3GPP TSG-RAN WG3 Meeting #114-e R3-22xxxx

E-meeting, January 17 – 25, 2021

Agenda Item: 13.1

Source: Qualcomm (moderator)

Title: CB: # 1301\_IAB\_BL\_CRs

Document for: Discussion

# Introduction

|  |
| --- |
| **CB: # 1301\_IAB\_BL\_CRs****- Endorse BL CRs if agreeable****- Check work plan in** [**R3-220291**](file:///C%3A%5Ctemporary%5CUsers%5Cghampel%5CAppData%5CLocal%5CTemp%5CTemp2_RAN3_114bis-e_agenda_20220115.zip%5CInbox%5CR3-220291.zip)**, revise if needed****- Can prioritization of issues be made on the basis of the list provided by the rapporteur?** **- To facilitate progress towards Rel17 closure, can any of the less critical issues be considered out of scope of Rel17?**(Qualcomm - moderator)[NWM] Summary of offline disc [R3-221048](file:///C%3A%5Ctemporary%5CUsers%5Cghampel%5CAppData%5CLocal%5CTemp%5CTemp2_RAN3_114bis-e_agenda_20220115.zip%5CInbox%5CR3-221048.zip) |

This CB#1301 discussion has two phases:

**Phase 1: Identify potentially achievable agreements for online discussion.**

**Phase 2: TBD**

The deadline for Phase 1 is Thursday, January 20, 23:59:59 UTC. This allows the moderator to prepare some proposals on Friday for Monday’s online session.

The deadline for Phase 2 is officially the same as for all email discussions, i.e., Monday, January 24, 13:00 UTC. We may want to allocate more time to update the ST2 TP in Ph2.

The discussion includes all contributions listed in the reference section.

# For the Chairman’s Notes

Propose the following:

**P1: BL CR to TS 38.420 in R3-220012 is endorsed.**

**P2: BL CR to TS 38.470 in R3-220015 is endorsed.**

**P3: Endorse BL CR to TS38.401 in R3-220063 after removal of the deleted changes in the definition of Boundary IAB-node: “~~. whose IAB-DU terminates the F1 interface at an IAB-donor-CU different than its parent gNB-DU.~~”**

**P4: BL CR to TS 38.423 in R3-220064 is endorsed.**

**P5: BL CR to TS 38.473 in R3-220084 is endorsed.**

**P6: Workplan in R3-220291 is noted.**

**P7: The draft CR to TS 38.300 in R3-22xxxx is endorsed.**

# PHASE 1: Discussion

## 3.1 BL CR TS 38.420

|  |  |  |
| --- | --- | --- |
| [R3-220012](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220012.zip) | CR on CP-UP separation for Rel-17 IAB (Nokia, Nokia Shanghai Bell, Samsung, Verizon, Qualcomm Incorporated, CATT, ZTE, Fujitsu, AT&T, KDDI, Lenovo, Motorola Mobility, LG Electronics) | CR0020r5, TS 38.420 v16.0.0, Rel-17, Cat. B |

|  |  |
| --- | --- |
| ***Reason for change:*** | Stage-2 CR to support CP-UP separation over Xn for Rel-17 IAB |
|  |  |
| ***Summary of change:*** | In last RAN3 meeting (RAN3#110e), the following agreements were achieved to support the CP-UP separation:**In Rel-17 eIAB, the following two scenarios are supported for CP-UP separation:** **- Scenario 1: F1-C uses NR access link via M-NG-RAN node (non-donor node) + F1-U uses backhaul link via S-NG-RAN node (donor node)****- Scenario 2: F1-U uses backhaul link via M-NG-RAN node (donor node) + F1-C uses NR access link via S-NG-RAN node (non-donor node)**Scenario 1 is very similar to EN-DC case, so to enable F1-C transfer, a new XnAP procedure, i.e., F1-C Traffic Transfer, is added.  |
|  |  |
| ***Consequences if not approved:*** | Cannot support CP-UP separation over Xn for Rel-17 IAB |
|  |  |
| ***Clauses affected:*** | 3.2, 6.2.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |

|  |  |
| --- | --- |
| ***This CR's revision history:*** | Rev 1: updated sourcing companyRev 2: updated for RAN3#112-eRev 3: updated for RAN3#113-eRev 4: updated for RAN3#114-eRev 5: updated for RAN3#114bis-e |

