**3GPP TSG-****RAN2 Meeting#110e R2-20XXXX**

**April, 2020**

**Agenda Item:** XXX

**Source:** Ericsson

**Title:** NR Rel-16 ASN.1 Review, Class 0 and Class 1 issues

**Document for:** Discussion and decision

# Guidelines

* This file is used to log NR 38331 ASN:1 Review Class 0 and Class 1 issues.
1. **Trivial** e.g. editorials, commas, colon, misspelling, missing/ double spaces, italics etc.
2. **Minor** e.g. quite straightforward changes e.g. correction/ addition of specification references or sub-clauses
* Fill in the columns, see example.
	+ Make sure the inserted specification text is unique, such that the location of the issue is simple to find.
	+ Avoid indicating duplicated issues by checking if the concerned specification text is already reported in the table.
	+ Step the file name v(x) -> v(x+1) and upload to ftp server.
* The “status” column will be filled in by the ASN.1 review moderator.

# Class 0 and Class 1 issues

| **Issue number** | **Copied existing specification text.****Text should be unique, so that it can be easily found in the specification.****If needed, add also the new text.** | **Comment/description/****correction** | **Email address**  | **Status** |
| --- | --- | --- | --- | --- |
| Ex 1 | 2> derive the KUPint key associated with the *integrityProtAlgorithm* indicated in the SecurityModeCommand message, as specified in TS 33.501 [11]; | Missing italics. | hakan.l.palm@ericsson.com |  |
| Ex 2 | PUSCH scheduled by RAR UL grant (see 38.213 clause 8.3 and 38.214 clause 6.1.2.2) and uses interlaced PUCCH Format 0, 1, 2, and 3 for cell-specific PUCCH (see TS 38.213 [13], clause 9.2.1). | Incorrect reference, should be 9.2.101. | hakan.l.palm@ericsson.com |  |
| 1 | **Original text:**Performs logging of available measurements together with location and time for logged measurement configured UEs.**Proposal text:**Performs logging of available measurements together with location and time ~~for~~ if logged measurements is configured ~~UEs~~. | There are two places in section 4.2.1 with the said text and both needs to be reworded as proposed. The reason for changing is to phrase the sentence from a specific UE point of view rather than a group of UEs point of view.  | pradeepa.ramachandra@ericsson.com |  |
| 2 | The UE may discard the connection establishment failure information, i.e. release the UE variable VarConnEsFailReport, 48 hours after the last connection establishment failure is detected. | Missing Italics | pradeepa.ramachandra@ericsson.com |  |
| 3 | **Generic comment:**In some places the term SSB is used and in some other SS/PBCH Block is used. It is better to align the text with a single terminology | Alignment between SSB and SS/PBCH Block | pradeepa.ramachandra@ericsson.com |  |
| 4 | 5> set the *measResultListNR* in *measResultNeighCells* to include all the available measurement quantities of the best measured cells associated to the *measObjectNR*, other than the source PCell, ordered such that the cell with highest SS/PBCH block RSRP is listed first if SS/PBCH block RSRP measurement results are available, otherwise the cell with highest SS/PBCH block RSRQ is listed first if SS/PBCH block RSRQ measurement results are available, otherwise the cell with highest SS/PBCH block SINR is listed first, based on the available SS/PBCH block based measurements collected up to the moment the UE detected handover failure; | ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 5 | 4> if the SS/PBCH block-based measurement quantities are available;5> set the *measResultListNR* in *measResultNeighCells* to include all the available measurement quantities of the best measured cells associated to the *measObjectNR*, other than the source PCell, ordered such that the cell with highest SS/PBCH block RSRP is listed first if SS/PBCH block RSRP measurement results are available, otherwise the cell with highest SS/PBCH block RSRQ is listed first if SS/PBCH block RSRQ measurement results are available, otherwise the cell with highest SS/PBCH block SINR is listed first, based on the available SS/PBCH