(Press Release No. 4/2022)

Information Note to the Press





TELECOM REGULATORY AUTHORITY OF INDIA

New Delhi, 18th January, 2022 (www.trai.gov.in)

Highlights of Telecom Subscription Data as on 30th November, 2021

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1167.50	23.55	1191.05
Net Addition in November, 2021 (Million)	1.20	0.22	1.42
Monthly Growth Rate	0.10%	0.96%	0.12%
Urban Telephone Subscribers (Million)	638.46	21.62	660.08
Net Addition in November, 2021 (Million)	1.02	0.23	1.25
Monthly Growth Rate	0.16%	1.08%	0.19%
Rural Telephone Subscribers (Million)	529.04	1.92	530.96
Net Addition in November, 2021 (Million)	0.18	-0.01	0.17
Monthly Growth Rate	0.03%	-0.37%	0.03%
Overall Tele-density*(%)	85.18%	1.72%	86.90%
Urban Tele-density*(%)	133.96%	4.54%	138.50%
Rural Tele-density*(%)	59.17%	0.22%	59.39%
Share of Urban Subscribers	54.69%	91.83%	55.42%
Share of Rural Subscribers	45.31%	8.17%	44.58%
Broadband Subscribers (Million)	777.19	24.42	801.60

- ❖ In the month of November, 2021, 7.33 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 645.54 million at the end of October-21 to 652.88 million at the end of November-21, since implementation of MNP.
- ❖ Number of active wireless subscribers (on the date of peak VLR[#]) in November, 2021 was 996.38 million.

Note:

- Information in this Press Release is based on the data provided by the Service Providers

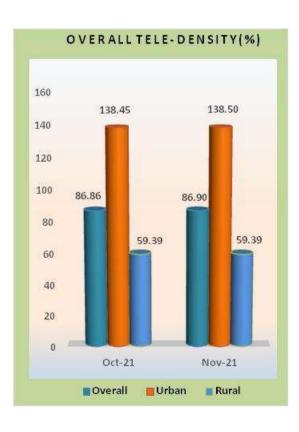
VLR is acronym of Visitor Location Register. The dates of peak VLR for various TSPs are different in different service areas.

Based on 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

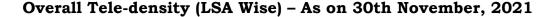
I. Total Telephone Subscribers

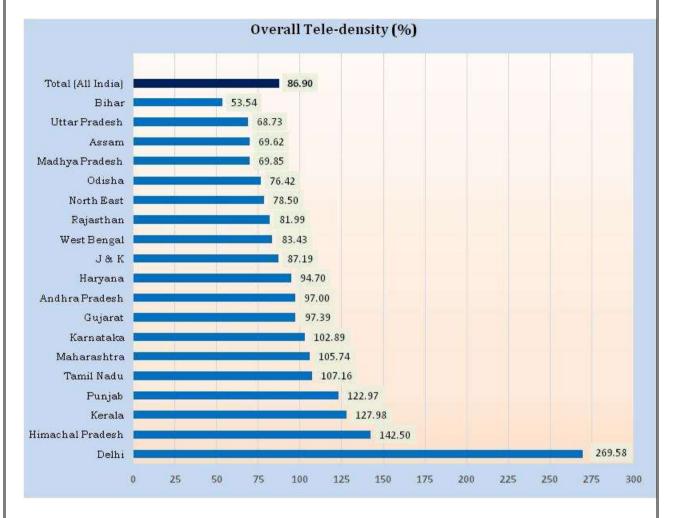
• The number of telephone subscribers in India increased from 1,189.62 million at the end of October-21 to 1,191.05 million at the end of November-21, thereby showing a monthly growth rate of 0.12%. Urban telephone subscription increased from 658.83 million at the end of October-21 to 660.08 million at the end of November-21 and the rural subscription also increased from 530.79 million to 530.96 million during the same period. The monthly growth rates of urban and rural telephone subscription were 0.19% and 0.03% respectively during the month of November-21.





