3GPP TSG-RAN WG2 Meeting #119-e ***R2-2208792***

Electronic Meeting, August 17 – 26, 2022

**Agenda item:** 6.11.2.1

**Source:** Qualcomm Incorporated

**Title:** Summary of AI 6.11.2.1: Essential Corrections for Latency enhancements

**Document for:**  Discussion

# 1. Introduction

This document provides a summary of (parts of) Agenda Item 6.11.2.1: Essential Corrections for Latency Enhancements. The following documents are considered in this summary.

[1] R2-2207101, "Corrections on the latency enhancements in TS 37.355", CATT.

[2] R2-2207579, "Correction on the request message of reduced PRS samples in 37.355", ZTE.

[3] R2-2207885, "Correction to the number of samples for PRS measurement in RRC\_INACTIVE", Huawei.

[4] R2-2208077, "Correction of the IE for lower Rx beam sweeping factor than 8 for FR2 capability and request".

[5] R2-2207693, "Positioning during handover and re-establishment", Lenovo.

[6] R2-2208124, "Correction to missing Scheduling Request Configuration for Positioning. Measurement Gap Activation/Deactivation Request MAC CE", Qualcomm Incorporated.

[7] R2-2207580: "Correction on UE capability of reduced PRS samples in RRC\_INACTIVE in 37.355", ZTE.

# 2. Area ID Capability / Common Positioning

|  |  |  |
| --- | --- | --- |
| [**R2-2207101**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2207101.zip) | Corrections on the latency enhancements in TS 37.355 | CATT |

Contribution R2-2207101 [1] proposes the following corrections:

**(1) Area ID Capability:**

**Reason for Change:**

 The capability of *nr-dl-prs-AssistanceDataValidity* from UE indicates the maximum number of cells the target device supports, instead of the maximum number of areas the target device supports, because the *assistanceDataValidityArea* consists of NR Cell-IDs of the TRPs belonging to a particular network area where the associated assistance data are valid.

**Summary of Change:**

 The description of *nr-dl-prs-AssistanceDataValidity* should indicate the maximum number of cells the target device supports, rather than the maximum number of areas the target device supports:

|  |
| --- |
| ***nr-dl-prs-AssistanceDataValidity***This field, if present, indicates that the target device supports validity conditions for pre-configured assistance data and comprises the following subfields:- ***area-validity*** indicates that the target device supports pre-configured assistance data with area validity. The integer number indicates the maximum number of cells the target device supports*.* |

**Consequences if not approved:**

 LMF would configure wrong numbers of valid assistance data to UE because UE report the maximum number of areas in *nr-dl-prs-AssistanceDataValidit*y but LMF would think the maximum number of cells the target device supports.

**(2) Common Positioning:**

**Reason for change:**

 The *locationTimestamp* in *CommonIEsProvideLocationInformation* from UE to LMF may include not only the UTC time, but also the *gnssTime* or *networkTime* since the *scheduledLocationTime* comprises types of time.

**Summary of Change:**

 *gnssTime* and *networkTime* are also included in the *locationTimestamp* in *CommonIEsProvideLocationInformation* from UE to LMF.

CommonIEsProvideLocationInformation ::= SEQUENCE {

 *parts omitted*

 [[

 segmentationInfo-r14 SegmentationInfo-r14 OPTIONAL -- Cond Segmentation

 ]],

 [[

 integrityInfo-r17 IntegrityInfo-r17 OPTIONAL,

 locationTimestamp-v17XY LocationTimestamp-v17XY OPTIONAL

 ]]

}

LocationTimestamp-v17XY::= SEQUENCE {

 gnssTime-r17 SEQUENCE {

 gnss-TOD-msec-r17 INTEGER (0..3599999),

 gnss-TimeID-r17 GNSS-ID

 } OPTIONAL,

 networkTime-r17 CHOICE {

 e-utraTime-r17 SEQUENCE {

 lte-PhysCellId-r17 INTEGER (0..503),

 lte-ArfcnEUTRA-r17 ARFCN-ValueEUTRA,

 lte-CellGlobalId-r17 CellGlobalIdEUTRA-AndUTRA

 OPTIONAL,

 lte-SystemFrameNumber-r17 INTEGER (0..1023)

