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

Title: Agreed CRs to TS 25.419

Source: TSG-RAN WG3

Agenda item: 8.3.3/8.3.4/9.4.3

RP Tdoc	R3 Tdoc	Spec	CR_Nur	n Rev	Release	CR_Subject	Ca	tCur_Ve	r New_Ver	Workitem
RP-010582	R3-012508	25.419	051	1	Rel-4	SABP criticality	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012505	25.419	052	1	Rel-4	Correction to the Error handling of the ERROR INDICATION nessage		3.5.0	3.6.0	TEI
RP-010582	R3-012507	25.419	053	1	R99	SABP criticality	F	3.5.0	3.6.0	TEI
RP-010582	R3-012504	25.419	054	1	R99	Correction to the Error handling of the ERROR INDICATION message	F	3.5.0	3.6.0	TEI
RP-010582	R3-012517	25.419	055	1	R99	Error handling of the Erroneously Present Conditional les	F	3.5.0	3.6.0	TEI
RP-010582	R3-012518	25.419	056	1	Rel-4	Error handling of the Erroneously Present Conditional les	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012649	25.419	057	1	R99	Clarification of chapter 10	F	3.5.0	3.6.0	TEI
RP-010582	R3-012650	25.419	058	1	Rel-4	Clarification of chapter 10	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012633	25.419	059	1	R99	SABP General Corrections	F	3.5.0	3.6.0	TEI
RP-010582	R3-012634	25.419	060	1	Rel-4	SABP General Corrections	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012696	25.419	061	2	R99	Clarification of the usage of the Number of Broadcasts Requested IE	F	3.5.0	3.6.0	TEI
RP-010582	R3-012697	25.419	062	2	Rel-4	Clarification of the usage of the Number of Broadcasts Requested IE	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012480	25.419	063		R99	Clarification of the usage of the SABP Reset Procedure	F	3.5.0	3.6.0	TEI
RP-010582	R3-012637	25.419	064	1	Rel-4	Clarification of the usage of the SABP Reset Procedure	Α	4.1.0	4.2.0	TEI
RP-010582	R3-012698	25.419	065	2	R99	Clarification of the usage of the Service Areas List IE within the Reset Procedure	F	3.5.0	3.6.0	TEI

						Clarification of the usage of the Service Areas List IE within the					
RP-010582	R3-012699	25.419	066	2	Rel-4	Reset Procedure	A 4	1.1.0	4.2.0	TEI	

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, 27th – 31th August 2001

Tdoc R3-012508

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Reason for change	e: ¥	- it ca	annot de	code the	type of	mess	age,		oe defined in			E
Summary of chang	je:₩	Error	Indication	on proce	dure is	used i	n thes	se tw	o cases.			
Consequences if not approved:				could behave co			ng the	e pro	cedure.			
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Other comments:	ж											

10.3.2 Criticality Information

In the SABP 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 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 the receiving entity (some may still remain unsupported).

Note that this restriction is 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, RANAP 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 RANAP-PROTOCOL-IES, RANAP-PROTOCOL-IES-PAIR, RANAP-PROTOCOL-EXTENSION or RANAP-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.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

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 IE/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 groups 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 groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- 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 IE/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 only the understood IEs/IE groups.
- If a *response* message 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.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included in the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included in the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

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	O&M Specifications	
Other comments:	x	

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. 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.
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- 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.

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10.3.2 Criticality Information

In the SABP 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;
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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 the receiving entity (some may still remain unsupported).
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- 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.

10.3.4 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.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

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 IE/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 groups 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 groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no 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. In case the information received in the

initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- 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 IE/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 only the understood IEs/IE groups.
- If a *response* message 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.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included in the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included in the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

CR-Form-v3 CHANGE REQUEST										
ж 25	.419 CR <mark>054</mark>	3 rev	1 *	Current vers	ion: 3.5.0 **					
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	L. DANO "00 "1				La di la EDDOD					
Reason for change: # In RAN3 #22, it was agreed to introduce a specific Error Handling on the INDICATION so as to avoid ping-ponging of ERROR INDICATION messathat is found undesirable. This CR corrects this behaviour.										
Summary of change: ₩	R1: Addition of a new Excep	otion su	ıb-clause							
	R0: It is specified as an exc INDICATION message for A be Local Error Handling. This CR is not backward co for the handling of errors in This CR has limited impact message.	Abstract mpatibl ERROF	t Syntax I e with the R INDICA	Errors and Log e previous ver ATION messag	gical Errors shall always sion of the specification ge.					
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	O&M Specifications	
Other comments:		

How to create CRs using this form:

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- 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.

3GPP TSG-RAN3 #23 Meeting Helsinki, Finland, August 27th – 31st 2001

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Work item code:	de: 第 TEI Date: 第 August 200									
Category:	₩ F			Release: ♯	R99					
Reason for chang	Use one of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) P (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. C (Functional modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. C (Functional modification) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) For change: 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 we the condition is not met) as this error case is not covered by the specification the time being.									
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affected:		Test specifications O&M Specifications	TS 25.453 v5.0.0 CR005
Other comments:	\mathfrak{R}		

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. Below is a brief summary:

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- 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 SABP 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 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.

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, <u>RANAP_SABP</u> 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 <u>RANAP_SABP_PROTOCOL_IES_PAIR</u>, <u>RANAP_SABP_PROTOCOL_IES_PAIR_IES_PA</u>

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.

10.3.6 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and 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 <u>or erroneously present</u>, the receiving node shall initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

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Other comments:	¥		

How to create CRs using this form:

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10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional SABP 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 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.

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, <u>RANAP_SABP</u> 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 <u>RANAP_SABP_PROTOCOL_IES_PAIR</u>, <u>RANAP_SABP_PROTOCOL_IES_PAIR_IES_PA</u>

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.

