RP#16(02) 0404

Technical Specification Group Radio Access Network Marco Island, USA 4 - 7 June 2002

TSG_Doc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	New_Ver_Num	Tdoc_Num	Workltem
RP-020404	25.419	095	2	R99	Criticality Information Decoding Failure Handling	F	3.8.0	3.9.0	R3-021181	TEI
RP-020404	25.419	096	2	Rel-4	Criticality Information Decoding Failure Handling	A	4.4.0	4.5.0	R3-021180	TEI
RP-020404	25.419	097		Rel-5	Criticality Information Decoding Failure Handling	A	5.0.0	5.1.0	R3-021179	TEI
RP-020404	25.419	098	1	R99	Clarification for the usage of the cause value	F	3.8.0	3.9.0	R3-021499	TEI
RP-020404	25.419	099	1	Rel-4	Clarification for the usage of the cause value	A	4.4.0	4.5.0	R3-021500	TEI
RP-020404	25.419	100	1	Rel-5	Clarification for the usage of the cause value	A	5.0.0	5.1.0	R3-021501	TEI
RP-020404	25.419	101		R99	Write-Replace Procedure Clarification	F	3.8.0	3.9.0	R3-021476	TEI
RP-020404	25.419	102		Rel-4	Write-Replace Procedure Clarification	A	4.4.0	4.5.0	R3-021477	TEI
RP-020404	25.419	103		Rel-5	Write-Replace Procedure Clarification	A	5.0.0	5.1.0	R3-021478	TEI

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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) result in rejecting the procedure.

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

10.3.2 Criticality Information

In the 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, SABP 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or SABP-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

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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) result in rejecting the procedure.

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

10.3.2 Criticality Information

In the 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, SABP 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or SABP-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

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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;

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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) result in rejecting the procedure.

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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;
- 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, SABP 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or SABP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

- 1. Optional;
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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.

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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:

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For <u>HELP</u> on	using this form, see bottom of this page or look	at the pop-up text over the \Re symbols.
Proposed change	affects: # (U)SIM ME/UE Rad	lio Access Network X Core Network X
Title: 3	Clarification for the usage of the cause value	9
Source: \$	R-WG3	
Work item code: 🖁	f TEI	Date: # 2002-May
	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier rest (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21.900</u>. The cause value, "Abstract Syntax Error the Cause IE. Please see R3-020971. In case of abstract syntax error occurs in and Notify, the procedure shall be contin report in the response message(for class the error IE has been ignored. However, in the above case, if the receiver the cause of the syntax case of above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the above case, if the receiver the cause of the cause of the above case, if the receiver the cause of the cause o	R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) (Ignore and Notify)", should not be set to the IE which has the criticality of Ignore use as if that error IE is not present and s 1), or in Errir Indication (for class 2) that
		ure, it is not clear what cause value(either) or Sementic Error) shall be set in the
Summary of chan	ge: # <u>Rev.1</u> Impact Analysis statement was corrected	d.
	Rev.0 It was clarified that if an error that termina cause value shall reflect the error that ca even if one or more abstract syntax error earlier occurred within the same procedu	aused the termination of the procedure rs with criticality "ignore and notify" have
Consequences if not approved:	 If this CR is not approved, unsuitable cau Impact Analysis: Impact assessment towards the previous 	
	release):	

		CR099 on TS25.419v4.4.0 CR100 on TS25.419v5.0.0	
		CR654 on TS25.423v3.9.0	
		CR655 on TS25.423v4.4.0	
		CR656 on TS25.423v5.0.0	
		CR684 on TS25.433v3.9.0	
		CR685 on TS25.433v4.4.0	
		CR686 on TS25.433v5.0.0	
		CR018 on TS25.453v5.3.0	
affected:	Test specifications		
	O&M Specifications		
Other comments:	ж		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 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.
- 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.
- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

