3GPP TSG CN Plenary Meeting #26 8th – 10th December 2004 Athens, Greece.

Source:	TSG CN WG4
Title:	Corrections on IMS Sh-interface
Agenda item:	8.1
Document for:	APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-040	Phase	Subject		Ver_C
29.328	110		1560	Rel-5	Access Key for Charging Information	F	5.7.0
29.328	104		1465	Rel-6	Rel-6 Access Key for Charging Information		6.3.0
29.329	052		1345	Rel-5	Sh ABNF corrections	F	5.7.0
29.329	053		1346	Rel-6	Sh ABNF corrections	А	6.2.0
29.328	109	2	1567	Rel-5	Handling of Information Element marked as (M), (C) or (O)	F	5.7.0
29.328	110	2	1568	Rel-6	Handling of Information Element marked as (M), (C) or (O)		6.3.0

N4-041345

Seoul, KOREA. 15th to 19th November 2004.

	CHANGE REQUEST												
ж		29.329	CR	052	ж rev	-	Ħ	Curr	rent ver	sion:	5.7	. 0	ж
For <u>HELP</u> o	n us	sing this for	m, see	bottom of th	is page or	look	at th	e pop	o-up tex	t over	r the Ħ	syn	nbols.
Proposed chang	ge a	affects:	JICC a	pps#	ME	Rad	dio A	ccess	s Netwo	ork	Cor	e Ne	twork X
Title:	ж	Sh ABNF	correct	tions									
Source:	Ħ	CN4											
Work item code	:¥	IMS-CCR						1	Date: 🖁	8 <mark>05</mark>	/11/20	04	
Category:	¥	Use <u>one</u> of F (cor A (cor B (ado C (fun D (edi	rection) respond dition of ctional r torial mo planation	wing categorie ls to a correction feature), modification of polification) ms of the above IR 21.900.	on in an ea feature)		eleas	Us	ease:	f the fo (GSI (Rela (Rela (Rela (Rela (Rela (Rela		se 2) 996) 997) 998) 999))))	ases:

Reason for change:	ж	Essential correction
		Sh command-code ABNF definitions are incorrect. 'P' bits are missing in answer messages. According to RFC 3588 application-id should be the last part of the header of the command.
Summary of change: ೫		Missing 'P' bits are added to the ABNF definitions. Application-Id is moved to the correct part of the header.
Consequences if not approved:	ж	Interoperability problems. Problems with Diameter proxies and relays.
Clauses affected:	æ	61

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/specs/CR.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.

6.1 Command-Code values

This section defines Command-Code values for this Diameter application.

Every command is defined by means of the ABNF syntax (as defined in RFC 2234 [5]), according to the rules in IETF RFC 3588 [4]. Whenever the definition and use of an AVP is not specified in this document, what is stated in IETF RFC 3588 [4] or 3GPP TS 29.229 [6] shall apply.

The command codes for the Sh interface application are taken from the range allocated by IANA in IETF RFC 3589 [7] as assigned in this specification. For these commands, the Application-ID field shall be set to 16777217 (application identifier of the Sh interface application, allocated by IANA).

The following Command Codes are defined in this specification:

Command-Name	Abbreviation	Code	Section
User-Data-Request	UDR	306	6.1.1
User-Data-Answer	UDA	306	6.1.2
Profile-Update-Request	PUR	307	6.1.3
Profile-Update-Answer	PUA	307	6.1.4
Subscribe-Notifications-Request	SNR	308	6.1.5
Subscribe-Notifications-Answer	SNA	308	6.1.6
Push-Notification-Request	PNR	309	6.1.7
Push-Notification-Answer	PNA	309	6.1.8

Table 6.1.1: Command-Code values

6.1.1 User-Data-Request (UDR) Command

The User-Data-Request (UDR) command, indicated by the Command-Code field set to 306 and the 'R' bit set in the Command Flags field, is sent by a Diameter client to a Diameter server in order to request user data.

