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Maastricht, Netherlands, March 18-21, 2024

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Agenda Item: 9.1.4.6

Qualcomm

Views on Other RAN4 Topics for Release 19

Qualcomm Incorporated

Summary

- Priorities for Other Topics
- Study on IMT Parameters for WP5D sharing and compatibility studies
- RAN4 Spec Quality

Priorities for “Other” Topics

- Study on IMT Parameters for WP5D sharing and compatibility studies
  - Important work for enabling use of IMT in new spectrum, RAN4 should perform a study to reply to ITU-R
- RAN4 Specification Quality Improvements
  - RAN4 should spend time to improve the specifications before the start of a new series of specifications(new generation)

Study on IMT Parameters for WP5D sharing and compatibility studies

Objectives

- ITU has asked for RF parameters to be used in sharing and compatibility studies for three frequency ranges:
  - 4 400-4 800 MHz
  - 7 125-8 400 MHz
  - 14.8-15.35 GHz
- RAN4 provided an estimated completion date and agreed that a study should be done (see RP-240033)
  - RAN4 should approve an SI such that RAN4 can work on this important issue
- Existing parameters can be mostly reused for some frequency range, a more comprehensive study is needed for the higher frequencies

RAN4 Specification Quality

Specification Issues

- RAN4 UE specification quality is worrisome for both RRM (38.133) and RF (38.101-X)
  - Large number of maintenance CRs in each meeting, some even for Rel-15 – see below statistics for RAN4#110
    - Rel-15&16 RF maintenance ->145 tdocs
    - Rel-15&16 RRM maintenance -> 137 tdocs
    - Rel-17 RF maintenance -> 84 tdocs
    - Rel-17&18 RRM maintenance -> 214 tdocs
  - Large amount of time spent clarifying the specifications or arguing about the interpretation of the specifications
  - RAN4 workload so far makes it almost impossible to thoroughly check CRs and propose/discuss improvements
  - At the end of the release there is an avalanche of CRs, different sections of a big CR for a feature are drafted by different companies and are only presented right before they have to be approved
    - No time for running CRs to add pieces little by little
- RAN4 should spend time on fixing the specifications
  - Setting up a dedicated WI or allocate special time for this
  - These issues should be understood and resolved before the work on next generation starts
    - When 6G SI starts, there won't be time

RAN4 Specification Quality

Specification Issues

- RRM Specification Issues – 38.133
  - Very large size (already split into multiple files), difficult to scroll and locate requirements
  - Extremely difficult to understand what the actual requirements are and how they apply because there are too many parameters, corner cases, etc
  - See subsequent slides
- RF Specification Issues – 38.101-X
  - Files very difficult to scroll through – CA spec improvement under discussion, so far promising developments
  - Many sub-features defined separately instead of having a general framework(e.g. PC handling with CA)
  - Many ambiguities which can lead to different interpretations
  - Long sentences very difficult to understand, dependencies on different parameters difficult to understand
  - See subsequent slides and Annex for some concrete examples

RRM Specification Issues (38.133)

- Issues in the specifications
  - Too many corner cases, too many parameters and conditions to define a requirement (see number of “ifs” for a requirement).
  - Applicability conditions for requirements are becoming more complex and harder to capture clearly and concisely in plain English. This is partly due to interactions between multiple features. In many cases the wording used in the specification is cumbersome and unnecessarily lengthy, making it harder to understand the requirements.
  - Excessive duplication of requirements that are common across multiple scenarios or features. This practice increases the burden of maintaining the specifications; corrections are needed in multiple places to fix a single issue. In addition, there is negative impact on usability due to larger file sizes.
- A few examples are shown in the Annex

RRM Specification Issues (38.133)

- Proposals
  - RAN4 would benefit by developing process improvements and guidelines for drafting CRs
    - Develop guidelines for drafting requirements with complex logic, including adopting a pseudo-code approach at least in some cases.
    - Develop guidelines to avoid/discourage excessive duplication of requirements in the specifications.
    - Develop guidelines for WI planning (work plan) so that enough time is allocated to drafting/reviewing/revising CRs. Specification structure should be a milestone in the work plan.
    - Develop guidelines to improve coordination of maintenance CRs for on-going WIs and avoid overlap between CRs submitted by multiple companies during core maintenance.
    - Consider adopting a running-CR approach to allow more time for draftCRs to be reviewed and revised across multiple RAN4 meetings before submitting them to RAN for approval.

