# (Press Release No.31/2023)

Information Note to the Press





**TELECOM REGULATORY AUTHORITY OF INDIA** 

New Delhi, 31<sup>st</sup> March, 2023 (www.trai.gov.in)

Highlights of Telecom Subscription Data as on 31st January, 2023										
Particulars	Wireless	Wireline	<b>Total</b> (Wireless+ Wireline)							
Broadband Subscribers (Million)	806.07	33.11	839.18							
Urban Telephone Subscribers (Million)	627.13	25.59	652.72							
Net Addition in January, 2023 (Million)	0.10	0.24	0.33							
Monthly Growth Rate	0.02%	0.94%	0.05%							
Rural Telephone Subscribers (Million)	515.89	2.14	518.03							
Net Addition in January, 2023 (Million)	0.00	0.039	0.04							
Monthly Growth Rate	0.00%	1.87%	0.01%							
Total Telephone Subscribers (Million)	1143.02	27.73	1170.75							
Net Addition in January, 2023 (Million)	0.10	0.28	0.37							
Monthly Growth Rate	0.01%	1.01%	0.03%							
<b>Overall Tele-density*(%)</b>	82.52%	2.00%	84.52%							
Urban Tele-density*(%)	128.76%	5.25%	134.02%							
Rural Tele-density*(%)	57.44%	0.24%	57.68%							
Share of Urban Subscribers	54.87%	92.29%	55.75%							
Share of Rural Subscribers	45.13%	7.71%	44.25%							

- In the month of January, 2023, 12.40 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 784.43 million at the end of December-22 to 796.84 million at the end of January-23, since implementation of MNP.
- Number of active wireless subscribers (on the date of peak VLR<sup>#</sup>) in January, 2023 was 1024.81 million.

#### Note:

<sup>-</sup> Information in this Press Release is based on the data provided by the Service Providers

<sup>\*</sup> 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 <u>https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%202011-2036%20-</u> %20upload compressed 0.pdf

<sup>#</sup> VLR is acronym of Visitor Location Register. The dates of peak VLR for various TSPs are different in different service areas.

# I. Broadband Subscriber

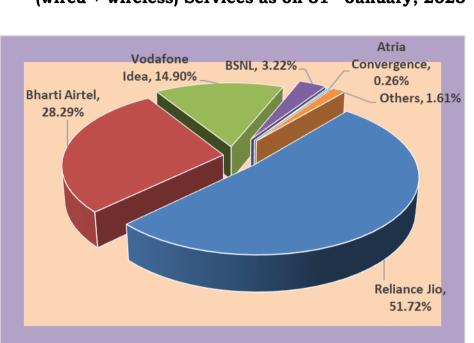
 As per the information received from 989 operators in January, 2023 in comparison to 907 Operator in December 2022, the total Broadband Subscribers increased from 832.20 million at the end of December-22 to 839.18 million at the end of January-23 with a monthly growth rate of 0.84%. Segment-wise broadband subscribers and their monthly growth rates are as below: -

# Segment-wise Broadband Subscribers and Monthly Growth Rate in the month of January, 2023

	Broadband su (in mill:	Monthly growth rate	
Segment	As on 31st December, 2022	As on 31st January, 2023	in the month of January, 2023
Wired subscribers	32.35	33.11	2.23%
Mobile devices users (Phones and dongles)	798.69	804.90	0.78%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	1.13	1.17	3.67%
Total	832.20	839.18	0.84%

• Top five service providers constituted 98.39% market share of the total broadband subscribers at the end of January-23. These service providers were Reliance Jio Infocomm Ltd (434.02 million), Bharti Airtel (237.40 million), Vodafone Idea (125.03 million), BSNL (27.05 million) and Atria Convergence (2.14 million).

