

**TSG-RAN Meeting #13  
Beijing, China, 18 - 21, September, 2001**

**TSGRP#13(01) 0702**

**Title: Agreed CRs to TS 25.453**

**Source: TSG-RAN WG3**

**Agenda item: 9.4.4**

RP Tdoc	R3 Tdoc	Spec	CR_Num	Rev	Release	CR_Subject	Cat	Cur_Ver	New_Ver	Workitem
RP-010702	R3-012506	25.453	002	1	Rel-5	Correction to the Error handling of the ERROR INDICATION message	F	5.0.0	5.1.0	TEI
RP-010702	R3-012521	25.453	005	2	Rel-5	Error handling of the Erroneously Present Conditional IEs	F	5.0.0	5.1.0	TEI
RP-010702	R3-012655	25.453	006	1	Rel-5	Clarification of chapter 10	F	5.0.0	5.1.0	TEI
RP-010702	R3-012513	25.453	007		Rel-5	PCAP Criticality	F	5.0.0	5.1.0	TEI

CR-Form-v3

## CHANGE REQUEST

⌘ **25.453 CR 002** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction to the Error handling of the ERROR INDICATION message		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ August 2001
<b>Category:</b>	⌘ F	<b>Release:</b>	⌘ REL-5
	<i>Use one of the following categories:</i> <b>F</b> (essential correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (Addition of feature), <b>C</b> (Functional modification of feature) <b>D</b> (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ In RAN3 #22, it was agreed to introduce a specific Error Handling on the ERROR INDICATION so as to avoid ping-ponging of ERROR INDICATION messages that is found undesirable. This CR corrects this behaviour.
<b>Summary of change:</b>	⌘ R1: Addition of a new Exception sub-clause.  R0: It is specified as an exception that the Error Handling for the ERROR INDICATION message for Abstract Syntax Errors and Logical Errors shall always be Local Error Handling.  This CR is not backward compatible with the previous version of the specification for the handling of errors in ERROR INDICATION message. This CR has limited impact on the Error Handling on the ERROR INDICATION message.
<b>Consequences if not approved:</b>	⌘ Exchanges of ERROR INDICATION messages may occur between two network entities leading to degraded performances.

<b>Clauses affected:</b>	⌘ 10.x	
<b>Other specs</b>	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.433 v3.6.0 CR495 TS 25.433 v4.1.0 CR485 TS 25.423 v3.6.0 CR424 TS 25.423 v4.1.0 CR425 TS 25.413 v3.6.0 CR325 TS 25.413 v4.1.0 CR324 TS 25.419 v3.5.0 CR054 TS 25.419 v4.1.0 CR052
<b>affected:</b>	<input type="checkbox"/> Test specifications	

O&M Specifications

**Other comments:** ☞

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 10.x Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.

## CHANGE REQUEST

⌘ **25.453 CR 005** ⌘ rev **2** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Error handling of the Erroneously Present Conditional IEs		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ August 2001
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-4
<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (essential correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (Addition of feature),  <b>C</b> (Functional modification of feature)  <b>D</b> (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p><b>2</b> (GSM Phase 2)  <b>R96</b> (Release 1996)  <b>R97</b> (Release 1997)  <b>R98</b> (Release 1998)  <b>R99</b> (Release 1999)  <b>REL-4</b> (Release 4)  <b>REL-5</b> (Release 5)</p>	

<b>Reason for change:</b>	⌘ In RAN3 #22, it was agreed to introduce an Error Handling for the case of Erroneously Present Conditional IEs (i.e. Conditional IEs that are present when the condition is not met) as this error case is not covered by the specification for the time being.
<b>Summary of change:</b>	⌘ R1: Editorial corrections.  R0: The newly identified error case is added and the handling of this new error case is similar to the error handling for "IEs or IE groups received in wrong order or with too many occurrences" as this is considered a severe error (furthermore, the Cause used is appropriate: 'Message Falsely Constructed')  This CR is backward compatible with the intention of the specification (as it can be considered as a sub-case of the "IEs with too many occurrences" error case). This CR does not have limited impact as it concerns the error handling for all the procedures that have a message containing a Conditional IE.
<b>Consequences if not approved:</b>	⌘ The error handling corresponding to this newly identified error case will remain unspecified.

<b>Clauses affected:</b>	⌘ 10.3.1, 10.3.3, 10.3.6	
<b>Other specs</b>	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.433 v3.6.0 CR503 TS 25.433 v4.1.0 CR504 TS 25.423 v3.6.0 CR443 TS 25.423 v4.1.0 CR444 TS 25.413 v3.5.0 CR338 TS 25.413 v4.1.0 CR339 TS 25.419 v3.6.0 CR055

<b>affected:</b>	<input type="checkbox"/>	Test specifications	TS 25.419 v4.1.0 CR056
	<input type="checkbox"/>	O&M Specifications	
<b>Other comments:</b>	⌘		

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 10.3 Abstract Syntax Error

### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional PCAP 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 (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.

Cases 1 and 2 (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) results 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 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with clauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in clause 10.3.6.

### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, PCAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class PCAP-PROTOCOL-IES, PCAP -PROTOCOL-IES-PAIR, PCAP -PROTOCOL-EXTENSION or PCAP -PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

If an IE/IE group is included in a received message and the presence of the IE/IE group is conditional and the condition is false according to the version of the specification used by the receiver, an abstract syntax error occurs due to this erroneously present conditional IE/IE group.



### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences or erroneously present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall initiate local error handling.

