3GPP TSG-RAN WG3 #111-e R3-211002

E-meeting, 25 January – 4 February 2021

**Agenda item: 13.2.1.2**

**Source: CATT**

**Title: Summary of offline discussion on CHO and DAPS**

**Document for: Approval**

# Introduction

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| **CB: # 35\_IAB\_CHO-DAPS**  **CATT**  **Descendant nodes and UEs receive RRC reconfiguration messages before migrating IAB node executes CHO.**  **Migrating IAB node sends BAP indication message to child node to indicate which set of configuration is validated by child node.**  **further discuss child node CHO in inter-CU migration.**  **further analyze the two “DAPS-like” scenarios.**  **E///**  **If RAN3 sees the need to address the RLF case, the regular reestablishment procedure should be used. To reduce the interruption time due to context fetching, the source CU can early provide (i.e. before the RLF occurs) the target CU with all the IABs/UEs contexts potentially involved.**  **CHO can be used as specified in Rel-16 and should not be further enhanced.**  **legacy Rel-16 DAPS cannot be directly applied to IAB nodes.**  **A DAPS-like solution (i.e., Dual IAB Protocol Stack DIPS) is introduced for addressing load balancing (both DL and UL) and RLF.**  **DIPS is based on:**  **a. Two independent protocol stacks (RLC/MAC/PHY)**  **b. One or two independent BAP entities with some common and some independent functionalities.**  **c. Each CU allocates its own resources (e.g., addresses, BH RLC channels, etc.) without the need for coordination, and configures each protocol stack.**  **\*\*\*\*\***  **- RRC Reestablishment procedure is baseline for inter-donor BH RLF recovery?**  **- No need to enhance Rel-16 CHO for IAB?**  **- align discussion with CB 34 (related topics)**  (CATT - moderator)  Summary of offline disc [R3-211002](https://ericsson-my.sharepoint.com/personal/filip_barac_ericsson_com/Documents/WORK/3GPP.exe/Users/ghampel/AppData/Local/Microsoft/Windows/INetCache/AppData/Local/Microsoft/Windows/INetCache/liuziqiao/AppData/Local/Temp/Temp1_RAN3_111-e_agenda_with_Tdocs20210122_1640.zip/Inbox/R3-211002.zip) |

Please comment before the **Thursday, January 28th at 23.59 UTC.**

# For the Chairman’s Notes

Propose to capture the following: …

# Discussions

## CHO

CHO in RLF scenario is supported for IAB in R16. In last meeting, we has the following agreement “Rel-16 CHO can be considered as baseline for the discussion of CHO for IAB; further analysis is expected.” [4] provides the benefit of CHO, and proposes some enhancements to support inter-donor-DU CHO. [1] mainly analyzes intra-donor-CU CHO for descendant node and given a flow chart. While [3] mentioned that we should not discuss intra-donor CHO until further progress has been made with inter-donor IAB-node migration using Xn handover procedure. [5] thinks the legacy CHO procedure can be reused, and the IAB donor CU can balance the fast recovery and resource reservation by implementation. In addition, [2] also considers CHO can be used as specified in Rel-16 and should not be further enhanced. It proposes that regular reestablishment procedure should be used in RLF case. Due to the opposite attitude to CHO, moderator suggests collecting the companies’ views about whether to consider the enhancement of CHO should be discussed first.

