**3GPP TSG RAN WG1 #100bis-e R1-2002430**

e-Meeting, April 20th – 30th, 2020

Source: NTT DOCOMO, INC.

Title: Summary on LTE UE features for others

Agenda Item: 6.2.5.5

**Document for:** **Discussion and Decision**

# **Introduction**

This contribution summarizes the discussions and proposals in AI 6.2.5.5 regarding LTE UE features for others.

In R1-2001485 [1] which is the version after [100e-LTE-Rel-16-UEFeatures] email discussion, following feature groups for [5G\_V2X\_NRSL] that eNB needs to know if UE supports the feature are captured with bracket.

* 5-1 Receiving NR sidelink configured by LTE Uu
* 5-2 Transmitting NR sidelink mode 1 scheduled by LTE Uu
* 5-3 Transmitting NR sidelink mode 2 configured by LTE Uu
* 5-4 GNSS and S-SSB for NR sidelink
* 5-5 Sidelink congestion control
* 5-6 Short-term time-scale TDM for in-device coexistence
* 5-7 256QAM sidelink transmission
* 5-7a FFS: 256QAM sidelink reception
* 5-8 PSFCH format 0
* 5-9 Low-spectral efficiency 64QAM MCS table
* 5-10 eNB type synchronization source for NR sidelink
* 5-11 Simultaneous transmission of uplink and sidelink
* 5-12 Support of SL slot less than 14 consecutive symbols
* 5-13 FFS: Support of multiple synchronization references

In AI 6.2.5.5, there are two contributions discussing on above feature groups and following proposals are provided.

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| OPPO [2] | ***Proposal 1: Set of LTE feature list for 5G\_V2X\_NRSL should in principle follow those of NR feature list, but containing only ones that are relevant to the LTE counterpart, i.e. those need to be known by LTE eNB for controlling / configuring NR SL operation.***  ***Proposal 2: It is necessary to define same set of BFGs in the LTE feature list as in the NR to align minimum set of features / functional expectations under NR control and LTE control. The set of FGs in the current LTE feature list that should be made as BFGs are 5-1/2/3/4/8.***  ***Proposal 3: It is important to clearly state and capture 2 receive antennas and 2 transmit antennas as minimum capability that every NR V2X UE need to support in FG 5-1 and 5-2/3, respectively.***  ***Proposal 4: The current FG 5-7a for 256QAM SL reception is not necessary. It can be simply captured in FG 5-7 that “Reception of 256QAM is mandatory” as a note, while FG 5-7 for 256QAM sidelink transmission is “optional with capability signalling”.*** |
| Ericsson [3] | [**Proposal 1** **Basic feature groups are defined for LTE UE features.**](#_Toc37338456)  [**Proposal 2** **In [1], 5-1, 5-2, 5-3, 5-4/5-10, 5.8 are considered as basic feature groups which are similar to the basic feature groups defined for NR.**](#_Toc37338457)  [**Proposal 3** **LTE features' list is to be updated further after settling the NR feature list.**](#_Toc37338458)  [**Proposal 4** **Include eNB as one of the synchronization references for NR sidelink along with GNSS and SynchRef UE.**](#_Toc37338459) |

Based on the above proposals, **it is the feature lead proposal that [5G\_V2X\_NRSL] features part in LTE features list should be updated after settling the corresponding part in NR features list.**

**Therefore, no email discussion is necessary for this sub-agenda.**

Companies are encouraged to check above FL proposals and to provide feedback if any in below.

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| Company | Comment |
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# **References**

[1] R1-2001485 RAN1 UE features list for Rel-16 LTE after RAN1#100-E Moderator (AT&T, NTT DOCOMO, INC.)

[2] R1-2001755 Discussion on LTE feature list for 5G\_V2X\_NRSL OPPO

[3] R1-2002242 LTE UE features for V2X Ericsson