**3GPP TSG-RAN WG3 Meeting #120 *R3-23xxxx***

**Incheon, KR, 22 May – 26 May, 2023**

**Agenda item:** 26.2

**Source:** ZTE, Nokia, Nokia Shanghai Bell, Ericsson, Huawei，CATT, Samsung

**Title:** (TP to TRS\_URLLC BLCR for TS 38.473) Support of 5G Timing Resiliency enhancements

Document for:  Agreement

# 1 Introduction

# This TP provides changes following the offline discussion for R18 TRS\_URLLC.

# 3 TP to BL CR of 38.473

*Changes Start*

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

**<Unchanged Text Omitted>**

[45] Void

[46] 3GPP TS 37.213: "NR; Physical layer procedures for shared spectrum channel access".

[47] 3GPP TS 37.483: "E1 Application Protocol (E1AP)".

[AA] IEEE Std 1588: "IEEE Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems", Edition 2019.

*Next Change*

#### 9.3.1.x1 RAN Timing Synchronisation Status Information

This IE indicates the RAN timing synchronisation status information provided from the gNB-DU to the gNB-CU.

Editor’s Note: The non-UE associated F1AP procedure(s) used to convey this IE towards the gNB-CU is FFS.

Editor’s Note: This IE may be further refined based on SA2 and RAN3 progress.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| Synchronisation State | O |  | ENUMERATED (locked, holdover, freeRun, …) |  |
| Traceable to UTC | O |  | ENUMERATED (true, false, …) |  |
| Traceable to GNSS | O |  | ENUMERATED (true, false, …) |  |
| Clock Frequency Stability | O |  | BIT STRING (SIZE (16)) | Indicates the offsetScaledLogVariance as specified in IEEE Std 1588 [AA]. |
| Clock Accuracy | O |  | 9.3.1.x2 |  |
| PTP clockClass | O |  | INTEGER(0..255,...) | Indicates the clockClass value as specified in IEEE Std 1588 [AA]. |
| Parent Time Source | O |  | ENUMERATED (pTP, gNSS, atomicClock, terrestrialRadio, serialTimeCode, nTP, handSet, other, …) |  |



#### 9.3.1.x2 Clock Accuracy

This IE indicates the clock accuracy as defined in TS 23.501 [21].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *Clock Accuracy* | M |  |  |  |
| >*choice1* |  |  |  |  |
| >>[FFS] |  |  |  |  |

Editor’s Note: Encoding of the *Clock Accuracy* IE is to be decided by RAN3 and should allow for different RAN implementations (e.g., CHOICE structure). The maximum range is 1 second. Details FFS.

*End of Changes*