**3GPP TSG-RAN WG2 Meeting #116 R2-21xxxxx**

**Online, 01 – 12 November 2021**

**Agenda item:** 5.5

**Source:** vivo

**Title:** Summary of [AT116-e][614][POS] AI 5.5 CRs

**Document for:**  Discussion

# 1. Introduction

This document summarizes the following email discussion:

* [AT116-e][614][POS] AI 5.5 CRs (vivo)

      Scope: Evaluate and conclude on the CRs in R2-2111126 and R2-2111127.

      Intended outcome: Agreed CRs

      Deadline:  Thursday 2021-11-11 0200 UTC

## 1.1 References

[1] R2-2111126, "Correction on LPP message delivery", vivo, CR Rel-15 37.355 15.2.0 - F

[2] R2-2111127, "Correction on LPP message delivery", vivo, CR Rel-16 37.355 16.6.0 - A

## 1.2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

|  |  |  |
| --- | --- | --- |
| Company | Name | Email Address |
| Intel | Yi Guo | Yi.guo@Intel.com |
| Huawei, HiSIlicon | Yinghao Guo | yinghaoguo@huawei.com |
| Nokia | Mani Thyagarajan | mani.thyagarajan@nokia.com |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 2. Discussion

## 2.1 Background

Both CRs [1][2] would correct the following description in the current stage 3 specification:

**Correction 1**

For periodic Assistance Data Transfer procedure in sections 5.2.1a and 5.2.2a, the text description for periodic assistance data parameter is “*a duration for ending the assistance data delivery*”. While in section 6.5.2.13, the corresponding parameter is not “*duration*”, but “*deliveryAmount*”. The description and ASN.1 are not aligned.

|  |
| --- |
| 1. The target sends a *RequestAssistanceData* message to the server using some available *transactionID* T1. The message contains a *periodicSessionID* S (different to any other *periodicSessionID* currently in use between the target and server) in the IE *CommonIEsRequestAssistanceData.* The message also includes a positioning method specific assistance data request element (e.g., IE *A-GNSS-RequestAssistanceData*) identifying the type of assistance data being requested together with desired periodicity conditions for sending it and a duration for ending the assistance data transfer (e.g., in IE *GNSS-PeriodicAssistDataReq*). |

#### – *GNSS-PeriodicControlParam*

The IE *GNSS-PeriodicControlParam* is used to specify control parameters for a periodic assistance data delivery.

-- ASN1START

GNSS-PeriodicControlParam-r15 ::= SEQUENCE {

 deliveryAmount-r15 INTEGER (1..32),

 deliveryInterval-r15 INTEGER (1..64),

 ...

}

-- ASN1STOP

Therefore, the CRs propose to rephrase the description as follows:

|  |
| --- |
| 1. The target sends a *RequestAssistanceData* message to the server using some available *transactionID* T1. The message contains a *periodicSessionID* S (different to any other *periodicSessionID* currently in use between the target and server) in the IE *CommonIEsRequestAssistanceData.* The message also includes a positioning method specific assistance data request element (e.g., IE *A-GNSS-RequestAssistanceData*) identifying the type of assistance data being requested together with desired periodicity conditions and delivery number for sending it (e.g., in IE *GNSS-PeriodicAssistDataReq*). |

**Correction 2**

For the LPP procedures in sections 5.2.3 and 5.3.3, the action of delivering the message to lower layers for transmission is missing.

|  |
| --- |
| 5.2.3 Transmission of LPP Request Assistance DataWhen triggered to transmit a *RequestAssistanceData* message, the target device shall:1> set the IEs for the positioning-method-specific request for assistance data to request the data indicated by upper layers. |

|  |
| --- |
| 5.3.3 Reception of Request Location InformationUpon receiving a *RequestLocationInformation* message, the target device shall:1> if the requested information is compatible with the target device capabilities and configuration:2> include the requested information in a *ProvideLocationInformation* message;2> set the IE *LPP-TransactionID* in the response to the same value as the IE *LPP-TransactionID* in the received message;2> deliver the *ProvideLocationInformation* message to lower layers for transmission.1> otherwise:2> if one or more positioning methods are included that the target device does not support:3> continue to process the message as if it contained only information for the supported positioning methods;3> handle the signaling content of the unsupported positioning methods by LPP error detection as in 5.4.3. |

Therefore, the CRs propose to add the missing action as follows:

|  |
| --- |
| 5.2.3 Transmission of LPP Request Assistance DataWhen triggered to transmit a *RequestAssistanceData* message, the target device shall:1> set the IEs for the positioning-method-specific request for assistance data to request the data indicated by upper layers.1> deliver the message to lower layers for transmission. |

|  |
| --- |
| 5.3.3 Reception of Request Location InformationUpon receiving a *RequestLocationInformation* message, the target device shall:1> if the requested information is compatible with the target device capabilities and configuration:2> include the requested information in a *ProvideLocationInformation* message;2> set the IE *LPP-TransactionID* in the response to the same value as the IE *LPP-TransactionID* in the received message;2> deliver the *ProvideLocationInformation* message to lower layers for transmission.1> otherwise:2> if one or more positioning methods are included that the target device does not support:3> continue to process the message as if it contained only information for the supported positioning methods;3> handle the signaling content of the unsupported positioning methods by LPP error detection as in 5.4.3. 3> deliver the *ProvideLocationInformation* message to lower layers for transmission. |

## 2.2 Discussion

**Question 1:** Do you agree with **Correction 1** to rephrase the "duration for ending the assistance data transfer" to "delivery number"?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| Intel | No | DO not see the problem since the deliveryAmount is also used to indicate the duration.  |
| Huawei, HiSIlicon | No | Agree that it is not totally accuate, but we don’t think there is any ambiguity |
| Nokia | No | This change is not essential since the delivery amount for a periodically transferred assistance data, along with periodicity, dictates the duration for ending the assistance data transfer. So, the current text is fine. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Question 2:** Do you agree with **Correction 2** to add the action "deliver the message to lower layers for transmission"?

|  |  |  |
| --- | --- | --- |
| Company | Yes/No | Comments |
| Intel |  | Agree it is missing, But not essential.  |
| Huawei, HiSIlicon |  | Not that essential |
| Nokia | No | Stage 2 has all the details of the underlying transport layer protocols and interfaces to support transmission of messages for a UE-terminated protocol i.e., LPP. “Signalling between LMF and UE” section in stage 2 explains well how the underlying transport is used to transfer LPP PDU. We do not see any ambiguity in the specification. So, not an essential correction. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 4. Proposed Conclusion

TBD