**3GPP TSG-RAN WG2 Meeting #118-e *R2-220xxxx***

**Online, 9–20 May 2022**

**Agenda item: 6.2.4**

**Source: Samsung**

**Title: Report of [AT118-e][226][DCCA] Corrections for TRS-based Scell activation (Samsung)**

**Document for: Discussion and Agreement**

# 1 Introduction

This is to report the result of the following email discussion in RAN2#118-e Meeting [1].

* [AT118-e][226][DCCA] Corrections for TRS-based Scell activation (Samsung)

      Scope: Provide MAC and RRC CRs for TRS-based Scell activation based on online decisions.

Intended outcome: Agreeable MAC CR in [R2-2206369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_118-e/Docs/R2-2206369.zip) and RRC CR in [R2-2206370](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_118-e/Docs/R2-2206370.zip).

Deadline: Deadline 6 / Post-meeting email

# 2 Contact Information

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| --- | --- |
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| Samsung | Jaehyuk JANG (jack.jang@samsung.com) |
| Ericsson | Zhenhua Zou (zhenhua.zou@ericsson.com) |
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# 3 Discussion

## 3.1 Agreements from GTW session on May 18 captured in [1]

* 1. If Rel-15 SCell activation/deactivation MAC CE is used when SCell is configured with TRS, UE just activates SCells as in legacy (i.e. no TRS). Can discuss if this requires clarification in RRC/MAC. If this causes problem, we can still restrict.
* 2. Do not support TRS based SCell activation by RRC message in Rel-17. Can discuss if this requires clarification in RRC/MAC.
* 3. Direct SCell activation via RRC doesn't suppport TRS-based SCell activation in Rel-17 (i.e. activation SCell via sCellState doesn't trigger TRS).
* Discuss details in discussion [226]
* 1 Network is allowed to configure one NZP-CSI-RS-ResourceSet for both MAC CE activation and DCI activation.
* 2-1 Add a new field aperiodicTriggeringOffsetL2-r17 in the IE NZP-CSI-RS-ResourceSet to indicate triggering offset of CSI-RS tracking activated by MAC CE.
* 2-2 Configure only one TCI-state instead of TCI state list.
* 3 Use the TP in the Annex of [R2-2205505](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_118-e/Docs/R2-2205505.zip) as baseline in discussion [226]

## 3.2 CR to MAC

Rapporteur thinks that the yellow-highlighted agreement from subclause 3.1 can be captured to MAC by adding the following NOTE to subclause 6.1.3.10 (i.e. the (legacy) SCell Activation/Deactivation MAC CEs). The TP is also provided to the draft CR in the folder.

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| NOTE: If UE receives the SCell Activation/Deactivation MAC CE for an SCell that configured with TRS, it does not use TRS for the correspoding SCell. |

**Question 1: Do you agree to add the NOTE above to MAC?**

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| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung | Yes | This removes any ambiguity. |
| Ericsson | Yes, but | The wording is not precise and may lead to mis-understanding. For example, network may configure TRS as in legacy Rel-15 with DCI triggering, which should not be dis-allowed by this note.  An alternative:   * If UE receives the SCell Activation/Deactivation MAC CE for an SCell configured with TRS for efficient activation of the SCell, no TRS is used for the correspoding SCell. |
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## 3.3 CR to RRC

Rapporteur thinks that the green-highlighted agreements from subclause 3.1 can be captured to RRC by adding the following sentence to the field description of *sCellState*. The TP is also provided to the draft CR in the folder.

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| ***sCellState***  Indicates whether the SCell shall be considered to be in activated state upon SCell configuration. If the field is included for an SCell that configured with TRS, it does not use TRS for the correspoding SCell. |
| ***sCellToAddModList***  List of secondary serving cells (SCells) to be added or modified. |

**Question 2: Do you agree to add the sentence above to the field description of *sCellState* in RRC?**

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| Company | Yes/No | Comment |
| Samsung | Yes | This removes any ambiguity. |
| Ericsson | Yes, but | Similar wording comments as above |
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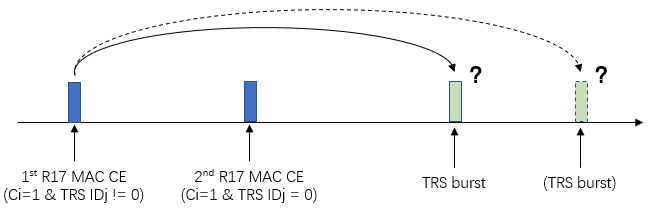
For the agreements highlighted in turquoise, the TP is already provided in R2-2205505 [4], and they are captured to the draft CR in the folder.

**Question 3: Do you agree the changes to RRC provided in R2-2205505?**

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| Company | Yes/No | Comment |
| Samsung | Yes | - |
| Ericsson | Yes |  |
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## 3.3 Further clarification

During the online session, vivo wanted to clarify the case described in their contribution i.e. R2-2205059 where network transmits two Rel-17 MAC CEs consecutively, as shown below, and they provided two options for the interpretation:



- Option 1: maintain the indication by the first R17 MAC CE (Ci=1 & “TRS ID for Ci”!=0), i.e. the network still transmits the TRS burst(s) indicated by the first R17 MAC CE;

- Option 2: follow the indication by the second R17 MAC CE (Ci=1 & “TRS ID for Ci”=0), i.e. the network stops to transmit the TRS burst(s) indicated by the first R17 MAC CE;

Rapporteur would like to collect the view from companies about their preference, and whether any specification change is needed.

**Question 4: Which option is correct from your view? Do you think any specification update is needed?**

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| Company | Option 1/2 | Spec. change is needed? | Comment |
| Samsung | - | No | The case itself seems quite rare, but if it happens, we think UE can follow the latest MAC CE from the network (which is similar to Option 2), which does not require any update to the specification, regardless of network behavior. We do not have to specify network behavior either. |
| Ericsson | - | No | Agree with Samsung that this is a corner case. SCell is activated by the network (with updated knowledge on the UE buffer status for UL and DL traffic for that UE). This is quite a corner case that just after a burst of traffic arrival (leading to the first Rel-17 MAC CE), there is another burst of traffic arrival (for the second Rel-17 MAC CE).  Even this happens, the network can send the second Rel-17 MAC CE with a different time slot offset. (for example, the first with offset x\_1 and the second with offset x\_2. In the end both point to the same absolute location). |
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# 4 Conclusion

TBD…

# 5 References

[1] RAN2-118e LTE 71 GHz DCCA Multi-SIM and RAN slicing (Tero)\_2022-05-18-1619\_v2.docx

[2] R2-2204978 Leftover issues for TRS based SCell activation Samsung discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[3] R2-2205059 Discussion on Temporary RS activation for fast SCell activation vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[4] R2-2205505 [E067][E068] TRS-based SCell activation Ericsson discussion