3GPP TSG-RAN WG2 #112e R2-20xxxxx

Electronic meeting, November 2nd – 13th 2020

Agenda Item: 6.4.2

Source: Ericsson

Title: Summary of [AT112-e][710][V2X] Left issue on UE capability

Document for: Discussion, Decision

# 1 Introduction

This document is to kick off the following email discussion:

* [AT112-e][710][V2X] Left issue on UE capability (Ericsson)

Discuss proposals in R2-2009707, R2-2009708, R2-2009716, R2-2009717, R2-2009719, R2-2009403, and R2-2010443 and prepare the endorsable CR in R2-2010941 (discussion summary in R2-2010940 if needed). CR will be endorsed by email. Deadline is 12:00pm 11/10/2020 (UTC).

**Deadline Phase 1:** Collect companies’ views and formulate proposals, by Friday November 6th 12:00 UTC

**Deadline Phase 2:** Further review proposals and related CRs, by Monday November 9th 1800 UTC

# 2 Contact Information

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# 3 Discussion

## 3.1 Correction on UECapabilityEnquirySidelink

R2-2009707 Correction on UECapabilityEnquirySidelink (Alt.2) Ericsson CR Rel-16 38.331 16.2.0 2112 - F 5G\_V2X\_NRSL-Core

R2-2009708 Correction on UECapabilityEnquirySidelink (Alt.1) Ericsson CR Rel-16 38.331 16.2.0 2113 - F 5G\_V2X\_NRSL-Core

According to the ASN.1 for the UECapabilityEnquirySidelink message, the field that is used to enquiry sidelink capabilities from the peer UE is OPTIONAL. This mean that the initiating UE it may send the enquiry message without really requesting any capability or to just simply inform the peer UE of the initiating UE capabilities.

This is of course not the intended behaviour since the UE should always include the field frequencyBandListFilterSidelink-r16 when sending the sidelink enquiry capability message.

Further, the IE description of FreqBandList need also to adreess the case of NR sidelink communication as this IE is also used for this purpose.

In addition to this, it is also not clear how the UE should prioritize the band combinations, in case not all of them can be included in the capability message due to message or list size.

According to this, companies are requested provide their feedback on whether the issue is valid and, if yes, which of the proposed option should be pursued.

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| Company | Agree with the issue? | Alt1 or Alt2? | Comments |
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## 3.2 Clarification on field description for supportedBandCombinationListSidelinkEUTRA-NR

R2-2009716 Clarificationon on field description for supportedBandCombinationListSidelinkEUTRA-NR Ericsson CR Rel-16 38.331 16.2.0 2120 - F 5G\_V2X\_NRSL-Core

R2-2009719 Clarification on field description for supportedBandCombinationListSidelinkEUTRA-NR Ericsson CR Rel-16 38.306 16.2.0 0434 - F 5G\_V2X\_NRSL-Core

In the RAN2#109bis-e meeting, the following agreements have been taken in the context of sidelink UE capabilities:

Agreements

1: For LTE-Uu controlling NR-PC5, define the NR PC5 band combination in UE-EUTRA-Capability.

2: For NR-Uu controlling LTE-PC5, define the NR PC5 band combination in UE-NR-Capability.

According to this, the field supportedBandCombinationListSidelinkEUTRA-NR has been introded in order to report the NR and E-UTRA band conbination that the UE support for NR sidelink communication and V2X communication.

However, the handling of this new paramernter is was absent and it is, indeed, unclear how and when the UE should include this new field when the capability trasfer procedure is triggered by the network.

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| Company | Agree with the CRs (Y/N)? | Comments |
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## 3.3 Correction on setting frequencyBandListFilterSidelink over PC5

R2-2009717 Correction on setting frequencyBandListFilterSidelink over PC5 Ericsson CR Rel-16 38.331 16.2.0 2121 - F 5G\_V2X\_NRSL-Core

Over PC5, the field frequencyBandListFilterSidelink is exchanged between two sidelink UEs when the capability transfer procedure is triggered. However, the filter should be aligned to what has been requested already by the network in the UECapabilityEnquiry message (if the UE that triggered the sidelink capability procedure already exchanged its capabilities with the network) in order to not cause any misalignment.

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| Company | Agree with the CRs (Y/N)? | Comments |
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## 3.5 Correction on the definition of RLC-ParamentersSidelink

R2-2009403 Correction on the definition of RLC-ParametersSidelink-r16 Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2068 - F 5G\_V2X\_NRSL-Core

In the current TS 38.331, the same IE RLC-ParametersSidelink-r16 is defined in two different places, i.e. within both IE SidelinkParameters (for Uu RRC) and UECapabilityInformationSidelink (for PC5 RRC). However, such a duplicated definition may not follow the convention of RRC Spec, where the same IE should only be defined once, in order to avoid occurrence of different definitions of the same IE which can further lead to the confusion on which one should actually be applied. Also, such duplicated definition results in extra burden of ensuring any future extension for the same IE to be made in every place it appears, as otherwise the inconsistent definitions for the same IE will occur. Considering that RLC-ParametersSidelink-r16 is future extensible, such duplicated definition for this IE should be avoided from the very first release it is introduced.

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| Company | Agree with the CRs (Y/N)? | Comments |
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## 3.6 Correction on sidelink capability transfer procedure

R2-2010443 Correction on sidelink capability transfer procedure Huawei, HiSilicon CR Rel-16 38.331 16.2.0 2224 - F 5G\_V2X\_NRSL

In TS 38.331, the PC5 RRC prodcdure for a UE is specified from the UE’s own perspective, i.e., for a UE, what if the UE initiates the transmission of a PC5 RRC message, what if the UE receives a PC5 RRC message. Therefore, unlike the Specs in other WGs (e.g. SA2/SA3), there should not be such role distinction of “initiating UE” for NR sidelink unicast as now specified in the “Sidelink UE capability transfer” procedure. Such termonologies, may, on the contrary, lead to potential ambiguity and misleading on whether the “initiating UE” mentioned by the RRC Spec refer to exactly the same “initiating UE” as specified in SA2/SA3 specifications (e.g. TS 33.536).

Therefore, it is better to remove such descriptions of “initiating UE” in the “Sidelink UE capability transfer” procedure.

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| Company | Agree with the CRs (Y/N)? | Comments |
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# 4 Conclusion

According to the previous sections the following proposals are made: