**3GPP TSG-RAN WG4 Meeting # 104-e R4-22XXXXX**

**Electronic Meeting, 15 – 26 August 2022**

**Agenda item:** 4.6.3, 5.2.4.4

**Source:** Moderator (ZTE)

**Title:** Email discussion summary for [104-e][318] Demod\_Maintenance\_BS

**Document for:** Information

# Introduction

*Briefly introduce background, the scope of this email discussion (e.g. list of treated agenda items) and provide some guidelines for email discussion if necessary.*

*List of candidate target of email discussion for 1st round and 2nd round*

* 1st round: TBA
* 2nd round: TBA

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator's remarks** |
| [**R4-2211648**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211648.zip) | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655:Agreements:The intention of the prior agreements was to have SRS sent once per radio frame, in the last symbol of the first special slot of the radio frame.The slot-based value of TSRS in NOTE1 of the “Test parameters for testing UL timing adjustment” table shall be scaled accordingly with the SCS, i.e., 15 kHz: TSRS =10, 30 kHz: TSRS =20, 60 kHz: TSRS =40, 120 kHz: TSRS =80. |
| R4-2211649 | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211648 |
| [**R4-2211650**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211650.zip) | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211651 | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211650 |
| [**R4-2211652**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211652.zip) | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211653 | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211652 |
| [**R4-2213435**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213435.zip) | DraftCR to TS 38.104 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: overlapping with R4-2211648 for T\_SRS according to agreed WF R4-2210655(2) Change 2: missing FRCs for UL TA |
| [**R4-2213436**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213436.zip) | DraftCR to TS 38.104 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213435 for Rel-17Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213437**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213437.zip) | DraftCR to TS 38.141-2 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined, and wrong reference to BS type 1-C in OTA requirements.(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213438**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213438.zip) | DraftCR to TS 38.41-2 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213437Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213439**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213439.zip) | DraftCR to TS 38.141-1 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213440**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213440.zip) | DraftCR to TS 38.141-1 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213440Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213671.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung | Same change as R4-2211648 |
| [**R4-2213672**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213672.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung | Same change as R4-2211650 |
| [**R4-2213673**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213673.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung | Same change as R4-2211652 |
| R4-2213674 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung | Rel-17 mirror CR to R4-2213671 |
| R4-2213675 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung | Rel-17 mirror CR to R4-2213672 |
| R4-2213676 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung | Rel-17 mirror CR to R4-2213673 |
| [**R4-2213821**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213821.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-15) | Huawei,HiSilicon | No intra-frequency hopping should exist in PUCCH format 2 tests (since only 1 symbol is configured). |
| R4-2213822 | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213821 |
| R4-2213823 | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213821 |
| [**R4-2213824**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213824.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-15) | Huawei,HiSilicon | Same changes as R4-2213821 for 38.141-1 |
| R4-2213825 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213824 |
| R4-2213826 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213824 |
| [**R4-2213827**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213827.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-15) | Huawei,HiSilicon | Same changes as R4-2213821 for 38.141-2 |
| R4-2213828 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213827 |
| R4-2213829 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2(Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213827 |
| [**R4-2213847**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213847.zip) | Draft CR on maintenance from Rel-15 (38.104, Rel-15) | Huawei,HiSilicon | Citation error in FRC tables |
| R4-2213848 | Draft CR on maintenance from Rel-15 (38.104, Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213847 |
| R4-2213849 | Draft CR on maintenance from Rel-15 (38.104, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213847 |
| [**R4-2213850**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213850.zip) | Draft CR on maintenance from Rel-16 (38.104, Rel-16) | Huawei,HiSilicon | (1) Change 1: Correct SRS period for UL TA requirements. Similar to R4-2211648 / R4-2213435 Change 1/ R4-2213671 (T\_SRS)(2) Change 2: Add FRC for UL TA requirements, overlapping with R4-22113435 Change 2(3) Change 3: Remove square brackets for FR2 PUSCH requirements. |
| R4-2213851 | Draft CR on maintenance from Rel-16 (38.104, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213850 |
| [**R4-2213852**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213852.zip) | Draft CR on maintenance from Rel-16 (38.141-1, Rel-16) | Huawei,HiSilicon | (1) Change 1: Correct reference in FRC.(2) Change 2: Correct SRS period for UL TA requirements. Similar to R4-2211650 / R4-2213439 Change 1/ R4-2213672 (T\_SRS) |
| R4-2213853 | Draft CR on maintenance from Rel-16 (38.141-1, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213852 |
| [**R4-2213854**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213854.zip) | Draft CR on maintenance from Rel-16 (38.141-2, Rel-16) | Huawei,HiSilicon | (1) Correct reference in FRC.(2) Correct SRS period for UL TA requirements. Similar to R4-2211652 / R4-2213438 Change 1/ R4-2213673 (T\_SRS) |
| R4-2213855 | Draft CR on maintenance from Rel-16 (38.141-2, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213854 |
| [**R4-2213915**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213915.zip) | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Inaccurate SNR description, For N (noise energy) to calculate SNR, it needs to take noise energy where wanted signal (S) exist, otherwise, it would lead to a higher SNR than defined requirement |
| [**R4-2213916**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213916.zip) | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Same as R4-2213915 for 38.141-1 |
| [**R4-2213917**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213917.zip) | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Same as R4-2213915 for 38.141-2 |
| R4-2213918 | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213915 |
| R4-2213919 | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213916 |
| R4-2213920 | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213917 |
| R4-2213921 | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213915 |
| R4-2213922 | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213916 |
| R4-2213923 | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213917 |