**It seems nothing has changed to this BL CR since the last meeting. In any case:**

**Q1: Do you support this BL CR update? If not, why not.**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung  | Yes  |  |
| **Ericsson** | OK |  |
| ZTE | Yes  |  |
| Fujitsu | Yes |  |
| Lenovo | Yes |  |
| Nokia  | Yes  |  |
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**P1: BL CR to TS 38.420 in R3-220012 is endorsed.**

## 3.2 BL CR TS 38.470

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| [R3-220015](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220015.zip) | CP-based Congestion Mitigation for IAB Network (ZTE) | CR0076r3, TS 38.470 v16.5.0, Rel-17, Cat. B |
| ***Reason for change:*** | Stage-2 CR to support CP-UP separation over Xn for Rel-17 IAB |
|  |  |
| ***Summary of change:*** | In last RAN3 meeting (RAN3#110e), the following agreements were achieved to support the CP-UP separation:**In Rel-17 eIAB, the following two scenarios are supported for CP-UP separation:** **- Scenario 1: F1-C uses NR access link via M-NG-RAN node (non-donor node) + F1-U uses backhaul link via S-NG-RAN node (donor node)****- Scenario 2: F1-U uses backhaul link via M-NG-RAN node (donor node) + F1-C uses NR access link via S-NG-RAN node (non-donor node)**Scenario 1 is very similar to EN-DC case, so to enable F1-C transfer, a new XnAP procedure, i.e., F1-C Traffic Transfer, is added.  |
|  |  |
| ***Consequences if not approved:*** | Cannot support CP-UP separation over Xn for Rel-17 IAB |
| ***This CR's revision history:*** | Rev 1: updated sourcing companyRev 2: updated for RAN3#112-eRev 3: updated for RAN3#113-eRev 4: updated for RAN3#114-e |

**It seems nothing has changed to this BL CR since the last meeting. In any case:**

**Q2: Do you support this BL CR update? If not, why not.**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung  | Yes  |  |
| **Ericsson** | OK |  |
| ZTE | Yes  |  |
| Fujitsu | Yes |  |
| Lenovo | Yes |  |
| Nokia  | Yes  |  |
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**P2: BL CR to TS 38.470 in R3-220015 is endorsed.**

## 3.3 BL CR TS 38.401

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| --- | --- | --- |
| [R3-220063](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220063.zip) | BL CR to TS 38.401 on support of eIAB (Huawei) | CR0179r7, TS 38.401 v16.8.0, Rel-17, Cat. B |

|  |  |
| --- | --- |
| ***Reason for change:*** | Support the inter-donor IAB topology update for Rel-17 eIAB |
|  |  |
| ***Summary of change:*** | * **RAN3#112e**
* Add the procedure for the IAB inter-donor migration.
* **RAN3#113e**
* Add MOBIKE in Stage-2 for IAB intra-donor migration.
* **RAN3#114e**
* Update the definition of boundary IAB node (Rapporteur)
* Update the MOBIKE operation in case IPsec tunnel mode is used for TNL protection
 |
|  |  |
| ***Consequences if not approved:*** | Cannot support the inter-donor IAB topology update for Rel-17 eIAB in stage 2 spec. |
|  |  |
| ***Clauses affected:*** | 3.1; 8.2.3.1; 8.xx (new); 8.xx.1(new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |

|  |  |
| --- | --- |
| ***This CR's revision history:*** | Rev -:* Add the procedure for the IAB inter-donor migration, according to agreements in RAN3-112e meeting.

