**3GPP TSG-RAN WG2 Meeting #124 *R2-231xxxx***

**Chicago, USA, 13 – 17 November 2023**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.306** | **CR** | **1001** | **rev** |  **1** | **Current version:** | **17.6.0** |  |
|  |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <http://www.3gpp.org/Change-Requests>.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Introduction of mobile IAB capabilities to TS 38.306 |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_mobile\_IAB-Core |  | ***Date:*** | 2023-11-23 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-18 |
|  | *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 canbe 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | Introducing Rel-18 mobile IAB feature capabilities to 38.306. |
|  |  |
| ***Summary of change:*** | RAN2#124:Clause 4.2.15.8: *gNB-ID-LengthReporting-r17* added as mandatory IAB-MT capability in Rel-18 (i.e. mandatory for mobile IAB-MT)Clause 4.2.15.9: IAB-MT MR-DC parameters shall be ignored for mobile IAB-MT (i.e. when IAB-MT indicates *mobileIAB-NodeIndication*)Clause 4.2.15.10: IAB-MT NR-DC parameters shall be ignored for mobile IAB-MT (i.e. when IAB-MT indicates *mobileIAB-NodeIndication*)Clause 5.4: Mobile IAB cell reselection prioritization captured as optional UE behaviour without capability signallingClause 6: Mandatory mobile IAB-MT idle/inactive and connected mode functionality captured as mandatory without capability signalling |
|  |  |
| ***Consequences if not approved:*** | Mobile IAB feature cannot be supported. |
|  |  |
| ***Clauses affected:*** | 4.2.15.8, 4.2.15.9, 4.2.15.105.46 |
|  |  |
|  | **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:*** |  |
|  |  |
| ***This CR's revision history:*** | Editor’s notes removed and updated based on agreements made at RAN2#124. |

*First Modified Subclause*

#### 4.2.15.8 MeasAndMobParameters Parameters

| Definitions for parameters | Per | M | FDD-TDDDIFF | FR1-FR2DIFF |
| --- | --- | --- | --- | --- |
| *eventA-MeasAndReport*Indicates whether the IAB-MT supports NR measurements and events A triggered reporting as specified in TS 38.331 [9]. | IAB-MT | Yes | Yes | No |
| ***handoverInterF***Indicates whether the IAB-MT supports inter-frequency HO. It indicates the support for inter-frequency HO from the corresponding duplex mode if this capability is included in fdd-Add-UE-NR-Capabilities or tdd-Add-UE-NR-Capabilities. It indicates the support for inter-frequency HO from the corresponding frequency range if this capability is included in fr1-Add-UE-NR-Capabilities or fr2-Add-UE-NR-Capabilities. | IAB-MT | No | Yes | Yes |
| ***mfbi-IAB-r16***Indicates whether the IAB-MT supports multiple frequency band indication. | IAB-MT | No | No | No |
| ***intraAndInterF-MeasAndReport***Indicates whether the IAB-MT supports NR intra-frequency and inter-frequency measurements and at least periodical reporting. | IAB-MT | Yes | Yes | No |
| ***gNB-ID-LengthReporting-r17***Indicates whether the IAB-MT supports acquisition and reporting of gNB ID length from a neighbouring intra-frequency or inter-frequency NR cell by reading the SI of the neighbouring cell and reporting the acquired gNB ID length to the network, as specified in TS 38.331 [9]. | IAB-MT | Yes | No | No |

*Next Modified Subclause*

#### 4.2.15.9 MR-DC Parameters

| Definitions for parameters | Per | M | FDD-TDDDIFF | FR1-FR2DIFF |
| --- | --- | --- | --- | --- |
| ***f1c-OverEUTRA-r16***Indicates whether the IAB-MT supports F1-C signalling over *DLInformationTransfer* and *ULInformationTransfer* messages via MN when IAB-MT operates in EN-DC mode, as specified in TS 36.331 [17]. | IAB-MT | No | No | No |
| ***scg-DRB-NR-IAB-r16***Indicates whether the IAB-MT supports SCG DRB with NR PDCP when IAB-MT operates in EN-DC mode. | IAB-MT | No | No | No |
| ***interNR-MeasEUTRA-IAB-r16***Indicates whether the IAB-MT supports NR measurement and reports while in EUTRA connected and event B1-based measurement and reports while in EUTRA connected. | IAB-MT | No | No | No |

NOTE: In this release of the specification, MR-DC parameters shall be ignored for an IAB-MT indicating *mobileIAB-NodeIndication*, as specified in TS 38.331 [9].

*Next Modified Subclause*

#### 4.2.15.10 NR-DC Parameters

| Definitions for parameters | Per | M | FDD-TDDDIFF | FR1-FR2DIFF |
| --- | --- | --- | --- | --- |
| ***f1c-OverNR-RRC-r17***Indicates whether the IAB-MT supports F1-C signalling over DLInformationTransfer and ULInformationTransfer messages via MN when IAB-MT operates in NR-DC and MN is the non-F1-termination node or via SN when IAB-MT operates in NR-DC and SN is the non-F1-termination node, as specified in TS 38.401 [33] and TS 37.340 [7]. | IAB-MT | No | No | No |
| ***simultaneousRxTx-IAB-MultipleParents-r17***Indicates the support of simultaneous transmission and reception of an IAB-node from multiple parent nodes. | BC | No | No | No |

NOTE: In this release of the specification, NR-DC parameters shall be ignored for an IAB-MT indicating *mobileIAB-NodeIndication*, as specified in TS 38.331 [9].