# Topic #1: Maintenance for HST

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator's remarks** |
| [**R4-2211648**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211648.zip) | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655:Agreements:The intention of the prior agreements was to have SRS sent once per radio frame, in the last symbol of the first special slot of the radio frame.The slot-based value of TSRS in NOTE1 of the “Test parameters for testing UL timing adjustment” table shall be scaled accordingly with the SCS, i.e., 15 kHz: TSRS =10, 30 kHz: TSRS =20, 60 kHz: TSRS =40, 120 kHz: TSRS =80. |
| R4-2211649 | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211648 |
| [**R4-2211650**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211650.zip) | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211651 | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211650 |
| [**R4-2211652**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211652.zip) | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211653 | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT | Rel-17 Mirror CR to R4-2211652 |
| [**R4-2213435**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213435.zip) | DraftCR to TS 38.104 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: overlapping with R4-2211648 for T\_SRS according to agreed WF R4-2210655(2) Change 2: missing FRCs for UL TA |
| [**R4-2213436**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213436.zip) | DraftCR to TS 38.104 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213435 for Rel-17Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213437**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213437.zip) | DraftCR to TS 38.141-2 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined, and wrong reference to BS type 1-C in OTA requirements.(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213438**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213438.zip) | DraftCR to TS 38.41-2 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213437Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213439**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213439.zip) | DraftCR to TS 38.141-1 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213440**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213440.zip) | DraftCR to TS 38.141-1 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell | Cat A of R4-2213440Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213671.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung | Same change as R4-2211648 |
| [**R4-2213672**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213672.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung | Same change as R4-2211650 |
| [**R4-2213673**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213673.zip) | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung | Same change as R4-2211652 |
| R4-2213674 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung | Rel-17 mirror CR to R4-2213671 |
| R4-2213675 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung | Rel-17 mirror CR to R4-2213672 |
| R4-2213676 | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung | Rel-17 mirror CR to R4-2213673 |