Rev 1: R3-212971* Rewording step 13 as ” The F1-C and F1-U are switched to the target path, details are FFS”
* Add an Editor note after step 13, to indicate that whether to align step 13 with the corresponding R16 text.
* Add “may” in step 15, and remove the FFS part.

Rev 2: R3-213178* Submit to the RAN3-112e meeting, rebase the v16.6.0 of the latest spec.

Rev 3: R3-214507* add MOBIKE in Stage-2 related TP agreed in R3-214398

Rev 4: R3-214656* Submit to the RAN3-114e meeting, rebase the v16.7.0 of the latest spec.

Rev 5: R3-216061* Update the definition of boundary IAB node

Rev 6: R3-216260* To merge TP agreed in R3-216090

Rev 7: R3-220063* Submit to the RAN3-114bise meeting, rebase the v16.8.0 of the latest spec.
 |

**Q3: Do you support this BL CR update? If not, why not.**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung  |  | Please remove the changes on changes **Boundary IAB-node:** anIAB-node with one RRC interface terminating at a different IAB-donor-CU than the F1 interface. This definition applies to partial migration and inter donor redundancy and inter donor RLF recovery. |
| **Ericsson** | OK |  |
| ZTE | Yes  |  |
| Fujitsu | Yes |  |
| Lenovo | Yes |  |
| Nokia  | Yes  |  |
|  |  |  |
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|  |  |  |

**P3: Endorse BL CR to TS38.401 in R3-220063 after removal of the deleted changes in the definition of Boundary IAB-node: “~~. whose IAB-DU terminates the F1 interface at an IAB-donor-CU different than its parent gNB-DU.~~”**

## 3.4 BL CR TS 38.423

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| [R3-220064](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220064.zip) | BL CR to XnAP on Rel-17 eIAB (Samsung, Nokia, Nokia Shanghai Bell, Verizon, Qualcomm Incorporated, CATT, ZTE, Fujitsu, AT&T, KDDI, Lenovo, Motorola Mobility, LG Electronics) | CR0532r8, TS 38.423 v16.8.0, Rel-17, Cat. B |

|  |  |
| --- | --- |
| ***This CR's revision history:*** | Rev#1:* Add “**Editor Note: FFS on potential revision to this procedure due to, e.g., RAN2 progress, etc**” in section 8.x.1.1.

Rev#2:* Change the Editor Note to “**Editor Note: FFS on potential revision to this procedure due to, e.g., RAN2 progress regarding simultaneous connectivity to two donors, etc.**”

Rev#3:* Remove Ericsson as co-signer

Rev#4 (pre-RAN3#112e)* Update cover page
* Re-base on TS38.423v16.5.0
* Incoporate R3-211327 agreed in RAN3#111e

Rev#5 (pre-RAN3#113e)* Re-base on TS38.423 v16.6.0

Rev#6 (pre-RAN3#114e)Re-base on TS38.423 v16.7.0 Rev#7(Post-RAN3#114e)* Incorporate R3-216142 agreed in RAN3#114e
* Change ProtocolIE-ID of id-Activated-Cells-List and id-IAB-MT-Cell-List to ‘xxx’

Rev#8 (Pre-RAN3#114bis-e)* Rebase v16.8.0
 |

**Q4: Do you support this BL CR update? If not, why not.**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung  | Yes  |  |
| **Ericsson** | See comment | Perhaps the wording “boundary IAB-node” rather than just “IAB-node” should be used where it is appropriate, e.g., in the F1-C traffic transfer procedure.We propose some further updates to the BL CR in AI 13.4.1 (CB#1307). |
| ZTE | Yes  |  |
| Fujitsu | Yes |  |
| Lenovo | Yes |  |
| Nokia  | Yes  |  |
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The moderator believes that this BL CR can be endorsed and the recommended updates can be done as part of CB#1307.