**Q1: Please share your view on whether the CHO enhancement for intra-donor-CU RLF should be discussed in R17.**

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| **Company** | **Answer** | **Comments** |
| QC | See comment | The contributions on this topic are very controversial. We propose to agree on the following WF:  **Proposal: Rel-16 CHO is supported for INTRA-donor migration of IAB-MT.**  After we have converged on this proposal, we can discuss further. |
| Samsung |  | We are fine with QC’s proposal. |
| **Ericsson** |  | We support QC proposal. |
| ZTE |  | QC’s proposal is ok.  In R16 IAB, IAB-node will perform RLF recovery procedure when intra-donor-CU RLF occurs. In our view, if CHO is configured for the IAB-node and the target cell is a candidate cell included in the CHO configuration, we think the IAB-node should perform CHO with priority. |
| Huawei |  | We are not sure why the CHO is for RLF? CHO is some enhancement for the IAB migration, not just for RLF case. We are open to discuss the intra-CU CHO and inter-CU CHO in R17, but fine with QC’s proposal for some progress. |
| Nokia |  | Agree with QC |
| LGE |  | Fine with QC’s proposal |
| CATT |  | It is ok for QC’s proposal. However, we should note that the R16 intra-CU CHO is not enough for IAB, e.g., does the child node execute CHO? |
| Intel |  | Agree with QC |
| Futurewei |  | We are fine with QC’s proposal as a starting point of the discussion. |

CHO implies that the candidate target cells are prepared for the incoming HO, i.e., the candidate target cell performs admission control and reserves resources for the UE/IAB node. That is because the UE/IAB node transmits directly an RRCReconfigurationComplete to the target CU when a CHO is executed. If resource reservation is waived for CHO, the IAB node would attach to the target CU even if the target CU has not admit it. [2] propose that if it is assumed that the target CU is not required to be prepared for the CHO, then the IAB node should first send RRCReestablishmentRequest in order to allow the IAB node to determine whether to admit or not the incoming IAB node. To reduce the interruption time due to context fetching, the source CU can early provide (i.e. before the RLF occurs) the target CU with all the IABs/UEs contexts potentially involved.

**Q2: Please share your view on early context fetching to reduce the interruption time in RLF case. i.e., RAN3 considers the enhancement of RLF rather than CHO.**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | We have the following concerns:  1. We believe that what is proposed is early context pushing rather than context fetching.  2. Context fetching or pushing is not needed for UEs and descendant nodes if F1 stays at the old donor CU.  3. If F1 needs to be transferred, it can be done over time after RRC Reestablishment. |
| Samsung |  | We didn’t see the necessity of early context fetching. In contrast, early context fetching will cause additional resource waste.  If the UE/child node context has to be migrated to the new donor CU, it can be performed after RRC reestablishment. To reduce the service interruption, it can be considered on top of this basis. |
| **Ericsson** | Let us clarify | **If RAN3 really thinks that we need to define a method for inter-donor RLF recovery**, then this should not be based on CHO, but on the regular RRC Reestablishment procedure.  It **cannot be assumed that CHO is the only solution for RLF recovery**. That is because CHO comes with the cost that the target donor has to be prepared in advance, reserve resource and do admission control for the incoming IAB node and its descendant IAB nodes/UEs.  Hence RAN3 should also consider the case in which resource reservation is waived, and in that case CHO cannot be used since the IAB node sends directly an RRCReconfigurationComplete (not an RRCReestablishmentRequest) to the target node which in fact does not allow the target CU to perform admission control for the incoming migrating nodes.  For this reason, RAN3 should also consider the use of plain RRC Reestablishment procedure, rather than CHO, where the early context fetching seems beneficial to reduce the interruption time needed to fetch the context.  Regarding **Samsung´s comment**, we do not believe that the early context fetching procedure wastes resources. The amount of information related to UE/IAB nodes contexts that the source and target CU should exchange in the early context fetching is the same as for the HO preparation in CHO. |
| ZTE | Disagree | Disagree with early context fetching. From the perspective of source CU, which IAB-node would occur RLF is unpredictable, let along the target CU the IAB-node would re-establish with. So the early context fetching is hard to realize, unless the source CU sends the context to all its neighbouring CUs. |
| Huawei |  | Share view as QC ,SS and ZTE, the early context fetching/pushing seems not necessary. The source CU may need to push the IAB node context as well as context for all descendent nodes/UEs to many neighboring CUs in advance, but the BH RLF does not occur. So suggest to fetch context after RRC Reestablishment. |
| Nokia |  | Agree with QC and ZTE.  This can be discussed later, e.g. if the migration discussion conclude the UE context remains in Source Donor, this is not needed. |
| LGE |  | Agree with Nokia, QC.  It can be checked later. |
| CATT | See comments | Agree with the majority companies.  We cannot see the benefit of early context fetching compared with CHO. This method avoid the resource reservation but increase the context exchanged to all neighbor nodes. |
| Intel |  | Since the source CU doesn’t know when RLF will happen, so it must keep updating the target CU whenever there is a change in IABs/UE context. This might generate more signaling traffic than desired. Moreover, since IAB is not mobile, RLF happens less often. RAN3 should analyze whether this worth the effort to save interruption time |
| Futurewei |  | Agree with comments from QC and other companies. We don’t see any value to specify an early context push. |

