Source:	**SA5 (Telecom Management)**
Title:	**2 Rel-5 CR 32.205/215 (Charging data description for the CS/PS domains) : Correction to Level of CAMEL Service**
Document for:	**Decision**
Agenda Item:	**7.5.3**

Doc-1st-Level	Spec	CR	Ph	Subject	Cat	Ver-Cur	Doc-2nd-Level	WI
SP-030620	32.205	023	Rel-5	Correction to Level of CAMEL Service	F	5.4.0	S5-034643	OAM-CH
SP-030620	32.215	030	Rel-5	Correction to Level of CAMEL Service	F	5.4.0	S5-034644	OAM-CH

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.205** CR **023** | ⌘ **rev** | **-** | ⌘ | Current version: | **5.4.0** | ⌘ |

*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 **X**

Title: ⌘	Correction to Level of CAMEL Service	
Source: ⌘	**SA5 (patrik.teppo@ericsson.se)**	
Work item code: ⌘	OAM-CH	***Date:*** ⌘ 10/10/2003
Category: ⌘ **F**		***Release:*** ⌘ Rel-5

Use <u>one</u> 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 <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)*

Reason for change: ⌘	The descriptions of the three flags (basic, online charging and call duration supervision) in Level of CAMEL Service is not consistent. The current description does not give a clear guidance for (a) what the meaning of the flag is and (b) when the flag shall be set.
Summary of change: ⌘	The present CR proposes corrections to the descriptions of the flags of the Level of CAMEL Service field.
Consequences if not approved: ⌘	- Ambiguous description of the Level of CAMEL Service field. MSC designers will not know how to implement this field. This may result in different implementations, which will hamper post-processing systems. - Mediation devices (and similar systems) designers do not know how to interpret the Level of CAMEL Service field.

Clauses affected: ⌘	5.43

	Y	N		
Other specs affected: ⌘		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.

KEEP the History box of the TS to be changed (see end of the present document)

Change in Clause 5.43

5.43 Level of CAMEL service

This field describes briefly the complexity of CAMEL invocation.

-   The flag 'bBasic' means that a CAMEL feature service is invoked during the set-up phase (e.g. to modify the destination) of the call only. This flag shall be set when a CAMEL service is invoked for a call.

-   'Online charging' means that CAMEL supported AoC parameter were sent to the mobile station (the Send Charging Information message, SCI, is received from the gsmSCF). The flag 'online charging' means that the CAMEL service has applied online charging for the call, by providing AoC parameters in the Send Charging Information message. This flag shall be set when the MSC has received the AoC parameters from the gsmSCF and has sent these AoC parameters to the MS.

-   The flag 'call duration supervision' is set whenever the call duration supervision is applied in the gsmSSF of the VPLMN (apply charging message is received from the gsmSCF). The flag 'call duration supervision' means that the CAMEL service has applied call duration control, with the Apply Charging message. This flag shall be set when the MSC has received the Apply Charging message from the gsmSCF.

End of Change in Clause 5.43

Annex A (informative):
Change history

| Change history |||||||||
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Mar 2001	S_11	SP-010025	--	--	Replaces Release 99 of 3GPP 32.005, which will be discontinued from Release 4 onwards.	-	1.0.0
Jun 2001	S_12	SP-010236	--	--	Re-submitted to SA#12 for Information	1.1.0	1.1.1
Sep 2001	S_13	SP-010464	--	--	Submitted to TSG SA #13 for Approval	2.0.0	4.0.0
Mar 2002	S_15	SP-020022	001	--	Addition of CAMEL phase 3 extensions in SMS-MO CDR	4.0.0	4.1.0
Mar 2002	S_15	SP-020035	002	--	Addition of Charging Data Record definition for Location Service in CS domain	4.1.0	5.0.0
Mar 2002	S_15	SP-020025	003	--	Addition of CAMEL phase 4 extensions in SMS-MT CDRs	4.1.0	5.0.0
Jun 2002	S_16	SP-020285	005	--	Corrections of parameter CallEventRecord	5.0.0	5.1.0
Dec 2002	S_18	SP-020734	007	--	Corrections on parameter Destination Number	5.1.0	5.2.0
Dec 2002	S_18	SP-020736	009	--	Corrections on LCS error cause definitions	5.1.0	5.2.0
Dec 2002	S_18	SP-020737	010	--	Charging for Mobile Number Portability (MNP) - Alignment with 23.066	5.1.0	5.2.0
Dec 2002	S_18	SP-020808	012	1	Corrections on MMS records ASN.1 definition and addition of the MMBox CDR types	5.1.0	5.2.0
Mar 2003	S_19	SP-030054	014	--	CDR correction for data services over Iu-interface - alignment with SA1's 22.002	5.2.0	5.3.0
Mar 2003	S_19	SP-030056	015	--	Corrections to ASN.1 Syntax associated with Wireless Number Portability (WNP)	5.2.0	5.3.0
Jun 2003	S_20	SP-030269	016	--	Correction of record contents regarding Partial Record Type	5.3.0	5.4.0
Jun 2003	S_20	SP-030269	017	--	Correction on MMS records ASN.1 definition	5.3.0	5.4.0
Jun 2003	S_20	SP-030269	018	--	Correction on IMS record definitions	5.3.0	5.4.0

