**3GPP TSG-RAN** **WG2 Meeting #112-e R2-200xxxx**

**Electronic, 2nd – 13rd November 2020**

**Agenda Item: 5.4.3**

**Source: Huawei, HiSilicon**

**Title: Summary of offline 013 Rel-15 UE caps III**

**Document for: Discussion and decision**

# Introduction

This document summarizes the following offline discussion for Rel-15 UE capability corrections.

* [AT112-e][013][NR15] UE caps III (Huawei)

Treat R2-2009480, R2-2008734, R2-2008770, R2-2008771, R2-2010241, R2-2010242, R2-2009392, R2-2009393, R2-2010239, R2-2010240, R2-2010545, R2-2010546, R2-2010561, R2-2010562

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

# Contact from companies

|  |  |
| --- | --- |
| Company | Email |
| Qualcomm Incorporated | Masato Kitazoe <mkitazoe [at] qti.qualcomm.com> |
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# Discussion

## Part 1 discussion: to achieve agreeable principle

Part 1 discussion is focusing on reaching conclusion whether the proposals/CRs can be agreed in principle, and Part 2 discussion would then focus on detailed changes for those agreeable contributions.

*Note: Regarding R2-2010561, R2-2010562, as it was already discussed on Monday GTW, the current discussion did not cover these two contributions.*

### 2.1.1 Clarification on the capability of supportedNumberTAG

Discussion is in [1]. The intention is to indicate the support of 2TAGs in a subset of the band combination,and the following 2 options are proposed:

* **Option 1:** UE is required to support the different TAGs in the different bands if the TAG number < band entry number;
* **Option 2:** Introduce the association between the TAG and the band entries, e.g. via the cell grouping;

**Proposal 1: Adopt Option 1 or Option 2 for the *supportedNumberTAG*** **capability** **indication in the mix intra/inter-band BC.**

**Q1-1 Do companies agree with P1?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Qualcomm Incorporated | Yes |  |
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**Q1-2 If companies agree with P1, which option is preferred and which release is expected to start the changes?**

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| --- | --- | --- | --- |
| **Company** | **Option 1/2** | **Release** | **Comments** |
| Qualcomm Incorporated | Option 1 and maybe Option 2 | Release-15 for Option 1. | Some clarification like option 1 is needed anyway even if we are to introduce an enhancement like option 2.  We understand the option 1 to mean that band entries from the same band (intra-band non-contiguous) shall be assigned into the same TAG. This looks to support typical deployment scenarios. Option 2 can be considered when companies (especially infra-vendors and operators) expect intra-band non-collocated topology to be important scenario. |
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### 2.1.2 Clarification on RAN4 features of NE-DC

The corresponding LS and CRs are in [2]-[6]. The main intention is to clarify the applicability of some features for NE-DC. The two sets of the CRs are quite similar and the major differences are whether to also have changes for some MR-DC parameters. So it could be discussed first and then decide which set of CRs is used as the baseline.

**Q2-1 Do companies agree *syncIntraBandENDC*, *intraBandENDC-Support* and *UL-TimingAlignmentEUTRA-NR* are applied to NE-DC as proposed in [3][4]?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Qualcomm Incorporated | Yes | Proponent |
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**Q2-2 Do companies agree with other changes for BandCombinationList and CA-ParametersEUTRA listed in [3][4][5][6]?**

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| **Company** | **Yes/No** | **Comments** |
| Qualcomm Incorporated | Yes | Proponent |
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**Q2-3 Please indicate which release to start adopting the changes if companies support in general to have the above changes?**

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| **Company** | **Release** | **Comments** |
| Qualcomm Incorporated | Release-15 | Proponent |
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### 2.1.3 Correction on PDCP duplication capability for NR-DC

The CRs are in [7][8], and the intention is to add duplication related capabilities specifically for NR-DC.

**Q3 Do companies agree with the major principle of the CRs? If yes, please indicate the starting release for the changes.**

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| --- | --- | --- | --- |
| **Company** | **Yes/No** | **Release** | **Comments** |
| Qualcomm Incorporated | Yes | Release-15 |  |
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### 2.1.4 Clarification on handover capability

The CRs are in [9][10], and the main intention is to clarify how to interpret the FDD/TDD and FR1/FR2 differentiation.

**Q4 Do companies agree with the major principle of the CRs? If yes, please indicate the starting release for the changes.**

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| **Company** | **Yes/No** | **Release** | **Comments** |
| Qualcomm Incorporated | Yes | Release-15 | Our understanding has been that the handoverInterF indicates the UE capability “within” duplex mode or “within” frequency range. But we can accept the changes as proposed in the CRs, since we see some UE implementations may benefit from it. |
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### 2.1.5 Clarification on xDD differentiation

The CRs are in [11][12]. The main intention is to clarify how FDD/TDD differentiation applies to rsrqMeasWidebandEUTRA.

**Q5 Do companies agree with the major principle of the CRs? If yes, please indicate the starting release for the changes.**

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| **Company** | **Yes/No** | **Release** | **Comments** |
| Qualcomm Incorporated | Yes | Release-15 | Release-16 CR (Cat.F) deals with other UE capabilities. We are fine with those other changes as well. |
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## Part 1 discussion summary

## Part 2 discussion: TBD

To be updated after Phase I discussion

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# Reference

1. [R2-2009480](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009480.zip) Clarification on the capability of supportedNumberTAG Apple
2. [R2-2008734](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008734.zip) Reply LS on Clarification on RAN4 features of NE-DC (R4-2011688; contact: Samsung)
3. [R2-2008770](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008770.zip) Correction for RAN4 features of NE-DC OPPO, Qualcomm Incorporated CR
4. [R2-2008771](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2008771.zip) Correction for RAN4 features of NE-DC OPPO, Qualcomm Incorporated CR
5. [R2-2010241](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010241.zip) Clarification on NE-DC for bandwidth combination set Huawei, HiSilicon, Samsung
6. [R2-2010242](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010242.zip) Clarification on NE-DC for bandwidth combination set Huawei, HiSilicon, Samsung
7. [R2-2009392](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009392.zip) Corrections on PDCP duplication capability for NR-DC Huawei, HiSilicon
8. [R2-2009393](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009393.zip) Corrections on PDCP duplication capability for NR-DC Huawei, HiSilicon
9. [R2-2010239](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010239.zip) Clarification on the inter-frequency handover capability Huawei, HiSilicon, Ericsson
10. [R2-2010240](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010240.zip) Clarification on the inter-frequency handover capability Huawei, HiSilicon, Ericsson
11. [R2-2010545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010545.zip) Clarification on UE capabilities with FDD/TDD differentiation Ericsson, ZTE Corporation, Sanechips
12. [R2-2010546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010546.zip) Clarification on UE capabilities with FDD/TDD differentiation Ericsson, ZTE Corporation, Sanechips