi Television Limited	85	NDTV 24*7	SD
		86	NDTV India	SD
		87	NDTV Profit	SD
24	NGC Network (India) Pvt Limited	88	Fox Life	SD
		89	National Geographic Channel (NGC)	SD
		90	Fox Life HD	HD
		91	Nat Geo Wild	SD
		92	National Geographic HD	HD
		93	Nat Geo Wild HD	HD
		94	Baby TV HD	HD

25	Odisha Television Limited	95	Prarthana	SD
		96	Tarang	SD
		97	Tarang Music	SD
		98	Alankar	SD
26	Parshavnath Media Private Limited	99	Dangal Kannada	SD
27	Raj Television Network Limited	100	Raj Digital Plus	SD
		101	Raj Musix	SD
		102	Raj News	SD
		103	Raj TV	SD
28	Silverstar Communications Limited	104	Mega 24	SD
		105	Mega Musiq	SD
		106	Mega TV	SD
29	Sony Pictures Networks India Private Limited	107	Sony YAY!	SD
		108	SET MAX	SD
		109	SAB	SD
		110	SONY ENTERTAINMENT CHANNEL (SET)	SD
		111	PIX	SD
		112	SIX	SD
		113	MAX 2	SD
		114	PAL	SD
		115	SET HD	HD
		116	SIX HD	HD
		117	PIX HD	HD
		118	MAX HD	HD
		119	Ten 2 HD	HD
		120	Ten 3 HD	HD
		121	Ten 2	SD
		122	Ten 1	SD
123	Ten 3	SD		
124	Ten 1 HD	HD		
125	SONY Wah	SD		
126	SAB HD	HD		

30	Star India Private Limited	127	Star Sports 3	SD
		128	Star Sports 1 Tamil	SD
		129	Star Sports Select 2	SD
		130	Star Bharat	SD
		131	Star Gold 2 (Movies OK)	SD
		132	Star Sports 1 Hindi	SD
		133	Star Gold	SD
		134	Star Jalsha	SD
		135	Star Movies	SD
		136	Star Gold Select	SD
		137	Star Plus	SD
		138	Star Pravah	SD
		139	Star Sports 1	SD
		140	Star Sports 2	SD
		141	Star World	SD
		142	Jalsha Movies	SD
		143	Star Sports HD 2	HD
		144	Star Sports HD 1	HD
		145	Star Bharat HD	HD
		146	Star Gold HD	HD
		147	Star Movies HD	HD
		148	Star Plus HD	HD
		149	Star Sports 1 HD Hindi	HD
		150	Star Sports Select 1	SD
		151	Star Movies Select HD	HD
		152	Star World HD	HD
		153	Star Sports First	SD
		154	MAA Gold	SD
		155	MAA Movies	SD
		156	MAA Music	SD
157	MAA TV	SD		
158	Star Pravah HD	HD		
159	Star Jalsha HD	HD		

		160	Jalsha Movies HD	HD
		161	Star Sports Select HD 1	HD
		162	Star Sports Select HD 2	HD
		163	MAA HD	HD
		164	Star Gold Select HD	HD
		165	MAA Movies HD	HD
		166	Star World Premiere HD	HD
		167	Star Sport 1 Telugu	SD
		168	Star Sport 1 Kannada	SD
		169	Star Sports 1 Bangla	SD
		170	Star Utsav	SD
		171	Star Sports 1 Marathi	SD
		172	Star Utsav Movies	SD
31	SUN TV Network Limited	173	Adithya TV	SD
		174	Chintu TV	SD
		175	Chutti TV	SD
		176	Gemini Comedy	SD
		177	Gemini Life	SD
		178	Gemini Movies	SD
		179	Gemini Music	SD
		180	Gemini TV	SD
		181	KTV	SD
		182	Surya Movies	SD
		183	Kushi TV	SD
		184	SUN Life	SD
		185	Sun Music	SD
		186	Sun News	SD
		187	Surya Music	SD
		188	SUN TV	SD
		189	Surya Comedy	SD
		190	Surya TV	SD
		191	Udaya Comedy	SD
		192	Udaya Movies	SD
		193	Udaya Music	SD

