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

**Prague, Czech Republic, October 13th –17th, 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 numerologies2. Support of TBS determination for the scaled TB up to a maximum TBS3. Support of determining the starting point for reading from the circular buffer (k0) for each subframe4. 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 numerologyFor component 2, the maximum TBS a UE supports for the scaled TB is derived based on DL-SCH as per TS 36.306 set by UE category; when the UE category has multiple maximum TBS, the largest TBS among the multiple maximum TBS of a DL-SCH as per TS 36.306 set by UE category.Note: One TB is mapped to N non-consecutive subframes. Two transmissions of the same TB are separated by (M-1) subframes.  | 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 | 3-1a | Cyclic shift of PMCH – ~~fixed~~ alpha1 | 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 | 3-1 | Yes | N/A | UE is not able to support time-interleaving with the cyclic shift and alpha1 | Per band | No | N/A |  , with * + - is the number of bits in the codeblock within a subframe (as defined in TS 36.212)
 | 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 | 3-1b | Cyclic shift of PMCH – alpha2 | 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 | 3-1 | Yes | N/A | UE is not able to support time-interleaving with the cyclic shift and alpha2 | Per band | No | N/A |  , 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)
 | 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 | 3-1c | Cyclic shift of PMCH - alpha3 | 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 | 3-1 | Yes | N/A | UE is not able to support time-interleaving with the cyclic shift and alpha3 | Per band | No | N/A |  where * the pseudo-random sequence is defined by clause 7.2 and shall be initialized with at the beginning of each radio frame for which ,
* is the number of subcarriers available in one OFDM symbol for PMCH,
* is the modulation order,
* denotes the subframe to which the transport block is mapped,

- is the number of subframes to which the transport block is mapped | Optional with capability signalling |

R1-2506915 Discussion on UE features for LTE based 5G broadcast ZTE Corporation, Sanechips

R1-2506977 UE features for LTE based 5G broadcast Xiaomi

R1-2507241 UE features for LTE broadcast Samsung

R1-2507709 UE features for LTE based 5G broadcast Phase 2 Qualcomm Incorporated

R1-2507742 Summary of UE features for LTE based 5G broadcast Phase 2 Moderator (AT&T)