3GPP TSG-RAN WG2 #112e Tdoc R2-20xxxx

Electronic meeting, November 2nd – 13th 2020

Agenda Item: 6.2.3

Source: Ericsson

Title: Summary of [AT112-e][037][IAB] User Plane

Document for: Discussion, Decision

# 1 Introduction

This paper addresses the following email discussion:

* [AT112-e][037][IAB] User Plane (Ericsson)

Treat tdocs under 6.2.3

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

The rapporteur would like to set the following deadlines:

**Deadline 1: Friday, Nov. 6 EOB for answers to the questionnaire in the summary**

**Deadline 2: Wed, Nov 11 1200 UTC for CR wording (if needed).**

# 2 Discussion

This email discussion handles the following documents submitted at RAN2#112 regarding IAB user plane:

[R2-2009745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009745.zip) Correction on Tdelta Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0938 - F NR\_IAB-Core

[R2-2010152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010152.zip) Correction to tDelta Ericsson CR Rel-16 38.321 16.2.1 0963 - F NR\_IAB-Core

[R2-2010150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010150.zip) Pre-emptive BSR handling at MAC Reset Ericsson CR Rel-16 38.321 16.2.1 0962 - F NR\_IAB-Core

[R2-2010419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010419.zip) Correction on the condition check in Pre-emptive BSR procedure ASUSTeK CR Rel-16 38.321 16.2.1 0984 - F NR\_IAB-Core

[R2-2009324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009324.zip) CR to 38.322 on Backhaul RLC Channel vivo CR Rel-16 38.322 16.1.0 0037 - F NR\_IAB-Core

Moved from 6.2.6

R2-2010684 Summary of Rel-16 IAB UP issues and corrections Samsung discussion Rel-16 NR\_IAB-Core

## 2.1 Correction to tDelta

The following CRs handle this issue:

* [R2-2009745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009745.zip) Correction on Tdelta Huawei, HiSilicon CR Rel-16 38.321 16.2.1 0938 - F NR\_IAB-Core
* [R2-2010152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010152.zip) Correction to tDelta Ericsson CR Rel-16 38.321 16.2.1 0963 - F NR\_IAB-Core

Both CRs intend to fix the mismatch between the RAN1 terminology in TS 38.213 and TS 38.321. From TS 38.213 the is the index value, while in MAC specification, the terminology Tdelta and T\_delta is used to represent the index value.

The two CRs are very similar. The only difference is that [R2-2009745](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009745.zip) proposes to remove *Tdelta*, and T\_delta and hence also to change the MAC. Instead, [R2-2010152](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010152.zip) proposes to keep the legacy MAC CE (with T\_delta field) and just remove *Tdelta.*

**Q1: Which option do you prefer to correct this issue?**

1. **The solution in** [**R2-2009745**](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009745.zip)
2. **The solution in** [**R2-2010152**](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010152.zip)

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| **Company** | **Preference (1/2)** | **Detailed Comments** |
| LG | 1 |  |
| Samsung | 2 | Our preference is 2 over 1, but we think the correction to the MAC CE mentioned in 1 should be agreed. Basically we prefer how 2 handles the issue with symbols and their editorial approach, but we think 1 has a point when suggesting to correct the MAC CE as well. So a combination of two is our preference. These details can be ironed out during the CR drafting stage – in any case a change is needed. |
| Huawei | 1 | Another difference is that we need to remove the “mapped to an index value Tdelta”, since there is no so-called mapping, as proposed in 1. |
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## 2.2 Correction to Pre-emptive BSR handling at MAC Reset

* [R2-2010150](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010150.zip) Pre-emptive BSR handling at MAC Reset Ericsson CR Rel-16 38.321 16.2.1 0962 - F NR\_IAB-Core

The CR is to specify that a triggered pre-emptive BSR shall be cancelled at MAC reset. This is in line with many other triggered procedures, e.g. Buffer Status Reporting procedure, that shall be cancelled at MAC reset.