RF Specification Issues (38.101-1)

In many places RAN4 specifications refer to CA requirements as follows:

In 6.2A.1.1: "*For uplink intra-band contiguous carrier aggregation, the maximum output power is specified…*"

And in 6.2A.1.3:

"*For inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, …*"

And

"*For inter-band uplink carrier aggregation with uplink assigned to two NR bands, …*"

It is unclear whether if the "assigned" refers to "configured", "activated" or "allocated" situation. Similarly thetement "For CA.." is not clear for which state of the CA it refers to.

Ran4 has defined capabilities for power class, currently there are three for SA NR operation, *powerClass*, *ue-PowerClass*, *ue-PowerClassPerBandPerBC-r17* and *higherPowerLimit-r17* also impacts power class behaviour of the UE and furthermore, *mpr-PowerBoost-FR2-r16*, *powerBoosting-pi2BPSK and uplinkTxSwitching-PowerBoosting-r16* expand the maximum output power limits of the UE. RAN4 also has defined so-called "power class fallback" behaviour in section 6.2.1 of TS 38.101-1. The term "fallback" here does not apply but a "default power class" is used. It was pointed out in [R4-2400180] that the implementation in the specification may have problems.

Which power class applies for which situation is currently under discussion under the agenda 12.2.1 Power class related topics (RAN4#110) motivated by RAN2 question in LS [R2-2211023] even discussion has been ongoing before that.

The difficulty in solving the power class is related to the ambiguous wording since some companies have assumed it means "allocated" and some companies have assumed "configured".

The power class topic in general has many branches and one problem has been that some companies provide correction proposal that maybe overlapping with the correction efforts under agenda 12.2.1.

RAN4 should gather the power class ambiguity and related issues under a SI/WI with clearly defined objective to ensure the proper execution of the needed corrections.

RF Specification Issues (38.101-X) – MSD Clea-up

- Thousands of MSD test points are specified, many of the are carried over from similar combinations, however, there are many discrepancies in the specs (see some examples in the Annex):
  - Inconsistencies between the MSD specified for narrowest and largest victim BW in MSD due to Harmonic Interference
  - Inconsistencies between the MSD specified for narrowest and largest victim BW in MSD due to Harmonic Mixing
  - Missing Harmonic Mixing cases
  - Inconsistencies between MSD test points in NR CA and in EN-DC
  - Inconsistencies between the Intermodulation MSD numbers between similar kinds of combination's
- **RAN4 should establish a SI/WI in which the framework for specifying the MSD values for upcoming combinations is studied and whether improvements for already specified values are possible**

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Thank you

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Annex 1 - RRM Spec issues

Complicated specifications

- Example on the left is just a part of the requirement on cell identification
  - Complete requirement is about twice longer

$T_{identify_intra_without_index} = (T_{PSS/SSS_sync_intra} + T_{SSB_measurement_period_intra})$ ms

$T_{identify_intra_with_index} = (T_{PSS/SSS_sync_intra} + T_{SSB_measurement_period_intra} + T_{SSB_time_index_intra})$ ms

Where:

T_{PSS/SSS_sync_intra}: it is the time period used in PSS/SSS detection given in table 9.2.5.1-1, 9.2.5.1-2, 9.2.5.1-4 (deactivated SCell) or 9.2.5.1-5 (deactivated SCell) or 9.2.5.1-9 (deactivated SCell) or 9.2.5.1-11 or 9.2.5.1-12 (deactivated PSCell) or 9.2.5.1-13 (deactivated PSCell).

- For UE supporting power class 6 with *highSpeedMeasFlagFR2-r17* configured, if SMTC <= 40ms, T_{PSS/SSS_sync_intra} is given in Table 9.2.5.1-11; otherwise, T_{PSS/SSS_sync_intra} is given in Table 9.2.5.1-2.

$T_{SSB_time_index_intra}$: it is the time period used to acquire the index of the SSB being measured given in table 9.2.5.1-3, 9.2.5.1-15 (FR2-2), 9.2.5.1-6 (deactivated SCell), 9.2.5.1-10(deactivated SCell) or 9.2.5.1-14 (deactivated PSCell).

