Analysis on Frequency Arrangement for the 600 MHz Band

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Abstract— The 470–694 MHz is a harmonized band used to provide terrestrial television broadcasting services in ITU Region 1 for many decades. At the same time, there is a need to continually take advantage of technological developments in order to increase the efficient use of the spectrum and facilitate spectrum access. The frequencies below 1 GHz are highly important for the coverage dependent services, e.g., broadcasting service, mobile service due to the favorable propagation characteristics of radio waves in this frequency range. In this paper authors analyse options of the mobile service possible implementation in part of the 470–694 MHz band, i.e., in the 600 MHz frequency band. In order to make the best possible use of this frequency band for mobile service systems (e.g., 5G, 6G), a frequency arrangement is to be prepared utilizing the available spectrum in the optimal way, thus also minimizing a possible interference between existing radiocommunication services.