block based measurements collected up to the moment the UE detected handover failure;6> for each neighbour cell included, include the optional fields that are available; | ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 6 | 4> if the CSI-RS based measurement quantities are available;5> set the *measResultListNR* in *measResultNeighCells* to include all the available measurement quantities of the best measured cells, other than the source PCell, ordered such that the cell with highest CSI-RS RSRP is listed first if CSI-RS RSRP measurement results are available, otherwise the cell with highest CSI-RS RSRQ is listed first if CSI-RS RSRQ measurement results are available, otherwise the cell with highest CSI-RS SINR is listed first, based on the available CSI-RS based measurements collected up to the moment the UE detected handover failure;6> for each neighbour cell included, include the optional fields that are available; | ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 7 | 3> for each of the configured EUTRA frequencies in which measurements are available;4> set the *measResultListEUTRA* in *measResultNeighCells* to include the best measured cells ordered such that the cell with highest RSRP is listed first if RSRP measurement results are available, otherwise the cell with highest RSRQ is listed first, and based on measurements collected up to the moment the UE detected radio link failure; | ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 8 | 3> set the *timeConnFailure* to the elapsed time since reception of the last *RRCReconfiguration* message including the *reconfigurationWithSync*; | This field name, timeConnFailure is not very self-explanatory and could be improved. Instead we can change the field name to ‘timeBetweenHOCommandAndFailure’. The changes are applicable in all places including ASN.1 | pradeepa.ramachandra@ericsson.com |  |
| 9 | 7> set the measResultListNR in measResultNeighCells to include all the available measurement quantities of the best measured cells, other than the source PCell, ordered such that the cell with highest SS/PBCH block RSRP is listed first if SS/PBCH block RSRP measurement results are available, otherwise the cell with highest SS/PBCH block RSRQ is listed first if SS/PBCH block RSRQ measurement results are available, otherwise the cell with highest SS/PBCH block SINR is listed first, based on the available SS/PBCH block based measurements collected up to the moment the UE detected radio link failure;8> for each neighbour cell included, include the optional fields that are available; | Missing italics‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 10 | 7> set the *measResultListNR* in *measResultNeighCells* to include all the available measurement quantities of the best measured cells, other than the source PCell, ordered such that the cell with highest CSI-RS RSRP is listed first if CSI-RS RSRP measurement results are available, otherwise the cell with highest CSI-RS RSRQ is listed first if CSI-RS RSRQ measurement results are available, otherwise the cell with highest CSI-RS SINR is listed first, based on the available CSI-RS based measurements collected up to the moment the UE detected radio link failure;8> for each neighbour cell included, include the optional fields that are available; | ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 11 | 5> set the connectionFailureType to rlf;5> set the *c-RNTI* to the C-RNTI used in the PCell;5> set the *rlf-Cause* to the trigger for detecting radio link failure;5> if the rlf-Cause is set to randomAccessProblem or beamFailureRecoveryFailure: | Missing italics | pradeepa.ramachandra@ericsson.com |  |
| 12 | 8> set the *numberOfPreamblesSentOnSSB* to indicate the number of successive random access attempts associated to the SS/PBCH block;  | Missing hyphen (-) between random access i.e., random-access. | pradeepa.ramachandra@ericsson.com |  |
| 13 | 2> if the UE has connection resume failure informaton available in *VarConnEstFailReport* and if the RPLMN is not equal to plmn-identity stored in *VarConnEstFailReport*: | Missing italics | pradeepa.ramachandra@ericsson.com |  |
