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

Elbonia, November, 2021

**Agenda item: 8.4.3**

**Source: LGE (Rapporteur)**

**Title: [AT116-e][032][eIAB] RLF indications**

**WID/SID: NR\_IAB\_enh-Core**

**Document for: Discussion and Decision**

# 1. Introduction

This offline discussion aims to make progress on BH RLF indication as outlined below:

* [AT116-e][032][eIAB] RLF indications (LGE)

      Scope: Progress Type-2/3 RLF indications and related functionality, based on contributions to this meeting. Identify agreements, discussion points, can also capture open issues. Attempt to close open issues.

      Intended outcome: Report

      Deadline: Tuesday W2 (online CB)

The discussion consists of two pahses, Phase 1 and Phase 2, and the deadline of each phase is given below:

Phase 1: to settle scope what is agreeable etc, deadline: Thursday W1 Nov 4 1200 UTC

Phase 2: to discuss further details and formulate agreeable proposals, deadline: Thuesday W2 Nov 9 10:00 UTC.

## Contact

To make it easier to find the correct contact delegate in each company for potential follow-up questions, the rapporteur encourages the delegates who provide input to provide their contact information in this table:

|  |  |
| --- | --- |
| Company | Contact: Name (E-mail) |
| LGE (rapporteur) | SungHoon Jung (sunghoon.jung@lge.com) |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# 2. Phase-I Discussion

## 2.1 Triggering of Type-2 indication

### 2.1.1 For dual-connected node

We first discuss triggering condition of type-2 indication for the IAB node connected to dual parents. Referring to the contributions in Annex, there are several options being identified, but those options can be classified into two options, option1 and option2, as follows:

* Option1) when the node detects BH RLF on both BHs (i.e., when it initiates RRC re-establishment)
* Option2) when the node detects BH RLF on any BH and further condition, if introduced, is met

The underlying principle of option1 would be that, as long as the IAB node has at least one available BH link, it does not notify the BH failure event to child node(s) but try actions to make child nodes remain transparent to the occurrence of BH RLF. Upon detecting BH RLF on one BH, the node would trigger MCG/SCG failure information procedure to recover from the failure, and at the same time, the node is required to re-route packet flows that are, otherwise, blocked by the BH failure, by using alternative BH available. However, if the IAB node cannot re-route all or some packet flows subject to the BH failure or if the failure recovery procedure is not prompt, these packets flows would suffer from increased latency.

The underlying principle of option2 would be that BH failure should be notified to child node(s) earlier so that the child node(s) can take actions quickly to minimize performance degradation, by performing, e.g., local re-routing, if possible. While the option2 may yield potential gains enabled by earlier actions of child nodes, it should be addressed what actions need to be done by child nodes upon receiving type-2 indication and how to avoid unnecessary actions of child nodes. For example, when a node receives a type-2 indication from its parent node, it is not clear whether the node should trigger local re-route or not, because the node may have no idea whether its parent node is already performing local re-routing or not. This gives the idea that option2 may require introduction of additional condition(s) that should be satisfied to trigger type-2 indication, so as to trigger type-2 indication only when necessary.

#### **Q1. Which option do you prefer between option1 and option2? Please provide your reasoning for your preference.**

|  |  |  |
| --- | --- | --- |
| Company | Option1/2 | Comment |
|  |  |  |

In case option2 is considered as triggering condition of type-2 indication, we should further discuss if additional condition needs to be introduced. The follong options are considered:

* Option2a) when the node detects BH RLF on any BH without considering additional condition
* Option2b) when the node detects BH RLF on any BH and it cannot perform re-routing for affected traffic (further detailed conditon is FFS)
* [please specify other option, if preferred]

In option2a, detection of BH RLF on any BH is a sufficient condition to trigger type-2 indication.

In option2b, there is additonal condition to be satisfied to trigger type-2 indication, and the condition is in general relate to whether the node detecting BH RLF can perform local re-routing or not. Depending on the details of the condition, several variants are possible for option2b, hence, if RAN2 goes for option2b, we need to further discuss the exact condition, which we can discuss later, if necessary.