CR-Form-v7

CHANGE REQUEST

| ⌘ | **32.215** CR **030** | ⌘**rev** | **-** | ⌘ | Current version: | **5.4.0** | ⌘ |

*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 **X**

Title: ⌘	Correction to Level of CAMEL Service	
Source: ⌘	**SA5 (Patrik.Teppo@Ericsson.com)**	
Work item code: ⌘	OAM-CH	***Date:*** ⌘ 10/10/2003

Category: ⌘   **F**   ***Release:*** ⌘   Rel-5

Use one of the following categories:	*Use one of the following releases:*
F (correction)	*2 (GSM Phase 2)*
A (corresponds to a correction in an earlier release)	*R96 (Release 1996)*
B (addition of feature),	*R97 (Release 1997)*
C (functional modification of feature)	*R98 (Release 1998)*
D (editorial modification)	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	The descriptions of the two flags (basic and call duration supervision) in Level of CAMEL Service is not consistent. The current description does not give a clear guidance for (a) what the meaning of the flag is and (b) when the flag shall be set.
Summary of change: ⌘	The present CR proposes corrections to the descriptions of the flags of the Level of CAMEL Service field.
Consequences if not approved: ⌘	- Ambiguous description of the Level of CAMEL Service field. SGSN designers will not know how to implement this field. This may result in different implementations, which will hamper post-processing systems. - Mediation devices (and similar systems) designers do not know how to interpret the Level of CAMEL Service field.

Clauses affected: ⌘	5.3

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

Other comments: ⌘	

Change in Clause 5.3

5.3 CAMEL Information

This field includes following CAMEL information elements for PDP context (S-CDR), Attach/Detach session (M-CDR), Mobile originated SMS (S-SMO-CDR) and Mobile terminated SMS (S-SMT-CDR) if corresponding CAMEL service is activated.

- CAMEL Access Point Name NI (S-CDR)

  This field contains the network identifier part of APN before modification by the CSE.

- CAMEL Access Point Name OI (S-CDR)

  This field contains the operator identifier part of APN before modification by the CSE.

- CAMEL Calling Party Number (S-SMO-CDR, S-SMT-CDR)

  This field contains the Calling Party Number modified by the CAMEL service.

- CAMEL Destination Subscriber Number (S-SMO-CDR)

  This field contains the short message Destination Number modified by the CAMEL service.

- CAMEL SMSC Address (S-SMO-CDR)

  This field contains the SMSC address modified by the CAMEL service.

- SCF address (S-CDR, M-CDR, S-SMO-CDR, S-SMT-CDR)

  This field identifies the CAMEL server serving the subscriber. Address is defined in HLR as part of CAMEL subscription information.

- Service key (S-CDR, M-CDR, S-SMO-CDR, S-SMT-CDR)

  This field identifies the CAMEL service logic applied. Service key is defined in HLR as part of CAMEL subscription information.

- Default Transaction/SMS Handling (S-CDR, M-CDR, S-SMO-CDR, S-SMT-CDR)

  This field indicates whether or not a CAMEL encountered default GPRS- or SMS-handling. This field shall be present only if default call handling has been applied. Parameter is defined in HLR as part of CAMEL subscription information.

- Free Format Data (S-CDR, M-CDR, S-SMO-CDR, S-SMT-CDR)

  This field contains charging information sent by the gsmSCF in the Furnish Charging Information GPRS messages as defined in 3GPP TS 29.078 [9]. The data can be sent either in one FCI message or several FCI messages with append indicator. This data is transferred transparently in the CAMEL clauses of the relevant call records.

