**3GPP TSG- Meeting # *s3i240743***

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | **2** | **Current version:** |  |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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| ***Title:*** | NAS transport initial Information with mobile IAB | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3LI (Ministère Economie et Finances, OTD\_US) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Authorization status information of the mobile IAB, mobileIABNodeIndication related to UE capability in the NAS transport initial Information and UE differentiation information are missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR is adding information related to mobile IAB and UE differentiation information such:   * mobileIABAuthorizedIndicator in the table 6.2.2.2A.1-1 and new clause 6.2.2.2A.12 Enumeration: MobileIABAuthorizedIndicator to detail with it, * only the new IAB field, mobileIABNodeIndication to the rest of whole of NASTransportInitialInformation, which was already in the ASN.1. Such information is detailled in the new text and table in clause 6.2.2.2A.13 related to NASTransportInitialInformation. Such clause was missing. * uEDifferentionInfo in the table 6.2.2.2A.1-1 which provides information about the behavior of a UE with predictable activity and/or mobility behavior. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Authorization status information mobile IAB-node, UE differentiation information and NAS transport initial Information with IAB would still be missing, i.e. regulatory issue. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.2.2.2A.1; 6.2.2.2A; 6.2.2.2A.13 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Schema changes for this CR can be found on the Forge:  Merge Request: <https://forge.3gpp.org/rep/sa3/li/-/merge_requests/280>  Commit Hash: [https://forge.3gpp.org/rep/sa3/li/-/commit/200f616c536d1268ec7f4f75c4fc485ab60f59f6](https://forge.3gpp.org/rep/sa3/li/-/commit/vdc7462ad28342df5692c14502440d5d3f95cbae7) | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | s3i240647; s3i240654 | | | | | | | | |

START OF FIRST CHANGE

##### 6.2.2.2A.1 Type: InitialRANUEContextSetup

The purpose of the InitialRANUEContextSetup type is to provide information the AMF sends to the NG-RAN to request the setup of the UE context. Encoded per TS 38.413 [23] clause 9.2.2.1.

Table 6.2.2.2A.1-1 contains the details for the InitialRANUEContextSetup type.

Table 6.2.2.2A.1-1: Structure of the InitialRANUEContextSetup type

| Field name | Type | Cardi nality | Description | M/C/O |
| --- | --- | --- | --- | --- |
| aMFUENGAPID | AMFUENGAPID | 1 | Identity that the AMF uses to uniquely identify the target UE over the NG Interface, See TS 38.413 [23] clause 9.3.3.1. | M |
| rANUENGAPID | RANUENGAPID | 1 | Identity that the AMF receives from the NG-RAN node uniquely identifying the target UE within the NG-RAN Node. See TS 38.413 [23] clause 9.3.3.2. | M |
| oldAMF | GUAMI | 0..1 | Previous serving AMF’s GUAMI, include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Format is defined in TS 29.571 [17] clause 5.3.4.1. | C |
| pDUSessionSetupRequest | SEQUENCE (SIZE (1..MAX)) OF PDUSessionSetupRequestItem | 1..MAX | Identifies the PDU Sessions for a UE. Derived from the information in the PDU Session Resource Setup Request Item IE defined in TS 38.413 [23] clause 9.2.2.1. | M |
| allowedNSSAI | AllowedNSSAI | 1 | Indicates the S-NSSAIs permitted by the network. | M |
| mobilityRestrictionList | MobilityRestrictionList | 0..1 | Provides roaming or access restrictions related to mobility from AMF to the RAN Node. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.85. | C |
| uERadioCapability | UERadioCapability | 0..1 | Contains the UE Radio Capability information. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Defined in TS 38.413 [23] clauses 9.3.1.74, and 9.3.1.74a. | C |
| rATFrequencySelectionPriority | RATFrequencySelectionPriority | 0..1 | Used to define local configuration for RRM strategies. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] 9.3.1.61. | C |
| uERadioCapabilityForPaging | UERadioCapabilityForPaging | 0..1 | Contains paging specific UE Radio Capability information. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Defined in TS 38.413 [23] clause 9.3.1.68. | C |
| iABAuthorizedIndicator | IABAuthorizedIndicator | 0..1 | Provides information about the authorization status of the UE to operate as an IAB node. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.129. | C |
| nRV2XServicesAuthorization | NRV2XServicesAuthorization | 0..1 | Provides information on the authorization status of the UE to use the NR sidelink for V2X services. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.146. | C |
| lTEV2XServiceAuthorization | LTEV2XServiceAuthorization | 0..1 | Provides information on the authorization status of the UE to use the LTE sidelink for V2X services. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.147. | C |
| rGLevelWirelineAccessCharacteristics | OCTET STRING | 0..1 | Indicates the wireline access technology specific QoS information corresponding to a specific wireline access subscription. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Specified in TS 23.316 [122] clause 4.5.1.2. | C |
| uERadioCapabilityID | OCTET STRING | 0..1 | Identifier used to represent a set of UE radio capabilities. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Defined in TS 23.003 [19] clause 29.2. | C |
| targetNSSAIInfo | TargetNSSAIInfo | 0..1 | Contains the Target NSSAI and Index to RAT/Frequency Selection Priority. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Defined in TS 38.413 [23] clause 9.3.1.229. | C |
| fiveGProSeAuthorizationIndication | FiveGProSeAuthorizationIndication | 0..1 | Provides information on the authorization status of the UE to use ProSe services. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. Defined in TS 38.413 [23] clause 9.3.1.233. | C |
| uEDifferentiationInfo | UEDifferentiationInfo | 0..1 | Provides information about the behavior of a UE with predictable activity and/or mobility behavior. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.144. | C |
| mobileIABAuthorizedIndicator | MobileIABAuthorizedIndicator | 0..1 | Provides information about the authorization status of the UE to operate as a mobile IAB node. Include when sent in the INITIAL CONTEXT SETUP REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.259. | C |