10.3.6 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 <u>or erroneously present</u>, the receiving node shall terminate the procedure and 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 <u>or erroneously present</u>, the receiving node shall initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

3GPP TSG-RAN3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

CHANGE REQUEST													
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Summary of d	chang		This CR makes the following updates: 10.3.4 - 10.4: Redundant information regarding "ignore the content of the not comprehended IEs/IEgroups" and "ignore that those IEs/IEgroups are missing" has been deleted, and sSeveral clarifications have been added. 10.3.4.2, 10.3.5: The inclusion of IEs is aligned with annex A. 10.5 (new): A new sentence is added in an Exceptiongeneral 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).										
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- 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.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received criticality information of an IE/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 groups 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 groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and initiate the Error Indication procedure.
- If a response message is received containing one or more IEs marked with "Reject IE" which the receiving node
 does no 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- 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 IE/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 only the understood IEs/IE groups.
- If a *response* message 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.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included iIn the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included iIn the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

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 this specification 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and 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 <u>consider the procedure as unsuccessfully terminated and initiate local error handling.</u>

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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- 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 <u>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.</u>

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.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and 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.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

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 IE's/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 procedure shall be terminated and 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 procedure shall be terminated and 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.

3GPP TSG-RAN3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

- CR-Form-												CR-Form-v3				
CHANGE REQUEST																
*	25.	419		CR	058	Э	€ re	ev	1	Ħ	Curre	ent ver	sion:	4.1.0		¥
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols											bols.					
Proposed change affects: # (U)SIM ME/UE Radio Access Network ▼ Core Network ▼																
Title:	ж	Clar	ification	n of cha	pter 10											
Source:	₩ R-WG3															
Work item code:										E	Date: 第 2001-08-30					
Category:	ж	Α									Rele	ase: #	€ RE	L-4		
		F A E C D Detail	one of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) C (Editorial modification) Editorial modification of the above categories can and the sum of the properties of the following release 2 R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)							ises:						
Reason for change: Several unclarities w.r.t. error handling were detected.																
Summary o	f chang	e: # - -	 This CR makes the following updates: 10.3.4 - 10.4: Redundant information regarding "ignore the content of the not comprehended IEs/IEgroups" and "ignore that those IEs/IEgroups are missing" has been deleted, and sSeveral clarifications have been added. 10.3.4.2, 10.3.5: The inclusion of IEs is aligned with annex A. 10.5 (new): A new sentence is added in an Exceptiongeneral 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). 													
Consequences if not approved: This CR is backward compatible with the intended behaviour of the specifications.																
Clauses affected: # 10.3.4, 10.3.5, 10.3.6, 10.4, 10.5(new)																
Other spec	25.413 v4.1.0 CR: 25.419 v3.5.0 CR: 25.423 v3.6.0 CR: 25.423 v4.1.0 CR: 25.433 v3.6.0 CR: 25.433 v4.1.0 CR: 25.453 v5.0.0 CR:							CR35 CR05 CR46 CR47 CR52 CR52	59 57 59 70 23	9 7 9 0 3 4						
				•	ification											

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. 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.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received criticality information of an IE/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 groups 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 groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no comprehend, the receiving node shall <u>consider the procedure as unsuccessfully terminated and initiate local error handling.</u>

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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- 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 IE/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 only the understood IEs/IE groups.
- If a response message 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.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included iIn the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. The Repetition Number IE shall be included iIn the Information Element Criticality Diagnostics IE if the reported IE/IE group was part of a "SEQUENCE OF" definition the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

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 this specification 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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and 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 <u>consider the procedure as unsuccessfully terminated and initiate local error handling.</u>

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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- 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 <u>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.</u>

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.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure Code IE, the Triggering Message IE, Procedure Criticality IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the Message Structure IE shall be included.

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. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication 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 terminate the procedure and 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.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

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 IE's/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 procedure shall be terminated and 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 procedure shall be terminated and 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.

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, August 27-31, 2001

CHANGE REQUEST											
[#] 25.4	419	CF	059) #	rev	1	\mathfrak{H}	Current ver	sion:	3.5.0	*
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.											
Proposed change affects:											
Title: ₩	SAF	BP General	Corrections								
Source: #	R-W	VG3									
Work item code: ₩	TEI							Date: 3	Aug	gust 30, 20	01
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Reason for change	: X										
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Consequences if not approved:	Ж							e of procedur			ntinue.

Clauses affected:	¥ 8.1, 9.1.3, 9.2.1, 9.3.2, 9.3.6
Other specs affected:	X Other core specifications
Other comments:	lpha

How to create CRs using this form:

- 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.

8 SABP Procedures

8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1, and Class 2 Procedures:

Table 1: Class 1

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outcome
Procedure		Response message	Response message
Write-Replace	WRITE-REPLACE	WRITE-REPLACE COMPLETE	WRITE-REPLACE FAILURE
Kill	KILL	KILL COMPLETE	KILL FAILURE
Status Load Status Enquiry	LOAD QUERY	LOAD QUERY COMPLETE	LOAD QUERY FAILURE
Status Message Status Query	MESSAGE QUERY	MESSAGE QUERY COMPLETE	MESSAGE QUERY FAILURE
Reset	RESET	RESET COMPLETE	RESET FAILURE

Table 2: Class 2

Elementary Procedure	Message
Restart Indication	RESTART
Failure Indication	FAILURE
Error Indication	ERROR INDICATION

9.1.3 WRITE-REPLACE

This message is sent by the CN to the RNC.

Direction: $CN \rightarrow RNC$

PARAMETER	PRESENCE	RANGE	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1		yes	reject
Message Identifier	M		9.2.19		yes	reject
New Serial Number	M		9.2.5		yes	reject
Old Serial Number	0		9.2.4		yes	ignore
Service Areas List	М		9.2.6		¥yes	reject
Category	0		9.2.7		yes	ignore
Repetition Period	М		9.2.8		yes	reject
Number of Broadcasts Requested	М		9.2.9		yes	reject
Data Coding Scheme	М		9.2.15		yes	reject
Broadcast Message Content	M		9.2.2		ves	reject

