**3GPP TSG-RAN WG2 Meeting #125R2-24xxxxx**

**Athens, Greece, 26th Feb – 1st March 2024**

Agenda Item: 7.2.1

Source: CATT

Title: [Post125][408][POS] 37.355 Rel-18 positioning CR (CATT)

Document for: Discussion, Decision

# Introduction

This is to kick off the email discussion.

* [Post125][408][POS] 37.355 Rel-18 positioning CR (CATT)

Scope: Update and check the CR in R2-2401082.

Intended outcome: Agreed CR in R2-2401631

Deadline: Short (for RP)

# 2 Discussion

## 2.1 Integrity

Please provide your comments on the Integrity changes

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| Company Name | Comments |
| QC | ***nr-IntegrityBeamInfoBounds***  This field provides an overbounding model that bounds the spatial direction information of the DL-PRS Resources. If this field is absent, the *nr-IntegrityBeamInfoBounds* for this instance of the *DL-PRS-BeamInfoElement* is the same as the *nr-IntegrityBeamInfoBounds* of the previous instance of the *DL-PRS-BeamInfoElement* in *DL-PRS-BeamInfoResourceSet*. If integrity bounds are provided, this field shall be present at least in the first instance of the *DL-PRS-BeamInfoResourceSet*. It comprises the following sub-fields:  - ***meanAzimuth***: This field specifies the mean azimuth error bound which is the mean value for an overbounding model that bounds the azimuth angle error of the boresight direction in which the DL-PRS Resources associated with this DL-PRS Resource ID in the DL-PRS Resource Set are transmitted.  The bound is *meanAzimuth* + K \* *stdDevAzimuth* and shall be so that the probability of it to be exceeded shall be lower than IRallocation for *ir-Minimum* < IRallocation < *ir-Maximum*, where K = normInv(IRallocation / 2) and *ir-Minimum*, *ir-Maximum* as provided in IE *NR-IntegrityServiceParameters*.  This IRallocation is a fraction of the Target Integrity Risk that represents the integrity risk budget available.  Scale factor 0.1 degrees; range 0-25.5 degrees.  - ***stdDevAzimuth***: This field specifies the standard deviation azimuth error bound which is the standard deviation for an overbounding model that bounds the Azimuth error of the boresight direction in which the DL-PRS Resources associated with this DL-PRS Resource ID in the DL-PRS Resource Set are transmitted.  Scale factor 0.1 degrees; range 0-25.5 degrees.  - ***meanElevation***: This field specifies the Mean Elevation Error bound which is the mean value for an overbounding model that bounds the elevation angle error of the boresight direction in which the DL-PRS Resources associated with this DL-PRS Resource ID in the DL-PRS Resource Set are transmitted. The bound is *meanElevation* + K \* *stdDevElevation* and shall be so that the probability of it to be exceeded shall be lower than IRallocation for *ir-Minimum* < IRallocation < *ir-Maximum*, where K = normInv(IRallocation / 2) and *ir-Minimum*, *ir-Maximum* as provided in IE *NR-IntegrityServiceParameters*. This IRallocation is a fraction of the Target Integrity Risk that represents the integrity risk budget available.  Scale factor 0.1 degrees; range 0-25.5 degrees.  - ***stdDevElevation***: This field specifies the standard deviation elevation error bound which is the standard deviation for an overbounding model that bounds the Elevation error of the boresight direction in which the DL-PRS Resources associated with this DL-PRS Resource ID in the DL-PRS Resource Set are transmitted.  