3GPP TSG-RAN WG3 Meeting #122 R3-23xxxx

**Chicago, US, 13-17 Nov, 2023**

Agenda Item: 13.2

Source: Huawei

Title: (TP to NR\_mobile\_IAB BL CR of TS 38.473) Mobile IAB-DU migration triggered by OAM

Document for: Agreement

# 1 Introduction

This contribution provides the TP to TS 38.473 BL CR, mainly for capturing the F1AP change for capturing the following Proposal in **CB: # IAB-node\_mobility**

Proposal 7a: The MIAB F1 SETUP OUTCOME NOTIFICATION message to include the gNB-ID of the target DU’s CU. Add to TP to BL CR for 38.401 in section on DU migration, step 4, the inclusion of the target F1-terminating CU’s gNB-ID.

# Annex: TP to NR\_mobile\_IAB BL CR of TS 38.473

<<<<<<<<<<<<<<<<<<<< First Change >>>>>>>>>>>>>>>>>>>>

### 8.10.Y Mobile IAB F1 Setup Outcome Notification

#### 8.10.Y.1 General

The purpose of the Mobile IAB F1 Setup Outcome Notification procedure is to report the outcome of the F1 interface setup between a target logical gNB-DU and a target F1-terminating IAB-donor-CU. The target logical gNB-DU is co-located with the gNB-DU that sends the notification message and can be used to set up another F1 interface for supporting mobile IAB-DU migration. This procedure uses non-UE associated signalling.

NOTE: This procedure is applicable for mobile IAB-nodes, where the term "gNB-DU" applies to mobile IAB-DU, and the term "gNB-CU" applies to source F1-terminating IAB-donor-CU during mIAB-DU migration.

#### 8.10.Y.2 Successful Operation



Figure 8.10.Y.2-1: Mobile IAB F1 Setup Outcome Notification: Successful Operation

The gNB-DU initiates the procedure by sending the MIAB F1 SETUP OUTCOME NOTIFICATION message to the gNB-CU. After the target logical gNB-DU co-located with the gNB-DU has performed the F1 setup procedure with the target F1-terminating IAB-donor-CU, the gNB-DU sends the MIAB F1 SETUP OUTCOME NOTIFICATION message to the gNB-CU, to report the outcome of the F1 setup towards the target F1-terminating IAB-donor-CU.

If the *Activated Cells Mapping List* is included in the MIAB F1 SETUP OUTCOME NOTIFICATION message, the gNB-CU shall, if supported, take it into account when further performing handover of the connected UEs from this gNB-DU to its co-located target logical gNB-DU.

If the *Target F1 Terminating IAB-Donor gNB ID* is included in the MIAB F1 SETUP OUTCOME NOTIFICATION message, the gNB-CU shall, if supported, take it into account when further performing handover of the connected UEs from this gNB-DU to its co-located target logical gNB-DU.

#### 8.10.Y.3 Abnormal Conditions

Not applicable.

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

### 9.2.9 IAB messages

>>>>>>>>>>>>>>>>>>Unchanged parts are skipped<<<<<<<<<<<<<<<<<<

#### 9.2.9.X2 MIAB F1 SETUP OUTCOME NOTIFICATION

This message is sent by the gNB-DU to notify the gNB-CU about the outcome of F1 interface setup between the gNB-DU’s co-located target logical gNB-DU and a target F1-terminating IAB-donor-CU.

Direction: gNB-DU → gNB-CU

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| F1 Setup Outcome | M |  | ENUMERATED (success, failure, …) |  | YES | reject |
| **Activated Cells Mapping List** |  | *0..1* |  |  | YES | ignore |
| **>Activated Cells List Mapping Item IEs** |  | *1.. <maxCellingNBDU>* |  | List of activated cells.  | EACH | ignore |
| >>NR CGI for Target Logical gNB-DU | O |  | NR CGI 9.3.1.12 | The identity of an activated cell belonging to the target logical gNB-DU of the mobile IAB-node | - |  |
| >>NR CGI for Source Logical gNB-DU | O |  | NR CGI 9.3.1.12 | The identity of an activated cell belonging to the source logical gNB-DU of the mobile IAB-node | - |  |
| Target F1 Terminating IAB-Donor gNB ID | O |  | Global gNB ID 9.3.1.x2 | The Global gNB ID of an IAB donor terminates F1 connection towards the target logical gNB-DU of the mobile IAB-node.This IE is present if the mobile IAB-DU migration is triggerd by mobile IAB-node’s OAM. | YES | reject |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxCellingNBDU | Maximum no. cells that can be served by a gNB-DU. Value is 512. |

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

### 9.4.4 PDU Definitions

<<<<<<<<<<<<<<<<<<<< Unmodified Text Omitted >>>>>>>>>>>>>>>>>>>>

-- MIAB F1 SETUP OUTCOME NOTIFICATION PROCEDURE

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

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-- MIAB F1 SETUP OUTCOME NOTIFICATION

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

MIABF1SetupOutcomeNotification ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ MIABF1SetupOutcomeNotificationIEs}},

 ...

}

MIABF1SetupOutcomeNotificationIEs F1AP-PROTOCOL-IES ::= {

 { ID id-TransactionID CRITICALITY reject TYPE TransactionID PRESENCE mandatory }|

 { ID id-F1SetupOutcome CRITICALITY reject TYPE F1SetupOutcome PRESENCE mandatory }|

 { ID id-Activated-Cells-Mapping-List CRITICALITY ignore TYPE Activated-Cells-Mapping-List PRESENCE optional }|

 { ID id-Target-F1-Terminating-Donor-gNB-ID CRITICALITY ignore TYPE GlobalGNB-ID PRESENCE optional },

 ...

}

F1SetupOutcome ::= ENUMERATED {success, failure,...}

Activated-Cells-Mapping-List ::= SEQUENCE (SIZE(1.. maxCellingNBDU)) OF ProtocolIE-SingleContainer { { Activated-Cells-Mapping-List-ItemIEs } }

Activated-Cells-Mapping-List-ItemIEs F1AP-PROTOCOL-IES ::= {

 { ID id-Activated-Cells-Mapping-List-Item CRITICALITY ignore TYPE Activated-Cells-Mapping-List-Item PRESENCE mandatory },

 ...

}

<<<<<<<<<<<<<<<<<<<< End of Changes >>>>>>>>>>>>>>>>>>>>