**3GPP TSG-RAN WG2 Meeting #109bis R2-200xxxx**

**Elbonia, Online, 20 -30 April 2020**

**Agenda item: 7.3.2.2**

**Source: Intel Corporation**

**Title: Report of [AT109bis-e][206][MOB] Flagging and discussion of DAPS CP open issues for RRC (Intel)**

**Document for: Discussion and Decision**

# Introduction

This is the email discussion report on below email discussion:

* [AT109bis-e][206][MOB] Flagging and discussion of DAPS CP open issues for RRC (Intel)

Scope:

* + - Companies flagging critical DAPS CP issues requiring Web conference discussion
    - Discuss the remaining CP/RRC open issues identified in email discussion report of Post109#11 in [R2-2003371](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003371.zip).

      Intended outcome:

* + - Discussion summary document in [R2-2003846](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003846.zip), including resolutions to open issues and identification of non-critical issues that should no longer be pursued in Rel-16

            Deadlines for flagging issues for Web conference discussion:

* + - Flagging of issues for the Web conference: Tuesday 2020-04-21 10:00 UTC
    - Rapporteur summary:  Tuesday 2020-04-21 11:30 UTC

Deadlines for providing comments and for rapporteur inputs:

* + - Initial deadline (for companies' feedback):  Thursday 2020-04-23 12:00 UTC
    - Initial deadline (for rapporteur's summary in [R2-2003846](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003846.zip)):  Friday 2020-04-24 08:00 UTC
    - Proposed agreements in [R2-200384](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003842.zip)6 indicated for email agreement and not challenged until Tuesday 2020-04-28 12:00 UTC will be declared as agreed by the session chair.

Based on Chairman’s guidance, the email discussion is splited into 3 phases:

**Phase 1** : please indicate whether any issues need to be discuss in the Web conference; Tuesday 2020-04-21 10:00 UTC

**Phase 2**: please provide your comments on open issues; Thursday 2020-04-23 12:00 UTC

**Phase 3:** double check the proposed agreements; Tuesday 2020-04-28 12:00 UTC

# Phase 1- flag issues

**Below are proposals from [1]:**

**To be agreed:**

Proposal S2.4: T312 in source is stopped upon executing a reconfiguration with sync even if DAPS is configured; No specificiation impact.

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Proposal S2.6-5-6: Do not introduce bye message from UE to the source upon UL switching.

Proposal S3.1: LTE DAPS+ LTE RACH-less is not allowed.

**RRC impacts:**

RRC S2.2-1: Condition for *statusReportRequired* should be changed to Rlc-AM-UM “For RLC AM or RLC UM ( if dapsConfig is configured for this bearer), the field is optionally present, need R. Otherwise, the field is absent.”.

RRC S2.3-1: Do not capture in specification “stop RLM in source after RACH successful to target PCell”, and remove the EN “TBC on how/whether to capture stop RLM in source after RACH successful to target PCell”.

RRC S2.3-2: moreThanoneRLC is not applied for DAPS HO, remove the EN “FFS on moreThanonRLC in pdcp-Config” and clarify in the field description “This field is not present if dapsConfig is configured for this bearer.”

RRC S2.3-3: Agree below principle on the terminoligy and to be confirmed in ASN.1 review, e.g. whether to change source/target to source/target MCG;

**Case 1** L1 configuration: “source or target" should be used since it is cell specific configuration;

**Case** 2 MAC/RLC/PDCP (Key, security/ROHC)/SDAP configuration: “source or target" could be used since they are common for all cells of source or target;

**Case** 3 C-RNTI, timers (e.g. T301, T310, T311) and constants (e.g. N310, N311): “source/target SpCell” should be used since it is PCell configuration;

**Case** 4 BCCH/MIB (5.3.5.5.2): “source/target SpCell” should be used since it is PCell configuration;

**Case** 5 RLF, and “revert back to the configuration used in source PCell”: “source/target SpCell” should be used since we only RLF in PCell instead of SCells;

**Case** 6 “revert back to the configuration used in source PCell”: “source PCell” could be used as legacy;

**Case** 7 SRB/DRB, RRM: “source or target" could be used since they are common for all cells of source or target;

RRC S2.3-5-3: For DAPS HO, reestablishPDCP is not needed for SRB, no matter whether key is changed or not.

RRC S2.3-8-1: When resume SRB upon DAPS HO failure, the old stored RRC message if any, (i.e.. the PDCP PDUs for SRB) shall be discarded;

RRC S2.5-1: To capture RAN1 parameters p-DAPS-FR1, p-DAPS-FR2 and UplinkPowerSharingDAPS-HO-mode and name them as “p-DAPS-Source, p-DAPS-Target and UplinkPowerSharingDAPS-HO-mode”

RRC S2.5-2: powerControlMode in HO preparation message ischanged to ENUMERATED {semi-static-mode1, semi-static-mode2, dynamic }

RRC S3.3: Agree below RRC changes:

3> consider radio link failure to be detected for the source MCG i.e. source RLF;

~~4~~3> suspend all DRBs in the source;

~~4~~3> release the source connection.

RRC S3.4-1: Do not add 2> If dapsConfig is configured for any DRB when capturing UL switching indication in RRC;

RRC S3.4-2: To discuss whether to UL switching indication in RRC as

3> for each DRB configured with *dapsConfig*, request uplink data switching to the PDCP entity, as specified in TS 38.323 [5];

RRC S3.5: Do not try to align the handling of SRB and non-DAPS DRB upon receiving DAPS HO command and upon fallback;

RRC S3.6: Change the handling on SRB for DAPS based on the below order:

1. *Regardless of security key change,*

* *Establish a PDCP entity for the target with state variables continuation as specified in TS 38.323 [5], with the same configuration, the state variables and security configuration as the PDCP entity for the source;*

1. *If reestablishPDCP for SRB is configured(i.e. security key change)*

* *The state variables will be reset by PDCP re-establishement.*

1. *Otherwise, the state variables are left as those of the source due to no PDCP re-establishment and it implies the case without security key change*

RRC S3.7-1: For non-DAPS DRB handling, do not agree that PDCP only reestablishment when RACH is successfully completed in target:

**Further discussion:**

Disc S2.3-6: To be discussed whether source can provide both original and downgrade source configuration to target;

Disc S3.8: To discuss whether the coordination on maxSCH-TB-BitsDL, maxSCH-TB-BitsUL is needed for NR since for NR the supported max DL/UL data rate for each CC can be derived from the L1 parameters included in the FeatureSet (according to the calculation defined in 38.306 4.1)

RRC S3.10: To discuss whether a new bit in RRC is needed to control second PDCP status report.

RRC S3.11: To discuss whether Network can trigger the subsequent HO after a DAPS HO before source cell has been released. If yes, whether source is released in the new HO command.

**Question 2.1-1: Any issue need to be discussed in the meeting?**

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| --- | --- | --- |
| **Company** | **Issues** | **Reason** |
| Huawei, HiSilicon | RRC S3.11 | It would be good to align companies’ understanding on subsequent RRC procedure. |
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**Question 2.1-2: Any other issues not covered in [1], and need to be discussed in the meeting?**

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| **Company** | **Issues** | **Reason** |
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# Phase 2 discusion

# Conclusion

The followings are proposed:

To be agreed:

Further discussion:

# References

1. [R2-2003371](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003371.zip), Report of [Post109e#11][MOB] Resolving open issues for DAPS (Intel), Intel Corporation