**3GPP T****SG-RAN WG2 Meeting #119bis-e R2-22nnnnn**

**Online Meeting, Oct 10-19 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.331** | **CR** | **Draft** | **rev** | **-** | **Current version:** | **17.2.0** |  |
|  |
| *For* [***HELP***](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:***  | Draft 38.331 CR for MBS UE capability corrections |
|  |  |
| ***Source to WG:*** | MediaTek Inc. |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_MBS-Core |  | ***Date:*** | 2022-10-17 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***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:*** | Correction of R17 MBS capabiliy following the agreement made during RAN2#119bis-e.=> We have a capability bit for FG 33-1-1  |
|  |  |
| ***Summary of change:*** | 1. Add dci-BroadcastWith16Repititions-r17 in the table hosting *FeatureSetDownlinkPerCC* in section 6.3.3

**Impact analysis**Impacted functionality:MBS broadcast receptionInter-operability:For the change, if the UE supports this change and the network does not, the network may be note aware of the UE capability to support dynamic slot-level repetition for broadcast MTCH. Then the UE may be not properly configured to receive MBS broadcast services as expected by the network. For the change, if the UE does not support this change and the network supports, there is no inter-operability issue. |
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| ***Consequences if not approved:*** | The agreement made during RAN2#119bis-e for R17 MBS UE capabilities is not captured at 38.331. |
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| ***Clauses affected:*** | 6.3.3 |
|  |  |
|  | **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 change*

### 6.3.3 UE capability information elements

[…]

#### – *FeatureSetDownlinkPerCC*

The IE *FeatureSetDownlinkPerCC* indicates a set of features that the UE supports on the corresponding carrier of one band entry of a band combination.

*FeatureSetDownlinkPerCC* information element

-- ASN1START

-- TAG-FEATURESETDOWNLINKPERCC-START

FeatureSetDownlinkPerCC ::= SEQUENCE {

 supportedSubcarrierSpacingDL SubcarrierSpacing,

 supportedBandwidthDL SupportedBandwidth,

 channelBW-90mhz ENUMERATED {supported} OPTIONAL,

 maxNumberMIMO-LayersPDSCH MIMO-LayersDL OPTIONAL,

 supportedModulationOrderDL ModulationOrder OPTIONAL

}

FeatureSetDownlinkPerCC-v1620 ::= SEQUENCE {

 -- R1 16-2a: Mulit-DCI based multi-TRP

 multiDCI-MultiTRP-r16 MultiDCI-MultiTRP-r16 OPTIONAL,

 -- R1 16-2b-3: Support of single-DCI based FDMSchemeB

 supportFDM-SchemeB-r16 ENUMERATED {supported} OPTIONAL

}

FeatureSetDownlinkPerCC-v1700 ::= SEQUENCE {

 supportedMinBandwidthDL-r17 SupportedBandwidth-v1700 OPTIONAL,

 broadcastSCell-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 33-2g: MIMO layers for multicast PDSCH

 dci-BroadcastWith16Repititions-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 33-1-1: Dynamic slot-level repetition for broadcast MTCH

 maxNumberMIMO-LayersMulticastPDSCH-r17 ENUMERATED {n2, n4, n8} OPTIONAL,

 -- R1 33-2h: Dynamic scheduling for multicast for SCell

 dynamicMulticastSCell-r17 ENUMERATED {supported} OPTIONAL,

 supportedBandwidthDL-v1710 SupportedBandwidth-v1700 OPTIONAL,

 -- R4 24-1/24-2/24-3/24-4/24-5

 supportedCRS-InterfMitigation-r17 CRS-InterfMitigation-r17 OPTIONAL

}

FeatureSetDownlinkPerCC-v1720 ::= SEQUENCE {

 -- R1 33-2j: Supported maximum modulation order used for maximum data rate calculation for multicast PDSCH

 maxModulationOrderForMulticastDataRateCalculation-r17 ENUMERATED {qam64, qam256, qam1024} OPTIONAL,

 -- R1 33-1-2: FDM-ed unicast PDSCH and group-common PDSCH for broadcast

 fdm-BroadcastUnicast-r17 ENUMERATED {supported} OPTIONAL,

 -- R1 33-3-2: FDM-ed unicast PDSCH and group-common PDSCH for multicast

 fdm-MulticastUnicast-r17 ENUMERATED {supported} OPTIONAL

}

MultiDCI-MultiTRP-r16 ::= SEQUENCE {

 maxNumberCORESET-r16 ENUMERATED {n2, n3, n4, n5},

 maxNumberCORESETPerPoolIndex-r16 INTEGER (1..3),

 maxNumberUnicastPDSCH-PerPool-r16 ENUMERATED {n1, n2, n3, n4, n7}

}

CRS-InterfMitigation-r17 ::= SEQUENCE {

 -- R4 24-1 CRS-IM (Interference Mitigation) in DSS scenario

 crs-IM-DSS-15kHzSCS-r17 ENUMERATED {supported} OPTIONAL,

 -- R4 24-2 CRS-IM in non-DSS and 15 kHz NR SCS scenario, without the assistance of network signaling on LTE channel bandwidth

 crs-IM-nonDSS-15kHzSCS-r17 ENUMERATED {supported} OPTIONAL,

 -- R4 24-3 CRS-IM in non-DSS and 15 kHz NR SCS scenario, with the assistance of network signaling on LTE channel bandwidth

 crs-IM-nonDSS-NWA-15kHzSCS-r17 ENUMERATED {supported} OPTIONAL,

 -- R4 24-4 CRS-IM in non-DSS and 30 kHz NR SCS scenario, without the assistance of network signaling on LTE channel bandwidth

 crs-IM-nonDSS-30kHzSCS-r17 ENUMERATED {supported} OPTIONAL,

 -- R4 24-5 CRS-IM in non-DSS and 30 kHz NR SCS scenario, with the assistance of network signaling on LTE channel bandwidth

 crs-IM-nonDSS-NWA-30kHzSCS-r17 ENUMERATED {supported} OPTIONAL

}

-- TAG-FEATURESETDOWNLINKPERCC-STOP

-- ASN1STOP

[…]

*End of change*