**3GPP TSG-CT3 Meeting #136 *C3-244444***

**Maastricht, The Netherlands, 19th – 23rd August 2024 revision of C3-244091**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** | **1717** | **rev** | **1** | **Current version:** | **18.1.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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| ***Title:*** | Add clarification regarding the missing RAT type EUTRAN-U | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16, 5GS\_Ph1-CT | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | 8 |
|  | *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:*** | | CT4 defined RAT type "EUTRA\_U" in C4-195560, to support RAT restriction for E-UTRA accessing through unlicensed bands.  As per TS 23.501,  5.4.8 Support for identification and restriction of using unlicensed spectrum  NR or E-UTRA cells in unlicensed spectrum, can be used as secondary cells as specified in the Dual Connectivity architecture defined in clause 5.11 or in addition can be configured to support the Carrier Aggregation Architecture (CA) defined in TS 38.300 [27] and TS 36.300 [30].  - To restrict the use of use of unlicensed spectrum with NR or E-UTRA as secondary RAT using Dual Connectivity or Carrier Aggregation Architecture (CA) defined in TS 38.300 [27] and TS 36.300 [30], the AMF signals this access restriction to NG-RAN as part of Mobility Restriction List.  In TS 29.212, cl 5.3.31 RAT-Type AVP defines the different values for different RAT types, which are also defined in TS 29.571, except for EUTRAN-U (which is the RAT type for E-UTRA in unlicensed spectrum).  This specific RAT type is not used across Gx/Rx interface and hence not defined, which is clarified in this CR. | | | | | | | | |
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| ***Summary of change:*** | | This CR proposes to add clarification regarding the absence of RAT type "EUTRAN-U" in the RAT-type AVP clause with a NOTE. | | | | | | | | |
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| ***Consequences if not approved:*** | | Incomplete requirement leading to ambiquity. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.31 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\*\*\* First Change \*\*\*

### 5.3.31 RAT-Type AVP

The RAT-Type AVP (AVP code 1032) is of type Enumerated and is used to identify the radio access technology that is serving the UE. It may be further detailed by AN-Trusted if applicable.

NOTE 1: Values 0-999 are used for generic radio access technologies that can apply to different IP-CAN types and are not IP-CAN specific.

NOTE 2: Values 1000-1999 are used for 3GPP specific radio access technology types.

NOTE 3: Values 2000-2999 are used for 3GPP2 specific radio access technology types.

NOTE 4: The informative Annex C presents a mapping between the code values for different access network types.

The following values are defined:

WLAN (0)

This value shall be used to indicate that the RAT is WLAN.

VIRTUAL (1)

This value shall be used to indicate that the RAT is unknown. For further details refer to 3GPP TS 29.274 [22].

TRUSTED- N3GA (2)

This value shall be used to indicate that the RAT is a trusted non-3GPP access, different than Trusted Wireless LAN (IEEE 802.11) access.

NOTE 5: This value is not used in the present specification.

WIRELINE (3)

This value shall be used to indicate that the transmission technology is wireline access. It is used when it is not possible to differentiate between wireline cable and wireline BBF.

NOTE 6: This value is not used in the present specification.

WIRELINE-CABLE (4)

This value shall be used to indicate that the transmission technology is wireline cable.

NOTE 7: This value is not used in the present specification.

WIRELINE-BBF (5)

This value shall be used to indicate that the transmission technology is wireline BBF.

NOTE 8: This value is not used in the present specification.

UTRAN (1000)

This value shall be used to indicate that the RAT is UTRAN. For further details refer to 3GPP TS 29.060 [18].

GERAN (1001)

This value shall be used to indicate that the RAT is GERAN. For further details refer to 3GPP TS 29.060 [18].

GAN (1002)

This value shall be used to indicate that the RAT is GAN. For further details refer to 3GPP TS 29.060 [18] and 3GPP TS 43.318 [29].

HSPA\_EVOLUTION (1003)

This value shall be used to indicate that the RAT is HSPA Evolution. For further details refer to 3GPP TS 29.060 [18].

