**3GPP TSG-RAN WG2 Meeting #105 *R2-19xxxxx***

**Athens, Greece, Feb 15th – March 1**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v11.4* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.300** | **CR** | **<CR#>** | **rev** | **0** | **Current version:** | **15.4.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | CR to 38.300 on Integrated Access and Backhaul for NR | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IAB Core | | | | |  | ***Date:*** | | | 2018-02 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Add the support for IAB | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Introduce clauses where IAB-related stage-2 aspects will be added | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3, 4, 6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

FIRST CHANGE

# 3 Abbreviations and Definitions

## 3.1 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1], in TS 36.300 [2] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1] and TS 36.300 [2].

>>>> Skip

BH Backhaul

>>>> Skip

IAB Integrated access and backhaul

>>>> Skip

MT Mobile termination

>>>> Skip

NEXT CHANGE

## 3.2 Definitions

>>>> Skip

**IAB-donor:** <TBD>

>>>> Skip

**IAB-node:** <TBD>

>>>> Skip

**NR backhaul link:** <TBD>

>>>> Skip

NEXT CHANGE

# 4 Overall Architecture and Functional Split

## 4.1 Overall Architecture

>>>> Skip

## 4.x Integrated Access and Backhaul

NEXT CHANGE

# 6 Layer 2

## 6.1 Overview

>>>>>Skip

## 6.x <NR Adaptation Protocol> sublayer

>>>>>Skip

## 6.y Layer 2 structure for IAB

END OF CHANGES

# Appendix

The following agreements were reached in RAN2 #105:

**Adaptation layer functionality**

- RAN2 confirms that routing and bearer mapping (e.g. mapping of BH RLC channels) are adaptation layer functions

- RAN2 assumes that the TX part of the adaptation layer performs routing and “bearer mapping”, and the RX part of the adaptation layer performs “bearer de-mapping”.

- RAN2 assumes that SDUs are forwarded from the RX part of the adaptation layer to the TX part of the adaptation layer (for the next hop) for packets that are relayed by the IAB node.

- It is FFS how to model adaptation layer protocol entities, e.g. whether separate for DU and MT or not, and how these are configured, i.e. via F1-AP or RRC.

**L2 configuration**

- RAN2 assumes that IAB-donor CU is controlling the setup and modification of all backhaul channels in the IAB network below the IAB-donor.

- RAN2 assumes that a separate BH RLC channel should be setup for each UE DRB with one-to-one bearer mapping.

- RAN2 assumes that for a UE DRB with many-to-one bearer mapping, a BH RLC channel associated with IAB node existing BH RLC channel might be reused as BH RLC channel to forward traffic of this UE DRB (e.g. if the BH RLC channel supports the required UE DRB QoS).

- RAN2 assumes that IAB-donor CU configures the adaptation layer.

- RAN2 assumes that routing is a function of the adaptation layer.

- The details of the routing functionality, e.g. what is configured vs. what is decided locally, is FFS.

**BH radio-link failure**

- RAN2 assumes that there is a RLF-notification at BH RLF, at least to downstream node(s).

- Alternate routes and/or Dual Connectivity could be utilised at recovery at a failure of a BH link.

- Current UE RLF detection and recovery is reused as baseline

- It is FFS, whether other indications are needed, e.g. when link has recovered, or when recovery is in progress.