**3GPP TSG-RAN WG4 Meeting #102-e *R4-2205140***

Electronic meeting, Feb 21st – March 3rd , 2022

**Source:** UIC

**Title:** TP 1900MHz RMR band – conclusion

**Agenda item:** 9.5.1

**Document for:** Approval

# Introduction

The provision of the RMR1900 spectrum for 5G NR was started in the RAN#91 meeting through the corresponding WID approval.

## ECC RMR

# Discussion

In the meantime, the necessary subject areas 5G NR system, UE RF and BS RF have been developed in compliance with the regulatory requirements of ECC Decision (20)02 [1].

**Observation 1:** **The necessary work for the provision of the RMR1900 band using 5G NR can be completed after RAN4#102-e meeting.**

# Conclusion

The following proposal is made :

**Proposal 1:** **The conclusion clause provides the necessary outline of the work and the recommendation to transfer the findings to the corresponding normative technical specifications.**

# References

1. ECC Decision(20)02, Harmonised use of the paired frequency bands 874.4-880.0 MHz and 919.4-925.0 MHz and of the unpaired frequency band 1900-1910 MHz for Railway Mobile Radio (RMR), 20 November 2020

# Annex TP to introduce maximum gain

#### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*1st Change\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

10 Conclusion

The study dealt with how the 1900-1910MHz spectrum block (RMR1900) can be used for rail communication using 5G NR applicable in Europe. The subject-areas 5G NR system, BS RF and UE RF were examined in detail.

General: The focus was on the use of RMR1900 under uncoordinated conditions, assuming that RMR BS operates independently of other operators e.g. MFCN. Co-location with other operators and resulting coordination is subject to national regulation and will be not further detailed by 3GPP RAN4.

System Parameter: The RMR1900 spectrum block can be used by either a 10MHz CBW or a 5MHz CBW. The corresponding system parameters are to be transferred to 3GPP TS 38.101-1 [2] and 3GPP TS 38.104 [4].

BS RF: The ECC Decision (20)02 [1], i.e. EIRP limits were analysed accordingly and the necessary conclusions for an uncoordinated operational approach were derived. These include the BS rated output power using corresponding assumptions, the resulting emission values of the transmitter and the specifications of the receiver. The agreed parameters are to be transferred to 3GPP TS 38.104 [4]. Furthermore, the coexistence with other 3GPP radio technologies has been included. These are to be captured in the corresponding normative 3GPP technical specifications.

UE RF: The ECC Decision (20)02 [1], i.e. EIRP limits were analysed accordingly, and the necessary conclusions were derived for the use of Power Class 3 (23dBm). The agreed parameters in the present TR are to be transferred to 3GPP TS 38.101-1 [2].

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