**Q2: Is there any concern with the correction in** [**R2-2010150**](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010150.zip)**?**

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| **Company** | **Preference (Yes/No)** | **Detailed Comments** |
| LG | NO | We are fine with this change. |
| Samsung | No |  |
| Huawei | Yes, but | We have agreed before that pre-BSR cancellation can be implementation, “*Implementation-specific cancellation conditions for Pre-emptive BSR are not precluded*”, when some contributions proposed to add more pre-BSR cancellation procedure.  We are wondering if anything is broken as in the current spec to allow IAB implementation to handle this case.  BTW, it is strange that we don't specify the exact behaviour to trigger pre-BSR, but cover all cases to cancel pre-BSR.  We are afraid that lots of CRs will come next meeting to check if any other pre-BSR cancellation is not captured, as legacy BSR, if the CR is agreed this meeting.  Therefore, we think the CR is not essential, but are open to hear majority’s view on the consequence if not agreed. |
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## 2.3 Correction on Pre-emptive BSR procedure

* [R2-2010419](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010419.zip) Correction on the condition check in Pre-emptive BSR procedure ASUSTeK CR Rel-16 38.321 16.2.1 0984 - F NR\_IAB-Core

The CR is to fix an editorial issue, i.e the word “Pre-emptive” is missing in the Pre-emptive Buffer Status Reporting procedure.

**Q3: Is there any concern with the correction in** [**R2-2010419**](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2010419.zip)**?**

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| **Company** | **Preference (Yes/No)** | **Detailed Comments** |
| LG |  | We think that the proposed clarification may be helpful, but there is no confusion without this change. No strong view. |
| Samsung | No | We support this change, for consistency’s sake. |
| Huawei | No, but | This is kind of editorial change. |
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## 2.4 Correction on Backhaul RLC Channel to TS 38.322

* [R2-2009324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009324.zip) CR to 38.322 on Backhaul RLC Channel vivo CR Rel-16 38.322 16.1.0 0037 - F NR\_IAB-Core

Intention of the CR is to clarify that in case of IAB the data are transferred between RLC and BAP via a single BH RLC channel, rather than via a single RLC channel as it is in legacy non-IAB networks. There is also a second change to clarify that the BAP procedures are specified in TS 38340.

Rapporteur´s view: If RAN2 intends to agree on the intention of this CR, Rapporteur believes that it would be enough to just state that “In case the upper layer is BAP as defined in TS 38.340 [xx], an RLC channel refers to a Backhaul RLC channel”. Otherwise, it might be misleading stating that data are transferred through a single BH RLC channel.

**Q4: Do you agree with the intention of the changes in** [**R2-2009324**](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009324.zip)**?**

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| **Company** | **Preference (Yes/No)** | **Detailed Comments** |
| LG | Yes | Agree with rapporteur’s view. |
| Samsung | Yes but… | Agree with the intention behind the change but not with the change itself. The current wording ‘the data will be transferred through a single Backhaul RLC channel **between RLC and BAP layer**’ can be misleading as pointed out by the rapporteur. We are ok with rapporteur’s alternative proposal. |
| Huawei | No | Adding reference is not essential.  For the NOTE, it is pretty clear on the protocol architecture from 38.300, e.g. “the BAP PDUs are carried by BH RLC channels”. We don't not need to clarify this in every spec.    Fig. 4.7.2-1: Protocol stack for the support of F1-U protocol |
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If the answer to Q4 is “Yes” related to the first change, do you agree with Rapporteur´s proposal to replace the NOTE in [R2-2009324](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_112-e\Docs\R2-2009324.zip) with a NOTE stating “In case the upper layer is BAP as defined in TS 38.340 [xx], an RLC channel refers to a Backhaul RLC channel”

**Q5: If the answer to Q4 is yes, do you agree with the Rapporteur proposal to add the following NOTE?**

NOTE: In case the upper layer is BAP as defined in TS 38.340 [xx], an RLC channel refers to a Backhaul RLC channel.

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| **Company** | **Preference (Yes/No)** | **Detailed Comments** |
| LG | Yes |  |
| Samsung | Yes |  |
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# 3 Conclusion