Message Format

< User-Data -Request> ::= < Diameter Header: 306, 16777217, REQ, PXY, 16777217 >

- < Session-Id >
- { Vendor-Specific-Application-Id } { Auth-Session-State } { Origin-Host } { Origin-Realm } [Destination-Host] { Destination-Realm } { User-Identity } [Server-Name] [Service-Indication] { Data-Reference } *[Requested-Domain] [Current-Location] *[AVP] *[Proxy-Info] *[Route-Record]

6.1.2 User-Data-Answer (UDA) Command

The User-Data-Answer (UDA) command, indicated by the Command-Code field set to 306 and the 'R' bit cleared in the Command Flags field, is sent by a server in response to the User-Data-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< User-Data-Answer > ::=

::= < Diameter Header: 306<u>*, PXY</u> 16777217 > < Session-Id > { Vendor-Specific-Application-Id } [Result-Code] [Experimental-Result] { Auth-Session-State } { Origin-Host } { Origin-Realm } [User-Data] *[AVP] *[Proxy-Info] *[Route-Record]

6.1.3 Profile-Update-Request (PUR) Command

The Profile-Update-Request (PUR) command, indicated by the Command-Code field set to 307 and the 'R' bit set in the Command Flags field, is sent by a Diameter client to a Diameter server in order to update user data in the server.

Message Format

```
< Profile-Update-Request > ::= < Diameter Header: 307, 16777217, REQ, PXY. 16777217 >
< Session-Id >
< Vendor-Specific-Application-Id }
{ Auth-Session-State }
{ Origin-Host }
{ Origin-Realm }
{ Destination-Host }
{ Destination-Realm }
{ User-Identity }
{ User-Data }
*[ AVP ]
*[ Proxy-Info ]
*[ Route-Record ]</pre>
```

6.1.4 Profile-Update-Answer (PUA) Command

The Profile-Update-Answer (PUA) command, indicated by the Command-Code field set to 307 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Profile-Update-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< Profile-Update-Answer > ::=< Diameter Header: 307, <u>PXY,</u>16777217 >

< Session-Id > { Vendor-Specific-Application-Id } [Result-Code] [Experimental-Result] { Auth-Session-State } { Origin-Host } { Origin-Realm } *[AVP] *[Proxy-Info] *[Route-Record]

6.1.5 Subscribe-Notifications-Request (SNR) Command

The Subscribe-Notifications-Request (SNR) command, indicated by the Command-Code field set to 308 and the 'R' bit set in the Command Flags field, is sent by a Diameter client to a Diameter server in order to request notifications of changes in user data.

Message Format

```
< Subscribe-Notifications-Request > ::= < Diameter Header: 308, <del>16777217,</del> REQ, PXY, <u>16777217</u> > 
< Session-Id > 
{ Vendor-Specific-Application-Id }
```

{ Vendor-Specific-Application-Id
{ Auth-Session-State }
{ Origin-Host }
{ Origin-Realm }
[Destination-Host]
{ Destination-Realm }
{ User-Identity }
[Service-Indication]
[Server-Name]
{ Subs-Req-Type }
{ Data-Reference }
*[AVP]
*[Proxy-Info]
*[Route-Record]

6.1.6 Subscribe-Notifications-Answer (SNA) Command

The Subscribe-Notifications-Answer command, indicated by the Command-Code field set to 308 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Subscribe-Notifications-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< Subscribe-Notifications-Answer > ::= < Diameter Header: 308, <u>PXY</u>, 16777217 > < Session-Id > { Vendor-Specific-Application-Id } { Auth-Session-State } [Result-Code] [Experimental-Result] { Origin-Host } { Origin-Realm } *[AVP] *[Proxy-Info] *[Route-Record]

6.1.7 Push-Notification-Request (PNR) Command

The Push-Notification-Request (PNR) command, indicated by the Command-Code field set to 309 and the 'R' bit set in the Command Flags field, is sent by a Diameter server to a Diameter client in order to notify changes in the user data in the server.

Message Format

{ User-Identity } { User-Data } *[AVP] *[Proxy-Info] *[Route-Record]

6.1.8 Push-Notifications-Answer (PNA) Command

The Push-Notifications-Answer (PNA) command, indicated by the Command-Code field set to 309 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Push-Notification-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< Push-Notification-Answer > ::=< Diameter Header: 309, <u>PXY</u>, 16777217 > < Session-Id > { Vendor-Specific-Application-Id } [Result-Code]

{ Vendor-Specific-Application-Id }
[Result-Code]
[Experimental-Result]
{ Auth-Session-State }
{ Origin-Host }
{ Origin-Realm }
*[AVP]
*[Proxy-Info]
*[Route-Record]

N4-041346

Seoul, KOREA. 15th to 19th November 2004.