• The overall Tele-density in India increased from 86.86% at the end of October-21 to 86.90% at the end of November-21. The Urban Tele-density increased from 138.45% at the end of October-21 to 138.50% at the end of November-21, however Rural Teledensity remained same i.e. 59.39% as it was at the end of October-21. The share of urban and rural subscribers total number of telephone in subscribers at the end of November-21 was 55.42% and 44.58% respectively.





• As may be seen in the above chart, eight LSA have less tele-density than the all India average tele-density at the end of November-21. Delhi service area has maximum tele-density of 269.58% and the Bihar service area has minimum tele-density of 53.54% at the end of November-21.

Notes: -

- 1. Population data/projections are available state wise only.
- 2. Tele-density figures are derived from the telephone subscriber data provided by the access service providers 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%20 2011-2036%20-%20upload compressed 0.pdf
- 3. Telephone subscriber data for Delhi, includes, apart from the data for the State of Delhi, wireless subscriber data for the areas served by the local exchanges of Ghaziabad & Noida (in Uttar Pradesh) and Gurgaon & Faridabad (in Haryana).
- 4. Data/information for West Bengal includes Kolkata, Maharashtra includes Mumbai and Uttar Pradesh includes UPE & UPW service area(s).
- 5. 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.

II. Category-wise Growth in subscriber base

Circle Category-wise Net Additions in Telephone Subscribers in the month of November 2021

Circle	Net additions of Novem	in the month ber, 2021	Telephone Subscriber base as on 30th November, 2021				
Category	Wireline segment	Wireless segment	Wireline segment	Wireless segment			
Circle A	79,910	354,586	89,81,429	39,73,62,268			
Circle B	87,431	5,55,932	54,50,654	47,89,03,293			
Circle C	19,114	4,67,833	13,99,132	17,91,44,491			
Metro	38,111	-1,79,372	77,15,192	11,20,88,681			
All India	2,24,566	11,98,979	2,35,46,407	1,16,74,98,733			

Circle Category-wise monthly and yearly Growth Rates in Telephone Subscribers in the month of November 2021

Circle		owth rate (%) o November-21)	Yearly growth rate (%) (November-20 to November-21)					
Category	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment				
Circle A	0.90%	0.09%	15.18%	0.39%				
Circle B	1.63%	0.12%	23.35%	2.30%				
Circle C	1.39%	0.26%	60.54%	1.40%				
Metro	0.50%	-0.16%	10.51%	-2.18%				
All India	0.96%	0.10%	17.32%	1.06%				

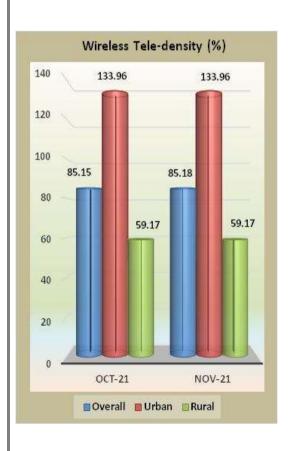
Note: Circle Category-Metro includes Delhi, Mumbai and Kolkata. Data for Chennai has been included in Circle Category-A, as part of TamilNadu.

- As can be seen in the above tables, in wireless segment, both on monthly and yearly basis, except circle 'Metro', all circles have registered growth rate in their subscriber base.
- In Wireline segment, both on monthly and yearly basis, Circles of all categories have registered growth rate in their subscriber base.

III. Wireless subscriber

• Total wireless subscribers increased from 1,166.30 million at the end of October-21 to 1,167.50 million at the end of November-21, thereby registering a monthly growth rate of 0.10%. Wireless subscription in urban areas increased from 637.44 million at the end of October-21 to 638.46 million at the end of November-21, and wireless subscription in rural areas also increased from 528.86 million to 529.04 million during the same period. Monthly growth rates of urban and rural wireless subscription were 0.16% and 0.03% respectively.

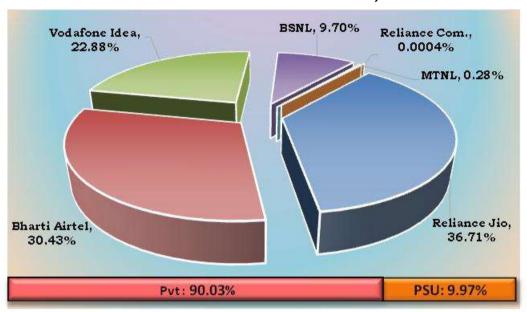




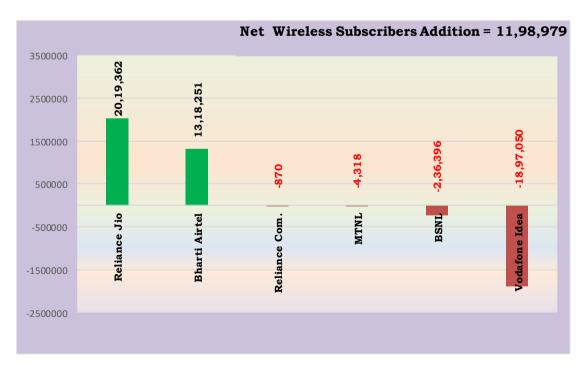
Wireless Tele-density in The India increased from 85.15% at the end of October-21 to 85.18% at the end November-21. The Urban Wireless Teledensity and Rural Wireless Tele-density didn't change at the end of November-21 and remained same as it was at the end of October-21 i.e. 133.96% and 59.17% respectively. The share of urban and rural wireless subscribers in total number of wireless subscribers was 54.69% and 45.31% respectively at the end November-21. Detailed statistics of wireless subscriber base is available at **Annexure-I**.

- As on 30th November, 2021, the private access service providers held 90.03% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 9.97%.
- The graphical representation of access service provider-wise market share and net additions in wireless subscriber base are given below: -

Access Service Provider-wise Market Shares in term of Wireless Subscribers as on 30th November, 2021



Net Addition/decline in Wireless Subscribers of Access Service Providers in the month of November, 2021



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

2. Virtual Network Operator (VNO) of BSNL has started reporting of its subscribers from the month of October, 2018 and the same has been included in the subscriber base of BSNL.

IV. Growth in Wireless Subscribers

Access Service Provider-wise Monthly Growth Rate of Wireless Subscribers in the month of November, 2021



Note: BSNL includes its Virtual Network Operator (VNO).

Service Area-wise Monthly Growth Rate of Wireless Subscribers in the month of November, 2021

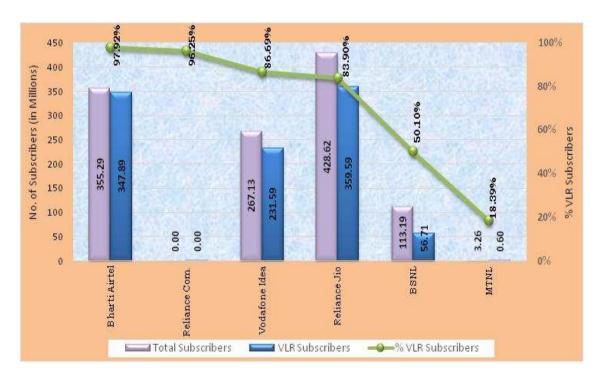


• Except Gujarat, Odisha, Mumbai, Delhi, Karnataka, Assam, Kolkata, U.P.(E) and Haryana service areas, all other service areas have showed growth in their wireless subscribers during the month of November-21.

V. Active Wireless Subscribers (VLR Data)

- Out ofthe total wireless subscribers (1.167.50)million), 996.38 million wireless subscribers were active on the date of peak VLR in the month of November-21. The proportion of active wireless subscribers was approximately 85.34% of the total wireless subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak **VLR** in the month of November-21 is available at **Annexure-II** and the methodology used for reporting VLR subscribers is available at Annexure-IV.