 },

 nrTime-r17 SEQUENCE {

 nr-PhysCellID-r17 NR-PhysCellID-r16,

 nr-ARFCN-r17 ARFCN-ValueNR-r15,

 nr-CellGlobalID-r17 NCGI-r15 OPTIONAL,

 nr-SFN-r17 INTEGER (0..1023),

 nr-Slot-r17 CHOICE {

 scs15-r17 INTEGER (0..9),

 scs30-r17 INTEGER (0..19),

 scs60-r17 INTEGER (0..39),

 scs120-r17 INTEGER (0..79)

 } OPTIONAL

 },

 ...

 } OPTIONAL,

}

**Consequences if not approved:**

 Some types of *timestamp* won’t be supported in UE which is not aligned with *scheduledlocationtime* in UE.

**Moderator's Comments:**

- On proposed correction (1):
Each *method-ProvideAssistanceData* (with *method* DL-TDOA, DL-AoD, or Multi-RTT) may provide one instance of the assistance data, applicable for the area indicated by *assistanceDataValidityArea.* The *assistanceDataValidityArea* provides the *AreaID-CellList* defining the network area for which the *method-ProvideAssistanceData* is valid. *AreaID-CellList* provides the Cell-IDs defining this particular area. Therefore, the capability must indicate the number of areas (or assistance data instances) a UE can handle/store, and not the maximum number of "cells a target device supports", as proposed in [1]. The number of "cells" (TRPs) per instance are given by the Rel-16 IE *NR-DL-PRS-AssistanceData*, which can be 256 (4 × 64).

Therefore, according to Moderator's understanding, (1) seems not an essential correction.

- On proposed correction (2):
The *scheduledLocation* time indicates that the target device is requested to obtain location measurements or location estimate valid at the *scheduledLocationTime* *T*. *T* can be expressed in UTC, GNSS time, network time, or relative time, dependent on UE capability. However, this does not change the applicable time stamp reported for each individual positioning method.

Therefore, according to Moderator's understanding, (2) seems not an essential correction.

**Proposal 1:** RAN2 to discuss and decide whether the LPP CR in R2-2207101, "Corrections on the latency enhancements in TS 37.355", is an essential correction or not.

# 3. Reduced Number of DL-PRS Processing Samples

## 3.1 Location Request Information

|  |  |  |
| --- | --- | --- |
| [**R2-2207579**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2207579.zip) | Correction on the request message of reduced PRS samples in 37.355 | ZTE, Sanechips |

Contribution R2-2207579 [2] proposes the following correction:

**Reason for Change:**

 In TS 38.133 section 5.6.2.5, 5.6.3.5 and 5.6.4.5 for RSTD measurements, PRS-RSRP measurements and UE Rx-Tx time difference measurements, it specifies that:

|  |
| --- |
|  C:\Users\00255772\AppData\Local\Temp\ksohtml8652\wps1.jpg is the number of PRS RSTD samples, where- C:\Users\00255772\AppData\Local\Temp\ksohtml8652\wps2.jpg= 1 if the UE supports *supportedDL-PRS-ProcessingSamples* [34], and the LMF requests the UE to perform positioning measurements with reduced number of samples, and meets the following conditions:- PRS bandwidth is within the active BWP and - Magnitude of difference between the serving cell’s SS-RSRP and the neighbor cell’s PRS-RSRP is within [6] dB.- C:\Users\00255772\AppData\Local\Temp\ksohtml8652\wps3.jpg= [2] if the UE supports *supportedDL-PRS-ProcessingSamples* [34], and the LMF requests the UE to perform positioning measurements with reduced number of samples, and does not meet the following conditions:- PRS bandwidth is within the active BWP and- Magnitude of difference between the serving cell’s SS-RSRP and the neighbor cell’s PRS-RSRP is within [6] dB.- C:\Users\00255772\AppData\Local\Temp\ksohtml8652\wps4.jpg= 4 otherwise. |