CR-Form-v3

## CHANGE REQUEST

⌘ **25.453** **CR** **006** ⌘ rev **1** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Clarification of chapter 10		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ 2001-08-30
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-5
Use <u>one</u> of the following categories: <b>F</b> (essential correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (Addition of feature), <b>C</b> (Functional modification of feature) <b>D</b> (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

<b>Reason for change:</b>	⌘ Several unclarities w.r.t. error handling were detected.		
<b>Summary of change:</b>	⌘ This CR makes the following updates: <ul style="list-style-type: none"> <li>- 10.3.4 - 10.4: <del>Redundant information regarding "ignore the content of the not comprehended IEs/IEgroups" and "ignore that those IEs/IEgroups are missing" has been deleted, and s</del>Several clarifications have been added.</li> <li>- 10.5 (new): A new sentence is added in an <del>Exception</del>general section concerning the case when the information to indentify the initiator of the procedure is not available in case the peer node has to return a message in reponse (e.g. corrupted RNC-id).</li> </ul>		
<b>Consequences if not approved:</b>	⌘ This CR is backward compatible with the intended behaviour of the specifications.		

<b>Clauses affected:</b>	⌘ 10.3.4, 10.3.5, 10.3.6, 10.4, 10.5(new)		
<b>Other specs</b>	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ 25.413 v3.6.0 CR358 25.413 v4.1.0 CR359 25.419 v3.5.0 CR057 25.419 v4.1.0 CR058 25.423 v3.6.0 CR469 25.423 v4.1.0 CR470 25.433 v3.6.0 CR523 25.433 v4.1.0 CR524
<b>affected:</b>	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
<b>Other comments:</b>	⌘ Chapter 10 in 25.453 v5.0.0 is not based on the latest version of this chapter in		

the RANAP, SABP, RNSAP and NBAP specifications. All changes proposed for these four TSes have thus not been possible to include for 25.453. These changes must instead be taken into account when chapter 10 of 25.453 is updated to the current status of chapter 10 in the other four TSes.

### **How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at:  
[http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 10.3.4 Not comprehended IE/IE group

### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

#### Reject IE:

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

#### Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

#### Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

### 10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received criticality information of an IEs/IE group other than the *Procedure Code* according to the following:

#### Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE group marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE group using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*", that the receiving node does not comprehend, the receiving node shall **consider the procedure as unsuccessfully terminated and** initiate local error handling.

#### Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, **continue with the procedure as if the not comprehended IEs/IE groups were not**

received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

### 10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of the present document used by the receiver:

**Reject IE:**

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall **consider the procedure as unsuccessfully terminated and** initiate local error handling.

**Ignore IE and Notify Sender:**

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.
- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall **continue with the procedure based on the other IEs/IE groups present in the message and** initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

**Ignore IE:**

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall **consider the procedure as unsuccessfully terminated and** initiate local error handling.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality information of the IEs/IE groups containing the erroneous values.

### Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value. Typical cause values are:

- Semantic Error.
- Message not compatible with receiver state.

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, **the procedure shall be considered as unsuccessfully terminated and** local error handling shall be initiated.

### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- In case a response message, failure message or Error Indication message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

CR-Form-v3

## CHANGE REQUEST

⌘ **25.453 CR 007** ⌘ rev **-** ⌘ Current version: **5.0.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ PCAP Criticality		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ August 2001
<b>Category:</b>	⌘ F	<b>Release:</b>	⌘ REL-5
<p><i>Use one of the following categories:</i></p> <p><b>F</b> (essential correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (Addition of feature),  <b>C</b> (Functional modification of feature)  <b>D</b> (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use one of the following releases:</i></p> <p><b>2</b> (GSM Phase 2)  <b>R96</b> (Release 1996)  <b>R97</b> (Release 1997)  <b>R98</b> (Release 1998)  <b>R99</b> (Release 1999)  <b>REL-4</b> (Release 4)  <b>REL-5</b> (Release 5)</p>	

<b>Reason for change:</b>	⌘ The behaviour of a receiving node needs to be defined in two cases: <ul style="list-style-type: none"> <li>- it cannot decode the type of message,</li> <li>- it cannot decode at least the criticality of a not comprehended IE.</li> </ul>
<b>Summary of change:</b>	⌘ Error indication procedure is used in these two cases.
<b>Consequences if not approved:</b>	⌘ Some nodes could behave as ignoring the procedure.  This CR is backwards compatible.

<b>Clauses affected:</b>	⌘ 10.3.2, 10.3.4		
<b>Other specs affected:</b>	<input checked="" type="checkbox"/> Other core specifications  <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	TS 25.433 v3.6.0 CR480 TS 25.433 v4.1.0 CR491 TS 25.423 v3.6.0 CR467 TS 25.423 v4.1.0 CR468 TS 25.413 v3.6.0 CR308 TS 25.413 v4.1.0 CR309 TS 25.419 v3.5.0 CR053 TS 25.419 v4.1.0 CR051
<b>Other comments:</b>	⌘		

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.



## 10.3.2 Criticality Information

In the PCAP 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 clause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see clause 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 following rules restrict when a receiving entity may consider an IE, an IE group, or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by a receiving entity (some may still remain unsupported).

NOTE: This restriction is not applicable to a sending entity for constructing messages.

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

When the criticality information cannot even be decoded in a not comprehended IE or IE group, the Error Indication procedure shall be initiated with an appropriate cause value.

## 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, PCAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class PCAP-PROTOCOL-IES, PCAP-PROTOCOL-IES-PAIR, PCAP-PROTOCOL-EXTENSION or PCAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

## 10.3.4 Not comprehended IE/IE group

### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

**Reject IE:**

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

#### Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

#### Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message IE*, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.4.2 IEs other than the Procedure Code and Type of Message

The receiving node shall treat the different types of received criticality information of an IEs/IE group other than the *Procedure Code* according to the following:

#### Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE group marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE group using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*", that the receiving node does not comprehend, the receiving node shall initiate local error handling.

#### Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.