**3GPP TSG-RAN WG4 Meeting # 102-e R4-22xxxxx**

**Electronic Meeting, 21th Feb - 3rd March 2022**

**Agenda item:** 9.40

**Source:** Moderator (OPPO)

**Title:** Email discussion summary for [102-e][121] NR\_4Rx\_Bn8\_FWA

**Document for:** Information

# Introduction

This summary covers the papers submitted in agenda 9.40.

# Topic #1:ΔRIB,4R for n8

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2204048 | CHTTL, China Unicom, ZTE, SGS Wireless | CR for 4 Rx antenna ports support of band n8 |

## CR comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2204048 | CR for 4 Rx antenna ports support of band n8 |
| ZTE: Agree with the CR.  SoftBank: Agree with the CR. |

## Summary for 1st round

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2204048 | CR for 4 Rx antenna ports support of band n8 |
| Agreeable |

# Topic #2: Release independent

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2204049 | CHTTL, China Unicom, ZTE | Proposal 1: Considering the 4Rx feature is introduced in some of the FR1 NR bands in Rel.15, and following the agreed procedure for introducing release independent features, the changes for release independent aspect of NR 4Rx feature will be introduced from the Rel.15 TS 38.307 specification.  Proposal 2: Agree on the related draft CRs, R4-2204050, R4-2204051, and R4-2204052 for TS 38.307. |
| R4-2204050 | CHTTL, China Unicom, ZTE | draft CR for release independent for 4Rx support for NR band |
| R4-2204051 | CHTTL, China Unicom, ZTE | draft CR for release independent for 4Rx support for NR band |
| R4-2204052 | CHTTL, China Unicom, ZTE | draft CR for release independent for 4Rx support for NR band |

## Open issues summary

**Issue 1: Is below proposal acceptable for 4Rx release independent?**

Proposal 1: Considering the 4Rx feature is introduced in some of the FR1 NR bands in Rel.15, and following the agreed procedure for introducing release independent features, the changes for release independent aspect of NR 4Rx feature will be introduced from the Rel.15 TS 38.307 specification.

* Option 1: Yes
* Option 2: No

|  |  |
| --- | --- |
| **Company** | **Comments** |
| ZTE | Option 1: Yes |
| HW | There is discussion in email thread [101] sub-topic 2-1 on how to capture the procedure. One option is that if the RF feature is introduced in the same release as the release which the feature is independent from, the common RF requirement table in 38.307 is specified from release N+1.  If the option is agreed by RAN4 then at least R15 CR is not needed for 4Rx release independent information. |
| CHTTL | Option 1: Yes  To HW, the “common RF requirement table in 38.307” discussed in email thread [101] is the annex B and also there is a column “requirements to be fulfilled” refers to that, which is basically in the current specification, as you can see, there is no annex B in the Rel.15 38.307, since the requirements are also in the same release, so that there is no need to put additional reference, the option is just to confirm it, and with this option the Rel.15 draft CR is also needed.  And the draft CRs actually follow the option, in Rel.15 draft CR, the column “requirements to be fulfilled” is empty, and there is no annex B. And those information is in Rel.16 and Rel.17 draft CRs. |
| SoftBank | Support Option 1 and we are fine with updating the draft CRs based on the discussion results in email thread [101]. |

## CR comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band  Note: R15 |
| ZTE: Agree |
| HW: Whether R15 CR is needed depends on discussion in email thread [101].  CHTTL: agree, see the response in 2.2. |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band  Note: R16 |
| ZTE: Agree |
| HW: The R16 CR is useful but seems applicable for R16 bands rather than band n8. Is R16 maintenance AI a better place?  CHTTL: we submitted to this agenda since all the draft CRs are related. Not sure whether separated agenda is better, but anyway these draft CRs for 38.307 provided from Rel.15 are aligned with the agreed 38.307 procedure in previous RAN4 meeting. |
| R4-2204052 | draft CR for release independent for 4Rx support for NR band  Note: R17 |
| ZTE: Agree |
| HW: Agree |

## Summary for 1st round

### Open issues

|  |  |
| --- | --- |
|  | **Status summary** |
| * Issue 1: Is below proposal acceptable for 4Rx release independent? | *Tentative agreements:* It is pointed out there is dependent on thread [101] conclusion on principles of release independent. Can be further discussed in 2nd round.  *Recommendations for 2nd round:* Return to in 2nd round. |