 Based on RAN4’s specification, the actual number of reduced PRS samples (1 or 2) should be decided by UE, not LMF. So LMF can only request, subject to UE capability, that whether a reduced PRS sample is expected, but can not request the explicit number of reduced PRS samples.

**Summary of Change:**

 Change the IE *requestedDL-PRS-ProcessingSamples-r17* and the corresponding field description in *NR-DL-TDOA-RequestLocationInformation*, *NR-DL-AoD-RequestLocationInformation* and *NR-Multi-RTT-RequestLocationInformation* to align with RAN4’s specification.

NR-DL-TDOA-ReportConfig-r16 ::= SEQUENCE {

 maxDL-PRS-RSTD-MeasurementsPerTRPPair-r16 INTEGER (1..4) OPTIONAL, -- Need ON

 timingReportingGranularityFactor-r16 INTEGER (0..5) OPTIONAL, -- Need ON

 ...,

 [[

 measureSameDL-PRS-ResourceWithDifferentRxTEGs-r17

 ENUMERATED { n0, n2, n3, n4, n6, n8, ... }

 OPTIONAL, -- Need ON

 requestedDL-PRS-ProcessingSamples-r17 ENUMERATED { requested} OPTIONAL, -- Need ON

 lowerRxBeamSweepingThan8-FR2-r17 ENUMERATED { requested } OPTIONAL -- Need ON

 ]]

}

|  |
| --- |
| ***requestedDL-PRS-ProcessingSamples***This field, if present, indicates the requested number of DL-PRS processing samples is a reduced number N, where N can be 1 or 2 as defined in TS 38.133 [46]. |

**Consequences if not approved:**

 LMF’s request message in the 37.355 will not align with RAN4’s instruction

**Moderator's Comments:**

- There seems to be a confusion in the current LPP specification and/or the RAN1/4 features.
In the IE *NR-DL-PRS-ProcessingCapability* a UE may indicate for RRC\_CONNECTED state for each supported band:

supportedDL-PRS-ProcessingSamples-r17 ENUMERATED { supported } OPTIONAL,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 27-3-1 | M-sample measurements in RRC\_CONNECTED | The capability to support reporting a measurement based on measuring M=1 or 2 samples (instances) of a DL PRS resource set | If the UE does not provide the capability, the UE is assumed to support M=4 only | per band |

 In the IE *NR-DL-PRS-ProcessingCapability* a UE may indicate for RRC\_INACTIVE state for all bands (per UE):

supportedDL-PRS-ProcessingSamples-RRC-Inactive-r17

 ENUMERATED { m1, m2, ... } OPTIONAL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 14-2 | PRS measurement for reduced sample in RRC\_inactive state | Capability of supporting reduced number of samples (M=1, 2) for PRS measurement in RRC\_inactive state | 27-17 | The reduced number of samples (M=1,2) for PRS measurement in RRC\_inactive state cannot be supported. The UE is assumed to support M=4 only. | Per UE |

- As indicated in the Reason for Change [2], from TS 38.133 it appears that the UE expects a request for "reduced number of samples": "… the LMF requests the UE to perform positioning measurements with reduced number of samples…".
There appears to be no differentiation between M=1 and M=2 reduced number of samples.
Also the capabilities seem not to differntiate between M=1 and M=2.
Therefore, the *requestedDL-PRS-ProcessingSamples-r17* could be an ENUMERATED { requested }.

- From an ASN.1 point of view, this change could be made backwards compatible by changing '*m1*' to '*requested*'. The field would then also be extensible.

