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**Source:** SA5 (Telecom Management)  
**Title:** 3 Rel-4/5 CR 32403 (Performance Management; Performance measurements - UMTS and combined UMTS/GSM)  
**Document for:** Approval  
**Agenda Item:** 7.5.3

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Doc-1st-	Spec	CR	R	Ph	Subject	Ca	Ver	Doc-2nd-	Workite	Relation
SP-030292	32.403	013	-	Rel-4	<b>Correction of the definition of the successful GPRS attach counters</b>	F	4.3.0	S5-038340	OAM-PM	Parent
SP-030292	32.403	014	-	Rel-5	<b>Correction of the definition of the successful GPRS attach counters</b>	A	5.2.0	S5-038339	OAM-PM	Mirror
SP-030292	32.403	015	-	Rel-5	<b>Deletion of dual clause 4.1.2</b>	F	5.2.0	S5-038342	OAM-PM	-

CR-Form-v7

## CHANGE REQUEST

⌘ **32.403 CR 013** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of the definition of the successful GPRS attach counters		
<b>Source:</b>	⌘ S5 Siemens AG		
<b>Work item code:</b>	⌘ OAM-PM	<b>Date:</b>	⌘ 20/05/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ The definition of the triggerpoints of the successful GPRS attach procedures (with IMSI already attached or combined IMSI/GPRS attach) as given in the standard is inconsistent. The inconsistency stems from the fact that the ATTACH ACCEPT message does not include the "Attach type" parameter, but only the attach result. This has only 2 possible values: "GPRS only attached" or "combined GPRS/IMSI attached". A third type "GPRS attach while IMSI attached" as given in the description of the triggerpoint does not exist.
<b>Summary of change:</b>	⌘ Change the definition of the trigger points of the "Successful GPRS attach procedures with IMSI already attached" and the "Successful combined GPRS/IMSI attach procedures" to include "GPRS attach while IMSI attached".
<b>Consequences if not approved:</b>	⌘ The trigger point will remain inconsistent

<b>Clauses affected:</b>	⌘ 5.1.10 – 5.1.13								
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"> </td> </tr> </table> Other core specifications      ⌘ Test specifications O&M Specifications              Rel-5 32.403	Y	N		X		X	X	
Y	N								
	X								
	X								
X									
<b>Other comments:</b>	⌘ Rel-5 Mirror CR 32.403 attached in S5-038339.								

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

**Change in Clause 5.1.10****5.1.10 Successful GPRS attach procedures with IMSI already attached**

- a) This measurement provides the number of successfully performed GPRS attach procedures, while IMSI is already attached. We count the attempts initiated within this SGSN area.  
The three measurement types defined in e)E are subject to the "2 out of 3 approach".
- b) CC.
- c) Transmission of a "ATTACH ACCEPT" message to the MS, indicating a GPRS attach while IMSI attached, in response to a previously transmitted "ATTACH REQUEST" indicating a GPRS attach while IMSI attached (TS 24.008).
- d) A single integer value per measurement type defined in E.
- e) MM.SuccImsiAttach:
- MM.SuccImsiAttach Combined (don't care);
  - MM.SuccImsiAttach.G GSM;
  - MM.SuccImsiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

**End of Change in Clause 5.1.10****Change in Clause 5.1.11****5.1.11 Attempted IMSI detach procedures initiated by MS**

- a) This measurement provides the number of attempted IMSI detach procedures MS-initiated within this SGSN area.  
The three measurement types defined in Ee) are subject to the "2 out of 3 approach".
- b) CC.
- c) Receipt of a "DETACH REQUEST" message from the MS, indicating a IMSI detach (TS 24.008).
- d) A single integer value per measurement type defined in Ee).
- e) MM.AttImsiDetachMs:
- MM.AttImsiDetachMs Combined (don't care);
  - MM.AttImsiDetachMs.G GSM;
  - MM.AttImsiDetachMs.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

**End of Change in Clause 5.1.11  
End of Document**

<b>Change in Clause 5.1.12</b>
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### 5.1.12 Attempted combined GPRS/IMSI attach procedures