9.2 Information Element Definitions

9.2.1 MessageType

Message Type IE uniquely identifies the message being sent. It is mandatory for all messages.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Message Type				
>Procedure Code	M		ENUMERATED (Write-Replace, Kill, Load Status EnquiryLoad Query, Message Status Query, Reset, Restart Indication, Failure Indication, Error Indication	
>Type of Message	М		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.3.2 Elementary Procedure Definitions

```
-- Elementary Procedure definitions
SABP-PDU-Descriptions {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-PDU-Descriptions (0)}
DEFINITIONS AUTOMATIC TAGS ::=
-- IE parameter types from other modules.
__ ********************************
IMPORTS
   Criticality,
   ProcedureCode
FROM SABP-CommonDataTypes
   Error-Indication,
   Failure,
   Kill,
   Kill-Complete,
   Kill-Failure,
   Load-Query,
   Load-Query-Complete,
   Load-Query-Failure,
   Reset,
   Reset-Complete,
   Reset-Failure.
   Restart,
   Message-Status-Query,
   Message-Status-Query-Complete,
   Message-Status-Query-Failure,
   Write-Replace,
   Write-Replace-Complete,
   Write-Replace-Failure
FROM SABP-PDU-Contents
   id-Error-Indication,
   id-Failure-Indication,
   id-Kill,
   id-Reset,
   id-Restart-Indication,
   id-Status-Load_Status-Enquiry,
   id-Status-Message-Status-Query,
   id-Write-Replace
FROM SABP-Constants;
-- Interface Elementary Procedure Class
__ ********************
SABP-ELEMENTARY-PROCEDURE ::= CLASS {
   &InitiatingMessage
   OPTIONAL,
WITH SYNTAX {
   INITIATING MESSAGE
                      &InitiatingMessage
   [SUCCESSFUL OUTCOME
&SuccessfulOutcome]
   [UNSUCCESSFUL OUTCOME
                        &UnsuccessfulOutcome]
```

```
PROCEDURE CODE
                          &procedureCode
   [CRITICALITY
                          &criticality]
}
__ **********************************
-- Interface PDU Definition
__ ********************
SABP-PDU ::= CHOICE {
   initiatingMessage
                      InitiatingMessage.
   successfulOutcome SuccessfulOutcome,
   unsuccessfulOutcome UnsuccessfulOutcome,
}
InitiatingMessage ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality
                                                        ({SABP-ELEMENTARY-
PROCEDURES \ { @procedureCode \} ) ,
              SABP-ELEMENTARY-PROCEDURE.&InitiatingMessage
                                                             ({SABP-ELEMENTARY-
PROCEDURES \ { @procedureCode \} )
SuccessfulOutcome ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality ({SABP-ELEMENTARY-
{\tt PROCEDURES} \big\} \big\{ @ {\tt procedureCode} \big\} \, ) \; ,
              SABP-ELEMENTARY-PROCEDURE & Successful Outcome
                                                             ({SABP-ELEMENTARY-
   value
PROCEDURES \ { @procedureCode \} )
UnsuccessfulOutcome ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality
                                                     ({SABP-ELEMENTARY-
PROCEDURES \ { @procedureCode \} ) ,
              SABP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({SABP-ELEMENTARY-
   value
{\tt PROCEDURES} \\ \{ @ procedure Code \} )
__ *********************
-- Interface Elementary Procedure List
__ ********************
SABP-ELEMENTARY-PROCEDURES SABP-ELEMENTARY-PROCEDURE ::= {
   SABP-ELEMENTARY-PROCEDURES-CLASS-1
   SABP-ELEMENTARY-PROCEDURES-CLASS-2
}
SABP-ELEMENTARY-PROCEDURES-CLASS-1 SABP-ELEMENTARY-PROCEDURE ::= {
   write-Replace
                      kill
   status-Lload-Status-Enquiry |
   status-Mmessage-Status-Query
   reset
}
SABP-ELEMENTARY-PROCEDURES-CLASS-2 SABP-ELEMENTARY-PROCEDURE ::= {
   restart-Indication
   failure-Indication
   error-Indication
}
write-Replace SABP-ELEMENTARY-PROCEDURE ::= {
   INITIATING MESSAGE Write-Replace
   SUCCESSFUL OUTCOME Write-Replace-Complete
   UNSUCCESSFUL OUTCOME Write-Replace-Failure
                      id-Write-Replace
   PROCEDURE CODE
kill SABP-ELEMENTARY-PROCEDURE ::= {
   INITIATING MESSAGE Kill
```

```
SUCCESSFUL OUTCOME Kill-Complete
    UNSUCCESSFUL OUTCOME Kill-Failure
    PROCEDURE CODE
                            id-Kill
}
status-Load-Enquiry SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Load-Query
SUCCESSFUL OUTCOME Load-Query-Complete
    UNSUCCESSFUL OUTCOME Load-Query-Failure
    PROCEDURE CODE
                            id-Status-Load-Status-Enquiry
status-Message-Query SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Message-Status-Query
    SUCCESSFUL OUTCOME Message-Status-Query-Complete
    UNSUCCESSFUL OUTCOME Message-Status-Query-Failure
    PROCEDURE CODE
                            id-Status-Message-Status-Query
reset SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Reset
    SUCCESSFUL OUTCOME Reset-Complete
    UNSUCCESSFUL OUTCOME
                           Reset-Failure
    PROCEDURE CODE
                            id-Reset
}
\verb"restart-Indication SABP-ELEMENTARY-PROCEDURE ::= \{
    INITIATING MESSAGE Restart
    PROCEDURE CODE
                            id-Restart-Indication
}
failure-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Failure
    PROCEDURE CODE
                            id-Failure-Indication
}
error-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Error-Indication
    PROCEDURE CODE
                            id-Error-Indication
}
END
```