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

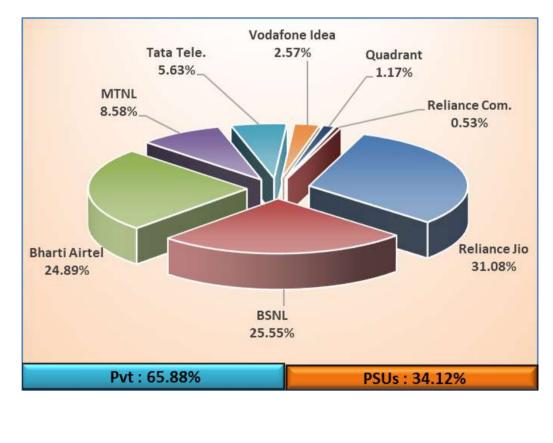


Service Provider-wise Market Share of Broadband (wired + wireless) Services as on 31<sup>st</sup> January, 2023

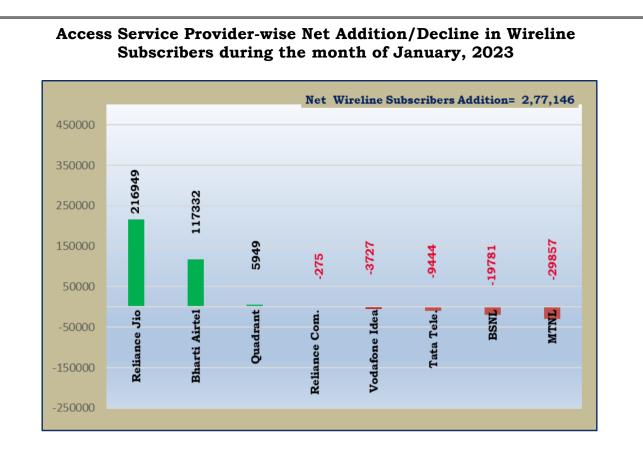
- As on 31<sup>st</sup> January, 2023, the top five <u>Wired</u> Broadband Service providers were Reliance Jio Infocomm Ltd (7.84 million), Bharti Airtel (5.85 million), BSNL (4.18 million), Atria Convergence Technologies (2.14 million) and Hathway Cable & Datacom (1.13 million).
- As on 31<sup>st</sup> January, 2023, the top five <u>Wireless</u> Broadband Service providers were Reliance Jio Infocom Ltd (426.17 million), Bharti Airtel (231.54 million), Vodafone Idea (125.02 million), BSNL (22.87 million) and Intech Online Pvt. Ltd. (0.23 million).

# **II. Wireline Subscribers**

- Wireline subscribers increased from 27.45 million at the end of December-22 to 27.73 million at the end of January-23. Net increase in the wireline subscriber base was 0.28 million with a monthly growth rate of 1.01%. The share of urban and rural subscribers in total wireline subscribers were 92.29% and 7.71% respectively at the end of January, 2023.
- The Overall Wireline Tele-density in India increased from 1.98% at the end of December-22 to 2% at the end of January-23. Urban and Rural Wireline Teledensity were 5.25% and 0.24% respectively during the same period.
- BSNL and MTNL, the two PSU access service providers, held 34.12% of the wireline market share as on 31<sup>st</sup> January, 2023. Detailed statistics of wireline subscriber base are available at **Annexure-I**.



## Access Service Provider-wise Market Share of Wireline Subscribers as on 31<sup>st</sup> January, 2023



### III. Wireless subscriber

Total wireless subscribers increased from 1,142.93 million at the end of December-22, to 1,143.02 million at the end of January-23, thereby registering a monthly growth rate of 0.01%. Wireless subscription in urban areas increased from to 627.03 million at the end of December-22 to 627.13 million at the end January-23 however, wireless of subscription in rural areas remained same i.e. 515.89 which was at the end of December, 2022. Monthly growth rates of urban and rural wireless subscription were 0.02% and 0.00% respectively.