ж	29.32	<mark>9</mark> CR <mark>053</mark>	ж rev	- *	Current ve	rsion: 6.2.0) ^ж	
For <u>HELP</u> o	n using this	form, see bottom o	f this page or	look at t	he pop-up te	ለt over the	ymbols.	
Proposed chang	ge affects:	UICC apps೫	ME	Radio	Access Netw	ork Core I	Network X	
Title:	ដ Sh ABI	NF corrections						
Source:	<mark>೫ CN4</mark>							
Work item code	: ສ <mark>IMS-C(</mark>	CR			Date: 3	₭ <mark>05/11/2004</mark>	ł	
Category:	F (c A (c B (c C (t D (c Detailed	of the following categ correction) corresponds to a corr addition of feature), functional modification editorial modification) explanations of the a in 3GPP <u>TR 21.900</u> .	ection in an ear n of feature)		Ph2	K Rel-6 f the following r (GSM Phase : (Release 199 (Release 199 (Release 199 (Release 4) (Release 4) (Release 5) (Release 6) (Release 7)	2) 6) 7) 8)	

Reason for change: ೫	Sh command-code ABNF definitions are incorrect. 'P' bits are missing in answer messages. According to RFC 3588 application-id should be the last part of the header of the command.				
Summary of change: ೫	Missing 'P' bits are added to the ABNF definitions. Application-Id is moved to the correct part of the header.				
Consequences if 🛛 🕱	Interoperability problems. Problems with Diameter proxies and relays.				
not approved:					

Clauses affected:	策 <mark>6.1</mark>	
Other specs affected:	Y N % X Other core specifications % X Test specifications X O&M Specifications	
Other comments:	ж	

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Profile-Update-Answer	PUA	307	6.1.4
Subscribe-Notifications-Request	SNR	308	6.1.5
Subscribe-Notifications-Answer	SNA	308	6.1.6
Push-Notification-Request	PNR	309	6.1.7
Push-Notification-Answer	PNA	309	6.1.8

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Message Format

< User-Data -Request> ::= < Diameter Header: 306, 16777217, REQ, PXY, 16777217 >

- < Session-Id >
- { Vendor-Specific-Application-Id }
- { Auth-Session-State }
- { Origin-Host }
- { Origin-Realm }
- [Destination-Host]
- { Destination-Realm }
- *[Supported-Features]
- { User-Identity } [Server-Name]
- [Service-Indication]
- { Data-Reference }
- [Identity-Set]
- *[Requested-Domain]
- [Current-Location]
- *[AVP]
- * [Proxy-Info]
- *[Route-Record]

6.1.2 User-Data-Answer (UDA) Command

The User-Data-Answer (UDA) command, indicated by the Command-Code field set to 306 and the 'R' bit cleared in the Command Flags field, is sent by a server in response to the User-Data-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< User-Data-Answer > ::=

< Diameter Header: 306+, PXY, 16777217 >
 < Session-Id >
 { Vendor-Specific-Application-Id }
 [Result-Code]
 [Experimental-Result]
 { Auth-Session-State }
 { Origin-Host }
 { Origin-Realm }
 *[Supported-Features]
 [User-Data]
 *[AVP]
 *[Proxy-Info]
 *[Route-Record]

6.1.3 Profile-Update-Request (PUR) Command

The Profile-Update-Request (PUR) command, indicated by the Command-Code field set to 307 and the 'R' bit set in the Command Flags field, is sent by a Diameter client to a Diameter server in order to update user data in the server.

