

Subject: Response to Consultation Paper on Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications

To,
Shri Sanjeev Banzal,
Advisor (Networks, Spectrum and Licensing),
TRAI

Sir,
Please find my response below on consultation paper

Q1. What should be the framework for introduction of M2M Service providers in the sector? Should it be through amendment in the existing licenses of access service/ISP license and/or Licensing authorization in the existing Unified License and UL (VNO) license or it should be kept under OSP Category registration? Please provide rationale to your response.

M2M services are largely getting covered now through IoT services and these services are getting enabled by innovative set of offerings. There are lot of start-ups which are provided solutions in this area along with telcos in India.

An important aspect to note here in that none of the players/companies so far have claimed to provide complete end-to-end solution and eco-system to become single point for customer who intend to offer IoT scenarios.

Most of these companies are in one or more than one areas within complete value chain. Therefore, creating specific license for M2M may not be needed looking at how IoT space is evolving.

While it is true that M2M is going to ride on spectrum driven technologies, however most of the players and companies in this space bank on communication part with telecom players. Many of them do partnership or signup contracts to provide the connectivity. Therefore, they are largely covered through existing license approach. The whole agenda for big players in telecom betting on 4G and 5G is to become the backbone of IOT wave and lead that part of value chain.

However, if a player still intent to venture in connectivity part of value chain, then MVNO regulation and license can be leveraged for the same, looking at business model of MVNO and question in this case.

Q2. In case a licensing framework for MSP is proposed, what should be the Entry Fee, Performance Bank Guarantee (if any) or Financial Bank Guarantee etc? Please provide detailed justification.

Licensing framework for MVNO as recommended by TRAI may be followed

Q3. Do you propose any other regulatory framework for M2M other than the options mentioned above? If yes, provide detailed input on your proposal.

No

Q4. In your opinion what should be the quantum of spectrum required to meet the M2M communications requirement, keeping a horizon of 10-15 years? Please justify your answer.

IoT services are fast moving to narrow band IoT technologies, since solutions at device /sensor end also require optimization.

As shared in consultation paper, 700 Mhz will be in demand, however quantum of spectrum will depend on degree of exponential growth in India.

Q5. Which spectrum bands are more suitable for M2M communication in India including those from the table 2.3 above? Which of these bands can be made delicensed?

Depends on growing maturity of M2M use cases and focus areas in India.

Q6. Can a portion of 10 MHz centre gap between uplink and down link of the 700 MHz band (FDD) be used for M2M communications as delicensed band for short range applications with some defined parameters? If so, what quantum? Justify your answer with technical feasibility, keeping in mind the interference issues.

No Response

**Q7. In your opinion should national roaming for M2M/IoT devices be free?
(a) If yes, what could be its possible implications?
(b) If no, what should be the ceiling tariffs for national roaming for M2M communication?**

There are going to possibility very less scenarios wherein M2M business case/model will be limited to same circle, therefore national roaming should be ideally free.

However, decision for national roaming should be left to market forces, since it will all depend on negotiations with operators and M2M services parties.

If we look at western countries, which are witnessing fast growth in IOT market, most of them does not have roaming as a concept including larger country like US.

Whole concept of national roaming in India anyways does not fit for India, but that is a separate topic.

Q8. In case of M2M devices, should;

(a) roaming on permanent basis be allowed for foreign SIM/eUICC; or

(b) Only domestic manufactured SIM/eUICC be allowed? and/or

(c) there be a timeline/lifecycle of foreign SIMs to be converted into Indian SIMs/eUICC?

(d) any other option is available?

Please explain implications and issues involved in all the above scenarios.

- a) Roaming on permanent basis can be allowed for foreign SIM/eUICC, however there has to be a timeline defined for completing KYC as per Indian regulation looking at security impact.
- b) There is no necessity to have only domestic manufactured SIMs/eUICC
- c) There should be a timeline for foreign SIMs to have KYC completed

Q9. In case permanent roaming of M2M devices having inbuilt foreign SIM is allowed, should the international roaming charges be defined by the Regulator or it should be left to the mutual agreement between the roaming partners?

International roaming charges should be left to mutual agreement between roaming partners, economies of scale will handle it based on market growth

Q10. What should be the International roaming policy for machines which can communicate in the M2M ecosystem? Provide detailed answer giving justifications.

Machines on international roaming are governed by existing set of roaming guidelines and same may be followed, for example they need to follow global identifier mechanism, KYC, numbering mechanism, etc

Q11. In order to provide operational and roaming flexibility to MSPs, would it be feasible to allocate separate MNCs to MSPs? What could be the pros and cons of such arrangement?

No Response

Q12. Will the existing measures taken for security of networks and data be adequate for security in M2M context too? Please suggest additional measures, if any, for security of networks and data for M2M communication.

Looking at existing strong data usage by subscribers and entities including that for financial transactions, existing security guidelines may be followed

Q13. (a) How should the M2M Service providers ensure protection of consumer interest and data privacy of the consumer? Can the issue be dealt in the framework of existing laws?

(b) If not, what changes are proposed in Information Technology Act, 2000 and relevant license conditions to protect the security and privacy of an individual?

Please comment with justification.

Looking at existing strong data usage by subscribers and entities including that for financial transactions, existing security guidelines may be followed

Q14. Is there a need to define different types of SLAs at point of interconnects at various layers of Heterogeneous Networks (HetNets)? What parameters must be considered for defining such SLAs? Please give your comments with justifications.

IoT/M2M are real time business services are require well defined SLAs at PoIs. However, these SLAs will be based on business model and mutually between players and M2M service providers

Q15. What should be the distributed optimal duty cycle to optimise the energy efficiency, end-to-end delay and transmission reliability in a M2M network?

No Response

Q16. Please give your comments on any related matter not covered in this consultation paper.

No Response

From:

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