**3GPP TSG-RAN WG3 #122 R3-237785**

**Chicago, IL, USA, November 13th – 17th, 2023**

Agenda Item: 10.2.1

Source: Samsung (moderator)

Title: Summary of Offline Discussion: CB: # SONMDT1\_SHRSPR

Document for: Discussion

# Introduction

This is the offline summary for the following comeback:

**CB: # SONMDT1\_SHRSPR**

**- Further discuss the above open issue**

**-Provide TPs if agreeable**

(moderator - SS)

Summary of offline disc [R3-237785](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_122%5CInbox%5CR3-237785.zip)

# For the Chairman’s Notes

TPs to be agreed:

**SHR:**

TP for SON BLCR for 38.300: R3-23xxxx rev of [R3-237350](file:///D%3A%5C3GPP%20Standardization%5CRAN3%5CRAN3%23122%5CDocs%5CR3-237350.zip) (Samsung)

TP for SON BLCR for 38.423: R3-23xxxx rev of [R3-237350](file:///D%3A%5C3GPP%20Standardization%5CRAN3%5CRAN3%23122%5CDocs%5CR3-237350.zip) (CATT)

TP for SON BLCR for 38.413: R3-23xxxx rev of [R3-237606](file:///D%3A%5C3GPP%20Standardization%5CRAN3%5CRAN3%23122%5CDocs%5CR3-237606.zip) (ZTE)

**SPR:**

TP for SON BLCR for 38.423: R3-23xxxx rev of [R3-237606](file:///D%3A%5C3GPP%20Standardization%5CRAN3%5CRAN3%23122%5CDocs%5CR3-237606.zip) (Ericsson)

Proposal for agreement:

**SHR:**

**Target C-RNTI should be included in the Xn HANDOVER REPORT. Define this IE as Mandatory.**

**Target C-RNTI should be included in the NG HANDOVER REPORT. Define this IE as Mandatory.**

**Include timeSinceFailure in HO Report message (Xn and NG). Define this IE as Mandatory.**

**SPR:**

**Add a new IE in S-NODE MODIFICATION REQUIRED message to inform the MN that an SPR is available at the UE.**

# Phase 2

**Whether the objective of T304 SPR trigger is also to optimize the mobility configurations in the source node?**

The proponent propose to add the following text to stage 2:

**In case of T304 trigger, the initialing node may also performs root cause analysis for mobility optimization.**

The overall paragraph is as below:

For PSCell addition/CPA and PSCell change/CPC (MN or SN initiated), the target SN always decides the T304 trigger for SPR and performs root cause analysis. In case of T304 trigger, the initialing node may also performs root cause analysis for mobility optimization.

**Q1: What’s your company view whether to have the above sentence in stage 2?**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Ericsson | Yes | It is already possible for MN-initiated PSCell change as MN will always receive the SPR. It would not harm to also make it possible for SN-initiated PSCell Change. |
|  |  |  |
|  |  |  |
|  |  |  |

**SN informs the UE (e.g. with MN involvement) that PSCell Change is SN-initiated, when MN is not aware of SN SPR configuration?**

During the offline discussion on Wednesday, companied think the status in RAN2 need to be checked.

**Is the MN/SN initiated flag always sent to the UE if UE support SPR? (check RAN2)**

**If yes, nothing is needed.**

**If no, further discuss whether there is any issue**

Let’s check companies understanding after the internal check.

**Q2: What’s your company’s understanding on the issue?**

|  |  |
| --- | --- |
| Company | Comment |
| Ericsson | We’ve checked with our RAN2 delegates, the MN should only send MN/SN initiated indication when SPR has been configured.  |
|  |  |
|  |  |
|  |  |

**Q3: Based on above understanding, do you think further work needed in RAN3 e.g. specification impact or LS to RAN2?**

|  |  |
| --- | --- |
| Company | Comment |
| Ericsson | SN does not always know that SPR has been configured by SN. So RAN2 needs to do something. Whether it is triggered by LS or directly in RAN2 via running CR does not matter |
|  |  |
|  |  |
|  |  |

# Discussion

## SHR

Correlation of SHR and RLF:

**Target C-RNTI should be included in the Xn HANDOVER REPORT. Define as Mandatory IE.**

**Target C-RNTI should be included in the NG HANDOVER REPORT. Define as Mandatory IE.**

After checking the specifications, the moderator think it is needed.

