**3GPP TSG-RAN WG2 Meeting #118-e *R2-2206360***

**Electronic, 9 May – 20 May 2022**

**Agenda Item:** 7.0.1

**Source:** Samsung

**Title:** LTE Rel-17 ASN.1 Review, Class 0 issues

**Document for:** Discussion and decision

# Guidelines

* This file is used to log LTE 36331 ASN:1 Review Class 0 issues.

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| Class 0: Expected correction has no functional impact | - Typo, minor wording improvement etc.- ASN.1 field not following naming rules (e.g. incorrect suffix, capitalization, etc).Not collected as RIL in Review file, but in separate word document. |

* 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 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. | seungri.jin@samsung.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. | seungri.jin@samsung.com |  |
| Insert issues from here |
| 1 | *SystemInformationBlockType24*  [[ carrierFreqListNR-v1700 CarrierFreqListNR-v1700 OPTIONAL -- Need OR ]]CarrierFreqNR-v1700 ::= SEQUENCE { nr-FreqNeighHSDN-CellList-r17 NR-FreqNeighHSDN-CellList-r17 OPTIONAL -- Need OR} | should use tab rather than space | odile.rollinger@huawei.com | Rap CR |
| 2 | *SystemInformationBlockType22-NB****cbpc-HystTimer***The minimum duration, in milliseconds, a UE configured with coverage-based paging carrier uses the same carrier for paging, see TS 36.304 [4]. Value *ms2560* corresponds to 2560ms, value *ms7680* corresponds to 7680ms, and so on. | ‘carrier’ should be removed | odile.rollinger@huawei.com | NBIoT/eMTC WI CR |
| 3 | *NPDSCH-Config-NB*Activativation of 16QAM for DL, see TS 36.213 [23]. | Typo: Activa~~tiva~~tion | odile.rollinger@huawei.com | NBIoT/eMTC WI CR |
| 4 | *Paging* ***pagingCause***Indicates whether the *Paging* message is originated due to IMS voice. If the field is present and upper layers indicate the support of paging cause, it implies that the corresponding paging entry is for IMS voice. If this field is not present but *pagingRecordList-v1700* is present, it implies that the corresponding paging entry is for a service other than IMS voice. Otherwise, *pagingCause* is undetermined. | replace ‘*pagingCause*’ with ‘paging cause’ | odile.rollinger@huawei.com | MUSIM WI CR |
| 5 | Section 3.1 Definitions | Definitions for IOT NTN are missing**Ephemeris:** A set of parameters that describe the movement of an NTN node over time. **Geosynchronous Orbit:** Earth-centred orbit at approximately 35,786 kilometres in altitude above Earth’s surface and synchronised with Earth’s rotation. A geostationary orbit is a non-inclined geosynchronous orbit, i.e in the Earth’s equator plane. **Non-geosynchronous orbit**: Earth-centred orbit with an orbital period that does not match Earth’s rotation on its axis. This includes Low Earth Orbit (LEO) and Medium Earth Orbit (MEO).**Non-terrestrial networks:** An E-UTRAN consisting of eNBs, which provide non-terrestrial LTE access to UEs by means of an NTN payload embarked on a space-borne NTN vehicle and an NTN Gateway.**Quasi-earth fixed cell:** An NTN cell fixed with respect to a certain geographic area on the earth during a certain time duration. This can be provided by beam(s) covering one geographic area for a finite period and a different geographic area during another period (e.g., the case of NGSO satellites generating steerable beams). **Satellite:** a space-borne vehicle orbiting the Earth that carries the NTN payload.  | odile.rollinger@huawei.com | IOT NTN Rap CR |
| 6 | Section 3.2 Abbreviations | Abbreviations for IOT NTN are missing GSO Geosynchronous OrbitNGSO Non-Geosynchronous Orbit | odile.rollinger@huawei.com | IOT NTN Rap CR |
| 7 | *Section 6.3.5 EphemerisOrbital Parameters****anomaly***Satellite orbital parameter: Mean anomaly M at epoch time, see NIMA TR 8350.2 [X]. Unit in radian.Value range 0...2π by step of 2π \* 2-24. Actual value = IE value \* (π \* 2-23)***eccentricity***Satellite orbital parameter: eccentricity e, see NIMA TR 8350.2 [X].Value range 0...0.015 by step of 0.015 \* 2-19. Actual value = IE value \* (0.015 \* 2-19).***inclination***Satellite orbital parameter: inclination i, see NIMA TR 8350.2 [X]. Unit in radian.Value range -π/2…π/2 by step of π/2 \* 2-19. Actual value = IE value \* (π \* 2-20).***longitude***Satellite orbital parameter: longitude of ascending node Ω, see NIMA TR 8350.2 [X]. Unit in radian.Value range 0...2π by step of 2π \* 2-21. Actual value = IE value \* (π \* 2-20).***periapsis***Satellite orbital parameter: argument of periapsis ω, see NIMA TR 8350.2 [X]. Unit in radian.Value range 0...2π by step of 2π \* 2-24. Actual value = IE value \* (π \* 2-23).***semiMajorAxis***Satellite orbital parameter: semi major axis α, see NIMA TR 8350.2 [X]. Unit in meter.Value range 6500000….43000000 by step of 2-33. Actual value = 6500000 + IE value \* (43000000 – 6500000) \* 2-33 | Change ‘IE’ to ‘field’  | odile.rollinger@huawei.com | IOT NTN Rap CR |
| 8 | *Section 6.3.5 EphemerisStateVectors****positionX, positionY, positionZ***X, Y, Z coordinate of satellite position state vector in ECEF. Unit in meter.Value range 43620761…43620760 by step of 1.3. Actual value = IE value \* 1.3.***velocityVX, velocityVY, velocityVZ***X, Y, Z coordinate of satellite velocity state vector in ECEF. Unit in meter/second.Value range -7864…7863 by step of 0.06. Actual value = IE value \* 0.06. | Change ‘IE’ to ‘field’  | odile.rollinger@huawei.com | IOT NTN Rap CR |
| 9 | **5.5.8 Measurements in NB-IoT** ………….if (NRSRPRef – (NRSRP– *PowerOffsetNonAnchor*)) > *s-MeasureDeltaP* | *PowerOffsetNonAnchor* is typo.*PowerOffsetNonAnchor => nrs-PowerOffsetNonAnchor* | lu.ting@zte.com.cn | NBIoT/eMTC WI CR |
| 10 | ***ul-SyncValidationDuration***Validity duration of the satellite ephemeris data and common TA parameters, i.e. maximum time during which the UE can apply the satellite ephemeris without acquiring new satellite ephemeris, see TS 36.213 [23]. Unit in s.Value *s5* corresponds to 5 seconds, value *s10* corresponds to 10 seconds and so on. | “Unit in s” is not so clear, suggest to change to “Unit in seconds.” | lu.ting@zte.com.cn | IOT NTN Rap CR |
| 11 | offsetThresholdTA-r17 ENUMERATED { ms05, ms1, ms2, ms3, ms4, ms5, ms6 ,ms7, ms8, ms9, ms10, ms11, ms12, ms13, ms14, ms15}OPTIONAL, -- Need OR***offsetThresholdTA***Offset for TA reporting as specified in TS 36.321 [6]. | Value of ms05 is not clear and there is no explanation on the values in the field description.offsetThresholdTA-r17 ENUMERATED { ms0dot5, ms1, ms2, ms3, ms4, ms5, ms6 ,ms7, ms8, ms9, ms10, ms11, ms12, ms13, ms14, ms15}OPTIONAL, -- Need OR***offsetThresholdTA***Offset for TA reporting as specified in TS 36.321 [6]. Value *ms0dot5* corresponds to 0.5 millisecond, value *ms1* corresponds to 1 millisecond and so on. | lu.ting@zte.com.cn | IOT NTN Rap CR |
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| ***EphemerisStateVectors* field descriptions** |
| ***positionX, positionY, positionZ***X, Y, Z coordinate of satellite position state vector in ECEF. Unit in meter.Value range 43620761…43620760 by step of 1.3. Actual value = IE value \* 1.3. |

