

Information note to the Press (Press Release No. 71/2017)

For Immediate Release

Telecom Regulatory Authority of India

TRAI releases recommendations on “Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications”

New Delhi, 5th September, 2017– The Telecom Regulatory Authority of India (TRAI) today issued its recommendations on “**Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications**”.

2. TRAI received a reference from Department of Telecommunications (DoT) on 5th January, 2016. DoT sought the recommendations of TRAI on three aspects related to M2M communications:

- a) M2M Spectrum Requirements
- b) M2M Roaming Requirements
- c) Quality of Service in M2M Services

3. M2M is the basis for automated information exchange between machines and can impact various industry verticals like Smart City, Smart Grid, Smart Water, Smart Transportation, Smart Health etc. Government of India has recognized the potential of M2M and emphasized the same in the National Telecom Policy 2012.

4. The Authority on 18th October, 2016 issued a Consultation Paper (CP) on the subject for the comments of the stakeholders. Written comments on the CP were invited from the stakeholders by 12th January, 2017 and counter-comments by 19th January, 2017. In response, the Authority received 42 comments and 03 counter comments from stakeholders. The Open House Discussions (OHDs) were organised at Delhi on 07th April 2017 and subsequently at Mumbai on 26th May 2017.

5. After analyzing various issues involved and considering the comments of stakeholders, in-house analysis & research the Authority has finalised the recommendations. The salient features of the recommendations are:

I. Licensing and Spectrum related aspects:

- ♦ All access service providers' viz. CMTS, UASL, UL (AS) and UL holders using licensed access spectrum shall be allowed to provide M2M connectivity within the area of their existing authorizations. Also, all Basic Services licensees and ISP licensees shall be allowed to provide M2M connectivity, including on unlicensed band, within the area of their existing authorizations, barring M2M cellular services. DoT may suitably amend the license conditions in respective licenses.
- ♦ All UL (VNO) holders shall also accordingly be allowed to provide M2M connectivity as authorized in their existing authorizations. DoT may suitably amend the license condition of UL (VNO).



- ◆ Connectivity provider using LPWAN technologies operating in unlicensed spectrum should be covered under licensing through a new authorization under UL namely UL (M2M). Such licensees shall be allowed to bid for licensed spectrum to provide exclusively M2M services.
- ◆ UL (M2M) authorization shall comprise of three categories i.e. UL (M2M) Category-A-National area, UL (M2M) Category-B -Telecom Circle/Metro area, UL (M2M) Category -C- SSA/ District area.
- ◆ Amount payable in the form of Entry Fee, PBG, FBG for obtaining authorizations under UL (M2M) Category 'A' for National area, UL (M2M) Category 'B' for Telecom circle/ Metro area and UL (M2M) Category 'C' for SSA area, should be at par with the existing provisions in UL for ISP category.
- ◆ Government, through DoT, should identify critical services in M2M sector and these services should be mandated to be provided only by connectivity providers using licensed spectrum.
- ◆ Regulatory authorities whose sectors will get impacted by M2M communications like TRAI, Central Drug Standards Control Organization, National Highways Authority of India, Inland Waterways Authority of India, Central Electricity Regulatory Commission, etc. and Ministry of Law & Justice should also be members in M2M apex body formed by DoT.
- ◆ M2M Service Providers (MSPs) should register with DoT as M2M service provider. This registration will be exclusive for the MSP and not part of existing OSP registration.
- ◆ A National Trust Centre (NTC), under the aegis of TEC, should be created for the certification of M2M devices and applications (hardware and software).
- ◆ Spectrum allocation should be technology and service neutral. No separate spectrum band is to be allocated exclusively for M2M services.
- ◆ Requirement of additional licensed spectrum for access services to meet the projected influx of connected devices due to M2M communication will be revisited by the Authority after WRC-19.
- ◆ In order to facilitate smooth roll out of M2M services utilizing the license exempt spectrum, 1 MHz of spectrum at 868 MHz (867-868) and a chunk of 6 MHz of spectrum at 915-935 MHz is recommended to be delicensed. Delicensing the V-band (57-64 GHz) as recommended by the Authority on various occasions may be done on priority.



II. SIM and Roaming related aspects:

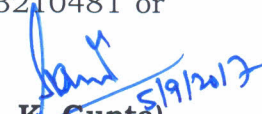
- ◆ Devices with pre-fitted embedded Universal Integrated Circuit Card (eUICC) should be allowed to be imported only if it has the ability to get reconfigured 'Over the air' (OTA) with local subscription. GSMA approved guidelines shall be followed for provisioning of new profile remotely with OTA mechanism.
- ◆ Devices fitted with eUICC shall be allowed in operation in roaming for maximum three years from the date of activation of roaming in the network of Indian TSP and mandatorily converted into Indian TSPs SIM within the stipulate period or on change of ownership of the device, whichever is earlier.
- ◆ International roaming in M2M shall be allowed under the well recognized framework of GSMA 'M2M Annex' to keep uniformity of the parameters and processes.
- ◆ In order to boost the M2M/IoT manufacturing in India, the government may consider feasibility of allowing extra-terrestrial usage of IMSI ranges with suitable framework on the basis of country specific bilateral agreements.

III. QoS, Security and Privacy related aspects:

- ◆ QoS is in the exclusive domain of TRAI. Therefore, once the M2M sector develops, the authority will put in place comprehensive regulations on QoS parameters in M2M communication, as per service requirements.
- ◆ At present stage of deployment of M2M devices and services, a duty cycle of 10% both at device level and network level would suffice to meet the requirements.
- ◆ On the issues related to data security and privacy in M2M, the Authority will issue comprehensive recommendations after due deliberation on the issues highlighted through consultation paper "Privacy, Security and ownership of Data in telecom sector" issued on 9th August, 2017.

6. The recommendations on **"Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications"** have been placed on TRAI's website // www.trai.gov.in/.

7. For any clarification/ information Shri S. T. Abbas, Advisor (Networks, Spectrum and Licensing), TRAI may be contacted at Tel. No. +91-11-23210481 or email at advmn@traigov.in


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