		194	Udaya TV	SD
		195	Kochu TV	SD
		196	Sun TV HD	HD
		197	KTV HD	HD
		198	Sun Music HD	HD
		199	Gemini TV HD	HD
		200	Gemini Music HD	HD
		201	Gemini Movies HD	HD
		202	Surya TV HD	HD
		203	Udaya TV HD	HD
32	Suryansh Broadcasting Private Limited	204	Flowers	SD
33	Turner International India Pvt Ltd	205	Cartoon Network	SD
		206	CNN International	SD
		207	POGO	SD
		208	Cartoon Network HD+	HD
34	TV 18 Broadcast Limited	209	CNN News 18	SD
		210	CNBC Bajaar	SD
		211	CNBC TV 18 Prime HD	HD
		212	CNBC Awaaz	SD
		213	News 18 Tamil Nadu	SD
		214	News 18 Kerala	SD
		215	News 18 Assam / North East	SD
		216	News 18 India	SD
		217	CNBC TV 18	SD
		218	News 18 Bihar Jharkhand	SD
		219	News 18 Madhya Pradesh / Chattisgarh	SD
		220	News 18 Rajasthan	SD
		221	News 18 Uttar Pradesh/ Uttaranchal	SD
		222	News 18 Urdu	SD
223	News 18 Kannada	SD		
224	News 18 Bangla	SD		
225	News 18 Punjab / Haryana / Himanchal Pradesh	SD		

		226	News 18 Gujarati	SD
		227	News 18 Odia	SD
35	TV Today Network Limited	228	Aaj Tak	SD
		229	India Today	SD
		230	AAJ Tak HD	HD
		231	Aaj Tak Tez	SD
36	Viacom 18 Media Private Limited	232	Colors	SD
		233	Comedy Central (HD)	HD
		234	MTV	SD
		235	NICK	SD
		236	NICK JR	SD
		237	SONIC	SD
		238	VH 1 (HD Distribution)	HD
		239	Colors Infinity HD	HD
		240	Colors Infinity	SD
		241	Colors HD	HD
		242	NICKS HD+	HD
		243	Colors Cineplex	SD
		244	MTV Beats	SD
		245	Colors Kannada HD	HD
		246	Colors Marathi HD	HD
		247	Colors Bangla HD	HD
		248	Colors Super	SD
		249	Colors Bangla	SD
		250	Colors Gujarati	SD
		251	Colors Kannada	SD
		252	Colors Marathi	SD
		253	Colors Oriya	SD
		254	MTV Beats HD	HD
		255	Colors Tamil	SD
256	Colors Cineplex HD	HD		
257	VH 1	SD		
258	Colors Tamil HD	HD		
259	MTV HD+	HD		

		260	Colors Rishtey	SD
		261	Colors Kannada Cinema	SD
		262	Colors Gujarati Cinema	SD
		263	Comedy Central	SD
		264	Rishtey Cineplex	SD
		265	Colors Bangla Cinema	SD
37	Zee Akaash News Private Limited	266	Zee 24 Ghanta	SD
38	Zee Entertainment Enterprises Limited	267	Zee Bollywood	SD
		268	Zee Action	SD
		269	Zee Bangla Cinema	SD
		270	Zee Café HD	HD
		271	Zee Café	SD
		272	Zee Cinema	SD
		273	Zee Talkies	SD
		274	Zee TV	SD
		275	Zing	SD
		276	& Picture	SD
		277	Zee Bangla	SD
		278	Zee Marathi	SD
		279	Zee Zest	SD
		280	Zee TV HD	HD
		281	Zee Cinema HD	HD
		282	& TV	SD
		283	& TV HD	HD
		284	Zee Kannada	SD
		285	Zee Telugu	SD
		286	& Pictures HD	HD
		287	Zee Cinemalu	SD
288	Zee Yuva	SD		
289	Zee Marathi HD	HD		
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 Anmol Cinema	SD
		298	& Flix HD	HD
		299	& Flix	SD
		300	Zee Keralam HD	HD
		301	Zee Keralam	SD
		302	Zee Vajwa	SD
		303	Zee Anmol	SD
		304	Big Magic	SD
		305	Big Ganga	SD
		306	Zee Classic	SD
		307	&Xplore HD	HD
		308	ZEE Sarthak	SD
		309	Zee Talkies HD	HD
		310	Zee Punjabi	SD
		311	Zee Thirai	SD
		312	Zee Picchar	SD
		313	Zee Biskope	SD
39	Zee Media Corporation Limited	314	Zee 24 Taas	SD
		315	Zee Odisha	SD
		316	Zee Business	SD
		317	Zee Punjab Haryana Himachal	SD
		318	Zee Madhya Pradesh Chattisgarh	SD
		319	Zee Salaam	SD
		320	Zee 24 Kalak	SD
		321	WION	SD
		322	Zee Uttar Pradesh	SD

