3GPP TSG-RAN WG4 Meeting # 97-e R4-2016796

Electronic Meeting, 26 October – 13 November, 2020

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **36.101** | **CR** | **5688** | **rev** | **1** | **Current version:** | **14.16.0** |  |
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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 |  | Core Network |  |

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| ***Title:***  | CR for 36.101 to clarify the SCS supports for LTE MBMS (Rel-14) |
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| ***Source to WG:*** | Huawei, HiSilicon, ZTE |
| ***Source to TSG:*** | R4 |
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| ***Work item code:*** | MBMS\_LTE\_enh2-Core |  | ***Date:*** | 2020-10-09 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-14 |
|  | *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-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:*** | 1. Based on the agreement in R4-2012604, UE doesn’t have to support all of the SCS, if UE support LTE MBMS.
2. For MBMS feature, there is no need to meet the minimum requirements of transmitter characteristics for UE.
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| ***Summary of change:*** | 1. The specification is clarified that UE doesn’t have to support all of the SCS for LTE MBMS feature.
2. The requirements for clause 6 is removed.
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| ***Consequences if not approved:*** | The specification doesn’t reflect RAN4’s agreement. |
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| ***Clauses affected:*** | 4.3A |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## **<<Start of Change1>>**

## 4.3A Applicability of minimum requirements (CA, UL-MIMO, ProSe, Dual Connectivity, UE category 0, UE category M1, UE category M2, UE category 1bis, UE category NB1 and NB2, V2X Communication, MBMS UE)

The requirements in clauses 5, 6 and 7 which are specific to CA, UL-MIMO, ProSe, Dual Connectivity, UE category 0, UE category M1, UE category M2, UE category 1bis, UE category NB1 and NB2 and V2X Communication are specified as suffix A, B, C, D, E, F and G where;

a) Suffix A additional requirements need to support CA

b) Suffix B additional requirements need to support UL-MIMO

c) Suffix C additional requirements need to support Dual Connectivity

d) Suffix D additional requirements need to support ProSe

e) Suffix E additional requirements need to support UE category 0, category M1, category M2, and category 1bis

f) Suffix F additional requirements need to support UE category NB1 and NB2

g) Suffix G additional requirements need to support V2X Communication

A terminal which supports the above features needs to meet both the general requirements and the additional requirement applicable to the additional subclause (suffix A, B, C, D, E, F and G) in clauses 5, 6 and 7. Where there is a difference in requirement between the general requirements and the additional subclause requirements (suffix A, B, C, D, E, F and G) in clauses 5, 6 and 7, the tighter requirements are applicable unless stated otherwise in the additional subclause.

A terminal which supports more than one feature (CA, UL-MIMO, ProSe, Dual Connectivity, UE category 0, UE category M1, UE category M2, UE category 1bis, UE category NB1 and NB2 and V2X Communication) in clauses 5, 6 and 7 shall meet all of the separate corresponding requirements.

For a terminal supporting CA, compliance with minimum requirements for non-contiguous intra-band carrier aggregation in any given operating band does not imply compliance with minimum requirements for contiguous intra-band carrier aggregation in the same operating band.

For a terminal supporting CA, compliance with minimum requirements for contiguous intra-band carrier aggregation in any given operating band does not imply compliance with minimum requirements for non- contiguous intra-band carrier aggregation in the same operating band.

A terminal which supports a DL CA configuration shall support all the lower order fallback DL CA combinations and it shall support at least one bandwidth combination set for each of the constituent lower order DL combinations containing all the bandwidths specified within each specific combination set of the upper order DL combination.

A terminal which supports CA, for each supported CA configuration, shall support Pcell transmissions in each of the aggregated Component Carriers unless indicated otherwise in clause 5.6A.1.

Terminal supporting Dual Connectivity configuration shall meet the minimum requirements for corresponding CA configuration (suffix A), unless otherwise specified.

For a terminal that supports ProSe Direct Communication and/or ProSe Direct Discovery, the minimum requirements are applicable when

- the UE is associated with a serving cell on the ProSe carrier, or

- the UE is not associated with a serving cell on the ProSe carrier and is provisioned with the preconfigured radio parameters for ProSe Direct Communications and/or ProSe Direct Discovery that are associated with known Geographical Area, or

- the UE is associated with a serving cell on a carrier different than the ProSe carrier, and the radio parameters for ProSe Direct Discovery on the ProSe carrier are provided by the serving cell, or

- the UE is associated with a serving cell on a carrier different than the ProSe carrier, and has a non-serving cell selected on the ProSe carrier that supports ProSe Direct Discovery and/or ProSe Direct Communication.

When the ProSe UE is not associated with a serving cell on the ProSe carrier, and the UE does not have knowledge of its geographical area, or is provisioned with preconfigured radio parameters that are not associated with any Geographical Area, ProSe transmissions are not allowed, and the requirements in Section 6.3.3D apply.

A terminal that supports simultaneous E-UTRA ProSe sidelink transmissions and E-UTRA uplink transmissions for the inter-band E-UTRA ProSe/E-UTRA bands specified in Table 5.5D-2, shall meet the minimum requirements for the corresponding inter-band UL CA configuration (suffix A), unless otherwise specified. For transmitter characteristics specified in clause 6, the terminal is required to meet the conformance tests for the corresponding inter-band UL CA configuration and is not required to be retested with simultaneous E-UTRA ProSe sidelink and E-UTRA uplink transmissions.

A terminal that supports E-UTRA V2X intra-band multi-carrier operation for the band specified in Table 5.5G-3, shall meet the corresponding transmitter characteristics requirements (in subclauses with suffix G in Section 6) only when there are multiple active transmissions on all of the configured carrier components. When there is only one active transmission on one of the configured carrier components, the corresponding requirements for V2X single carrier operation apply for the corresponding active carrier component.

A terminal which supports MBMS (including 15 kHz, 7.5 kHz and 1.25 kHz subcarrier spacing), shall meet the minimum requirements in clauses 5 and 7. A terminal which supports MBMS is not required to support all kinds of subcarrier spacing.

## **<<End of Change1>>**