#### **Q2. Which option do you prefer between option2a and option2b (and possibly other option)? Please provide your reasoning for your preference.**

|  |  |  |
| --- | --- | --- |
| Company | Option2a/option2b | Comment |
|  |  |  |

Another possibe option is to support both option1 and option2 for Q1, and which option to use is lef to network implementation, i.e. option3 below can be suggested.

* Option3) The IAB node is configured by a donor node with either of option1 or option2, i.e., both options are supported in specifications and which option to use is left to network implementaion.

With option3, a donor node needs to configure each IAB node with either option1 and option2. This option may be preferred as an exit solution just in case option1 and 2 are semi-equally prefred and their technical merits and drawbacks are not relatively outstanding.

#### **Q3. Do you think option3 can be acceptable?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

### 2.1.2 For single-connected node

For an IAB node connected to a single parent, RAN2 already agreed that the IAB node sends a type-2 indication to child node(s) if the node detects a BH RLF. Since the node then initiates re-establishment, it is equivalent to say that type-2 indication is triggered upon initiation of re-establishment for this case. Companies are invited to provide comments if the initiation of re-establishment is a sufficient condition or if additional condition should be introduced.

#### **Q4. Please provide comments if BH RLF detection and resulting initiation of RRC re-establishment is a sufficient condition for single-connected node to trigger type-2 indication? If not, please provide your view on what condition should be further introduced?**

|  |  |  |
| --- | --- | --- |
| Company | Y(sufficient) /N(insufficient) | Comment |
|  |  |  |

## 2.2 Contents of type-2 indication

### 2.2.1 For dual-connected node

We discuss contents of type-2 indication sent by a dual-connected IAB node. There are basically two options:

* Option x) Type-2 indication does not carry further information related to BH RLF
* Option y) Type-2 indication carries further information to shape the behavior of the node receiving the type-2 indication.

From rapporteur’s understanding, if option1 is taken for Q1, the necessity to take option y seems to diminish and hence option x seems sufficient. On the other hand, if option2 is taken for Q1, the necessity or sufficiency of each option should be investigated depending on whch sub-option of option2 for Q2 is taken.

#### **Q5. Which option do you prefer between option x and option y? Please provide your reasoning for your preference in relation to your choices for Q1 and Q2.**

|  |  |  |
| --- | --- | --- |
| Company | Option x/y | Comment |
|  |  |  |

In case option y is considered in Q5, we should further discuss what information should be carried in type-2 indication. companies that prefer option y want to include information related to reachability within type-2 indication, and the intention of the information is to enable a node receiving the indication to choose proper actions e.g., local re-routing. Specifically, there are two options related to reachibility on the table.

* Option y1) Type-2 indication includes routing ID information indicating which routing IDs are not available
* Option y2) Type-2 indication includes BAP destination information indicating which BAP-destinations are not reachable

#### **Q6. Which option do you prefer between option y1 and option y2? Please provide your reasoning for your preference**

|  |  |  |
| --- | --- | --- |
| Company | Option y1/y2 | Comment |
|  |  |  |

### 2.2.2 For single-connected node

For type-2 indication sent by a single-connected IAB node, we need to discuss if there is any necessity of benefit of including information related to BH RLF within the indication. It is rapporteur’s observation that most companies think that type-2 indication sent by a single connected node does not need to carry any further information related to BH RLF.

#### **Q7. Do you agree that type-2 indication sent by a single-connected node does not need to carry any further information related to BH RLF?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

## 2.3 Behaviours upon reception of type-2 indication

### 2.3.1 Local re-routing

RAN2 agreed that type-2 indication may be used to trigger local re-routing of a node receiving the indication. This is the case when the node receiving the indication is dual-connected.