 | The negative sign is missed from the lower point of the value range of *positionX, positionY, positionZ*“43620761” should be “-43620761” | lu.ting@zte.com.cn | IOT NTN Rap CR |
| 13 | section 5.5.8 1> if *neighCellMeasCriteria* is present in *SystemInformationBlockType3-NB*:2> if (NRSRPRef – (NRSRP– *PowerOffsetNonAnchor*)) > *s-MeasureDeltaP*:3> set NRSRPRef = (NRSRP – *nrs-PowerOffsetNonAnchor*);3> start or restart T326 with the value *t-MeasureDeltaP*; | Should *nrs-PowerOffsetNonAnchor* - | odile.rollinger@huawei.com | Duplicate of #9 |
| 14 | MBSFN-AreaInfoList IE: suffix of new value kHz15-r17 should be „-v1700“.subcarrierSpacingMBMS-r16 ENUMERATED {kHz7dot5, kHz2dot5, kHz1dot25, kHz0dot37,kHz15-r17, spare3, spare2, spare1}, | Replace “kHz15-r17” should be „ kHz15-v1700“. | hchoi5@lenovo.com | Rap CR |
| 15 | 7.3.1: The timers in the table out of order. | Sort the timers in order. | hchoi5@lenovo.com | Rap CR |
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