

Trends of Studies on International Harmonization of Frequency Usages for Railway Radiocommunication Systems in The ITU-R and Its Possible Impact on The Japanese Railway Systems

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Various radio communication systems such as train radios, cellular phones, Wireless LAN, etc. are carrying voices, pictures, movies, and data by using radio waves. Frequency usages of these radio communication systems are defined in the “Radio Regulations” published by the International Telecommunication Union Radiocommunication Sector (ITU-R). Recently, various radio communication techniques to support safe and stable train operation have been widely introduced into railway systems in the world, and there is a growing need for an international harmonization of frequency usages in railway systems to realize smooth inter-operability and to promote international trade. The ITU-R has already started studies on this issue under the decision of World Radiocommunication Conference held in 2015. This review describes the outline of ITU-R, the current situation of studies and discussions by the ITU-R, and the possible impact of international harmonization of frequency usages on the Japanese railway systems.