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| logogreen | **ASIA-PACIFIC TELECOMMUNITY****The 15th Meeting of APT Wireless Group (AWG-15)**27 – 30 August 2013, Bangkok, Thailand | **Document:****AWG15/OUT-13**30 August 2013 |

WORKING GROUP TECHNOLOGY ASPECTS

**QUESTIONNAIRE
FOR NETWORK SYNCHRONIZATION TECHNOLOGIES
IN RADIO ACCESS NETWORKS FOR IMT**

**Background**

In the 15th meeting of APT Wireless Group, it was agreed to initiate studies on network synchronization technologies in radio access networks for IMT. The scope of the studies is as follows:

* To collect case studies of network synchronization achieved in existing cellular technologies in APT countries
* To share information on any existing regulatory conditions and guidelines related to network synchronization in APT countries
* To identify technical challenges and requirements of developing and deploying network synchronization in IMT networks
* To study technologies addressing the technical challenges and requirements
(Note: Unnecessary overlap with activities in external organization should be avoided)

This Questionnaire is designed to seek the relevant information on network synchronization from administrations, operators, vendors and others in APT.

It is encouraged every member to provide its response to the next AWG meeting (AWG-16) in March, 2014 and no later than the 17th meeting of AWG.

**Questions** (Note: Every member does not necessarily need to respond to all the questions below.)

**Question 1:** What cellular technologies are currently operated or planned to be operated that employ radio access network synchronization? (or what cellular technologies’ equipment are currently implemented or planned to be implemented that employ radio access network synchronization?)

**Answer**

|  |  |  |
| --- | --- | --- |
| Cellular technologies[[1]](#footnote-1) | Frequency bands | Status |
| Currently operated/implemented | Planned to be operated/implemented |
|  |  | [ ]  | [ ]  |
| …… |  | [ ]  | [ ]  |

**Question 2:** With regard to the technologies listed in Question 1, what types of network synchronization are employed?

**Answer**

|  |  |  |
| --- | --- | --- |
| Cellular technologies1 | Frequency bands | Types of network synchronization |
| Limited local area network | Intra-operator self-network synchronization | Inter-operator networks’ synchronization |
|  |  | [ ]  | [ ]  | [ ]  |
| …… |  | [ ]  | [ ]  | [ ]  |

**Question 3:** With regard to the technologies listed in Question 1, what kinds of synchronization solutions are employed?

**Answer**

|  |  |  |
| --- | --- | --- |
| Cellular technologies1 | Frequency bands | Synchronization |
| GPS | Ethernet | Others |
|  |  | [ ]  | [ ]  | [ ]  <please describe details here> |
| …… |  | [ ]  | [ ]  | [ ]  <please describe details here> |

**Question 4:** What are your main technical and operational concerns when deploying radio access network synchronizations?

**Answer**

* 1. Cost [ ]  <please describe details here>
	2. Precision of synchronization [ ]  <please describe details here>
	3. Deployment scenarios [ ]  <please describe details here>
	4. Other concerns: [ ]  <please describe details here>

**Question 5:** What are the levels of synchronization demands that you considered the most important?

**Answer**

1. Limited local area network [ ]  <please describe details here>
2. Intra-operator self-network synchronization [ ]  <please describe details here>
3. Inter-operator networks’ synchronization [ ]  <please describe details here>
4. Others [ ]  <please describe details here>

**Question 6:** What are the requirements of synchronization solutions that you considered the most important?

**Answer**

1. Easy to deploy [ ]  <please describe details here>
2. High precision [ ]  <please describe details here>
3. Specific scenarios [ ]  <please describe details here>
4. Others [ ]  <please describe details here>

**Question 7:** Are there any existing regulatory conditions and guidelines related to network synchronization in your country?

**Answer**

**Question 8:** What is your expectation or suggestions for AWG’s studies on network synchronization technologies in radio access networks for IMT?

**Answer**

**Identification of your organization**

Name of the organization : <please type your answer here>

Name of contact person : <please type your answer here>

Email Address : <please type your answer here>

My organization is:

 Regulator [ ]

 Operator [ ]

 Vender [ ]

 Other [ ]  <please describe your details here>

\_\_\_\_\_\_\_\_\_\_\_

1. Please describe the cellular technologies such as, GSM, CDMA, WCDMA, HSPA, HSPA+, DC-HSPA, LTE(FDD), LTE(TDD), CDMA2000, EV-DO, WiMAX, etc. [↑](#footnote-ref-1)