**3GPP TSG-RAN WG4 Meeting #112-bis R4-241xxxx**

**Hefei, China, 14 – 18 October, 2024**

**Agenda item:** 6.20.4

**Source:** Huawei, HiSilicon

**Title:** WF on RRM requirements for NR\_duplex\_evo

**Document for:** Approval

# Agreements

Sub-topic 1-1: RRM impacts of UE-to-UE CLI handling

Issue 1-1-1: Measurement quantities

* Agreements (from online session)
	+ RAN4 to define requirements for L1-SRS-RSRP and L1-CLI-RSSI.
	+ Requirements for other measurement quantities can be considered based on further RAN1 agreement.

Issue 1-1-6: Side condition

* Agreements (from online session)
	+ Send LS to RAN1: in addition to intra-cell scenario, whether inter-cell scenario is considered in this WI. Further discuss the details in the LS.
	+ For SRS configuration, re-use Rel-16 side condition as baseline.

Issue 1-1-14: Measurement timing for L1-SRS-RSRP

* Agreements (from online session)
	+ As baseline, for L1 SRS-RSRP measurement, UE will apply a constant offset relative to the downlink reference timing in the serving cell, and the constant offset value is derived by UE implementation and shall be at least Tc\*NTA\_offset.
	+ This can be revisited if it proves to be conflicting with further RAN1 agreements.

Sub-topic 1-2: RRM impacts of SBFD operation

Issue 1-2-1: Requirements for SSB based measurement

* Agreements (from online session)
	+ Down-select one of the two options:
		- Option 1:
			* As baseline, for SBFD-aware UE, existing requirements apply for SSB based neighbour cell measurement, i.e. SSB measurement is prioritized over UL transmission.
			* This can be revisited if it proves to be conflicting with further RAN1 agreements.
		- Option 2:
			* For inter-frequency measurement without gap, UL transmission is prioritized.
			* Follow option 1 in other cases.

Issue 1-2-2: Requirements for CSI-RS based measurement

* Agreements (from online session)
	+ RAN4 to discuss whether and how L1 CSI-RS measurement requirements would be impacted by the following SBFD operations.
		- CSI-RS colliding with dynamically scheduled UL transmission
		- CSI-RS puncturing in frequency domain in SBFD symbols
		- CSI-RS distributed over SBFD and non-SBFD symbols
	+ Align the understanding whether above SBFD operations are applicable for CSI-RS for RLM, BFR and L1-RSRP, or they are only applicable for CSI-RS for CSI.
	+ RAN4 to discuss whether and how L3 CSI-RS measurement requirements would be impacted by SBFD operations, and further RAN1/2 conclusions can be considered.

Issue 1-2-9: Limits on the maximum number of DL/UL switching

* Agreements (from online session)
	+ RAN4 not to discuss limits on the maximum number of DL/UL switching unless requested by other WGs.

Potential issues for further discussion

Sub-topic 1-1: RRM impacts of UE-to-UE CLI handling

Issue 1-1-2: Baseline for defining requirements

* Recommended WF
	+ Close the issue, and RAN4 to focus on the exact requirement development rather than the baseline.

Issue 1-1-3: Measurement methods

* Recommended WF
	+ Further discuss the issue

Issue 1-1-4: Rx beam

* Recommended WF
	+ Further discuss the issue

Issue 1-1-5: Measurement resources

* Recommended WF
	+ Further discuss the issue

Issue 1-1-7: Measurement period

* Recommended WF
	+ Further discuss the issue

Issue 1-1-8: Measurement reporting

* Recommended WF
	+ Further discuss the issue

Issue 1-1-9: Measurement accuracy

* Recommended WF
	+ RAN4 to define measurement accuracy requirements for L1-SRS-RSRP and L1-CLI-RSSI in the Performance part of the WI.

Issue 1-1-10: Scheduling and measurement restriction

* Recommended WF
	+ Further discuss the issue

Issue 1-1-11: Measurement capability

* Recommended WF
	+ Further discuss the issue

Issue 1-1-12: Report mapping

* Recommended WF
	+ Further discuss the issue

Issue 1-1-13: Requirement applicability

* Recommended WF
	+ Further discuss the issue

Sub-topic 1-2: RRM impacts of SBFD operation

Issue 1-2-3: Requirements for scheduling restriction

* Recommended WF
	+ Further discuss the issue

Issue 1-2-4: Requirements for RACH requirements

* Recommended WF
	+ Interested companies are encouraged to bring proposals on exact RRM impacts, if any

Issue 1-2-5: Requirements for UL PC and or spatial relation update

* Recommended WF
	+ Interested companies are encouraged to bring proposals on exact RRM impacts, if any

Issue 1-2-6: Requirements for MG and BWP switch

* Recommended WF
	+ Further discuss the issue

Issue 1-2-7: Requirements for UL resource muting

* Recommended WF
	+ Interested companies are encouraged to bring proposals on exact RRM impacts, if any

Issue 1-2-8: Requirements for generic SBFD operation

* Recommended WF
	+ Interested companies are encouraged to bring proposals on exact RRM impacts, if any