**3GPP TSG-CT WG1 Meeting #146C1-240181**

**Online, 22– 26 January 2024**

**Source: ZTE**

**Title: Clarification on location information**

**Spec: 3GPP TS 24.514 v0.5.0**

**Agenda item: 18.2.23**

**Document for: Agreement**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

The description on location information "range and direction", "relative location" and "relative velocity" are detailed in following clauses in TS 23.032 which should be referenced in clause 7.3.

5.10 Range and Direction

5.11 Relative 2D Location with uncertainty ellipse

5.12 Relative 3D Location with uncertainty ellipsoid

8.4a Relative Velocity with Uncertainty

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.514 v0.5.0.

\* \* \* First Change \* \* \* \*

# 2 References

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".

[2] 3GPP TR 23.586: " Ranging based services and Sidelink Positioning ".

[3] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[4] 3GPP TS 24.587: "Vehicle-to-Everything (V2X) services in 5G System (5GS); Protocol aspects; Stage 3".

[5] 3GPP TS 33.533: "Security aspects of ranging based services and sidelink positioning".

[6] 3GPP TS 24.554: "Proximity-services (ProSe) in 5G System (5GS) protocol aspects".

[7] ITU-T Recommendation E.212: "The international identification plan for public networks and subscriptions", 2016-09-23.

[8] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

[9] ISO TS 17419 ITS-AID AssignedNumbers : <http://standards.iso.org/iso/ts/17419/TS17419%20Assigned%20Numbers/TS17419_ITS-AID_AssignedNumbers.pdf>.

[10] ISO/IEC 10118-3:2018: "IT Security techniques – Hash-functions – Part 3: Dedicated hash-functions".

[11] 3GPP TS 23.273: "5G System (5GS) Location Services (LCS); Stage 2".

[12] 3GPP TS 38.355: "NR; Sidelink Positioning Protocol (SLPP); Protocol Specification".

[13] IETF RFC 9110: "HTTP Semantics".

[14] IETF RFC 9112: "HTTP/1.1".

[15] 3GPP TS 24.526: "UE policies for 5G System (5GS); Stage 3".

[xx] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

\* \* \* Second Change \* \* \* \*

## 7.3 Ranging and sidelink positioning communication on LCS aspect

The UE or the network initiates the ranging and sidelink positioning communication utilizing the location services signaling messages defined in 3GPP TS 23.273 [11] to obtain location information including one or more of the following:

a) absolute location of the UE;

b) absolute velocity of the UE;

c) range and direction between a pair of UEs (see clause 5.10 of 3GPP TS 23.032 [xx]);

d) relative location between a pair of UEs (see clause 5.11 and 5.12 of 3GPP TS 23.032 [xx]); and

d) relative velocity between a pair of UEs (see clause 8.4a of 3GPP TS 23.032 [xx]).

In order to obtain the absolute location and/or absolute velocity of the target the UE, the following procedures defined in 3GPP TS 23.273 [11] are applied:

a) Sidelink Mobile Originated Location Request (SL-MO-LR) procedure;

b) MO-LR using sidelink positioning; and

c) MT-LR using sidelink positioning.

NOTE: In order to estimate the location of the UE, the network can decide to utilize the ranging and sidelink positioning during the MO-LR procedure (i.e., MO-LR using sidelink positioning) and the MT-LR procedure (i.e., MT-LR using sidelink positioning).

Editor’s Note: It is FFS whether SL-MT-LR procedure is needed.

In order to obtain the relative locations or distances, relative directions, and/or relative velocity between a pair of UEs, the following procedures defined in 3GPP TS 23.273 [11] are applied:

a) Sidelink Mobile Originated Location Request (SL-MO-LR) procedure; and

b) Sidelink Mobile Terminated Location Request (SL-MT-LR) procedure.

\* \* \* End of Changes \* \* \* \*