**Proposal 2:** The LPP CR in R2-2207579, "Correction on the request message of reduced PRS samples in 37.355", is an essential correction. RAN2 to discuss and decide:
(a) whether to correct the ASN.1 *requestedDL-PRS-ProcessingSamples-r17* backwards compatible:
 requestedDL-PRS-ProcessingSamples-r17 ENUMERATED { ~~m1~~requested, ... }
 or non-backwards compatible (as proposed in R2-2207579):
 requestedDL-PRS-ProcessingSamples-r17 ENUMERATED { ~~m1, ...~~ requested}
(b) discuss whether RAN1 and RAN4 should be consulted on the capability confusion (i.e., "per band" (RAN1), "per UE" (RAN4)).

## 3.2 Capabilities

|  |  |  |
| --- | --- | --- |
| [**R2-2207885**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2207885.zip) | Correction to the number of samples for PRS measurement in RRC\_INACTIVE | Huawei, HiSilicon |

|  |  |  |
| --- | --- | --- |
| **[R2-2207580](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2207580.zip)** | Correction on UE capability of reduced PRS samples in RRC\_INACTIVE in 37.355 | ZTE, Sanechips |

Contribution R2-2207885 [3] proposes the following correction:

**Reason for Change:**

 FG 14-2 (PRS measurement for reduced sample in RRC\_inactive state) in the RAN4 UE feature LS R4-2211189 is captured as ENUMERATED { m1, m2, … } in the current LPP specification.

supportedDL-PRS-ProcessingSamples-RRC-Inactive-r17

 ENUMERATED { m1, m2, ... } OPTIONAL

 However, similar to the RRC\_CONNECTED, this feature is about support of reduced number of samples, instead of reporting support of 1-sample or 2-sample. It means that UE should not select m1 or m2 in the capability reporting, but should support both values where the applicability in the requirement is determined by the side condition as specified by RAN4, similar to the following capability entry for RRC\_CONNECTED.

supportedDL-PRS-ProcessingSamples-r17 ENUMERATED { supported } OPTIONAL,

**Summary of Change:**

 Dummify the existing field of *supportedDL-PRS-ProcessingSamples-RRC-Inactive-r17*, and add a new field the *reducedDL-PRS-ProcessingSamples-RRC-Inactive-r17*, which is the same type as *supportedDL-PRS-ProcessingSamples-r17* and change the corresponding field descriptions.

 The field name *supportedDL-PRS-ProcessingSamples-r17* is also changed to indicate this capability is for RRC\_CONNECTED state.

NR-DL-PRS-ProcessingCapability-r16 ::= SEQUENCE {

 prs-ProcessingCapabilityBandList-r16 SEQUENCE (SIZE (1..nrMaxBands-r16)) OF

 PRS-ProcessingCapabilityPerBand-r16,

 maxSupportedFreqLayers-r16 INTEGER (1..4),

 simulLTE-NR-PRS-r16 ENUMERATED { supported } OPTIONAL,

 ...,

 [[

 dummy

 ENUMERATED { m1, m2, ... } OPTIONAL

 ]],

 [[

 reducedDL-PRS-ProcessingSamples-RRC-Inactive-r17

 ENUMERATED { supported } OPTIONAL

 ]]

}

reducedDL-PRS-ProcessingSamplesRRC-Connected-r17 ENUMERATED { supported } OPTIONAL,

**Consequences if not approved:**

 UE must choose between {m1, m2} for reporting FG 14-2 in the RAN4 UE feature, and this also forces network to deploy the PRS that matches the side condition applied to the reported number.

**Moderator's Comments:**

- As discussed in section 3.1 above, it seems the "reduced number of samples" capability is not intended to differentiate between 1 or 2 sample processing.

- The proposed change in [3] is backwards compatible from ASN.1 point of view.

