**3GPP TSG-RAN WG2 Meeting #131bis *R2-250xxxx***

**Prague, 13th –17th October, 2025**

Agenda Item: 8.5.2

Source: Xiaomi

Title: OD-SSB and CSI-RS measurements

Document for: Discussion and Decision

# 1 Introduction

This is to kick off the following post meeting email discussion:

* [Post131bis][301][NES] OD-SSB CSI-RS measurements (Xiaomi)

 Scope: Discuss procedural text for OD-SSB and CSI-RS measurements and for SMTC setup for SSB adaptation/OD-SSB

 Intended outcome: email discussion summary

 Deadline: long

# 2 SMTC for OD-SSB

During last meeting, SMTC setup for OD-SSB was not discussed.

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| RRC issue 8: [X200/A103/N001/J001] Procedural text of OD-SSB SMTC setup [R2-2507115](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2507115%20-%20Control%20plane%20open%20issues%20on%20Rel-19%20NES.docx) Control plane open issues on Rel-19 NES (including RIL E204/E205/A103/X200/O005) Apple discussion Rel-19 Netw\_Energy\_NR\_enh-CoreProposal 4 (A103/X200): RAN2 adopt the following spec changes to simplify and align the procedure text of handling SMTC for OD-SSB and SSB adaptation:1. In ASN.1, modify SSB-MTCxList-r19 and SSB-MTC-SSBAdapt-r19 to use same IE type (e.g. SSB-MTCx-r19) which explicitly includes the mapped SSB periodicity.
2. In Section 5.5.2.10, modify the procedure of OD-SSB and SSB adaptation with aligned wording that the SMTC with same mapped SSB periodicity is selected.
* Continue the discussion after progress on the other higher level principles

[R2-2506936](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2506936%20%5BH126%5D%5BL201%5D%5BX200%5D%5BA103%5D%5BH128%5D%5BH129%5D%5BX201%5D%5BH131%5D%5BH130%5D%5BH127%5D%20Control%20plane%20issues.docx) [H126][L201][X200][A103][H128][H129][X201][H131][H130][H127] Control plane issues Huawei, HiSilicon discussion Rel-19 Netw\_Energy\_NR\_enh-CoreProposal 4: On [X200][A103]: Extend the maximum number of OD-SSB specific SMTCs from 6 to 12, no change to the procedure text is needed. |

Since this issue is quite related to the text procedure for SMTC setup, rapporteur would like to firstly check companies views on this issue. The existing maximum OD-SSB specific SMTC is 6, based on the assumption that SMTC is only adapted according to OD-SSB periodicity and there are at most 6 candidate OD-SSB periodicity values. Actually, during ASN.1 review, Nokia raised a RIL N002 to remove SFN offset and half frame index within OD-SSB config, the status of which is PropAgree and already captured in the spec. In this case, SMTC window should not be adapted only based on SSB periodicity, e.g., same SSB periodicity but different SFN offset or different half frame index should be associated with different SMTC. Please note for SSB adaptation, the SMTC is adapted based on *Adapt-SSB-BurstPeriodicity-r19* which also includes SSB periodicity, SFN offset and half frame index. Considering there are at most 2 candidate values for *Adapt-SSB-BurstPeriodicity-r19*, the maximum number of adapted SMTC is 2.

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| – *OD-SSB-Config*The IE *OD-SSB-Config* is used to configure the OD-SSB activated by *od-ssb-ActivationStatus* or by a MAC CE see TS 38.321 [3], clause 6.1.3.88.***OD-SSB-Config* information element**-- ASN1START-- TAG-OD-SSB-CONFIG-STARTOD-SSB-Config-r19 ::= SEQUENCE { od-ssb-ConfigId-r19 OD-SSB-ConfigId-r19, od-ssb-SFN-Offset-r19 INTEGER (0..15) OPTIONAL, -- Need R od-ssb-halfFrameIndex-r19 ENUMERATED {zero, one} OPTIONAL, -- Need R od-ssb-ActivationStatus-r19 ENUMERATED {activated} OPTIONAL, -- Need S od-ssb-Periodicity-r19 ENUMERATED { ms5, ms10, ms20, ms40, ms80, ms160, spare2, spare1 }, od-ssb-PositionsInBurst-r19 CHOICE { shortBitmap BIT STRING (SIZE (4)), mediumBitmap BIT STRING (SIZE (8)), longBitmap BIT STRING (SIZE (64)) } OPTIONAL, -- Cond ODssbAOssb od-ssb-NrofBursts-r19 ENUMERATED {n5, n10, n15, n20, n25, n30, n40, n50, n75, n100, n150, n200} OPTIONAL, -- Cond MACCE ...}OD-SSB-ConfigId-r19 ::= INTEGER (0.. maxNrofOD-SSB-1-r19)-- TAG-OD-SSB-CONFIG-STOP |