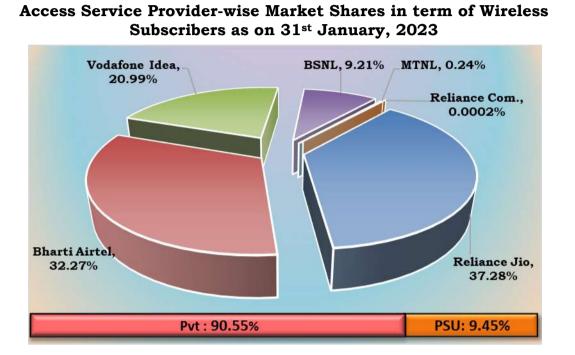
• The Wireless Tele-density in India decreased from 82.57% at the end of December-22 to 82.52% at the end of January-23. The Urban Wireless Tele-density decreased from 128.94% at the end of December-22 to 128.76% at the end of January-23 and Rural Tele-density also decreased from 57.46% to 57.44% during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 54.87% and 45.13% respectively at the end of January-23. Detailed statistics of

wireless subscriber base is available at Annexure-II.

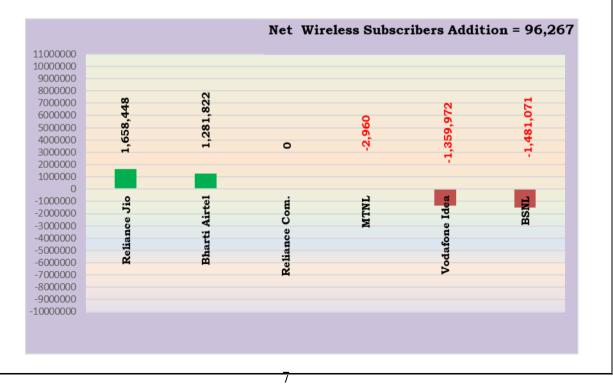
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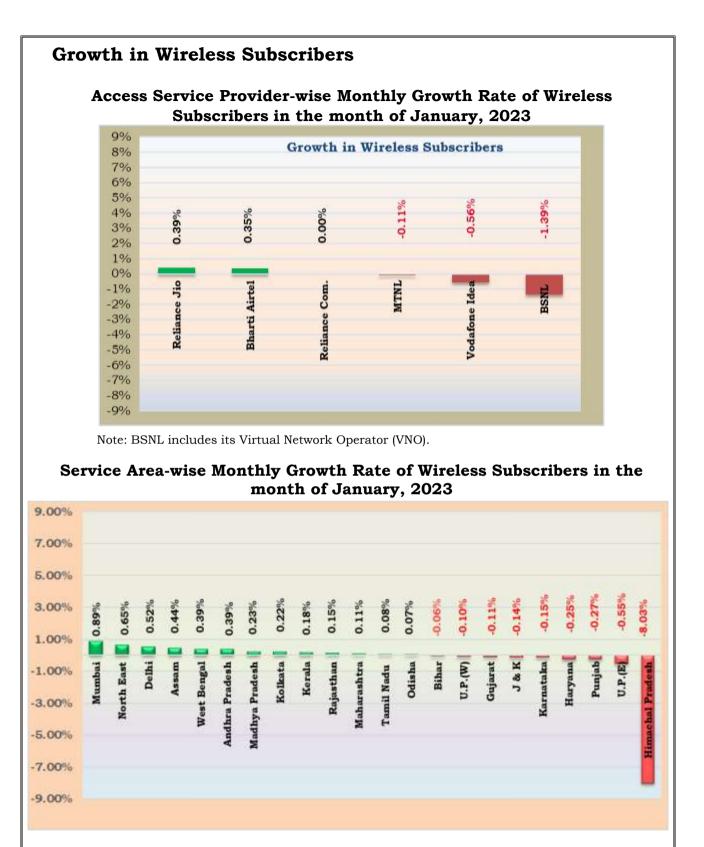
• As on 31<sup>st</sup> January, 2023, the private access service providers held 90.55% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 9.45%.