			Uttarakhand	
		323	Zee Hindustan	SD
		324	Zee Bihar Jharkhand	SD
		325	Zee News	SD
		326	Zee Rajasthan News	SD
40	Zoom Entertainment Network Limited	327	Movies Now	SD

List of Major MSOs / HITS Operators

- 1. M/s. Siti Networks Limited.,**
1st Floor, FC-09, Gate No.03,
Sector-16-A Film City,
Noida-201301,
Tel: 0120-4526700
Website : www.sitinetnetworkslimited
Toll Free No. 1800 1234 001
- 2. M/s Den Networks Limited.**
236, Ground Floor, Okhla Industrial Estate,
Phase-III, New Delhi-110020
Website: www.den-networks.com
Toll Free No. 1800 419 2020
- 3. M/s Hathway Digital Private Limited.**
805/606, 8th Floor, Windsor
Off CST Road, Kalina, Santacruz (East),
Mumbai-400098 (Maharashtra)
PH: 022-26001306,
Fax No: 022-26001307
Website : www.hathway.com
Toll Free No. 1800 4197 900
- 4. M/s GTPL Hathway.**
202, 2nd Floor,
Sahajanad Shopping Center
Opp. Swaminarayan Mandir
Shahibaug, Ahemdabad-38004
Ph: 079-30280340 / 41, 079-25626476 / 77
Website : www.gtpl.net
Toll Free No. 1800-419-0419
- 5. M/s NXT Digital Limited.**
IN Centre, 49/50 MIDC
12th Road, Andheri
MUMBAI-400093 (Maharashtra)
Ph: 022-28208585
Website : www.nxtdigital.co.in
Toll Free No. 18602120400 18002100400

- 6. M/s NXT Digital Limited (HITS)**
IN Centre, 49/50 MIDC
12th Road, Andheri
MUMBAI-400093 (Maharashtra)
Ph: 022-28208585
Website : www.nxtdigital.co.in
Toll Free No. 18602120400 18002100400
- 7. M/s Fastway Transmission Pvt. Ltd.**
SCO-16-17, Top Floor
Sector-34-A, Chandigarh
Ph: 0161-4044444
Website : www.fastway.in
Toll Free No. 18001026602
- 8. M/s Tamil Nadu ARASU Cable TV Corporation Ltd.**
11/22, Mangadusamy Street, Nungambakkam,
Chennai-600034
Ph: 044-2843 2911
Fax : 044-2843 2913
Website : www.tactv.in
Toll Free No. 1800 425 2911
- 9. M/s Kerala Communicators Cable Ltd.**
CC -22/491, Girnar, Kadavanthara,
Cochin-682020 (Kerala)
Ph: 0484-2316441
Website : www.kccl.tv
Toll Free No. 18004195755
- 10. M/s Thamizhaga Cable TV Communication Pvt. Ltd.**
Old No. 150, New No. 48, Sami Naicken Street,
Chinthadripet, Chennai-600002 (T.N.)
Ph: 044-49272222
Website : www.tccl.co.in
Toll Free No. 1800-102-9845
- 11. M/s Asianet Digital Network Pvt. Network**
2A, 2nd Floor, Leela Infopark
Technopark, Kazahakuttom,
Thiruvananthapuram-695581 (Kerala)
Ph: 0471-2700995
Fax : 0471-2527878
Website : www.asianetdigital.co.in
Toll Free No. 1800 425 4725

- 12. M/s Kal Cable Private Ltd.**
No. 229, Kutchery Road, Mylapore,
Chennai-600004 (T.N.)
Ph: 044-49616161
Fax : 044-49616171
Website : www.scv.in
Toll Free No. 1800-102-0728
- 13. M/s V.K. Digital Network Pvt. Ltd.**
3-A-29, Willow Crest,
6th Main Road, R.A. Puram,
Chennai-600029 (T.N.)
Ph: 044-4242 8282
Website : www.vkdigital.co.in
Toll Free No. 18004199908