- a) This measurement provides the number of attempts of combined GPRS/IMSI attach procedures initiated within this SGSN area.  
The three measurement types defined in ~~e) E~~ are subject to the "2 out of 3 approach".
- b) CC.
- c) Receipt of a "ATTACH REQUEST" message from the MS, indicating combined GPRS/IMSI attach (TS 24.008; attach type = Combined GPRS/IMSI attach).
- d) A single integer value per measurement type defined in ~~E e~~.
- e) MM.AttCombiAttach:
  - MM.AttCombiAttach Combined (don't care);
  - MM.AttCombiAttach.G GSM;
  - MM.AttCombiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.12</b>
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<b>Change in Clause 5.1.13</b>
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### 5.1.13 Successful combined GPRS/IMSI attach procedures

- a) This measurement provides the number of success-fully completed of ~~c) C~~ Combined GPRS/IMSI attach procedures initiated within this SGSN area.  
The three measurement types defined in ~~E e~~ are subject to the "2 out of 3 approach".
- b) CC.
- c) Transmission of a "ATTACH ACCEPT" message to the MS, indicating combined GPRS/IMSI attach, in response to a "ATTACH REQUEST" indicating combined GPRS/IMSI attach (TS 24.008).
- d) A single integer value per measurement type defined in ~~e) E~~.
- e) MM.SuccCombiAttach:
  - MM.SuccCombiAttach Combined (don't care);
  - MM.SuccCombiAttach.G GSM;
  - MM.SuccCombiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.13</b>
<b>End of Document</b>

CR-Form-v7

## CHANGE REQUEST

⌘ **32.403 CR 015** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘	Deletion of dual clause 4.1.2	
<b>Source:</b>	⌘	S5	
<b>Work item code:</b>	⌘	OAM-PM	<b>Date:</b> ⌘ 08/05/2003
<b>Category:</b>	⌘	<b>F</b>	<b>Release:</b> ⌘ Rel-5
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		<b>F</b> (correction)	2 (GSM Phase 2)
		<b>A</b> (corresponds to a correction in an earlier release)	R96 (Release 1996)
		<b>B</b> (addition of feature),	R97 (Release 1997)
		<b>C</b> (functional modification of feature)	R98 (Release 1998)
		<b>D</b> (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	⌘	There are two clauses 4.1.2.
<b>Summary of change:</b>	⌘	Delete the first occurrences clause 4.1.2.
<b>Consequences if not approved:</b>	⌘	May lead to confusion and misinterpretations.

<b>Clauses affected:</b>	⌘	4.1.2								
<b>Other specs affected:</b>	⌘	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N		X		X		X
Y	N									
	X									
	X									
	X									
<b>Other comments:</b>	⌘									

<b>Change in Clause 4. 1</b>
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## 4.1 RAB management

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### 4.1.2 RAB assignment for CS domain

The five measurement types defined in the clause 4.1.2 for CS domain are subject to the "4 out of 5 approach".

#### 4.1.2.1 Attempted RAB establishments for CS domain

- a) This measurement provides the number of RAB assignment attempts for CS domain. The measurement is pegged by traffic class.
- b) CC.
- c) On receipt by the RNC of a RANAP RAB ASSIGNMENT REQUEST message for CS domain, each RAB assignment request is added to the relevant measurement according to the traffic class requested. See TS 25.413 and TS 23.107.
- d) Four integer values.
- e) RAB.AttEstabCS.Conv  
RAB.AttEstabCS.Strm  
RAB.AttEstabCS.Intact  
RAB.AttEstabCS.Bgrd
- f) RncFunction.
- g) Valid for circuit switched traffic.
- h) UMTS.

#### 4.1.2.2 Successful RAB establishments without queuing for CS domain

- a) This measurement provides the number of successfully established RABs for CS domain in which a queuing process has not been involved. The measurement is pegged by traffic class.
- b) CC.
- c) On transmission by the RNC of a RANAP RAB ASSIGNMENT RESPONSE message for CS domain, each successfully established RAB is added to the relevant measurement according to the traffic class requested in the RAB ASSIGNMENT REQUEST message. See TS 25.413 and TS 23.107.