- An alternative backwards compatible change could be an extension of the ENUMERATED together with a field description which specifies that values '*m1*' and '*m2*' are not applicable:
ENUMERATED { m1, m2, ..., supported-v17xy }

- Contribution [7] addresses the same issue and proposes a non-backwards compatible correction: ENUMERATED { supported }

**Proposal 3:** The LPP CR R2-2207885, "Correction to the number of samples for PRS measurement in RRC\_INACTIVE", is an essential correction. RAN2 to discuss and decide:

(a) whether to dummify the existing field of *supportedDL-PRS-ProcessingSamples-RRC-Inactive-r17*, and add a new field for the *reducedDL-PRS-ProcessingSamples-RRC-Inactive-r17* as proposed in R2-2207885*.*

(b) extend the ENUMERATED and dummify the existing values 'm1' and 'm2':
ENUMERATED { ~~m1~~dummy1, ~~m2~~dummy2, ..., supported-v17xy }

(c) make a non-backwards compatible ASN change as proposed in R2-2207580 [7]:
ENUMERATED { ~~m1, m2, ...~~supported }

# 4. Lower Rx Beam Sweeping Factor than 8 for FR2

|  |  |  |
| --- | --- | --- |
| [**R2-2208077**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2208077.zip) | Correction of the IE for lower Rx beam sweeping factor than 8 for FR2 capability and request | Ericsson |

Contribution R2-2208077 [4] proposes the following correction:

**Reason for Change:**

 The IE name *lowerRxBeamSweepingThan8-FR2-r17* is used both to represent the UE capablity and to send request to use a lower Rx beam sweeping factor than 8 for FR2 according to UE's capability, while the content to the two IEs is different from each other.

**Summary of Change:**

 Rename the IE name *lowerRxBeamSweepingThan8-FR2-r17* to *supported-lowerRxBeamSweepingThan8-FR2-r17* for the capability inside the *NR-DL-PRS-ProcessingCapability-r16* IE to differentiate with the corresponding request IE.

-- ASN1START

PRS-ProcessingCapabilityPerBand-r16 ::= SEQUENCE {

 *Parts omitted*

 OPTIONAL,

 maxNumOfDL-PRS-ResProcessedPerSlot-RRC-Inactive-r17 SEQUENCE {

 scs15-r17 ENUMERATED {n1, n2, n4, n6, n8, n12, n16, n24,

 n32, n48, n64} OPTIONAL,

 scs30-r17 ENUMERATED {n1, n2, n4, n6, n8, n12, n16, n24,

 n32, n48, n64} OPTIONAL,

 scs60-r17 ENUMERATED {n1, n2, n4, n6, n8, n12, n16, n24,

 n32, n48, n64} OPTIONAL,

 scs120-r17 ENUMERATED {n1, n2, n4, n6, n8, n12, n16, n24,

 n32, n48, n64} OPTIONAL,

 ...

 } OPTIONAL,

 supported-lowerRxBeamSweepingThan8-FR2-r17 ENUMERATED { n1, n2, n4, n6 } OPTIONAL

 ]]

}

**Consequences if not approved:**

 Without correction, two IEs representing capablity and request containing different content but using the same IE name will be wrong and confusing.

**Moderator's Comments:**

- Seems "editorial". These are two fields, not IEs.

- After further discussion on the RAN2 reflector:
To align with the naming convention, the proposed field name *supported-lowerRxBeamSweepingThan8-FR2-r17* should be changed to *supportedLowerRxBeamSweepingThan8-FR2-r17*.

**Proposal 4:** The field name *lowerRxBeamSweepingThan8-FR2-r17* in IE *PRS-ProcessingCapabilityPerBand-r16* should be changed to *supportedLowerRxBeamSweepingThan8-FR2-r17*.

# 5. Positioning During Handover

|  |  |  |
| --- | --- | --- |
| [**R2-2207693**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2207693.zip) | Positioning during handover and re-establishment | Lenovo |

According to contribution [5]:

Observation 1: It is not clear in the current specification whether UE continues (or stop) to receive DL PRS during handover/re-establishment.