• The graphical representation of access service provider-wise market share and net additions in wireless subscriber base are given below: -



Net Addition in Wireless Subscribers of Access Service Providers in the month of January, 2023

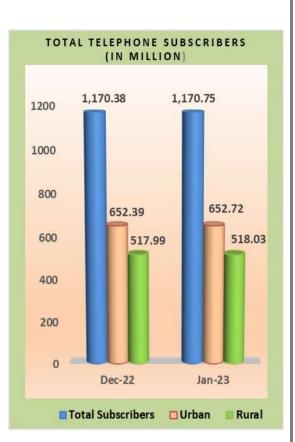


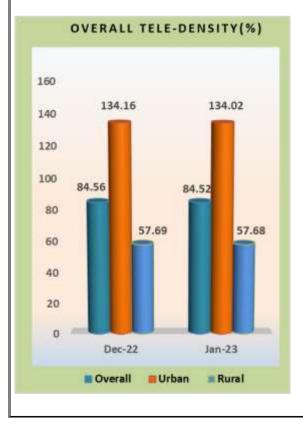


Except Bihar, U.P.(W), Gujarat, J & K, Karnataka, Haryana, Punjab, U.P.(E) and Himachal Pradesh service areas, all other service areas have showed growth rate in their wireless subscribers during the month of January-23.

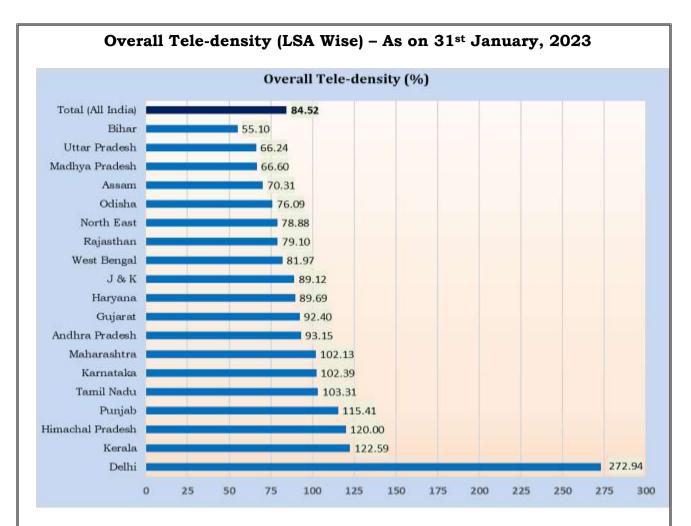
## **IV. Total Telephone Subscribers**

The number of telephone subscribers in India increased from 1,170.38 million at the end of December-22 to 1,170.75 million at the end of January-23, thereby showing a monthly growth rate of 0.03%. Urban telephone subscription increased from 652.39 million at the end of December-22 to 652.72 million at the end of January-23 and the rural subscription also increased from 517.99 million to 518.03 million during the same period. The monthly growth rates of urban and rural telephone subscription were 0.05% and 0.01% respectively during the month of January-23.





The overall Tele-density India in • 84.56% decreased at the end of December-22 to 84.52% at the end of January-23. The Urban Tele-density decreased from 134.16% at the end of December-22 to 134.02% at the end of January-23 and Rural Tele-density also decreased from 57.69% to 57.68% during the same period. The share of urban and rural subscribers in total number of telephone subscribers at the end of January-23 was 55.75% and 44.25% 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 January-23. Delhi service area has maximum tele-density of 272.94% and the Bihar service area has minimum tele-density of 55.10% at the end of January-23.

#### Notes: -

<sup>1.</sup> Population data/projections are available state wise only.

<sup>2.</sup> 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 <u>https://main.mohfw.gov.in/sites/default/files/Population%20Projection%20Report%20</u> 2011-2036%20-%20upload compressed 0.pdf

<sup>3.</sup> 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).

<sup>4.</sup> Data/information for West Bengal includes Kolkata, Maharashtra includes Mumbai and Uttar Pradesh includes UPE & UPW service area(s).

<sup>5.</sup> 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.

