**3GPP TSG-RAN WG2 Meeting #116 electronic R2-21xxxxx**

**Online, 1 – 12 Nov 2021**

**Agenda Item: 8.13 SON/MDT**

**Source: Huawei**

**Title: Report of [AT116e][820][SON/MDT] Information required by SNSCG (Huawei)**

**Document for: Discussion and decision**

# Introduction

This document is to kick off the following email discussion:

* **[AT116e][820][SON/MDT] Information required by SNSCG (Huawei)**

Focus on summary proposal 1, 2 and 3 in R2-2110637

(1) For summary proposal 1, progress on the conditions which will trigger to log RA information.

(2) progress on summary proposal 3.

(3) just final check and confirm to agree proposal 2.

 Intended outcome: Agreements

 Deadline: 05:00 UTC, Friday November 5th

**Contact Information**

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# Discussion

2.1 Discussion on summary proposal 1

In summary proposal 1, some conditions of including RA info in the existing SCG failure message are provided and they are FFS.

Summary proposal 1: Put RA information (the 5th parameter) in the existing SCG failure message when some conditions are met. FFS for conditions e.g. the UE would not include RA information to the SCG failure message in case of too late handover failure, and the UE only needs to include RA information in case of RA problem/BFR resulted RLF and HOF.

During email discussion [Post115-e][897], some companies pointed out that the condition “too late handover failure” is unclear, so it is suggested to focus on RA problem and BRF problem, i.e. when failureType=randomAccessProblem, or failureType=beamFailureRecoveryFailure-r16 (relevant ASN.1 text is shown as below).

FailureReportSCG ::= SEQUENCE {

 failureType ENUMERATED {

 t310-Expiry, randomAccessProblem,

 rlc-MaxNumRetx,

 synchReconfigFailureSCG, scg-ReconfigFailure,

 srb3-IntegrityFailure, other-r16, spare1},

 measResultFreqList MeasResultFreqList OPTIONAL,

 measResultSCG-Failure OCTET STRING (CONTAINING MeasResultSCG-Failure) OPTIONAL,

 ...,

 [[

 locationInfo-r16 LocationInfo-r16 OPTIONAL,

 failureType-v1610 ENUMERATED {scg-lbtFailure-r16, beamFailureRecoveryFailure-r16,

 t312-Expiry-r16, bh-RLF-r16, spare4, spare3, spare2, spare1} OPTIONAL

 ]]

}

**Q1: Do companies agree that the UE needs to include RA information in case that failureType is set to randomAccessProblem?**

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| Company | Agree?(Yes or No) | Comments |
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Summary: TBD

**Q2: Do companies agree that the UE needs to include RA information in case that failureType is set to beamFailureRecoveryFailure-r16?**

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| Company | Agree?(Yes or No) | Comments |
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Summary: TBD

If you think other conditions can be also considered, please provide your comments in the the table below.

**Q3: Do you have comments on other other conditions?**

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| Company | Comments |
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Summary: TBD

2.2 Discussion on summary proposal 2

One target is that (3) just final check and confirm to agree proposal 2.

Summary proposal 2: RA-InformationCommon-r16 is used as a baseline to indicate random-access related information set by the PSCell.

**Q4: Do companies agree with summary proposal 2?**

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| Company | Agree?(Yes or No) | Comments |
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2.3 Discussion on summary proposal 3

During the email discussion [Post115-e][897], whether the first 4 parameters in the RAN3 LS [2] can be implicitly indicated by existing IEs is an open issue, and then summary proposal 3 is made.

Summary proposal 3: For the 1st, 2nd, 3rd and 4th parameter, it is proposed to continue discussing whether they can be implicitly indicated by existing Ies in SCG failure information or new parameters are needed (based on observations for question 2a).

In the email report [1], some observations were provided by some companies, and it is proposed to use the observations as a baseline for collecting companies’ opinions.

**Observations:**

1. If the *failureType* in *SCGFailureInformation* message is set to *synchReconfigFailureSCG* then the *connectionFailureType* is *HOF*, otherwise *connectionFailureType* is *RLF*. Therefore *connectionFailureType* is not required in *SCGFailureInformation*.
2. As the *SCGFailureInformation* message is sent immediately to the MN, the value of *timeSCGFailure* is expected to be 0 most of the times if not all of the times. Therefore, *timeSCGFailure* is also not required in *SCGFailureInformation* message.
3. If the *failureType* in *SCGFailureInformation* message is set to *synchReconfigFailureSCG* then this is a HOF and as the *SCGFailureInformation* is sent to the MN immediately and as the UE context is still present in the network side (both at MN and SN), the network should be able to figure out that the failed PSCell is the target cell of the PSCell change procedure and also the previous PSCell that sent the PSCell change command to the UE. Thus including *failedPSCell* and *previousPSCell* is not required in the *SCGFailureInformation* message when *failureType* in *SCGFailureInformation* message is set to *synchReconfigFailureSCG*.
4. If the *failureType* in *SCGFailureInformation* message is set to a value other than *synchReconfigFailureSCG* then this is a RLF on SCG and as the *SCGFailureInformation* is sent to the MN immediately and as the UE context is still present in the network side (both at MN and SN), the network should be able to figure out that the failed PSCell is the current PSCell. Thus including *failedPSCell* and *previousPSCell* is not required in the *SCGFailureInformation* message when *failureType* in *SCGFailureInformation* message is set to a value other than *synchReconfigFailureSCG*.
5. we think one issue to purely rely on the existing failureType is that UE will miss categorized an reconfigurationWithSyncFailure(will be classified as HOF) as RandomAccessProblem(will be classified as RLF), because when deciding SN failure cause, UE will not check T304 status. We can reuse failureType, but with a small enhancement that one indication can be included to indicate whether T304 is running.

**Q5: Do companies agree with the above observation 1), 2), 3), 4) and 5)?**

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Summary: TBD

If observation 1), 2), 3) and 4) are agreeable, new parameters are not needed and it means the first 4 parameters in the LS [2] can be indicated by existing IEs. Otherwise, new parameters may be needed.

**Q6: What parameters do companies want to introduce? And please provide some explanations.**

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| Company | New parameters? | Comments |
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Summary: TBD

# Conclusions

[To be added]

# Reference

[1] R2-2110637 [Post115-e][897][SONMDT] Modeling aspects related to information required by SNSCG (Huawei) Huawei

[2] R2-2102639/R3-211332 LS on information needed for MRO in SCG Failure Report