

File No. Z-18015/1/2017-eGov
Government of India
Ministry of Health & Family Welfare
(eHealth Section)

Nirman Bhawan, New Delhi
Dated 8th March, 2017

OFFICE MEMORANDUM

Subject: Request for comments on TRAI, Consultation Paper 'Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications' issued on 18th October, 2016.

The undersigned is directed to refer to TRAI's letter no. 103-3/2016-NSL-II dated 07th December, 2016 seeking comments of this Ministry on the abovementioned consultation paper and to say that the comments from Ministry of Health and Family welfare are enclosed herewith for your kind perusal please.

2. This issues with approval of Secretary(HFW) please.



(S. K. Pani)

Under Secretary to Gol
Ph No: 23061213

Enclosure: As above.

To

Shri Sanjeev Banzal,
Advisor (Networks Spectrum & Licensing),
Telecom Regulatory Authority of India (TRAI)
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Comments from MoHFW on Consultation Paper 'Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications'

M2M technology is going to play a significant role in effective and efficient management of healthcare in days to come. With emergence of eHealth in India, the focus on M2M technology would increasingly grow.

However, there is need to simultaneously ensure that various aspects related to quality of service (QoS), privacy, data security and associated parameters are adequately addressed. In this direction, the efforts being taken by TRAI are very important particularly for outlining quality of service parameters and setting standards accordingly.

MoHFW would like to highlight that security and privacy of health data being captured, transacted etc. through M2M technology need to be given proper focus in a coordinated way. The QoS categories and parameters such as security, criticality, error, etc. outlined in the consultation paper are relevant for health care through electronic means.

There are several questions presented in the document (Consultation Paper) referred by you. The questions are quite comprehensive. MoHFW's comments/suggestions on these questions having some bearing upon healthcare, mostly in terms of functional aspects (not technical aspects) are provided as below.

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.

MoHFW assesses the use of M2M Technologies in different areas of healthcare such as:

- Remote monitoring of patients in ICU, Aging population in home, citizens with Chronic Disease, expectant high risk pregnancy etc.
- Telecare in rural and areas with scarce resources.
- Remote Diagnostics
- Remote medication, reminders
- Health logistics management
- Security both physical and Infection in OT / ICU. Tele-visits to ICU, Post-operative areas are case scenarios
- Tele-epidemiology
- Tele-education, Tele-skill transfer towards development of health human resource

It is suggested that an enabling ecosystem (covering licensing, registration of service providers etc.) should be built for introduction of M2M Service providers in the sector. Various technical aspects associated with such an ecosystem should be addressed by the relevant government ministry/department(s).

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.

It is important that for an effective regulatory framework different relevant organizations of MoHFW should be appropriately included under the framework.

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

It is proposed that National eHealth Authority (NeHA) being set-up by MoHFW under an Act of Parliament should be the nodal regulatory body for all electronic health modes, modalities etc. including M2M technology service providers. NeHA would be enforcing body for the proposed legislation on Electronic Health Data Privacy & Security.

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.

Starting from basic internet to very high speed internet, Satcom, Mobile GSM 4G, Wi Max etc. would be required for adoption of M2M technologies in healthcare.

Q5. Which spectrum bands are more suitable for M2M communication in India? Which of these bands can be made delicensed?

-N. A. -

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.

-N. A. -

Q7. In your opinion should national roaming for M2M/IoT devices be free? (a) If yes, what could be its possible implications? 62 (b) If no, what should be the ceiling tariffs for national roaming for M2M communication?

Yes, the M2M/IoT national roaming should be free for healthcare as many medical/healthcare-related devices have life-saving features that require 24 x 7 monitoring to be effective. It should be as per policy to be developed for other applications in social sectors.

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.

Foreign SIM for healthcare-related products/devices, as feasible under the applicable technical framework & modalities, may be converted to domestic after a certain period counted from the date of arrival in India - this would ensure that those on tourism is not affected, however the long-term residents are governed by Indian laws and regulations. If the domestic SIM is insisted upon, the tourists will be unnecessarily inconvenienced since many devices may just be for health monitoring to ensure that wellness and preventive care is catered to.

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 charging rates policy may be similar to what is currently prevalent for mobile telephony.

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

-N. A. -

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?

-N. A. -

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.

-N. A. -

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? 63 (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.

The Electronic Health Care Data (Standardisation, Privacy and Security) Act that is currently being drafted by MoHFW has sufficient provisions to effectively address this issue. No separate provisions need be made for health care-specific M2M/IoT communications.

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.

It is may be as per policy developed for other sectors.

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?

-N. A. -

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

MoHFW adoption is related to eGovernance of health using M2M data management, health information sharing in secured environment, education and skill sharing captured from hospital environment. So, the applications are diverse and development will take time as the ministry deploy the national mission mode projects in eHealth.

MoHFW has notified standards for electronic health records which include standards for data exchange, format, storage etc. and guidelines for data security. The same may be referred by TRAI. The same may be seen at <http://www.mohfw.nic.in/showfile.php?lid=4138> .

MoHFW is also working on legislation for electronic health data privacy and security, which would include aspects like ownership of data, responsibility of data users, stipulated time interval for data sharing as and when demanded, security norms etc. the draft legislation would soon be placed in public domain. At present there is no legislation specifically catering to various aspects related to privacy and security of electronic health data.