The first question in this subcaluse is whether we need to specify rules related to triggering of local re-routing or not, i.e., followings two approaches are considered:

* Approach 1) Upon reception of type-2 indication, it is left to implementation of the node whether to trigger local re-routing
* Approach 2) RAN2 specifies rule(s) to govern local re-routing by the node upon reception of type-2 indication

In the first approach, whehter to trigger local re-routing upon reception of type-2 indication is left to implementation. If a node receiving type-2 indication is able to determine what local re-rotuing actions are currently desirable based on the type-2 indication (and implicit information derived from the answer for Q1 and Q5), approach1 can work. In constrat, if the node cannot determine whehter/what local re-routing actions should be triggered, approach1 would result in inefficient or even unprediable routing behaviors.

In the second aproach, RAN2 need to discuss when to trigger local re-routing and which traffic to be re-routed. This discussion is tightly coupled with the discussion reseults for Q1 and Q5. We may need to investigate the rules on a case-by-case basis, unless a generic rule is developed, which we can discuss further, if necessary.

#### **Q8. Which approach do you prefer between approach 1 and 2? Please provide your reasoning for your preference. If approach2 is preferred, please specify your preferred rule.**

|  |  |  |
| --- | --- | --- |
| Company | Approach 1/2 | Comment and preferred rule in case of approach2 |
|  |  |  |

Next question is if a donor node should be able to have at least the capability of enabling or disabling local re-routing of an IAB node receiving type-2 indication. This question is applicbale for both approaches for Q8.

#### **Q9. Do you think that a donor should be able to configure each node with whether local re-routing upon reception of type-2 indication is ALLOWED (in approach 1)/ENABLED (in approach2) or NOT?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

### 2.3.2 Conditional mobility triggering

RAN2 agreed that conditional mobility is supported for IAB nodes. However, RAN2 has not concluded whether type-2 indication may be used to trigger conditional mobility.

From rappateur’s understanding, if it is the case that a dual-connected node receivies type-2 indication, there is no benefit to trigger CHO/CPC, because local re-routing is much more desirable in this case. So, rapporteru assumes that our focus for this discussion must be the case when a single-connected node receives type-2 indication.

The disscussion on conditional mobilty triggering is formulated as similar to the discussion in section 2.3.2 with one different additional approach3, we have the approaches:

* Approach 1) Upon reception of type-2 indication, it is left to implementation of the node whether to trigger conditional mobility (given that the node is already configured with conditional reconfiguration)
* Approach 2) RAN2 specifies rule(s) to govern triggering of conditional mobility upon reception of type-2 indication
* Approach 3) conditional mobility cannot be triggered by reception of type-2 indication

Approach1 may be undesriable in terms of topological stability, since the resulting topology may be somehow less predictable.

Approach2 may be beneficial for keeping network topology more predicable than approach1. RAN2 needs to discuss detailed rules to decide when to trigger conditional mobility. For example, we need to decide whether the node triggeres conditional mobility only if the node receives type-2 indication or it conditionally triggers conditonal mobility based on the received type-2 indication.

Approach3 is to entirely remove the possibility that type-2 indication triggers conditional mobility.

#### **Q10. Which approach do you prefer between approach 1, 2, and 3? Please provide your reasoning for your preference. If approach2 is preferred, please specify your preferred rule.**

|  |  |  |
| --- | --- | --- |
| Company | Approach 1/2/3 | Comment and preferred rule in case of approach2 |
|  |  |  |

Next question is if a donor node should be able to have at least the capability of enabling or disabling   
CHO triggering by a node receiving type-2 indication. This question is applicbale for apprach1 and 2, but not for approach 3.

#### **Q11. Do you think that a donor should be able to configure each node with whether CHO upon reception of type-2 indication is ALLOWED (in approach1)/ENABLED(in approach2) or NOT?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

### 2.3.3 Further propagation of received type-2 indication downwards

For the case an IAB node receives type-2 indication, it is FFS whether the node should be able to further propagate the indication downward based on some condition. That is, two options are considered:

* Option 1) Received type-2 indication is not propagated further (unless a normal type-2 triggering conditon is met)
* Opton 2) Upon reception of the type-2 indication, the node should propagate the indication to the child if it has no alternative path available.

