



Submission on ‘Spectrum, Roaming and QoS related requirements’ in Machine-to-Machine [M2M] Communications’

1/19/2017

I. Introduction

At the outset IAMAI welcomes this Consultation Paper (“CP”) which aims to realize policy goals of Make in India, Digital India, Public Wi-Fi, Smart Grids and Smart Cities and to streamline existing policies and processes to have a uniform framework which will benefit the ecosystem.

The CP seeks industry feedback on three issues that are:

- a) *Quality of Service in M2M Services: Network and Applications*
- b) *M2M Roaming Requirements: Interoperability and standardisation*
- c) *M2M Spectrum Requirements: De-licensing of Specific Bands*

The CP is in conjunction to the Machine-to-Machine [M2M] Roadmap 2015 released by the Department of telecommunications [DOT]. The roadmap focused on communication aspects of M2M viz., interoperable standards, policies and regulations suited for Indian conditions across sectors in the country. In addition, Telecom Engineering Centre (TEC) has also come out with 9 technical reports on M2M detailing sector specific requirements/use cases to carry out gap analysis and future action plans with possible models of service delivery.

II. IAMAI Submission

M2M sector has a huge potential in India which can bring substantial social and economic benefits through increase in productivity and competitiveness, improvements in service delivery, optimal use of scarce resources as well as creation of new jobs. However, the digital sector, being relatively young, needs to be kept out of any form of stringent regulations and licensing norms.

In this context IAMAI has following suggestions:

1. **No Licensing Regime:** The regulator acknowledges that the industry is at a nascent stage, any form of licensing regime will be detrimental to the growth of the industry and to the ambitious Gol plans. Any form of stringent regulations without any clear objective or public policy justification would be detrimental to the M2M sector.

The preferred option for a way forward for a nascent industry would be soft touch regulations as opposed to licensing, since mandatory registration will bring onerous compliance burdens on the industry. It should be noted that mandating registration will also negatively impact the application providers that do not have any presence in India and solely offer their services over the application layer. Such a condition will be problematic given that many M2M service providers will be unable to adequately disclose the nature of services and their registration may fall outside the actual description disclosed. The inherent nature of the technology sector is to continuously evolve and roll out fresh applications/adaptations of services seeking to offer novel benefits to users.

IAMAI Suggests: *Licensing regime should not be imposed on M2M industry. Keeping registration optional or mandated only to a specific class of services may be appropriate.*

2. **Privacy and Security Issues:** Onerous security and Privacy protocols will negatively impact the M2M sector for the following reasons:

- In M2M communication, large interface with technical applications go beyond infrastructure layer to the application layer. This becomes critical for the application layer where most of the M2M interactions occur. As all such companies dealing with the application part are already under the purview of the IT Act and comply with various provisions of the IT Act and international treaties in maintaining records, logs etc, mandating any more compliance will be highly onerous. In fact many small scale businesses and start-ups will not have a business case to comply with the norms.
- There are several content providers that have only a part of their platform which support communication. Hence, by prescribing similar level of privacy and security compliance for all would discourage entrepreneurial growth and innovation in the technology and mobile sector and create a lot of confusion with onerous responsibilities being imposed on the entire Industry.

IAMAI Suggests: *Onerous security and Privacy protocols such as SIM procurement rules, local SIM registration etc would pose serious threat to the proliferation of the M2M industry. In absence of specific laws viz., Encryption and Privacy legislations, it is suggested that any such standards which are notified may be as per international standards to enable the benefits of standardisation.*

3. **Uniform Approach and Standardisation:** Here it is pertinent to note that different industries apply applications distinctly with different interests and commercial practices. Therefore each industry may require independent appraisal avoiding a uniform approach for all industry types. 'One size fits all' cannot be applicable to the M2M industry. For instance, industries such as the automotive and cargo industries may not require the same level of standards development as banking and taxation, application and content providers or a private industry and essential government services industry.

