**3GPP TSG RAN WG1 #122 R1-250xxxx**

**Bengaluru, India, Aug 25th – 29th, 2025**

**Source: Moderator (ZTE)**

**Title: FL summary of the discussion on LS on CSI-RS based CFRA using SBFD RO**

**Agenda item: 5**

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

# Introduction

This document provides the summary of the discussion on LS on CSI-RS based CFRA using SBFD RO [1].

R1-2505121 LS on CSI-RS based CFRA using SBFD RO RAN2, ZTE

RAN2 is requesting RAN1 to feedback if there are any concerns on its agreement on CSI-based CFRA using SBFD RO. RAN1 Response needed. To be handled in agenda item 8.3. Moderator Shuaihua (ZTE)

**Relevant Tdoc(s)**

R1-2505869 Draft Reply LS to RAN2 on CSI-RS based CFRA using SBFD RO Apple

R1-2506106 Draft Reply LS to RAN2 on CSI-RS based CFRA using SBFD RO Google

R1-2506366 On RAN2 LS on CSI-RS based CFRA using SBFD RO Ericsson

# Discussion

RAN2 send RAN1 an LS on CSI-RS based CFRA using SBFD RO.

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| Agreement:  For L3 HO and BFR cases, CSI-RS based CFRA using SBFD RO is supported from RAN2 perspective. Send LS to RAN1/4 to inform this conclusion.  **ACTION:** RAN2 respectfully asks RAN1 and RAN4 to take the above agreement into account and provide feedback if there are any concerns. |

Based on the contributions [2] [3] [4],

* One company propose to relay RAN2 an LS including: RAN1 agreed CBRA and CFRA in SBFD symbols are supported for SBFD aware UEs in RRC CONNECTED state. For L3 HO and BFR cases, CSI-RS based CFRA using SBFD RO has no impact on RAN1 specifications.
* One company believes
  + Separate RSRP thresholds are needed for BFR measurements on SBFD symbols and non-SBFD symbols
  + The network can indicate the symbol type for the BFR measurements
  + Separate RLM thresholds are needed for SBFD symbols and non-SBFD symbols
* One company believes that there will be an ambiguity in the interpretation of the RO location and propose to relay RAN2 an LS with the following information/questions.

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| * Send a reply LS to RAN2 stating that in order to unambiguously map CSI-RS indices to RO locations, the UE must also be made aware of the following:   + Whether the RO locations should apply to legacy or additional ROs, and,   + In case of additional ROs, whether said ROs should be validated according to the single RACH configuration (Option 1) or the additional RACH configuration (Option 2). |

RAN2 has agreed that the network can indicate the RO type, i.e., legacy RO or additional RO for the UE. The legacy RO is used if RO type is not configured. Moderator think the first question is clear.

Companies are invited to provide their views on the questions in the following tables.

**Question 1-1:**

Do you think RAN1 need to introduce separate RSRP thresholds, and/or separate RLM thresholds for SBFD symbol and non-SBFD symbols, and/or indicate the symbol type for BFR measurements?

Please share your view and comments/reasons.

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| **Company** | **Comments** |
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**Question 2-1:**

For the replay LS, which option do you prefer?

In the relay LS, the following is included.

* **Option 1:** RAN1 agreed CBRA and CFRA in SBFD symbols are supported for SBFD aware UEs in RRC CONNECTED state. For L3 HO and BFR cases, CSI-RS based CFRA using SBFD RO has no impact on RAN1 specifications.
* **Option 2:** RAN1 ask the following question to RAN2.
  + In case of additional ROs, whether said ROs should be validated according to the single RACH configuration (Option 1) or the additional RACH configuration (Option 2).
* **Option 3:** RAN1 agreed CBRA and CFRA in SBFD symbols are supported for SBFD aware UEs in RRC CONNECTED state. For L3 HO and BFR cases, CSI-RS based CFRA using SBFD RO has no impact on RAN1 specifications. In addition, RAN1 ask the following question to RAN2.
  + In case of additional ROs, whether said ROs should be validated according to the single RACH configuration (Option 1) or the additional RACH configuration (Option 2).

Please share your view and comments/reasons.

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| **Company** | **Comments** |
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# Conclusion

# References

1. R1-2505121 LS on CSI-RS based CFRA using SBFD RO RAN2, ZTE
2. R1-2505869 Draft Reply LS to RAN2 on CSI-RS based CFRA using SBFD RO Apple
3. R1-2506106 Draft Reply LS to RAN2 on CSI-RS based CFRA using SBFD RO Google
4. R1-2506366 On RAN2 LS on CSI-RS based CFRA using SBFD RO Ericsson