Observation 2: UE is not required to release LPP message including DL PRS configuration when UE performs handover or re-establishment.

The following Proposals are made in [5]:

Proposal 1: To specify that UE continues to perform measurement for positioning e.g. reception of DL PRS during handover and re-establishment.

Proposal 2: In the case that UE receives DL PRS during handover and re-establishment, monitoring the PDCCH will have higher priority over reception of DL PRS if ra-ResponseWindow or the ra-ContentionResolutionTimer or the msgB-ResponseWindow is running.

**Moderator's Comments:**

- For DL-only positioning, the UE can continue to measure DL-PRS during handover and re-establishment. However, the UE would need to request new measurement gaps in the new cell (assuming sufficient response time is left. Note, the UE can not request a PPW in the new cell since no UE-triggered procedure is defined.). For gap-based measurements, there seems no principle difference compared to LTE OTDOA.

- For RRC\_CONNECTED state, the requirements are defined in TS 38.133, section 9.9:

 "If handover occurs while RSTD measurements are being performed, then the UE shall continue and complete the on-going RSTD measurements. The RSTD measurement period can be longer. The UE shall meet the RSTD measurement accuracy requirements in clause 10.1.23."

 "If handover occurs while PRS-RSRP measurements are being performed then the UE shall complete the ongoing PRS-RSRP measurements session. The PRS-RSRP measurement period can be longer."

 "The UE Rx-Tx time difference measurement period is restarted if HO occurs during the measurement period and after SRS reconfiguration on the target cell is complete."

- For RRC\_INACTIVE, the requirements are defined in TS 38.133, section 5.6:

 "If cell re-selection occurs while RSTD measurements are being performed, then the UE shall continue and complete the on-going RSTD measurements after a new cell is selected. The RSTD measurement period can be longer."

 "The UE shall continue the PRS-RSRP measurement after the cell reselection then the PRS-RSRP measurement period can be longer."

 "If cell reselection occurs during the UE Rx-Tx time difference measurement period then the UE shall restart the UE Rx-Tx time difference measurement after it obtains SRS configuration and Timing Advance command from the new serving cell."

- Therefore, it appears the RAN2 specifications and RAN4 requirements are clear on DL-PRS measurements during handover/cell reselection.

**Proposal 5:** RAN2 to discuss and decide whether the Proposals in R2-2207693, "Positioning during handover and re-establishment", are essential corrections or not.

# 6. SR Configuration for Positioning Measurement Gap Activation/Deactivation Request MAC CE

|  |  |  |
| --- | --- | --- |
| [**R2-2208124**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_119-e/Docs/R2-2208124.zip) | Correction to missing Scheduling Request Configuration for Positioning Measurement Gap Activation/Deactivation Request MAC CE | Qualcomm Incorporated |

Contribution R2-2208124 [6] proposes the following correction:

**Reason for Change:**

 As specified in TS 38.321 clause 5.25, a UE may trigger a Scheduling Request for Positioning Measurement Gap Activation/Deactivation Request MAC CE. However, there is currently no scheduling request configuration defined for Positioning Measurement Gap Activation/Deactivation Request.

**Summary of Change:**

 Addition of a scheduling request configuration applicable for Positioning Measurement Gap Activation/Deactivation Request to IE *MAC-CellGroupConfig.*

MAC-CellGroupConfig ::= SEQUENCE {

*Parts omitted*

 ]],

 [[

 schedulingRequestID-PosMG-Request-r17 SchedulingRequestId OPTIONAL -- Need R

 ]]

}

|  |
| --- |
| ***schedulingRequestID-LBT-SCell***Indicates the scheduling request configuration applicable for consistent uplink LBT recovery on SCell, as specified in TS 38.321 [3]. |
| ***schedulingRequestID-PosMG-Request***Indicates the scheduling request configuration applicable for Positioning Measurement Gap Activation/Deactivation Request, as specified in TS 38.321 [3]. |

**Consequences if not approved:**

 The UE would have no SR configuration for Positioning Measurement Gap Activation/Deactivation Request MAC CE, and therefore, may not be able to request the low-latency measurement gaps for positioning.