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| – *CellGroupConfig*The *CellGroupConfig* IE is used to configure a master cell group (MCG) or secondary cell group (SCG). A cell group comprises of one MAC entity, a set of logical channels with associated RLC entities and of a primary cell (SpCell) and one or more secondary cells (SCells). For an NCR-MT, the *CellGroupConfig* IE is also used to provide the configuration of side control information for the NCR-Fwd access link.*CellGroupConfig* information element-- ASN1START-- TAG-CELLGROUPCONFIG-START-- Configuration of one Cell-Group:CellGroupConfig ::= SEQUENCE { cellGroupId CellGroupId, rlc-BearerToAddModList SEQUENCE (SIZE(1..maxLC-ID)) OF RLC-BearerConfig OPTIONAL, -- Need N<text omitted>Adapt-SSB-Config-r19 ::= SEQUENCE { ssb-BurstPeriodicityList-r19 SEQUENCE (SIZE (1..2)) OF Adapt-SSB-BurstPeriodicity-r19 OPTIONAL, -- Need N posInDCI-ssbPeriodicityIndicationForScell-r19 INTEGER (1..maxDCI-2-9-Size-r18) OPTIONAL -- Need N}Adapt-SSB-BurstPeriodicity-r19 ::= SEQUENCE { ssb-Periodicity-r19 ENUMERATED { ms5, ms10, ms20, ms40, ms80, ms160, spare2, spare1 } OPTIONAL, -- Need S ssb-Offset-r19 INTEGER (0..15) OPTIONAL, -- Need N ssb-halfFrameIndex-r19 ENUMERATED { zero, one } OPTIONAL -- Need N}*– MeasObjectNR*The IE *MeasObjectNR* specifies information applicable for SS/PBCH block(s) intra/inter-frequency measurements and/or CSI-RS intra/inter-frequency measurements.***MeasObjectNR* information element**-- ASN1START-- TAG-MEASOBJECTNR-STARTMeasObjectNR ::= SEQUENCE { ssbFrequency ARFCN-ValueNR OPTIONAL, -- Cond SSBorAssociatedSSB ssbSubcarrierSpacing SubcarrierSpacing OPTIONAL, -- Cond SSBorAssociatedSSB smtc1 SSB-MTC OPTIONAL, -- Cond SSBorAssociatedSSB smtc2 SSB-MTC2 OPTIONAL, -- Cond IntraFreqConnected refFreqCSI-RS ARFCN-ValueNR OPTIONAL, -- Cond CSI-RS referenceSignalConfig ReferenceSignalConfig, absThreshSS-BlocksConsolidation ThresholdNR OPTIONAL, -- Need R absThreshCSI-RS-Consolidation ThresholdNR OPTIONAL, -- Need R nrofSS-BlocksToAverage INTEGER (2..maxNrofSS-BlocksToAverage) OPTIONAL, -- Need R nrofCSI-RS-ResourcesToAverage INTEGER (2..maxNrofCSI-RS-ResourcesToAverage) OPTIONAL, -- Need R quantityConfigIndex INTEGER (1..maxNrofQuantityConfig), offsetMO Q-OffsetRangeList, cellsToRemoveList PCI-List OPTIONAL, -- Need N cellsToAddModList CellsToAddModList OPTIONAL, -- Need N excludedCellsToRemoveList PCI-RangeIndexList OPTIONAL, -- Need N excludedCellsToAddModList SEQUENCE (SIZE (1..maxNrofPCI-Ranges)) OF PCI-RangeElement OPTIONAL, -- Need N allowedCellsToRemoveList PCI-RangeIndexList OPTIONAL, -- Need N allowedCellsToAddModList SEQUENCE (SIZE (1..maxNrofPCI-Ranges)) OF PCI-RangeElement OPTIONAL, -- Need N...,<text omitted>}SSB-MTC3List-r16::= SEQUENCE (SIZE(1..4)) OF SSB-MTC3-r16SSB-MTC4List-r17::= SEQUENCE (SIZE(1..3)) OF SSB-MTC4-r17SSB-MTC5List-r19::= SEQUENCE (SIZE(1..3)) OF SSB-MTC5-r19SSB-MTC6List-r19::= SEQUENCE (SIZE(1..6)) OF SSB-MTCSSB-MTC-SSBAdapt-r19 ::= SEQUENCE (SIZE(1..2)) OF SSB-MTC |

From this perspective, it seems straightforward to extend OD-SSB specific SMTC to 16, corresponding to the 16 OD-SSB configurations. Detailed SMTC setup text procedure can be further discussed.

**Q1. Do you agree to extend the OD-SSB specific SMTC from 6 to 16 as analyzed above (Yes/No)? Please suggest a way forward if you do not.**

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| **Company** | **Yes/No** | **Comment** |
| Xiaomi | Yes |  |
| OPPO | Yes |  |
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# 3 Text proposal

START OF CHANGE

5.5.2.10 Reference signal measurement timing configuration

The UE shall setup the first SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicityAndOffset* parameter (providing *Periodicity* and *Offset* value for the following condition) in the *SSB-MTC* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR SpCell meeting the following condition:

SFN mod *T* = (FLOOR (*Offset*/10));

if the *Periodicity* is larger than *sf5*:

subframe = *Offset* mod 10;

else:

subframe = *Offset* or (*Offset* +5);

with *T* = CEIL(*Periodicity*/10).

If *smtc2* is present, for cells indicated in the *pci-List* parameter in *smtc2* in the same *MeasObjectNR*, the UE shall setup an additional SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicity* parameter in the *smtc2* configuration and use the *Offset* (derived from parameter *periodicityAndOffset*) and *duration* parameter from the *smtc1* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR SpCell meeting the above condition.

If *smtc2-LP* is present, for cells indicated in the *pci-List* parameter in *smtc2-LP* in the same frequency (for intra frequency cell reselection) or different frequency (for inter frequency cell reselection), the UE shall setup an additional SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicity* parameter in the *smtc2-LP* configuration and use the *Offset* (derived from parameter *periodicityAndOffset*) and *duration* parameter from the *smtc* configuration for that frequency. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR SpCell or serving cell (for cell reselection) meeting the above condition.

If *smtc3list* is present, for cells indicated in the *pci-List* parameter in each *SSB-MTC3* element of the list in the same *MeasObjectNR*, the IAB-MT shall setup an additional SS block measurement timing configuration in accordance with the received *periodicityAndOffset* parameter (using same condition as *smtc1* to identify the SFN and the subframe for SMTC occasion) in each SSB-MTC3 configuration and use the duration and *ssb-ToMeasure* parameters from each SSB-MTC3 configuration.

If *smtc4list* is present, for cells indicated in the *pci-List* parameter in each *SSB-MTC4* element of the list in the same *MeasObjectNR*, the UE shall setup an additional SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *offset* parameter in each *SSB-MTC4* configuration and use the *duration* parameter and *periodicity* (derived from parameter *periodicityAndOffset*) from the *smtc1* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR serving cell meeting the above condition.