Scale factor 0.1 degrees; range 0-25.5 degrees.  🡪 There are some "spaces" at the beginning of some lines instead of "tabs".  ***nr-IntegrityRTD-InfoBounds***  This field specifies an overbounding model that bounds the inter-TRP synchronization error between reference TRP and this TRP. This field comprises the following sub-fields:  - ***resolution***: The resolution is used in the *meanRTD* and *stdDevRTD*. The enumerated values mdot1, m1, m10, m30 correspond to 0.1, 1, 10, 30 metres, respectively.  - ***meanRTD***: This field specifies the mean inter-TRP synchronization error bound which is the mean value for an overbounding model that bounds the inter-TRP synchronization error. The bound is *meanRTD* + K \* *stdDevRTD* and shall be so that the probability of it to be exceeded shall be lower than IRallocation for *ir-Minimum* < IRallocation < *ir-Maximum*, where K = normInv(IRallocation / 2) and *ir-Minimum*, *ir-Maximum* as provided in IE *NR-IntegrityServiceParameters*. This IRallocation is a fraction of the Target Integrity Risk that represents the integrity risk budget available. The value of *meanRTD* is provided in units of metres. Default value is 0meter.  - ***stdDevRTD:*** This field specifies the standard deviation inter-TRP synchronization error bound which is the standard deviation for an overbounding model that bounds the inter-TRP synchronization error. The value field used in the *stdDevRTD* is provided in units of metres. The resolution is used in the value field of *stdDevRTD*. The enumerated values mdot1, m1, m10, m30 correspond to 0.1, 1, 10, 30 metres, respectively.  🡪 What does this mean? The *meanRTD* is mandatory – no default interpretation is needed.  🡪 This is confusing, since the units are in the *resolution* field.  🡪 This is confusing/wrong, since the resolution is provided in the *resolution* field (not *stdDevRTD* field).  ***nr-IntegrityBeamPowerBounds***  This field specifies the mean and the Standard Deviation beam power error bound for an overbounding model that bounds the beam power error. If this field is absent, the *nr-IntegrityBeamInfoBounds* for this instance of the *beamPowerList* is the same as *nr-IntegrityBeamInfoBounds* of the previous instance in the *beamPowerList*. If integrity bounds are provided, this field shall be included at least in the first instance of the *beamPowerList*.  - ***meanBeamPower***: This field specifies the Mean Beam Power Error bound which is the mean value for an overbounding model that bounds the beam power error of the DL-PRS Resources.  The bound is *meanBeamPower* + K \* *stdDevBeamPower* and shall be so that the probability of it to be exceeded shall be lower than IRallocation for *ir-Minimum* < IRallocation < *ir-Maximum*, where K = normInv(IRallocation / 2) and *ir-Minimum*, *irMaximum* as provided in IE *NR-IntegrityServiceParameters*.This IRallocation is a fraction of the Target Integrity Risk that represents the integrity risk budget available.  Scale factor 0.1 dB; range 0-12.7 dB.  - ***stdDevBeamPower***:This field specifies the Standard Deviation Beam Power Error bound which is the standard deviation for an overbounding model that bounds the beam power error of the DL-PRS Resources.  