|  |  |  |
| --- | --- | --- |
| logogreen | **ASIA-PACIFIC TELECOMMUNITY**  **The 15th Meeting of APT Wireless Group (AWG-15)**  27 – 30 August 2013, Bangkok, Thailand | **Document:**  **AWG15/OUT-14**  30 June 2013 |

WORKING GROUP TECHNOLOGY ASPECTS

**questionNaire oN road sensor network**

1. **Background**

At the AWG-15 meeting, it was agreed to survey the usage of road sensor network in Asia-Pacific   
region.

RSN (Road Sensor Network) means a specific type of wireless sensor network which is installed at the road for ITS applications. Road sensors may be loop detector, magnetic sensors, radar and   
CCTV camera. These are used for vehicle motion detection, traffic status monitoring and weather   
conditions, and so on.

Loop detectors are currently used and reliable technology for vehicle detection, which has high cost in maintenance. However, magnetic sensor network will be a new technology for vehicle detection,  
which has lower cost in installation and maintenance. And CCTV camera is currently used   
technology for road situation monitoring, vehicle plate number detection, which has a lower   
performance in bad weather condition. Radar is a reliable technology for vehicle speed detection   
and object ranging in bad weather condition. Thus, sensor fusion of road radar and CCTV will   
provide more accurate and reliable technology. Concept of RSN is shown in Fig. 1.

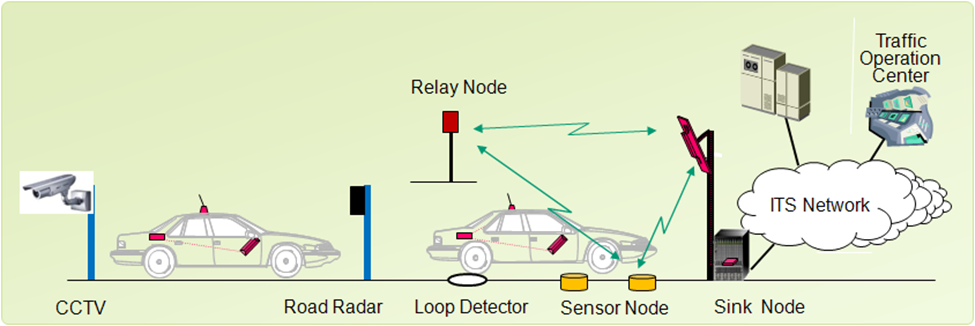


Fig. 1 Concept of RSN

Road radars and magnetic sensor network are related to radio spectrum and standardization.   
However, CCTV camera is not related to that. The attachment of this questionnaire shows one   
example of Road Sensor Network (RSN) Technology.

1. **Purpose of Survey**

This survey is to collect information of current utilization and future plan on road radar and   
magnetic sensor network in APT countries. The result of this survey will be used to develop a   
report of utilization and future plan on RSN in APT countries.

1. **Timetable**

|  |  |  |
| --- | --- | --- |
| **Meeting** | **Date** | **Work to be Completed** |
| AWG-16 | March 2014 | * Responses to questionnaire and preparation of draft Report. |
| AWG-17 | September  2014 | * Collect additional responses and finalize the Report * Consideration of input contribution for ITU-R SG5 WP5A |

Attachment: Road Sensor Network (RSN) Technology in Korea



**Questions**

**Question 1:** What frequency band(s) is/are used for road sensor network in your country as of   
2013 ?

**Question 2:** What frequency bands are allocated for road sensor network technology on your   
frequency allocation table in your country?

**Question 3:** Which technologies and/or standards is/are being used in the frequency band(s)   
mentioned in Question 1? (For example, such as ZigBee)

**Question 4:** If above question 1 and 2 were answered, would you provide the summary   
of technologies and/or standards used in the frequency band(s) mentioned in Question 1 and 2?

**Question 5:** If above question 1, 2 and 3 were answered, would you provide the summarized   
current status of application deployment used in the frequency band(s) mentioned in Question 1   
and 2? (For example, parking management system, road condition detection system)

**Answers to Questions 1, 2, 3, 4 and 5:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Frequency Band(MHz)**  **(Q1, Q2)** | **Technology/**  **Standard**  **(Q3, Q4)** | **Application**  **(Q5)** | **Deployment or plan**  **Year(Q5)** | **Other**  **Comment** |
|  |  |  |  |  |
|  |  |  |  |  |

**Question 6:** In addition to the answers above, would you provide the future plan for the designation of ITS frequency band(s)?

**Answer to Question 6:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Frequency Band(MHz)** | **Technology/**  **Standard** | **Service** | **Deployment or plan**  **Year** | **Other**  **Comment** |
|  |  |  |  |  |

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