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Thailand

PRELIMINARY VIEW ON WRC-19 AGENDA ITEM 1.11, 1.12 AND 1.15

Agenda Item 1.11:

"to take necessary actions, as appropriate, to facilitate global or regional harmonized frequency bands to support railway radiocommunication systems between train and trackside within existing mobile service allocations, in accordance with Resolution 236 (WRC-15)"

Background

The evolving radiocommunication technologies facilitate the railway transportation, which contributes to global economic and social development, especially for developing countries. As one of the core infrastructures, railway radiocommunication systems between train and trackside (RSTT) are vital to provide improved railway traffic control, passenger safety and improved security for train operations.

With the development of international railway transportation, cross-border railway transportation are of increasing great importance. At present, RSTT vary in different countries, which lead to high operation costs for cross-border railway transportation. International standards and harmonized spectrum would facilitate improved interoperability of RSTT, reducing the railway infrastructure investment and providing for economies of scale.

Resolution 236 (WRC-15) invites the WRC-19, based on the results of ITU-R studies, to take necessary actions, as appropriate, to facilitate global or regional harmonized frequency bands, to the extent possible, for the implementation of railway radiocommunication systems between train and trackside, within existing mobile-service allocations.

Preliminary Views

- Thailand supports studies towards global or regional harmonized frequency bands to support Railway Radiocommunication Systems between Train and Trackside (RSTT) within existing mobile service allocations, in accordance with Resolution 236 (WRC-15). Harmonized spectrum would facilitate efficient and safe cross-border railway transportation, reducing the railway infrastructure investment and providing for economies of scale.
- Thailand is considering frequency bands 885-890 MHz/930-935 MHz to be included in global or regional harmonized frequency bands to support RSTT within existing mobile service allocations. The implementation of harmonized frequency bands for RSTT should not impose additional constraints on any application of the primary services to which these frequency bands are already allocated**.**

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Agenda Item 1.12:

"to consider possible global or regional harmonized frequency bands, to the maximum extent possible, for the implementation of evolving Intelligent Transport Systems (ITS) under existing mobile-service allocations, in accordance with Resolution 237 (WRC-15)"

Background

Since 1995, research and development activities have been conducted in info-communication systems as core technologies of ITS. ITS, including ETC (Electronic Toll Collection) have been globally deployed. Evolving ITS, including vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I) communications, vehicle-to-network (V2N) and vehicle-to-pedestrian (V2P) have been regionally deployed to assist safe driving. Communicating with moving vehicles is one of the typical use cases for radiocommunication, and a variety of ITS applications greatly depend on functionality of radiocommunication. Radiocommunication technology is essential to the next generation of ITS applications, especially to assist safe driving and potentially supports automated driving, etc.

Evolving ITS also becomes important in resolving road traffic problems such as congestion and accidents. To resolve such road safety and efficiency related matters, the ITS systems with vehicle-to-everything communication (e.g. WAVE, ETSI ITS-G5, LTE based V2X) are studied in ITU-R.

Recognizing that harmonized spectrum and international standards would facilitate deployment of ITS radiocommunication, agenda item 1.12 was approved by WRC-15 to study the possible global or regional harmonized frequency bands for the implementation of evolving ITS under existing mobile-service allocations. The mobile service bands being used by the evolving ITS may also be utilized by other applications and services and some of the frequency bands are also being considered under other agenda items.

Preliminary Views

- Thailand supports ITU-R studies under Resolution 237 (WRC-15) toward possible harmonization of frequency bands in existing mobile-service allocations for the implementation of evolving Intelligent Transport Systems (ITS).
- Thailand is of the view that the implementation of harmonized frequency bands for ITS should not impose additional constraints on any application of the primary services to which these frequency bands are already allocated.
- Thailand is of the view that ITS systems, including those used for safety related applications, should be designed and deployed in such a way to ensure they can operate facing the potential interference generated by Fixed Satellite Service (FSS) transmitting earth stations in the band 5 850-5 925 MHz.

Agenda Item 1.15:

"to consider identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450 GHz, in accordance with Resolution 767 (WRC-15);"

Resolution 767 (WRC-15) – Studies towards an identification for use by administrations for land-mobile and fixed services applications operating in the frequency range 275 450 GHz

Background

ITU-R Working Parties are undertaking studies to identify the frequency bands to support the use of land-mobile and fixed services operating in the frequency range 275-450 GHz.

The frequency range above 275 GHz is currently not allocated to any service in Article 5 of the Radio Regulations. However, a number of frequency bands in the range between 275 GHz and 450 GHz are already identified for the uses of passive applications such as radio astronomy, earth exploration satellite and space research services as showed in RR No. 5.565. Such identification does not preclude the use of active services in 275-450 GHz as long as the use of existing passive services are protected from interference, until a proper allocation is established.

The condition allows opportunities to use the spectrum in the frequency range 275-450 GHz for land-mobile and fixed services applications such as high-speed wireless links and close proximity wireless connections. The studies carried by ITU-R would lead to a practicable method for spectrum sharing between the passive and active services and the possible harmonization of frequency bands for services in 275-450 GHz.

Preliminary View

Thailand supports ITU-R studies to identify frequency bands for the land-mobile and fixed services operating in the frequency range 275-450 GHz given the condition that the use of existing EESS (passive) and RAS applications shall be protected as identified in RR No. 5.565.

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