

महानगर टेलीफोन निगम लिमिटेड

( भारत सरकार का उपक्रम)

MAHANAGAR TELEPHONE NIGAM LIMITED

( A Government Of India Enterprises)

निगम कार्यालय, CORPORATE OFFICE



MTNL/RA/TRAI-CP/M2M/2016-17

Dated 05.12.2016

To

Advisor (NSL),  
Telecom Regulatory Authority of India.  
MDS Bhawan  
JLN Marg  
New Delhi-110002

**(Kind attention: Shri Sanjeev Banzal)**

**Sub: TRAI Consultation paper dated 18.10.2016 on  
“Spectrum, Roaming and QoS related requirements in  
Machine-to-Machine (M2M) Communications”**

Dear Sir,

Kindly find enclosed herewith MTNL's response as Annexure-I on the consultation paper “Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications” dated 18.10.2016.

(R.K.Gupta)

DE(RA)

Encl: As above



**Annexure-I**

- 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.**

**Comment:**

The provisioning of M2M service is presently at a very nascent stage. However, considering the vast potential & expected proliferation of M2M communication / services market in near future, there will be need to avoid haphazard growing of M2M service providers who can make it more or less an unorganized sector.

Further, The ecosystem of M2M service is complex which includes device manufacturer, platform providers, connectivity, quality of service delivery, cyber security, use of open standard & protocols & Interoperability etc. Therefore new entity under OSP category registration may not be able to execute the entire responsibilities in smoother way.

Telecom operators can play a vital role in proliferation of M2M services in the country because of their existing omnipresence & robust telecommunication infrastructure already in place at every nook & corner of the country.

In view of the above, existing access license of telecom providers may be amended suitably so that faster and systematic growth of M2M services could be possible.

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- 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.**

**Comment:**

M2M is at nascent stage and putting more / additional entry fee etc. may discourage the incumbent TSPs in offering these services. Accordingly, in our opinion, there should be no entry fee, PBG / FBG etc **for the incumbent TSPs** holding Access service / ISP licenses.

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

**Comment:**

As M2M is at very nascent stage, therefore putting too much Regulatory compliance can hamper the innovation & growth of this industry. However, a light Regulation will promote orderly growth of this business.

- 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.**

**Comment:**

The quantum of spectrum required to meet the M2M communication at this stage can't be predicted as of now. However, services can be started by TSPs with their existing spectrum. It may be reviewed by TRAI as and when required.



But, if it is recommended by TRAI for separate spectrum band through open auction and for this service. Then, in such a circumstance, MTNL would like to request Govt. that whatever frequency band is specified for M2M deployment in the country, the interest of state run PSUs like MTNL may also be taken into consideration, so as not to let them down in a fiercely competitive telecom market. MTNL would like to request the Govt. that the desired bandwidth in preferred band may be allotted to MTNL in Delhi & Mumbai for M2M services free of cost / cost of spectrum to be borne by the Government.

- 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?**

**Comment:**

Globally, the trend is to use telecom network of TSP and/or free wireless bands for M2M communications. In line with the requirement, there may be a need to fine-tune the free / unlicensed spectrum bands. To promote system development in an unrestricted way, the deployment may not be restricted to any single band. Accordingly, along with the 2G/3G/LTE bands, other unlicensed free bands (e.g. 400 MHz, 865-869 MHz, 2.4 GHz, and 5.8 GHz etc) can also be used for M2M communication.

- 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.**

**Comment:**

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For optimum & efficient utilization of the 700 MHz band spectrum, we feel that around 5 MHz bandwidth of the centre gap of 10 MHz between uplink & downlink of this band may be safely used for M2M communication. However, before moving ahead, proper testing in this direction is required to ensure technical feasibility & avoiding any interference issues.

**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?**

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**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.**

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**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?**

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**Comment on Q7, Q8 & Q9 :** These aspects like commercials, roaming, tariff timeline etc are concerned, should be left on the TSPs/ M2M service providers on mutually agreed terms and conditions and not to be regulated by TRAI. This arrangement may be reviewed every three year or as and when required.

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

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**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?**

**Comment on Q10 & Q11:** As M2M service is under developing stage, therefore existing policy may be followed. Once the ecosystem of M2M service come into some mature stage, the policy in this regard can be reviewed.

**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.**

**Comment:**

It is felt that the existing security & encryption related regulation in licenses & IT Act 2000 governing current data services should be sufficient to deal with issues involved in M2M communication. However, considering

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involvement of various entities other than TSPs like sensor / device manufacturers, Gateway owners, MSPs etc., the existing provisions of the licenses applicable for TSP's for interception & monitoring of data by the LEAs shall also be applicable in case of other M2M entities.

**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.**

**Comment:**

Due to involvement of various entities in M2M communications, the existing laws of protection of consumer interest & data privacy as applicable in case of TSPs may not be fully effective. Accordingly, we feel that some additional provisions may be required in the IT act 2000, considering the overall aspect of M2M service provisioning / delivery.

**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.**

**Comment:**

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Presently, M2M business cases are in B2B segment and very nascent stage. So, at this stage fixing bench marks/ SLA is not advisable. Once, there are enough identified issues pertaining to quality of service , TRAI may come up SLA/ QoS Regulation as done in the case of Mobile Banking.

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

**Comment:** At this stage it may left to M2M business partners.

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

**Comment:** MTNL would like to bring to the notice of the Govt. that the state run PSUs like MTNL play a vital role in induction & large scale adoption of any new technology in the country, along with their social commitments / obligations. They always play a key role in avoiding cartelization of private TSPs in the sector & thus protect the interest of the Govt. & customers in large. MTNL can play a vital role in proliferation of M2M services in the country because of existing telecommunication infrastructure.

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