9.3.6 Constant Definitions

```
__ *********************************
-- Constant definitions
 __ *********************************
SABP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-Constants (4) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
 __ ********************************
-- Elementary Procedures
 __ **********************
id-Write-Replace
                          INTEGER ::= 0
id-Kill
id-Status-Load-Status-Enquiry
id-Status-Message-Status-Query
id-Status-Message-Status Query
INTEGER ::= 3
INTEGER ::= 4
                                      INTEGER ::= 2
id-Reset
                      INTEGER ::= 5
id-reset ::= 6
id-Failure-Indication INTEGER ::= 6
id-Failure-Indication INTEGER ::= 7
id-Error-Indication
                          INTEGER ::= 7
__ *********************
id-Broadcast-Message-Content
id-Category
                         INTEGER ::= 1
                      INTEGER ::= 2
id-Cause
\verb|id-Criticality-Diagnostics| INTEGER ::= 3
id-Data-Coding-Scheme
                             INTEGER ::= 4
id-Failure-List
                         INTEGER ::= 5
id-Message-Identifier INTEGER ::= 6
id-New-Serial-Number
                              INTEGER ::= 7
id-Old-Serial-Number INTEGER ::= 10
id-Radio-Resource-Loading-List INTEGER ::= 11
id-Recovery-Indication INTEGER ::= 12
id-Repetition-Period INTEGER ::= 13
id-Recovery-Indication
id-Repetition-Period INTEGER ::= 15
id-Service-Areas-List INTEGER ::= 15
id-Service-Areas-List INTEGER ::= 15
INTEGER ::= 16
id-TypeOfError
                              INTEGER ::= 17
__ *********************************
-- Extension constants
 __ *********************
-- Lists
 __ *********************
maxRadio-Resource-Loading-List INTEGER ::= 65535
maxFailure-List
                          INTEGER ::= 65535
\verb|maxNumber-of-Broadcasts-Completed-List| INTEGER ::= 65535
                         INTEGER ::= 256
maxNrOfErrors
maxService-Areas-List
                             INTEGER ::= 65535
maxProtocolExtensions
                             INTEGER ::= 65535
                         INTEGER ::= 65535
maxProtocolIEs
```

maxNrOfLevels INTEGER ::= 256

END

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, August 27-31, 2001

CHANGE REQUEST												
[#] 25.	419		CR	060	ж	rev	1	ж	Current ver	rsion:	4.1.0	*
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.												
Proposed change affects:												
Title: ₩	SA	BP Gene	eral Cor	rections								
Source: #	R-V	VG3										
Work item code: ₩	TEI	[Date: 3	& Au	gust 30, 20	01
Category: Ж	A								Release:	€ RE	L-4	
Reason for change	Deta be fo	F (esse A (corre B (Addi C (Fund D (Edito iled expl	ential con esponds ition of f ctional n orial mod lanations	to a corre	ection in n of feat	ure)		lease	2	(GSN (Rele (Rele (Rele (Rele (Rele	ollowing rela M Phase 2) Pase 1996) Pase 1997) Pase 1998) Pase 1999) Pase 4)	
		chapte In the other of for the propose The "I names	Table 1 chapters consist sed to be procedu. So it si	, there are use "Loac ent usage e changed	"Status d Status of proce as "Load in Messa changed	Load Enquiedure d Stat age Ty into p	Enqui iry" an names, us Enc vpe IE rocedu	ry" and "M , the p quiry" conta	nd "Status M lessage Statu procedure na ' and "Messa nins message nmes.	lessage s Quer mes in lge Stat	Query". B y" respecti- the Table it tus Query".	ut in the vely. So I are
Summary of chang	je: ૠ	Enquir Chang Chang	ry" and ge the mo	"Message	Status (mes in "Ang ASN."	Query [*] <i>Proce</i> .1 par	" respe dure C t.	ective	age Query" i ly. into procedu			oad Status
Consequences if not approved:	¥			-	•			Ū	ge of procedu			ntinue.

Clauses affected:	8.1 , 9.1.3, 9.2.1, 9.3.2, 9.3.6
Other specs affected:	X Other core specifications
Other comments:	*

How to create CRs using this form:

- 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.

8 SABP Procedures

8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1, and Class 2 Procedures:

Table 1: Class 1

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outcome
Procedure		Response message	Response message
Write-Replace	WRITE-REPLACE	WRITE-REPLACE COMPLETE	WRITE-REPLACE FAILURE
Kill	KILL	KILL COMPLETE	KILL FAILURE
Status Load Status	LOAD QUERY	LOAD QUERY COMPLETE	LOAD QUERY FAILURE
Enquiry			
Status Message Status	MESSAGE QUERY	MESSAGE QUERY COMPLETE	MESSAGE QUERY FAILURE
Query			
Reset	RESET	RESET COMPLETE	RESET FAILURE

Table 2: Class 2

Elementary Procedure	Message
Restart Indication	RESTART
Failure Indication	FAILURE
Error Indication	ERROR INDICATION

9.1.3 WRITE-REPLACE

This message is sent by the CN to the RNC.

Direction: $CN \rightarrow RNC$

PARAMETER	PRESENCE	RANGE	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1		yes	reject
Message Identifier	M		9.2.19		yes	reject
New Serial Number	M		9.2.5		yes	reject
Old Serial Number	0		9.2.4		yes	ignore
Service Areas List	M		9.2.6		¥yes	reject
Category	0		9.2.7		yes	ignore
Repetition Period	M		9.2.8		yes	reject
Number of Broadcasts Requested	М		9.2.9		yes	reject
Data Coding Scheme	M		9.2.15		yes	reject
Broadcast Message Content	M		9.2.2		ves	reiect