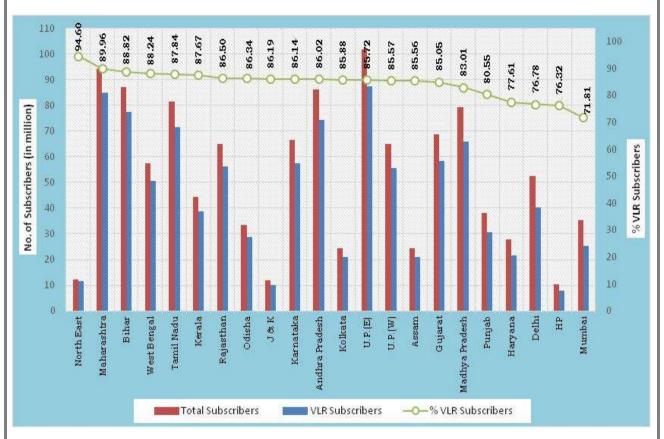
Access Service Provider-wise Percentage of VLR Subscribers in the month of November, 2021



- Bharti Airtel has the maximum proportion (97.92%) of its active
- wireless subscribers (VLR) as against its total wireless

subscribers (HLR) on the date of peak VLR in the month of November-21 and MTNL has the minimum proportion of VLR (18.39%) of its HLR during the same period.

Service Area wise percentage of VLR Subscribers in the month of November, 2021



VI. Mobile Number Portability (MNP)

- Intra-service area Mobile number portability (MNP) was implemented first in Haryana service area w.e.f. 25.11.2010 and in the rest of the country w.e.f. 20.01.2011. Inter-Service Area MNP has been implemented in the country w.e.f. 03.07.2015. Now, the wireless telephone subscribers can retain their mobile numbers when they relocate from one service area to another.
- During the month of November-21, a total of 7.33 million requests were received for MNP. Out of total 7.33 million new requests, 4 million requests received from Zone-I and 3.33 million requests received from Zone-II. The cumulative MNP requests increased from 645.54 million at the end of October-

21 to 652.88 million at the end of November-21, since the implementation of MNP.

- In MNP Zone-I (Northern and Western India), the highest number of requests till date have been received in Maharashtra (about 54.02 million) followed by Uttar Pradesh-East (about 48.18 million) service area.
- In MNP Zone-II (Southern and Eastern India), the highest number of requests till date have been received in Karnataka (about 51.27 million) followed by Andhra Pradesh (about 49.57 million).

Service Area Wise MNP Status								
Zo	ne -1	Zone – 2						
Service Area	Number of Requests (i	_	Service Area	Number of Porting Requests (in Million)				
	Oct-21	Nov-21		Oct-21	Nov-21			
Delhi	31.48	31.83	Andhra Pradesh	49.12	49.57			
Gujarat	43.62	44.03	Assam	4.47	4.52			
Haryana	21.48	21.65	Bihar	31.54	32.04			
Himachal Pradesh	2.96	2.98	Karnataka	50.89	51.27			
Jammu & Kashmir	1.42	1.44	Kerala	17.16	17.39			
Maharashtra	53.36	54.02	Kolkata	13.41	13.52			
Mumbai	26.64	26.64 26.78		46.76	47.36			
Punjab	24.03	24.22	North East	1.66	1.67			
Rajasthan	46.50	46.94	Odisha	12.51	12.66			
U.P.(East)	47.24	48.18	Tamil Nadu	47.63	47.99			
U.P.(West)	37.76	38.41	West Bengal	33.92	34.40			
Total	336.48	340.48	Total	309.07	312.39			
Total (Zone-1 +	Zone-2)			645.54	652.88			
Net Addition (Novem	nber, 2021)			7.33	million			

