**3GPP TSG RAN WG1 #100bis-e** **R1-200XXXX**

**e-meeting, April 20-30, 2020**

**Agenda item: 7.2.2.2.1**

**Source: Moderator (Nokia)**

**Title: TPs related to the email discussion [100b-e-NR-unlic-NRU-ChAcc-02]**

**Document for: Discussion and Decision**

# 1 Introduction

This document captures the text proposals in the following RAN1#100bis-e email thread:

[100b-e-NR-unlic-NRU-ChAcc-02] Email discussion/approval on clarifications to UL to DL COT sharing by 4/24; if necessary, followed by endorsing the corresponding TPs by 4/29 – Timo (Nokia)

During the preparation phase it was identified that the following TDocs and proposals relate to corrections and clarifications to UL to DL COT sharing:

**Issue #3** Clarifications to UL to DL COT sharing

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| Clarifications to UL to DL COT sharing | R1-2001652 (2.2)  R1-2001705 (2.1)  R1-2001759 (2.3, 2.4)  R1-2001935 (p5, p6)  R1-2002247 (p1)  R1-2002530 (p3)  R1-2002632 (p1)  R1-2002684 (p1, p2, p3) |

This contribution provides text proposals for some of the related aspects.

# 2. TPs

## 2.3 Clarification of the max duration of a UL-DL shared COT

From the agreement in [100b-e-NR-unlic-NRU-ChAcc-02]:

Further discussion on TPs for Sections 4.2.1 and 4.1.3 of 37.213 based on the inputs until 4/29

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| **TS 37.213**  --- Beginning of Text proposal #1 ----  4.2.1 Channel access procedures for uplink transmission(s)  <unchanged text omitted>  A UE shall use Type 1 channel access procedure for transmissions related to random access procedure that initiate a channel occupancy with UL channel access priority class in Table 4.2.1.  A UE shall not transmit on a channel for a *Channel Occupancy Time* that exceeds where the channel access procedures are performed based on a channel access priority class associated with the UE transmissions, as given in Table 4.2.1-1.  The total duration of autonomous uplink transmission(s) obtained by the channel access procedure in this clause, including the following DL transmission if the UE sets 'COT sharing indication' in AUL-UCI to '1' in a subframe within the autonomous uplink transmission(s) as described in Subclause 4.1.3, shall not exceed , where is given in Table 4.2.1-1.  <unchanged text omitted>  --- End of the Text proposal #1 ---- |
| **TS 37.213**  --- Beginning of Text proposal #2 ---- 4.1.3 DL channel access procedures in a shared channel occupancy <unchanged text omitted>  If a gNB shares a channel occupancy initiated by a UE using the channel access procedures described in clause 4.2.1.1 on a channel, the gNB may transmit a transmission that follows a UL transmission on scheduled resources or a PUSCH transmission on configured resources by the UE after a gap as follows:  <unchanged text omitted>  --- End of the Text proposal #2 ---- |

Companies are asked to provide their views on the TPs using the Table below:

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| **Company / Org.** | **View on FL proposal #4** |
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## 2.4 COT sharing indication in CG-UCI

From the agreement in [100b-e-NR-unlic-NRU-ChAcc-02]:

Finalize TP for the editorial corrections for COT sharing indication in CG-UCI until 4/29

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| **TS 37.213**  --- Beginning of Text proposal #3 ----  4.1.3 DL channel access procedures in a shared channel occupancy  <unchanged text omitted>  For the case where a gNB shares a channel occupancy initiated by a UE with configured grant PUSCH transmission, the gNB may transmit a transmission that follows the configured grant PUSCH transmission by the UE as follows:  - If the higher layer parameter *ul-toDL-CO-SharingED-Threshold-r16* is provided, the UE is configured by *cg-COT-SharingList-r16* where *cg-COT-SharingList-r16* provides a table configured by higher layer. Each row of the table provides a channel occupancy sharing information given by higher layer parameter *CG-COT-Sharing-r16*. One row of the table is configured for indicating that the channel occupancy sharing is not available.  <unchanged text omitted>  --- End of the Text proposal #3 ---- |

Companies are asked to provide their views on the TP using the Table below:

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| **Company / Org.** | **View on FL proposal #4** |
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## 2.6 Clarifications

From the agreement in [100b-e-NR-unlic-NRU-ChAcc-02]:

Further discussion on TPs based on TP1 in R1-2002247 and the comments in the email discussion until 4/29

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| **TS 37.213**  --- Beginning of Text proposal #4 ----  4.1.3 DL channel access procedures in a shared channel occupancy  <unchanged text omitted>  If a gNB shares a channel occupancy initiated by a UE using the channel access procedures described in clause 4.2.1.1 on a channel, the gNB may transmit a transmission that follows a UL transmission on scheduled resources or a PUSCH transmission on configured resources by the UE after a gap as follows:  <unchanged text omitted>  --- End of the Text proposal #4 ---- |

Companies are asked to provide their views on the TP using the Table below:

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| **Company / Org.** | **View on FL proposal #4** |
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# 3. Conclusions

TBA

# References

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| 1 | [**R1-2001534**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001534.zip) | Maintainance on the channel access procedure | Huawei, HiSilicon |
| 2 | [**R1-2001652**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001652.zip) | Remaining issues on the channel access procedures | vivo |
| 3 | [**R1-2001705**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001705.zip) | Remaining issues on the channel access procedure for NR-U | ZTE, Sanechips |
| 4 | [**R1-2001759**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001759.zip) | Discussion on the remaining issues of channel access procedure | OPPO |
| 5 | [**R1-2001935**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001935.zip) | Remaining issues of channel access procedure for NR-U | LG Electronics |
| 6 | [**R1-2001987**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2001987.zip) | Channel access mechanism for NR-unlicensed | Intel Corporation |
| 7 | [**R1-2002031**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002031.zip) | Channel access procedures | Ericsson |
| 8 | [**R1-2002117**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002117.zip) | Channel access procedures for NR-U | Samsung |
| 9 | [**R1-2002193**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002193.zip) | Remaining Issues on Channel Access Procedures for NR-U | Nokia, Nokia Shanghai Bell |
| 10 | [**R1-2002247**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002247.zip) | Remaining issues on channel access procedures for NR-U | ETRI |
| 11 | [**R1-2002383**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002383.zip) | Remaining issues and corrections on channel access procedure for NR-U | Sharp |
| 12 | [**R1-2002405**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002405.zip) | Remaining issues on channel access for NR-U operation | MediaTek Inc. |
| 13 | [**R1-2002434**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002434.zip) | Remaining issues on channel access procedures for NR-U | NTT DOCOMO, INC. |
| 14 | [**R1-2002465**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002465.zip) | TP on shared spectrum in NR-U | NEC |
| 15 | [**R1-2002530**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002530.zip) | TP for Channel access procedures for NR unlicensed | Qualcomm Incorporated |
| 16 | [**R1-2002632**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002632.zip) | Remaining issues on channel access procedure for NR-U | WILUS Inc. |
| 17 | [**R1-2002684**](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_100b_e/Docs/R1-2002684.zip) | COT sharing information in CG-UCI | Lenovo, Motorola Mobility |