**3GPP TSG-RAN WG2 Meeting#110-e R2-200xxxx**

**Electronic, 1 - 12 June 2020**

**Agenda Item:**  **6.10.2**

**Source: Huawei, HiSilicon**

**Title: Summary of [AT110-e][074][DCCA] UE capabilities (Huawei)**

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

# 1 Introduction

This document is a summary of the following offline discussion:

* [AT110-e][074][DCCA] UE capabilities (Huawei)

Scope: Treat documents under 6.10.2, determine agreeable parts and and make agreements. Implement meeting agreements in updated CRs.

 Part 1: Agreements (rapporteur sets the deadline)

 Part 2: Endorsed CRs 38306 38331 36306 36331 (For merge, good Q cover sheet etc)

 Deadline: June 11 0700 UTC

# 2 Discussion

## 2.1 Previous discussions

Following [Post109bis-e][033][DCCA] UE capabilities CRs, the following CRs were submitted:

[R2-2005251](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_110-e%5CDocs%5CR2-2005251.zip) Introduction of UE capabilities for eDCCA Huawei, HiSilicon CR Rel-16 36.306 16.0.0 1757 1 B LTE\_NR\_DC\_CA\_enh-Core R2-2003703 Late

[R2-2005252](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_110-e%5CDocs%5CR2-2005252.zip) Introduction of UE capabilities for eDCCA Huawei, HiSilicon CR Rel-16 38.306 16.0.0 0293 1 B LTE\_NR\_DC\_CA\_enh-Core R2-2003704 Late

[R2-2005253](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_110-e%5CDocs%5CR2-2005253.zip) Introduction of UE capabilities for eDCCA Huawei, HiSilicon CR Rel-16 36.331 16.0.0 4283 1 B LTE\_NR\_DC\_CA\_enh-Core R2-2003705 Late

[R2-2005254](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_110-e%5CDocs%5CR2-2005254.zip) Introduction of UE capabilities for eDCCA Huawei, HiSilicon CR Rel-16 38.331 16.0.0 1580 1 B LTE\_NR\_DC\_CA\_enh-Core R2-2003706 Late

It is believed that all comments in that discussion were taken into account.

**Q1: Do company have comments on these CRs or see any issue not indicated as FFS in these CRs?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
|  |  |  |
|  |  |  |

Six aspects are FFS:

- **36.306**

- ***endc-IdleInactiveMeasurements-r16***: split in two separate capabilities, one for FR1 and one for FR2 measurements

- ***directSCellActivationResume-r16***: split in two separate capabilities, one for E-UTRA MCG SCells and one for E-UTRA SCG SCells (for NE-DC if resume with SCG is supported)

- **38.306**

- ***idleInactiveNR-MeasReport-r16***: FR1/FR2 separation, i.e. separate indications for support FR1 measurements and support of FR2 measurements (same as endc-IdleInactiveMeasurements-r16)

- ***directSCellActivation-r16***:

- split in two separate capabilities, one for NR MCG SCell activation, one for NR SCG SCell activation (in EN-DC or in NR-DC)

- FR1/FR2 separation, i.e. separate indications for direct activation of FR1 SCell and direct activation of FR2 SCell

- ***directSCellActivationResume-r16***:

- split in two separate capabilities, one for NR MCG SCell activation, one for NR SCG SCell activation (in EN-DC or in NR-DC if the UE supports resume with SCG)

- FR1/FR2 separation, i.e. separate indications for direct activation of FR1 SCell and direct activation of FR2 SCell

This discussion will poll company opinions again, but based on previous poll. there was no clear majority either way. Then, let's poll again.

**Q2: For idle/inactive NR measurements (i.e. *endc-IdleInactiveMeasurements-r16*** **and** ***idleInactiveNR-MeasReport-r16***)**, do companies prefer to distinguish FR1/FR2?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
|  |  |  |
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**Q3: For direct SCell activation, i.e. in 36.306 *directSCellActivationResume-r16* and in 38.306 *directSCellActivation-r16* and *directSCellActivationResume-r16*, do companies prefer to distinguish MCG SCells and SCG SCells, as indicated above?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
|  |  |  |
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**Q4: For direct SCell activation, i.e. in 38.306 *directSCellActivation-r16* and *directSCellActivationResume-r16*, do companies prefer to distinguish FR1 SCells and FR2 SCells?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
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|  |  |  |

## 2.2 New discussions

The following document is discussing the need for additional capabilities:

[R2-2005223](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_110-e%5CDocs%5CR2-2005223.zip) Introduce capabilities on Async NR-DC and cell-grouping configuration Qualcomm Incorporated

The proposals are about asynchronous NR-DC.

**Proposal 1: Like LTE, introduce UE capabilities on asynchronous NR-DC and supported cell-grouping configurations for a band combination of NR-DC, to indicate the support of Async NR-DC and power sharing between MN and SN.**

**Q5: Do companies agree with proposal 1 above?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
|  |  |  |
|  |  |  |

**Proposal 2: Put the UE capabilities on asynchronous NR-DC and supported cell-grouping configurations in *CA-ParametersNRDC.***

**Q6: Do companies agree with proposal 2 above?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
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**Proposal 3: Introduce *asyncNRDC-r16* and *supportedCellGroupingAsyncNRDC-r16* to indicate the support of asynchronous NR-DC, where:**

* ***asyncNRDC-r16* is ENUMERATED {supported}, same as LTE**
* ***supportedCellGroupingAsyncNRDC-r16* reuse the mapping table of LTE with up to 4 bands from ASN.1 perspective, as illustrated in table 1.**

|  |  |  |
| --- | --- | --- |
| **Nr of Band Entries:** | 4 | 3 |
| **Length of Bit-String:** | 7 | 3 |
| **Bit String Position** | **Cell grouping option (0= first cell group, 1= second cell group)** |
| 1 | 0001 | 001 |
| 2 | 0010 | 010 |
| 3 | 0011 | 011 |
| 4 | 0100 |  |
| 5 | 0101 |  |
| 6 | 0110 |  |
| 7 | 0111 |  |

**Table 1: Illustration of mapping from bands to cell group configuration for NR-DC**

**Q7: Do companies agree with proposal 3 above?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments (if any)** |
|  |  |  |
|  |  |  |

## 2.3 Progress on RAN2 eDCCA UE capabilities

Due to ITU submission, there cannot be any FFS or Editor's note in June 2020 Rel-16 specifications, so it is not possible to agree a CR with FFS. In case there cannot be any agreement on the above FFS, there are two possibilities:

1) all companies agree to introduce RAN2 eDCCA UE capabilities according to the (potentially small) majority view on each FFS

2) RAN2 eDCCA UE capabilities for which there is an FFS are not introduced in June 2020 specifications

3) RAN2 eDCCA UE capabilities are not introduced in June 2020 specifications

**Q8: Which of the following options are acceptable/unacceptable?**

|  |  |  |
| --- | --- | --- |
| **Company** | **(e.g. acceptable: 1, unacceptable 2/3)** | **Comments (if any)** |
|  |  |  |
|  |  |  |

# 3 Conclusion

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