If companies think RAN3 can further discuss the enhancement of inter-donor-DU CHO, the following parts are about the detail of enhancement.

[4] proposes that the descendant IAB node and UE could keep the connection with migration IAB node without triggering CHO for **intra donor DU**. Donor CU only need to reconfigure the BH RLC channels and BAP routing entries for descendant IAB node after migration IAB node completes the CHO.

However, if the migration IAB node performs **inter-donor-DU** HO, the descendant nodes need to be configured with default UL BH RLC channel, default UL BAP routing ID, and new IP address which is included in CHO configuration from donor-CU.

**Q3: Please share your view on the default configuration is included in CHO configuration for descendant nodes in inter-donor-DU HO.**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | If we adopt Rel-16 CHO as baseline for IAB, this would already be supported in present RRC. |
| Samsung |  | If the default configuration is referring to the F1-C, it has been supported in the Rel-16 RRC. While if the default configuration is also referring to F1-U, we think it may be beneficial since the F1-U transmission can be started as long as the migrated IAB node re-connects to the network. |
| **Ericsson** |  | Already supported in Rel16.  There is no need for any further enhancements or baseline proclamations. |
| ZTE | Agree | Here the default configuration and new IP address are mainly used to configure UL mapping for F1-C traffic on the target path, e.g. IKE handshake, SCTP chunks, during the handover preparation procedure.  The default configuration included in the CHO configuration is per donor-DU. Because the CHO configuration includes configuration corresponding to several donor-Dus, and thus the default configuration is per donor-DU. |
| Huawei |  | The default configuration, including default UL BH RLC channel, default UL BAP routing ID, and new IP address are necessary to be provided to the IAB-node and its descendent nodes. But as pointed out by above companies, the signaling has already be supported in R16. |
| Nokia |  | Agree with QC. It is unclear what is missing in the spec. |
| LGE |  | Should be clarified what is missing in Rel-16 |
| CATT |  | It seems to have been supported in R16 |
| Intel |  | Agree with QC |
| Futurewei |  | Agree with QC’s comment. This is already supported in the spec |

[1] thinks child nodes and UEs cannot trigger CHO since the links between them are still good even if the migrating IAB node suffers RLF. It proposes pre-configuration of descendant nodes and Ues before the migrating IAB node executes CHO. It means that descendant nodes will receive RRC reconfiguration messages from donor CU via source path and suspend the new configuration.

