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| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY | **Document:** |
| **Meeting of the SATRC Working Group on Spectrum** | **SAPVII-SPEC1/OUT-03** |
| 11 – 12 June 2019, Tehran, Islamic Republic of Iran | 12 June 2019 |

SATRC Working on Spectrum

**QUESTIONNAIRE ON SPECTRUM CONSIDERATIONS FOR THE DEPLOYMENT OF IoT**

**Section 1: Elementary Part**

**1.1 Introduction**

Internet of Things (IoT) is defined as a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies.

The goal of the IoT is to enable things to be connected anytime, anyplace, with anything and anyone ideally using any path/network and any service. Analysts predict that new IoT products and services will grow exponentially in the next few years. IoT, as an industry, is still nascent. However, that hasn’t stopped many tech companies from developing IoT devices, software, and systems.

In many countries, especially technology-developed countries including some APT members, the enterprises, institutions of higher education, research centers and individual professionals have taken up the idea of IoT. There is a dramatic race to pick up and adopt IoT with the enthusiasm that was not seen in the past decade. Some countries provided a detailed plan for the implementation and deployment of IoT. These countries are integrating IoT in their day to day activities.

 **1.2 Objectives**

The objective of these questionnaires is to collect information on the current status and future plan of IoT in SATRC members.

**1.3 About Your Administration**

Name of Administration :

Name of Contact Person :

Telephone Number :

Postal Address :

Email Address :

**Section 2: Questionnaire Part**

**Question 1:**

Which types of IoT applications have been deployed in your country? (e.g. Smart city, Agriculture, Transportation, Environment, Healthcare, etc.)

**Question 2:**

Is there any specific regulatory framework that applies to IoT in your country? If yes, please attach

**Question 3:**

Based on ITU-T Recommendation Y.2060 Figure I.1, which organization issue license or permission to following roles for different IoT application types:

* Platform provider: …
* Network provider: …
* Device provider: …
* Application provider: …
* Application customer: …

**Question 4:**

Which type of telecom operator(s) is eligible to apply for IoT business?

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MNO | MVNO | FWA | PSTN | ISP | SAP | BO | ... | … | … | … |
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Use three last blanks if there is anymore (Note: For definition of abbreviations refer to the annex 1)

**Question 5:**

Do you impose license-fee and/or spectrum fee for IoT? If yes please describe (Note: license-fee is a single-pay amount that is not necessarily for spectrum utilization)

**Question 6:**

Describe spectrum requirement, candid frequency bands, radio license type and employed technologies for IoT in your country

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| --- | --- | --- | --- | --- | --- | --- |
| No. | Spectrum Requirement(MHz) | Candid Frequency Bands (MHz) | IoTTechnology (ies) | Licensed | Unlicensed | Re-farming requirement |
| Lower edge | Upper edge | Yes | No |
| 1 | … | … | … | … |  |  |  |  |
| … | … | … | … | … |  |  |  |  |

**Question 7:**

Do you have any mechanism/method for assignment of the spectrum mentioned in Q.6? (e.g. according to number of devices, coverage area, etc.)

**Question 8:**

What is/are technical specification(s)/standard(s) the IoT requires to comply with? (for example cellular /IoT, Sigfox, LoRa, ETSI, IEEE standards, and etc.)

**Question 9:**

If there are other useful regulations such as how to store or transfer IoT's data, privacy, security, SLA, cross-border, device identification, numbering, etc. please describe.

**Question 10:**

Are there any provisions in place for Type Approval of IoT devices? [If exist any document(s) please provide link on this answer]

**Question 11:**

Is your administration or any domestic company member of any international IoT alliance? (if yes please mention name, date of membership and alliance topic(s))

**Question 12:**

Please inform, if there is any researching activity and IoT manufacturer in your country.

**Annex 1- Abbreviations**

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| --- | --- |
| MNO | Mobile Network Operator |
| MVNO | Mobile Virtual Network Operator |
| FWA | Fixed Wireless Access |
| PSTN | Public Switching Telephone Network |
| ISP | Internet Service Provider |
| SAP | Satellite Access Provider |
| BO | Broadcast Operator |