VII. Wireline Subscribers

• Wireline subscribers increased from 23.32 million at the end of October-21 to 23.55 million at the end of November-21. Net increase

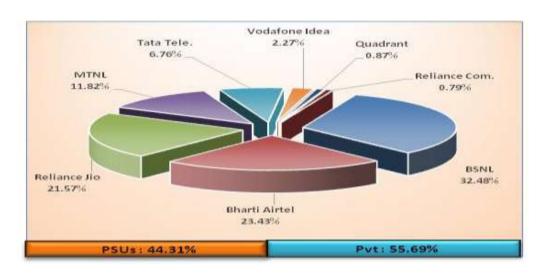
in the wireline subscriber base was 0.22 million with a monthly growth rate of 0.96%. The share of urban and rural subscribers in total

wireline subscribers were 91.83% and 8.17% respectively at the end of November, 2021.

• The Overall Wireline Tele-density in India, increased from 1.70% at the end of October-21 to 1.72% at the end of November-21. Urban and Rural Wireline Tele-density were

4.54% and 0.22% respectively during the same period. BSNL and MTNL, the two PSU access service providers, held 44.31% of the wireline market share as on 30th November, 2021. Detailed statistics of wireline subscriber base are available at **Annexure-III**.

Access Service Provider-wise Market Share of Wireline Subscribers as on 30th November, 2021



Access Service Provider-wise Net Addition/Decline in Wireline Subscribers during the month of November, 2021



VIII. Broadband (≥ 512 Kbps download)

 As per the information received from 592 operators in November 2021 in comparison to 577 Operator in October 2021, the total Broadband Subscribers increased from 798.95 million at the end of October-21 to 801.60 million at the end of November-21 with a monthly increase rate of 0.33%. Segment-wise broadband subscribers and their monthly growth rates are as below:

Segment-wise Broadband Subscribers and Monthly Growth Rate in the month of November, 2021

	Broadband s	Monthly growth rate in			
Segment	As on 31st October, 2021	As on 30 th November, 2021	the month of November-21		
Wired subscribers	24.55	24.42	-0.54%		
Mobile devices users (Phones and dongles)	773.09	775.93	0.37%		
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	1.31	1.26	-3.74%		
Total	798.95	801.60	0.33%		

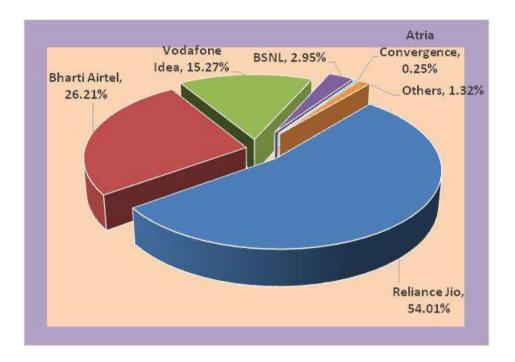
 Top five service providers constituted 98.68% market share of the total broadband subscribers at the end of November-21. These service providers were Reliance Jio Infocomm Ltd (432.96 million), Bharti Airtel (210.10 million), Vodafone Idea (122.40 million), BSNL (23.62 million) and Atria Convergence (1.98 million).

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

 The graphical representation of the service provider-wise market share of broadband services is given below: -

Service Provider-wise Market Share of Broadband

(wired + wireless) Services as on 30th November 2021



• As on 30th November, 2021, the top five Wired Broadband Service providers were Reliance Jio Infocomm Ltd (4.34 million), BSNL (4.20 million), Bharti Airtel (4.08 million), Atria Convergence Technologies (1.98 million) and Hathway Cable & Datacom (1.07 million).

As on 30th November, 2021, the top five <u>Wireless</u> Broadband Service providers were Reliance Jio Infocom Ltd (428.62 million), Bharti Airtel (206.02 million), Vodafone Idea (122.39 million), BSNL (19.41 million) and Tikona Infinet Ltd. (0.30 million).