List of Pay DTH Operators

- 1. M/s. Tata Sky Ltd.,**
Tata Communications Complex,
Mandi Road, PO Chattarpur,
New Delhi – 110 074
Tel: 011-6616 3000
Fax-022-6616 3030
Website : www.tatasky.com
Toll Free No. 18002086633
- 2. M/s Dish TV India Ltd.**
FC-19, Sector-16A, Film City,
Noida-201301
Tel: 91-120-2467005 / 2467000
Fax: 91-120-4357082
Toll Free No. 18002583474 (Dish), 1800212212 (d2h)
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
Toll Free No. 18001037575
- 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
Toll Free No. 18001036065

Annexure 5.4: List of 105 existing cities with operational FM Radio Channels in India as on 31st March, 2021

S.No	City	Category	Channels
1	Agartala	D	2
2	Agra	B	4
3	Ahmedabad	A	7
4	Ahmednagar	C	3
5	Aizwal	D	3
6	Ajmer	C	4
7	Akola	C	4
8	Alappuzha	C	2
9	Aligarh	C	3
10	Allahabad	B	4
11	Amravati	C	1
12	Amritsar	B	4
13	Asansol	B	3
14	Aurangabad	C	4
15	Bareily	C	4
16	Bengaluru	A	8
17	Bharuch	D	1
18	Bhavangar	C	1
19	Bhopal	B	4
20	Bhubaneshwar	C	4
21	Bikaner	C	4
22	Bilaspur	C	3
23	Chandigarh	C	4
24	Chennai	A+	7
25	Cochin	B	4
26	Coimbatore	B	4
27	Dehradun	C	1
28	Delhi	A+	9
29	Dhule	C	3
30	Dhubri	others	1
31	Durg-Bhillaina	D	1

32	Erode	C	2
33	Gangtok	D	2
34	Gorakhpur	C	4
35	Gulbarga	C	1
36	Guwahati	C	4
37	Gwalior	C	4
38	Haflong	D	1
39	Hissar	D	4
40	Hubli - Dharwad	C	2
41	Hyderabad	A	8
42	Indore	B	4
43	Itanagar	D	2
44	Jabalpur	B	4
45	Jaipur	A	6
46	Jalandhar	C	4
47	Jalgaon	C	4
48	Jammu	C	3
49	Jamnagar	C	1
50	Jamshedpur	B	4
51	Jhansi	C	4
52	Jodhpur	C	4
53	Junagarh	D	1
54	Kannur	C	3
55	Kanpur	A	6
56	Karnal	D	3
57	Kolhapur	C	4
58	Kolkata	A+	7
59	Kota	C	4
60	Kozhikode	C	4
61	Lucknow	A	6
62	Madurai	B	4
63	Mangalore	C	3
64	Mehsana	D	1
65	Mumbai	A+	9

66	Muzaffarpur	C	4
67	Mysore	C	3
68	Nagpur	A	6
69	Nanded	C	3
70	Nasik	C	4
71	Nellore	C	1
72	Palampur	D	1
73	Panaji	D	2
74	Patiala	C	4
75	Patna	B	4
76	Puducherry	C	4
77	Pune	A	6
78	Raigarh	D	1
79	Raipur	C	3
80	Rajahmundry	C	2
81	Rajkot	B	4
82	Ranchi	C	4
83	Rourkela	C	2
84	Salem	C	2
85	Sangli	C	5
86	Shillong	D	3
87	Shimla	D	3
88	Sholapur	C	4
89	Siliguri	C	3
90	Srinagar	C	4
91	Surat	A	6
92	Thiruvananthapuram	C	4
93	Thrissur	C	3
94	Tiruchy	C	3
95	Tirunelveli	C	3
96	Tirupati	C	2
97	Tuticorin	C	2
98	Udaipur	C	4
99	Ujjain	C	1

100	Vadodra	B	4
101	Varanasi	B	5
102	Vellore	C	2
103	Vijayawada	B	2
104	Vishakapatnam	B	3
105	Warrangal	C	2
Total			366

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

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