**3GPP TSG-RAN WG4 Meeting # 109 R4-2318140**

**Chicago, USA, November 13 – November 17, 2023**

**Agenda item:** 8.14.7

**Source:** Man Hung Ng (Nokia)

**Title:** Topic summary for [109][134] NR\_FR1\_lessthan\_5MHz\_BW

**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.*

Summary for contributions submitted under agenda items 8.14, 8.14.1 and 8.14.2 for NR support for dedicated spectrum less than 5MHz for FR1.

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

* 1st round: Discussion and agreement on open issues listed below.
* 2nd round: Continue discussion and agreement on open issues listed below.

# Topic #1: Revised WID

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2328723 | Nokia, Nokia Shanghai Bell | Proposal 1: Revised WID to include TS 38.307, TS 38.423, and TS 38.473 in the list of impacted specifications.  Observation 1: |

## Open issues summary

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

### Sub-topic 1-1

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 1-1: R4-2318237 (Revised WID to include TS 38.307, TS 38.423, and TS 38.473 in the list of impacted specifications)**

* Proposals
  + Option 1: Revise the revised WID
  + Option 2: Note the revised WID
* Recommended WF
  + Option 2: Note the revised WID

# Topic #2: System parameters

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2318564 | Nokia, Nokia Shanghai Bell, Qualcomm, Ericsson | Proposal 1: CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth.  Observation 1: |
| R4-2318713 | MediaTek Inc. | Proposal 1: Draft CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth.  Observation 1: |
| R4-2320648 | Qualcomm Inc. | Proposal 1: Introduce the following modifications to the existing FGs for NR less than 5 MHz.   |  |  |  | | --- | --- | --- | | **Features** | **Index** | **Note** | | 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-1 | This FG is supported for 15 kHz SCS only  This FG is applicable only when an associated SS/PBCH block is located according to Table 5.4.3.3-2 in TS 38.101-1 in Rel-18 | | 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-2 | This FG is supported for 15 kHz SCS only  This FG is only applicable when an associated SS/PBCH block is located in band n100 at GSCN 41637 of Table 5.4.3.1-3 in TS 38.101-1 in Rel-18.  Note: The UE supporting this FG supports configuration of 12 PRB BWP operation | | 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-3 | This FG is supported for 15 kHz SCS only  This FG is only applicable when an associated SS/PBCH block is located in band n100 at GSCN 41638 of Table 5.4.3.1-3 in TS 38.101-1 in Rel-18.  Note: The UE supporting this FG supports configuration of 20 PRB BWP operation |   Observation 1: |

## Open issues summary

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

### Sub-topic 2-1

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 2-1: R4-2318564 (CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth)**

* Proposals
  + Option 1: Agree the CR
  + Option 2: Revise the CR
* Recommended WF
  + Option 1: Agree the CR (Resubmission of endorsed draft CR in R4-2315267)

### Sub-topic 2-2

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 2-2: R4-2318713 (Draft CR to TS 38.101-1 on clarification of applicable SS raster entries for 3 MHz channel bandwidth)**

* Proposals
  + Option 1: Endorse the draft CR
  + Option 2: Revise the draft CR
  + Option 3: Note the draft CR
* Recommended WF
  + TBD

### Sub-topic 2-3

*Sub-topic description*

*Open issues and candidate options before meeting:*

**Issue 2-3: R4-2320648 (Introduce the following modifications to the existing FGs for NR less than 5 MHz)**

|  |  |  |
| --- | --- | --- |
| **Features** | **Index** | **Note** |
| 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-1 | This FG is supported for 15 kHz SCS only  This FG is applicable only when an associated SS/PBCH block is located according to Table 5.4.3.3-2 in TS 38.101-1 in Rel-18 |
| 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-2 | This FG is supported for 15 kHz SCS only  This FG is only applicable when an associated SS/PBCH block is located in band n100 at GSCN 41637 of Table 5.4.3.1-3 in TS 38.101-1 in Rel-18.  Note: The UE supporting this FG supports configuration of 12 PRB BWP operation |
| 51. NR\_FR1\_lessthan\_5MHz\_BW | 51-3 | This FG is supported for 15 kHz SCS only  This FG is only applicable when an associated SS/PBCH block is located in band n100 at GSCN 41638 of Table 5.4.3.1-3 in TS 38.101-1 in Rel-18.  Note: The UE supporting this FG supports configuration of 20 PRB BWP operation |

* Proposals
  + Option 1: Agree the proposal
  + Option 2: Revise the proposal
  + Option 3: Note the proposal
* Recommended WF
  + Option 3: Note the proposal (According to guidance from Rel-18 feature list topic moderator: “From my perspective, since RAN1 already captured them in their UE feature list and sent to RAN2, we do not need to repeat the discussion in RAN4.”)

# Topic #3: UE RF requirements

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2318531 | Nokia | Proposal 1: CR for 38.307: Release independece of NR 3 MHz channel bandwidth.  Observation 1: |
| R4-2318565 | Nokia, Nokia Shanghai Bell, Qualcomm, Ericsson | Proposal 1: CR to TS 38.124 on channel bandwidth for boundary between NR out of band and general spurious emission domain.  Observation 1: |
| R4-2318714 | MediaTek Inc. | Proposal 1: CR to TS 38.124 for introduction of 3 MHz channel bandwidth.  Observation 1: |

## Open issues summary

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

### Sub-topic 3-1

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 3-1: R4-2318531 (CR for 38.307: Release independece of NR 3 MHz channel bandwidth)**

* Proposals
  + Option 1: Agree the CR
  + Option 2: Revise the CR
* Recommended WF
  + Option 1: Agree the CR (Resubmission of endorsed draft CR in R4-2315234)

### Sub-topic 3-2

*Sub-topic description*

*Open issues and candidate options before meeting:*

**Issue 3-2: R4-2318565 (CR to TS 38.124 on channel bandwidth for boundary between NR out of band and general spurious emission domain)**

* Proposals
  + Option 1: CR is withdrawn
* Recommended WF
  + No need for discussion.

### Sub-topic 3-3

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 3-3: R4-2318714 (CR to TS 38.124 for introduction of 3 MHz channel bandwidth)**

* Proposals
  + Option 1: Agree the CR
  + Option 2: Revise the CR
* Recommended WF
  + Option 1: Agree the CR (Resubmission of endorsed draft CR in R4-2317749)