Message Format

< Profile-Update-Request > ::= < Diameter Header: 307, 16777217, REQ, PXY, 16777217 >
< Session-Id >
{ Vendor-Specific-Application-Id }
{ Auth-Session-State }
{ Origin-Host }
{ Origin-Realm }
{ Destination-Host }
{ Destination-Realm }
*[Supported-Features]
{ User-Identity }
{ User-Data }
*[AVP]
*[Proxy-Info]
*[Route-Record]

6.1.4 Profile-Update-Answer (PUA) Command

The Profile-Update-Answer (PUA) command, indicated by the Command-Code field set to 307 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Profile-Update-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< Profile-Update-Answer > ::=< Diameter Header: 307, <u>PXY</u>, 16777217 > < Session-Id > { Vendor-Specific-Application-Id } [Result-Code] [Experimental-Result] { Auth-Session-State } { Origin-Host } { Origin-Realm } *[AVP] *[Proxy-Info] *[Route-Record]

6.1.5 Subscribe-Notifications-Request (SNR) Command

The Subscribe-Notifications-Request (SNR) command, indicated by the Command-Code field set to 308 and the 'R' bit set in the Command Flags field, is sent by a Diameter client to a Diameter server in order to request notifications of changes in user data.

Message Format

< Subscribe-Notifications-Request > ::= < Diameter Header: 308, 16777217, REQ, PXY, <u>16777217</u> > < Session-Id > { Vendor-Specific-Application-Id } { Auth-Session-State } { Origin-Host } { Origin-Realm } [Destination-Host] { Destination-Realm } *[Supported-Features] { User-Identity } [Service-Indication] [Server-Name] { Subs-Req-Type } { Data-Reference } *[AVP] * [Proxy-Info] *[Route-Record]

6.1.6 Subscribe-Notifications-Answer (SNA) Command

The Subscribe-Notifications-Answer command, indicated by the Command-Code field set to 308 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Subscribe-Notifications-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

6.1.7 Push-Notification-Request (PNR) Command

The Push-Notification-Request (PNR) command, indicated by the Command-Code field set to 309 and the 'R' bit set in the Command Flags field, is sent by a Diameter server to a Diameter client in order to notify changes in the user data in the server.

Message Format

```
< Push-Notification-Request > ::=
```

< Diameter Header: 309, 16777217, REQ, PXY<u>, 16777217</u> > < Session-Id > { Vendor-Specific-Application-Id } { Auth-Session-State } { Origin-Host } { Origin-Realm } { Destination-Host } { Destination-Realm } *[Supported-Features] { User-Identity } { User-Data } *[AVP] *[Proxy-Info] *[Route-Record]

6.1.8 Push-Notifications-Answer (PNA) Command

The Push-Notifications-Answer (PNA) command, indicated by the Command-Code field set to 309 and the 'R' bit cleared in the Command Flags field, is sent by a client in response to the Push-Notification-Request command. The Result-Code or Experimental-Result AVP may contain one of the values defined in section 6.2 in addition to the values defined in 3GPP TS 29.229 [6].

Message Format

< Push-Notification-Answer > ::=< Diameter Header: 309, <u>PXY</u>, 16777217 >

< Session-Id > { Vendor-Specific-Application-Id } [Result-Code] [Experimental-Result] { Auth-Session-State } { Origin-Host } { Origin-Realm } *[Supported-Features] *[AVP] *[Proxy-Info] *[Route-Record]

N4-041465

Seoul, KOREA. 15th to 19th November 2004.

				(CHANG	GE RI	EQ	UE	ST	I			C	R-Form-v7.
ж			<mark>29.328</mark>	CR	104	жľ	ev	-	Ħ	Current	version	6.	3.0	ж
For <mark>H</mark>	ELP on	n us	sing this for	m, see	bottom of	f this pag	e or	look	at th	e pop-up	text ove	er the	Ж syr	nbols.
Propose	d chang	e a	ffects: l	JICC a	ipps#	М	E	Rad	A oit	ccess Ne	twork	C	ore Ne	twork X
Title:		Ж	Access K	ey for	Charging I	nformatio	on							
Source:		Ж	CN4											
Work ite	m code:	ж	IMS-CCR							Date	e:	9/10/2	2004	
Category	<i>!:</i>		B (add C (fun	rection) respon lition of ctional torial m planatic	ds to a corre feature), modification odification) ons of the ab	ection in a n of featur	e)		elease	Ph2	<u>e</u> of the (GS (Re (Re (Re 4 (Re 5 (Re 6 (Re	SM Ph lease lease lease	ase 2) 1996) 1997) 1998) 1999) 4) 5) 6)	eases:
Reason f	for chan	ge.	: ೫ <mark>Tabl</mark>	e 7.6.1	shows the	e data tha	at is a	acces	ssible	e on the S	Sh inter	ace a	ind de	fines

Reason for change: ೫	Table 7.6.1 shows the data that is accessible on the Sh interface and defines reference values, access keys and recommened AS permissions to access this data. However there is no access key defined for the Charging Information. This data type has associated AS permissions for Sh-Pull where the corresponding command definition in table 6.1.1.1 shows that User-Identity and Data-Reference AVPs are Mandatory.
Summary of change: ೫	Define User-Identity and Data-Reference as the access key for Charging Information in table 7.6.1
Consequences if % not approved:	Unclear as to how to access the Charging Information over the Sh Interface.

Clauses affected:	<mark>೫ 7.6</mark>
	ΥΝ
Other specs	# X Other core specifications #
affected:	X Test specifications
	X O&M Specifications
Other comments:	ж

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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.

*** First Modification ***

7.6 Data

This information element contains an XML document conformant to the XML schema defined in Annex D.

Annex C specifies the UML logical model of the data downloaded via the Sh interface.

Table 7.6.1 defines the reference values, access key and recommended AS permissions (as described in section 6.2) for the data accessible via the Sh interface. It is a matter of operator policy to further restrict the AS permission rights defined in table 7.6.1.

Data Ref.	XML tag	Defined in	Access key	Operations AS may be permitted to use:
0	RepositoryData	7.6.1	User-Identity + Data- Reference + Service- Indication	Sh-Pull, Sh-Update, Sh-Subs- Notif
10	IMSPublicIdentity	7.6.2	User-Identity + Data- Reference + Identity-Set	Sh-Pull
11	IMSUserState	7.6.3	User-Identity + Data-	Sh-Pull, Sh-Subs-Notif
12	S-CSCFName	7.6.4	Reference	Sh-Pull, Sh-Subs-Notif
13	InitialFilterCriteria	7.6.5	User-Identity + Data- Reference + Server- Name	Sh-Pull, Sh-Subs-Notif
14	LocationInformation	7.6.6	User-Identity + Data-	Sh-Pull
15	UserState	7.6.7	Reference+ Requested- Domain	
16	Charging information	7.6.8	User-Identity + Data-	Sh-Pull
17	MSISDN	7.6.9	Reference	Sh-Pull

Table 7.6.1: Data accessible via Sh interface

N4-041560

Seoul, KOREA. 15th to 19th November 2004.

	CHANGE REQUEST											
ж		29.328	CR	110	жrev	-	Ħ	Current v	ersion:	5.7	.0	ж
For <mark>HE</mark>	LP on u	sing this for	m, see	bottom of this	s page or	look	at th	e pop-up te	ext ove	r the ¥	syn	nbols.
Proposed	change	affects: l	JICC ap	ops#	ME	Rad	dio A	ccess Netv	vork	Cor	e Ne	twork X
Title:	H	Access K	ey for C	harging Infor	mation							
Source:	ж	CN4										
Work item	l code: भ	IMS-CCR						Date:	<mark>೫ 29</mark>	<mark>/10/20</mark>	04	
Category:	X	F (corr A (corr B (adc C (fun D (edit	rection) respond lition of t ctional n torial mc planatior	wing categories s to a correction feature), nodification of the dification) us of the above R 21.900.	n in an eai feature)		eleas	Release: Use <u>one</u> Ph2 e) R96 R97 R98 R98 R99 Rel-4 Rel-5 Rel-6 Rel-7	of the f (GS (Rel (Rel (Rel (Rel (Rel (Rel (Rel		se 2) 996) 997) 998) 999)))	ases:
Reason fo	or change			shows the da llues, access								

	reference values, access keys and recommened AS permissions to access this data. However there is no access key defined for the Charging Information. This data type has associated AS permissions for Sh-Pull where the corresponding command definition in table 6.1.1.1 shows that User-Identity and Data-Reference AVPs are Mandatory.
Summary of change: ೫	Define User-Identity and Data-Reference as the access key for Charging Information in table 7.6.1
Consequences if % not approved:	Unclear as to how to access the Charging Information over the Sh Interface.

Clauses affected:	第 <mark>7.6</mark>
Other specs affected:	Y N % X Other core specifications % X Test specifications
anecieu.	X O&M Specifications
Other comments:	X

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This information element contains an XML document conformant to the XML schema defined in Annex D.