ж	25.4	<mark>19</mark> CR	099	жrev	1 ^ж	Current vers	^{ion:} 4.4.0	ж
For <u>HELP</u> on	n using th	is form, se	e bottom of thi	s page or	look at th	e pop-up text	over the # sy	mbols.
Proposed change	e affects	።	SIM ME	E/UE	Radio A	ccess Network	X Core No	etwork X
Title:	¥ Clari	fication for	the usage of t	he cause v	value			
Source:	¥ <mark>R-W</mark>	G3						
Work item code:	¥ TEI					Date: ೫	2002-May	
Category:	F A B C D Detaile	(correction (correspor (addition o (functional (editorial n	ds to a correction f feature), modification of nodification) ons of the above	on in an ear feature)		2 e) R96 R97 R98 R99	REL-4 the following rel (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	
Reason for chan	tt In a ru tt E e A	ne Cause I n case of a and Notify, eport in the ne error IE lowever, in pror which obstract Sy	E. Please see bstract syntax the procedure response me has been igno the above cas should termina	R3-02097 error occu shall be co ssage(for ored. se, if the re ate the pro ore and N	1. urs in the ontinue a class 1), eceiver fu cedure, i otify) or S	IE which has s if that error l or in Errir Indi urther detect a t is not clear v Sementic Erro	the criticality o IE is not prese cation (for clas n error e.g. se vhat cause val r) shall be set	f Ignore nt and ss 2) that mentic ue(either
Summary of chai	L F It c e	mpact Anal <u>Rev.0</u> : was clarifi ause value even if one	shall reflect th	rror that te ne error th act syntax	rminates at caused errors wit	d the terminati	occurs, the retu ion of the procu phore and notif	edure
Consequences if not approved:	lı Ir	mpact Anal	lysis:			Ŭ	e set to the Car	

		CR098 on TS25.419v3.8.0 CR100 on TS25.419v5.0.0	
		CR654 on TS25.423v3.9.0	
		CR655 on TS25.423v4.4.0	
		CR656 on TS25.423v5.0.0	
		CR684 on TS25.433v3.9.0	
		CR685 on TS25.433v4.4.0	
		CR686 on TS25.433v5.0.0	
		CR018 on TS25.453v5.3.0	
affected:	Test specifications		
	O&M Specifications		
Other comments:	ж		

How to create CRs using this form:

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- 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 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.
- 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.
- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

ж	25.419 CR 100 # rev 1 # Current version: 5.0.0 #
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: ೫ (U)SIM ME/UE Radio Access Network X Core Network X
Title:	Clarification for the usage of the cause value
Source:	R-WG3
Work item code:	TEI Date: # 2002-May
Category: 3	ARelease: %REL-5Use one of the following categories:Use one of the following releases:F (correction)2A (corresponds to a correction in an earlier release)R96B (addition of feature),R97C (functional modification of feature)R98D (editorial modification)R99D tetailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5
Reason for chang	 # The cause value, "Abstract Syntax Error (Ignore and Notify)", should not be set to the <i>Cause</i> IE. Please see R3-020971. In case of abstract syntax error occurs in the IE which has the criticality of Ignore and Notify, the procedure shall be continue as if that error IE is not present and report in the response message(for class 1), or in Errir Indication (for class 2) that the error IE has been ignored. However, in the above case, if the receiver further detect an error e.g. sementic error which should terminate the procedure, it is not clear what cause value(either Abstract Syntax Error (Ignore and Notify) or Sementic Error) shall be set in the failure messsage(for class 1) or Error ndication (for class 2).
Summary of char	ge: # Rev.1 Impact Analysis statement was corrected. Rev.0 It was clarified that if an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.
Consequences if not approved:	 If this CR is not approved, unsuitable cause value might be set to the Cause IE. <u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release):

		CR098 on TS25.419v3.8.0 CR099 on TS25.419v4.4.0 CR654 on TS25.423v3.9.0 CR655 on TS25.423v4.4.0 CR656 on TS25.423v5.0.0 CR684 on TS25.433v3.9.0 CR685 on TS25.433v4.4.0	
		CR686 on TS25.433v5.0.0 CR018 on TS25.453v5.3.0	
affected:	Test specifications O&M Specifications		
Other comments:	ĸ		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 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.
- 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.
- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

