**3GPP TSG-RAN WG4 Meeting # 96-e R4-2011567**

**Electronic Meeting, 17-28 Aug., 2020**

**Agenda item:** 10.22, 10.23

**Source:** Moderator (CMCC)

**Title:** Email discussion summary for [96e] [134] NR\_SUL\_bands

**Document for:** Information

# Introduction

New WID on introduction of 1880-1920MHz SUL band (RP-201363) and 2300-2400MHz SUL band (RP-201364) for NR were approved in RAN#88-e meeting.

This email discussion includes contributions in agenda 10.22 and 10.23, the targets of email discussion based on companies’ contributions submitted in this e-meeting are as below:

* 1st round:

Discuss RF characteristics for NR SUL bands and provide comments on the CRs.

* 2nd round:

Strive to approve CRs.

# Topic #1: Introduction of 1880-1920MHz SUL band for NR

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| [**R4-2009633**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009633.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 38.101-1** |
| [**R4-2009634**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 38.104** |
| [**R4-2009635**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009635.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 36.104** |
| [**R4-2009636**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009636.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 36.141** |
| [**R4-2009637**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009637.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 37.104** |
| [**R4-2009638**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009638.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 37.105** |
| [**R4-2009639**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009639.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 37.141** |
| [**R4-2009640**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009640.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-1** |
| [**R4-2009641**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009641.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 37.145-2** |
| [**R4-2009642**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009642.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-1** |
| [**R4-2009643**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009643.zip) | CMCC | **CR for introduction of 1880-1920MHz SUL band into Rel-17 TS 38.141-2** |
| [**R4-2010151**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010151.zip) | Huawei, HiSilicon | **Proposal 1: Introduce the new SUL band for 1880 – 1920MHz as band n96.**  **Proposal 2: Specify UE RF requirements for the new SUL band for 1880 – 1920MHz following band n39.**  **Proposal 3: Specify BS spurious emissions requirements for the new SUL band for 1880 – 1920MHz in all the BS specs such as TS 38.104, 38.141-1/-2, 36.104, 36.141, 37.104, 37.141, 37.105, 37.145-1/-2, whenever necessary.** |
| [**R4-2010152**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010152.zip) | Huawei, HiSilicon | **draftCR to 38101-1 on introducing new SUL band n96** |
| [**R4-2010153**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010153.zip) | Huawei, HiSilicon | **draftCR to 38104 on introducing new SUL band n96** |
| [**R4-2010154**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010154.zip) | Huawei, HiSilicon | **draftCR to 38141-1 on introducing new SUL band n96** |
| [**R4-2010155**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010155.zip) | Huawei, HiSilicon | **draftCR to 38141-2 on introducing new SUL band n96** |
| [**R4-2010156**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010156.zip) | Huawei, HiSilicon | **draftCR to 36104 on introducing new SUL band n96** |
| [**R4-2010157**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010157.zip) | Huawei, HiSilicon | **draftCR to 36141 on introducing new SUL band n96** |
| [**R4-2010158**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010158.zip) | Huawei, HiSilicon | **draftCR to 37104 on introducing new SUL band n96** |
| [**R4-2010159**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010159.zip) | Huawei, HiSilicon | **draftCR to 37141 on introducing new SUL band n96** |
| [**R4-2010160**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010160.zip) | Huawei, HiSilicon | **draftCR to 37105 on introducing new SUL band n96** |
| [**R4-2010161**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010161.zip) | Huawei, HiSilicon | **draftCR to 37145-1 on introducing new SUL band n96** |
| [**R4-2010162**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010162.zip) | Huawei, HiSilicon | **draftCR to 37145-2 on introducing new SUL band n96** |

## Open issues summary

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

### Sub-topic 1-1 UE RF Requirements

**Issue 1-1-1: Operating band number**

* Proposals
  + Introduce the new SUL band for 1880 – 1920MHz as band n96.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

**Issue 1-1-2: UE channel bandwidth，Channel raster，MOP /A-MPR and Spurious emissions**

* Proposals
  + Specify UE RF requirements for the new SUL band for 1880 – 1920MHz following band n39.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

