**3GPP TSG-RAN WG2 Meeting #131R2-2506346**

**Bengaluru, India, August 25 - 29, 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **36.306** | **CR** | **1920** | **rev** | **1** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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 LTE-based 5G Broadcast Phase 2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon, Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LTE\_terr\_bcast\_Ph2-Core | | | | |  | ***Date:*** | | | 2025-09-05 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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)* | |
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| ***Reason for change:*** | | Introduction of LTE-based 5G Broadcast Phase 2 to 36.306:  The time-frequency interleavers for MBMS-dedicated cells is introduced in Rel-19.This CR is to capture the UE capabilities of time interleaving and frequency interleaving based on R1-2506427. | | | | | | | | |
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| ***Summary of change:*** | | Introduce the UE capabilities for time interleaving and frequency interleaving. | | | | | | | | |
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| ***Consequences if not approved:*** | | LTE-based 5G Broadcast Phase 2 is not supported. | | | | | | | | |
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| ***Clauses affected:*** | | 4.3.17.w (new), 4.3.17.x (new), 4.3.17.y (new), 4.3.17.z (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.211 CR 0576  TS 36.212 CR 0376  TS 36.213 CR 1448  TS 36.300 CR 1428  TS 36.331 CR 5143  TS 36.321 CR 1593 | | |
| ***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

### 4.3.17 MBMS parameters

#### 4.3.17.w *timeInterleavingKhz15-r19, timeInterleavingKhz7dot5-r19, timeInterleavingKhz2dot5-r19, timeInterleavingKhz1dot25-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports MBMS reception from an MBMS-dedicated cell configured with time interleaving. With time interleaving, one TB is mapped to N non-consecutive subframes and two transmissions of the same TB are separated by (M-1) subframes. A UE that supports this feature shall support the following components:

1. PMCH transmission pattern, excluding MCCH and MSI, with time interleaving for the corresponding PMCH numerology;
2. TBS determination for the scaled TB;
3. determining the starting point for reading from the circular buffer (k0) for each subframe;
4. extended MSI periodicities.

A UE which supports this feature shall also support *fembmsDedicatedCell-r14* as specified in TS 36.331 [5].

#### 4.3.17.x *cyclicShiftFixedAlpha-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports cyclic shift of PMCH with fixed alpha for the bit sequence in Section 6.3.1 of TS 36.211 for the ith subframe of the time-interleaved TB by X\_i bits. A UE which supports this feature shall also support *timeInterleaving-r19* as specified in TS 36.331 [5].

#### 4.3.17.y *cyclicShift-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports cyclic shift of PMCH for the bit sequence in Section 6.3.1 of TS 36.211 for the ith subframe of the time-interleaved TB by X\_i bits. A UE which supports this feature shall also support *timeInterleaving-r19* as specified in TS 36.331 [5].

#### 4.3.17.z *freqInterleavingKhz15-r19, freqInterleavingKhz7dot5-r19, freqInterleavingKhz2dot5-r19, freqInterleavingKhz1dot25-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports MBMS reception from an MBMS-dedicated cell configured with frequency interleaving. A UE that supports this feature shall support frequency-interleaving for MTCH for the corresponding PMCH numerology.

A UE which supports this feature shall also support *fembmsDedicatedCell-r14* as specified in TS 36.331 [5].

End of Changes