# V. Category-wise Growth in subscriber base

month of January 2023										
Circle		in the month ry, 2023	Telephone Subscriber base as on 31 <sup>st</sup> January, 2023							
Category	Wireline segment	Wireless segment	Wireline segment	Wireless segment						
Circle A	1,03,558	3,09,452	1,06,18,495	38,49,85,899						
Circle B	95,883	-2,16,707	69,49,232	46,34,88,827						
Circle C	39,655	-6,30,668	20,02,463	18,20,14,447						
Metro	38,050	6,34,190	81,61,783	11,25,32,327						
All India	2,77,146	96,267	2,77,31,973	1,14,30,21,500						

## Circle Category-wise Net Additions in Telephone Subscribers in the month of January 2023

Circle Category-wise monthly and yearly Growth Rates in Telephone Subscribers in the month of January 2023

Circle		owth rate (%) 2 to January-23)	Yearly growth rate (%) (January-22 to January-23)					
Category	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment				
Circle A	0.98%	0.08%	15.01%	-0.96%				
Circle B	1.40%	-0.05%	21.97%	-1.21%				
Circle C	2.02%	-0.35%	36.25%	2.92%				
Metro	0.47%	0.57%	4.50%	1.84%				
All India	<b>1.01</b> %	0.01%	14.54%	-0.19%				

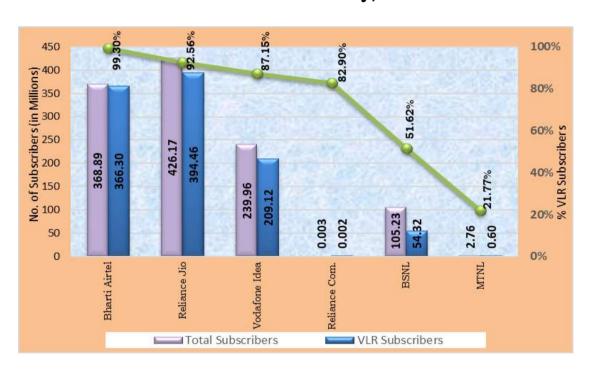
Note: Circle Category-Metro includes Delhi, Mumbai and Kolkata. Data for Chennai has been included in Circle Category-A, as part of TamilNadu.

- As can be seen in the above tables, in wireless segment, on monthly basis except Circle 'B' and Circle 'C', other circles have registered growth rate in their subscriber base. On yearly basis, except Circle 'A' and Circle 'B' other circles have registered growth rate in their subscriber base.
- In Wireline segment both on monthly and yearly basis, all circles have registered growth rate in their subscriber base.

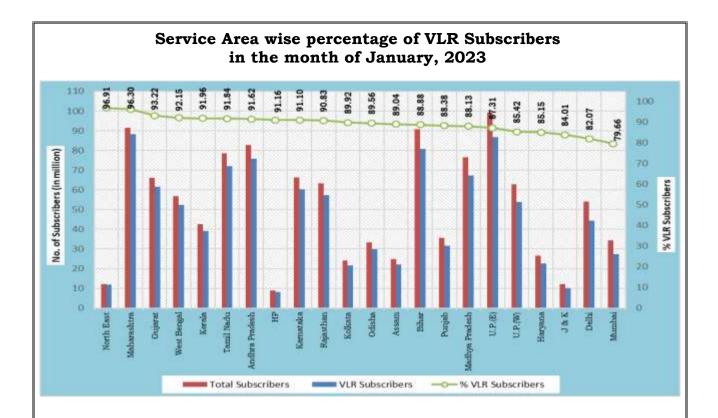
# VI. Active Wireless Subscribers (VLR Data)

- Out of the total 1,143.02 million wireless subscribers, 1024.81 million wireless subscribers were active on the date of peak VLR in the month of January-23. The active wireless proportion of subscribers approximately was 89.66% of the total wireless subscriber base.
- The detailed statistics on proportion active of wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of January-23 is available at Annexure-III 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 January, 2023



 Bharti Airtel has the maximum proportion 99.30% of its active wireless subscribers (VLR) as against its total wireless subscribers (HLR) on the date of peak VLR in the month of January-23 and MTNL has the minimum proportion of VLR 21.77% of its HLR during the same period.



# VII. 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 January-23, a total of 12.40 million requests were received for MNP. Out of total 12.40 million new requests, 7.29 million requests received from Zone-I and 5.12 million requests received from Zone-II. The cumulative MNP requests increased from 784.43 million at the end of December-22 to 796.84 million at the end of January-23, since the implementation of MNP.
- In MNP Zone-I (Northern and Western India), the highest number of requests till date have been received in Uttar Pradesh-East (about 67.76 million) followed by Maharashtra (about 65.82 million) service area.