NOTE: The addition is performed with the condition the RAB has not been mentioned as queued in a previous RANAP RAB ASSIGNMENT RESPONSE.

- d) Four integer values.
- e) RAB.SuccEstabCSNoQueuing.Conv  
RAB.SuccEstabCSNoQueuing.Strm  
RAB.SuccEstabCSNoQueuing.Intact  
RAB.SuccEstabCSNoQueuing.Bgrd
- f) RncFunction.
- g) Valid for circuit switched traffic.
- h) UMTS.

#### 4.1.2.3 Failed RAB establishments without queuing for CS domain

- a) This measurement provides the number of RAB establishment failures for CS domain in which a queuing process has not been involved. The measurement is pegged by failure cause.
- b) CC.
- c) On transmission by the RNC of a RANAP RAB ASSIGNMENT RESPONSE message for CS domain, each RAB failed to establish is added to the relevant measurement according to the failure cause. Possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of RAB Establishment Failures. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

NOTE: The addition is performed with the condition the RAB has not been mentioned as queued in a previous RANAP RAB ASSIGNMENT RESPONSE.

- d) Each measurement is an integer value. The number of measurements is equal to the number of causes supported plus a possible sum value identified by the *.sum* suffix.
- e) The measurement name has the form RAB.FailEstabCSNoQueuing.*Cause* where *Cause* identifies the failure cause.
- f) RncFunction.
- g) Valid for circuit switched traffic.
- h) UMTS.

#### 4.1.2.4 Successful RAB establishments with queuing for CS domain

- a) This measurement provides the number of successfully established RABs for CS domain in which a queuing process has been involved. The measurement is pegged by traffic class.
- b) CC.
- c) On transmission by the RNC of a RANAP RAB ASSIGNMENT RESPONSE message for CS domain, each successfully established RAB is added to the relevant measurement according to the traffic class. See TS 25.413 and TS 23.107.

NOTE: The addition is performed with the condition the RAB has been mentioned as queued in a previous RANAP RAB ASSIGNMENT RESPONSE.

- d) Four integer values.
- e) RAB.SuccEstabCSQueuing.Conv  
RAB.SuccEstabCSQueuing.Strm  
RAB.SuccEstabCSQueuing.Intact  
RAB.SuccEstabCSQueuing.Bgrd
- f) RncFunction.
- g) Valid for circuit switched traffic.
- h) UMTS.

#### 4.1.2.5 Failed RAB establishments with queuing for CS domain

- a) This measurement provides the number of RAB establishment failures for CS domain in which a queuing process has been involved. The measurement is pegged by failure cause.
- b) CC.
- c) On transmission by the RNC of a RANAP RAB ASSIGNMENT RESPONSE message for CS domain, each RAB failed to establish is added to the relevant measurement according to the cause. Possible causes are included in TS 25.413. The sum of all supported per cause measurements shall equal the total number of RAB

Establishment Failures. In case only a subset of per cause measurements is supported, a sum measurement subtype will be provided first.

NOTE: The addition is performed with the condition the RAB has been mentioned as queued in a previous RANAP RAB ASSIGNMENT RESPONSE.

- d) Each measurement is an integer value. The number of measurements is equal to the number of causes plus a possible sum value identified by the *.sum* suffix.
- e) The measurement name has the form RAB.FailEstabCSQueuing.*Cause* where *Cause* identifies the failure cause.
- f) RncFunction.
- g) Valid for circuit switched traffic.
- h) UMTS.

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<b>End of Change in Clause 4. 1</b>
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## CHANGE REQUEST

⌘ **32.403 CR 014** ⌘ rev **-** ⌘ Current version: **5.2.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Correction of the definition of the successful GPRS attach counters		
<b>Source:</b>	⌘ S5 Siemens AG		
<b>Work item code:</b>	⌘ OAM-PM	<b>Date:</b>	⌘ 20/05/2003
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-5
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ The definition of the triggerpoints of the successful GPRS attach procedures (with IMSI already attached or combined IMSI/GPRS attach) as given in the standard is inconsistent. The inconsistency stems from the fact that the ATTACH ACCEPT message does not include the "Attach type" parameter, but only the attach result. This has only 2 possible values: "GPRS only attached" or "combined GPRS/IMSI attached". A third type "GPRS attach while IMSI attached" as given in the description of the triggerpoint does not exist.
<b>Summary of change:</b>	⌘ Change the definition of the trigger points of the "Successful GPRS attach procedures with IMSI already attached" and the "Successful combined GPRS/IMSI attach procedures" to include "GPRS attach while IMSI attached".
<b>Consequences if not approved:</b>	⌘ The trigger point will remain inconsistent

