



Thailand

**PROPOSAL FOR PRELIMINARY APT COMMON PROPOSALS ON WRC-19  
AGENDA ITEM 9 ISSUE 9.1.6 AND 9.1.7**

**Agenda Item 9.1, Issue 9.1.6:**

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC-15;

9.1.6 Issue 1) in the annex to Resolution 958 (WRC-15)

*Urgent studies required in preparation for the 2019 World Radiocommunication Conference:*

1) *Studies concerning Wireless Power Transmission (WPT) for electric vehicles:*

a) *to assess the impact of WPT for electric vehicles on radiocommunication services;*

b) *to study suitable harmonized frequency ranges which would minimize the impact on radiocommunication services from WPT for electrical vehicles.*

*These studies should take into account that the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the Society of Automotive Engineers (SAE) are in the process of approving standards intended for global and regional harmonization of WPT technologies for electric vehicles.*

**1. Background**

Wireless power transmission (WPT) technologies are being developed worldwide to support many applications and WPT for electric vehicles (WPT-EV) is one of the promising applications. However, since the WPT-EV requires relatively high power, it should be developed not to cause harmful interference to radiocommunication services.

Resolution **958 (WRC-15)** requested the ITU-R to study the impact of WPT-EV on radiocommunications and suitable harmonized frequency ranges. The CPM19-1 identified the studies on WPT-EV as Issue 9.1.6 under Agenda Item 9.1.

Report ITU-R SM.2303-2 ‘Wireless power transmission using technologies other than radio frequency beam’ contains various results of technical studies on the impact of WPT, including WPT-EV, on radiocommunication services.

The work on the preliminary draft revision of Recommendation ITU-R SM.2110-0 “Frequency ranges for operation of non-beam wireless power transmission systems” which indicates harmonized frequency ranges are expected to be completed in June 2019.

As a responsible group for Issue 9.1.6, WP 1B submitted the draft CPM report in June 2018. The draft CPM report indicates frequency ranges, e.g. 19-25 kHz, 55-5X kHz, 6Y-65 kHz, and 79-90 kHz for WPT-EV. The values of X and Y will be determined in May/June block meeting of Study Group 1.

The draft CPM report and studies thereafter show the following:

The studies indicate that the operation of WPT-EV in the 19-25 kHz, 55-5X kHz, 6Y-65 kHz, and 79-90 kHz bands is compatible with existing radiocommunication services operating at other frequencies, provided that the WPT-EV unwanted emissions are tightly controlled. The exact limits and mitigation techniques, as well as potential other matters, still need to be defined through further studies.

Methodology and guidance to administrations are/will be included in several ITU-R documents.

Consequently, there is no need for activity related to WRC-19 to amend the RR.

The ITU-R will need to continue to closely collaborate with SDOs. This is to ensure that appropriate frequency ranges and technical limits are incorporated into standards to protect radiocommunication services.

## **2. Views and Proposals**

Thailand agrees with the view expressed by APT which was reached at APG19-4.

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### **Agenda Item 9.1, Issue 9.1.7:**

*“Issue 2) in the Annex to Resolution 958 (WRC-15) Studies to examine:*

*a) whether there is a need for possible additional measures in order to limit uplink transmissions of terminals to those authorized terminals in accordance with No. 18.1;*

*b) the possible methods that will assist administrations in managing the unauthorized operation of earth station terminals deployed within its territory, as a tool to guide their national spectrum management programme, in accordance with Resolution ITU-R 64 (RA 15).”*

### **1. Background**

The issue under study is uplink transmissions from such satellite terminals not adhering to certain international regulations or national service rules: i.e. an earth station operating in the territory of a country without any authorization obtained from that country.

While the 2015 ITU Radiocommunication Assembly (RA-15) addressed this matter through the establishment of Resolution ITU-R 64 *Guidelines for the management of unauthorized operation of earth station terminals*, WRC-15 subsequently included further studies under Issue 2 Annexed to Resolution 958 (WRC-15).

The Annex to Resolution 958 (WRC-15) calls for ITU-R studies to assess the need for additional measures to limit uplinks of unauthorized earth stations and to examine the possible methods to assist administrations to manage the issues of unauthorized earth stations deployed within its territory. ITU-R Working Party 1B has collected necessary information through a questionnaire for the studies and has developed possible options to resolve the agenda item.

As per current draft CPM report under this agenda item, there are two methods to satisfy issue 2a as follows:

- a. Option 1: no change to the Radio Regulations as current measures are sufficient
- b. Option 2: develop a new WRC Resolution to assist administrations with the application of RR No. 18.1.

Meanwhile, there is only one method to satisfy issue 2b under this agenda item which is to provide necessary guidelines on satellite monitoring capabilities, along with possible revision and/or further development of ITU-R reports or handbooks to assist administrations with managing unauthorized operation of earth station terminals deployed within their territory as a tool to guide their national spectrum management.

## **2. Views and Proposals**

Thailand is of the view that international regulatory measures stated in the RR Article 18 are sufficient for addressing the issue of unauthorized earth station in fixed satellite service and therefore Thailand supports Option 1 – NOC to the RR for issue 2a.

Nevertheless, Thailand supports the development of ITU-R reports or handbooks to assist administrations with managing unauthorized operation of earth station terminals deployed within their territory and therefore Thailand supports the only option for Issue 2b.

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