## Open issues summary

*Before e-Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

*No explicit open issues.*

## Companies views’ collection for 1st round

### CRs/TPs comments collection

*For close-to-finalize WIs and maintenance work, comments collections can be arranged for TPs and CRs. For ongoing WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| **R4-2211648/ 49/50/51/52/53** | Company A |
| Company B |
| Moderator: Identical changes as Change 1 in R4-22113435 |
| **R4-22113435 /36/37/38/39/40** | Company A |
| Company B |
|  |
| **R4-2213671 /72/73/74/75/76** | Company A |
| Company B |
| Moderator: Identical changes as Change 1 in R4-22113435 |

## Summary for 1st round

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provides recommendation on CRs/TPs Status update*

*Note: The tdoc decisions shall be provided in Section 3 and this table is optional in case moderators would like to provide additional information.*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
|  | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| **R4-2211648/ 49/50/51/52/53** |  |
| **R4-22113435 /36/37/38/39/40** |  |
| **R4-2213671 /72/73/74/75/76** |  |

## Discussion on 2nd round (if applicable)

# Topic #2: BS demodulation SNR calculation

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator's remarks** |
| [**R4-2213915**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213915.zip) | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Inaccurate SNR description, For N (noise energy) to calculate SNR, it needs to take noise energy where wanted signal (S) exist, otherwise, it would lead to a higher SNR than defined requirement |
| [**R4-2213916**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213916.zip) | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Same as R4-2213915 for 38.141-1 |
| [**R4-2213917**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213917.zip) | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Same as R4-2213915 for 38.141-2 |
| R4-2213918 | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213915 |
| R4-2213919 | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213916 |
| R4-2213920 | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Rel-16 mirror CR to R4-2213917 |
| R4-2213921 | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213915 |
| R4-2213922 | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213916 |
| R4-2213923 | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd | Rel-17 mirror CR to R4-2213917 |

## Open issues summary

*Before e-Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

**Issue 2-1: According to the current specs text on BS demodulation SNR calculation, is the noise energy higher than the defined requirement?**

* Proposals
	+ Option 1: Yes, only noise energy should be considered where wanted signal (S) exists
	+ Option 2: No, it is clear enough
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

*Moderator: Subject to the outcome on Issue 2-1.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| **R4-22113915/ 16/17/18/19/20/21/22/23** | Company A |
| Company B |
|  |
|  |

## Summary for 1st round

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| **R4-22113915/ 16/17/18/19/20/21/22/23** | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #3: Miscellaneous

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator's remarks** |
| [**R4-2213821**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213821.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-15) | Huawei,HiSilicon | No intra-frequency hopping should exist in PUCCH format 2 tests (since only 1 symbol is configured). |
| R4-2213822 | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213821 |
| R4-2213823 | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213821 |
| [**R4-2213824**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213824.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-15) | Huawei,HiSilicon | Same changes as R4-2213821 for 38.141-1 |
| R4-2213825 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213824 |
| R4-2213826 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213824 |
| [**R4-2213827**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213827.zip) | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-15) | Huawei,HiSilicon | Same changes as R4-2213821 for 38.141-2 |
| R4-2213828 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213827 |
| R4-2213829 | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2(Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213827 |
| [**R4-2213847**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213847.zip) | Draft CR on maintenance from Rel-15 (38.104, Rel-15) | Huawei,HiSilicon | Citation error in FRC tables |
| R4-2213848 | Draft CR on maintenance from Rel-15 (38.104, Rel-16) | Huawei,HiSilicon | Rel-16 Mirror CR to R4-2213847 |
| R4-2213849 | Draft CR on maintenance from Rel-15 (38.104, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213847 |
| [**R4-2213850**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213850.zip) | Draft CR on maintenance from Rel-16 (38.104, Rel-16) | Huawei,HiSilicon | (1) Change 1: Correct SRS period for UL TA requirements. Similar to R4-2211648 / R4-2213435 Change 1/ R4-2213671 (T\_SRS)(2) Change 2: Add FRC for UL TA requirements, overlapping with R4-22113435 Change 2(3) Change 3: Remove square brackets for FR2 PUSCH requirements. |
| R4-2213851 | Draft CR on maintenance from Rel-16 (38.104, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213850 |
| [**R4-2213852**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213852.zip) | Draft CR on maintenance from Rel-16 (38.141-1, Rel-16) | Huawei,HiSilicon | (1) Change 1: Correct reference in FRC.(2) Change 2: Correct SRS period for UL TA requirements. Similar to R4-2211650 / R4-2213439 Change 1/ R4-2213672 (T\_SRS) |
| R4-2213853 | Draft CR on maintenance from Rel-16 (38.141-1, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213852 |
| [**R4-2213854**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213854.zip) | Draft CR on maintenance from Rel-16 (38.141-2, Rel-16) | Huawei,HiSilicon | (1) Correct reference in FRC.(2) Correct SRS period for UL TA requirements. Similar to R4-2211652 / R4-2213438 Change 1/ R4-2213673 (T\_SRS) |
| R4-2213855 | Draft CR on maintenance from Rel-16 (38.141-2, Rel-17) | Huawei,HiSilicon | Rel-17 Mirror CR to R4-2213854 |

