**3GPP TSG-2 Meeting #R2-22xxxx**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **36.321** | **CR** |  | **rev** |  | **Current version:** | **16.6.0** |  |
|  |
| *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 | **X** | Radio Access Network | **X** | Core Network |  |

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|  |
| ***Title:***  | Introduction of 16QAM |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NB\_IOTenh4\_LTE\_eMTC6-Core |  | ***Date:*** | 2022-03-24 |
|  |  |  |  |  |
| ***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 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:*** | To refer to new table for report mapping when channel quality reporting for 16QAM. |
|  |  |
| ***Summary of change:*** | Reference to new table for 16QAM has been added. |
|  |  |
| ***Consequences if not approved:*** | 16QAM feature may not be supported |
|  |  |
| ***Clauses affected:*** | 6.1.3.19 |
|  |  |
|  | **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:*** |  |

*Beginning of Changes*

#### 6.1.3.19 Downlink Channel Quality Report and AS RAI MAC Control Element

DCQR and AS RAI MAC control element is identified by a MAC PDU subheader with LCID as specified in Table 6.2.1-2. A MAC PDU shall contain at most one DCQR and AS RAI MAC control element.

It has a fixed size and consists of a single octet defined as follows (Figure 6.1.3.19-1):

- R: Reserved bit, set to "0";

- AS RAI: The field corresponds to Access Stratum Release Assistance Indication as shown in Table 6.1.3.19-1. The length of the field is 2 bits;

- Quality Report: For an NB-IoT UE, the field corresponds to CQI-NPDCCH-NB as defined in TS 36.331 [8]. If *npush-16QAM-Config* is not configured, the report mapping is defined in Table 9.1.22.15-1 in TS 36.133[9] and if *npush-16QAM-Config* is configured the report mapping is defined in Table 9.1.22.17-1 in TS 36.133[9]. For a BL UE or UE in CE, the field corresponds to DL channel quality report as defined in TS 36.133 [9]. The length of the field is 4 bits.



Figure 6.1.3.19-1: DCQR and AS RAI MAC control element

Table 6.1.3.19-1: Values for AS RAI

|  |  |
| --- | --- |
| Codepoint/Index | Value |
| 00 | No RAI information |
| 01 | No subsequent DL and UL data transmission is expected |
| 10 | A single subsequent DL transmission is expected |
| 11 | Reserved |

*End of Changes*