In NG Handover Report, RLF Report is optional. NG Handover Report can be used for RRC Reestablishment without RLF report case.

The question raised online is whether the target node can know the source node information for routing via 5GC. The target node can know the source CGI from the UE history information.

#### 9.3.3.39 HO Report

This IE contains the HO report to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| Handover Report Type | M |  | ENUMERATED (HO too early, HO to wrong cell, Inter-system ping-pong, …) |  |
| Handover Cause | M |  | Cause9.3.1.2 | Indicates handover cause employed for handover from source cell |
| Source Cell CGI | M |  | NG-RAN CGI9.3.1.73 | NG-RAN CGI of the source cell for handover procedure |
| Target Cell CGI | M |  | NG-RAN CGI 9.3.1.73 | NG-RAN CGI of the target cell for handover procedure. If the Handover Report Type is set to “Inter-system ping-pong”, it contains the target cell of the inter system handover from the other system to NG-RAN nodecell |
| Re-establishment Cell CGI | C-ifHandoverReportType HoToWrongCell |  | NG-RAN CGI 9.3.1.73 | NG-RAN CGI of the cell where UE attempted re-establishment or where the UE successfully re-connected after the failure |
| Source Cell C-RNTI | O |  | BIT STRING (SIZE (16)) | C-RNTI allocated at the source NG-RAN node |
| Target Cell in E-UTRAN | C-ifHandoverReportType Intersystempingpong |  | E-UTRA CGI9.3.1.9 | E-UTRA CGI of the E-UTRAN target cell for handover procedure |
| Mobility Information | O |  | BIT STRING (SIZE (32)) | Information provided in the HANDOVER REQUEST message from the source NG-RAN node |
| UE RLF Report Container | O |  | 9.3.3.41 | The UE RLF Report Container IE received in the FAILURE INDICATION message. |

**Include timeSinceFailure in HO Report message (Xn and NG). Mandatory IE.**

SHR: time from Handover command to SHR reporting

timeConnFailure-r16 INTEGER (0..1023)

TimeSinceFailure-r16 ::= INTEGER (0..172800)

## SPR

1. Either or both the preferred T310/T312 SPR thresholds or T310/T312 timer values needs to be provided as assistance information from the source SN to the MN?
2. **Whether the objective of T304 SPR trigger is also to optimize the mobility configurations in the source node?**

**Check whether there is any stage2 text is acceptable?**

Three options:

Option 1: no need to send message to S-SN

Option 2: Stage 2: The MN always send the message to the S-SN for SN initiated PSCell change/CPC

Option 3: the MN firstly check with T-SN whether there is RACH issue, if the problem is NOT in the T-SN, the MN send message to the S-SN.

We already has the following agreement on the forwarding:

Third node -> MN -> the node which generate the threshold which configure the threshold.

Text from stage 2 BLCR:

For PSCell addition/CPA and PSCell change/CPC (MN or SN initiated), the target SN always decides the T304 trigger for SPR and performs root cause analysis. **In case of T304 trigger, the initialing node may also performs root cause analysis for mobility optimization.**

**Check further whether the above sentence for stage 2 can be agreed.**

1. SN informs the UE (e.g. with MN involvement) that PSCell Change is SN-initiated, when MN is not aware of SN SPR configuration?

**Is the MN/SN initiated flag always sent to the UE if UE support SPR? (check RAN2)**

**If yes, nothing is needed.**

**If no, further discuss whether there is any issue**

Considering that RAN2 has agreement: RAN2 agreed that the available flag can be sent via SRB3. The following can be agreed.

Add a new IE in S-NODE MODIFICATION REQUIRED message to inform the MN that an SPR is available at the UE.