**Q4-1: Please share your view on the descendant nodes and UEs receive RRC reconfiguration messages before migrating IAB node connects to another path**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | In the last meeting it was agreed that the RRC Reconfiguration to the descendant node can be transferred via the source path. This is also being discussed in CB#36. |
| Samsung |  | * Descendant node   Whether the RRCReconfiguration can be transmitted via source path or target path depends on when the migration occurs. If the network side can ensure that RRCReconfiguration can be transmitted to the descendant nodes before sending CHO RRCReconfiguration to the migrated IAB node, it is good. However, we are wondering if this is always possible.  Thus, we should also allow that the RRCReconfiguration can be sent to the descendant node after migrating of top-level node.  **RRCReconfiguation to descendant nodes can be sent after the migrating node connects to the target path.**   * UE   UE RRCReconfiguration message can be sent after the migrating node connects to the target path. If all those messages are transmitted via the source path, it will be a big burden.  **RRCReconfiguration to Ues are sent after the migrating node connects to the target path.** |
| **Ericsson** |  | This issue is **not CHO-native**, so why are we discussing it here? We propose to remove this question from this CB as it is discussed in CB#36. |
| ZTE |  | This issue is not CHO specific. It is a common issue in handover and is discussed in CB#36. |
| Huawei |  | To enable the descendent nodes being migrated with the top-level IAB node which performs CHO, the RRC reconfiguration to these descendent nodes can be send via source path. |
| Nokia |  | This should be discussed in CB#36. |
| LGE |  | Seems not CHO specific |
| CATT |  | We consider this proposal in CHO because the RRC reconfigure to UEs would not be sent after migrating node connects to the target path in the case that descendant node migrate with top-level node.  If CU sends RRC reconfiguration to UE after migrating node connects to the target path, descendant node needs a RRC reconfiguration message to executes migration. But this is not CHO, it just normal handover since the link between child node is still good, the descendant node cannot trigger CHO procedure. So descendant node receives RRC reconfiguration message before top-level migration is more suitable for CHO case. The intention is different from CB#36 for reduce service interruption. |
| Intel |  | Agree with Qualcomm that RAN3 already agreed that the RRCReconfiguration to the descendant nodes can be send over the source path, but that is not for CHO.  For CHO configuration, we preferred to send it after the migration |
| Futurewei |  | Not sure how this question is specific to CHO. Can wait for CB#36 conclusion |

Moreover, the descendant nodes and UEs may receive various reconfiguration messages for different target path, they execute specific configuration depends on which target path migrating IAB node accesses. After migrating IAB node connect to the certain target path, it should notify the child node with BAP indication message. This message is aim to indicate the child node to validate which set of configuration.

**Q4-2: Please share your view on an indication is sent from migrating IAB node to child node to indicate** **which set of configuration is validated for child node.**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | This is already discussed for bottom-up sequence of conventional intra-donor migration in CB#36 as a condition for the execution of the RRC Reconfiguration based on the migrating-IAB-node’s successful HO execution.  Let’s solve it there first. |
| Samsung |  | The scenario, i.e., “ the descendant nodes and UEs may receive various reconfiguration messages for different target path” , is unclear to me.  Let’s focus on only one RRCReconfiguration message. |
| **Ericsson** |  | Same as Q4.1, this issue is **not CHO-native**, so why are we discussing it here? We propose to remove this question from this CB as it is discussed in CB#36.  Moreover, the proposal pertains to the bottom-up sequence, and it is not certain that this sequence will be supported at all. |
| ZTE |  | Since the channel condition between the descendant IAB node and the migrating node does not deteriorate, the legacy R16 CHO trigger (i.e., A3/A5 events) is not suitable. In this case, a dedicated trigger is necessary. It is better to define an indication from the migrating IAB node to descendant IAB node to trigger the CHO. |
| Huawei |  | Do you mean that the child node may receive several different RRCReconfiguration related to different CHO of top-level IAB-node? If this is the case, the indication sounds reasonable. |
| Nokia |  | Prefer to wait for the decision on CB#36, then identify the missing part. |
| LGE |  | Seems not CHO specific |
| CATT |  | HW’s understanding is right.  And this proposal is not for bottom-up while it is focus on top-down. After top-level connects to one certain path, it needs indicate to child node about what reconfiguration is validated.  Reason1: child node cannot trigger CHO as ZTE mentioned  Reason2: we cannot assume only one candidate parent node for top-level IAB node, which means that the child node would receive different RRC reconfiguration message. Child node needs to know which set of configuration is validated |
| Intel |  | Agree with Ericsson |
| Futurewei |  | This question does not seem to be within the scope of RAN3. Such concepts should be discussed in RAN2.  Having said that, we are generally not in favor of using BAP as a general signaling protocol between IAB nodes, as BAP control signals do not have any security. As such, both RAN2 and SA3 would need to study the feasibility and risk of such an approach. |

