**3GPP TSG RAN WG1 #104-e R1-20xxxxx**

**e-Meeting, January 25th – February 5th, 2021**

**Agenda Item: 7.2.11**

**Source: Moderator (AT&T)**

**Title: Summary of email discussion/approval [104-e-NR-UEFeatures-MobEnh-01]**

**Document for:** **Discussion/Decision**

# Introduction

This document presents the summary of email discussion/approval [104-e-NR-UEFeatures-MobEnh-01] during RAN1 #104-e. According to the Chairman’s Notes:

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| [104-e-NR-UEFeatures-MobEnh-01] Email discussion/approval of whether to change the prerequisites of FGs 21-2, 21-2a, 21-2b to include FG 21-1b and update the description with “for inter-frequency DAPS HO” , till 1/29 (Ralf, AT&T)* Any necessary alignments between RAN1 and RAN2 (e.g., changing the type of FG 21-1a to “Per Band/per BC”) can be handled in email discussion/approval [104-e-NR-UEFeatures-LS]
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The following was discussed and agreed during RAN1 #104-e within the scope of [104-e-NR-UEFeatures-MobEnh-01]. All proposals are based on the latest RAN1 UE features list for Rel-16 NR in [1].

# Summary of email discussion/approval [104-e-NR-UEFeatures-MobEnh-01]

The following changes highlighted in red below were proposed by Apple in [2].

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21-1a | Intra-frequency DAPS HO | Support of  intra-frequency DAPS-HO  1. Support of simultaneous DL reception of PDCCH and PDSCH from source and target cell in DAPS-HO
2. Support of PDCCH blind decoding capability in the first MCG and second MCG.
3. Support of cancelling UL transmission to the source cell for intra-frequency DAPS-HO
 | DAPS(Note: RAN2 feature) | Yes | N/A | The network cannot configure UE with intra-frequency DAPS HO  | Per Band/per BC | No | N/A | N/A |  | Optional with capability signalling |
| 21-1b | Inter-frequency DAPS HO | Support of  inter-frequency DAPS-HO  1) Support of simultaneous DL reception of PDCCH and PDSCH from source and target cell in DAPS-HO 2) Support of PDCCH blind decoding capability in the first MCG and second MCG.  | DAPS(Note: RAN2 feature) | Yes | N/A | The network cannot configure UE with inter-frequency DAPS HO  | Per BC | No | N/A | N/A |  | Optional with capability signalling |
| 21-2 | Semi-static UL power sharing mode 1 for DAPS HO | Support of semi-static power sharing mode1 between source and target cells of same FR for inter-frequency DAPS HO  | DAPS, 21-1b(Note: RAN2 feature) | Yes | N/A | UE is not expected to simultaneously transmit PRACH/PUSCH/PUCCH/SRS to source and target cell that overlap in time domain | Per BC | No | N/A | N/A |  | Optional with capability signalling |
| 21-2a | Semi-static UL power sharing mode 2 for DAPS HO | Support of semi-static power sharing mode 2 between source and target cells of same FR for inter-frequency DAPS HO | 21-2, 21-1b | Yes | N/A |  | Per BC | No | N/A | N/A | only applicable to DAPS HO in synchronous scenarios | Optional with capability signalling |
| 21-2b | Dynamic UL power sharing for DAPS HO | Support of dynamic power sharing between source and target cells of same FR for inter-frequency DAPS HO1) T\_offset | 21-2, 21-1b | Yes | N/A |  | Per BC | No | N/A | N/A | Candidate values for (1) are {short, long} | Optional with capability signalling   |
| 21-2d | UL transmission cancellation | Indicates support of cancelling UL transmission to the source cell for inter-frequency DAPS-HO | 21-1b | Yes | N/A | UE does not support scheduling of overlapping PUSCH/PUCCH/SRS transmissions to source and target cells for inter-frequency DAPS-HO | per band combination | No | N/A | N/A |   | Optional with capability signalling |

Companies are invited to express their views in the table below.

Whether to change the type of FG 21-1a to “Per Band/per BC”

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| --- | --- |
| Company | Comments/Questions/Suggestions |
| Apple | We support to change the FG21-1a to Per Band/per BC to align with RAN2 agreements, and to avoid confusion for implementation. |
| Ericsson | The RAN2 specs are normative – there is no need to update the RAN1 documents, the RAN1 feature list should not be used for implementation. |
| Nokia, NSB | It is true that RAN1 feature list is not normative, but in practice it is frequently used for reference, especially as we do not have yet a document similar to 38.822 that includes the FG numbers. Hence we are OK to update this information here. |
| Huawei, HiSilicon | Ok with the change.  |
| Samsung | Support the change. |
| Qualcomm | We are fine with the change to align with RAN2 agreements.  |

Whether to change the prerequisites of FGs 21-2, 21-2a, 21-2b to include FG 21-1b and update the description with “for inter-frequency DAPS HO”

|  |  |
| --- | --- |
| Company | Comments/Questions/Suggestions |
| Apple | We support the updates to make it clear for implementation that UL power sharing modes are only applicable to inter-frequency DAPS HO. |
| Ericsson | Support |
| Nokia, NSB | We support the FL proposal. |
| Huawei, HiSilicon | Ok with the change.  |
| Samsung | Support the change. |
| Qualcomm | We support the updates. |

# Conclusion

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# References

1. R1-2009585, Updated RAN1 UE features list for Rel-16 NR, Moderators (AT&T, NTT DOCOMO, INC.)
2. R1-2101342, Discussions on NR Rel-16 UE features, Apple