3GPP TSG-RAN WG3 Meeting #29 Gyeongju, South Korea, 13th – 17th May 2002

CHANGE REQUEST									
x	<mark>25.419</mark>	CR	101	ж rev	- *	Current vers	^{ion:} 3.8.0	ж	
For <u>HELP</u>	on using	this form, see	bottom of this	page or	look at t	he pop-up text	over the # sy	mbols.	
Proposed chai	nge affec	ts:	IM ME/	UE	Radio A	ccess Network	k X Core N	etwork X	
Title:	¥ <mark>SA</mark>	BP: WRITE-R	EPLACE Proc	edure Cl	arificatio	n			
Source:	<mark>ដ R-\</mark>	VG3							
Work item cod	e:೫ TE	l				Date: ೫	9 th May 2002	2	
Category:	Deta	 F (correction) A (correspond) B (addition of i C (functional n D (editorial mode) 	nodification of fe dification) is of the above of	in an ear ature)		2	R99 the following re. (GSM Phase 2, (Release 1996) (Release 1997, (Release 1998, (Release 4) (Release 4) (Release 5))))	
Reason for cha	ange: Ж		efinition of how the description			niquely identify	/ a CBS messa	age does	
Summary of cl	hange: ¥		ment in the wo ithin the Write-			RNC <i>uniquel</i> y ure.	y identifies a C	BS	
		Impact assessment towards the previous version of the specification (same release): This CR has some impact because the changes now ensure that CBC messages							
		can be uniqu	uely identified	by which	Service	Area a CBS n S message has	nessage has b		
Consequences not approved:	sif #					NC can unique <mark>o having differ</mark>			
Clauses affecte	ed: ೫	8.2.1							
Other specs	ж	X Other cor	e specification	s ¥	-	9 V4.4.0 CR10 9 V5.0.0 CR10			
affected:		Test spec O&M Spe	ifications cifications						
Other commen	nts: ೫								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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.

Release 99

- 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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

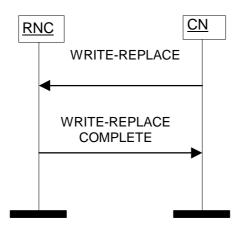


Figure 1: Write-Replace Procedure: Successful Operation

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 <u>IdentifierList</u>* 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 Broadcasts Completed List* IE to indicate the number of times the old broadcast message has been successfully broadcast to the particular Service Area(s).

If the WRITE-REPLACE message sent from the CN:

- contained a New Serial Number IE but not an Old Serial Number IE, the Number of Broadcasts IE within the Number of Broadcasts Completed List IE is set to "0" for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.
- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

8.2.3 Unsuccessful Operation

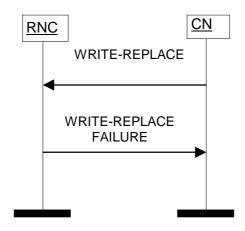


Figure 2: Write-Replace Procedure: Un-Successful Operation

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 WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number* IE but not an *Old Serial Number* IE, the *Number of Broadcasts* IE within the *Number of Broadcasts Completed List* IE is set to '0' for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions

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3GPP TSG-RAN WG3 Meeting #29 Gyeongju, South Korea, 13th – 17th May 2002

									CR-Form-v5	
^ж 25	<mark>.419</mark>	CR	102	жrev	-	ж	Current vers	ion: 4.	4.0	¥
For <u>HELP</u> on	using t	his form, see b	ottom of thi	s page or	look a	at the	e pop-up text	over the	Ж syn	nbols.
Proposed change	affect	t s:	M ME	E/UE	Radi	o Ac	cess Network	Co	ore Ne	twork X
Title: 3	€ <mark>SA</mark> E	BP: WRITE-RE	PLACE Pro	ocedure C	larifica	ation				
Source: ३	€ <mark>R-V</mark>	VG3								
Work item code:	€ TEI						Date: ೫	9 th May	<mark>2002 v</mark>	
Category: 3	Detai	one of the follown F (correction) A (corresponds B (addition of fe C (functional mod led explanations und in 3GPP <u>TR</u>	to a correction ature), odification of ification) of the above	on in an ea feature)		lease	R97	R4 the followi (GSM Pha (Release (Release (Release (Release (Release	ase 2) 1996) 1997) 1998) 1999) 4)	pases:
Reason for chang		The current de not align with t					quely identify	a CBS n	nessa	ge does
Summary of chan	ge: #	A rearrangem message, with						∕ identifie	s a CE	3S
		Impact assessment towards the previous version of the specification (same release):								
This CR has some impact because the changes now ensure that CBC message can be uniquely identified by which Service Area a CBS message has been ser to, and not only due to the list of SAs a CBS message has been sent.										
Consequences if not approved:	ж	It will be confi which seman								
				io dunio, i	inot			0.11 11000	ago a	
Clauses affected:	ж	8.2.1								
Other specs	Ħ	X Other core	specificatio	ons ¥			V3.8.0 CR10 V5.0.0 CR10			
affected:	-	Test specif O&M Spec			20.			-		
Other comments:	ж									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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.