## DAPS

In last RAN3 meeting, the following agreements were achieved

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| Discuss how to support simultaneous connectivity with 2 donors, to reduce service interruption; potential solutions may include dual-protocol-stack solutions (“DAPS-like”); FFS whether the same solution also applies to descendant nodes  The simultaneous connectivity dual-protocol-stack solutions (“DAPS-like”) of an IAB node should allow at least DL simultaneous transmission of BH traffic carried on BH RLC channels, on the paths to both donors. |

[2] claims that unlike CHO and DC, a DAPS-like solution, i.e., DIPS meets all the objectives of the IAB Rel-17 WI. It considers load balancing in DIPS. Specifically, when the CU determines that load balancing is needed, the CU starts the procedure requesting to a second CU resources to offload part of the traffic of a certain IAB node. The only affected node is the IAB from which data is being offloaded and no other node or UE is aware of this situation. All this procedure can be performed with current signalling. Some minor changes are needed. In this contribution, [2] suggest DAPS-like solution (i.e., Dual IAB Protocol Stack DIPS) is introduced for addressing load balancing **(both DL and UL)** and RLF. Moderator suggests the scenarios can be re-discussed since this is a DAPS-like solution for IAB which is not the traditional DAPS for UE.

**Q5: Please share your view on the use cases of “DAPS-like” e.g., load balancing (both DL and UL) and RLF**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | Since the release of the source path is triggered by the target donor, DAPS could be used for all use cases.  RAN2 has to confirm the applicability of DAPS in UL. |
| Samsung |  | “DAPS-like” solution aims at service interruption reduction.  For load balancing, we need feedback from RAN2 on the simultaneous UL transmission. If it is not feasible, we are wondering if “DAPS-like” solution is a good candidate for the load balancing since UL load balance may be restricted.  For RLF, “DAPS-like” solution is not applicable. |
| **Ericsson** |  | Some companies have misunderstood what service interruption reduction refers to – it refers to **both load balancing and RLF recovery**, and this applies for the nodes **both capable and incapable of simultaneous connectivity to two donors**. To reduce service interruption, we are discussing the DAPS-like solution.  DIPS is a DAPS-like solution with support for simultaneous UL and DL traffic – **we did not and should not limit the service interruption reduction to DL only**. DIPS targets **both service interruption reduction during load balancing and service interruption reduction at RLF**. For load balancing, when the CU determines that load balancing is needed, the CU starts the procedure requesting to a second CU resources to offload part of the traffic of a certain (i.e. top-level) IAB node.  As per Samsung comment, DIPS is certainly feasible for RLF recovery – when RLF occurs, the top-level node uses its simultaneous connection to the second donor to carry the traffic diverted via the second donor. |
| ZTE |  | Before discussing the use cases, we should first figure out what “DAPS-like” is. From Ericsson’s opinion, the “DAPS-like” method is totally different from the traditional DAPS. The essential of the traditional DAPS is handover. However, the “DAPS-like” is more like a type of protocol stack design, and thus the “DAPS-like” method can be used in many cases.  So we suggest to have a new question to collect companies’ view on the understanding of “DAPS-like”. |
| Huawei |  | In R16, the UE DAPS is for service interruption reduction during UE handover. For IAB, the DAPS-like solution will be different. According to Ericsson’s contribution, their design for the DAPS like solution is similar as the EN-DC based solution, then it seems suit for the traffic offloading.  So as we commented in CB34, RAN3&RAN2 should first align on what is the “DAPS-like” solution for IAB, e.g. clarify the protocol stack of the DAPS-like IAB and its descendent IAB nodes/UEs, whether the IAB-DU can connect to two donor CU simultaneously, what is the granularity of the traffic at each path, etc.  For RLF, we think the RRC Reestablishment should be used, not rely on DAPS-like solution.  RAN3 has asked RAN2 about the support of UL simultaneous transmission via DAPS-like solution, we can wait RAN2 input. |
| Nokia |  | Load balancing can be supported via NR-DC. Better to clarify the issue to use NR-DC, before introducing a new solution. Even with the DAPS-like, it still pends on RAN2. |
| LGE |  | The understanding of companies is various. Better to wait for the reply from RAN2 on DAPS-like solution. |
| CATT |  | Agree with HW, the DAPS-like should be clarified first and continue pending the feedback from RAN2. |
| Intel |  | RAN3 already sent an LS to solicit input from RAN2 on their view on “DAPS-like” function. Let’s wait for their input |
| Futurewei | Not applicable | Our understanding is that a DAPS-like solution could be employed to address reduction of service interruption. However, it is not suitable either for load balancing, or RLF recovery.  What E/// is discussing seems to be essentially NR-DC, but just with a different name. |