| 14 | 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 [x5]; | Missing reference | pradeepa.ramachandra@ericsson.com |  |
| 15 | 1> if the *includeCommonLocationInfo* is configured in the corresponding *reportConfig* for this *measId* and detailed location information that has not been reported is available, set the content of *commonLocationInfo* of the *locationInfo* as follows:2> include the locationTimestamp;2> include the *locationCoordinate*, if available;2> include the *velocityEstimate*, if available;2> include the *locationError*, if available;2> include the *locationSource*, if available;2> if available, include the *gnss-TOD-msec*, | In section 5.5.5.1Missing italics‘;’ instead of ‘,’ | pradeepa.ramachandra@ericsson.com |  |
| 16 | 1> if *reportType* is set to *periodical*:2> if a single reporting quantity is set to *true* in *reportQuantityRS-Indexes*;3> consider the configured single quantity as the sorting quantity;2> else:3> if *rsrp* is set to *true*;4> consider RSRP as the sorting quantity;3> else:4> consider RSRQ as the sorting quantity; | In section 5.5.5.2 ‘:’ instead of ‘;’ | pradeepa.ramachandra@ericsson.com |  |
| 17 | I1> if available, set the *locationInfo* as follows:2> if available, set the *commonLocationInfo* to include the detailed location information;2> if available, set the *bt-LocationInfo* to include the Bluetooth measurement results, in order of decreasing RSSI for Bluetooth beacons;2> if available, set the *wlan-LocationInfo* to include the WLAN measurement results, in order of decreasing RSSI for WLAN APs.2> if available, set the *sensor-LocationInfo* to include the sensor measurement results.  | n section 5.7.3.5 and 5.7.3a.3 ‘;’ instead of ‘.’ | pradeepa.ramachandra@ericsson.com |  |
| 18 | 1> if the number of RA-Report stored in the RA-ReportList-r16 is less than 8, then append the following contents associated to the successfully completed random-access procedure as a new entry in the *VarRA-Report*: | Missing italics | pradeepa.ramachandra@ericsson.com |  |
| 19 | 2> else:3> set the plmn-Identity to the PLMN selected by upper layers from the PLMN(s) included in the plmn-IdentityList in SIB1; | Missing italics | pradeepa.ramachandra@ericsson.com |  |
| 20 | 2> set the parameters associated to individual random-access attempt in the chronological order of attmepts in the *perRAInfoList* as specified in 5.3.10.3: | ‘;’ instead of ‘:’ | pradeepa.ramachandra@ericsson.com |  |
| 21 | NG-RAN initiates the logged measurement configuration procedure to UE in RRC\_CONNECTED by sending the *LoggedMeasurementConfiguration* message. | ‘towards’ instead of ‘to’NG-RAN initiates the logged measurement configuration procedure towards UE in RRC\_CONNECTED by sending the *LoggedMeasurementConfiguration* message. | pradeepa.ramachandra@ericsson.com |  |
| 22 | This procedure specifies the logging of available measurements by a UE in RRC\_IDLE and RRC\_INACTIVE that has a logged measurement configuration. The actual process of logging within the UE, takes place in RRC IDLE state could continue in RRC INACTIVE state or vice versa. | Missing ‘and’This procedure specifies the logging of available measurements by a UE in RRC\_IDLE and RRC\_INACTIVE that has a logged measurement configuration. The actual process of logging within the UE, takes place in RRC IDLE state and could continue in RRC INACTIVE state or vice versa. | pradeepa.ramachandra@ericsson.com |  |
| 23 | **Generic comment:**The terminology reportType used in loggedMeasurementConfiguration and the associated UE variable VarLogMeasConfig.  | The purpose of this field is to inform the UE ‘when’ to log, not ‘what’ to log. Therefore, the field name is misleading.It is proposed to change it to loggingType instead of reportType. | pradeepa.ramachandra@ericsson.com |  |
| 24 | 3> if the UE is camping normally on an NR cell and if the RPLMN is included in *plmn-IdentityList* stored in *VarLogMeasReport* and, if the cell is part of the area indicated by *areaConfiguration* if configured in *VarLogMeasConfig*: | Remove the ‘,’ | pradeepa.ramachandra@ericsson.com |  |