Scale factor 0.1 degrees; range 0-12.7 dB.  🡪 There are some "spaces" instead of "tabs" at the beginning of some lines.  🡪 A "Space" should be added before "This"  NR-IntegrityLocationBounds-r18 ::= SEQUENCE {  units-r18 ENUMERATED {mm, cm, m, ...},  meanLocationErrorBound-r18 SEQUENCE {  horizontal-r18 INTEGER (0..255),  vertical-r18 INTEGER (0..255)  },  stdDevLocationErrorBound-r18 SEQUENCE {  horizontal-r18 INTEGER (0..255),  vertical-r18 INTEGER (0..255)  },  ...  }  🡪 Empty paragraph can be deleted (see final view)  - *nr-****IntegrityTRP-LocationBounds***: This field provides the mean and standard deviation TRP location error bound which is the mean value and the standard deviation of an overbounding model that bounds the TRP location error. This field comprises the following sub-fields:  - ***units***: This field specifies the units (scale factor) for the meanLocationErrorBound and stdDevLocationErrorBound. Enumerated values mm, cm, and m correspond to 10-3 metre, 10-2 metre, and 1 metre, respectively.  - ***meanLocationErrorBound***: This field specifies the mean TRP Location Error bound in horizontal and vertical direction, which are the mean values for a set of two overbounding models that bound the TRP location error in horizontal and vertical directions.  Scale factor is 1 with units provided in units field.  - ***stdDevLocationErrorBound***: This field specifies the standard deviation TRP Location Error bound in horizontal and vertical direction, which are the standard deviation values for a set of two overbounding models that bound the TRP location error in horizontal and vertical directions.  Scale factor is 1 with units provided in units field.  🡪 There are some "spaces" instead of "tabs" at the beginning of some lines.  🡪 This should be in Italic Font.  🡪 This should be superscript.  ***nr-IntegrityDL-PRS-ResourceSetARP-LocationBound***: This field provides the mean and the standard deviation ARP of the location error bound of the DL-PRS Resource Set of an overbounding model that bounds the antenna reference point location error of the DL-PRS Resource Set.  🡪 One space after "DL-PRS Resource Set " can be deleted.  ***nr-IntegrityDL-PRS-ResourceARP-LocationBounds***: This field provides the mean and the standard deviation ARP of the location error bound of the DL-PRS Resources of an overbounding model that bounds the antenna reference point location error of the DL-PRS Resource.  🡪 Last paragraph mark can be deleted (results in an empty paragraph in final view)  [[  locationCoordinateTypes-r18 LocationCoordinateTypes OPTIONAL,  symbolTimeStampSupport-r18 ENUMERATED { supported } OPTIONAL,  periodicAssistanceData-r18 BIT STRING { solicited (0),  unsolicited (1)} (SIZE (1..8)) OPTIONAL,  nr-IntegrityAssistanceSupport-r18 BIT STRING {  serviceParametersSup-r18 (0),  serviceAlertSup-r18 (1),  riskParametersSup-r18 (2),  integrityParaTRP-LocSup-r18 (3),  integrityParaBeamInfoSup-r18 (4),  integrityParaRTD-InfoSup-r18 (5)  } (SIZE (1..8)) OPTIONAL  ]]  }  🡪 Two empty paragraphs before "]]" can be deleted.  [Rapp]: Thanks and revised CR accordingly. |
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## 2.2 Carrier Phase Positioning