Release 4

- 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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

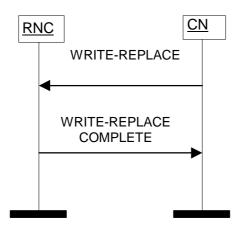


Figure 1: Write-Replace Procedure: Successful Operation

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 <u>IdentifierList</u>* 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 Broadcasts Completed List* IE to indicate the number of times the old broadcast message has been successfully broadcast to the particular Service Area(s).

If the WRITE-REPLACE message sent from the CN:

- contained a New Serial Number IE but not an Old Serial Number IE, the Number of Broadcasts IE within the Number of Broadcasts Completed List IE is set to "0" for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.
- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

8.2.3 Unsuccessful Operation

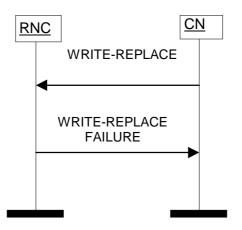


Figure 2: Write-Replace Procedure: Un-Successful Operation

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-REPLACE 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 WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number* IE but not an *Old Serial Number* IE, the *Number of Broadcasts* IE within the *Number of Broadcasts Completed List* IE is set to '0' for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions

3GPP

3GPP TSG-RAN WG3 Meeting #29 Gyeongju, South Korea, 13th – 17th May 2002

CHANGE REQUEST									
^ж 25.	419	CR 1	<mark>03</mark> ೫	# rev	-	ж	Current versi	ion: 5.0.	0 [#]
For <u>HELP</u> on u	sing this fo	rm, see botto	m of this µ	bage or	look a	at the	e pop-up text	over the ¥	symbols.
Proposed change a	affects: #	(U)SIM	ME/L	JE	Radio	o Aco	cess Network	X Core	Network X
Title: Ж	SABP: W	RITE-REPLA	CE Proce	edure Cl	arifica	ation			
Source: ೫	R-WG3								
Work item code: ೫	TEI						Date: ೫	9 th May 20	002
Category: ⊮	F (co. A (co B (ao C (fui D (co Detailed ex	the following or rrection) rresponds to a dition of featurn nctional modifica itorial modifica planations of to 3GPP <u>TR 21.9</u>	correction e), cation of fea tion) he above c	ature)		lease,	2 R96 R97 R98 R99 REL-4	R5 the following (GSM Phase (Release 199 (Release 199 (Release 199 (Release 4) (Release 5)	92) 96) 97) 98)
Reason for change		current definit lign with the c					quely identify	a CBS me	ssage does
Summary of chang		arrangement sage, within						videntifies a	CBS
		act assessme ase):	ent toward	s the pre	evious	s ver	sion of the sp	Decification	(same
	This CR has some impact because the changes now ensure that CBC message can be uniquely identified by which Service Area a CBS message has been ser to, and not only due to the list of SAs a CBS message has been sent.								
Consequences if not approved:		II be confusin ch semantical							
Clauses affected:	¥ 8.2.		.,				g	g	
Other specs) ther core spe	cifications	- 92	25 /	110 \	√3.8.0 CR10 [,]	1	
affected:	Т	est specificat &M Specifica	ions	5 00			V4.4.0 CR102		
Other comments:	ж								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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.

Release 5

- 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 <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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

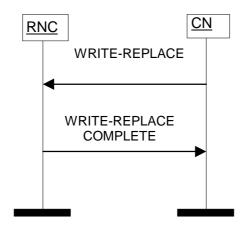


Figure 1: Write-Replace Procedure: Successful Operation

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 <u>IdentifierList</u>* 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 Broadcasts Completed List* IE to indicate the number of times the old broadcast message has been successfully broadcast to the particular Service Area(s).

If the WRITE-REPLACE message sent from the CN:

- contained a New Serial Number IE but not an Old Serial Number IE, the Number of Broadcasts IE within the Number of Broadcasts Completed List IE is set to "0" for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.
- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

8.2.3 Unsuccessful Operation

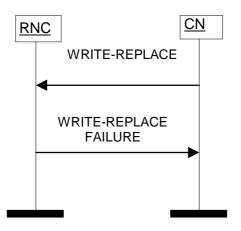


Figure 2: Write-Replace Procedure: Un-Successful Operation

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-REPLACE 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 WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number* IE but not an *Old Serial Number* IE, the *Number of Broadcasts* IE within the *Number of Broadcasts Completed List* IE is set to '0' for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions

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