If *smtc5list* is present, for cells indicated in the *pci-List* parameter in each *SSB-MTC5* element of the list in the same *MeasObjectNR*, the UE shall setup an additional SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicity* and *offset* parameter in each *SSB-MTC5* configuration and use the *duration* parameter from the *smtc1* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR serving cell meeting the above condition.

If *smtc6list* is present, when OD-SSB is activated and the serving cell is activated, the UE shall setup SS/PBCH block measurement timing configuration (SMTC) according to the first configured field in *smtc6list* for serving cell measurements on the corresponding configured measurement object as specified in 5.5.3.1, if *od-ssb-ActivationStatus* associated with the first *OD-SSB-config* is set to *activated*; the UE shall setup SMTC according to the second configured field in *smtc6list* for serving cell measurements on the corresponding configured measurement object as specified in 5.5.3.1, if *od-ssb-ActivationStatus* associated with the second *OD-SSB-config* is set to *activated* and so on.

If *smtc7-SSBAdapt* is present, the UE shall setup SS/PBCH block measurement timing configuration (SMTC) according to *smtc1* for serving cell measurements on the corresponding configured measurement object as specified in 5.5.3.1, if DCI format 2\_9 with CRC scrambled by *adaptSSBPeriodInd-RNTI* is not received; the UE shall setup SMTC according to the first configured field in *smtc7-SSBAdapt* for serving cell measurements on the corresponding configured measurement object as specified in 5.5.3.1, if the received DCI format 2\_9 indicates the first adaptive SSB periodicity in *ssb-BurstPeriodicityList*; the UE shall setup SMTC according to the second configured field in *smtc7-SSBAdapt* for serving cell measurements on the corresponding configured measurement object as specified in 5.5.3.1, if the received DCI format 2\_9 indicates the second adaptive SSB periodicity in *ssb-BurstPeriodicityList*.

On the indicated *ssbFrequency*, the UE shall not consider SS/PBCH block transmission in subframes outside the SMTC occasion for RRM measurements based on SS/PBCH blocks and for RRM measurements based on CSI-RS except for SFTD measurement (see TS 38.133 [14], clause 9.3.8)

NEXT CHANGE

5.5.3.1 General

An RRC\_CONNECTED UE shall derive cell measurement results by measuring one or multiple beams associated per cell as configured by the network, as described in 5.5.3.3. For all cell measurement results, except for RSSI, and CLI measurement results in RRC\_CONNECTED, the UE applies the layer 3 filtering as specified in 5.5.3.2, before using the measured results for evaluation of reporting criteria, measurement reporting or the criteria to trigger conditional reconfiguration execution. For cell measurements, the network can configure RSRP, RSRQ, SINR, RSCP or EcN0 as trigger quantity. For CLI measurements, the network can configure SRS-RSRP or CLI-RSSI as trigger quantity. For cell and beam measurements, reporting quantities can be any combination of quantities (i.e. only RSRP; only RSRQ; only SINR; RSRP and RSRQ; RSRP and SINR; RSRQ and SINR; RSRP, RSRQ and SINR; only RSCP; only EcN0; RSCP and EcN0), irrespective of the trigger quantity, and for CLI measurements, reporting quantities can be either SRS-RSRP or CLI-RSSI. For conditional reconfiguration execution, the network can configure up to 2 quantities, both using same RS type. The UE does not apply the layer 3 filtering as specified in 5.5.3.2 to derive the CBR measurements. The UE does not apply the layer 3 filtering as specified in 5.5.3.2 to derive the Rx-Tx time difference measurements. The UE does not apply the layer 3 filtering as specified in 5.5.3.2 to derive the altitude measurements.

The network may also configure the UE to report measurement information per beam (which can either be measurement results per beam with respective beam identifier(s) or only beam identifier(s)), derived as described in 5.5.3.3a. If beam measurement information is configured to be included in measurement reports, the UE applies the layer 3 beam filtering as specified in 5.5.3.2. On the other hand, the exact L1 filtering of beam measurements used to derive cell measurement results is implementation dependent.

The UE shall:

1> whenever the UE has a *measConfig*, perform RSRP and RSRQ measurements for each serving cell for which *servingCellMO* or *servingCellMO-OD* is configured as follows:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is not configured, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured without *od-ssb-absoluteFrequency*, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured with *od-ssb-absoluteFrequency* and OD-SSB transmission is not activated:

3> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains an *rsType* set to *ssb* and *ssb-ConfigMobility* is configured in the *measObject* indicated by the *servingCellMO*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered RSRP and RSRQ per beam for the serving cell based on SS/PBCH block, as described in 5.5.3.3a;

4> derive serving cell measurement results based on SS/PBCH block, as described in 5.5.3.3;

3> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains an *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *measObject* indicated by the *servingCellMO*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered RSRP and RSRQ per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell measurement results based on CSI-RS, as described in 5.5.3.3;

2> if *absoluteFrequencySSB* is not configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured and OD-SSB transmission is not activated:

3> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains an *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *measObject* indicated by the *servingCellMO*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered RSRP and RSRQ per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell measurement results based on CSI-RS, as described in 5.5.3.3;

2> if *absoluteFrequencySSB* is not configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured and OD-SSB transmission is activated, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured with *od-ssb-absoluteFrequency* and OD-SSB transmission is activated:

3> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains an *rsType* set to *ssb* and *ssb-ConfigMobility* is configured in the *measObject* indicated by the *servingCellMO-OD*:

4> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport* and contains an *rsType* set to *ssb*:

5> derive layer 3 filtered RSRP and RSRQ per beam for the serving cell based on SS/PBCH block, as described in 5.5.3.3a;

4> derive serving cell measurement results based on SS/PBCH block, as described in 5.5.3.3;

3> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains an *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *measObject* indicated by the *servingCellMO-OD*:

4> if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport* and contains an *rsType* set to *csi-rs*:

5> derive layer 3 filtered RSRP and RSRQ per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell measurement results based on CSI-RS, as described in 5.5.3.3;

1> for each serving cell for which *servingCellMO* or *servingCellMO-OD* is configured, if the *reportConfig* associated with at least one *measId* included in the *measIdList* within *VarMeasConfig* contains SINR as trigger quantity and/or reporting quantity:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is not configured, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured without *od-ssb-absoluteFrequency*, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured with *od-ssb-absoluteFrequency* and OD-SSB transmission is not activated:

3> if the *reportConfig* contains *rsType* set to *ssb* and *ssb-ConfigMobility* is configured in the *servingCellMO*:

4> if the *reportConfig contains* a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered SINR per beam for the serving cell based on SS/PBCH block, as described in 5.5.3.3a;

4> derive serving cell SINR based on SS/PBCH block, as described in 5.5.3.3;

3> if the *reportConfig* contains *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *servingCellMO*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered SINR per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell SINR based on CSI-RS, as described in 5.5.3.3;

2> if *absoluteFrequencySSB* is not configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured and OD-SSB transmission is not activated:

3> if the *reportConfig* contains *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *servingCellMO*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered SINR per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell SINR based on CSI-RS, as described in 5.5.3.3;

2> if *absoluteFrequencySSB* is not configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured and OD-SSB transmission is activated, or:

2> if *absoluteFrequencySSB* is configured in *ServingCellConfigCommon* and *OD-SSB-Config* is configured with *od-ssb-absoluteFrequency* and OD-SSB transmission is activated:

3> if the *reportConfig* contains *rsType* set to *ssb* and *ssb-ConfigMobility* is configured in the *servingCellMO-OD*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered SINR per beam for the serving cell based on SS/PBCH block, as described in 5.5.3.3a;

4> derive serving cell SINR based on SS/PBCH block, as described in 5.5.3.3;

3> if the *reportConfig* contains *rsType* set to *csi-rs* and *CSI-RS-ResourceConfigMobility* is configured in the *servingCellMO-OD*:

4> if the *reportConfig* contains a *reportQuantityRS-Indexes* and *maxNrofRS-IndexesToReport*:

5> derive layer 3 filtered SINR per beam for the serving cell based on CSI-RS, as described in 5.5.3.3a;

4> derive serving cell SINR based on CSI-RS, as described in 5.5.3.3;

1> for each *measId* included in the *measIdList* within *VarMeasConfig*:

2> if the *reportType* for the associated *reportConfig* is set to *reportCGI* and timer T321 is running:

3> if *useAutonomousGaps* is configured for the associated *reportConfig*:

4> perform the corresponding measurements on the frequency and RAT indicated in the associated *measObject* using autonomous gaps as necessary;

3> else:

4> perform the corresponding measurements on the frequency and RAT indicated in the associated *measObject* using available idle periods;

3> if the cell indicated by *reportCGI* field for the associated *measObject* is an NR cell and that indicated cell is broadcasting *SIB1* (see TS 38.213 [13], clause 13):

4> try to acquire *SIB1* in the concerned cell;

3> if the cell indicated by *reportCGI* field is an E-UTRA cell:

4> try to acquire *SystemInformationBlockType1* in the concerned cell;

2> if the *ul-DelayValueConfig* is configured for the associated *reportConfig*:

3> ignore the *measObject;*

3> for each of the configured DRBs*,* configure the PDCP layer to perform corresponding average UL PDCP packet delay measurement per DRB;

2> if the *ul-ExcessDelayConfig* is configured for the associated *reportConfig*:

3> ignore the *measObject;*

3> for each of the configured DRBs*,* configure the PDCP layer to perform corresponding UL PDCP Excess Packet Delay delay measurement according to the configured threshold per DRB;

2> if the *reportType* for the associated *reportConfig* is *periodical*; or

2> if the *reportType* for the associated *reportConfig* is *eventTriggered*, and the *eventId* is not set to *eventD1* or *eventD2*; or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig,* the *measId* is within the MCG *VarMeasConfig* and is indicated in the *condExecutionCond* or in the *condExecutionCondPSCell* associated to a *condReconfigId* in the MCG *VarConditionalReconfig* (for CHO, CPA, MN-initiated inter-SN CPC, or subsequent CPAC in NR-DC), and the *condEventId* is not set to *condEventD1*, *condEventD2* or *condEventT1*; or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig*, the *measId* is within the SCG *VarMeasConfig* and is indicated in the *condExecutionCond* associated to a *condReconfigId* in the SCG *VarConditionalReconfig* (for intra-SN CPC or subsequent CPAC); or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig*, the *measId* is within the SCG *VarMeasConfig* and is indicated in the *condExecutionCondSCG* associated to a *condReconfigId* in the MCG *VarConditionalReconfig* (for SN-initiated inter-SN CPC or subsequent CPAC in NR-DC); or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig*, the *measId* is within the SCG *VarMeasConfig* and is indicated in the *triggerConditionSN* associated to a *condReconfigurationId* in *VarConditionalReconfiguration* as specified in TS 36.331 [10] (for SN-initiated inter-SN CPC in EN-DC); or

2> if the *reportType* for the associated *reportConfig* is *condTriggerConfig,* the *measId* is within the MCG *VarMeasConfig* and is indicated in the *LTM-ExecutionConditionList* for which the UE is currently performing LTM cell switch conditions evaluation based on L3 measurements as specified in 5.3.5.18.8:

3> if a measurement gap configuration is setup, or

3> if the UE does not require measurement gaps to perform the concerned measurements:

4> if *s-MeasureConfig* is not configured, or

4> if *s-MeasureConfig* is set to *ssb-RSRP* and the NR SpCell RSRP based on SS/PBCH block, after layer 3 filtering, is lower than *ssb-RSRP,* or

4> if *s-MeasureConfig* is set to *csi-RSRP* and the NR SpCell RSRP based on CSI-RS, after layer 3 filtering, is lower than *csi-RSRP*:

5> if the *measObject* is associated to NR and the *rsType* is set to *csi-rs*:

6> if reportQuantityRS-Indexes and maxNrofRS-IndexesToReport for the associated reportConfig are configured:

7> derive layer 3 filtered beam measurements only based on CSI-RS for each measurement quantity indicated in *reportQuantityRS-Indexes*, as described in 5.5.3.3a;

6> derive cell measurement results based on CSI-RS for the trigger quantity and each measurement quantity indicated in *reportQuantityCell* using parameters from the associated *measObject*, as described in 5.5.3.3;

5> if the *measObject* is associated to NR and the *rsType* is set to *ssb*:

6> if reportQuantityRS-Indexes and maxNrofRS-IndexesToReport for the associated reportConfig are configured:

7> derive layer 3 beam measurements only based on SS/PBCH block for each measurement quantity indicated in *reportQuantityRS-Indexes*, as described in 5.5.3.3a;

6> derive cell measurement results based on SS/PBCH block for the trigger quantity and each measurement quantity indicated in *reportQuantityCell* using parameters from the associated *measObject*, as described in 5.5.3.3;

5> if the *measObject* is associated to E-UTRA:

6> perform the corresponding measurements associated to neighbouring cells on the frequencies indicated in the concerned *measObject*, as described in 5.5.3.2;

5> if the measObject is associated to UTRA-FDD:

6> perform the corresponding measurements associated to neighbouring cells on the frequencies indicated in the concerned *measObject*, as described in 5.5.3.2;

5> if the measObject is associated to L2 U2N Relay UE:

6> perform the corresponding measurements associated to candidate Relay UEs on the frequencies indicated in the concerned *measObject*, as described in 5.5.3.4;

4> if the *measRSSI-ReportConfig* is configured in the associated *reportConfig*:

5> perform the RSSI and channel occupancy measurements on the frequency configured by *rmtc-Frequency* in the associated *measObject*;

NOTE 0: The network avoids configuring UEs supporting only CHO and/or Rel-16 CPC with measurements not referred to by any execution condition.

2> if the *reportType* for the associated *reportConfig* is set to *reportSFTD* and the *numberOfReportsSent* as defined within the *VarMeasReportList* for this *measId* is less than one:

3> if the *reportSFTD-Meas* is set to *true:*

4> if the *measObject* is associated to E-UTRA:

5> perform SFTD measurements between the PCell and the E-UTRA PSCell;

5> if the *reportRSRP* is set to *true*;

6> perform RSRP measurements for the E-UTRA PSCell;

4> else if the *measObject* is associated to NR:

5> perform SFTD measurements between the PCell and the NR PSCell;

5> if the *reportRSRP* is set to *true*;

6> perform RSRP measurements for the NR PSCell based on SSB;

3> else if the *reportSFTD-NeighMeas* is included*:*

4> if the *measObject* is associated to NR:

5> if the *drx-SFTD-NeighMeas* is included:

6> perform SFTD measurements between the PCell and the NR neighbouring cell(s) detected based on parameters in the associated *measObject* using available idle periods;

5> else:

6> perform SFTD measurements between the PCell and the NR neighbouring cell(s) detected based on parameters in the associated *measObject*;

5> if the *reportRSRP* is set to *true*:

6> perform RSRP measurements based on SSB for the NR neighbouring cell(s) detected based on parameters in the associated *measObject*;

2> if the *reportType* for the associated *reportConfig* is *cli-Periodical* or *cli-EventTriggered*:

3> perform the corresponding measurements associated to CLI measurement resources indicated in the concerned *measObjectCLI*;

2> perform the evaluation of reporting criteria as specified in 5.5.4, except if *reportConfig* is *condTriggerConfig*.

NOTE 1: The evaluation of conditional reconfiguration execution criteria is specified in 5.3.5.13.

NOTE 1a: The evaluation of LTM cell switch conditions execution criteria is specified in 5.3.5.18.8.

The UE acting as a L2 U2N Remote UE whenever configured with *measConfig* shall:

1> perform the corresponding measurements associated to the serving L2 U2N Relay UE, as described in 5.5.3.4;

The UE capable of Rx-Tx time difference measurement when configured with *measObjectRxTxDiff* shall:

1> perform the corresponding Rx-Tx time difference measurements associated with downlink reference signals indicated in the concerned *measObjectRxTxDiff*.

The UE capable of CBR measurement when configured to transmit NR sidelink communication/discovery/positioning shall:

1> If the frequency used for NR sidelink communication/discovery/positioning is included in *sl-FreqInfoToAddModList*/*sl-FreqInfoToAddModListExt* in *sl-ConfigDedicatedNR* within *RRCReconfiguration* message or includedin *sl-ConfigCommonNR* within *SIB12* orincludedin *sl-PosConfigCommonNR* within *SIB23*:

2> if the UE is in RRC\_IDLE or in RRC\_INACTIVE:

3> if configured with NR sidelink communication and the cell chosen for NR sidelink communication provides *SIB12* which includes *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* forthe concerned frequency; or

3> if configured with NR sidelink discovery and the cell chosen for NR sidelink discovery provides *SIB12* which includes *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* but does not include *sl-DiscTxPoolSelected* forthe concerned frequency:

4> perform CBR measurement on pool(s) in *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* for the concerned frequency in *SIB12*;

3> if configured with NR sidelink discovery and the cell chosen for NR sidelink discovery provides *SIB12* which includes *sl-DiscTxPoolSelected* forthe concerned frequency:

4> perform CBR measurement on pools in *sl-DiscTxPoolSelected* and *sl-TxPoolExceptional* for the concerned frequency in *SIB12*;

3> if configured with NR sidelink positioning and the cell chosen for NR sidelink positioning provides *SIB23* which includes *sl-PRS-TxPoolSelectedNormal* or *sl-PRS-TxPoolExceptional* forthe concerned frequency, or provides *SIB12* which includes *sl-TxPoolSelectedNormal*, *sl-TxPoolExceptional*:

4> perform CBR measurement on pool(s) in *sl-PRS-TxPoolSelectedNormal*, *sl-PRS-TxPoolExceptional, sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* for the concerned frequency;

2> if the UE is in RRC\_CONNECTED:

3> if *tx-PoolMeasToAddModList* is included in *VarMeasConfig*:

4> perform CBR measurements on each transmission resource pool indicated in the *tx-PoolMeasToAddModList*;

3> if *sl-DiscTxPoolSelected*, *sl-TxPoolSelectedNormal*, *sl-TxPoolScheduling,* *sl-TxPoolExceptional*, *sl-PRS-TxPoolSelectedNormal*, *sl-PRS-TxPoolScheduling or sl-PRS-TxPoolExceptional* is included in *sl-ConfigDedicatedNR* for the concerned frequency within *RRCReconfiguration*:

4> perform CBR measurement on pool(s) in *sl-DiscTxPoolSelected*, *sl-TxPoolSelectedNormal*, *sl-TxPoolScheduling,* *sl-TxPoolExceptional*, *sl-PRS-TxPoolSelectedNormal*, *sl-PRS-TxPoolScheduling and sl-PRS-TxPoolExceptional* if included in *sl-ConfigDedicatedNR* for the concerned frequency within *RRCReconfiguration*;

3> else:

4> if configured with NR sidelink communication and the cell chosen for NR sidelink communication provides *SIB12* which includes *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* forthe concerned frequency; or

4> if configured with NR sidelink discovery and the cell chosen for NR sidelink discovery provides *SIB12* which includes *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* but does not provide *sl-DiscTxPoolSelected* forthe concerned frequency:

5> perform CBR measurement on pool(s) in *sl-TxPoolSelectedNormal* or *sl-TxPoolExceptional* for the concerned frequency in *SIB12*;

4> if configured with NR sidelink discovery and the cell chosen for NR sidelink discovery provides *SIB12* which includes *sl-DiscTxPoolSelected* forthe concerned frequency:

5> perform CBR measurement on pools in *sl-DiscTxPoolSelected* and *sl-TxPoolExceptional* for the concerned frequency in *SIB12*;

4> if configured with NR sidelink positioning and the cell chosen for NR sidelink positioning provides *SIB23* which includes *sl-PRS-TxPoolSelectedNormal* or *sl-PRS-TxPoolExceptional,* or provides *SIB12* which includes *sl-TxPoolSelectedNormal*, *sl-TxPoolExceptional* forthe concerned frequency:

5> perform CBR measurement on pool(s) in *sl-TxPoolSelectedNormal*, *sl-TxPoolExceptional*, *sl-PRS-TxPoolSelectedNormal* or *sl-PRS-TxPoolExceptional* for the concerned frequency;

1> else:

2> if configured with NR sidelink communication and *sl-TxPoolSelectedNormal* is included in *SidelinkPreconfigNR* for the concerned frequency; or

2> if configured with NR sidelink discovery and *sl-TxPoolSelectedNormal* is included in *SidelinkPreconfigNR* but *sl-DiscTxPoolSelected* is not included in *SidelinkPreconfigNR* for the concerned frequency:

3> perform CBR measurement on pool(s) in *sl-TxPoolSelectedNormal* in *SidelinkPreconfigNR* for the concerned frequency.

2> if configured with NR sidelink discovery and *sl-DiscTxPoolSelected* is included in *SidelinkPreconfigNR* for the concerned frequency:

3> perform CBR measurement on pools in *sl-DiscTxPoolSelected* if included in *SidelinkPreconfigNR*.

2> if configured with NR sidelink positioning and *sl-TxPoolSelectedNormal* or *sl-PRS-TxPoolSelectedNormal* is included in *SL-PreconfigurationNR* for the concerned frequency:

3> perform CBR measurement on pool(s) in *sl-TxPoolSelectedNormal* or *sl-PRS-TxPoolSelectedNormal* in *SidelinkPreconfigNR* for the concerned frequency.

NOTE 2: In case the configurations for NR sidelink communication and CBR measurement are acquired via the E-UTRA, configurations for NR sidelink communication in *SIB12*, *sl-ConfigDedicatedNR* within *RRCReconfiguration* used in this clause are provided by the configurations in *SystemInformationBlockType28*, *sl-ConfigDedicatedForNR* within *RRCConnectionReconfiguration* as specified in TS 36.331[10], respectively.

NOTE 3: If a UE that is configured by upper layers to transmit V2X sidelink communication is configured by NR with transmission resource pool(s) and the measurement objects concerning V2X sidelink communication (i.e. by *sl-ConfigDedicatedEUTRA-Info*), it shall perform CBR measurement as specified in clause 5.5.3 of TS 36.331 [10], based on the transmission resource pool(s) and the measurement object(s) concerning V2X sidelink communication configured by NR.

NOTE 4: For V2X sidelink communication, each of the CBR measurement results is associated with a resource pool, as indicated by the *poolReportId* (see TS 36.331 [10]), that refers to a pool as included in *sl-ConfigDedicatedEUTRA-Info* or *SIB13*.

NEXT CHANGE

### 6.3.2 Radio resource control information elements

*– MeasObjectNR*

The IE *MeasObjectNR* specifies information applicable for SS/PBCH block(s) intra/inter-frequency measurements and/or CSI-RS intra/inter-frequency measurements.