Please provide your comments on CPP changes.

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| Company Name | Comments |
| HW | 1/  LocationInformationType ::= ENUMERATED {  locationEstimateRequired,  locationMeasurementsRequired,  locationEstimatePreferred,  locationMeasurementsPreferred,  ...,  locationEstimateAndMeasurementsRequired-v1800  }  Should be v18xy  [Rapp]: It should be –r18 since *locationEstimateAndMeasurementsRequired* is a new field. |
| QC | *– NR-DL-PRS-MeasurementTimeWindowsConfig* The IE *NR-DL-PRS-MeasurementTimeWindowsConfig* provides a set of indicated time window(s) which is configured for the target device to perform measurements on indicated DL-PRS Resource Set(s) occurring within indicated time window(s) for DL-TDOA, Multi-RTT and DL-AoD.  🡪 Agreement says:  Agreement:  Replace the IE description for NR-DL-PRS-MeasurementTimeWindowsConfig with “The IE NR-DL-PRS-MeasurementTimeWindowsConfig provides a set of indicated time window(s) which is configured for the target device to perform measurements on indicated DL PRS resource set(s) occurring within indicated time window(s).”  Better stick to the agreement for now, although, "target device" in the agreement above seems not fully correct. (a) it can not be a SUPL SET (since PRUs can not be supported in SUPL), and (b) it is not only a "target UE" (as defined in 23.273), but also a PRU (which is a "|UE" but not a "target UE"). "Target device" could simply be "UE".  ***nr-SelectedDL-PRS-IndexListPerFreq***  This field provides the list of addressed TRPs of the selected frequency layer. If this field is absent, all DL-PRS Resources of all TRPs of the indicated frequency layer are addressed. The number of the indicated DL PRS resource set(s) for all the selected TRPs in this list are the same.  🡪 "DL PRS resource set(s)" should be "DL-PRS Resource Set(s)" to be consistent within the spec.  🡪 "are the same" should be "is the same".  -- ASN1START  NR-PeriodicAssistData-r18 ::= SEQUENCE {  nr-PeriodicPRU-DL-Info-r18 NR-PeriodicControlParam-r18 OPTIONAL, -- Need ON  ...  }  -- ASN1STOP  🡪 Delete some tabs to avoid a line break before "Need ON"  [[  nr-RSTD-BasedOnAggregatedResources-r18 ENUMERATED {true} OPTIONAL,  nr-AggregatedDL-PRS-ResourceSetID-List-r18 SEQUENCE (SIZE (2.. 3)) OF  NR-AggregatedDL-PRS-ResourceSetID-Element-r18 OPTIONAL,  nr-RSCPD-r18 INTEGER (0..61565) OPTIONAL,  nr-PhaseQuality-r18 NR-PhaseQuality-r18 OPTIONAL,  nr-RSCPD-AddMeasurementSamples-r18 SEQUENCE (SIZE (1..nrNumOfSamples-1-r18 )) OF  NR-RSCPD-AdditionalMeasurementSamplesElement-r18 OPTIONAL,  nr-ReportDL-PRS-MeasBasedOnSingleOrMultiHopRx-r18  ENUMERATED { singleHop, multipleHop } OPTIONAL  ]]  🡪 Some tabs need to be added/deleted to avoid a line break before OPTIONAL.  nr-RSCPD-AdditionalMeasurementsAddSamples-r18 SEQUENCE (SIZE (1..nrNumOfSamples-1-r18 )) OF  NR-RSCPD-AdditionalMeasurementSamplesElement-r18 OPTIONAL,  🡪 Some tabs need to be added/deleted to avoid a line break before OPTIONAL.  NR-RSCPD-AdditionalMeasurementSamplesElement-r18 ::= SEQUENCE {  nr-RSCPD-r18 INTEGER (0..61565) OPTIONAL,  nr-PhaseQuality-r18 NR-PhaseQuality-r18 OPTIONAL,  nr-TimeStamp-r18 NR-TimeStamp-r16 OPTIONAL,  ...  }  🡪 A tab schould be added before INTEGER (check final view).  NR-RSCP-AdditionalMeasurements-r18 ::= SEQUENCE {  nr-RSCP-r18 INTEGER (0..3599) OPTIONAL,  nr-PhaseQuality-r18 NR-PhaseQuality-r18 OPTIONAL,  nr-TimeStamp-r18 NR-TimeStamp-r16 OPTIONAL,  ...  }  🡪 Some tabbs need to be added/deleted before INTEGER (check final view).  [RAPP]: Revised. |
| vivo | The IE *NR-DL-PRS-MeasurementTimeWindowsConfig* provides a set of indicated time window(s) which is configured for the target device to perform measurements on indicated DL-PRS Resource Set(s) occurring within indicated time window(s) for DL-TDOA, Multi-RTT and DL-AoD.  Remove all the postionging methods to align with the agreement.  [RAPP]: Revised. |
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## 2.3 Bandwidth Aggregation

Please provide your comments on the bandwidth aggregation changes.