• In MNP Zone-II (Southern and Eastern India), the highest number of requests till date have been received in Madhya Pradesh (about 60.10 million) followed by Karnataka (about 58.78 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)					
	Dec-22 Jan-23			Dec-22	Jan-23				
Delhi	37.60	38.23	Andhra Pradesh	56.38	57.01				
Gujarat	53.36	54.23	Assam	5.59	5.66				
Haryana	25.44	25.78	Bihar	40.84	41.72				
Himachal Pradesh	3.48	3.51	Karnataka	58.21	58.78				
Jammu & Kashmir	1.80	1.83	Kerala	20.25	20.46				
Maharashtra	64.76	65.82	Kolkata	15.36	15.52				
Mumbai	29.28	29.54	Madhya Pradesh	58.96	60.10				
Punjab	27.78	28.08	North East	1.89	1.91				
Rajasthan	55.56	56.28	Odisha	14.49	14.65				
U.P.(East)	66.05	67.76	Tamil Nadu	53.71	54.21				
U.P.(West)	51.48	52.82	West Bengal	42.15	42.92				
Total	416.60	423.89	Total	367.83	372.95				
Total (Zone-1 +	Zone-2)			784.43	796.84				
Net Addition (Janua	ry, 2023)			12.40	million				

# Contact details in case of any clarification: -

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(V. Raghunandan) Secretary, TRAI

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	Wireline Subscriber Base																	Aı	nnexure-
	BS	NL	M1	MTNL		Bharti Airtel		ce Com.	Tata	Tele.	Oua	drant	Vodafone Idea		Reliance Jio		Total		
Service Area	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Net Addition
Andhra Pradesh	676133	676711			421335	432127	20335	19774	155414	155001			71275	71395	979388	1006135	2323880	2361143	3726
Assam	109,461	109,801			16417	17155	0	0	0	0			2640	2640	139677	143445	268195	273041	484
Bihar	171,257	173,997			66258	69483	9	9	8920	8863			2080	2050	390312	403333	638836	657735	1889
Delhi	0	0	1097894	1077185	1889035	1909801	20651	20880	142415	139890			89445	89265	795691	811780	4035131	4048801	1367
Gujarat	343420	337392			195551	198028	2649	2798	76557	76156			59236	59236	494177	502586	1171590	1176196	460
Haryana	201075	203055			96292	99606	0	0	31111	30409			420	420	95765	98701	424663	432191	752
Himachal Pradesh	87556	87397			3807	4023	0	0	1535	1536			30	90	45443	46339	138371	139385	101
J & K	88336	88064			73600	76123	0	0	0	0			30	30	173497	176653	335463	340870	540
Karnataka	885635	885555			1019470	1032470	19717	19684	221897	219276			157652	154892	721102	750068	3025473	3061945	3647
Kerala	1014448	1015120			87613	88318	3663	3614	18986	18819			6830	6830	214788	221513	1346328	1354214	788
Kolkata	209708	207136			181903	183549	4513	4411	48667	48288			13855	13805	387984	396811	846630	854000	737
Madhya Pradesh	261323	262657			414607	422390	14	14	12409	13486			35245	35245	519977	532287	1243575	1266079	2250
Maharashtra	624800	616132			354018	362702	9599	9537	210820	210306			25958	25961	215592	219803	1440787	1444441	365
Mumbai			1310696	1301548	520336	529245	43056	43861	471710	471375			171225	170770	724949	742183	3241972	3258982	1701
North East	75707	75530			0	0	0	0	0	0			510	510	128643	132464	204860	208504	364
Odisha	172912	173536			0	0	4	4	8409	8348			3960	3960	191798	197080	377083	382928	584
Punjab	335015	341870			212790	217250	1982	1899	15450	14680	318346	324295	2210	2210	239793	247640	1125586	1149844	2425
Rajasthan	280128	278460			182960	187757	3600	3598	12901	12852			15325	15325	310574	316914	805488	814906	941
Tamil Nadu	974808	971304			771994	786764	18641	18084	117545	116141			38433	38088	631786	644389	2553207	2574770	2156
U.P.(E)	138197	134784			161936	166413	23	24	8150	8023			16660	16660	385876	397321	710842	723225	1238
U.P.(W)	188774	177357			103285	105505	12	8	4894	4906			3648	3558	423462	435445	724075	726779	270
West Bengal	265723	268777			12784	14614	76	70	2589	2580			120	120	191500	195833	472792	481994	920:
Total	7104416	7084635	2408590	2378733	6785991	6903323	148544	148269	1570379	1560935	318346	324295	716787	713060	8401774	8618723	27454827	27731973	27714
Net Addition		-19781		-29857		117332		-275		-9444		5949		-3727		216949		277146	