*Next Modified Subclause*

## 5.4 Other features

| Definitions for feature |
| --- |
| **eCall over IMS**It is optional for UE to support eCall over IMS as specified in TS 38.331 [9]. |
| **Access Category 1 selection assistance information enhancement**It is optional for UE that is configured for delay tolerant service to support Access Category 1 selection assistance information enhancement, according to *uac-AC1-SelectAssistInfo-r16* as specified in TS 38.331 [9]. |
| **Random access prioritization for MPS and MCS**It is optional for UE that is configured for MPS or MCS to support random access prioritization for Access Identity 1 or 2 as specified in TS 38.321 [8]. |
| **HSDN cell reselection**It is optional for UE to support HSDN cell reselection priority handling in RRC\_IDLE/RRC\_INACTIVE as specified in TS 38.304 [21] and TS 38.331 [9]. |
| **TRS occasions for idle mode and RRC\_INACTIVE UEs**It is optional for UE to support reading TRS configuration from SIB and receiving L1 indication for TRS availability.NOTE: Receiving L1 indication via DCI format 2\_7 is supported only if the UE supports receiving DCI format 2\_7. |
| **Minimization of service interruption**It is optional for UE to support minimization of service interruption including reporting to NAS of disaster roaming information for available PLMNs and Access Barring check for Access Identity 3, as specified in TS 38.331 [9]. |
| **Random access prioritisation for Slicing**It is optional for UE to support slice-based prioritisation for random access as specified in TS 38.321 [8]. |
| **Random access partitioning for Slicing**It is optional for UE to support slice-based RACH partitioning as specified in TS 38.321 [8]. |
| **Relaxed cell reselection on GEO**It is optional for UE to support the relaxed cell reselection on GEO. |
| **Support of polarization signalling in NR NTN**It is optional for UE to support the polarization signalling in NR NTN comprised of the following functional components:- Support polarization indication reception in SIB indicating DL and/or UL polarization information using respective polarization type parameters to indicate: RHCP or LHCP or linear;- Support polarization signalling for target serving cell in handover command message;- Support polarization signalling for non-serving cell in RRM measurement configuration. |
| **Mobile IAB cell reselection**It is optional for UE to support mobile IAB cell reselection priority handling in RRC\_IDLE/RRC\_INACTIVE, as specified in TS 38.304 [21] and TS 38.331 [9]. |

*Next Modified Subclause*

# 6 Conditionally mandatory features without UE radio access capability parameters

| Features | Condition |
| --- | --- |
| Acquisition of SI messages with explicit SI window positions | It is mandatory to support acquisition of SI messages with explicit SI window positions for UEs which support the SIB types in *schedulingInfoList2* as specified in TS 38.331 [9]. |
| AS layer memory size for QoE paused measurement reports | It is mandatory to support the minimum AS layer memory size of 64KB for QoE paused measurement reports for UEs which support *qoe-Streaming-MeasReport-r17*, *qoe-MTSI-MeasReport-r17* or *qoe-VR-MeasReport-r17*. |
| Downlink SDAP header | Either NAS reflective QoS or *as-ReflectiveQoS* is supported. |
| Extended values for *drx-HARQ-RTT-TimerDL/UL* | It is mandatory for UEs which support FR2-2 bands with SCS 480kHz and/or 960kHz. |
| IMS emergency call | It is mandatory to support IMS emergency call over PLMN for UEs which are IMS voice capable in NR.It is mandatory to support IMS emergency call over SNPN for UEs that are SNPN capable and IMS voice capable over SNPNs. |
| Logged measurements suspension due to IDC interference | It is mandatory to support Logged measurements suspension due to IDC interference for UEs which are supporting logged measurements in RRC\_IDLE and RRC\_INACTIVE upon request from the network and in-device coexistence indication as specified in TS 38.331 [9]. |
| MAC subheaders with one-octet eLCID field | It is mandatory to support MAC subheaders with one-octet eLCID field for UEs/IAB-MTs supporting MAC CEs using extended LCID values as specified in TS 38.321 [8]. |
| Mobile IAB-MT connected mode behaviour | It is mandatory for a mobile IAB-MT to support mobile IAB-specific idle/inactive and connected mode functionality, as specified in TS 38.304 [21] and TS 38.331 [9]. |
| Paging cause in RAN paging message | It is mandatory for a UE to support paging cause in RAN paging if UE supports paging cause in CN paging. |
| Skipping UL configured grant if no data to transmit, as specified in release-15 version of TS 38.321 [8]. | Either configuredUL-GrantType1 or *configuredUL-GrantType1-v1650* or configuredUL-GrantType2 or *configuredUL-GrantType2-v1650* is supported. |
| TA reporting during initial access | It is mandatory to support TA reporting during initial access for UEs supporting *uplink-TA-Reporting-r17* as specified in TS 38.321 [8]. |

*End of Changes*