| 25 | 4> set the *measResultServCell* to include the quantities of the last logged cell the UE was camping on; 3> else:4> set the *servCellIdentity* to indicate global cell identity of the cell the UE is camping on;4> set the *measResultServCell* to include the quantities of the cell the UE is camping on; | There is no IE by the name ‘measResultServCell’.Missing part of the correct field name (‘ing’). It should have been measResultServingCell’ | pradeepa.ramachandra@ericsson.com |  |
| 26 | 4> if available, set the *measResultNeighCells*, in order of decreasing ranking-criterion as used for cell re-selection, to include neighbouring cell measurements ~~(excluding the~~ *~~resultsSSB-Indexes~~* ~~IE)~~ that became available during the last logging interval for at most the following number of neighbouring cells: 6 intra-frequency and 3 inter-frequency neighbours per frequency as well as 3 inter-RAT neighbours, per frequency/ set of frequencies per RAT and according to the following: | No need for the text in the brackets as the field *measResultNeighCells* does not contain *resultsSSB-Indexes* | pradeepa.ramachandra@ericsson.com |  |
| 27 | LoggedMeasurementConfiguration-r16-IEs ::= SEQUENCE { traceReference-r16 TraceReference-r16, traceRecordingSessionRef-r16 OCTET STRING (SIZE (2)), tce-Id-r16 OCTET STRING (SIZE (1)), absoluteTimeInfo-r16 AbsoluteTimeInfo-r16, areaConfiguration-r16 AreaConfiguration-r16 OPTIONAL, --Need R plmn-IdentityList-r16 PLMN-IdentityList3-r16 OPTIONAL, --Need R bt-NameList-r16 BT-NameListConfig-r16 OPTIONAL, --Need R wlan-NameList-r16 WLAN-NameListConfig-r16 OPTIONAL, --Need R sensor-NameList-r16  Sensor-NameListConfig-r16 OPTIONAL, --Need R loggingDuration-r16 LoggingDuration-r16, reportType CHOICE { periodical LoggedPeriodicalReportConfig-r16, eventTriggered LoggedEventTriggerConfig-r16 }} | Missing ‘-r16’ | pradeepa.ramachandra@ericsson.com |  |
| 28 | ***eventType***The value outOfCoverage indicates the UE to perform logging of measurements when the UE enters any cell selection state, and the value eventL1 indicates the UE to perform logging of measurements when the triggering condition (similar as event A2 as specified in 5.5.4.3) as configured in the event is met for the camping cell in camped normally state.  | Missing italics | pradeepa.ramachandra@ericsson.com |  |
| 29 | LogMeasInfo-r16 ::= SEQUENCE { locationInfo-r16 LocationInfo-r16 OPTIONAL, relativeTimeStamp-r16 INTEGER (0..7200), servCellIdentity-r16 CGI-InfoNR-Logging-r16, measResultServingCell-r16 MeasResultServingCell-r16 OPTIONAL, measResultNeighCells-r16 SEQUENCE { measResultNeighCellListNR MeasResultListLogging2NR-r16 OPTIONAL, measResultNeighCellListEUTRA MeasResultList2EUTRA-r16 OPTIONAL }, anyCellSelectionDetected-r16 ENUMERATED {true} OPTIONAL} | Missing -r16 | pradeepa.ramachandra@ericsson.com |  |
| 30 | ***timeStamp***Includes time stamps for the waypoints that describe planned locations for the UE.  | No such field. Remove the field description completely. | pradeepa.ramachandra@ericsson.com |  |
| 31 | ***numberOfConnFail***This field is used to indicate the number of failed connection setup attempts after radio link failure. | There is no relation to RLF. Remove ‘after radio link failure’ | pradeepa.ramachandra@ericsson.com |  |
| 32 | ***numberOfPreamblesSent***This field is used to indicate the number of random access preambles that were transmitted. | No such field. Remove the field description completely. | pradeepa.ramachandra@ericsson.com |  |
| 33 | ***maxTxPowerReached***This field is used to indicate whether or not the maximum power level was used for the last transmitted preamble.  | No such field. Remove the field description completely. | pradeepa.ramachandra@ericsson.com |  |
| 34 | ***cellIdentity-eutra-epc, cellIdentity-eutra-5GC***Unambiguously identify a cell within a PLMN and it belongs the first *PLMN-IdentityInfo* IE of *PLMN-IdentityInfoList* in *SIB1*. | Missing ‘to’***cellIdentity-eutra-epc, cellIdentity-eutra-5GC***Unambiguously identify a cell within a PLMN and it belongs to the first *PLMN-IdentityInfo* IE of *PLMN-IdentityInfoList* in *SIB1*. | pradeepa.ramachandra@ericsson.com |  |