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| Company Name | Comments |
| HW | 1/ format is not right, need more tabs  NR-AggregatedDL-PRS-ResourceSetID-Element-r18 ::= SEQUENCE {  dl-PRS-ID-r18 INTEGER (0..255),  nr-DL-PRS-ResourceSetID-r18 NR-DL-PRS-ResourceSetID-r16,    ...  }  [RAPP]: Revised. |
| QC | -- ASN1START  NR-AggregatedDL-PRS-ResourceSetID-Element-r18 ::= SEQUENCE {  dl-PRS-ID-r18 INTEGER (0..255),  nr-DL-PRS-ResourceSetID-r18 NR-DL-PRS-ResourceSetID-r16,    ...  }  -- ASN1STOP  🡪 Paragraph after NR-DL-PRS-ResourceSetID-r16 should be deleted (empty paragraph in final view)  nr-RelativeTimeDifference-r16 CHOICE {  k0-r16 INTEGER(0..16351),  k1-r16 INTEGER(0..8176),  k2-r16 INTEGER(0..4088),  k3-r16 INTEGER(0..2044),  k4-r16 INTEGER(0..1022),  k5-r16 INTEGER(0..511),  ...,  kMinus1-r18 INTEGER(0..32701),  kMinus2-r18 INTEGER(0..65401),  kMinus3-r18 INTEGER(0..130802),  kMinus4-r18 INTEGER(0..261602),  kMinus5-r18 INTEGER(0..523202),  kMinus6-r18 INTEGER(0..1046402)  },  🡪 Empty paragraph after (0..1046402) can be deleted.  NR-AggregatedDL-PRS-ResourceSetID-Element-r18 ::= SEQUENCE {  dl-PRS-ID-r18 INTEGER (0..255),  nr-DL-PRS-ResourceSetID-r18 NR-DL-PRS-ResourceSetID-r16,    ...  }  🡪 Empty paragraph after NR-DL-PRS-ResourceSetID-r16 can be deleted. Tab can be added before NR-DL-PRS-ResourceSetID-r16  NR-DL-PRS-AggregationElement-r18 ::= SEQUENCE {  nr-DL-PRS-FrequencyLayerIndex-r18 INTEGER (0..nrMaxFreqLayers-1-r16),  nr-DL-PRS-TRP-Index-r18 INTEGER (0..nrMaxTRPsPerFreq-1-r16),  nr-DL-PRS-ResourceSetIndex-r18 INTEGER (0..nrMaxSetsPerTrpPerFreqLayer-1-r16)  }  🡪 Tab has been deleted, but seems needed (need to check in final view)  ***nr-DL-PRS-TRP-Index***: This field indicates the TRP/DL-PRS ID used for bandwidth aggregation *belonging to the nr-DL-PRS-FrequencyLayerIndex*. Value 0 corresponds to the first TRP/DL-PRS ID provided in *nr-DL-PRS-AssistanceDataPerFreq*, value 1 to the second TRP/DL-PRS ID in *nr-DL-PRS-AssistanceDataPerFreq*, and so on.  🡪 One space before "belonging" can be deleted.  ***nr-DL-PRS-ResourceSetIndex***: This field indicates the DL-PRS Resource Set ID used for bandwidth aggregation belonging to *nr-DL-PRS-TRP-Index-*. Value 0 corresponds to the first DL-PRS Resource Set provided in *nr-DL-PRS-ResourceSetList*, value 1 to the second DL-PRS Resource Set in *nr-DL-PRS-ResourceSetList.*  🡪 There is a "minus" after *nr-DL-PRS-TRP-Index* (final view)  nr-RSTD-r16 CHOICE {  k0-r16 INTEGER (0..1970049),  k1-r16 INTEGER (0..985025),  k2-r16 INTEGER (0..492513),  k3-r16 INTEGER (0..246257),  k4-r16 INTEGER (0..123129),  k5-r16 INTEGER (0..61565),  ...,  kMinus1-r18 INTEGER (0..3940097),  kMinus2-r18 INTEGER (0..7880193),  kMinus3-r18 INTEGER (0..15760386),  kMinus4-r18 INTEGER (0..31520770),  kMinus5-r18 INTEGER (0..63041537),  kMinus6-r18 INTEGER (0..126083074)  },  🡪 Empty line before "}" can be deleted.  nr-RSTD-ResultDiff-r16 CHOICE {  k0-r16 INTEGER (0..8191),  k1-r16 INTEGER (0..4095),  k2-r16 INTEGER (0..2047),  k3-r16 INTEGER (0..1023),  k4-r16 INTEGER (0..511),  k5-r16 INTEGER (0..255),  ...,  kMinus1-r18 INTEGER (0..16382),  kMinus2-r18 INTEGER (0..32764),  kMinus3-r18 INTEGER (0..65530),  kMinus4-r18 INTEGER (0..131058),  kMinus5-r18 INTEGER (0..262114),  kMinus6-r18 INTEGER (0..524226)  },  🡪 Empty line before "}" can be deleted.  ***nr-AggregatedDL-PRS-ResourceSetID-List***  This field provides the DL-PRS Resource Set IDs which are used for the aggregated RSTD, RSRP, or RSRPP measurement results. This field is optionally present if the field *nr-RSTD-BasedOnAggregatedResources* is present; otherwise, it is not present. If the field is present, the field *nr-DL-PRS-ResourceID* and *nr-DL-PRS-ResourceSetID* should not be included, and the *dl-PRS-ID* in IE *NR-DL-TDOA-MeasElement* is not meaningful.  ***nr-AggregatedDL-PRS-ResourceSetID-List***  This field provides the DL-PRS Resource Set IDs which are used for the aggregated UE Rx-Tx time difference ,RSRP, or RSRPP measurement results. This field is optionally present if the field *nr-UE-RxTxTimeDiffBasedOnAggregatedResources* is present; otherwise, it is not present. If the field is present, the field *nr-DL-PRS-ResourceID* and *nr-DL-PRS-ResourceSetID* should not be included, and the *dl-PRS-ID* in IE *NR-Multi-RTT-MeasElement* is not meaningful.  🡪 This should be translated into (actionable) specification text. E.g.,  "…and the *dl-PRS-ID* in IE *NR-DL-TDOA-MeasElement* should be ignored by a receiver."  ***nr-RequestedMeasurements***  This field specifies the NR DL-TDOA measurements requested. This is represented by a bit string, with a one‑value at the bit position means the particular measurement is requested; a zero‑value means not requested. The jointMeasurementsReq means that the target device is requested to perform joint measurement across aggregated PFLs for DL-TDOA.  🡪 This should be in Italic Font  🡪 This can be deleted, since the wholw IE is for DL-TDOA.  ***timingReportingGranularityFactor, timingReportingGranularityFactorExt***  This field specifies the recommended reporting granularity for the DL RSTD measurements. Value (0..5) corresponds to (*k0*..*k5*) and value (6..11) corresponds to (kMinus1..kMinus6) used for *nr-RSTD* and *nr-RSTD-ResultDiff* in *NR-DL-TDOA-MeasElement*. The UE may select a different granularity value for *nr-RSTD* and *nr-RSTD-ResultDiff*. The *timingReportingGranularityFactorExt* should not be included by the location server and shall be ignored by the target device if *timingReportingGranularityFactor* is included.The *timingReportingGranularityFactor* should not be included by the location server and shall be ignored by the target device if *timingReportingGranularityFactorExt* is included.  🡪 This is unclear. I.e., what does "kMinus1" mean? Is this "k = -1" or "k-1"? Using proper values for the INTEGER(-6..-1) would avoid this confusion.  nr-UE-RxTxTimeDiff-r16 CHOICE {  k0-r16 INTEGER (0..1970049),  k1-r16 INTEGER (0..985025),  k2-r16 INTEGER (0..492513),  k3-r16 INTEGER (0..246257),  k4-r16 INTEGER (0..123129),  k5-r16 INTEGER (0..61565),  ...,  kMinus1-r18 INTEGER (0..3940097),  kMinus2-r18 INTEGER (0..7880193),  kMinus3-r18 INTEGER (0..15760386),  kMinus4-r18 INTEGER (0..31520770),  kMinus5-r18 INTEGER (0..63041538),  kMinus6-r18 INTEGER (0..126083074)  },  🡪 Empty line before "}" can be deleted.  nr-UE-RxTxTimeDiffAdditional-r16 CHOICE {  k0-r16 INTEGER (0..8191),  k1-r16 INTEGER (0..4095),  k2-r16 INTEGER (0..2047),  k3-r16 INTEGER (0..1023),  k4-r16 INTEGER (0..511),  k5-r16 INTEGER (0..255),  ...,  kMinus1-r18 INTEGER (0..16382),  kMinus2-r18 INTEGER (0..32764),  kMinus3-r18 INTEGER (0..65530),  kMinus4-r18 INTEGER (0..131058),  kMinus5-r18 INTEGER (0..262114),  kMinus6-r18 INTEGER (0..524226)  },  🡪 Two empty lines before "}" can be deleted.  [RAPP]: Revised. |
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## 2.4 REDCAP