**P4: BL CR to TS 38.423 in R3-220064 is endorsed.**

## 3.5 BL CR TS 38.473

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| [R3-220084](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220084.zip) | CP-based Congestion Indication for IAB Networks (Ericsson) | CR0737r11, TS 38.473 v16.8.0, Rel-17, Cat. B |

|  |  |
| --- | --- |
| ***Reason for change:*** | Enabling CP-based congestion detection in IAB Networks |
|  |  |
| ***Summary of change:*** | Adding a congestion indicator in GNB-DU STATUS INDICATION message. |
|  |  |
| ***Consequences if not approved:*** | CP-based congestion detection in IAB Networks not supported. |
|  |  |
|  |  |
| ***This CR's revision history:*** | Rev1-2: changes during the RAN3#111-e meetingRev3: rebased on TS 38.473 v16.5.0Rev4: corrected the meeting number and dateRev5: used the newest CR template (CR-Form-v12.1)Rev6: included the agreements from RAN3#112-eRev7: rebased on TS 38.473 v16.6.0Rev8: rebased on TS 38.473 v16.7.0Rev9: included R3-216184, agreed at the RAN3#114-eRev10: changed the author of all change marks to ‘Author’Rev11: rebased on TS 38.473 v16.8.0 |

**Q5: Do you support this BL CR update? If not, why not.**

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comment |
| Samsung  | Yes |  |
| **Ericsson** | OK |  |
| ZTE | Yes  |  |
| Fujitsu | Yes |  |
| Lenovo | Yes |  |
| Nokia  | Yes  |  |
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**P5: BL CR to TS 38.473 in R3-220084 is endorsed.**

## 3.6 Workplan

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| --- | --- | --- |
| [R3-220291](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220291.zip) | Updated Workplan for Rel-17 IAB (Qualcomm Incorporated (WI Rapporteur)) | discussion |

The workplan draft was floated on the reflector before deadline. No comments were received.

**Q6: Do you have any comments on the workplan?** **Can the items on the workplan be prioritized (critical vs. less critical)? Which of the less critical items could be de-prioritized for Rel-17?**

|  |  |
| --- | --- |
| Company | Comment |
| Samsung  | Normally, we only note the workplan, and the workplan can be updated if some agreeable comments are received. However, we do not make decision on de-prioritize some items based on work plan. It is a good practice to categorize the issues to Critical and less Critical for the discussion and progress. However, this does not mean less critical issue is deprioritized. Even for this meeting, we are still discussing the less critical issues. Thus, we suggest to not make any decision on deprioritize some issues based on work plan.  |
| **Ericsson** | Revoking is a critical issue. |
| ZTE | Actually, we are not sure rules for defining critical and less critical issues. What will we do for less critical issues, e.g. does not discuss them if time is limited? Besides, all issues about inter-donor-DU rerouting are less critical. We disagree because these issues must be discussed. And there are some tricky issues in this topic as well.We agree with SS’s suggestion. |
| Fujitsu | Agree with Samsung. |
| Lenovo | Agree with Samsung. |
| Nokia | The RAN3 part of the updated plan is for this meeting. We believe companies have considered it for contribution submission. So the work plan can be noted.  |
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**P6: Workplan in R3-220291 is noted.**

## 3.7 Draft CR TS 38.300

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| [R3-220292](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220292.zip) | draft CR for 38.300 on Rel-17 IAB enhancements (Qualcomm Incorporated) | discussion |

|  |  |
| --- | --- |
| ***Reason for change:*** | RAN3 introduced additional functionality in Rel-17 IAB such as inter-donor partial migration, inter-donor RLF recovery, inter-donor redundancy and CP-UP separation. |
|  |  |
| ***Summary of change:*** | Addition of St2 description related to inter-donor partial migration, inter-donor RLF recovery, inter-donor redundancy and CP-UP separation. Some corrections of Rel-16 text.  |
|  |  |
| ***Consequences if not approved:*** | Rel-17 IA features of inter-donor partial migration, inter-donor RLF recovery, inter-donor redundancy and CP-UP separation cannot be supported. |

This draft is new. Please read it and provide feedback.

