**3GPP TSG-RAN WG3 Meeting #115-e *R3-222581***

**E-meeting, 21 Feb – 3 Mar 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.470** | **CR** | **0086** | **rev** |  | **Current version:** | 16.5.0 |  |
|  | | | | | | | | |
| *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 |  |

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| ***Title:*** | Introduction of Propagation Delay Compensation Procedure | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IIOT\_URLLC\_enh-Core | | | | |  | ***Date:*** | | | 2022-02-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The Enhanced Industrial IoT and URLLC Support for NR WI was agreed in RP-210854. This CR provides stage 2 descriptions on propogation delay compensation measurement. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * Add the PDC measurement function and PDC measurement procedures. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Rel-17 PDC measurement function/procedure is not reflected in stage 2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.2, 5.2.aa, 6.1.bb | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS38.413 CR0598  TS38.423 CR0620  TS38.463 CR0609  TS38.473 CR0751 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **Change Begins** |

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] 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].

5GC 5G Core Network

5QI 5G QoS Identifier

AMF Access and Mobility Management Function

ARP Antenna Reference Point

ARPI Additional RRM Policy Index

BH Backhaul

CAG Closed Access Group

CN Core Network

CG Cell Group

CGI Cell Global Identifier

CHO Conditional Handover

CP Control Plane

CPC Conditional PSCell Change

DAPS Dual Active Protocol Stack

DL Downlink

DL-PRS Downlink Positioning Reference Signal

EN-DC E-UTRA-NR Dual Connectivity

EPC Evolved Packet Core

IAB Integrated Access and Backhaul

IMEISV International Mobile station Equipment Identity and Software Version number

LMF Location Management Function

NID Network Identifier

NPN Non-Public Network

NSSAI Network Slice Selection Assistance Information

PDC Propagation Delay Compensation

posSIB Positioning SIB

PNI-NPN Public Network Integrated NPN

RANAC RAN Area Code

RIM Remote Interference Management

RIM-RS RIM Reference Signal

RRC Radio Resource Control

RSRP Reference Signal Received Power

SNPN Stand-alone Non-Public Network

S-NSSAI Single Network Slice Selection Assistance Information

SUL Supplementary Uplink

TAC Tracking Area Code

TAI Tracking Area Identity

TRP Transmission-Reception Point

UL-AoA Uplink Angle of Arrival

UL-RTOA Uplink Relative Time of Arrival

UL-SRS Uplink Sounding Reference Signal

Z-AoA Zenith Angles of Arrival

**<Unchanged Text Omitted>**

# 5 Functions of the F1 interface

## 5.1 General

The following clauses describe the functions supported over F1-C and F1-U.

## 5.2 F1-C functions

**<Unchanged Text Omitted>**

### 5.2.12 IAB support function

The BAP mapping configuration function allows the IAB-donor-CU to provide BAP mapping which includes the backhaul routing configuration and/or BH RLC channel mapping information for IAB-donor-DU or IAB-DU.

The gNB-DU resource configuration function is used by the IAB-donor-CU to provide cell resource configuration for an IAB-donor-DU or an IAB-DU, and/or information about the child node’s cell resource configuration and other periodic configurations to a parent IAB-node or an IAB-donor-DU.

The IAB TNL address configuration function enable the IAB-donor-CU to request IP address(es) to be used for IAB-node(s) from an IAB-donor-DU.

The IAB UP configuration update function allows the update of BH information or the UP TNL information between the IAB-donor-CU and an IAB-DU.

### 5.2.aa PDC measurement function

The PDC measurement function allows the gNB-CU to request the gNB-DU to report measurements used for propagadation delay compensation at the gNB-CU or UE.

**<Unchanged Text Omitted>**

# 6 Procedures of the F1 interface

## 6.1 Control plane procedures

**<Unchanged Text Omitted>**

### 6.1.12 IAB procedures

The IAB procedures are listed below:

- BAP Mapping Configuration procedure

- gNB-DU Resource Configuration procedure

- IAB TNL Address Allocation procedure

- IAB UP Configuration Update procedure

### 6.1.bb PDC Measurement procedures

The PDC measurement procedures are listed below:

- PDC Measurement Initiation procedure

- PDC Measurement Report procedure

**<Unchanged Text Omitted>**

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| **Change Ends** |