### Sub-topic 1-2 BS RF Requirements

**Issue 1-2-1: BS spurious emissions requirements**

* Proposals
  + Specify BS spurious emissions requirements for the new SUL band for 1880 – 1920MHz in all the BS specs such as TS 38.104, 38.141-1/-2, 36.104, 36.141, 37.104, 37.141, 37.105, 37.145-1/-2.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 1-1-1:  Issue 1-1-2:  ….  Others: |
| Huawei | We can go with all the rapporteurs’ CRs.  Since the formal version of R17 specs do not emerge until Dec. If all the CRs are agreed in this meeting, one suggestion is to announce closure of this WID in Sept. and implement the CRs in Dec. |
| Ericsson | We are fine with all CMCC’s CRs, just one comment on R4-2009633: n96 shoud be added to NS\_50 (clause 6.2.3) |
| Nokia | Issue 1-1-1: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead  Issue 1-1-2: while requirements can follow n39, some changes in CR are needed as highlighted below |

### 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** |
| [**R4-2009633**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009633.zip) | Huawei: We agree to all the CRs. |
| Ericsson: n96 shoud be added to NS\_50 (clause 6.2.3) |
| Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. For band definition, note shall be added this band is applicable in countries where only n98 is used, otherwise there will be co-existence issue with Band n39. Some additional spurious emissions requirements are specified as for n39 but A-MPR and NS-signalling area is missing. |
| [**R4-2009634**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. For band definition, note shall be added this band is applicable in countries where only n98 is used, otherwise there will be co-existence issue with Band n39. |
| Company B |
|  |
| [**R4-200963**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip)**5** | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-200963**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip)**6** | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009637**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009638**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009639**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009640**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009641**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009642**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |
| [**R4-2009643**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Nokia: n96 is discussed for some time under NR-U agenda, we propose to use n98 instead. |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary** |
| **Sub-topic#1** | *Tentative agreements:*  *Candidate options:*  *Recommendations for 2nd round:* |

*Recommendations on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 |  |  |

### CRs/TPs

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

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| XXX | *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)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #2: Introduction of 2300-2400MHz SUL band for NR

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| [**R4-2009644**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009644.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.101-1** |
| [**R4-2009645**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009645.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.104** |
| [**R4-2009646**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 36.104** |
| [**R4-2009647**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009647.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 36.141** |
| [**R4-2009648**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009648.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.104** |
| [**R4-2009649**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009649.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.105** |
| [**R4-2009650**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009650.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.141** |
| [**R4-2009651**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009651.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-1** |
| [**R4-2009652**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009652.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 37.145-2** |
| [**R4-2009653**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009653.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-1** |
| [**R4-2009654**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009654.zip) | CMCC | **CR for Introduction of 2300-2400MHz SUL band into Rel-17 TS 38.141-2** |
| [**R4-2010163**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010163.zip) | Huawei, HiSilicon | **Proposal 1: Introduce the new SUL band for 2300 – 2400MHz as band n97.**  **Proposal 2: Specify UE RF requirements for the new SUL band for 2300 – 2400MHz following band n40.**  **Proposal 3: Specify BS spurious emissions requirements for the new SUL band for 2300 – 2400MHz in all the BS specs such as TS 38.104, 38.141-1/-2, 36.104, 36.141, 37.104, 37.141, 37.105, 37.145-1/-2, whenever necessary.** |
| [**R4-2010164**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010164.zip) | Huawei, HiSilicon | **draftCR to 38101-1 on introducing new SUL band n97** |
| [**R4-2010165**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010165.zip) | Huawei, HiSilicon | **draftCR to 38104 on introducing new SUL band n97** |
| [**R4-2010166**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010166.zip) | Huawei, HiSilicon | **draftCR to 38141-1 on introducing new SUL band n97** |
| [**R4-2010167**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010167.zip) | Huawei, HiSilicon | **draftCR to 38141-2 on introducing new SUL band n97** |
| [**R4-2010168**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010168.zip) | Huawei, HiSilicon | **draftCR to 36104 on introducing new SUL band n97** |
| [**R4-2010169**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010169.zip) | Huawei, HiSilicon | **draftCR to 36141 on introducing new SUL band n97** |
| [**R4-2010170**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010170.zip) | Huawei, HiSilicon | **draftCR to 37104 on introducing new SUL band n97** |
| [**R4-2010171**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010171.zip) | Huawei, HiSilicon | **draftCR to 37141 on introducing new SUL band n97** |
| [**R4-2010172**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010172.zip) | Huawei, HiSilicon | **draftCR to 37105 on introducing new SUL band n97** |
| [**R4-2010173**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010173.zip) | Huawei, HiSilicon | **draftCR to 37145-1 on introducing new SUL band n97** |
| [**R4-2010174**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2010174.zip) | Huawei, HiSilicon | **draftCR to 37145-2 on introducing new SUL band n97** |