A copy has been uploaded to the draft folder.

**Q6: Do you have any comments on draft CR?**

|  |  |
| --- | --- |
| Company | Comment |
| Samsung  | Some comments or revisions:**Inter-donor partial migration:** Migration of an IAB-MT to a parent node underneath a different IAB-donor-CU while the collocated IAB-DU and descendent IAB-node(s), if any, are terminated at the initial IAB-donor-CU.1. For topology definition, it seems not be applicable for boundary node. Maybe a better way is to define it from the F1-termination point of view, e.g.,

**Topology:** The unison of all IAB-nodes and IAB-donor-DUs that terminate F1 interface to a single IAB-donor-CU.3.The IAB-node may exchange F1-C traffic with the IAB-donor via the backhaul link and/or via the access link with the gNB. In the latter case, the F1-C traffic is carried over NR RRC between IAB-node and gNB and via XnAP between gNB and IAB-donor. For F1-C traffic via access link, SRB2 is used in case the gNB has MN role and split-SRB2 in case the gNB has SN role.4.The procedures for establishment of redundant transport of F1-C for IAB-nodes using NR-DC and EN-DC are captured in TS 37.340 [zz] and TS 38.401 [4], respectively. |
| **Ericsson** | The CR front page template is outdated, v12.1 should be used.We left some further edits in the file. |
| Fujitsu | A typo:**Inter-donor partial migration:** Migration of an IAB-MT to a parent node underneath a different IAB-donor-CU while the boundary IAB-DU and descendent IAB-node(s), if any, are terminated at the initial IAB-donor-CU. |
| Lenovo | 1: For the definition of Inter-donor partial migration, we also suggest changing the “boundary IAB-DU” with “collocated IAB-DU”.2: 4.7.4.3 Topological RedundancyThe IAB-node may have redundant routes to the IAB-donor-CU(s). |
| Nokia | The boundary node definition can simply reference to 38.401, similar to IAB-donor-CU/DU in the section. Also added some editorial corrections. Please find the updated CR. |
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**P7: The draft CR to TS 38.300 in R3-22xxxx is endorsed.**

# PHASE II: Convergence of PH1

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# References

|  |  |  |
| --- | --- | --- |
| [R3-220012](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220012.zip) | CR on CP-UP separation for Rel-17 IAB (Nokia, Nokia Shanghai Bell, Samsung, Verizon, Qualcomm Incorporated, CATT, ZTE, Fujitsu, AT&T, KDDI, Lenovo, Motorola Mobility, LG Electronics) | CR0020r5, TS 38.420 v16.0.0, Rel-17, Cat. B |
| [R3-220015](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220015.zip) | CP-based Congestion Mitigation for IAB Network (ZTE) | CR0076r3, TS 38.470 v16.5.0, Rel-17, Cat. B |
| [R3-220063](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220063.zip) | BL CR to TS 38.401 on support of eIAB (Huawei) | CR0179r7, TS 38.401 v16.8.0, Rel-17, Cat. B |
| [R3-220064](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220064.zip) | BL CR to XnAP on Rel-17 eIAB (Samsung, Nokia, Nokia Shanghai Bell, Verizon, Qualcomm Incorporated, CATT, ZTE, Fujitsu, AT&T, KDDI, Lenovo, Motorola Mobility, LG Electronics) | CR0532r8, TS 38.423 v16.8.0, Rel-17, Cat. B |
| [R3-220084](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220084.zip) | CP-based Congestion Indication for IAB Networks (Ericsson) | CR0737r11, TS 38.473 v16.8.0, Rel-17, Cat. B |
| [R3-220291](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220291.zip) | Updated Workplan for Rel-17 IAB (Qualcomm Incorporated (WI Rapporteur)) | discussion |
| [R3-220292](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_114bis-e%5CDocs%5CR3-220292.zip) | draft CR for 38.300 on Rel-17 IAB enhancements (Qualcomm Incorporated) | discussion |