**3GPP T****SG-RAN WG3 Meeting #110-e R3-211125**

**Online, 25th January – 5th February 2020**

Agenda Item: 9.3.8

Source: Ericsson

Title: Summary of Discussion for NR-NR\_DCconfigRelease

Document for: Discussion, Decision

# Introduction

A Summary of Offline Discussions has been assigned to the topic of NR-NR DC configuration Release.

The discussion has been summarised as follows in the meeting minutes:

**CB: # 108\_****NR-NR\_DCconfigRelease**

**- check RAN2 progress (scenario seems valid)**

**- clarify SCG suspend/resume case, if needed**

**- clarify details**

**(E/// - moderator)**

**Summary of offline disc** [**R3-211125**](Inbox\R3-211125.zip)

# For the Chairman’s Notes

**[To be added]**

# Discussion

In [1] the cosourcing companies have described a case in which a UE is configured with dual connectivity.

For such configuration to take place, an MN needs to share the UE capabilities with an SN, so that both MN and SN can serve the UE, while never exceeding the overall UE’s capabilities.

As an example, we could focus on how MN and SN share band combinations.

Let’s assume that a UE can support two types of band combinations at the same time, e.g. BC#1 and BC#2. When an SCG want to be added for the UE, the MN gNB-DU will need to select only one of the BCs supported by the UE, so to leave “space” for the SN to also adopt one BC. We assume that the MN-gNB-DU selects BC#1 and signals it to the MN-gNB-CU by means of the *Selected BandCombinationIndex* IE over the F1 interface.

Such choice will be signalled to the SN by means of the allowedBC-ListMRDC (included in CG-ConfigInfo). In turn, the SN will select the remaining BC#2, which the UE can support (we assume that the SN also support this BC). At this point in time the SCG can be configured at the UE and the full UE capabilities are used in a shared way between MN and SN.

If however the SCG is released, the SN would stop using BC#2 at the UE. In an optimal solution the MN-gNB-DU should be informed of the SCG release, so that the MN can select a configuration for the UE that exploits the UE’s full capabilities.   
However, there is today no means over the F1 interface to communicate to the MN-gNB-DU that an SCG has been released and that the full capabilities of the UE can be utilized.

During the online session it was mentioned that this topic may be handled by RAN2. Indeed, one mechanism to convey to the MN-gNB-DU the information that the SCG has been released is to include a flag in the RRC CG-Config IE. However, we note that the CG-Config is also used to convey inter node information from the SN to the MN.

In the SN to MN signalling (e.g. over the Xn) the IEs contained in the Xn messages are able to inform the MN that a DRB at SN has been removed and by that it is possible to determine that the SCG has been released. Hence, including a flag to indicate SCG release in the CG-Config IE would duplicate information over the Xn.   
Also, resolving this issue at RRC level would mean to impact two specifications, 36.331 for EN-DC and 38.331 for MR-DC.

The only signalling where such SCG release indication is missing is from the MN-gNB-CU to the MN-gNB-DU, which is why we believe that adding an indication over the F1 signalling is the best option.

During the online discussions it was also asked whether a notification of SCG release should be also signalled when an SCG is suspended. We believe this may be investigated further and it is rather an optimization, hence not strictly needed as a Rel15/16 correction.

With the above in mind, **companies are invited to provide their view on whether a solution for indication of SCG release from MN-gNB-CU to MN-gNB-DU is needed.**

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| **Company** | **Comments** |
| Ericsson | Yes, a solution is needed. Not having a solution would imply that a UE will in most of the cases be served only by means of parts of its capabilities. This would lower performance substantially. |
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**In light of the above, companies are invited to provide their view on the changes introduced in [2] and whether they can be agreed**

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| **Company** | **Comments** |
| Ericsson | We support to agree to the changes in [2] |
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# Conclusion, Recommendations

# References

[1] R3-210406, How to release NR-NR DC configurations between MN-CU and MN-DU (Ericsson, Verizon Wireless)

[2] R3-210407, How to release NR-NR DC configurations between MN-CU and MN-DU (Ericsson, Verizon Wireless)