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **Summary** |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band  Note: R15 |
| Different views, return to in 2nd round with conclusions in thread [101] |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band  Note: R16 |
| Different views, return to in 2nd round with conclusions in thread [101] |
| R4-2204052 | draft CR for release independent for 4Rx support for NR band  Note: R17 |
| Agreeable |

## Discussion on 2nd round

### Open issues

|  |  |
| --- | --- |
|  | **Comments** |
| **Issue 1: Is below proposal acceptable for 4Rx release independent?**  Proposal 1: Considering the 4Rx feature is introduced in some of the FR1 NR bands in Rel.15, and following the agreed procedure for introducing release independent features, the changes for release independent aspect of NR 4Rx feature will be introduced from the Rel.15 TS 38.307 specification. | HW: 4Rx as part of Rel-15 core requirements, could apply to Rel-15 automatically, therefore doesn’t need to be included in Rel-15 38.307.  CHTTL: To HW, all the features listed in Rel.15 38.307 are release independent from Rel.15 and also the core requirements are also in Rel.15.  based on the agreed procedure of 38.307 in R4-2202405  "When a new feature is introduced only the latest release of release independent spec needs to be updated. **The latest release of release independent spec refers to the release which the new feature is introduced in.**  (i.e. **CR to the frozen release might be needed when the release independent issue is missed to be resolved when the new feature is introduced**, or when CR implementation errors occur in the previous release.)"  Following this agreed procedure, the 4Rx feature should be introduced from the Rel.15 TS 38.307 specification. Otherwise, the specs are not aligned. So we hope this proposal is agreeable.  ZTE: Agree with CHTTL. The feature to supporting 4Rx feature in 38,307 were totally forgotten in the Rel-15 spec since some of the band have already supported 4Rx in Rel-15.  HW: I see different understanding of the purpose of 38.307 here. There is nothing stopping 4Rx feature from being used in R15 no matter it’s captured in R15 38.307 or not. For 4Rx bands introduced in R16, R16 38.307 could be used to indicate these bands are release independent from R15, and the same applies to R17.  Given companies feel the Rel-15 CR is quite necessary, I could hold my opinion and live with this CR. |

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **Summary** |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band  Note: R15 |
| HW: Prefer not to agree this CR.  CHTTL: We hope it can be agreed, otherwise the spec is not aligned, and agreed the procedure of 38.307 is not followed.  ZTE: We agree with this CR. Cosidering some of the band have already supported 4Rx in Rel-15, so this feature shall be introduced in Rel-15 38.307 specification, and also it compliance to the agreed procedure.  HW: Could compromise and agree the CR. |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band  Note: R16 |
| HW: Agreeable. |

## Summary for 2nd round

### Open issues

|  |  |
| --- | --- |
|  | **Status recommendation** |
| **Issue 1: Is below proposal acceptable for 4Rx release independent?**  Proposal 1: Considering the 4Rx feature is introduced in some of the FR1 NR bands in Rel.15, and following the agreed procedure for introducing release independent features, the changes for release independent aspect of NR 4Rx feature will be introduced from the Rel.15 TS 38.307 specification. | Proposal is agreed. |

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **Summary** |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band  Note: R15 |
| Agreeable. |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band  Note: R16 |
| Agreeable |

# Recommendations for Tdocs

## 1st round

1. **Existing tdocs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation** | **Comments** |
| R4-2204048 | CR for 4 Rx antenna ports support of band n8 | CHTTL, China Unicom, ZTE, SGS Wireless | Agreeable |  |
| R4-2204049 | Further discussion on release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | Noted |  |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | return to |  |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | return to |  |
| R4-2204052 | draft CR for release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | Agreeable |  |

## 2nd round (only include Tdocs discussed in 2nd round)

1. **Existing tdocs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation** | **Comments** |
| R4-2204050 | draft CR for release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | Agreeable |  |
| R4-2204051 | draft CR for release independent for 4Rx support for NR band | CHTTL, China Unicom, ZTE | Agreeable |  |

# Annex

Contact information

|  |  |  |
| --- | --- | --- |
| **Company** | **Name** | **Email address** |
| Huawei | Chunying Gu | guchunying@huawei.com |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Note:

1. Please add your contact information in above table once you make comments on this email thread.
2. If multiple delegates from the same company make comments on single email thread, please add you name as suffix after company name when make comments i.e. Company A (XX, XX)