$T_{SSB_measurement_period_intra}$: equal to a measurement period of SSB based measurement given in table 9.2.5.2-1, table 9.2.5.2-2 table 9.2.5.2-3 (deactivated SCell), 9.2.5.2-4(deactivated SCell), 9.2.5.2-5 or 9.2.5.2-6(deactivated SCell), 9.2.5.2-8(deactivated PSCell) or 9.2.5.2-9(deactivated PSCell).

- For UE supporting power class 6 with *highSpeedMeasFlagFR2-r17* configured, if SMTC <= 40ms, $T_{SSB_measurement_period_intra}$ is given in Table 9.2.5.2-7; otherwise, $T_{SSB_measurement_period_intra}$ is given in Table 9.2.5.2-2.

$CSSF_{intra}$: it is a carrier specific scaling factor and is determined

according to $CSSF_{outside_gap,i}$ in clause 9.1.5.1 for measurement conducted outside measurement gaps, i.e. when intra-frequency SMTC is fully non overlapping or partially overlapping with measurement gaps or NCSG, or according to $CSSF_{within_gap,i}$ in clause 9.1.5.2 for measurement conducted within measurement gaps, i.e. when intra-frequency SMTC is fully overlapping with measurement gaps, or according to $CSSF_{within_ncsg,i}$ in clause 9.1.5.3 for measurement conducted within NCSG, i.e. when intra-frequency SMTC is fully overlapping with NCSG.

For a UE that supports Pre-MG, an SMTC occasion is only considered to be overlapped by Pre-MG if the Pre-MG is activated.

if the high layer in TS 38.331 [2] signalling of *smtc2* is configured, the assumed periodicity of intra-frequency SMTC occasions corresponds to the value of higher layer parameter *smtc2*; Otherwise the assumed periodicity of intra-frequency SMTC occasions corresponds to the value of higher layer parameter *smtc1*.

$M_{pss/sss_sync_w/o_gaps}$: For a UE supporting FR2-1 power class 1 or 5, $M_{pss/sss_sync_w/o_gaps}$ =40. For a UE supporting power class 2, $M_{pss/sss_sync_w/o_gaps}$ =24. For a UE supporting FR2-1 power class 3, $M_{pss/sss_sync_w/o_gaps}$ =24. For a UE supporting FR2-1 power class 4, $M_{pss/sss_sync_w/o_gaps}$ =24. For a UE supporting FR2-2 power class 1, $M_{pss/sss_sync_w/o_gaps}$ = 60. For a UE supporting FR2-2 power class 2, $M_{pss/sss_sync_w/o_gaps}$ = 36. For a UE supporting FR2-2 power class 3, $M_{pss/sss_sync_w/o_gaps}$ = 36.

$M_{meas_period_w/o_gaps}$: For a UE supporting FR2-1 power class 1 or 5, $M_{meas_period_w/o_gaps}$ =40. For a UE supporting FR2-1 power class 2, $M_{meas_period_w/o_gaps}$ =24. For a UE supporting FR2-1 power class 3, $M_{meas_period_w/o_gaps}$ =24.

Source sample text

Cumbersome/lengthy wording

- These requirements could be captured in a simpler manner by saying that these measurements are performed outside gaps provided the RS is available outside gaps.

9.1.5.1 Monitoring of multiple layers outside gaps

For a UE supporting concurrent gaps or [concurrent gaps with Pre-MG] or [concurrent gaps with NCSG], and when concurrent [gaps] are configured the carrier-specific scaling factor $CSSF_{outside_gap,i}$ for measurement object *i* derived in this chapter is applied to following measurement types :