From the rapporteur’s understanding, option2 is to address the case where the node receiving type-2 inidcaiton is single-connected and hence incable of local re-routing but there is at least one descendent node that is dual-connected. By progagating the indication to the descendent node, local re-routing can be triggered by the descendent node. While this controlled propgation may increase the chance of local re-routing by exploiting the descendent nodes’ capability, we should evaluate whether such potential gain can justify potential side-effects, if any, such as increased signaling overhead and diverged routing.

#### **Q12. Which option do you prefer between option 1, 2, and 3? Please justify your preference.**

|  |  |  |
| --- | --- | --- |
| Company | Option1/2 | Comment |
|  |  |  |

### 2.3.4 Disabling UL transmission

For the case an IAB node receives type-2 indication, it is FFS whether the node should suspend UL transmission. Two options can be considered:

* Option 1) Specify that UL transmsision constraints are enforced as mandatory (e.g. SR/BSR are suspended, FFS for details)
* Option 2) It is left to implementation of the node receiving the type-2 indication and also up to scheduling policy of the node transmitting the type-2 indication.
* Option 3) A donor configures each IAB node with whether UL transmission should be suspended or not.

In option1, RAN2 needs to specify UL transmission constraints imposed by reception of type-2 indication. For instance, the IAB node suspend UL transmission including SR/BSR and other uplink physcial channels.

In opion2, RAN2 does not specify UL transmission constraints imposed by reception of type-2 indication. It is entirely left to implementation of IAB nodes that tramsit/receive the indication.

In option3, it is up to a donor’s configuration whethher UL transmission contraints should be enforced or not.

#### **Q13. Which option do you prefer between option 1, 2, and 3? Please justify your preference.**

|  |  |  |
| --- | --- | --- |
| Company | Option1/2/3 | Comment |
|  |  |  |

### 2.3.5 Disabling IAB-support indicator

RAN2 agreed that type-2 indication may be used to disable IAB-support indication in SIB1. However, it is FFS whether disabling or not is left to implemtnation or mandated. Hence two options are considered:

* Option 1 ) RAN2 does not specify that IAB-support indicator is toggled by reception of type-2 indication, i.e., it is up to implementation.
* Option 2) IAB-support indicator shall be turned off upon recepton of type-2 indication

With option2, upon reception of type-2 indication, the node prevents any new child node from accessing the node by turning off the IAB-support indicator until problematic situation is resolved. If the probematic situation is resolved, the node is expected to turn on the indicator, e.g.,when it receives type-3 indication.

The rapporteur observes that

* Given that IAB topology is fairly static in Rel-17 (given that IAB nodes are static), toggling IAB-supprot indicator in case of receiving type-2 indication does not change the situation very much. This is becase there would be not many child nodes attempting to access the concerned node, and hence togging the indicator as poposed in option2 may not change the consequence effectively.
* Even in case there are some access attempts from other nodes to the concerned node, disabling the IAB-supprot indicator as poposed in option2 may enforce other nodes to exclude the concerned node from access candidate longer than necessary, because they may consider the node as barred even after the probematic situation of the concerned node is resolved .

To make a sensible decision, proponents of the option2 is requested to justify if option2 is indeed beneficial, and at the same time, proponets of the option1 is requested to justify that option1 is sufficient. .

#### **Q14. Which option do you prefer between option1 and 2? Please justify your preference.**

|  |  |  |
| --- | --- | --- |
| Company | Option1/2 | Comment |
|  |  |  |

## Triggering of Type-3 indication

Most companies seem to think that a node can transmit type-3 indication only if it previously sent type-2 indication.

#### **Q15. Do you agree that a node can transmit type-3 indication only if it previously sent typ-2 indication, i.e., type-3 indication cannot be triggered without triggering type-2 indication previously?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

Actual triggering condition of Type-3 indication is dependent of triggerinng conditon of type-2 indication.

