**3GPP TSG-RAN WG4 Meeting # 95-e DRAFT R4-2008325**

**Electronic Meeting, 25 May – 5 June, 2020**

**Agenda item:** 9.2

**Source:** Moderator (Huawei)

**Title:** Email discussion summary for [95e][135] FS\_7to24GHz\_NR

**Document for:** Information

# Introduction

This is the email discussion summary for [95e][135] FS\_7to24GHz\_NR on 7 – 24 GHz SI, with the following topics covered:

* General aspects
* Spectrum and regulatory matters
* Deployment scenarios
* NR BS architecture
* NR BS requirements

As there was a limited number of TPs submitted, all of them were listed in a single Topic (i.e. TPs to TR 38.820) in this summary to ease readability and review process.

Conclusion of the first round should conclude if the submitted TPs can be agreed or need to be revised.

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

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

# Topic #1: TPs to the TR 38.820

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2008138 | Huawei | TP to TR 38.820: editorial cleanup  It is expected that this TP may be revised during the meeting to incorporate more corrections. |
| R4-2008139 | Huawei | TP to TR 38.820: deployment scenarios cleanup  Scenarios with no entries (i.e. HST, highway, urban grid) removed from the TR. Clarification text added for the “IMT for fixed wireless broadband in fixed services bands” topic from WRC-19 conclusions. |
| R4-2008140 | Huawei | TP to TR 38.820: clarification on WRC-19 resolution for IMT for fixed wireless broadband in fixed services bands  Clarification added on the WRC-19 resolution COM6/18 on the IMT for fixed wireless broadband in fixed services bands. |
| R4-2006925 | Ericsson | TP to TR 38.820: Addition of antenna parameter selection guideline in subclause 7.2.3  Additional technical background for how to determine antenna parameters for different array geometries is added, based on the reference to the 10GHz band discussion for IMT. |
| R4-2006105 | Nokia, Nokia Shanghai Bell | TP to TR 38.820: Summary Tables for Transmitter Requirements  TP to fill empty entries in the summary tables for Tx requirements in the TR, according to the contents in the related discussion sections. |
| R4-2006106 | Nokia, Nokia Shanghai Bell | TP to TR 38.820: Summary Tables for Receiver Requirements  TP to fill empty entries in the summary tables for Rx requirements in the TR, according to the contents in the related discussion sections. |

## Open issues summary

## Companies views’ collection for 1st round

### Open issues

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2008138 | *Company A* |
| *Company B* |
|  |
| R4-2008139 | Nokia: Why do we need to additionally mention ‘FWA and fixed wireless broadband’ scenarios, but completely remove ‘High speed train, Highway scenario and Urban Grid for Connected Car’ scenarios? |
| *Company B* |
|  |
| R4-2008140 | *Company A* |
| *Company B* |
|  |
| R4-2006925 | Nokia:  In general: this topic is not specific to 7-24GHz but also applies to other frequency ranges, hence it should be put into the AAS TR37.840; the model is a very general one and something similar is used in coexistence studies, e.g. the model captured in 38.803, there is no need to duplicate similar content in many TRs.  In particular:  - What is the meaning of 'nonphysical gain response'?  - Coexistence scenario should also be considered when selecting the antenna parameters.  - There is typo 'beam with product'.  - Not sure how 'The element directivity can be calculated based on the pattern described by Table 2-1 assuming that Ge,max is equal to 0 dBi', and Table 2.2 and Eq. 2-3 point to each other when calculating element radiation pattern and peak element directivity.  - Does the Dv for 2x1 sub-array in Table 2.2 denote the vertical distance between any two elements inside the same sub-array or the vertical distance between two sub-arrays?  - The parameters in Table 2.3 are discussed under the ITU reply LS agenda item. |
| Ericsson: Clearly, we need to document how antenna parameters are selected, which we are happy to do in all TRs if required. Here for this frequency range the current version of TR 38.820 has a section about antenna topologies. In this section, sub-arrays are mentioned. Therefore, this TP was created to show an example on how the antenna model in TR 37.840 can be used to support sub-arrays.  The meaning of no-physical gain response means that the model with incorrect parameter values will break energy conservation. It will produce power; hence the gain will be incorrect.  About assuming 0 dBi gain. It does not matter since it will be directivity normalized.  dv is always the element separation between two element, also in the case of sub-arrays. With 2x1 sub-arrays, the distance will be twice the distance as for a single element geometry.  The parameters in Table 2.3 is just an example for this frequency range. |
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| R4-2006105 | *Company A* |
| *Company B* |
|  |
| R4-2006106 | *Company A* |
| *Company B* |
|  |

## Summary for 1st round

### Open issues

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2008138 | *“to be revised”* |
| R4-2008139 | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| R4-2008140 |  |
| R4-2006925 |  |
| R4-2006105 |  |
| R4-2006106 |  |

## 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”* |