**3GPP TSG-RAN WG4 Meeting #113 R4-2420094**

**Orlando, US, 18th – 22nd November, 2024**

**Agenda item:** 7.15.4

**Source:** CATT

**Title:** WF on RRM requirements for NR\_RRM\_Ph5\_Part2

**Document for:** Approval

# Introduction

This WF includes the agreements and open issues discussed in topic summary for [113][219] NR\_RRM\_Ph5\_Part2.

# Topic #1: Fast SCell activation for UE supporting Rel-18 EMR

## Sub-topic 1-1 General

#### Issue 1-1-1: Applicability of fast SCell activation delay requirements

Agreement in offline session (Wednesday):

* For R19 fast SCell activation for UE supporting R18 EMR, when neither *measIdleValidityDuration-r18* nor *measReselectionValidityDuration-r18* is configured:
  + Fast SCell activation delay requirements (same with conclusion of the case whereeither *measIdleValidityDuration-r18* or *measReselectionValidityDuration-r18* is configured) apply under the following conditions:
    - For EMR carriers:
      * Consider the case when the T331 timer hasn’t expired at the moment of initiation of RRC state transition to Connected mode. i.e., measIdleDuration-r16 is configured, and T331 is running.
  + Otherwise, follow the legacy unknown SCell activation delay requirements.

#### Issue 1-1-2: Target scenarios of fast SCell activation

Agreement in offline session (Wednesday):

* Fast SCell activation requirements defined in R19 do NOT apply to the following scenarios:
  + SCell being contiguous to PCell in FR1 (i.e. intra-band contiguous CA)
  + SCell being in the same band as PCell in FR2 (i.e. intra-band CA)

#### Issue 1-1-3: Work Schedule for fast SCell activation with Rel-18 eEMR

## Sub-topic 1-2 SCell activation delay requirements

#### Issue 1-2-1a: The fast SCell activation delay components for direct SCell activation at SCell addition

Agreement in online session (Monday):

* For single direct SCell activation at SCell addition, for FR1
  + provided *measIdleValidityDuration-r18/measReselectionValidityDuration-r18* is configured:
    - use existing SSB based known SCell activation delay requirement with 2 SSB samples, i.e. Tactivation\_time is TFirstSSB\_MAX + Trs + 5ms.
* For single direct SCell activation at SCell addition, for FR2
  + provided *measIdleValidityDuration-r18/measReselectionValidityDuration-r18* is configured:
    - use existing SSB based known SCell activation delay requirement with 2 SSB samples.
      * delay components: 2 SSB samples \* beam sweeping +1 SSB sample
      * Further discuss the detailed requirements when drafting the CR

#### Issue 1-2-1b: The fast SCell activation delay components for MAC CE based single SCell activation

Agreement in online session (Monday):

* For **MAC CE based** SCell activation delay requirements with eEMR report, reuse the same conclusions as **direct** SCell activation at SCell addition.

#### Issue 1-2-1c: The time gap condition for MAC CE based single SCell activation

Agreement in online session (Monday):

* For MAC CE based SCell activation delay requirements with eEMR report, **reuse the same conclusions as direct SCell activation at SCell addition**, i.e., [Y] equals to 5s for FR1, and 4s for UE supporting power class 1/5 and 3s for UE supporting power class 2/3/4 for FR2.

#### Issue 1-2-1d: The SSB detectability condition for both direct SCell activation and MAC CE based single SCell activation

Agreement in online session (Monday):

* The earliest **possible** RRC Idle/Inactive measurement time instance is defined as below:
  + From the time UE receives the configuration of measurement in idle and inactive modes.
* Discuss the details when drafting the CR.

Agreement in offline session (Wednesday):

* Agree on the following as baseline for CR:
  + If the configured validity duration is only based on Rel-16 EMR, it refers to the time instance when the UE obtained the configuration parameter (i.e., *measIdleDuration-r16*).
  + If the configured validity duration includes Rel-18 eEMR, the configured, it refers to the time instance *measIdleValidityDuration-r18* or *measReselectionValidityDuration-r18* before Msg1 transmission.

#### Issue 1-2-2: Consideration on measurement period condition of FR1 known SCell activation

Tentative Agreement:

* The issue can be covered by issue 1-2-1a, and no further agreements are needed.

#### Issue 1-2-3: Whether the indication to network is needed

Agreement in offline session:

* It is RAN4 common understanding that fast SCell activation requirements apply for any of reported cells, as long as side conditions (agreed in previous issues) are met. No need to introduce additional indication to the network for fast SCell activation.

#### Issue 1-2-4: UE capability

Tentative Agreement:

* Discuss the UE capability by the end of core part.

# Reference

1. R4-2418277 Topic summary for [113][219] NR\_RRM\_Ph5\_Part2, CATT, RAN4#113