**3GPP TSG-RAN2 #110\_e R2-2006231**

**Electronic meeting, 1st to 12th June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.321** | **CR** | **0752** | **rev** | **1** | **Current version:** | **16.0.0** |  |
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| *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 | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:*** | 38321 CR Clarification on eLCID | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | LG Electronics, MediaTek, ASUSTek | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2020-06-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | There are various minor inconsistencies in the specification relating to the addition of eLCIDs.  1. In the function for error handling the term LCID is used to determine the corresponding action upon detection of an reserved LCID. This text overlooks the introduction of eLCID leaving the UE behaviour upon reception of a reserved eLCID value unspecified.  2. In the description of the fields of the MAC subheader the full function of the eLCID is not described. An eLCID can also describe the type of a corresponding MAC CE which is missing in the text. | | | | | | | | |
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| ***Summary of change:*** | | 1. The term eLCID is introduced in the function for error handling.  2. The description of the field eLCID is updated to reflect the intended functionality. | | | | | | | | |
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| ***Consequences if not approved:*** | | 1. The UE behaviour when receiving a reserved eLCID value remains unspecified.  2. A UE could reject eLCIDs which correspond to MAC CEs. | | | | | | | | |
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| ***Clauses affected:*** | | 5.13, 6.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

Start of changes

## 5.13 Handling of unknown, unforeseen and erroneous protocol data

When a MAC entity receives a MAC PDU for the MAC entity's C-RNTI or CS-RNTI, or by the configured downlink assignment, containing a Reserved LCID or eLCID value, or an LCID or eLCID value the MAC Entity does not support, the MAC entity shall at least:

1> discard the received subPDU and any remaining subPDUs in the MAC PDU.

When a MAC entity receives a MAC PDU for the MAC entity's C-RNTI or CS-RNTI, or by the configured downlink assignment, containing an LCID or eLCID value which is not configured, the MAC entity shall at least:

1> discard the received subPDU.

When a MAC entity receives a MAC PDU on SL-SCH containing a Reserved LCID value for broadcast or groupcast, or an LCID value which is not configured, the MAC entity shall:

1> discard the received subPDU.

Next change

### 6.2.1 MAC subheader for DL-SCH and UL-SCH

The MAC subheader consists of the following fields:

- LCID: The Logical Channel ID field identifies the logical channel instance of the corresponding MAC SDU or the type of the corresponding MAC CE or padding as described in Tables 6.2.1-1 and 6.2.1-2 for the DL-SCH and UL-SCH respectively. There is one LCID field per MAC subheader. The LCID field size is 6 bits. If the LCID field is set to 34, one additional octet is present in the MAC subheader containing the eLCID field and follow the octet containing LCID field. If the LCID field is set to 33, two additional octets are present in the MAC subheader containing the eLCID field and these two additional octets follow the octet containing LCID field;

- eLCID: The extended Logical Channel ID field identifies the logical channel instance of the corresponding MAC SDU or the type of the corresponding MAC CE as described in tables 6.2.1-1a, 6.2.1-1b, 6.2.1-2a and 6.2.1-2b for the DL-SCH and UL-SCH respectively. The size of the eLCID field is either 8 bits or 16 bits.

NOTE 1: The extended Logical Channel ID space using two-octet eLCID and the relevant MAC subheader format is used, only when configured, on the NR backhaul links between IAB nodes or between IAB node and IAB Donor.

- L: The Length field indicates the length of the corresponding MAC SDU or variable-sized MAC CE in bytes. There is one L field per MAC subheader except for subheaders corresponding to fixed-sized MAC CEs, padding, and MAC SDUs containing UL CCCH. The size of the L field is indicated by the F field;

- F: The Format field indicates the size of the Length field. There is one F field per MAC subheader except for subheaders corresponding to fixed-sized MAC CEs, padding, and MAC SDUs containing UL CCCH. The size of the F field is 1 bit. The value 0 indicates 8 bits of the Length field. The value 1 indicates 16 bits of the Length field;

- R: Reserved bit, set to 0.

The MAC subheader is octet aligned.