Annex C specifies the UML logical model of the data downloaded via the Sh interface.

Table 7.6.1 defines the reference values, access key and recommended access rights for the data accessible via the Sh interface. It is a matter of operator policy to further restrict the access rights defined in table 7.6.1.

Data Ref.	XML tag	Defined in	Access key	May be included in the operations:
0	RepositoryData	7.6.1	User-Identity + Data- Reference + Service- Indication	Sh-Pull, Sh-Update, Sh-Subs- Notif
10	IMSPublicIdentity	7.6.2	User-Identity + Data- Reference	Sh-Pull
11	IMSUserState	7.6.3]	Sh-Pull, Sh-Subs-Notif
12	S-CSCFName	7.6.4]	Sh-Pull, Sh-Subs-Notif
13	InitialFilterCriteria	7.6.5	User-Identity + Data- Reference + Server- Name	Sh-Pull, Sh-Subs-Notif
14	LocationInformation	7.6.6	User-Identity + Data-	Sh-Pull
15	UserState	7.6.7	Reference+ Requested- Domain	
16	Charging information	7.6.8	User-Identity + Data-	Sh-Pull
17	MŠISDN	7.6.9	Reference	Sh-Pull

Table 7.6.1: Data accessible via Sh interface

E.

N4-041568

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Seoul, KOREA.	15 th to	19 th	November	2004.

CHANGE REQUEST										
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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										
Title: #	Har	ndling of Info	ormation Elem	ent marked	d as (M), (C	C) or (O)			
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Summary of chang	де: Ж	<u>lt is an es</u>	sential correc	<u>ction</u>						
	It is proposed to add a descriptive text in the beginning of the section 6 explaining the meaning of the terms "Mandatory", "Conditional" and "Optional" i the table. Moreover, the text states that a missing mandatory information element in a command shall cause an application error and an answer message shall be set back to the originator of the request with a Result-Code set to DIAMETER_MISSING_AVP_and a Failed-AVP AVP containg an example of the expected AVP. The appropriate handling is also detailled for Conditional and Optional information elements								n a be sent	
Consequences if not approved:	ж	meaning a	of wrong imple s well as on th l or optional							
Clauses affected:	ж	6								

Other specs affected:	XOther core specificationsXTest specificationsXO&M Specifications	発 CR-108	
Other comments:	¥		

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/specs/CR.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.

Beginning of the modified section

6 Procedure Descriptions

In the tables that describe the Information Elements transported by each command, each Information Element is marked as (M) Mandatory, (C) Conditional or (O) Optional.

- A mandatory Information Element (marked as (M) in the table) shall always be present in the command. If this
 Information Element is absent, an application error occurs at the receiver and an answer message shall be sent
 back to the originator of the request with the Result-Code set to DIAMETER MISSING AVP. This message
 shall also include a Failed-AVP AVP containing the missing Information Element i.e. the corresponding
 Diameter AVP defined by the AVP Code and the other fields set as expected for this Information Element.
- A conditional Information Element (marked as (C) in the table) shall be present in the command if certain conditions are fulfilled.
 - If the receiver detects that those conditions are fulfilled and the Information Element is absent, an application error occurs and an answer message shall be sent back to the originator of the request with the Result-Code set to DIAMETER MISSING AVP. This message shall also include a Failed-AVP AVP containing the missing Information Element i.e. the corresponding Diameter AVP defined by the AVP Code and the other fields set as expected for this Information Element.
 - If those conditions are not fulfilled, the Information Element shall be absent. If however this Information
 Element appears in the message, it shall not cause an application error and it may be ignored by the receiver
 if this is not explicitly defined as an error case. Otherwise, an application error occurs at the receiver and an
 answer message with the Result-Code set to DIAMETER AVP NOT ALLOWED shall be sent back to the
 originator of the request. A Failed-AVP AVP containing a copy of the corresponding Diameter AVP shall be
 included in this message
- An optional Information Element (marked as (O) in the table) may be present or absent in the command, at the discretion of the application at the sending entity. Absence or presence of this Information Element shall not cause an application error and may be ignored by the receiver.

End of the modified section

N4-041568

Seoul, KOREA. 15th to 19th November 2004.

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End of the modified section