Please provide your comments on the RedCap changes

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| Company Name | Comments |
|  | nr-DL-PRS-RxHoppingRequest-r18 SEQUENCE {  nr-DL-PRS-RxHoppingTotalBandwidth-r18 CHOICE {  fr1 ENUMERATED {mhz40, mhz50, mhz80, mhz100},  fr2 ENUMERATED {mhz100, mhz200, mhz400}  } OPTIONAL -- Need ON  } OPTIONAL, -- Need ON  🡪 Some Tabs can be added before OPTIONAL.  [[  nr-DL-PRS-RxHoppingRequest-r18 SEQUENCE { nr-DL-PRS-RxHoppingTotalBandwidth-r18 CHOICE {  fr1 ENUMERATED {mhz40, mhz50, mhz80, mhz100},  fr2 ENUMERATED {mhz100, mhz200, mhz400}  } OPTIONAL -- Need ON  } OPTIONAL, -- Need ON  timingReportingGranularityFactorExt-r18 INTEGER (6..11) OPTIONAL, -- Need ON  nr-DL-PRS-JointMeasurementRequestedPFL-List-r18 SEQUENCE (SIZE (2..3)) OF  INTEGER (0..nrMaxFreqLayers-1-r16) OPTIONAL, -- Need ON  nr-DL-PRS-RSCP-Request-r18 ENUMERATED { requested } OPTIONAL, -- Need ON  nr-DL-PRS-MeasurementTimeWindowsConfig-r18  NR-DL-PRS-MeasurementTimeWindowsConfig-r18 OPTIONAL -- Need ON  ]]  🡪 Some tabs need to be added/deleted; a new line is needed before *nr-DL-PRS-RxHoppingTotalBandwidth-r18*; the last empty line can be deleted (check in final view).  [RAPP]: Revised. |
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## 2.5 LPHAP

Please provide your comments on the LPHAP changes

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| Company Name | Comments |
| QC | [[  posSRS-Preconfigured-RRC-InactiveInitialUL-BWP-r18 ENUMERATED {supported} OPTIONAL,  posSRS-Preconfigured-RRC-InactiveOutsideInitialUL-BWP-r18 ENUMERATED {supported} OPTIONAL  ]]  }  🡪 Some tabs have to be deleted/added to avoid a line break before OPTIONAL  [RAPP]: Revised. |
| vivo | [[  posSRS-Preconfigured-RRC-InactiveInitialUL-BWP-r18 ENUMERATED {supported} OPTIONAL,  posSRS-Preconfigured-RRC-InactiveOutsideInitialUL-BWP-r18 ENUMERATED {supported} OPTIONAL  ]]  In the RAN1 feature list, the UE capability of supporting SRS in multiple cells should be known by LMF. However, RAN1 does not differentiate non-preconfig and preconfig.  We have concerns to only indicate the capability of preconfig to LMF.  [RAPP]: Only the capabilities in R2-2401082 were captured here. Others please refer to the discussion [413] 37.355 Rel-18 positioning capability CR (Xiaomi). Apologies to bring confusion to readers. |
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## 2.6 Any other comments

Please provide any other comments below.

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| Company Name | Comments |
| vivo | ***referencePointLongitude***  This field specifies the longitude for the reference point, expressed in the range -180°, +180°, coded as a number between -225 and 225-1, coded in 2's complement binary on 26 bits. The relation between the longitude X in the range [-180°, 180°] and the coded number N is:    The reference point defines the northwest corner of the grid point array.  It’s incorrect to revise the ‘)’ to ‘]’. For the longitude to the reference point, -180° shares the same position with 180°. Besides, the range of N is -225 to 225-1, if X can be 180°, then the range of N should be -225 to 225  [Rapp]: The comment is valid. X in the range should be [-180°, 180°). |
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# Conclusion

In the previous sections we made the following observations:

Based on the discussion in the previous sections we propose the following:

# References