EUTRAN (1004)

This value shall be used to indicate that the RAT is EUTRAN (WB-EUTRAN) terrestrial RAT type. For further details refer to 3GPP TS 29.274 [22].

EUTRAN-NB-IoT (1005)

This value shall be used to indicate that the RAT is NB-IoT. For further details refer to 3GPP TS 29.274 [22].

NR (1006)

This value shall be used to indicate that the RAT is NR.

NOTE 9: This value is not used in the present specification.

LTE-M (1007)

This value shall be used to indicate that the RAT is LTE-M. For further details refer to 3GPP TS 29.274 [22].

NR-U (1008)

This value shall be used to indicate that the RAT is NR in unlicensed bands.

NOTE 10: This value is not used in the present specification.

EUTRAN(LEO) (1011)

This value shall be used to indicate that the RAT is WB-EUTRAN(LEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN(MEO) (1012)

This value shall be used to indicate that the RAT is WB-EUTRAN(MEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN(GEO) (1013)

This value shall be used to indicate that the RAT is WB-EUTRAN(GEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN(OTHERSAT) (1014)

This value shall be used to indicate that the RAT is WB-EUTRAN(OTHERSAT). For further details refer to 3GPP TS 29.274 [22].

EUTRAN-NB-IoT(LEO) (1021)

This value shall be used to indicate that the RAT is NB-IoT(LEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN-NB-IoT(MEO) (1022)

This value shall be used to indicate that the RAT is NB-IoT(MEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN-NB-IoT(GEO) (1023)

This value shall be used to indicate that the RAT is NB-IoT(GEO). For further details refer to 3GPP TS 29.274 [22].

EUTRAN-NB-IoT(OTHERSAT) (1024)

This value shall be used to indicate that the RAT is NB-IoT(OTHERSAT). For further details refer to 3GPP TS 29.274 [22].

LTE-M(LEO) (1031)

This value shall be used to indicate that the RAT is LTE-M(LEO). For further details refer to 3GPP TS 29.274 [22].

LTE-M(MEO) (1032)

This value shall be used to indicate that the RAT is LTE-M(MEO). For further details refer to 3GPP TS 29.274 [22].

LTE-M(GEO) (1033)

This value shall be used to indicate that the RAT is LTE-M(GEO). For further details refer to 3GPP TS 29.274 [22].

LTE-M(OTHERSAT) (1034)

This value shall be used to indicate that the RAT is LTE-M(OTHERSAT). For further details refer to 3GPP TS 29.274 [22].

NR(LEO) (1035)

This value shall be used to indicate that the RAT is NR(LEO).

NOTE 11: This value is not used in the present document.

NR(MEO) (1036)

This value shall be used to indicate that the RAT is NR(MEO).

NOTE 12: This value is not used in the present document.

NR(GEO) (1037)

This value shall be used to indicate that the RAT is NR(GEO).

NOTE 13: This value is not used in the present document.

NR(OTHERSAT) (1038)

This value shall be used to indicate that the RAT is NR(OTHERSAT).

NOTE 14: This value is not used in the present document.

NR-REDCAP (1039)

This value shall be used to indicate that the RAT is NR-REDCAP.

NOTE 15: This value is not used in the present document.

NR-EREDCAP (1040)

This value shall be used to indicate that the RAT is NR-EREDCAP.

NOTE 16: This value is not used in the present document.

CDMA2000\_1X (2000)

This value shall be used to indicate that the RAT is CDMA2000 1X. For further details refer to 3GPP2 X.S0011 [20].

HRPD (2001)

This value shall be used to indicate that the RAT is HRPD. For further details refer to 3GPP2 X.S0011 [20].

UMB (2002)

This value shall be used to indicate that the RAT is UMB. For further details refer to 3GPP2 X.S0011 [20].

EHRPD (2003)

This value shall be used to indicate that the RAT is eHRPD. For further details refer to 3GPP2 X.S0057 [24].

NOTE 17: RAT type value to indicate that the RAT is EUTRAN (WB-EUTRAN) in unlicensed bands is not defined, since it is not applicable over Gx/Rx interface.

\*\*\* End of Changes \*\*\*