**3GPP TSG-RAN** **WG2 Meeting #111-e R2-200xxxx**

**Electronic, 17th – 28th August 2020**

**Agenda Item: 5.4.3**

**Source: Huawei, HiSilicon**

**Title: Summary of offline 010 Rel-15 UE cap Clarifications**

**Document for: Discussion and decision**

# Introduction

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

* [AT111-e][010][NR15] UE cap Clarifications (Huawei)

 Scope: Treat [R2-2007209](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007209.zip), [R2-2007210](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007210.zip), [R2-2007211](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007211.zip), [R2-2007798](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007798.zip), [R2-2007799](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007799.zip), [R2-2007800](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007800.zip), [R2-2007796](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007796.zip), [R2-2007797](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007797.zip), [R2-2007885](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007885.zip), [R2-2007887](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007887.zip), [R2-2007850](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007850.zip) (proponents to drive)

 Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

 Deadline: Aug 20, 0900 UTC.

 Part 2: For agreeable parts, continuation to agree CRs.

 Deadline: Aug 26, 0900 UTC.

# Discussion

## Part 1 discussion: to achieve agreeable principle

### 2.1.1 Clarification on band combination

Discussion and CRs are in [1][2][3].

**Proposal 1: Ran2 to confirm that the *BandCombinationList* and the *FreqBandList* also include the NR non-CA band combination.**

**Proposal 2: If the proposal 1 was agreed, agree the CR [1] for Rel15 and CR [2] for Rel 16.**

**Proposal 3: Ran2 to confirm whether the band in the *supportedBandListNR* shall always be included in the *supportedBandCombinationList.***

**Proposal 4: If the UE can indicate some bands only in the *supportedBandListNR*, for these bands, the network shall take the capabilities that only included in the *supportedBandCombinationList* as not reported.**

Please companies to provide feedback on the proposals listed in [1].

**Q1-1 Do companies agree with P1 and P2?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
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**Q1-2 Do companies agree with P3 and P4?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
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### 2.1.2 Discussion on ambiguity for multi bands/cells

The discussion is seen in [4] and corresponding CRs are seen in [6] and [7].

**Proposal 1: the UE needs to indicate capabilities (*simultaneousTxSUL-NonSUL, dynamicSwitchSUL*) for both SUL band and the paired NUL band, and the network only enables this configuration for the bands pair where these capabilities are indicated for both SUL and NUL band.**

**Proposal 2: confirm that** **the network could only configure PUCCH on the bands where *twoPUCCH-Group*** **is indicated if two PUCCH groups are configured.**

**Proposal 3: for interpretation of FGs applicable to cross-carrier operation, RAN2 waits for RAN1 conclusion.**

It is worth mentioning that Proposal 3 has been updated after tdoc submission as RAN1 already started a similar discussion, and thus from the proponent RAN2 does not need to duplicate the discussion.

Please companies to provide feedback on the proposals listed in [4].

**Q2-1 Do companies agree with P1?**

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| **Company** | **Yes/No** | **Comments** |
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**Q2-2 Do companies agree with P2?**

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| **Company** | **Yes/No** | **Comments** |
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**Q2-3 Do companies agree with P3?**

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| **Company** | **Yes/No** | **Comments** |
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### 2.1.3 Clarification on PDSCH rate matching

The CRs are in [7][8], and the main intention is to clarify support of *rateMatchingResrcSetDynamic* means only supporting dynamic rate matching for *bitmaps* in *patternType*.

**Q3 Do companies agree with the CR principle?**

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| **Company** | **Yes/No** | **Comments** |
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### 2.1.4 Clarification on the simultaneousRxTxInterBandCA capability

The CRs are in [9][10], and the main intention is to apply this capability to NR-DC case.

**Q4 Do companies agree with the CR principle?**

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| **Company** | **Yes/No** | **Comments** |
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### 2.1.5 xDD and FRx differentiation on UE capabilities which are not signalled by ENUMERATED {supported}

The discussion is in [11]. The main intention is to discuss the case if the UE capabilities have XDD and FRX differentiation but the value is not simply ENUBERATED {supported}.

**Proposal 1: RAN2 clarify that Table B-1 is not applied for the the xDD/FRx differentiation of capabilities which are not signalled by ENUMERATED {supported}.**

**Q4 Do companies agree with the proposal?**

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| **Company** | **Yes/No** | **Comments** |
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## Part 2 discussion: TBD

To be updated after Phase I discussion

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# Reference

1. [R2-2007209](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007209.zip) Clarification on the BandCombination ZTE Corporation, Sanechips
2. [R2-2007210](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007210.zip) CR on the BandCombination (R15) ZTE Corporation, Sanechips
3. [R2-2007211](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007211.zip) CR on the BandCombination (R16) ZTE Corporation, Sanechips CR
4. R2-2008368 Discussion on the ambiguity for the capabilities associated with multiple bands/Cells Huawei, HiSilicon
5. R2-2008369 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon
6. R2-2008370 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon
7. [R2-2007796](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007796.zip) Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon
8. [R2-2007797](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007797.zip) Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon
9. [R2-2007885](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007885.zip) Clarification on the simultaneousRxTxInterBandCA capability in NR-DC MediaTek Inc.
10. [R2-2007887](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007887.zip) Clarification on the simultaneousRxTxInterBandCA capability in NR-DC MediaTek Inc.
11. [R2-2007850](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_111-e%5CDocs%5CR2-2007850.zip) xDD and FRx differentiation on UE capabilities which are not signalled by ENUMERATED {supported} Samsung