END OF FIRST CHANGE

START OF SECOND CHANGE

##### 6.2.2.2A.12 Type: UEDifferentiationInfo

The UEDifferentiationInfo contains the UE expected behavior information. The UEDifferentiationInfo type is derived from UE Differentiation Information IE defined in TS 38.413 [23] clause 9.3.1.144.

Table 6.2.2.2A.12-1 contains the details for the UEDifferentiationInfo type.

Table 6.2.2.2A.12-1: Structure of the UEDifferentiationInfo type

| Field name | Type | Cardi nality | Description | M/C/O |
| --- | --- | --- | --- | --- |
| periodicCommunicationIndicator | ENUMERATED | 0..1 | Indicates whether the UE communicates periodically or on demand, if available. See TS 38.413 [23] clause 9.3.1.144. | C |
| periodicTime | INTEGER | 0..1 | Indicates interval time of periodic communication expressed in seconds, if available. See TS 38.413 [23] clause 9.3.1.144. | C |
| scheduledCommunicationTime | SBIType | 0..1 | Provides time zone and day of the week when the UE is available for communication, if available, See TS 38.413 [23] clause 9.3.1.144. Encoded according to TS 29.571 [17] clause 5.4.4.41. The SBIReference for this parameter shall be populated with 'TS29571\_CommonData.yaml#/components/schemas/ScheduledCommunicationTime'. | C |
| stationaryIndication | SBIType | 0..1 | Indicates whether the UE is stationary or mobile, if available. See TS 38.413 [23] clause 9.3.1.144. Encoded according to TS 29.571 [17] clause 5.4.3.21. The SBIReference for this parameter shall be populated with 'TS29571\_CommonData.yaml#/components/schemas/StationaryIndication'. | C |
| trafficProfile | SBIType | 0..1 | Identifies the type of data transmission, if available: single packet transmission (UL or DL), dual packet transmission (UL with subsequent DL or DL with subsequent UL), multiple packets transmission. See TS 38.413 [23] clause 9.3.1.144. Encoded according to TS 29.571 [17] clause 5.4.3.25. The SBIReference for this parameter shall be populated with 'TS29571\_CommonData.yaml#/components/schemas/TrafficProfile'. | C |
| batteryIndication | SBIType | 0..1 | Identifies power consumption criticality for the UE, if available: if the UE is battery powered but the battery is not rechargeable/not replaceable, battery powered with  rechargeable/replaceable battery, or not battery powered. See TS 38.413 [23] clause 9.3.1.144. Encoded according to TS 29.571 [17] clause 5.4.4.43. The SBIReference for this parameter shall be populated with 'TS29571\_CommonData.yaml#/components/schemas/BatteryIndication'. | C |

END OF SECOND CHANGE

START OF THIRD CHANGE

##### 6.2.2.2A.13 Enumeration: MobileIABAuthorizedIndicator

The MobileIABAuthorizedIndicator provides information about the authorization status of the mobile IAB node. Defined in TS 38.413 [23] clause 9.3.1.259.

Table 6.2.2.2A.13-1 contains the details of the MobileIABAuthorizedIndicator type.

Table 6.2.2.2A.13-1: Enumeration for MobileIABAuthorizedIndicator

|  |  |
| --- | --- |
| Enumeration value | Description |
| authorized(1) | Indicates the UE is authorized to operate as a mobile IAB node. |
| notAuthorized(2) | Indicates the UE is not authorized to operate as a mobile IAB node. |

END OF THIRD CHANGE

START OF FOURTH CHANGE

##### 6.2.2.2A.14 Type: NASTransportInitialInformation

Table 6.2.2.2A.14-1 contains the details for the NASTransportInitialInformation type. This information is derived from information present in the INITIAL UE MESSAGE defined in TS 38.413 [38] clauses 9.2.5.1.