***MeasObjectNR* information element**

-- ASN1START

-- TAG-MEASOBJECTNR-START

MeasObjectNR ::= SEQUENCE {

 ssbFrequency ARFCN-ValueNR OPTIONAL, -- Cond SSBorAssociatedSSB

 ssbSubcarrierSpacing SubcarrierSpacing OPTIONAL, -- Cond SSBorAssociatedSSB

 smtc1 SSB-MTC OPTIONAL, -- Cond SSBorAssociatedSSB

 smtc2 SSB-MTC2 OPTIONAL, -- Cond IntraFreqConnected

 refFreqCSI-RS ARFCN-ValueNR OPTIONAL, -- Cond CSI-RS

 referenceSignalConfig ReferenceSignalConfig,

 absThreshSS-BlocksConsolidation ThresholdNR OPTIONAL, -- Need R

 absThreshCSI-RS-Consolidation ThresholdNR OPTIONAL, -- Need R

 nrofSS-BlocksToAverage INTEGER (2..maxNrofSS-BlocksToAverage) OPTIONAL, -- Need R

 nrofCSI-RS-ResourcesToAverage INTEGER (2..maxNrofCSI-RS-ResourcesToAverage) OPTIONAL, -- Need R

 quantityConfigIndex INTEGER (1..maxNrofQuantityConfig),

 offsetMO Q-OffsetRangeList,

 cellsToRemoveList PCI-List OPTIONAL, -- Need N

 cellsToAddModList CellsToAddModList OPTIONAL, -- Need N

 excludedCellsToRemoveList PCI-RangeIndexList OPTIONAL, -- Need N

 excludedCellsToAddModList SEQUENCE (SIZE (1..maxNrofPCI-Ranges)) OF PCI-RangeElement OPTIONAL, -- Need N

 allowedCellsToRemoveList PCI-RangeIndexList OPTIONAL, -- Need N

 allowedCellsToAddModList SEQUENCE (SIZE (1..maxNrofPCI-Ranges)) OF PCI-RangeElement OPTIONAL, -- Need N

 ...,

 [[

 freqBandIndicatorNR FreqBandIndicatorNR OPTIONAL, -- Need R

 measCycleSCell ENUMERATED {sf160, sf256, sf320, sf512, sf640, sf1024, sf1280} OPTIONAL -- Need R

 ]],

 [[

 smtc3list-r16 SSB-MTC3List-r16 OPTIONAL, -- Need R

 rmtc-Config-r16 SetupRelease {RMTC-Config-r16} OPTIONAL, -- Need M

 t312-r16 SetupRelease { T312-r16 } OPTIONAL -- Need M

 ]],

 [[

 associatedMeasGapSSB-r17 MeasGapId-r17 OPTIONAL, -- Need R

 associatedMeasGapCSIRS-r17 MeasGapId-r17 OPTIONAL, -- Need R

 smtc4list-r17 SSB-MTC4List-r17 OPTIONAL, -- Need R

 measCyclePSCell-r17 ENUMERATED {ms160, ms256, ms320, ms512, ms640, ms1024, ms1280, spare1}

 OPTIONAL, -- Cond SCG

 cellsToAddModListExt-v1710 CellsToAddModListExt-v1710 OPTIONAL -- Need N

 ]],

 [[

 associatedMeasGapSSB2-v1720 MeasGapId-r17 OPTIONAL, -- Cond AssociatedGapSSB

 associatedMeasGapCSIRS2-v1720 MeasGapId-r17 OPTIONAL -- Cond AssociatedGapCSIRS

 ]],

 [[

 measSequence-r18 MeasSequence-r18 OPTIONAL, -- Need R

 cellsToAddModListExt-v1800 CellsToAddModListExt-v1800 OPTIONAL -- Need N

 ]],

 [[

 smtc5list-r19 SSB-MTC5List-r19 OPTIONAL, -- Need R

 smtc6list-r19 SSB-MTC6List-r19 OPTIONAL, -- Need R

 smtc7-SSBAdapt-r19 SSB-MTC-SSBAdapt-r19 OPTIONAL, -- Cond IntraFreqConnected

 neighSCellMeasSkipping-r19 ENUMERATED { enabled } OPTIONAL -- Cond SCellMO

 ]]

}

SSB-MTC3List-r16::= SEQUENCE (SIZE(1..4)) OF SSB-MTC3-r16

SSB-MTC4List-r17::= SEQUENCE (SIZE(1..3)) OF SSB-MTC4-r17

SSB-MTC5List-r19::= SEQUENCE (SIZE(1..3)) OF SSB-MTC5-r19

SSB-MTC6List-r19::= SEQUENCE (SIZE(1..16)) OF SSB-MTC

SSB-MTC-SSBAdapt-r19 ::= SEQUENCE (SIZE(1..2)) OF SSB-MTC

T312-r16 ::= ENUMERATED { ms0, ms50, ms100, ms200, ms300, ms400, ms500, ms1000}

ReferenceSignalConfig::= SEQUENCE {

 ssb-ConfigMobility SSB-ConfigMobility OPTIONAL, -- Need M

 csi-rs-ResourceConfigMobility SetupRelease { CSI-RS-ResourceConfigMobility } OPTIONAL -- Need M

}

SSB-ConfigMobility::= SEQUENCE {

 ssb-ToMeasure SetupRelease { SSB-ToMeasure } OPTIONAL, -- Need M

 deriveSSB-IndexFromCell BOOLEAN,

 ss-RSSI-Measurement SS-RSSI-Measurement OPTIONAL, -- Need M

 ...,

 [[

 ssb-PositionQCL-Common-r16 SSB-PositionQCL-Relation-r16 OPTIONAL, -- Cond SharedSpectrum

 ssb-PositionQCL-CellsToAddModList-r16 SSB-PositionQCL-CellsToAddModList-r16 OPTIONAL, -- Need N

 ssb-PositionQCL-CellsToRemoveList-r16 PCI-List OPTIONAL -- Need N

 ]],

 [[

 deriveSSB-IndexFromCellInter-r17 ServCellIndex OPTIONAL, -- Need R

 ssb-PositionQCL-Common-r17 SSB-PositionQCL-Relation-r17 OPTIONAL, -- Cond SharedSpectrum2

 ssb-PositionQCL-Cells-r17 SetupRelease {SSB-PositionQCL-CellList-r17} OPTIONAL -- Need M