- SSB-based intra-frequency measurement with no measurement gap in clause 9.2.5 and 9.2A.5, when none of the SMTC occasions of this intra-frequency measurement object are overlapped by the union of concurrent [GAPs].
- SSB-based intra-frequency measurement with no measurement gap in clause 9.2.5 and 9.2A.5, when part of the SMTC occasions of this intra-frequency measurement object are overlapped by the union of concurrent [GAPs].
- CSI-RS based intra-frequency measurement in clause 9.10.2, when none of CSI-RS resources for L3 measurement of this intra-frequency measurement object are overlapped by the union of concurrent [GAPs].
- CSI-RS based intra-frequency measurement in clause 9.10.2, when all CSI-RS resources for L3 measurement of this intra-frequency measurement object are partially overlapped by the union of concurrent [GAPs].
- SSB-based inter-frequency measurement with no measurement gap in clause 9.3.9, when none of the SMTC occasions of this inter-frequency measurement object are overlapped by the union of concurrent [GAPs], if UE supports *interFrequencyMeas-NoGap-r16* and the flag *interFrequencyConfig-NoGap-r16* is configured by the Network.
- SSB-based inter-frequency measurement with no measurement gap in clause 9.3.9, when part of the SMTC occasions of this inter-frequency measurement object are overlapped by the union of concurrent [GAPs], if UE supports *interFrequencyMeas-NoGap-r16* and the flag *interFrequencyConfig-NoGap-r16* is configured by the Network.

Duplication of requirements

- The four sections listed below contain identical requirements
- **7.2 UE timer accuracy**
- **7.2A UE timer accuracy for RedCap**
- **7.2C UE timer accuracy for satellite access**
- **7.2D UE timer accuracy for ATG**

Annex 2 - RF Spec issues

Ambiguities in the spec

Intra-band CA

- Intra-band UL CA section, single CC maximum power (6.2.1) applies when only one component carrier is configured for UL
  - It implies that when two component carriers are configured for UL, then maximum power applies from 6.2A.1
  - Ambiguity whether requirement applies when only one CC is activation or when the scheduled UL is in a single CC?
- In MPR section, MPR is defined for contiguous allocation but contiguous allocation is also when only one CC is allocated
  - Improvement would be to state which maximum power and MPR applies in which conditions

6.2A.1.1 UE maximum output power for Intra-band contiguous CA

For uplink intra-band contiguous carrier aggregation, the maximum output power is specified in Table 6.2A.1.1-1. For downlink intra-band contiguous carrier aggregation with a single uplink component carrier configured in the NR band, the maximum output power is specified in Table 6.2.1-1 for power class 3 and other power classes if indicated in clause 5.5A.1.

Table 6.2A.1.1-1: UE Power Class for intra-band contiguous CA

6.2A.2.1 UE maximum output power reduction for Intra-band contiguous CA

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power in 6.2A.1.1-1 with contiguous RB allocation is specified in Table 6.2A.2.1-1 for UE power class 3 CA bandwidth classes B and C. The MPR with contiguous RB allocation is specified in Table 6.2A.2.1-1a for power class 2 CA bandwidth classes B and C when the signalling is absent for *dualPA-Architecture* IE, and for power class 2 CA bandwidth classe C when the signalling is indicated for *dualPA-Architecture* IE. The MPR with contiguous RB allocation is specified in Table 6.2A.2.1-1b for power class 2 CA bandwidth classes B and C with TxD supported.

For CA bandwidth class B and bandwidth class C with contiguous RB allocation, the following parameters are defined to specify valid RB allocation ranges for Inner and Outer RB allocations:

An RB allocation is contiguous if $L_{CRB1} = 0$ or $L_{CRB2} = 0$ or ($L_{CRB1} \neq 0$ and $L_{CRB2} \neq 0$ and $RB_{Start1} + L_{CRB1} = N_{RB1}$ and $RB_{Start2} = 0$), where RB_{Start1}, L_{CRB1}, and N_{RB1} are for CC1, RB_{Start2}, L_{CRB2}, and N_{RB2} are for CC2, CC1 is the component carrier with lower frequency.

In contiguous CA, a contiguous allocation is an inner allocation if

For CA bandwidth classes B and C with non-contiguous RB allocation, the following parameters are defined to specify valid RB allocation ranges for Inner, Outer1 and Outer2 RB allocations:

Non-Contiguous RB allocation is defined as $RB_{Start1} + L_{CRB1} < N_{RB1}$, or $RB_{Start2} > 0$, when both uplink CCs are activated and allocated with RB(s), where RB_{Start1}, L_{CRB1}, and N_{RB1} are for CC1, RB_{Start2}, L_{CRB2}, and N_{RB2} are for CC2, CC1 is the component carrier with lower frequency.