9.2 Information Element Definitions

9.2.1 MessageType

Message Type IE uniquely identifies the message being sent. It is mandatory for all messages.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Message Type				
>Procedure Code	M		ENUMERATED (Write-Replace, Kill, Load Status EnquiryLoad Query, Message Status Query, Reset, Restart Indication, Failure Indication, Error Indication	
>Type of Message	М		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.3.2 Elementary Procedure Definitions

```
-- Elementary Procedure definitions
SABP-PDU-Descriptions {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-PDU-Descriptions (0)}
DEFINITIONS AUTOMATIC TAGS ::=
-- IE parameter types from other modules.
__ ********************************
IMPORTS
   Criticality,
   ProcedureCode
FROM SABP-CommonDataTypes
   Error-Indication,
   Failure,
   Kill,
   Kill-Complete,
   Kill-Failure,
   Load-Query,
   Load-Query-Complete,
   Load-Query-Failure,
   Reset,
   Reset-Complete,
   Reset-Failure.
   Restart,
   Message-Status-Query,
   Message-Status-Query-Complete,
   Message-Status-Query-Failure,
   Write-Replace,
   Write-Replace-Complete,
   Write-Replace-Failure
FROM SABP-PDU-Contents
   id-Error-Indication,
   id-Failure-Indication,
   id-Kill,
   id-Reset,
   id-Restart-Indication,
   id-Status-Load_Status-Enquiry,
   id-Status-Message-Status-Query,
   id-Write-Replace
FROM SABP-Constants;
-- Interface Elementary Procedure Class
__ ********************
SABP-ELEMENTARY-PROCEDURE ::= CLASS {
   &InitiatingMessage
   OPTIONAL,
WITH SYNTAX {
   INITIATING MESSAGE
                      &InitiatingMessage
   [SUCCESSFUL OUTCOME
&SuccessfulOutcome]
   [UNSUCCESSFUL OUTCOME
                        &UnsuccessfulOutcome]
```

```
PROCEDURE CODE
                          &procedureCode
   [CRITICALITY
                          &criticality]
}
__ **********************************
-- Interface PDU Definition
__ ********************
SABP-PDU ::= CHOICE {
   initiatingMessage
                      InitiatingMessage.
   successfulOutcome SuccessfulOutcome,
   unsuccessfulOutcome UnsuccessfulOutcome,
}
InitiatingMessage ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality
                                                        ({SABP-ELEMENTARY-
PROCEDURES \ {@procedureCode \} ) ,
              SABP-ELEMENTARY-PROCEDURE.&InitiatingMessage
                                                             ({SABP-ELEMENTARY-
PROCEDURES \ { @procedureCode \} )
SuccessfulOutcome ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality ({SABP-ELEMENTARY-
{\tt PROCEDURES} \big\} \big\{ @ {\tt procedureCode} \big\} \, ) \; ,
              SABP-ELEMENTARY-PROCEDURE & Successful Outcome
                                                             ({SABP-ELEMENTARY-
   value
PROCEDURES \ { @procedureCode \} )
UnsuccessfulOutcome ::= SEQUENCE {
   procedureCode SABP-ELEMENTARY-PROCEDURE.&procedureCode
                                                             ({SABP-ELEMENTARY-PROCEDURES}),
   criticality SABP-ELEMENTARY-PROCEDURE.&criticality
                                                     ({SABP-ELEMENTARY-
PROCEDURES \ { @procedureCode \} ) ,
              SABP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({SABP-ELEMENTARY-
   value
{\tt PROCEDURES} \\ \{ @ procedure Code \} )
__ *********************
-- Interface Elementary Procedure List
__ ********************
SABP-ELEMENTARY-PROCEDURES SABP-ELEMENTARY-PROCEDURE ::= {
   SABP-ELEMENTARY-PROCEDURES-CLASS-1
   SABP-ELEMENTARY-PROCEDURES-CLASS-2
}
SABP-ELEMENTARY-PROCEDURES-CLASS-1 SABP-ELEMENTARY-PROCEDURE ::= {
   write-Replace
                      kill
   status-Lload-Status-Enquiry |
   status-Mmessage-Status-Query
   reset
}
SABP-ELEMENTARY-PROCEDURES-CLASS-2 SABP-ELEMENTARY-PROCEDURE ::= {
   restart-Indication
   failure-Indication
   error-Indication
}
write-Replace SABP-ELEMENTARY-PROCEDURE ::= {
   INITIATING MESSAGE Write-Replace
   SUCCESSFUL OUTCOME Write-Replace-Complete
   UNSUCCESSFUL OUTCOME Write-Replace-Failure
                      id-Write-Replace
   PROCEDURE CODE
kill SABP-ELEMENTARY-PROCEDURE ::= {
   INITIATING MESSAGE Kill
```

```
SUCCESSFUL OUTCOME Kill-Complete
    UNSUCCESSFUL OUTCOME Kill-Failure
    PROCEDURE CODE
                            id-Kill
}
status-Load-Enquiry SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Load-Query
SUCCESSFUL OUTCOME Load-Query-Complete
    UNSUCCESSFUL OUTCOME Load-Query-Failure
    PROCEDURE CODE
                            id-Status-Load-Status-Enquiry
status-Message-Query SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Message-Status-Query
    SUCCESSFUL OUTCOME Message-Status-Query-Complete
    UNSUCCESSFUL OUTCOME Message-Status-Query-Failure
    PROCEDURE CODE
                            id-Status-Message-Status-Query
reset SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Reset
    SUCCESSFUL OUTCOME Reset-Complete
    UNSUCCESSFUL OUTCOME
                           Reset-Failure
    PROCEDURE CODE
                            id-Reset
}
\verb"restart-Indication SABP-ELEMENTARY-PROCEDURE ::= \{
    INITIATING MESSAGE Restart
    PROCEDURE CODE
                            id-Restart-Indication
}
failure-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Failure
    PROCEDURE CODE
                            id-Failure-Indication
}
error-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE Error-Indication
    PROCEDURE CODE
                            id-Error-Indication
}
END
```

9.3.6 Constant Definitions

```
__ *********************************
-- Constant definitions
__ *********************************
SABP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-Constants (4) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
__ ********************************
-- Elementary Procedures
__ **********************
id-Write-Replace
                         INTEGER ::= 0
id-Kill
id-Status-Load-Status-Enquiry
id-Status-Message-Status-Query
id-Status-Message-Status Query
INTEGER ::= 3
INTEGER ::= 4
                                    INTEGER ::= 2
id-Reset
                     INTEGER ::= 5
id-Reset INTEGER ::= 6
id-Error-Indication
                         INTEGER ::= 7
__ *********************
id-Broadcast-Message-Content
id-Category
                        INTEGER ::= 1
                     INTEGER ::= 2
id-Cause
\verb|id-Criticality-Diagnostics| INTEGER ::= 3
id-Data-Coding-Scheme
                            INTEGER ::= 4
id-Failure-List
                        INTEGER ::= 5
id-Message-Identifier INTEGER ::= 6
id-New-Serial-Number
                            INTEGER ::= 7
id-Old-Serial-Number INTEGER ::= 10
id-Radio-Resource-Loading-List INTEGER ::= 11
id-Recovery-Indication INTEGER ::= 12
id-Repetition-Period INTEGER ::= 13
id-Recovery-Indication
id-Repetition-Period INTEGER ::= 15
id-Service-Areas-List INTEGER ::= 15
id-Service-Areas-List INTEGER ::= 15
INTEGER ::= 16
id-TypeOfError
                            INTEGER ::= 17
__ *********************************
-- Extension constants
__ *********************
-- Lists
__ *********************
maxRadio-Resource-Loading-List INTEGER ::= 65535
maxFailure-List
                         INTEGER ::= 65535
maxNumber-of-Broadcasts-Completed-List INTEGER ::= 65535
                        INTEGER ::= 256
maxNrOfErrors
maxService-Areas-List
                            INTEGER ::= 65535
maxProtocolExtensions
                            INTEGER ::= 65535
                        INTEGER ::= 65535
maxProtocolIEs
```