Due to the air interface protocol stacks design is mainly RAN2 scope, so moderator may suggest that the BAP function would not be discussed in this part deeply. If companies interested about it or consider there is RAN3 impact, please show your views in Q7.

Moderator notices that most of companies think that “DAPS-like” can support reduction of service interruption. There are two “DAPS-like” scenarios were discussed in last meeting and [1] analyse both of them. In this CB, companies can further discuss the following scenarios.

*Scenario 1: “DAPS-like” for migrating IAB node.*

*Scenario 2: “DAPS-like” for the descendent IAB nodes and UEs of the migrating IAB node.*

**Q6: Please provide the view on the above two scenario for “DAPS-like”, e.g.,** **whether “DAPS-like” also applies to descendant nodes**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | DAPS has the purpose to provide concurrent connectivity to source and target parents. The descendent node only has one parent. Therefore, DAPS does not apply. |
| Samsung |  | “DAPS-like” solution is only applicable for the migrating IAB node. |
| **Ericsson** |  | The DAPS-like solution applies only to the top-level node, not to the descendants. Scenario 2 should not be considered. |
| ZTE |  | As we know, DAPS was introduced for reducing service interruption of UE during HO in R16-NR. The same optimized requirement is needed for IAB migration scenario. DAPS support DL simultaneous transmission for UE in NR. Similar solution can also be supported in IAB. Thus, to get this goal, we suggest “DAPS-like” can be supported by both migration IAB node and descendent IAB nodes/Ues of the migrating IAB node. In this case, IAB-specific enhancement need to be considered, for example, the DU of the accessing IAB-node should have two F1-U connections to source donor-CU and target donor-CU. |
| Huawei |  | Scenario 1 is fine.  Some clarification for scenario 2 is necessary. Based on our understanding, the descendent nodes and Ues may only have one parent node, so technically they are not DAPS-like if the DAPS-like requires dual PHY/MAC/RLC, but if the DAPS-like migrating IAB node will receive packets from two donor Cus, and these packets will be forwarded to the descendent IAB-MTs or Ues, these Ues/IAB-MTs should support two sets of PDCP layer configuration corresponding to the two donor Cus. Otherwise, the simultaneous DL transmission from two donor Cus for the DAPS-like migrating IAB node is meaningless, since the IAB-MT/UE can only decipher one CU’s DL packets. So, the status of the descendent IAB nodes and UE may **not exactly “DAPS-like”** **but should maintain two sets of PDCP configuration**. |
| Nokia |  | Please refer to refer to our comment on Q5. The DAPS-like should be first discussed in RAN2.  In addition, the UE shall not be affected, i.e. the UE does not see the DAPS-like of the IAB. The descendant IAB may only see 2 routing path, but not necessarily to be aware of the DAPS-like. The impact to the descendant IAB may be similar to the case that parent IAB is DC. Ok to study Scenario 1. |
| LGE |  | “DAPS-like” is for migrating IAB node. |
| CATT |  | The UE and descendant node required dual protocol stacks (option 2) when top-level node doing DAPS-like. Since there is only one PDCP entity in UE but two PDCP entities for different donor CU cause UE cannot work except parent node buffers target CU packet until a new PDCP is establishment in UE. However, we cannot make sure dual protocol stacks (option 2) related to two different CU means DAPS-like. |
| Intel |  | Agree with Ericsson |
| Futurewei |  | Generally agree with the comment from Nokia. A DAPS-like solution for IAB, if agreed, should only impact migrating IAB node. |

[5] mentioned that IAB-MT part should keep the BAP layer related configurations (e.g., BAP address, BH RLC CH configuration, IP address of the source path) and the F1-U tunnels over the source path to support the DL transmission. However, similar as DAPS HO which is DRB specific, the kept configuration can be BH RLC CH specific, i.e., if the DL transmission of one BH RLC CH is kept at the source side, the configuration for the traffic over such BH RLC CH can be kept as well.

