3GPP TSG RAN WG1 #104-e Meeting R1-2102045

e-Meeting, January 25th – February 5th, 2021

Title: [Draft] LS on maximum data rate for NR sidelink

Release: Rel-16

Work Item: 5G\_V2X\_NRSL-Core

Source: RAN1

To: RAN2

Cc:

**Contact Person:**

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Attachments: -

**1. Overall Description:**

In RAN1#104-e, RAN1 reached the agreements for the overhead values in the SL maximum data rate for NR sidelink defined in TS38.306.

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| Agreements: * The following value, OH, are used for the calculation of SL max data rate.
	+ 0.25 for FR2 in SL

Agreements:* The following value, OH, are used for the calculation of SL max data rate.
	+ 0.217 for FR1 in SL
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From the above agreements and from identification of an IE naming error, RAN1 suggest the following changes.

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| 4.1.5 Supported max data rate for SLFor NR sidelink, the approximate data rate is computed as follows.$$data rate (in Mbps)=10^{-6}⋅v\_{Layers}⋅Q\_{m}⋅f⋅R\_{max}⋅\frac{N\_{PRB}^{BW,μ}⋅12}{T\_{s}^{μ}}⋅\left(1-OH\right)$$whereinRmax = 948/1024,$v\_{Layers}$ is the the maximum number of supported layers for sidelink transmission (or reception) given by UE capability on supporting rank 2 PSSCH transmission and higher layer parameter *rankTwoReception*,$Q\_{m}$ is the maximum supported modulation order between 6 or 8 given by higher layer parameter *sl-Tx-256QAM* and *sl-Rx-256QAM*,$f$ is the scaling factor for sidelink transmission and reception given by higher layer parameter *scalingFactorTxSidelink* and *scalingFactorRxSidelink* respectively, as specified in TS 36.331 [17] and TS 38.331 [9], and can take the values 1, 0.8, 0.75, and 0.4. is the numerology (as defined in TS 38.211 [6]) is the average OFDM symbol duration in a subframe for numerology , i.e. . Note that normal cyclic prefix is assumed.$N\_{PRB}^{BW,μ}$ is the maximum possible RB allocation in bandwidth BW for PSSCH, where BW is the UE supported maximum bandwidth in the given band or band combination,$OH$ is the overhead and takes the following values0.217, for frequency range FR1 for SL0.25, for frequency range FR2 for SL |

**2. Actions:**

**To RAN2**

RAN1 respectfully asks RAN2 to implement the above RAN1 agreements in TS 38.306 considering the suggested changes.

**3. Date of Next Meetings:**

TSG-RAN WG1 Meeting #104-bis-e April 12 – 20, 2021 e-meeting

TSG-RAN WG1 Meeting #105-e May 19 – 27, 2021 e-meeting