November 15, 2019

Direction

Subject: **Direction under section 13, read with sub-clauses (i) and (v) of clause (b) of sub-section (1) of section 11 of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997) on submission of Coverage Map data**.

F.No. 305-10/2019-QoS.........Whereas the Telecom Regulatory Authority of India (hereinafter referred to as the Authority), established under sub-section (1) of section 3 of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997) (hereinafter referred to as TRAI Act), has been entrusted with discharge of certain functions, inter-alia, to regulate the telecommunication services, ensure compliance of terms and conditions of licence and lay-down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of telecommunications service;

2.   And whereas the Authority has, in exercise of powers conferred under sections 36 read with sub-clauses (i) and (v) of clause (b) of sub- section (1) of section 11 of the TRAI Act, made the Standards of Quality of Service of Basic Telephone Service (Wireline) & Cellular Mobile Telephone Service Regulations, 2009 (7 of 2009) dated 20th March 2009 (hereinafter referred to as the Regulations);

3.   And whereas the Authority has, in exercise of powers conferred by the TRAI Act, asked Telecom Service Providers (TSPs) to submit coverage maps of LSAs on several occasions vide its -

Letters Nos. (a)   21-17/2015-IT dated 04.05.2016, 21-03/2016-IT dated 12.09.2016, 301-1/2018-(QoS) dated 05.02.2018, 301-1/2018-(QoS) dated 06.06.2019;

(b) Emails dated 15.03.2017, 21.04.2017, 24.10.2017, 07.01.2019, 03.05.2019, 21.05.2019 and;

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150 YEARS OF CELEBRATING THE MAHATMA

(c)   meetings held at TRAI on 17.04.2017, 19.12.2017, 13.04.2018 and 08.07.2019.

4.   And whereas several presentations on Coverage maps were given to the Authority, in the past;

5.   Now, therefore, the Authority, in exercise of powers conferred upon it under section 13, read with sub-clauses (i) and (v) of clause (b) of sub-section (1) of section 11, of the Telecom Regulatory Authority of India Act, 1997, hereby directs all access providers to submit the coverage map data as per specifications [at Annexure 'A'] for the licensed service area of Delhi and Madhya Pradesh, within fifteen days of issue of this direction and for other service areas, as and when asked by the Authority.

Encls.:   Annexure 'A'

(Asit Kadayan)
Advisor (QoS)

To
     All Access Service Providers.
     [M/s Airtel, M/s Vodafone Idea Ltd, M/s BSNL, M/s MTNL, M/s RJio India Ltd)

The coverage map data to incorporate the following:

1. **Voice**
   a. The data to have best integrated view of 2G, 3G and 4G.
   b. The following colour coding be used;

Technology	Outdoor	Threshold	Colour	Colour code
2G	better than -65 dbm	-65 dbm	To be assigned by TRAI	1
2G	between -75 dbm and -65 dbm	-75 dbm		2
2G	between -85 dbm and -75 dbm	-85 dbm		3
2G	between -95 dbm to -85 dbm	-95 dbm		4
2G	worse than -95 dbm	> -95 dbm		5
3G	better than -80 dbm	-80 dbm		1
3G	between -85 dbm and -80 dbm	-85 dbm		2
3G	between -90 dbm and -85 dbm	-90 dbm		6
3G	between -95 dbm to -90 dbm	-95 dbm		3
3G	between -99 dbm to -95 dbm	-99 dbm		4
3G	worse than -99 dbm	> -99 dbm		5
4G	better than -90 dbm	-90 dbm		1
4G	between -100 dbm and -90 dbm	-100 dbm		2
4G	between -110 dbm and -100 dbm	-110 dbm		6
4G	between -115 dbm to -110 dbm	-115 dbm		3
4G	between -120 dbm to -115 dbm	-120 dbm		4
4G	worse than -120 dbm	> -120 dbm		5

1. **Data**
   a. Data for 3G and 4G be furnished separately
   b. The following colour coding be used;

Technology	Outdoor	Threshold	Colour	Colour Code
3G	better than -70 dbm	-70 dbm	To be assigned by TRAI	1
3G	between -80 dbm to -70 dbm	-80 dbm		2
3G	between -90 dbm to -80 dbm	-90 dbm		6
3G	between -100 dbm to -90 dbm	-100 dbm		4
3G	worse than -100 dbm	> -100 dbm		5
4G	better than -90 dbm	- 90 dbm		1
4G	between -100 dbm and -90 dbm	-100 dbm		2
4G	between -110 dbm and -100 dbm	-110 dbm		6
4G	between -115 dbm to -110 dbm	-115 dbm		3
4G	between -120 dbm to -115 dbm	-120 dbm		4
4G	worse than -120 dbm	> -120 dbm		5

2. The resolution of map data to be kept as 50m.
3. The projection be kept as WGS 84 EPSG 4326
4. Per Licensed Service Area, only one file in *.shp format to be submitted along with all supporting files.
5. The attribute table to have a column named "THRESHOLD" which shall contain the threshold values of legends.
6. The colour shall be assigned by TRAI uniformly for all the service providers and will be intimated to all the service providers.