Table 6.2.2.2A.14-1: Payload for NASTransportInitialInformation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| rANUENGAPID | RANUENGAPID | 1..1 | Identity that the AMF receives from the NG-RAN node uniquely identifying the target UE within the NG-RAN Node. See TS 38.413 [23] clause 9.3.3.2. | M |
| iABNodeIndication | BOOLEAN | 0..1 | Indicates that the UE is capable of acting as an IAB Node. Shall be present if present in the message that triggered the event or known at the NF where the POI is located. | C |
| eDTSession | BOOLEAN | 0..1 | Indicates that the session is EDT capable. Shall be present if present in the message that triggered the event or known at the NF where the POI is located. | C |
| authenticatedIndication | BOOLEAN | 0..1 | Indicates the Fixed Network Residential Gateway (FN-RG) has been authenticated by the access network. | C |
| nPNAccessInformation | CellCAGList | 0..1 | Contains information to perform access control for Non-Public Network (NPN), | C |
| rEDCAPIndication | REDCAPIndication | 0..1 | Indicates that the UE is a Reduced Capability (RedCap) UE. | C |
| mobileIABNodeIndication | BOOLEAN | 0..1 | Indicates that the UE is capable of acting as a mobile IAB Node. Shall be present if present in the message that triggered the event or known at the NF where the POI is located. | C |

END OF FOURTH CHANGE

\*\*\* Start of attachment change \*\*\*

START OF CHANGE 1

---a/33128/r19/TS33128Payloads.asn  
+++b/33128/r19/TS33128Payloads.asn

@@ -1753,7 +1753,8 @@ NASTransportInitialInformation ::= SEQUENCE

1753 1753 eDTSession [3] BOOLEAN OPTIONAL,

1754 1754 authenticatedIndication [4] BOOLEAN OPTIONAL,

1755 1755 nPNAccessInformation [5] CellCAGList OPTIONAL,

1756 - rEDCAPIndication [6] REDCAPIndication OPTIONAL

1756 + rEDCAPIndication [6] REDCAPIndication OPTIONAL,

1757 + mobileIABNodeIndication [7] BOOLEAN OPTIONAL

1757 1758 }

1758 1759

1759 1760 NGInformation ::= SEQUENCE

@@ -1833,7 +1834,9 @@ InitialRANUEContextSetup ::= SEQUENCE

1833 1834 rGLevelWirelineAccessCharacteristics [13] OCTET STRING OPTIONAL,

1834 1835 uERadioCapabilityID [14] OCTET STRING OPTIONAL,

1835 1836 targetNSSAIInfo [15] TargetNSSAIInfo OPTIONAL,

1836 - fiveGProSeAuthorizationIndication [16] FiveGProSeAuthorizationIndication OPTIONAL

1837 + fiveGProSeAuthorizationIndication [16] FiveGProSeAuthorizationIndication OPTIONAL,

1838 + uEDifferentiationInfo [17] UEDifferentiationInfo OPTIONAL,

1839 + mobileIABAuthorizedIndicator [18] MobileIABAuthorizedIndicator OPTIONAL

1837 1840 }

1838 1841

1839 1842 PDUSessionSetupRequestItem ::= SEQUENCE

@@ -1917,6 +1920,28 @@ FiveGSUpdateType ::= OCTET STRING (SIZE(1))

1917 1920

1918 1921 UnavailabilityPeriodDuration ::= OCTET STRING (SIZE(1))

1919 1922

1923 + UECommunicationInfo ::= SEQUENCE

1924 + {

1925 + periodicCommunicationIndicator [1] PeriodicCommunicationIndicator OPTIONAL,

1926 + periodicTime [2] INTEGER OPTIONAL,

1927 + scheduledCommunicationTime [3] SBIType OPTIONAL,

1928 + stationaryIndication [4] SBIType OPTIONAL,

1929 + trafficProfile [5] SBIType OPTIONAL,

1930 + batteryIndication [6] SBIType OPTIONAL

1931 + }

1932 +

1933 + PeriodicCommunicationIndicator ::= ENUMERATED

1934 + {

1935 + periodically(1),

1936 + ondemand(2)

1937 + }

1938 +

1939 + MobileIABAuthorizedIndicator ::= ENUMERATED

1940 + {

1941 + authorized(1),

1942 + notAuthorized(2)

1943 + }

1944 +

1920 1945 -- ==================

1921 1946 -- 5G SMF definitions

1922 1947 -- ==================

END OF CHANGE 1

\*\*\* End of attachment change \*\*\*