<b>Clauses affected:</b>	⌘ 5.1.10 – 5.1.13						
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
<b>Other comments:</b>	⌘ Rel-5 Mirror of Rel-4 CR 32.403 attached in S5-038340.						

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

<b>Change in Clause 5.1.10</b>
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### 5.1.10 Successful GPRS attach procedures with IMSI already attached

- a) This measurement provides the number of successfully performed GPRS attach procedures, while IMSI is already attached. We count the attempts initiated within this SGSN area.  
The three measurement types defined in e)E are subject to the "2 out of 3 approach".
- b) CC.
- c) Transmission of a "ATTACH ACCEPT" message to the MS, indicating a GPRS attach while IMSI attached, in response to a previously transmitted "ATTACH REQUEST" indicating a GPRS attach while IMSI attached (TS 24.008).
- d) A single integer value per measurement type defined in E.
- e) MM.SuccImsiAttach:
  - MM.SuccImsiAttach Combined (don't care);
  - MM.SuccImsiAttach.G GSM;
  - MM.SuccImsiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.10</b>
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<b>Change in Clause 5.1.11</b>
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### 5.1.11 Attempted IMSI detach procedures initiated by MS

- a) This measurement provides the number of attempted IMSI detach procedures MS-initiated within this SGSN area.  
The three measurement types defined in Ee) are subject to the "2 out of 3 approach".
- b) CC.
- c) Receipt of a "DETACH REQUEST" message from the MS, indicating a IMSI detach (TS 24.008).
- d) A single integer value per measurement type defined in Ee).
- e) MM.AttImsiDetachMs:
  - MM.AttImsiDetachMs Combined (don't care);
  - MM.AttImsiDetachMs.G GSM;
  - MM.AttImsiDetachMs.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.11</b>
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<b>Change in Clause 5.1.12</b>
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### 5.1.12 Attempted combined GPRS/IMSI attach procedures

- a) This measurement provides the number of attempts of combined GPRS/IMSI attach procedures initiated within this SGSN area.  
The three measurement types defined in ~~e) E~~ are subject to the "2 out of 3 approach".
- b) CC.
- c) Receipt of a "ATTACH REQUEST" message from the MS, indicating combined GPRS/IMSI attach (TS 24.008; attach type = Combined GPRS/IMSI attach).
- d) A single integer value per measurement type defined in ~~E e~~.
- e) MM.AttCombiAttach:
  - MM.AttCombiAttach Combined (don't care);
  - MM.AttCombiAttach.G GSM;
  - MM.AttCombiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.12</b>
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<b>Change in Clause 5.1.13</b>
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### 5.1.13 Successful combined GPRS/IMSI attach procedures

- a) This measurement provides the number of success-fully completed of ~~c) C~~ Combined GPRS/IMSI attach procedures initiated within this SGSN area.  
The three measurement types defined in ~~E e~~ are subject to the "2 out of 3 approach".
- b) CC.
- c) Transmission of a "ATTACH ACCEPT" message to the MS, indicating combined GPRS/IMSI attach, in response to a "ATTACH REQUEST" indicating combined GPRS/IMSI attach (TS 24.008).
- d) A single integer value per measurement type defined in ~~e) E~~.
- e) MM.SuccCombiAttach:
  - MM.SuccCombiAttach Combined (don't care);
  - MM.SuccCombiAttach.G GSM;
  - MM.SuccCombiAttach.U UMTS.
- f) RA, specified by a concatenation of the MCC, MNC, LAC and the RAC.
- g) Valid for packet switching.
- h) GSM/UMTS.

<b>End of Change in Clause 5.1.13</b>
<b>End of document</b>