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(Rajiv Sinha) Secretary (i/c), TRAI

	Wireless Subscriber Base								Aı	Annexure-I							
Circle	Bharti Airt	el cluding Tata	Relian	ce Com.	Vodafo	Vodafone Idea		BSNL		BSNL (VNO's)		`NL	Reliance Jio		Total		Net
	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Addition
Andhra Pradesh	31114350	31298106			14589459	14417213	9108418	9182467					31280685	31335317	86092912	86233103	140191
Assam	9,748,438	9,813,893			2844345	2808749	3111491	3127340					8737018	8636783	24441292	24386765	-54527
Bihar	36,102,624	36,212,977			10877621	10747890	5495516	5453955					34183516	34626924	86659277	87041746	382469
Delhi	15814431	15876083	320	250	15774846	15823733					2154926	2154158	18811487	18629786	52556010	52484010	-72000
Gujarat	11743743	11700880	166	142	24206672	24075093	5590010	5558866					27171671	27355288	68712262	68690269	-21993
Haryana	5682781	5702016	47	19	7962609	7896091	4986044	4962800					9365110	9299197	27996591	27860123	-136468
Himachal Pradesh	3323832	3328678	93	93	597924	589772	2705274	2710918					3779027	3831736	10406150	10461197	55047
J & K	5506324	5513815	0	0	446906	490285	1312811	1313545					4392606	4434671	11658647	11752316	93669
Karnataka	30293784	30400959	957	728	8456083	8362821	7031492	6953582					20931005	20893192	66713321	66611282	-102039
Kerala	7461603	7563895	236	187	16576730	16499736	10720778	10675401					9445458	9602106	44204805	44341325	136520
Kolkata	5495417	5495146	18	4	6402240	6355564	2334289	2236564					10237359	10311973	24469323	24399251	-70072
Madhya Pradesh	15447846	15406932	0	0	20723844	20566331	6005064	5967668					37155085	37474968	79331839	79415899	84060
Maharashtra	20181990	20236300	0	0	29030093	28900729	6624339	6594366					38388649	38599140	94225071	94330535	105464
Mumbai	9416692	9426690	2097	2020	11620995	11603364					1110237	1106687	13092699	13066659	35242720	35205420	-37300
North East	5465771	5504889	0	0	1247622	1235345	1352550	1350345					3988177	3984784	12054120	12075363	21243
Odisha	10871307	10986849	111	74	2033600	2031253	6277613	6246307					14274541	14162621	33457172	33427104	-30068
Punjab	11477678	11576445	183	134	9004580	8932142	5357459	5307331					12297174	12372060	38137074	38188112	51038
Rajasthan	21513959	21506066	207	162	11557027	11512840	6103323	6178117					25539082	25692343	64713598	64889528	175930
Tamil Nadu	27665088	27848022	389	328	18267793	18157872	9875338	9932629	56,318	59,984			25399190	25498244	81264116	81497079	232963
U.P.(E)	36457063	36545014	0	0	21051817	20548863	11123371	11120915					33481471	33590714	102113722	101805506	-308216
U.P.(W)	17939539	18068668	108	27	19271089	19123461	5668625	5651015					21731250	22079143	64610611	64922314	311703
West Bengal	15252023	15282211	472	366	16482187	16449885	2587936	2607548					22916503	23140476	57239121	57480486	241365
Total	353976283	355294534	5404	4534	269026082	267129032	113371741	113131679	56318	59984	3265163	3260845	426598763	428618125	1166299754	1167498733	1198979
Net Addition		1318251		-870		-1897050		-240062		3666		-4318		2019362	0	1198979	
Rural Subscribers	170,829,410	171,327,023	0	0	136517387	135298593	36,561,165	36,474,853	0	0	45038	45022	184906387	185894234	528859387	529039725	180338

 $[\]textbf{Note:}\ 1.\ The\ subscribers\ of\ M/s\ Bharti\ Airtel\ includes\ subscribers\ of\ M/s\ Tata\ Teleservices\ Ltd.$

^{2.} Virtual Network Operator (VNO) of BSNL has reported its subscriber number from the month of October, 2018.