In case of standardization process for cyber security and interoperability, several products may not traditionally include any reference to cyber security per se. For instance, standards for a thermostat standard may include the electromagnetic parameters, the accuracy in terms of temperature, safety in terms of electrical shocks and energy rating but if it goes into a connected smart device, it also needs to have built-in cyber security.

IAMAI Suggests: *It is desirable to have a broad, flexible and adaptable framework that can respond appropriately to the changing needs of the ecosystem while still being contemporary and relevant by imbibing the lessons learnt globally and within India.*

4. **Roaming and Interoperability:** Flexible roaming arrangements/regulations and seamless interoperability are the keys to manage systems and to open markets to competitive solutions. The existence of standards' guarantees that components of different suppliers and technologies can interact seamlessly.

India needs unabated services by the M2MSPs in the domains of agriculture, health, water quality, natural disasters, transportation, security, automobile, supply chain management, smart cities, automated metering and monitoring of utilities, waste management, Oil & Gas etc.

For instance, M2M can be used by ships for the efficient management of the container loading and unloading, particularly pertinent in case of perishable goods. In cases such as this the container will carry a SIM which is foreign made, the server containing data on that SIM will be overseas, the M2M service provider will not be registered under DOT, and data will have to flow between different ports in different countries where the ship has to berth.

In such cases of M2M applications will be a non-starter in India and Indian customers cannot leverage the benefits of M2M technology if onerous roaming and interoperability regulations are implemented.

IAMAI Suggests: *Need for a policy framework in place to facilitate seamless operation of machines with flexible roaming arrangements. Regulations should not pose barriers in the way of smaller players entering global competition. In case of permanent roaming of M2M devices having inbuilt foreign SIMs, the international roaming charges should be left to the mutual agreement between the roaming partners.*

Know Your Customer (KYC) norms for M2M devices: At present the KYC verification is maintained and carried out within a well-developed regulatory system by the Telecom Licensee's as part of their license conditions. The need for ensuring the KYC verification is served well within such a framework and it is suggested that no additional obligations may be imposed on M2M providers. However, since the regulator is proposing de-licensing of several radio bands, these bands already contain within themselves identification protocols as per international standards. Since such bands are unlicensed, to impose KYC norms would be burdensome and result in discouraging innovation and benefits to end consumers.

IAMAI Suggestion: *KYC verification should be maintained by the Telecom licensee's as opposed to M2M providers.*

- 5. Spectrum management:** Spectrum management is an important issue for ensuring availability and capacity for M2M/IoT communications. The association appreciates that the TRAI CP urges to bring various spectrum bands which can be optimally used for M2M communication in unlicensed frequency range from the point of propagation characteristics and the ecosystem development. TRAI has also recommended for delicensing the V-band (57-64GHz). There are many bands viz., 60 GHz, 70GHz, 80GHz and E Bands etc which should be brought under unlicensed policy by the government by periodically re-evaluation of spectrum allocation to identify the underused or unused spectrum and reallocate it to ensure efficient use of spectrum in each market/circle. During the September-October 2016 the government's spectrum auctions fell short by 60% of spectrum being unsold. 700 MHz band remains unsold due to exorbitant prices.¹

¹ <http://timesofindia.indiatimes.com/business/india-business/60-spectrum-unsold-govt-mops-up-66k-cr-in-auction/articleshow/54725297.cms>



The other specific frequencies that need un-licensing are: 433-434 MHz, 902-928 MHz, 1880-1900 MHz, 2483-2500 MHz, and 5725-6400 MHz². These bands have become unlicensed in several countries where the interference concerns to licensed users, the predominant reason behind the limited allocation of unlicensed spectrum, have greatly diminished with the advent of facilitating technology.

IAMAI Suggests: *By remaining unutilised the spectrum is affecting evolution/adoption of applications. The unutilised spectrum, if released, will hasten connectivity in the country and help bridge the digital divide.*

² Center for Internet and Society India 2012, CIS