**Q7: Please share your view on** **IAB-MT part keep the BAP layer related configurations and the F1-U tunnels over the source path on per-BH RLC CH basis to support “DAPS-like” solution.**

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| **Company** | **Answer** | **Comments** |
| Qualcomm | See comment | To support DAPS for IAB, DAPS has to be extended to BH RLC CHs. This means the IAB-MT simultaneously supports BH RLC CHs to both parents similar to NR-DC. The IAB-MT can keep the BAP configuration of the source path.  It is up to the source CU whether to map F1-U to the source path or switch F1-U to the target path. Note that RAN3 has agreed that the F1-U tunnel cannot be split between target and source path! |
| Samsung |  | The F1-tunnels over the BH RLC CH should be kept at the source path since there are still on-the-fly packets using the old F1-U tunnels over the source path.  So, in our understanding, **as long as the BH RLC CH is kept at the source path, the configurations of the traffic (e.g., F1-U tunnel, BAP routing, Bearer mapping, etc**.**) conveying by such BH RLC CH should be kept as well.** |
| **Ericsson** |  | **This question belongs to CB#36, why is it here?** We suggest moving it to CB#36. The paper [5] is not even submitted to the CHO/DAPS AI.  Anyway, it needs to be clarified what it means to keep BH RLC configuration, does it mean that either all traffic through that channel is moved at once or can the F1-Us be moved gradually?  We think that mere preservation of configurations may not be sufficient. |
| ZTE |  | From the sentence, it seems the IAB-MT part keeps the F1-U tunnels over the source path on per-BH RLC CH basis to support “DAPS-like” solution. But why IAB-MT? It is not clear. |
| Huawei |  | It is necessary for the a DAPS-like IAB-MT to keep the BAP layer related configurations, otherwise, this IAB node cannot keep simultaneous receiving through two parent nodes.  The F1-U tunnels should pending the clarification of the “DAPS-like” solution. For example, if this solution aims at service interruption during the IAB migration, it is reasonable to keep the F1-U tunnels over the source path for a period of time; while if this solution aims at offloading some F1-U tunnels to the target path, then not all old F1-U tunnels need to be maintained. |
| Nokia |  | Prefer to discuss this later, e.g. after a decision is made on DAPS-like solution. |
| LGE |  | Agree with Samsung if DAPS-like here is similar to Rel-16 DAPS. We need to first be clear with DAPS-like. |
| CATT |  | Agree with that IAB-MT part keeps the BAP layer related configurations to support DAPS like. And agree with the SS’s comments, we need consider the buffer packet and on fly packet. Latency DAPS also support data forwarding |
| Intel |  | This contribution doesn’t belong to this CB. Should discuss in CB#36 under Unnecessary Transmission. |
| Futurewei |  | This is an interesting question. In the downstream direction it is debatable how this is addressed. However, DAPS UL can only transmit data to one cell at a time. Hence, at least for the upstream direction it seems that all F1-U traffic would have to move to the target path. |

**Q8: Please provide the view on other issues not mentioned above.**

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| **Company** | **Comments** |
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# Conclusion, Recommendations [if needed]

If needed

# References

1. R3-210101, CHO and DAPS for IAB (CATT)
2. R3-210722, Simultaneous Connectivity to Two IAB-donors and the Use of CHO (Ericsson)
3. R3-210347, TP for BL CR to 38.401 on Inter-donor Topology Adaptation Procedures (Qualcomm Incorporated)
4. R3-210207, Further considerations on inter-donor IAB Node Migration procedure (ZTE)
5. R3-210217, Discussion on Service Interruption Reduction for Rel-17 IAB (Samsung)