## Open issues summary

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

### Sub-topic 2-1 UE RF Requirements

**Issue 2-1-1: Operating band number**

* Proposals
  + Introduce the new SUL band for 2300 – 2400MHz as band n97.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

**Issue 2-1-2: UE channel bandwidth，Channel raster，MOP /A-MPR and Spurious emissions**

* Proposals
  + Option1: Specify UE RF requirements for the new SUL band for 2300 – 2400MHz following band n40.
  + Option2: Specify UE channel bandwidth, Channel raster and MOP /A-MPR requirements for the new SUL band for 2300 – 2400MHz following band n40, and add Band 41 to the protected bands of n97 as below table.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| n97 | E-UTRA Band 1, 3, 5, 7, 8, 20, 22, 26, 27, 28, 31, 32, 33, 34, 38, 39, 41, 42, 43, 44, 45, 50, 51, 52, 65, 67, 68, 69, 72, 74, 75, 76,  NR Band n77, n78 | FDL\_low | - | FDL\_high | -50 | 1 |  |
| NR Band n79 | FDL\_low | - | FDL\_high | -50 | 1 | 2 |

* Recommended WF
  + TBA. Collect companies’ view in 1st round

### Sub-topic 2-2 BS RF Requirements

**Issue 2-2-1: BS spurious emissions requirements**

* Proposals
  + Specify BS spurious emissions requirements for the new SUL band for 2300 – 2400MHz in all the BS specs such as TS 38.104, 38.141-1/-2, 36.104, 36.141, 37.104, 37.141, 37.105, 37.145-1/-2, whenever necessary.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 1-1-1:  Issue 1-1-2:  ….  Others: |
| Huawei | We agree with CMCC that protection to n41 should be added for band n97.  We can go with all the rapporteurs’ CRs. Since the formal version of R17 specs do not emerge until Dec. If all the CRs are agreed in this meeting, one suggestion is to announce closure of this WID in Sept. and implement the CRs in Dec. |
| Nokia | Not clear why protection to n41 would be added for n97 but is missing for n40. It is not clear how WI could be closed in September if CRs will be implemented only after December RAN. |

### 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** |
| [**R4-2009644**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009644.zip) | Huawei: we agree to all the CRs. |
| Nokia: For band definition, note shall be added this band is applicable in countries where only n97 is used, otherwise there will be co-existence issue with Band n40. Clarification needed on applying note 9 in Table 5.3.5-1. |
|  |
| [**R4-2009645**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009645.zip) | Nokia: For band definition, note shall be added this band is applicable in countries where only n97 is used, otherwise there will be co-existence issue with Band n40. |
| Company B |
|  |
| [**R4-2009646**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009647**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009648**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009649**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009650**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009651**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009646.zip) | Company A |
| Company B |
|  |
| [**R4-2009652**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Company A |
| Company B |
|  |
| [**R4-2009653**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Company A |
| Company B |
|  |
| [**R4-2009654**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_96_e/Docs/R4-2009634.zip) | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary** |
| **Sub-topic#1** | *Tentative agreements:*  *Candidate options:*  *Recommendations for 2nd round:* |

*Recommendations on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 |  |  |

### CRs/TPs

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

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| XXX | *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)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |