**3GPP TSG-RAN WG4 Meeting # 110 R4-2401080**

**Athens, Greece, February 26 ‒ March 1, 2024**

**Agenda item:** 8.2.4

**Source:** Hisashi Onozawa (Nokia)

**Title:** Topic summary for [110] [121] FR2\_enh\_req\_Ph3\_part1

**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.*

At RAN4#109 meeting, introduction of beam correspondence requirement for initial access and RRC\_INACTIVE was approved for the UE power class 3 (PC3) for FR2-1 bands; the following beam correspondence requirements were agreed to include in TS 38.101-2.

• For spherical coverage EIRP in beam correspondence, minimum EIRP requirement at 50%-tile CDF is specified 2 dB lower in initial access and RRC\_INACTIVE than RRC\_CONNECTED.

• Side conditions are the same as SSB based enhanced beam correspondence requirement introduced in Rel-16.

• Minimum peak EIRP requirement is not applicable in initial access and RRC\_INACTIVE.

Introducing the beam correspondence requirement in initial access and RRC\_INACTIVE for other power classes was not concluded and left for further discussion.

# Topic #1: Beam correspondece for initial access and RRC\_INACTIVE

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2401513 | vivo | **Draft CR:**  Reason for change: The beam correspondence is mandatory feature from R18. Considering that no capability is introduce, it is better to reflect is in the core requirement spec.  Summary of change: Add the information that the beam correspondence in initial access and RRC\_INACTIVE is mandatory |
| R4-2402394 | Sony, Ericsson | **Observation 1: The beam correspondence requirements in initial access are applicable and necessary for power class 1, 5, 6 and 7.**  **Observation 2: No power class is distinguished or precluded in the WI, and thus all the power classes should be treated.**  **Proposal 1: Specify the beam correspondence requirements in initial access for power class 1, 5, 6 and 7 during the maintenance phase.**  **Proposal 2: Specify the relaxation for beam correspondence requirements in initial access with 0 dB for power class 1/5/6, and 2 dB for power class 7.** |
| R4-2402410  Revised to R4-2402937 | Nokia, Nokia Shanghai Bell | **CR:**  Reason for change: Beam correspondence requirement for initial access and RRC\_INACTIVE is not introduced for PC5/6/7 yet.  Summary of change: PC7 beam correspondence requirement in initial access and RRC\_INACTIVE is introduced only for EIRP spherical coverage with 2 dB relaxation from RRC\_CONNECTED in the same way as PC3.  PC5/6 beam correspondence requirement in initial access and RRC\_INACTIVE is introduced only for EIRP spherical coverage without additional relaxation from RRC\_CONNECTED. |

## 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 Power classes

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 1-1: Beam correspondence in initial access for power class 1, 5, 6 and 7.**

* Proposals
  + Option 1: PC1, 5, 6 and 7 shall be specified.
  + Option 2: PC5, 6 and 7 shall be specified.
  + Option 3: No requirement other than PC3.
  + Option 4: Others
* Recommended WF
  + Option 1

*Apple: what is the implication? We need reuse? Or we need define the different relaxation. Eventual solution matters.*

*Sony: the motivation is that based on the discussions in last meeting no all the power classes are specified. From Sony side, we believe PC1, 6 with 0 dB relaxation and reuse the requirements for PC7.*

### Sub-topic 1-2 Relaxation

*Sub-topic description*

*Open issues and candidate options before meeting:*

**Issue 1-2: Relaxation for beam correspondence requirements in initial access**

* Proposals
  + Option 1: 2 dB for PC7 and 0 dB for other PCs (PC1/5/6)
  + Option 2: Others
* Recommended WF
  + Option 1

Apple: we agree for PC7. For PC1/5/6, how are they different from PC3? We introduce the requirements for PC3 due to power control issue. PC1/5/6 have the similar issue.

Agreement: reuse the existing relaxations for PC1, PC5, PC6 and PC7.