Proportion	of VLR on tl	ne date of F	Peak VLR in th	e month	of November-	21 (%) Ar	nexure-II
Circle	Bharti	BSNL	Vodafone Idea	MTNL	Reliance Com.	Reliance Jio	Total
Andhra Pradesh	98.99	57.18	88.85		-	80.23	86.02
Assam	96.01	44.38	86.70		-	88.22	85.56
Bihar	95.93	43.75	87.54		-	88.87	88.82
Delhi	94.28		72.56	11.57	160.80	72.98	76.78
Gujarat	99.25	46.17	89.66		93.66	82.82	85.05
Haryana	109.69	32.64	87.86		200.00	73.23	77.61
Himachal Pradesh	100.35	36.92	102.04		31.18	79.37	76.32
J & K	96.23	52.88	77.50		-	84.52	86.19
Karnataka	95.49	48.73	84.11		165.11	85.81	86.14
Kerala	100.54	70.81	91.86		91.98	89.08	87.67
Kolkata	97.26	41.63	88.24		175.00	87.95	85.88
Madhya Pradesh	95.14	42.37	82.95		-	84.53	83.01
Maharashtra	103.24	56.66	89.77		-	88.82	89.96
Mumbai	82.13		70.30	31.69	51.24	69.10	71.81
North East	103.36	62.75	87.30		-	95.55	94.60
Odisha	99.40	56.67	89.29		31.08	88.88	86.34
Punjab	103.13	41.58	82.28		65.67	74.88	80.55
Rajasthan	99.36	43.34	91.88		66.05	83.71	86.50
Tamil Nadu	95.09	69.57	94.19		306.40	82.56	87.84
U.P. (E)	99.06	32.24	88.14		-	87.44	85.72
U.P. (W)	102.82	38.40	86.78		40.74	82.48	85.57
West Bengal	96.99	64.52	87.26		30.60	85.84	88.24
Total	97.92	50.10	86.69	18.39	96.25	83.90	85.34

Note: Peak VLR figures in some circles of some of the service providers are more than their HLR figures due to a large number of inroamers.

