**3GPP TSG-RAN** **WG2 Meeting #109bis-e R2-200xxxx**

**Electronic, April 20 – 30, 2020**

**Source: Qualcomm Incorporated**

**Title: Summary of email discussion [AT109bis-e][014][NR15] UE Cap Miscellaneous II**

**Document for: Decision**

**Agenda Item: 6.19**

# Introduction

This document summarizes the following email discussion.

(The list of companies below is incorrect. It should be “Ericsson, Huawei”.)

* [AT109bis-e][015][NR15] UE Cap Miscellaneous II (Qualcomm, ZTE, Mediatek, Huawei)

Scope: Treat [R2-2003306](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003306.zip), [R2-2003307](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003307.zip), [R2-2003280](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003280.zip), [R2-2003281](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003281.zip), [R2-2003459](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003459.zip), [R2-2003460](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003460.zip), [R2-2003461](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003461.zip), [R2-2003462](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003462.zip)

Part 1: Determine which issues that need resolution, find agreeable proposals. Deadline: April 23 0700 UTC

Part 2: For the parts that are agreeable, discussion will continue to agree on CRs.

# Discussion: Part 1 (by April 23 0700 UTC)

It is proposed to try to come to a set of agreeable proposals out of the documents listed above.

## Undefined band combinations in UECapabilityInformation ([R2-2003306](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003306.zip))

This document requests RAN2 to confirm that band combinations advertised by UE in NR and E-UTRA UECapabilityInformation are supported by the UE and defined in RAN4 specifications (36.101, 38.101). The document also requests RAN2 to discuss if anything need to be captured in specifications on that regard.

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| --- | --- | --- |
| **Company name** | **Agree / Disagree** | **Comments** |
| Qualcomm Incorporated | Agree, but. | We do not consider it is necessary to capture anything in our specifications. Band combinations defined by RAN4 is moving target and there are always cases where the legacy network in the field would see unknown band combinations reported by the UE. |
| Nokia | Disagree | Yes, we did not understand the real point of this contribution. |
| Intel | Same view as Qualcomm. | We agree with the intention, but do not see any need to capture in RAN2 spec. |
| CATT | Agree with QC. | Not sure if any changes are needed. |
| OPPO |  | The key point of this contribution is not very clear.  In general, we have not identify the reason for specification change yet. |

## Bands in supportedBandListNR ([R2-2003307](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003307.zip))

This document requests RAN2 to confirm the UE that indicate support for certain band in supportedBandCombinationList (in RF-Parameters or RF-ParametersMRDC) also indicates this band in *supportedBandListNR.*

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| **Company name** | **Agree / Disagree** | **Comments** |
| Qualcomm Incorporated | Agree |  |
| Nokia | Agree | That was obvious and no CR was needed ;-) |
| Intel | Agree |  |
| CATT | Agree | Agree with Nokia. |
| OPPO | Agree |  |

## Missing "Optional features without UE radio access capability parameters" ([R2-2003280](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003280.zip), [R2-2003281](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003281.zip))

These CRs try to clarify that CMAS and ETWS are optional feature without corresponding UE capability parameters.

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| **Company name** | **Support / Not support** | **Comments** |
| Qualcomm Incorporated | Support |  |
| Nokia | Not Support | Regulatory features are mandated by regulators/operators. It is just not needed to implement \*both\* CMAS and ETWS with the same region. We think the UE vendors understand this. Also, from NW perspective, everything is optional and what gets implemented depends on operators request. So, it does not make sense to mark it as optional now since anyway PWS is practically mandated by regulators in all regions. |
| Intel | Neutral | We are ok to go with majority view about adding this to the spec. |
| CATT | Support | We tend to support this change as it makes the cap clearer. From UE or network perspective we do not see much complexity. |
| OPPO | Support | Yes as Nokia mentioned, it could be mandatory in some country or region, but could be optional in other area like in China. So then from specification point view, it should be optional. |

## Correction on default Power class for FR2 ([R2-2003459](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003459.zip), [R2-2003460](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003460.zip))

These CRs try to specify that the UE not signalling the power class for FR2 means the UE supports the default power class as defined by RAN4, i.e. implement the same behaviour as FR1 today.

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| **Company name** | **Support / Not support** | **Comments** |
| Qualcomm Incorporated | Not support | This is not backward compatible to legacy network. Default UE capability in absence of signalled parameter should be avoided as much as possible. |
| Nokia | Not support | RAN4 has specified for FR2 in TS38.101-2 that the Power class 3 is default power class (also for FR2). So, the clarification is not required. Agree also that default UE capability in absence of signalled parameter should be avoided as much as possible for BC reasons. |
| Intel | Not support | Same view as Qualcomm. |
| CATT | No strong opinion |  |
| OPPO | Not support | NBC change (in this case, the main problem is it would be hard for legacy network to understand the absence case) should be avoided. |

## Correction to the serving cell number for ENDC power class ([R2-2003461](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003461.zip), [R2-2003462](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003462.zip))

These CR try make the power class (the one signalled per band combination) to be applicable to three UL CA case.

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| **Company name** | **Support / Not support** | **Comments** |
| Nokia | Not support | This CR seems to implement a draft LS that was never agreed to be sent to RAN2 and how can we make an agreement in RAN2 to correct something that was only Noted in RAN4? We should just wait for RAN4 discussions to conclude, no? |
| Intel | Not support | Same view as Nokia. |
| CATT | No strong view | We agree with the intention of this CR. But on the other hand there seems to be limited risk with the current text. So we think majority’s view can be followed on this one. |
| OPPO | Not support | We can wait for formal LS from RAN4. |

**Proposal 1: xxxx**

# Discussion: Part 2

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# Conclusion

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# Reference

[1]