Let us first consider the case option1 is taken in Q1, i.e. type-2 indication is triggered if both BHs fail. Then the immediate question is as follow:

#### **Q16a. If option1 is considered in Q1, do you agree that a node can transmit type-3 indication if re-establishment is successful?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

Regarding the exact condition to trigger type-3 indication in case option1 is taken for Q1, the following options are considered:

* *Option1) Upon successful transmission of RRC reestablishment complete*
* *Option2) [If option1 is not acceptable, please specify your preferred condition]*

#### **Q16b. Please specify exact condition to trigger type-3 indication in case option1 is considered in Q1**

|  |  |  |
| --- | --- | --- |
| Company | Option | Comment |
|  |  |  |

Next let us consider the case option2 is taken in Q1, i.e. type-2 indication is triggered if at least one BH fails and possibly other condition is met, if specified. Then the immediate question is as follow:

#### **Q17a. If option2 is considered in Q1, do you agree that a node can transmit type-3 indication if the failed BH is recovered.**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

Regarding the exact condition to trigger type-3 indication in case option2 is taken for Q1, the following options are considered:

* *Option1)* 
  + *Upon reception of reconfigurationWithSync for MCG, if previous type-2 indication is triggered by BH failure on MCG.*
  + *Upon reception of RRCReconfiguration for SCG, if previous type-2 indication is triggered by BH failure on SCG.*
* *Option2) [If option1 is not acceptable, please specify your preferred condition]*

#### **Q17b. Please specify exact condition to trigger type-3 indication in case option2 is considered in Q1**

|  |  |  |
| --- | --- | --- |
| Company | Option | Comment |
|  |  |  |

## 2.5 Contents of type-3 indication

This issue can be discussed after RAN2 make progress on the above issues. So we skip this issue in the phase1 discussion.

## 2.6 Behaviours upon reception of type-3 indication

Companies seem to have the common understanding that, upon reception of type-3 indication, the actions triggered upon reception of a previous type-2 indication may be reversed. While the details need further discussion, we can confirm if that is a general understanding in RAN2.

#### **Q18. Do you agree upon reception of type-3 indication, the actions triggered upon reception of a previous type-2 indication may be reversed, if possible?**

|  |  |  |
| --- | --- | --- |
| Company | Y/N | Comment |
|  |  |  |

Then following question is whehter we should mandate the reverse behaviors or whether it should be left to implementation.

* Approach 1) Upon reception of type-3 indication, it is left to implementation of the node whether to trigger a reverse action, if possible.
* Approach 2) RAN2 specifies rule(s) to govern whether/when reserve action is triggered by the node upon reception of type-2 indication

If companies think RAN2 should specify rules to govern behaviors upon reception of type-2 indicaton, they may think that reverse behaviours upon reception of type-3 indication also need to be specified. On the other hand, the behaviors upon reception of type-2 indication can be mostly left to implementation, the same approach can apply to behaviours upon reception of type-3 indication. Companies are requested to provide input on the appraches above.

#### **Q19. Which approach do you prefer between approach 1 and 2? Please provide your reasoning for your preference. If approach2 is preferred, please specify your preferred rule with justification. If other approach is preferred, please specify your preferred approach.**

|  |  |  |
| --- | --- | --- |
| Company | Approach 1/2(/other) | Comment |
|  |  |  |

## 2.7 Terminology

There are proposals of terminomogies for type-2/3/4 indications. We can consider two approaches

*Approach 1 is to define separate names for different indications. For example:*

* Type-2: “BH RLF detection indication” or something else (to be proposed below)
* Type-3: “BH RLF recovery indication” or something else (to be proposed)
* Type-4: “BH RLF recovery failure indication or something else (to be proposed below) or existing name (“BH RLF indication”)

Approach 2 is to use a generic name ‘BH RLF indication’ for them and distinguish them with type indicator

* Type-2: “BH RLF type X indication” or the similar (to be proposed below)
* Type-3: “BH RLF type Y indication” or the similar (to be proposed below)
* Type-4: “BH RLF type Z indication” or the similar (to be proposed below)

Note that we alreay use “BH RLF indication” for type-4 indication from Rel-16. Hence, care must be taken.