						Wireli	ine Sub	scriber B	ase									Anne	exure-III
	BS	N T	M	nl	Dhowti	Airtel	Dollon	ce Com.	Tota	Tele.	Quad	luont	Vodafor	o Idoo	Relian	oo lie	Tot	o.1	
Service Area	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Oct-21	Nov-21	Net Addition
Andhra Pradesh	687168	683522			313224	329515	20664	20362	155813	156268			61415	62400	556175	581604	1794459	1833671	3921
Assam	103,814	102,769			0	0	0	0	0	0			3450	3360	75953	79695	183217	185824	260
Bihar	180,833	178,936			0	0	20	19	7820	7817			1770	1740	190597	200459	381040	388971	793
Delhi	0	0	1297343	1295076	1694192	1708394	30345	30130	137791	137860			96179	85451	491870	510231	3747720	3767142	1942
Gujarat	447023	436908			137703	139250	3591	3540	76053	76107			44979	39296	315580	325465	1024929	1020566	-436
Haryana	182401	182355			37462	44207	0	0	35443	33713			360	360	56375	58215	312041	318850	680
Himachal Pradesh	89259	88334			0	0	0	0	1620	1620			30	30	23373	24642	114282	114626	34
J & K	107456	105788			30662	35379	0	0	0	0			0	30	115496	120796	253614	261993	837
Karnataka	872640	870560			837631	855780	24168	24407	242362	242431			98872	96617	380828	402200	2456501	2491995	3549
Kerala	1077563	1069835			73517	74351	5098	5030	18605	18712			8830	8740	117906	124352	1301519	1301020	-49
Kolkata	399835	394976			162659	164942	6819	6774	46025	45661			15400	9910	210818	222091	841556	844354	279
Madhya Pradesh	295756	291409			326398	333077	5	5	10974	10906			5765	8050	285372	298016	924270	941463	1719
Maharashtra	762778	749978			206852	222184	11101	11074	215873	215223			29820	25093	137402	140045	1363826	1363597	-22
Mumbai	0	0	1488297	1488736	452239	456620	56950	55305	479228	479387			112305	109795	498786	513853	3087805	3103696	1589
North East	83117	81557			0	0	0	0	0	0			330	330	63382	66812	146829	148699	187
Odisha	197797	193146			0	0	6	6	8295	8264			6570	3570	88368	94033	301036	299019	-201
Punjab	260728	258750			173057	176966	1700	1668	13115	13153	197291	205578	2265	2070	134101	138885	782257	797070	1481
Rajasthan	305041	301005			121631	126426	4172	4121	12074	12102			13440	15080	177225	186927	633583	645661	1207
Tamil Nadu	1045902	1036242			638940	646280	23933	23758	118248	118128			38565	38210	396216	408982	2261804	2271600	979
U.P.(E)	191016	189592			105384	117606	20	20	7882	7875			23810	20070	219265	227757	547377	562920	1554
U.P.(W)	205120	203375			74341	85817	7	7	4351	4347			7350	3220	229377	240897	520546	537663	1711
West Bengal	230648	229424			0	0	12	12	2446	2425			120	120	108404	114026	341630	346007	437
Total	7725895	7648461	2785640	2783812	5385892	5516794	188611	186238	1594018	1591999	197291	205578	571625	533542	4872869	5079983	23321841	23546407	22456
Net Addition		-77434		-1828		130902		-2373		-2019		8287		-38083		207114		224566	
Rural Subscribers	1816065	1806426	0	0	0	0	180	180	38297	38181	24471	24071	0	0	51911	55011	1930924	1923869	-705

Note: - BSNL-FTTH Voice-connections have also been incorporated from the month of May 2021

VLR Subscribers in the Wireless Segment

Home Location Register (HLR) is a central database that contains details of each mobile phone subscriber that is authorized to use the GSM core network. The HLRs store details of every SIM card issued by the service provider. Each SIM has a unique identifier called an International Mobile Subscriber Identity (IMSI), which is the primary key to each HLR record. The HLR data is stored for as long as a subscriber remains with the service provider. HLR also manages the mobility of subscribers by means of updating their position in administrative areas. It sends the subscriber data to a Visitor Location Register (VLR).

Subscriber numbers reported by the service providers is the difference between the numbers of IMSI registered in service provider's HLR and sum of other figures as given below: -

1	Total IMSI's in HLR (A)
2	Less: $(B = a + b + c + d + e)$
a.	Test/Service Cards
b.	Employees
c.	Stock in hand/in Distribution Channels (Active Card)
d.	Subscriber Retention period expired
e.	Service suspended pending disconnection
3	Subscribers Base (A-B)

Visitor Location Register (VLR) is a temporary database of the subscribers who have roamed into the particular area, which it serves. Each base station in the network is served by exactly one VLR; hence a subscriber cannot be present in more than one VLR at a time.

If subscriber is in active stage i.e. he is able to send/receive calls/SMSs he is available both in HLR and VLR. However, it may be possible that the subscriber is registered in HLR but not in VLR due to the reason that he is either switched-off or moved out of coverage area, not reachable etc. In such circumstances he will be available in HLR but not in VLR. This causes difference between subscriber number reported by the service providers based on HLR and numbers available in VLR.

The VLR subscriber data calculated here is based on active subscribers in VLR on the date of Peak subscriber number in VLR of the particular month for which the data is being collected. This data is to be taken from the switches having the purge time of not more than 72 hours.