Table 6.2.1-1 Values of LCID for DL-SCH

|  |  |
| --- | --- |
| Codepoint/Index | LCID values |
| 0 | CCCH |
| 1–32 | Identity of the logical channel |
| 33 | Extended logical channel ID field (two-octet eLCID field) |
| 34 | Extended logical channel ID field (one–octet eLCID field) |
| 35 | Reserved |
| 36 | SP Positioning SRS Activation/Deactivation |
| 37 | Duplication RLC Activation/Deactivation |
| 38 | Absolute Timing Advance Command |
| 39 | CC list-based SRS Activation/Deactivation |
| 40 | PUSCH Pathloss Reference RS Activation/Deactivation |
| 41 | SRS Pathloss Reference RS Activation/Deactivation |
| 42 | AP SRS spatial relation Indication |
| 43 | Enhanced PUCCH spatial relation Activation/Deactivation |
| 44 | Enhanced TCI States Activation/Deactivation for UE-specific PDSCH |
| 45 | Number of Provided Guard Symbols |
| 46 | Timing Delta |
| 47 | Recommended bit rate |
| 48 | SP ZP CSI-RS Resource Set Activation/Deactivation |
| 49 | PUCCH spatial relation Activation/Deactivation |
| 50 | SP SRS Activation/Deactivation |
| 51 | SP CSI reporting on PUCCH Activation/Deactivation |
| 52 | TCI State Indication for UE-specific PDCCH |
| 53 | TCI States Activation/Deactivation for UE-specific PDSCH |
| 54 | Aperiodic CSI Trigger State Subselection |
| 55 | SP CSI-RS/CSI-IM Resource Set Activation/Deactivation |
| 56 | Duplication Activation/Deactivation |
| 57 | SCell Activation/Deactivation (four octets) |
| 58 | SCell Activation/Deactivation (one octet) |
| 59 | Long DRX Command |
| 60 | DRX Command |
| 61 | Timing Advance Command |
| 62 | UE Contention Resolution Identity |
| 63 | Padding |

Table 6.2.1-1a Values of two-octet eLCID for DL-SCH

|  |  |
| --- | --- |
| Index | LCID values |
| 320 to (216 + 191) | Identity of the logical channel |
| (216 + 192) to (216 + 319) | Reserved |

Table 6.2.1-1b Values of one-octet eLCID for DL-SCH

|  |  |  |
| --- | --- | --- |
| Codepoint | Index | LCID values |
| 0 to 255 | 64 to 319 | reserved |

Table 6.2.1-2 Values of LCID for UL-SCH

|  |  |
| --- | --- |
| Index | LCID values |
| 0 | CCCH of size 64 bits (referred to as "CCCH1" in TS 38.331 [5]) |
| 1–32 | Identity of the logical channel |
| 33 | Extended logical channel ID field (two–octet eLCID field) |
| 34 | Extended logical channel ID field (one–octet eLCID field) |
| 35–39 | Reserved |
| 40 | Sidelink Configured Grant Confirmation |
| 41 | Truncated Sidelink BSR |
| 42 | Sidelink BSR |
| 43 | Multiple Entry Configured Grant Confirmation |
| 44 | LBT failure (four octets) |
| 45 | LBT failure (one octet) |
| 46 | SCell BFR (four octets Ci) |
| 47 | SCell BFR (one octet Ci) |
| 48 | Truncated SCell BFR (four octets Ci) |
| 49 | Truncated SCell BFR (one octet Ci) |
| 50 | Number of Desired Guard Symbols |
| 51 | Pre-emptive BSR |
| 52 | CCCH of size 48 bits (referred to as "CCCH" in TS 38.331 [5]) |
| 53 | Recommended bit rate query |
| 54 | Multiple Entry PHR (four octets Ci) |
| 55 | Configured Grant Confirmation |
| 56 | Multiple Entry PHR (one octet Ci) |
| 57 | Single Entry PHR |
| 58 | C-RNTI |
| 59 | Short Truncated BSR |
| 60 | Long Truncated BSR |
| 61 | Short BSR |
| 62 | Long BSR |
| 63 | Padding |

Table 6.2.1-2a Values of two-octet eLCID for UL-SCH

|  |  |
| --- | --- |
| Codepoint/IIndex | LCID values |
| 320 to (216 + 191) | Identity of the logical channel |
| (216 + 192) to (216 + 319) | Reserved |

Table 6.2.1-2b Values of one-octet eLCID for UL-SCH

|  |  |  |
| --- | --- | --- |
| Codepoint | Index | LCID values |
| 0 to 255 | 64 to 319 | reserved |

NOTE 2: For the eLCID space, the 16-bit codepoint 000…00 (all zeros) corresponds to the index value of 320, while the 16-bit codepoint 111…11 (all ones) corresponds to the index value of 216+ 319.

End of changes