## Open issues summary

*Before e-Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

No explicit discussion points.

## Companies views’ collection for 1st round

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| **R4-2213821/ 22/23/24/25/26/27/28/29** | Company A |
| Company B |
|  |
|  |
| **R4-2213847/48/49** | Company A |
| Company B |
|  |
|  |
| **R4-2213850/ 51/52/53/54/55** | Moderator: Change 1 similar to R4-2211648 / R4-2213435 Change 1/ R4-2213671 (T\_SRS)Change 2 overlapped with R4-22113435 Change 2 |
| Company A |
|  |
|  |

## Summary for 1st round

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
|  | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| **R4-2213821/ 22/23/24/25/26/27/28/29** |  |
| **R4-2213847/48/49** |  |
| **R4-2213850/ 51/52/53/54/55** |  |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Recommendations for Tdocs

## 1st round

**New tdocs**

|  |  |  |  |
| --- | --- | --- | --- |
| **New Tdoc number** | **Title** | **Source** | **Comments** |
|  | WF on … | YYY |  |
|  | LS on … | ZZZ | To: RAN\_X; Cc: RAN\_Y |
|  |  |  |  |

**Existing tdocs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tdoc number** | **Revised to** | **Title** | **Source** | **Recommendation**  | **Comments** |
| R4-22xxxxx |  | CR on … | XXX | Agreeable, Revised, Merged, Postponed, Not Pursued |  |
| [**R4-2211648**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211648.zip) |  | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT |  | T\_SRS change according to the agreed WF R4-2210655:Agreements:The intention of the prior agreements was to have SRS sent once per radio frame, in the last symbol of the first special slot of the radio frame.The slot-based value of TSRS in NOTE1 of the “Test parameters for testing UL timing adjustment” table shall be scaled accordingly with the SCS, i.e., 15 kHz: TSRS =10, 30 kHz: TSRS =20, 60 kHz: TSRS =40, 120 kHz: TSRS =80. |
| R4-2211649 |  | CR for TS 38.104, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT |  | Rel-17 Mirror CR to R4-2211648 |
| [**R4-2211650**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211650.zip) |  | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT |  | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211651 |  | CR for TS 38.141-1, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT |  | Rel-17 Mirror CR to R4-2211650 |
| [**R4-2211652**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2211652.zip) |  | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-16) | CATT |  | T\_SRS change according to the agreed WF R4-2210655: |
| R4-2211653 |  | CR for TS 38.141-2, On SRS periodic for UL timing adjustment for FR1(Rel-17) | CATT |  | Rel-17 Mirror CR to R4-2211652 |
| [**R4-2213435**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213435.zip) |  | DraftCR to TS 38.104 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell |  | (1) Change 1: overlapping with R4-2211648 for T\_SRS according to agreed WF R4-2210655(2) Change 2: missing FRCs for UL TA |
| [**R4-2213436**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213436.zip) |  | DraftCR to TS 38.104 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell |  | Cat A of R4-2213435 for Rel-17Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213437**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213437.zip) |  | DraftCR to TS 38.141-2 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell |  | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined, and wrong reference to BS type 1-C in OTA requirements.(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213438**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213438.zip) |  | DraftCR to TS 38.41-2 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell |  | Cat A of R4-2213437Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213439**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213439.zip) |  | DraftCR to TS 38.141-1 on HST Maintenance (Rel-16) | Nokia, Nokia Shanghai Bell |  | (1) Change 1: Applicability rule for PRACH requirement tests for high speed train PRACH formats (D.111) are not defined(2) Change 2/3 the same Change 1/2 as R4-2213435 |
| [**R4-2213440**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213440.zip) |  | DraftCR to TS 38.141-1 on HST Maintenance (Rel-17 Cat A) | Nokia, Nokia Shanghai Bell |  | Cat A of R4-2213440Moderator: Cat A CR should NOT be uploaded! |
| [**R4-2213671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213671.zip) |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung |  | Same change as R4-2211648 |
| [**R4-2213672**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213672.zip) |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung |  | Same change as R4-2211650 |
| [**R4-2213673**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213673.zip) |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung |  | Same change as R4-2211652 |
| R4-2213674 |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.104 | Samsung |  | Rel-17 mirror CR to R4-2213671 |