| 35 | ***excessDelay***Indicates excess queueing delay ratio in UL, according to excess delay ratio measurement report mapping table, as defined in TS 38.314 [x5], Table 4.2.1.1.1-1.  | No such field. Remove the field description completely. | pradeepa.ramachandra@ericsson.com |  |
| 36 | -- ASN1START-- TAG-ULDELAYVALUECONFIG-STARTUL-DelayValueConfig-r16 ::= SEQUENCE { delay-DRBlist SEQUENCE (SIZE(1..maxDRB)) OF DRB-Identity}-- TAG-ULDELAYVALUECONFIG-STOP-- ASN1STOP | Missing ‘-r16’ | pradeepa.ramachandra@ericsson.com |  |
| 37 | Sensor-NameList-r16 ::= SEQUENCE {  measUncomBarPre-r16 BOOLEAN OPTIONAL, -- Need R measUeSpeed BOOLEAN OPTIONAL, -- Need R measUeOrientation BOOLEAN OPTIONAL -- Need R}-- TAG-SENSORNAMELISTCONFIG-STOP-- ASN1STOP | Missing ‘-r16’ | pradeepa.ramachandra@ericsson.com |  |
| 38 | ***measUncomBarPre***If configured, the UE reports the uncompensated Barometeric pressure measurement as defined in uncompensatedBarometricPressure-r16. | There is no IE called ‘uncompensatedBarometricPressure-r16’. But it is defined in 37.355. Therefore, propose to change the field description as;***measUncomBarPre***If configured, the UE reports the uncompensated Barometeric pressure measurement as defined by *uncompensatedBarometricPressure* is TS 37.355 [YY]. | pradeepa.ramachandra@ericsson.com |  |
| 39 | reportType CHOICE { periodical LoggedPeriodicalReportConfig-r16, eventTriggered LoggedEventTriggerConfig-r16 } | Missing ‘-r16’ | pradeepa.ramachandra@ericsson.com |  |
| 40 | -- ASN1START-- TAG-VARLOGMEAREPORT-STARTVarLogMeasReport-r16 ::= SEQUENCE { absoluteTimeStamp-r16 AbsoluteTimeInfo-r16, traceReference-r16 TraceReference-r16, traceRecordingSessionRef-r16 OCTET STRING (SIZE (2)), tce-Id-r16 OCTET STRING (SIZE (1)), logMeasInfoList-r16 LogMeasInfoList-r16, plmn-IdentityList-r16 PLMN-IdentityList3-r16}-- TAG-VARLOGMEAREPORT-STOP-- ASN1STOP | Missing ‘S’VARLOGMEASREPORT | pradeepa.ramachandra@ericsson.com |  |
| 41 | MeasResultServingCell-r16 ::= SEQUENCE { physCellId PhysCellId OPTIONAL, resultsSSB-Cell MeasQuantityResults OPTIONAL, resultsSSB SEQUENCE{ best-ssb-Index SSB-Index, best-ssb-Results MeasQuantityResults OPTIONAL, numberOfGoodSSB INTEGER (1..maxNrofSSBs) OPTIONAL } OPTIONAL, ...} | Missing ‘-r16’ | pradeepa.ramachandra@ericsson.com |  |
| 42 | [[    simultaneousTCI-UpdateList-r16                   SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    simultaneousTCI-UpdateListSecond-r16             SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    simultaneousSpatial-UpdatedList-r16               SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    simultaneousSpatial-UpdatedListSecond-r16        SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL    -- Need R    ]]In CellGroupConfig IE |     [[    tci-RelationCellList1-r16                    SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    tci-RelationCellList2-r16                    SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    spatialRelationCellList1-r16                 SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL,   -- Need R    spatialRelationCellList2-r16                  SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex           OPTIONAL    -- Need R    ]] | Helka-liina.maattanen@ericsson.com |  |
| 43 |  lte-CRS-PatternList-r16 SetupRelease { LTE-CRS-PatternList-r16 } OPTIONAL, -- Cond LTE-CRS lte-CRS-PatternListSecond-r16 SetupRelease { LTE-CRS-PatternList-r16 } OPTIONAL, -- Cond CORESETPoolIN servingCellConfig IE |     lte-CRS-PatternList1-r16             SetupRelease { LTE-CRS-PatternList-r16 }                          OPTIONAL,   -- Cond LTE-CRS    lte-CRS-PatternList2-r16             SetupRelease { LTE-CRS-PatternList-r16 }                          OPTIONAL,   -- Cond CORESETPool | Helka-liina.maattanen@ericsson.com |  |
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