Wireless Subscriber Base											Annexure-II												
Circle	Bharti (including		Reliance Com.		Reliance Com.		Reliance Com		Reliance Com		Vodafo	Vodafone Idea		BSNL		VNO's)	MTNL		Reliance Jio		Total		Net
circle	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Dec-22	Jan-23	Addition						
Andhra Pradesh	32163984	32294796			12060526	12000139	8156707	8157253					29991757	30242362	82372974	82694550	321576						
Assam	10,648,415	10,745,881			2128563	2032031	3308505	3318740					8621292	8718780	24706775	24815432	108657						
Bihar	39,726,581	39,833,563			9195941	9042859	5705175	5748958					36246456	36193068	90874153	90818448	-55705						
Delhi	16826426	16959252	194	194	16872359	16918702					1690527	1690250	18487734	18589977	53877240	54158375	281135						
Gujarat	11380155	11403475	47	47	22528058	22448214	5139655	5092727					27017956	27048203	66065871	65992666	-73205						
Haryana	6489254	6509330	11	11	7563522	7437444	4621826	4627486					8027774	8060101	26702387	26634372	-68015						
Himachal Pradesh	3414229	3409078	92	92	496145	485406	2391457	1604896					3286812	3319408	9588735	8818880	-769855						
J & K	5795811	5765145	0	0	387466	377611	830350	828725					5045691	5071135	12059318	12042616	-16702						
Karnataka	31169983	31221030	593	593	7598993	7402281	6492981	6328383					21045839	21256958	66308389	66209245	-99144						
Kerala	7942467	7967440	114	114	14684250	14660944	9961133	9928898					9911488	10017233	42499452	42574629	75177						
Kolkata	5699449	5690192	0	0	5876479	5878598	2166601	2174015					10258126	10309622	24000655	24052427	51772						
Madhya Pradesh	15216078	15247422	0	0	17368867	17401404	5443063	5412656					38223356	38362105	76251364	76423587	172223						
Maharashtra	20934562	21035277	0	0	24958114	24809241	6428378	6470806					39162702	39268021	91483756	91583345	99589						
Mumbai	9480918	9768812	1015	1015	11367552	11240673					1068028	1065345	12102729	12245680	34020242	34321525	301283						
North East	5836711	5859987	0	0	935069	951893	1,373,270	1,370,251					3983794	4025370	12128844	12207501	78657						
Odisha	11381082	11308362	29	29	1647883	1645039	6,318,998	6,306,844					13939298	14051296	33287290	33311570	24280						
Punjab	12232409	12265174	106	106	7386768	7308781	4,920,829	4,845,070					11273435	11298327	35813547	35717458	-96089						
Rajasthan	21980740	22148502	155	155	10406709	10333463	6,293,169	6,233,460					24445346	24503401	63126119	63218981	92862						
1 Nadu	27579698	27663720	269	269	17142543	16910521	9,643,192	9,715,873	98,287	108,661			23981468	24107049	78445457	78506093	60636						
U.P.(E)	36435124	36484936	0	0	19023762	19020934	9,436,080	9,002,308					34975500	34813538	99870466	99321716	-548750						
U.P.(W)	18556736	18560186	8	8	17073244	17054469	5,579,253	5,536,340					21763217	21756247	62972458	62907250	-65208						
West Bengal	16717883	16748957	151	151	14621269	14603463	2,405,969	2,421,457					22724469	22916806	56469741	56690834	221093						
Total	367608695	368890517	2784	2784	241324082	239964110	106616591	105125146	98287	108661	2758555	2755595	424516239	426174687	1142925233	1143021500	96267						
Net Addition		1281822		0		-1359972		-1491445		10374		-2960		1658448	0	96267							

