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

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

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **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 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-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 0576TS 36.212 CR 0376TS 36.213 CR 1448TS 36.300 CR 1428TS 36.331 CR 5143TS 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 *pmch-cyclicShiftAlpha1-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports cyclic shift of PMCH with *alpha1* 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 *pmch-cyclicShiftAlpha2-r19*

This parameter defines, for the corresponding E-UTRA band, whether the UE supports cyclic shift of PMCH with *alpha2* 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 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