**3GPP TSG-RAN WG4 Meeting #112 R4-2413885**

**Maastricht, Netherlands, Aug. 19th – Aug. 23rd, 2024**

**Agenda item:** 8.21.3

**Source:** Ericsson.

**Title:** WF on Netw\_Energy\_NR\_enh

**Document for:** Approval

# Introduction

Note: The detail open issue list is captured in the moderator summary R4-2411817.

# Topic #1: On-demand SSB(OD-SSB) requirements

### Sub-topic 1-1: General OD-SSB requirements

**Issue 1-1-1: OD-SSB work plan**

* **Agreement**:
  + RAN4 to first focus on the MAC CE based single SCell activation case as starting point.
  + After RAN4 concludes on the above case, RAN4 may discuss other Scell activation scenarios if needed.

**Issue 1-1-2: OD-SSB scenarios**

* Agreement:
  + RAN4 to discuss OD-SSB based SCell activation requirements based on following RAN1 agreed scenarios.
    - Case #1 and Scenario #2
    - Case #1 and Scenario #2A
    - Case #2 and Scenario #2
    - Case #2 and Scenario #2A
    - Note 1: Follow RAN1 definition on the scenarios and cases.
    - Note 2: This list can be updated pending on RAN1 further agreement.

**Issue 1-1-3: Deactivated SCell measurement requirement**

* Agreement:
  + RAN4 to discuss OD-SSB based deactivated Scell measurement and Scell activation requirement.
    - Includes both FR1 and FR2-1

### Sub-topic 1-2: OD-SSB requirements(Case 1)

**Deactivated SCell L3 measurement part**

**Issue 1-2-1: Case 1- OD-SSB based deactivated SCell measurement**

* Proposals
  + Option 1: For deactivated SCell measurement requirements, follow the periodicity of configured OD-SSB (not the measurement cycle).
  + Option 2: For deactivated SCell measurement requirements, follow the measCycleSCell.
  + Other option is not precluded

**Issue 2-2-2: Case 1 - OD-SSB based deactivated SCell measurement before OD-SSB indication**

* Agreement:
  + In (Case #1 Scenario #2) and (Case #1, Scenario #2A), UE is not expected to perform the SSB based deactivated SCell L3 measurement before OD-SSB is triggered.
    - Note: How to differentiate OD-SSB SCell and normal SCell depends on other WGs’ discussion.

**Issue 2-2-10: Case #1 and Scenario #2A - unknown SCell activation**

* Proposals
  + Option 1: RAN4 to only define unknown SCell activation provided that the OD-SSB is the first OD-SSB triggered by NW for (Case #1, Scenario #2A).
  + Option 2: RAN4 only specifies requirements assuming the target SCell is unknown in (Case #1, Scenario #2A).
  + Option 3: RAN4 needs to further consider the scenario (Case #1, Scenario #2A) together with (Case #1, Scenario #2) for deactivated SCell OD-SSB measurement.
  + Other option is not precluded

# Topic #2: On-demand SIB1(OD-SIB1) requirements

**Issue 2-1-1: RRM impact of OD-SIB1**

* Agreement
  + Postpone RAN4 work until any RRM impact is identified.

# Topic #3: Adaptation of Common Signals and Channels

### Sub-topic 3-1: SSB Adaptation requirements

**Issue 3-1-1: SSB adaptation in IDLE/CONNECTED mode**

* Agreement
  + RAN4 to prioritize the SSB adaptation discussion in CONNECTED mode.
  + Whether to discuss SSB adaptation in IDLE mode depends on RAN1 progress

**Issue 3-1-2: SSB adaptation impact in RRM requirement**

* Agreement:
  + RAN4 to discuss the L1/L3 measurement requirement impact as starting point.
* Wayforward:
  + RAN4 to discuss SSB periodicity adaptation in time-domain as starting point. Other SSB adaptation mechanism (s) and requirements are not precluded depending on RAN1 progress.

### Sub-topic 3-2: Impact on Paging Adaptation requirements

**Issue 3-2-1: Paging adaptation**

Agreement:

* + Deprioritize Paging adaptation until the RAN1 concrete conclusion is available.

### Sub-topic 3-3: Impact on PRACH Adaptation requirements

**Issue 3-3-1: PRACH adaptation**

Agreement:

* + Deprioritize PRACH adaptation until the RAN1 concrete conclusion is available.