**3GPP TSG-RAN WG3 #115-e *R3-222713***

**Online, 21st February - 3rd March 2022 was R3-221612**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **36.413** | **CR** | **1804** | **rev** | **5** | **Current version:** | **16.8.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** | Correction for Chapter 10 | | | | | | | | | |
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| ***Source to WG:*** | Ericsson, Nokia, Nokia Shanghai Bell, Huawei | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
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| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-02-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Section 10.3.2 requires, if a receiving entity comprehend all IEs or IE groups within messages of the same EP of the same standard version, if one IE or IE group is comprehended.  If several features are introduced in the same standard version, e.g. at the end of a release, implementations would either need to implement all new features or implement on application level handling of the not-supported features instead of using the criticality mechanism. | | | | | | | | |
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| ***Summary of change:*** | | Sections 10.3.1 and 10.3.2 were modified to remove all ambiguities w.r.t. the functional equivalence of the terms “comprehension” and “support”.  Section 10.3.2 was modified to say that there is no requirement to comprehend all IEs or IE groups of an EP if one IE or IE group is understood.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  The impact can be considered isolated because the change affects only implementations which considered IEs or IE groups comprehended without actually implementing the corresponding function. | | | | | | | | |
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| ***Consequences if not approved:*** | |  | | | | | | | | |
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| ***Clauses affected:*** | | 10.3.1, 10.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
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| ***Other comments:*** | | Note, that general protocol principles as specified in chapter 10 of TS 36.413 are also applicable for the following specifications: TS 36.423, TS 36.443, TS 36.444, TS 36.455, TS 36.459, TS 36.463 | | | | | | | | |
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| ***This CR's revision history:*** | | **r5**: changes to the cover sheet  **r4**: resubmission of the endorsed CR.  **r3**: further small correction in chapter 10.3.1  **r2**: submission to RAN3#112, including changes in chapter 10.3.1  **r1**: revised at RAN3#111  **r0**: submission to RAN3#111 | | | | | | | | |

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### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional S1AP entity:

1. receives IEs or IE groups that cannot be understood (unknown IE ID);

2. receives IEs for which the logical range is violated (e.g., ASN.1 definition: 0 to 15, the logical range is 0 to 10, while values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);

3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message.

4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;

5. receives IEs or IE groups but according to the conditional presence of the concerning object and the specified condition, the IEs or IE groups should not have been present in the received message.

6. receives IEs or IE groups for a functionality that is not supported.

Cases 1, 2 and 6 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 and 6 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

### 10.3.2 Criticality Information

In the S1AP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e., the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE.

- Ignore IE and Notify Sender.

- Ignore IE.

The comprehension of different IEs or IE groups within a standard version or between standard versions is not mandated. Any IE or IE group that is not supported shall be considered not comprehended, even if another IE or IE group for that EP from that standard version is comprehended, and action based on criticality shall be applied.

The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported shallbe considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

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