



To,

Advisor (NSL),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg,
(Old Minto Road), New Delhi-02

(Kind attention: Sh. Sanjeev Banzal)

No: Regln/1-46/2016/ 2213

Dated: 29th Nov, 2016

Sir,

Sub:- Comments on "Spectrum, Roaming and QoS related requirements in Machine to Machine (M2M) Communications".

Kindly refer to your consultation paper released on dated 18th Oct, 2016 regarding Consultation Paper on "Spectrum, Roaming and QoS related requirements in Machine to Machine (M2M) Communications". In this context, kindly find herewith the BSNL comments on the above mentioned 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.

BSNL Reply: As far as regulatory framework of M2M is concerned, it is felt that M2M is the field of innovation. Too much regulatory compliance can stymie the growth of M2M business in the country which is still in very nascent stage. On the other side light regulation will promote the innovation as well as orderly growth of industry.

M2M is the complex ecosystem of Vertical specific Device Manufactures, platform providers, connectivity providers, App developers and system Integrators. It is obvious that it is not possible for a single entity to execute all responsibility hence building partner is the key for success of M2M. Telecom operators have might and expertise to operate complex system at very large scale. At this stage, it is more appropriate to build on this existing strength of Telcos rather than permitting new entities with unproven track record of handling such type of systems. Therefore, it is imperative that existing licence of Telco's may be amended suitably so that to enable them to conduct M2M business smoothly.

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.

BSNL Reply: Not Applicable in view of Q.1.

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

BSNL Reply: Not Applicable in view of Q.1.

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.

BSNL Reply: At present, M2M is in initial phase in India, it is not possible to predict the exact requirement of Spectrum. So, we can start with the existing spectrum allotted to TSP and same may be reviewed after 02 years.

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?

BSNL Reply: 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.

BSNL Reply: Yes, any ecosystem for 700 MHz unlicensed band does not exist today. It will be developing over a period of time.

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?

BSNL Reply: It should be left to the telcos/ TSPs as a business case, not to be regulated by TRAI.

Q8. In case of M2M devices, should;

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

BSNL Reply: Yes, it should be allowed and this is to be decided on case to case basis, it should be left to the mutual agreement between TSPs.

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

BSNL Reply: No

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

BSNL Reply: There should be no timeline.

(d) Any other option is available? Please explain implications and issues involved in all the above scenarios.

BSNL Reply: No comments.

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?

BSNL Reply: It should be left to the mutual agreement between the roaming partners.

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?

BSNL Reply: M2M scenario is emerging and it would be prudent that we stick with the existing international P2P roaming policy. The commercial to be charged are anyway in TSPs domain & can be decided based on volumes and overall size/ stake in the M2M project. This can be re-visited/ reviewed after 2 years.

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.

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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?

BSNL Reply: The M2M service is new and in developing stage, thus existing policy be followed which can be reviewed after 2 years.

(b) 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.

BSNL Reply: *No change is proposed at present.*

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.

BSNL Reply: *Presently most of M2M business cases are in B2B segment so it is more advisable to leave the SLA/QoS issue to M2M business partners. When there are enough cases pertaining to retail customers then this policy can be reviewed again and TRAI may come up with SLA/QoS regulations as done in case of Mobile Banking.*

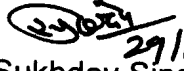
Q15. What should be the distributed optimal duty cycle to optimise the energy efficiency, end-to-end delay and transmission reliability in a M2M network?

BSNL Reply: *As explained in reply to Q:14, such issues at this stage may be left to M2M business partners.*

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

BSNL Reply: *No comments.*

Yours Sincerely


29/11/16
Sukhdev Singh
Jt. GM (RegIn-II)