maxNrOfLevels INTEGER ::= 256

END

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

CR-Form-v3											
				CHAN	GE R	EQ	UE:	ST			
*	25.	419	CR	61	¥	rev	2	Ж	Current vers	ion: 3.5. () #
For HE	LP on u	sing	this form, se	e bottom c	of this pa	ge or	look a	at the	e pop-up text	over the % s	ymbols.
Proposed change affects: # (U)SIM ME/UE Radio Access Network X Core Network X											
Title:	ж	Cla	rification of	he usage	of the N	umbei	of Bi	road	casts Reques	sted IE	
Source:	ж	R-V	VG3								
Work item	code: ૠ	TE	l						Date: ∺	2001-08-3	1
Category:	ж	F							Release: ♯	REL-99	
		Deta	one of the foll F (essential of A (corresport B (Addition of C (Functional roll of D (Editorial roll of bund in 3GPP	correction) Ids to a correction, I feature), I modification I modification I no of the a	rection in on of feat) lbove cate	ure)		lease	2	the following r (GSM Phase (Release 199) (Release 199) (Release 199) (Release 199) (Release 4) (Release 5)	2) 6) 7) 8)
Reason for change: Within the WRITE-REPLACE message, there exists the Number of Broadca Requested IE, which indicates to the RNC how frequently a message should broadcasted. If set to '0', this means that the message shall be broadcast indefinetly until instructed otherwise – however – it was not clear if the RNC should return a WRITE-REPLACE COMPLETE to the CBC upon broadcast each message. Repeated WRITE-REPLACE COMPLETE messages inform the CBC of the progress of this message to be broadcasted (indefinetly) is the required, instead the Message Query procedure should be utilised.						should be ast RNC dcasting nforming y) is not					
Summary o	of chang	ю: Ж	Additional REPLACE			e Proc	edura	al de	scription to de	escribe the V	VRITE-
Consequei not approv		æ	respond ear '0'. Backwards Isolated Imp	Compatibition of the compatibi	the CN very ty: There CR has dended the	where e is no	the <i>N</i> impa	impa	s it is not cleaser of Broadcas pon the ASN. act upon the lud respond e	ats Requested In transfer sy Write-Replace	E is set to ntact.
Clauses af	fected:	*	8.2.2								
Other spec affected:	es	ж	X Other co	ore specific ecifications pecification	3	ж	25.4	419	v4.1.0 (Rel 4)) CR62	
Other com	ments:	Ж									

How to create CRs using this form:

- 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.

8.2 Write-Replace

8.2.1 General

The purpose of this Write-Replace procedure is to broadcast new information or replace a message already broadcast to a chosen Service Area(s).

8.2.2 Successful Operation

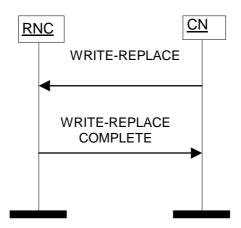


Figure 1: Write-Replace Procedure: Successful Operation

The CN shall initiate the procedure by sending a WRITE-REPLACE message to the RNC.

The presence of a *New Serial Number* IE will indicate that this is a new broadcast. The presence of both the *Old Serial Number* IE and a *New Serial Number* IE will indicate that this message is a replacement of an existing broadcast. The RNC will initiate broadcasting of a new message or replace a message already broadcast as requested to the service areas as indicated in the *Service Areas List* IE.

The RNC shall uniquely identify the CBS message by the *Message Identifier* IE together with the serial number in the *New Serial Number* IE and the *Service Areas List* IE.

The RNC shall perform the broadcast according to the value of the Category IE as follows:

- The Category IE, if given in the WRITE-REPLACE message, shall be treated as follows:
 - 1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately
 - 2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal"
 - 3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.
- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

The RNC shall pass the Data Coding Scheme IE transparently to the radio interface protocol.

The RNC shall pass the *Broadcast Message Content* IE Transparently to the radio interface protocol.

The RNC shall broadcast the message frequently according to the value of the *Number of Broadcasts Requested* IE. If the value is set to "0", the RNC shall broadcast the message until the CN requests otherwise.

Upon receipt of the WRITE-REPLACE message the RNC shall respond using the WRITE-REPLACE COMPLETE message containing a *New Serial Number* IE indicating that resources are available as requested for the Service Area(s)

specified and a *Number of Broadcast Complete List* IE contains each Service Area which successfully performed the requested operation and for each of these Service Area(s), the number of times the broadcast message has been sent to the particular Service Area(s) for broadcast.

If the *Number of Broadcasts Requested* IE was set to "0" the RNC shall send the WRITE-REPLACE COMPLETE message only once and that is after it has successfully attempted the first broadcast of the message in all the requested Service Area(s).

8.2.3 Unsuccessful Operation

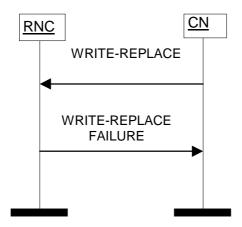


Figure 2: Write-Replace Procedure: Un-Successful Operation

If the RNC cannot allocate all the resources requested for the Service Area(s) specified in the WRITE-REPLACE message, then the RNC shall return a WRITE-REPACE FAILURE message to the CN. A list of Service Area(s) where the requested resources are unavailable and appropriate cause value shall be provided in this WRITE-REPLACE FAILURE message in the *Failure List* IE.

This WRITE-REPLACE FAILURE message may also include those Service Area(s) where the requested resources were available and shall indicate in the *Number of Broadcasts Completed List* IE those Service Area(s) which completed the request.