| R4-2213675 |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-1 | Samsung |  | Rel-17 mirror CR to R4-2213672 |
| R4-2213676 |  | Correction CR on FR1 HST UL timing adjustment requirements for TS 38.141-2 | Samsung |  | Rel-17 mirror CR to R4-2213673 |
| [**R4-2213821**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213821.zip) |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-15) | Huawei,HiSilicon |  | No intra-frequency hopping should exist in PUCCH format 2 tests (since only 1 symbol is configured). |
| R4-2213822 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-16) | Huawei,HiSilicon |  | Rel-16 Mirror CR to R4-2213821 |
| R4-2213823 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.104 (Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213821 |
| [**R4-2213824**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213824.zip) |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-15) | Huawei,HiSilicon |  | Same changes as R4-2213821 for 38.141-1 |
| R4-2213825 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-16) | Huawei,HiSilicon |  | Rel-16 Mirror CR to R4-2213824 |
| R4-2213826 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-1 (Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213824 |
| [**R4-2213827**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213827.zip) |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-15) | Huawei,HiSilicon |  | Same changes as R4-2213821 for 38.141-2 |
| R4-2213828 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2 (Rel-16) | Huawei,HiSilicon |  | Rel-16 Mirror CR to R4-2213827 |
| R4-2213829 |  | CR:Modification of test parameters of PF2 performance requirements in TS 38.141-2(Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213827 |
| [**R4-2213847**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213847.zip) |  | Draft CR on maintenance from Rel-15 (38.104, Rel-15) | Huawei,HiSilicon |  | Citation error in FRC tables |
| R4-2213848 |  | Draft CR on maintenance from Rel-15 (38.104, Rel-16) | Huawei,HiSilicon |  | Rel-16 Mirror CR to R4-2213847 |
| R4-2213849 |  | Draft CR on maintenance from Rel-15 (38.104, Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213847 |
| [**R4-2213850**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213850.zip) |  | Draft CR on maintenance from Rel-16 (38.104, Rel-16) | Huawei,HiSilicon |  | (1) Change 1: Correct SRS period for UL TA requirements. Similar to R4-2211648 / R4-2213435 Change 1/ R4-2213671 (T\_SRS)(2) Change 2: Add FRC for UL TA requirements, overlapping with R4-22113435 Change 2(3) Change 3: Remove square brackets for FR2 PUSCH requirements. |
| R4-2213851 |  | Draft CR on maintenance from Rel-16 (38.104, Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213850 |
| [**R4-2213852**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213852.zip) |  | Draft CR on maintenance from Rel-16 (38.141-1, Rel-16) | Huawei,HiSilicon |  | (1) Change 1: Correct reference in FRC.(2) Change 2: Correct SRS period for UL TA requirements. Similar to R4-2211650 / R4-2213439 Change 1/ R4-2213672 (T\_SRS) |
| R4-2213853 |  | Draft CR on maintenance from Rel-16 (38.141-1, Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213852 |
| [**R4-2213854**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213854.zip) |  | Draft CR on maintenance from Rel-16 (38.141-2, Rel-16) | Huawei,HiSilicon |  | (1) Correct reference in FRC.(2) Correct SRS period for UL TA requirements. Similar to R4-2211652 / R4-2213438 Change 1/ R4-2213673 (T\_SRS) |
| R4-2213855 |  | Draft CR on maintenance from Rel-16 (38.141-2, Rel-17) | Huawei,HiSilicon |  | Rel-17 Mirror CR to R4-2213854 |
| [**R4-2213915**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213915.zip) |  | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd |  | Inaccurate SNR description, For N (noise energy) to calculate SNR, it needs to take noise energy where wanted signal (S) exist, otherwise, it would lead to a higher SNR than defined requirement |
| [**R4-2213916**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213916.zip) |  | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd |  | Same as R4-2213915 for 38.141-1 |
| [**R4-2213917**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_104-e/Docs/R4-2213917.zip) |  | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd |  | Same as R4-2213915 for 38.141-2 |
| R4-2213918 |  | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd |  | Rel-16 mirror CR to R4-2213915 |
| R4-2213919 |  | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd |  | Rel-16 mirror CR to R4-2213916 |
| R4-2213920 |  | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd |  | Rel-16 mirror CR to R4-2213917 |
| R4-2213921 |  | draftCR to 38.104: BS Demod SNR description correction (8.1.1)(11.1.1) | Keysight Technologies UK Ltd |  | Rel-17 mirror CR to R4-2213915 |
| R4-2213922 |  | draftCR to 38.141-1: BS Demod SNR description correction (8.1.1) | Keysight Technologies UK Ltd |  | Rel-17 mirror CR to R4-2213916 |
| R4-2213923 |  | draftCR to 38.141-2: BS Demod SNR description correction (8.1.0) | Keysight Technologies UK Ltd |  | Rel-17 mirror CR to R4-2213917 |