In contiguous CA, a non-contiguous RB allocation is a non-contiguous Inner RB allocation if the following conditions are met:

Ambiguities in the spec

Ambiguous wording on applicability of requirement

In many places RAN4 specifications refer to CA requirements as follows:

- In 6.2A.1.1: "*For uplink intra-band contiguous carrier aggregation, the maximum output power is specified…"*
- And in 6.2A.1.3:
- "*For inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, …"*
- And
- "*For inter-band uplink carrier aggregation with uplink assigned to two NR bands, …"*

It is unclear whether if the "assigned" refers to "configured", "activated" or "allocated" situation. Similarly thetement "For CA.." is not clear for which state of the CA it refers to.

Ran4 has defined capabilities for power class, currently there are three for SA NR operation, *powerClass*, *ue-PowerClass*, *ue-PowerClassPerBandPerBC-r17* and *higherPowerLimit-r17* also impacts power class behaviour of the UE and furthermore, *mpr-PowerBoost-FR2-r16*, *powerBoosting-pi2BPSK and uplinkTxSwitching-PowerBoosting-r16* expand the maximum output power limits of the UE. RAN4 also has defined so-called "power class fallback" behaviour in section 6.2.1 of TS 38.101-1. The term "fallback" here does not apply but a "default power class" is used. It was pointed out in [R4-2400180] that the implementation in the specification may have problems.

Which power class applies for which situation is currently under discussion under the agenda 12.2.1 Power class related topics (RAN4#110) motivated by RAN2 question in LS [R2-2211023] even discussion has been ongoing before that.

The difficulty in solving the power class is related to the ambiguous wording since some companies have assumed it means "allocated" and some companies have assumed "configured".

The power class topic in general has many branches and one problem has been that some companies provide correction proposal that maybe overlapping with the correction efforts under agenda 12.2.1.

- **Power class ambiguity and related ambiguities should be grouped under a SI/WI with clearly defined objective to ensure the proper execution of the needed corrections.**

Ambiguitites in spec

Inter-band UL CA

- The word assigned is ambiguous, it can be allocated(scheduled RBs) or activated or configured.
  - Just to note that the current ongoing work for defining the applicability of powerClass, ue-PowerClass and ue-PowerClassPerBandPerBC is partly because of this ambiguity. Many TUs used for this work and discussion is scattered in many agendas, reply-LS, both Rel-15 maintenance and rel-17 maintenance

6.2A.1.3 UE maximum output power for Inter-band CA

For inter-band downlink carrier aggregation with one uplink carrier assigned to one NR band, the transmitter power requirements in Table 6.2.1-1 apply for power class 3 and other power classes if indicated in clause 5.5A.3.

For inter-band carrier aggregation with two uplink contiguous carrier assigned to one NR band, the transmitter power requirements specified in subclause 6.2A.1.1 apply.

For inter-band carrier aggregation with two uplink non-contiguous carrier assigned to one NR band, the transmitter power requirements specified in subclause 6.2A.1.2 apply. For inter-band uplink carrier aggregation with uplink assigned to two NR bands, UE maximum output power shall be measured over all component carriers from different bands. If each band has separate antenna connectors, maximum output power is defined as the sum of maximum output power from each UE antenna connector. The period of measurement shall be at least one sub frame (1 ms). The maximum output power is specified in Table 6.2A.1.3-1.

Ambiguities in the spec

UL MIMO

- The specification states that “For UE with two transmit antenna connectors in closed-loop spatial multiplexing scheme, the allowed Maximum Power Reduction (MPR) …“
- Ambiguity on what is the spec when UE is scheduled for PUCCH (only 1-port exists) and PUSCH (2-layer or 2-port 1-layer) in the same slot
  - UE here would be without ULFPTx PC2
  - In 1-port Table 6.2.2-2 would apply
  - In 2-port Table 6.2D.2-1 would apply
  - But between two transmissions, different MPR would apply
- Spec improvement would be to define the conditions when what applies:
  - One option is to define to apply based on maxRank in pusch-Config or maxMIMO-Layers in PUSCH-ServingCellConfig for all transmissions (details TBD)
  - Or then only based on uplink grant, like this part says but it not in MPR section