If the *Number of Broadcasts Requested*‡ IE was set to "0" and the RNC was not able to send the message at least once to a subset of the requested Service Area(s) indicated in the *Service Areas List* IE, the RNC shall send the WRITE-REPLACE FAILURE message only once and that is after it has successfully attempted the first broadcast of the message in all the Service Area(s) where it was able to allocate resources.

8.2.4 Abnormal Conditions

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

	CR-Form-v3										CR-Form-v3		
				С	HAN	GE F	REQ	UE	ST	•			
*	25.	419		CR	62	ж	rev	2	ж	Current vers	sion:	4.1.0	æ
For <u>HEL</u>	LP on u	sing t	his for	m, see	bottom o	of this pa	ige or	look	at th	e pop-up text	over	the # sy	mbols.
Proposed change affects: # (U)SIM ME/UE Radio Access Network X Core Network X													
Title:	ж	Cla	rification	on of the	e usage	of the N	lumbe	r of B	road	lcasts Reque	sted II	E	
Source:	ж	R-V	VG3										
Work item	code: ૠ	TEI								Date: ♯	200	1-08-31	
Category:	ж	Α								Release: ♯	RE	L-4	
		Deta	F (ess A (cord B (Add C (Fur D (Edi iled exp	ential co responds dition of t nctional r torial mo planation	to a córi	rection in on of feat) lbove cat	ture)		elease	Use <u>one</u> of 2 e) R96 R97 R98 R99 REL-4 REL-5	(GSM (Rele (Rele (Rele (Rele (Rele	llowing real place 1 Phase 2 ase 1996 ase 1997 ase 1999 ase 4 ase 5)))
Reason for	Required broad indefined should be each the Control of the control	dested II deasted finetly un Ild return messag CBC of t	E, which If set to Itil instru I a WRIT Ge. Repe	indicate o '0', this ucted oth TE-REP eated W ess of th	es to the mean records to	he RNns thate And the COM REPLESSAGE	NC hat the owe work own the ow	re exists the // ow frequently e message she ver – it was no ETE to the CB E COMPLETE be broadcaste occedure shou	all be all be ot cleased upon the cleased and	essage shads broadca ar if the Fon broad sages in definetly)	nould be st RNC casting forming		
Summary o	of chang	æ:₩			xt is add rocedure		e Prod	edur	al de	escription to d	escrib	e the W	RITE-
Consequen		**	respondante (10°). Backv Isolate procee	nd each vards Co ed Impa dure – it	time to	the CN ty: Ther CR has ended the	where e is no	the A impa	<i>lumb</i> act u ⊢imp	is it is not clear er of Broadcas upon the ASN act upon the uld respond e	sts Red .1 trar Write	<i>quested</i> IE nsfer syn -Replace	E is set to
Clauses aff	fected:	¥	8.2.2)									
Other spec affected: Other comi	s	* * *	X O1	ther core	e specific ifications cificatior	3	¥	25.	419	v3.6.0 CR 61			
Juici Cuilli	neno.	თ											

How to create CRs using this form:

- 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.

8.2 Write-Replace

8.2.1 General

The purpose of this Write-Replace procedure is to broadcast new information or replace a message already broadcast to a chosen Service Area(s).

8.2.2 Successful Operation

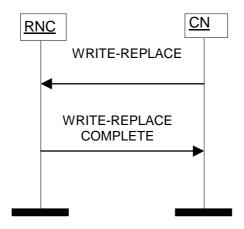


Figure 1: Write-Replace Procedure: Successful Operation

The CN shall initiate the procedure by sending a WRITE-REPLACE message to the RNC.

The presence of a *New Serial Number* IE will indicate that this is a new broadcast. The presence of both the *Old Serial Number* IE and a *New Serial Number* IE will indicate that this message is a replacement of an existing broadcast. The RNC will initiate broadcasting of a new message or replace a message already broadcast as requested to the service areas as indicated in the *Service Areas List* IE.

The RNC shall uniquely identify the CBS message by the *Message Identifier* IE together with the serial number in the *New Serial Number* IE and the *Service Areas List* IE.

The RNC shall perform the broadcast according to the value of the Category IE as follows:

- The Category IE, if given in the WRITE-REPLACE message, shall be treated as follows:
 - 1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately
 - 2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal"
 - 3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.
- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

The RNC shall pass the Data Coding Scheme IE transparently to the radio interface protocol.

The RNC shall pass the *Broadcast Message Content* IE Transparently to the radio interface protocol.

The RNC shall broadcast the message frequently according to the value of the *Number of Broadcasts Requested* IE. If the value is set to "0", the RNC shall broadcast the message until the CN requests otherwise.

Upon receipt of the WRITE-REPLACE message the RNC shall respond using the WRITE-REPLACE COMPLETE message containing a *New Serial Number* IE indicating that resources are available as requested for the Service Area(s)

specified and a *Number of Broadcast Complete List* IE contains each Service Area which successfully performed the requested operation and for each of these Service Area(s), the number of times the broadcast message has been sent to the particular Service Area(s) for broadcast.

If the *Number of Broadcasts Requested* IE was set to "0" the RNC shall send the WRITE-REPLACE COMPLETE message only once and that is after it has successfully attempted the first broadcast of the message in all the requested Service Area(s).

8.2.3 Unsuccessful Operation

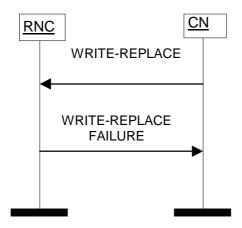


Figure 2: Write-Replace Procedure: Un-Successful Operation

If the RNC cannot allocate all the resources requested for the Service Area(s) specified in the WRITE-REPLACE message, then the RNC shall return a WRITE-REPACE FAILURE message to the CN. A list of Service Area(s) where the requested resources are unavailable and appropriate cause value shall be provided in this WRITE-REPLACE FAILURE message in the *Failure List* IE.

This WRITE-REPLACE FAILURE message may also include those Service Area(s) where the requested resources were available and shall indicate in the *Number of Broadcasts Completed List* IE those Service Area(s) which completed the request.

If the *Number of Broadcasts Requested* IE was set to "0" and the RNC was not able to send the message at least once to a subset of the requested Service Area(s) indicated in the *Service Areas List* IE, the RNC shall send the WRITE-REPLACE FAILURE message only once and that is after it has successfully attempted the first broadcast of the message in all the Service Area(s) where it was able to allocate resources.