Notes:

1. Please include the summary of recommendations for all tdocs across all sub-topics incl. existing and new tdocs.
2. For the Recommendation column please include one of the following:
	1. CRs/TPs: Agreeable, Revised, Merged, Postponed, Not Pursued
	2. Other documents: Agreeable, Revised, Noted
3. For new LS documents, please include information on To/Cc WGs in the comments column
4. Do not include hyper-links in the documents

## 2nd round

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tdoc number** | **Revised to** | **Title** | **Source** | **Recommendation**  | **Comments** |
| R4-22xxxxx |  | CR on … | XXX | Agreeable, Revised, Merged, Postponed, Not Pursued |  |
| R4-22xxxxx |  | WF on … | YYY | Agreeable, Revised, Noted |  |
| R4-22xxxxx |  | LS on … | ZZZ | Agreeable, Revised, Noted |  |
|  |  |  |  |  |  |

Notes:

1. Please include the summary of recommendations for all tdocs across all sub-topics.
2. For the Recommendation column please include one of the following:
	1. CRs/TPs: Agreeable, Revised, Merged, Postponed, Not Pursued
	2. Other documents: Agreeable, Revised, Noted
3. Do not include hyper-links in the documents

# Annex

Contact information

|  |  |  |
| --- | --- | --- |
| **Company** | **Name** | **Email address** |
|  |  |  |

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)