**Q20. Which approach do you prefer between two approaches?**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Company | Approach1/ Approach2 | Preferred name | | | Comment |
| Type-2 indication | Type-3 indication | Type-4 indication |
|  |  |  |  |  |  |

## 2.8 Other

We can start discussion on the following issues after RAN2 make progress on the above issues during this email discussion:

* Whehter type-2 indication is mandatory or optional?
* Whehter type-3 indication is mandatory or optional?
* Whether fast MCG recovery should be mandatory for DC capable IAB node?
* [Other issue to discuss? If so, please specify here]

# 3. Phase-II Discussion

# 4. Conclusion

# Reference

[R2-2109784](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109784.zip) Leftover proposals in Summary of [Post114-e][075][eIAB] Open Issues on Re-routing Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109584](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109584.zip) Discussion on Type-2/3 RLF indication CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109585](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109585.zip) Discussion on left issues of local routing and routing CATT discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109612.zip) IAB dual connection, RLF and local rerouting Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109749](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109749.zip) Open issues on (re-)routing Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109750](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109750.zip) Open issues on Type-2 BH RLF indication Fujitsu discussion Rel-17 NR\_IAB\_enh-Core R2-2107649

[R2-2109785](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109785.zip) RLF indication for R17-IAB Huawei, HiSilicon discussion Rel-17 NR\_IAB\_enh-Core

[R2-2109856](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109856.zip) Discussion on RLF indication and local re-routing ZTE, Sanechips discussion Rel-17

[R2-2109940](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109940.zip) BAP processing at the boundary node: Modelling A and B Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh

[R2-2109941](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2109941.zip) Enhancements to RLF indications in IAB Qualcomm Incorporated discussion Rel-17 NR\_IAB\_enh

[R2-2110203](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110203.zip) Routing and re-routing enhancements for eIAB Kyocera discussion Rel-17

[R2-2110204](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110204.zip) Details of BH RLF Indications for eIAB Kyocera discussion Rel-17 R2-2107997

[R2-2110291](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110291.zip) Discussion on issues of local re-routing based on congestion vivo discussion Rel-17 NR\_IAB\_enh-Core

[R2-2110292](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110292.zip) Miscellaneous Issues of Topology Adaptation vivo discussion Rel-17 NR\_IAB\_enh-Core

[R2-2110307](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110307.zip) Discussion on local rerouting and local bearer remapping for IAB Lenovo, Motorola Mobility discussion Rel-17

[R2-2110343](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110343.zip) Rel-17 BAP Operations CANON Research Centre France discussion Rel-17 NR\_IAB\_enh-Core

[R2-2110344](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110344.zip) Discussion on RLF indication enhancements CANON Research Centre France discussion Rel-17 NR\_IAB\_enh-Core R2-2107115

[R2-2110418](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110418.zip) Triggers for local rerouting Samsung Electronics GmbH discussion

[R2-2110724](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110724.zip) Re-routing ehnancements and RLF indications in IAB Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core R2-2107516

[R2-2110886](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110886.zip) On Local Routing and Type 2/3 RLF Handling Ericsson discussion NR\_IAB\_enh-Core

[R2-2110888](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110888.zip) Remaining Issues Related to CP/UP Separation in IAB Network Ericsson discussion NR\_IAB\_enh-Core

[R2-2110899](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2110899.zip) CHO in IAB InterDigital discussion Rel-17 NR\_IAB\_enh-Core

[R2-2111057](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2111057.zip) Open issues for type-2/3 RLF indication ETRI discussion Rel-17

[R2-2111088](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2111088.zip) CP-UP separation and other topology adaptation issues Samsung Electronics discussion NR\_IAB\_enh-Core

[R2-2111142](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2111142.zip) Resolving open issues on BH RLF indications LG Electronics discussion Rel-17

[R2-2111156](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2111156.zip) Further discussion on enhancement of local re-routing LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

[R2-2111157](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_116-e\Docs\R2-2111157.zip) Remaining issues on enhancements of topology adaptation and congestion mitigation LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core