**3GPP TSG-RAN WG4 Meeting #104-e R4-221xxxx**

**Electronic Meeting, 15 ‒ 26 Aug, 2022**

**Title:** WF on Coexisting studies between IMT service around DTT spectrum

**Agenda Item:** 12.4.4

**Source:** ZTE

**Document for:** Approval

## Topic # 1: Coexistence studies between IMT service and DTT spectrum

**Status summary:**

Based on the companies’ comments as far and agreement achieved in thread#128, coexistence study between IMT service and DTT should be conducted in Rel-18 to identify the DTT BS ACLR requirement and DTT UE ACS requirements. The coexistence case and simulation assumption should be discussed in the thread#128.

ZTE made the following proposals:

* For existing IMT-BS coexisting with DTT BS, it’s proposed to follow the requirement in TS 36.104 for the protection of DTT.
* For DTT coexisting with legacy E-UTRA BS, it’s proposed to follow the regulatory requirement to show its compliance.

Rohde & Schwarz,Qualcomm support the above proposals and Huawei tend to agree with ZTE, but clarified that more studies about current regulatory requirements are welcome in case working group miss something.

Nokia clarified that 5G broadcast BS fulfills the DTT emission requirements, there is no need for further co-existence study between 5G broadcast and IMT.

Nokia and Ericsson also highlighted that coexistence study between DTT and IMT-service is needed since there is no such kind of coexistence study before which was also agreed in the main session, under the e-mail thread#128.

**Tentative Agreements:**

* + For the existing IMT-BS coexistence with 5G broadcast BS or DTT BS, it should also follow the regulatory requirements defined at least.

Note: the protection of DTT service has been defined in sub-clause 6.6.3.3 and Annex G.1 of TS36.104; the protection of DTT service is also defined in the sub-clause 6.6.4.2.5.2 and 9.7.4.2.1.1 of TS38.104.

* + For 5G broadcast BS coexisting with legacy IMT-BS, it should follow the regulatory requirements at least;
	+ For coexistence study between 5G based broadcast and IMT-service, this should be mainly targeted to define the BS ACLR and UE ACS requirements of 5G broadcast service.
	+ The following regulatory requirement should be taken into account for coexistence between IMT service and DTT spectrum
	[1] TS 36.104
	[2] In ITU Region 1 operation of transmitters of the broadcasting service are governed by the Technical Annexes of the GE06 Agreement and ETSI specification ETSI EN 302 296.
	[3] In ITU Region 2, the relevant documents are offered by corresponding national regulators such as FCC in the US and Anatel in Brazil
	Title 47 CFR 73.622, Digital television table of allotments, FCC, United States
	ABNT 15601, NORMA BRASILEÑA, Televisión digital terrestre — Sistema de transmisión ISDB-Tb, Anatel, Brazil
	[4] In ITU Region 3, national regulation is applied in coordination and negotiation between affected administrations, such as China.
	GB20600-2006 [8], Framing structure, channel coding and modulation for digital television terrestrial broadcasting system, National Radio and Television Standardization Technical Committee, People’s Republic of China
	[5] ITU-R BT.2033 Planning criteria, including protection ratios, for second generation of digital terrestrial television broadcasting systems in the VHF/UHF bands
	[6] ITU-R BT.2215-7 Measurements of protection ratios and overload thresholds for broadcast TV receivers