6.2D.2 UE maximum output power reduction for UL MIMO

For UE with two transmit antenna connectors in closed-loop spatial multiplexing scheme, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2D.1-1 is specified in Table 6.2.2-1for PC3, Table 6.2D.2-1 for 2Tx PC2 when the UE does not indicate ul-FullPwrMode-r16 or ul-FullPwrMode2-TPMIGroup-r16 for the band and Table 6.2.2-2 for 2Tx PC2 when the UE indicates ul-FullPwrMode-r16 or ul-FullPwrMode2-TPMIGroup-r16 for the band, Table 6.2D.2-2 and Table 6.2D.2-3 for PC1.5 respectively. For UE power class 1.5, the allowed maximum power reduction (MPR) defined in Table 6.2D.2-3 is in accordance with the indicated *modifiedMPR-Behavior* specified in Table L.1-1 for channel bandwidths ≤ 100 MHz. The requirements shall be met with UL MIMO configurations defined in Table 6.2D.1-2. For UE supporting UL MIMO, the maximum output power is defined as the sum of the maximum output power from both UE antenna connectors.

For UE support uplink full power transmission (ULFPTx) for UL MIMO except the feature *ul-FullPwrMode-r16* or *ul-FullPwrMode2-TPMIGroup-r16*, the allowed MPR for the maximum output power in Table 6.2D.1-1 is specified in Table 6.2.2-1 for PC3, Table 6.2D.2-1 when *TxD* is indicated and Table 6.2.2-2 when *TxD* is not indicated for PC2 , Table 6.2D.2-2 and Table 6.2D.2-3 for PC1.5 respectively, and the requirements shall be met with the PUSCH configurations specified in Table 6.2D.1-3, based upon UE’s support of uplink full power transmission mode. A UE indicating the feature *ul-FullPwrMode-r16* or *ul-FullPwrMode2-TPMIGroup-r16* for a band shall meet the maximum output power requirement with MPR according to clause 6.2.2. When a UE that indicates PC1.5 for a given band is limited to PC2 by the rules in clause 6.2.1, the MPR requirements in Table 6.2.2-2 apply. For UE support uplink full power transmission (ULFPTx) for UL MIMO, the maximum output power is defined as the sum of the maximum output power from both UE antenna connectors.

The same MPR requirements shall be applicable to UE with 1-layer UL MIMO transmission (either with or without ULPFTx) as with the UL MIMO configurations of using 2-layer UL MIMO transmission with codebook of $\frac{1}{\sqrt{2}}\begin{bmatrix}1 & 0\\ 0 & 1\end{bmatrix}$.

For the UE maximum output power modified by MPR, the power limits specified in clause 6.2D.4 apply.

For the UE maximum output power modified by MPR, the power limits specified in clause 6.2D.4 apply.

If UE is scheduled for single antenna-port PUSCH transmission by DCI format 0_0 or by DCI format 0_1 for single antenna port codebook based transmission, the corresponding requirements in clause 6.2D.1 apply for the power class as indicated by the *ue-PowerClass* field in capability signaling. A UE indicating the feature *ul-FullPwrMode-r16* or *ul-FullPwrMode2-TPMIGroup-r16* for a band shall meet the requirement in clause 6.2 with MPR according to clause 6.2.2

MSD Issue Examples

- MSD due to Harmonic Interference (1) and MSD due to Harmonic Mixing (2) are specified for narrowest and widest victim BW.
  - The MSD is scaled according to victim BW. For cases where the MSD is high (=Interference is way above the REFSENS of the victim BW) the scaling is usually correct.
  - In cases where the MSD is low (=Interference is just slightly above or even below the REFSENS of the victim BW), the scaling is not correct.
  - For instance, using the interference which results as 10.5dB MSD due to UL harmonic for 10MHz for n77 in CA_n5-n77, the same interference would result in ~3dB MSD for 100MHz while current specification shows 1.4dB

n5	n77[8]	5	15	16 (RBstart=0)	10	10.5	NOTE 4	UL4/DL1 direct-hit
n5	n77[8]	5	15	25 (RBstart=0)	100	1.4	NOTE 4	UL4/DL1 direct-hit

  - For instance, using the interference which results as 8.3dB MSD due to Harmonic mixing for 10MHz for n48 in CA_n41-n77, the same interference would result in ~2dB MSD for 100MHz while current specification shows 0.4dB

n41	n48	10	30	24 (RBstart=0)	10	8.3	NOTE 9	UL4/DL3
n41	n48	10	30	24 (RBstart=0)	100	0.4	NOTE 9	UL4/DL3