1178/TRAI/ISPAI/17

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Subject: **ISPAI response to TRAI Consultation Paper on 'Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications'**

Dear Sir,

We congratulate the Authority to have come out with the consultation paper on the matter captioned above and sincere thanks for proving us the opportunity to submit our response on this matter.

We have enclosed our comprehensive response for your consideration. We believe that the Authority would consider our response in positive perspective and incorporate our concerns on the subject matter.

Looking forward for your favourable consideration.

Thanking you,

With Best Regards,
For Internet Service Providers Association of India

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Encl: As above

ISPAI response to TRAI Consultation Paper on 'Spectrum, Roaming and QoS related requirements in Machine-to-Machine (M2M) Communications'

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.

ISPAI Response:

We recommend that M2M/IoT communication services should be provided only by entitles holding a valid telecom licence under Section 4 of the Indian Telegraph Act viz UL-AS or UL-ISP licensees. We are not in favour of M2M communication services being provided under the OSP registration. We are also not in favour of any separate registration certificate.

In fact, the issue of providing M2M communication services was deliberated during the consultation paper on VNO. Thereafter, while recommending the entry of VNO in the Indian telecom market, TRAI had inter-alia stated the following in its recommendations:

> "*With the increasing deployment of Smart Grids, Smart Transportation, Smart Cars, Smart consumable durables, Machine–to-Machine (M2M) communication and Internet of Things (IoT) converged technologies are coming to occupy centre stage in peoples' lives. This will require that the machines or the equipment is embedded with a device at the manufacturing stage itself which has the capability of communicating with either other devices or a central controller through wireless or on IP platform. The present licensing framework does not have adequate provisions to facilitate these new developments. **With the introduction ofVNOs, a system integrator for such a network can acquire a VNO licence and get into an agreement with a TSP for such services.**"*

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.

ISPAI Response: All entities that intend to offer M2M communication services in India, should obtain a Unified License or a Unified License (VNO) and follow the rules related to entry fee, PBG, FBG, etc. as laid down by the government in the Unified License guidelines.

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

ISPAI Response:

As stated above, we recommend either a Unified License or Unified License (VNO) regime for providing M2M communication services in India. We do not recommend any other regulatory framework, such as registration certificate for M2M communication services.

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.

ISPAI Response:

M2M devices communicate using IP technology over wireless data networks of mobile services providers or over wifi or fixed line networks of ISPs. In general, M2M devices send or receive very small amounts of data and Cisco has forecasted global M2M traffic demand to be only about 6% of total data demand by 2020.
We believe the existing licensed spectrum is sufficient to meet the demand for M2M communication services.

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?

ISPAI Response:

In continuation of our response to Q4, we reiterate that M2M communication services should be offered by TSPs on existing licensed spectrum (using mobile technology) and on unlicensed spectrum by ISPs, to ensure a viable and sustainable M2M ecosystem.

We recommend new unlicensed bands be designated for proliferation of wifi that can also be used for M2M communication services.

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.

ISPAI Response: See Answer to Q5 above.

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?

ISPAI Response: Existing licensing arrangements are satisfactory.

Q8. In case of M2M devices, should;
(a) roaming on permanent basis be allowed for foreign SIM/eUICC;

ISPAI Response: Existing licensing regulations adequately address this issue.

Q8. In case of M2M devices, should;
      (b) Only domestic manufactured SIM/eUICC be allowed?

ISPAI Response:

Existing licensing regulations adequately address this issue

Q8. In case of M2M devices, should;
 (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.

ISPAI Response: Existing licensing regulations adequately address this issue.

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?

ISPAI Response: Existing licensing regulations adequately address this issue.

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

ISPAI Response: Existing licensing regulations adequately address this issue.

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?

ISPAI Response: Existing licensing regulations adequately address this issue.

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.

ISPAI Response:
We do not suggest any additional security measures for M2M communication services as the Indian telecom operators are already subjected to stringent security and data guidelines.

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.

ISPAI Response:

We believe M2M communication services should continue to be provided only by entities holding a licence under Section 4 of the Indian Telegraph Act.

We do not recommend any further changes to the existing licence agreement. Also, the storage of data related to Indian customers should be within the jurisdiction of India to protect the security of the personal data.

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.

ISPAI Response:

TRAI has already prescribed QoS norms for bearer services and the same should also apply to M2M communication services. The QoS/SLAs of M2M should be flexible, left to mutual agreement between customers and TSPs and based on the use case (instead of on bandwidth)

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?

ISPAI Response: N/A

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

ISPAI Response: N/A