 ]],

 [[

 cca-CellsToAddModList-r17 PCI-List OPTIONAL, -- Need N

 cca-CellsToRemoveList-r17 PCI-List OPTIONAL -- Need N

 ]],

 [[

 ssb-ToMeasureAltitudeBasedList-r18 SetupRelease { SSB-ToMeasureAltitudeBasedList-r18 } OPTIONAL -- Need M

 ]]

}

Q-OffsetRangeList ::= SEQUENCE {

 rsrpOffsetSSB Q-OffsetRange DEFAULT dB0,

 rsrqOffsetSSB Q-OffsetRange DEFAULT dB0,

 sinrOffsetSSB Q-OffsetRange DEFAULT dB0,

 rsrpOffsetCSI-RS Q-OffsetRange DEFAULT dB0,

 rsrqOffsetCSI-RS Q-OffsetRange DEFAULT dB0,

 sinrOffsetCSI-RS Q-OffsetRange DEFAULT dB0

}

ThresholdNR ::= SEQUENCE{

 thresholdRSRP RSRP-Range OPTIONAL, -- Need R

 thresholdRSRQ RSRQ-Range OPTIONAL, -- Need R

 thresholdSINR SINR-Range OPTIONAL -- Need R

}

CellsToAddModList ::= SEQUENCE (SIZE (1..maxNrofCellMeas)) OF CellsToAddMod

CellsToAddModListExt-v1710 ::= SEQUENCE (SIZE (1..maxNrofCellMeas)) OF CellsToAddModExt-v1710

CellsToAddModListExt-v1800 ::= SEQUENCE (SIZE (1..maxNrofCellMeas)) OF CellsToAddModExt-v1800

CellsToAddMod ::= SEQUENCE {

 physCellId PhysCellId,

 cellIndividualOffset Q-OffsetRangeList

}

CellsToAddModExt-v1710 ::= SEQUENCE {

 ntn-PolarizationDL-r17 ENUMERATED {rhcp,lhcp,linear} OPTIONAL, -- Need R

 ntn-PolarizationUL-r17 ENUMERATED {rhcp,lhcp,linear} OPTIONAL -- Need S

}

CellsToAddModExt-v1800 ::= SEQUENCE {

 ntn-NeighbourCellInfo-r18 NTN-NeighbourCellInfo-r18 OPTIONAL -- Cond NeighbourCell

}

RMTC-Config-r16 ::= SEQUENCE {

 rmtc-Periodicity-r16 ENUMERATED {ms40, ms80, ms160, ms320, ms640},

 rmtc-SubframeOffset-r16 INTEGER(0..639) OPTIONAL, -- Need M

 measDurationSymbols-r16 ENUMERATED {sym1, sym14or12, sym28or24, sym42or36, sym70or60},

 rmtc-Frequency-r16 ARFCN-ValueNR,

 ref-SCS-CP-r16 ENUMERATED {kHz15, kHz30, kHz60-NCP, kHz60-ECP},

 ...,

 [[

 rmtc-Bandwidth-r17 ENUMERATED {mhz100, mhz400, mhz800, mhz1600, mhz2000} OPTIONAL, -- Need R

 measDurationSymbols-v1700 ENUMERATED {sym140, sym560, sym1120} OPTIONAL, -- Need R

 ref-SCS-CP-v1700 ENUMERATED {kHz120, kHz480, kHz960} OPTIONAL, -- Need R

 tci-StateInfo-r17 SEQUENCE {

 tci-StateId-r17 TCI-StateId,

 ref-ServCellId-r17 ServCellIndex OPTIONAL -- Need R

 } OPTIONAL -- Need R

 ]],

 [[

 ref-BWPId-r17 BWP-Id OPTIONAL -- Need R

 ]]

}

SSB-PositionQCL-CellsToAddModList-r16 ::= SEQUENCE (SIZE (1..maxNrofCellMeas)) OF SSB-PositionQCL-CellsToAddMod-r16

SSB-PositionQCL-CellsToAddMod-r16 ::= SEQUENCE {

 physCellId-r16 PhysCellId,

 ssb-PositionQCL-r16 SSB-PositionQCL-Relation-r16

}

SSB-PositionQCL-CellList-r17 ::= SEQUENCE (SIZE (1..maxNrofCellMeas)) OF SSB-PositionQCL-Cell-r17

SSB-PositionQCL-Cell-r17 ::= SEQUENCE {

 physCellId-r17 PhysCellId,

 ssb-PositionQCL-r17 SSB-PositionQCL-Relation-r17

}

SSB-ToMeasureAltitudeBasedList-r18 ::= SEQUENCE (SIZE (1..maxNrofAltitudeRanges-r18)) OF SSB-ToMeasureAltitudeBased-r18

SSB-ToMeasureAltitudeBased-r18 ::= SEQUENCE {

 altitudeRange-r18 SEQUENCE {

 altitudeMin-r18 Altitude-r18 OPTIONAL, -- Need S

 altitudeMax-r18 Altitude-r18 OPTIONAL, -- Need S

 altitudeHyst-r18 HysteresisAltitude-r18 OPTIONAL -- Need R

 },

 ssb-ToMeasure-r18 SSB-ToMeasure OPTIONAL -- Need S

}

NTN-NeighbourCellInfo-r18 ::= SEQUENCE {

 epochTime-r18 EpochTime-r17,

 ephemerisInfo-r18 EphemerisInfo-r17,

 referenceLocation-r18 ReferenceLocation-r17 OPTIONAL -- Need R

}

-- TAG-MEASOBJECTNR-STOP

-- ASN1STOP

# 4 Comments on text proposal

Companies can provide comments and suggestions to the text proposal in this table. Please do not add changes, suggestions, or comments directly to the text proposal above.

|  |  |  |  |
| --- | --- | --- | --- |
| Company + Issue Number (e.g.,Xiaomi001) | Issue | Comments and proposed changes | Rapp response |
| OPPO | See the bubbles above | See the bubbles above |  |
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