8.2.4 Abnormal Conditions

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

	CHANGE REQUEST											
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Other comments:												

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \(\mathbb{H} \) 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.

8.6 Reset

8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

8.6.2 Successful Operation

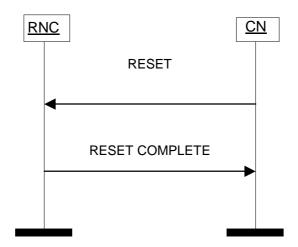


Figure 9: Reset Procedure: Successful Operation

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

8.6.3 Unsuccessful Operation

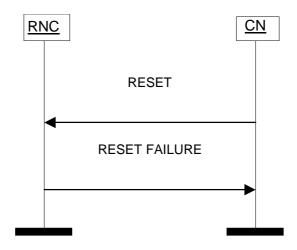


Figure 10: Reset Procedure: Un-Successful Operation

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message containing the *Failure List* IE indicating the relevant Service Area(s) and the appropriate cause value.

The RESET FAILURE message may – if applicable - also include those Service Area(s) for which the RESET message was successful.

8.6.4	Abnormal Conditions
	END OF CHANGES

3GPP TSG-RAN WG3 Meeting #23 Helsinki, Finland, 27th – 31st August, 2001

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How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
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- 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.

8.6 Reset

8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

8.6.2 Successful Operation

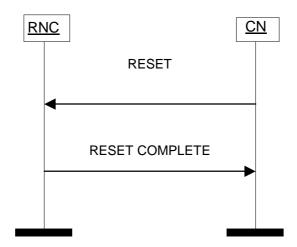


Figure 9: Reset Procedure: Successful Operation

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

8.6.3 Unsuccessful Operation

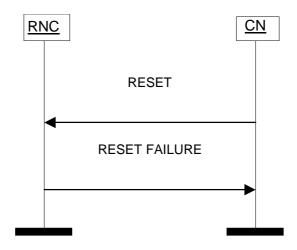


Figure 10: Reset Procedure: Un-Successful Operation

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message containing the *Failure List* IE indicating the relevant Service Area(s) and the appropriate cause value.

The RESET FAILURE message may – if applicable - also include those Service Area(s) for which the RESET message was successful.

8.6.4	Abnormal Conditions	
	END OF CHANGES	

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Other comments:

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ 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.

8.6 Reset

8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

8.6.2 Successful Operation

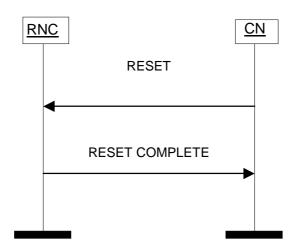


Figure 9: Reset Procedure: Successful Operation

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

8.6.3 Unsuccessful Operation

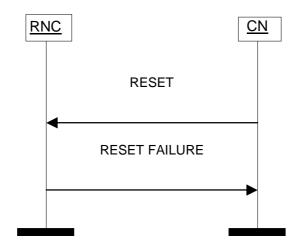


Figure 10: Reset Procedure: Un-Successful Operation

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message. The RESET FAILURE message may containing the Service Areas List IE and shall contain the the Failure List IE indicating the relevant Service Area(s) in which the RESET message was successful and unsuccessful respectively, along with and the appropriate cause value.

The sum of the Service Area(s) included in the Service Areas List and Failure List IEs shall be the same as indicated in the Service Areas List IE of the initiating RESET message.

The RESET FAILURE message may if applicable also include those Service Area(s) for which the RESET message was successful.

8.6.4 Abnormal Conditions

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9.2.6 Service Areas List

<u>The Service Areas List IE identifies a sequence of one or more Service Areas to which the message(s) apply is sent from the CN to the RNC. It indicates the group of Service Area(s) that the message will be broadcast to. The Service Areas List IE must include at least one Service Area.</u>

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Service Areas List		1 to <maxno of SAI></maxno 		
>Service Area Identifier	М		9.2.11	

Range bound	Explanation					
MaxnoofSAI	Maximum no. of SAI in Service Areas List. Value is 65535					

END OF CHANGES
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Other comments:

How to create CRs using this form:

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8.6 Reset

8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

8.6.2 Successful Operation

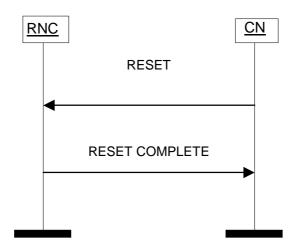


Figure 9: Reset Procedure: Successful Operation

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

 $Upon\ receipt\ of\ this\ message\ the\ RNC\ shall\ end\ broadcasting\ in\ the\ indicated\ Service\ Area(s)\ and\ shall\ respond\ using\ a$ $RESET\ COMPLETE\ message.$

8.6.3 Unsuccessful Operation

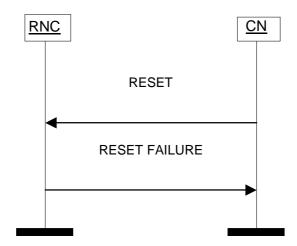


Figure 10: Reset Procedure: Un-Successful Operation

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message. The RESET FAILURE message may containing the Service Areas List IE and shall contain the the Failure List IE indicating the relevant Service Area(s) in which the RESET message was successful and unsuccessful respectively, along with and the appropriate cause value.

The sum of the Service Area(s) included in the Service Areas List and Failure List IEs shall be the same as indicated in the Service Areas List IE of the initiating RESET message.

The RESET FAILURE message may if applicable also include those Service Area(s) for which the RESET message was successful.

8.6.4 Abnormal Conditions

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9.2.6 Service Areas List

<u>The Service Areas List IE identifies a sequence of one or more Service Areas to which the message(s) apply.is sent from the CN to the RNC. It indicates the group of Service Area(s) that the message will be broadcast to. The Service Areas List IE must include at least one Service Area.</u>

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Service Areas List		1 to <maxno of SAI></maxno 		
>Service Area Identifier	М		9.2.11	

Range bound	Explanation		
MaxnoofSAI	Maximum no. of SAI in Service Areas List. Value is 65535		

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