**Moderator's Comments:**

- It seems that when TS 38.321 specifies "Trigger a Scheduling Request for XXX MAC CE" there is a corresponding SR ID provided in RRC. However, not for the Measurement Gap Activation/Deactivation Request MAC CE.

- Therefore, it appears the contribution [6] is an essential correction.

- Based on further discussion on the RAN2 reflector, it seems there are two options:

(a) Link the SR configuration for the Measurement Gap Activation/Deactivation Request MAC CE to a common SR configuration. Note, the Measurement Gap Activation/Deactivation Request MAC CE is not associated with any logical channels.

(b) Introduce a dedicated SR configuration, as proposed in [6].

**Proposal 6:** With regards to the SR configuration for Measurement Gap Activation/Deactivation Request MAC CE, RAN2 to discuss and decide whether
(a) link the SR configuration for the Measurement Gap Activation/Deactivation Request MAC CE to a common SR configuration.
(b) introduce a dedicated SR configuration for the Measurement Gap Activation/Deactivation Request MAC CE.

# 7. Summary

**Proposal 1:** RAN2 to discuss and decide whether the LPP CR in R2-2207101, "Corrections on the latency enhancements in TS 37.355", is an essential correction or not.

**Proposal 2:** The LPP CR in R2-2207579, "Correction on the request message of reduced PRS samples in 37.355", is an essential correction. RAN2 to discuss and decide:
(a) whether to correct the ASN.1 *requestedDL-PRS-ProcessingSamples-r17* backwards compatible:
 requestedDL-PRS-ProcessingSamples-r17 ENUMERATED { ~~m1~~requested, ... }
 or non-backwards compatible (as proposed in R2-2207579):
 requestedDL-PRS-ProcessingSamples-r17 ENUMERATED { ~~m1, ...~~ requested}
(b) discuss whether RAN1 and RAN4 should be consulted on the capability confusion (i.e., "per band" (RAN1), "per UE" (RAN4)).

**Proposal 3:** The LPP CR R2-2207885, "Correction to the number of samples for PRS measurement in RRC\_INACTIVE", is an essential correction. RAN2 to discuss and decide:

(a) whether to dummify the existing field of *supportedDL-PRS-ProcessingSamples-RRC-Inactive-r17*, and add a new field for the *reducedDL-PRS-ProcessingSamples-RRC-Inactive-r17* as proposed in R2-2207885*.*

(b) extend the ENUMERATED and dummify the existing values 'm1' and 'm2':
ENUMERATED { ~~m1~~dummy1, ~~m2~~dummy2, ..., supported-v17xy }

(c) make a non-backwards compatible ASN change as proposed in R2-2207580 [7]:
ENUMERATED { ~~m1, m2, ...~~supported }

**Proposal 4:** The field name *lowerRxBeamSweepingThan8-FR2-r17* in IE *PRS-ProcessingCapabilityPerBand-r16* should be changed to *supportedLowerRxBeamSweepingThan8-FR2-r17*.

**Proposal 5:** RAN2 to discuss and decide whether the Proposals in R2-2207693, "Positioning during handover and re-establishment", are essential corrections or not.

**Proposal 6:** With regards to the SR configuration for Measurement Gap Activation/Deactivation Request MAC CE, RAN2 to discuss and decide whether
(a) link the SR configuration for the Measurement Gap Activation/Deactivation Request MAC CE to a common SR configuration.
(b) introduce a dedicated SR configuration for the Measurement Gap Activation/Deactivation Request MAC CE.