ti     BSNL       4     60.11       6     41.09       5     41.05       4	93.81 94.96 81.21 63.79 93.91 90.03 90.03 105.68	M TNL	Reliance Com.     -     -     -     85.05     114.89     109.09	Reliance Jio91.2394.4193.1489.7594.4896.29	Total 91.62 89.04 88.88 82.07 93.22 85.15
41.09   5 41.05   4 32   45.15   10 32.69   4 59.42   1 69.75	94.96     81.21     63.79     93.91     90.03     105.68	17.35	- 85.05 114.89 109.09	94.41 93.14 89.75 94.48	89.04 88.88 82.07 93.22
41.05   44   32 45.15   10 32.69   4 59.42   1 69.75	6   81.21     63.79     6   93.91     9   90.03     105.68	17.35	- 85.05 114.89 109.09	93.14 89.75 94.48	88.88 82.07 93.22
4   32 45.15   10 32.69   4 59.42   1 69.75	63.79 5 93.91 9 90.03 2 105.68	17.35	85.05 114.89 109.09	89.75 94.48	82.07 93.22
32 45.15   10 32.69   14 59.42   1 69.75	93.91       90.03       105.68	17.35	114.89 109.09	94.48	93.22
10     32.69       14     59.42       1     69.75	90.03 90.68		109.09		
24     59.42       1     69.75	105.68			96.29	85 15
1 69.75			12.12		00.10
	81.08		43.48	97.10	91.16
	01.00		-	80.76	84.01
47.90	84.93		94.77	94.45	91.10
41 81.13	93.46		130.70	91.39	91.96
43.92	89.04		-	96.38	89.92
99 46.88	8 85.91		-	89.85	88.13
14 61.26	89.98		-	99.18	96.30
9	72.66	28.77	79.11	81.16	79.66
27 54.74	94.78		-	102.51	96.91
57 51.37	96.17		41.38	95.46	89.56
32 40.42	91.65		66.98	92.79	88.38
13 41.27	92.12		61.94	93.59	90.83
16 66.59	93.24		97.40	91.59	91.84
0 33.89	86.83		-	91.87	87.31
5 36.26	85.96		100.00	85.47	85.42
69.78	8 88.29		49.01	93.71	92.15
	9     27   54.74     57   51.37     32   40.42     13   41.27     16   66.59     0   33.89     55   36.26     0   69.78	99   72.66     27   54.74   94.78     57   51.37   96.17     32   40.42   91.65     13   41.27   92.12     16   66.59   93.24     0   33.89   86.83     35   36.26   85.96     0   69.78   88.29	99   72.66   28.77     27   54.74   94.78     57   51.37   96.17     32   40.42   91.65     13   41.27   92.12     16   66.59   93.24     0   33.89   86.83     35   36.26   85.96     0   69.78   88.29	19     72.66     28.77     79.11       27     54.74     94.78     -       57     51.37     96.17     41.38       32     40.42     91.65     66.98       13     41.27     92.12     61.94       16     66.59     93.24     97.40       0     33.89     86.83     -       35     36.26     85.96     100.00       0     69.78     88.29     49.01	9   72.66   28.77   79.11   81.16     27   54.74   94.78   -   102.51     57   51.37   96.17   41.38   95.46     32   40.42   91.65   66.98   92.79     13   41.27   92.12   61.94   93.59     16   66.59   93.24   97.40   91.87     55   36.26   85.96   100.00   85.47     69   69.78   88.29   49.01   93.71

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.

# 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.