**3GPP TSG RAN WG1 #122 R1-25nnnnn**

**Bengaluru, India, Aug 25th – 29th, 2025**

**Source: Ad-Hoc Chair (AT&T)**

**Title: Session Notes of AI** **9.13**

**Agenda Item: 9.13**

**Document for: Endorsement**

### 9.13 UE features for LTE based 5G broadcast Phase 2

**Proposal: Adopt the following changes highlighted in chromatic fonts, while keeping the yellow highlighting, if any, as shown**

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| 3. LTE\_terr\_bcast\_Ph2 | 3-1 | Time-interleaving | 1. Support of PMCH transmission pattern, excluding MCCH and MSI, with time interleaving for a set of PMCH numerologies  2. Support of TBS determination for the scaled TB  3. Support of determining the starting point for reading from the circular buffer (k0) for each subframe  4. Support of the extended MSI periodicities | Support of fembmsDedicatedCell | Yes | N/A | UE is not able to support time-interleaving for LTE-based 5G broadcast | Per band | No | N/A | For component 1, the UE indicates a bitmap [b15, b7dot5, b2dot5, b1dot25] where each bit indicates whether the UE supports time-interleaving for the corresponding numerology  Note: One TB is mapped to N non-consecutive subframes. Two transmissions of the same TB are separated by (M-1) subframes.  ~~Note: For each band, the UE can also indicate for which subcarrier spacing FG 3-1 is supported~~ | Optional with capability signalling |

**Proposal: Introduce the following Rel. 19 UE FGs (yellow highlighting, if any, shows text that’s not yet agreed)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 3. LTE\_terr\_bcast\_Ph2 | 3-1a | Cyclic shift of PMCH | 1. Support of cyclic shift for the bit sequence in Section 6.3.1 of TS 36.211 for the i^th subframe of the time-interleaved TB by X\_i bits | FG3-1 | Yes | N/A | UE is not able to support time-interleaving with the cyclic shift | Per band | No | N/A | Candidate values for is   * + Alt 1: , with     - is the number of bits in the codeblock within a subframe (as defined in TS 36.212)   + Alt 2: , with     - denotes the number of OFDM symbols within a subframe     - denotes the number of CBs in the time-interleaved (scaled) TB     - is the number of bits in the codeblock within a subframe (as defined in TS 36.212)   + Alt. 3: No component candidate values | Optional with capability signalling |

**Proposal: Introduce the following Rel. 19 UE FGs (yellow highlighting, if any, shows text that’s not yet agreed)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 3. LTE\_terr\_bcast\_Ph2 | 3-1b | Soft buffer scaling factor for unicast reception | 1. Support of the soft buffer scaling factor for unicast reception | 3-1 | Yes | N/A | UE is not able to support simultaneously receiving unicast and time-interleaving MBMS | Per band | No | N/A |  | Optional with capability signalling |

**Proposal: Adopt the following changes highlighted in chromatic fonts, while keeping the yellow highlighting, if any, as shown**

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| 3. LTE\_terr\_bcast\_Ph2 | 3-2 | Frequency-interleaving | 1. Support of frequency-interleaving for ~~MCCH/~~MTCH~~/MSI~~ for a set of PMCH numerologies | Support of fembmsDedicatedCell | Yes | N/A | UE is not able to support frequency-interleaving for LTE-based 5G broadcast | Per band | No | N/A | For component 1, the UE indicates a bitmap [b15, b7dot5, b2dot5, b1dot25] where each bit indicates whether the UE supports time-interleaving for the corresponding numerology  ~~Note: For each band, the UE can also indicate for which subcarrier spacing FG 3-2 is supported~~ | Optional with capability signalling |

R1-2505352 UE features for LTE based 5G broadcast Phase 2 Huawei, HiSilicon

R1-2505572 UE features for LTE broadcast Samsung

R1-2505646 Discussion on UE features for LTE based 5G broadcast Xiaomi

R1-2506205 UE features for LTE based 5G broadcast Phase 2 Qualcomm Incorporated

R1-2506230 Summary of UE features for LTE based 5G broadcast Phase 2 Moderator (AT&T)

R1-2506258 Discussion on UE features for LTE based 5G broadcast ZTE Corporation, Sanechips