3GPP TSG CN Plenary Meeting #26 **NP-040524**
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	Cat	Ver_C
29.328	110		1560	Rel-5	Access Key for Charging Information	F	5.7.0
29.328	104		1465	Rel-6	Access Key for Charging Information	A	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	A	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)	A	6.3.0

3GPP TSG-CN WG4 Meeting #25 ***N4-041345***

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.329** **CR** **052** ⌘ **rev** **-** ⌘ Current version: **5.7.0** ⌘

*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 ☒

Title:	⌘	Sh ABNF corrections
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	05/11/2004
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	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:	⌘	Missing 'P' bits are added to the ABNF definitions. Application-Id is moved to the correct part of the header.
Consequences if not approved:	⌘	Interoperability problems. Problems with Diameter proxies and relays.

Clauses affected:	⌘	6.1

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ 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:

Table 6.1.1: Command-Code values

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

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~~:~~, PXY, 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]

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, PXY, 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, 16777217 >
< Session-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, PXY, 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

< Push-Notification-Request > ::= < Diameter Header: 309, ~~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]

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, PXY, 16777217 >
< Session-Id >
{ Vendor-Specific-Application-Id }
[Result-Code]
[Experimental-Result]
{ Auth-Session-State }
{ Origin-Host }
{ Origin-Realm }
*[AVP]
*[Proxy-Info]
*[Route-Record]

3GPP TSG-CN WG4 Meeting #25 ***N4-041346***

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.329** **CR** **053** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Sh ABNF corrections
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	05/11/2004
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
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Reason for change:	⌘	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:	⌘	Missing 'P' bits are added to the ABNF definitions. Application-Id is moved to the correct part of the header.
Consequences if not approved:	⌘	Interoperability problems. Problems with Diameter proxies and relays.

Clauses affected:	⌘	6.1			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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Profile-Update-Answer	PUA	307	6.1.4
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Subscribe-Notifications-Answer	SNA	308	6.1.6
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Push-Notification-Answer	PNA	309	6.1.8

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Message Format

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< 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, PXY, 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, 16777217 >
< 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

< Subscribe-Notifications-Answer > ::= < Diameter Header: 308, PXY, 16777217 >
< Session-Id >
{ Vendor-Specific-Application-Id }
{ Auth-Session-State }
[Result-Code]
[Experimental-Result]
{ Origin-Host }
{ Origin-Realm }
***[Supported-Features]**
*[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

< Push-Notification-Request > ::= < Diameter Header: 309, ~~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]

6.1.8 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, PXY, 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]

3GPP TSG-CN WG4 Meeting #25 ***N4-041465***

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.328** **CR** **104** ⌘ **rev** **-** ⌘ Current version: **6.3.0** ⌘

*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 ☒

Title:	⌘	Access Key for Charging Information
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	29/10/2004
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(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)*
Rel-7	*(Release 7)*

Reason for change:	⌘	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:	⌘	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:	⌘	7.6

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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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.

Table 7.6.1: Data accessible via Sh interface

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-Reference	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-Reference+ Requested-Domain	Sh-Pull
15	UserState	7.6.7		
16	Charging information	7.6.8	User-Identity + Data-Reference	Sh-Pull
17	MSISDN	7.6.9		Sh-Pull

3GPP TSG-CN WG4 Meeting #25 ***N4-041560***

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.328** **CR** **110** ⌘ **rev** **-** ⌘ Current version: **5.7.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Access Key for Charging Information
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	29/10/2004
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	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:	⌘	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:	⌘	7.6			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ 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.

*** 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 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.

Table 7.6.1: Data accessible via Sh interface

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-Reference+ Requested-Domain	Sh-Pull
15	UserState	7.6.7		
16	Charging information	7.6.8	User-Identity + Data-Reference	Sh-Pull
17	MSISDN	7.6.9		Sh-Pull

3GPP TSG-CN WG4 Meeting #25 ***N4-041568***

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.328** **CR** **109** ⌘ **rev** **2** ⌘ Current version: **5.7.0** ⌘

*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 ☒

Title:	⌘	Handling of Information Element marked as (M), (C) or (O)
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	15/11/2004
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
Ph2 (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)
Rel-7 (Release 7)

Reason for change:	⌘	In the tables describing the Information Elements transported in the various Sh commands specified in the TS 29.328, there is no description of the meaning of the "Mandatory", "Conditional" and "Optional". Moreover, it is not described the correct handling when one of those information elements are missing in received request.
Summary of change:	⌘	**It is an essential correction** 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" in 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 sent 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
Consequences if not approved:	⌘	Possibility of wrong implementation due to an unclear specification on the meaning as well as on the correct handling of missing IE marked as mandatory, conditional or optional

Clauses affected:	⌘	6

Y N

Other specs affected:	⌘	X		Other core specifications	⌘	CR-108
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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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.

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

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

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.328** **CR** **108** ⌘ **rev** **2** ⌘ Current version: **6.3.0** ⌘

*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 ☒

Title:	⌘	Handling of Information Element marked as (M), (C) or (O)
Source:	⌘	CN4
Work item code:	⌘	IMS-CCR
Date:	⌘	15/11/2004
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
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Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
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R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	In the tables describing the Information Elements transported in the various Sh commands specified in the TS 29.328, there is no description of the meaning of the "Mandatory", "Conditional" and "Optional". Moreover, it is not described the correct handling when one of those information elements are missing in received request.
Summary of change:	⌘	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" in 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 sent back to the originator of the request with a Result-Code set to DIAMETER_MISSING_AVP and the Failed-AVP AVP containing an example of the expected AVP. The appropriate handling is also detailled for Conditional and Optional information elements
Consequences if not approved:	⌘	Possibility of wrong implementation due to an unclear specification on the meaning as well as on the correct handling of missing IE marked as mandatory, conditional or optional

Clauses affected:	⌘	6			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	

	X	O&M Specifications

Other comments: ⌘

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Beginning of the modified section

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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.

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  - 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