QUESTION ITU-R 263/5

**Studies related to the further development of RSTT**

(2022)

The ITU Radiocommunication Assembly,

*considering*

*a)* that railway transportation systems are growing and evolving;

*b)* that railway radiocommunications systems between train and trackside (RSTT) are vital to provide improved railway traffic control, passenger safety, and improved security for train operations;

*c)* that many administrations wish to facilitate RSTT interoperability, for both national and cross-border operations;

*d)* that some national and international railway organizations and standards bodies have begun investigating new technologies for railway radiocommunication systems;

*e)* that there is a need to integrate different technologies in order to facilitate various functions, for instance dispatching commands, operating control and data transmission, into railway train and trackside systems to also meet the needs of a high-speed railway environment;

*f)* that continuing development of new technologies may be able to serve, support or supplement RSTT;

*g)* that administrations may have different requirements for railway operations depending on their national needs, spectrum requirements, policy objectives, and operating environments;

*h)* that cooperation between administrations and railway organizations will facilitate greater levels of spectrum harmonization;

*i)* that usage of harmonized frequency bands will enable administrations to benefit from harmonization while continuing to meet national planning requirements;

*j)*  that international standards and harmonized frequency spectrum would facilitate worldwide deployment of RSTT and provide for economies of scale in railway transportation;

*k)* thatthere is a continuing need for development of regionally harmonized frequency arrangements for the purposes of implementing RSTT;

*l)* that the frequency bands to be harmonized are allocated to a variety of services in accordance with the relevant provisions of the Radio Regulations, especially to the mobile service on primary basis,

*noting*

*a)* the continued need to carry out studies to facilitate spectrum harmonization for RSTT;

*b)* the already existing results of studies on RSTT in ITU‑R Reports:

 Report [ITU-R M.2418](https://www.itu.int/pub/R-REP-M.2418) – Description of Railway Radiocommunication Systems between Train and Trackside;

 Report [ITU-R M.2442](https://www.itu.int/pub/R-REP-M.2442) – Current and future usage of railway radiocommunication systems between train and trackside (RSTT),

*recognizing*

*a)* that Resolution **240 (WRC-19)** invites ITU-R to continue development of an ITU-R Recommendation to facilitate the spectrum harmonization of current and evolving RSTT in a timely manner and to further develop and update ITU-R Recommendations/Reports concerning the technical and operational implementation of RSTT, as appropriate;

*b)* that work on draft new Recommendation ITU-R M.[RSTT\_FRQ] was not concluded in the study cycle 2019-2023,

*decides* that the following Questions should be studied

1 what are the current and future technologies to maximize efficient and flexible use of spectrum to be used by RSTT?

2 what are the capabilities of the applications of the four RSTT categories (Train radio, Train positioning information, Train remote and Train surveillance) in specific frequency bands?

3 what are the possible solutions and implementation for global/regional harmonization of frequency bands for RSTT focused on bands already allocated to the Mobile Service on a primary basis?

*further decides*

1 that the results of the above studies should be included in one or more Recommendation(s) and/or Report(s);

2 that the above studies should be completed by 2027.

Category: S2