

RWS-210431



Infotainment

Volkswagen AG

Input to 3GPP Rel-18 WS

LTE/NR-V2X sidelink co-channel coexistence

Agenda item 4.2: Non-eMBB-driven Functional Evolution

LTE/NR-V2X sidelink co-channel coexistence

Motivation:

NR-V2X has not been designed to coexist with LTE-V2X (RP-181480 / RP-200129).

The available ITS frequency spectrum for C-V2X direct communication is small. In particular in the US, the spectrum in the 5.9GHz band has been reduced to 30MHz.

The current assumption is that this small spectrum is to be shared by LTE-V2X and NR-V2X and that in order to facilitate future use cases as e.g. defined in 22.186 a co-channel operation of both sidelink RATs becomes necessary.

LTE/NR-V2X sidelink co-channel coexistence

Proposed Rel-18 work:

In order to facilitate use cases which build upon LTE-V2X and NR-V2X, mechanisms to provide a concurrent co-channel sidelink operation of LTE-V2X and NR-V2X should be introduced.

Implication to existing NR sidelink releases:

To account for the reduced ITS spectrum for C-V2X direct communication it is proposed to revise earlier assumptions and to introduce co-channel coexistence mechanisms also to earlier NR sidelink releases.