  If the FCI is received more then once during one CAMEL call, the append indicator defines whether the FCI information is appended to previous FCI and stored in the relevant record or the information of the last FCI received is stored in the relevant record (the previous FCI information shall be overwritten).

  In the event of partial output the currently valid "Free format data" is stored in the partial record.

- FFD Append Indicator (S-CDR, M-CDR)

    This field contains an indicator whether CAMEL free format data is to be appended to free format data stored in previous partial CDR. This field is needed in CDR post processing to sort out valid free format data for that call leg from sequence of partial records. Creation of partial records is independent of received FCIs and thus valid free format data may be divided to different partial records.

    If field is missing then free format data in this CDR replaces all received free format data in previous CDRs. Append indicator is not needed in the first partial record. In following partial records indicator shall get value true if all FCIs received during that partial record have append indicator. If one or more of the received FCIs for that call leg during the partial record do not have append indicator then this field shall be missing.

- Level of CAMEL services (S-CDR, M-CDR)

    This field describes briefly the complexity of CAMEL invocation. Categories are the same as in circuit switched services and measure of resource usage in VPLMN requested by HPLMN.

    -The flag "bBasic" means that a CAMEL servicefeature is invoked during the PDP context activation phase only (e.g. to modify APN_NI/APN_OI) or during GPRS Attach. This flag shall be set when a CAMEL service is invoked for a PDP context (for S-CDR) or for an Attach/Detach session (for M-CDR).

    -"Call duration supervision" means that PDP context duration or volume supervision is applied in the gprsSSF of the VPLMN (Apply Charging message is received from the gsmSCF). The flag 'call duration supervision' means that the CAMEL service has applied call duration control, with the Apply Charging message. This flag shall be set when the SGSN has received the Apply Charging message from the gsmSCF.

- Number of DPs encountered (S-CDR, M-CDR)

    This field indicates how many armed CAMEL detection points (TDP and EDP) were encountered and complements "Level of CAMEL service" field.

- smsReferenceNumber (S-SMO-CDR, S-SMT-CDR)

    This parameter contains the SMS Reference Number assigned to the Short Message by the SGSN.

End of Change in Clause 5.3

Annex B (informative): Change history

					Change history		
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
May 2001	--	--	--	--	Transferred from 3GPP 32.015 v3.5.0.	--	1.0.0
Jun 2001	S_12	SP-010236	--	--	Submitted to TSG SA #12 for Information	1.0.0	1.0.1
Sep 2001	S_13	SP-010464	--	--	Submitted to TSG SA #13 for Approval	2.0.0	4.0.0
Dec 2001	S_14	SP-010633	001	--	Specification of the "Data Record Format" and "Data Record Format Version"	4.0.0	4.1.0
Dec 2001	S_14	SP-010633	002	--	Correction of ASN.1 data item QosInformation	4.0.0	4.1.0
Dec 2001	S_14	SP-010634	003	--	Correction of ASN.1 statements for backwards compatibility reason	4.0.0	4.1.0
Mar 2002	S_15	SP-020022	004	--	Addition of CAMEL phase 3 extensions in SMS-MO CDR	4.1.0	4.2.0
Mar 2002	S_15	SP-020024	005	--	Addition of "QoSRequested" parameter into "traffic volume containers"	4.1.0	4.2.0
Mar 2002	S_15	SP-020025	006	--	Addition of CAMEL phase 4 extensions in SMS-MT CDRs	4.2.0	5.0.0
Jun 2002	S_16	SP-020289	007	--	Addition of real-time delivery of Charging Data Records (CDRs) to the Billing System	5.0.0	5.1.0
Jun 2002	S_16	SP-020289	008	--	Alignment of CDRs' IPv4 versus IPv6 address usage with architectural principles	5.0.0	5.1.0
Jun 2002	S_16	SP-020286	010	--	Correction of S-CDR triggers	5.0.0	5.1.0
Jun 2002	S_16	SP-020289	011	--	Addition of external charging identifier into G-CDR	5.0.0	5.1.0
Jun 2002	S_16	SP-020289	012	--	Addition of an "IMS signalling PDP context" flag into G-CDR	5.0.0	5.1.0
Jun 2002	S_16	SP-020288	014	--	Correcting definition of traffic data volume CDR field & Specify usage of the LRSN to avoid loss of billing data	5.0.0	5.1.0
Jun 2002	S_16	SP-020285	016	--	Alignment with 23.271 (LCS stage 2) of CDR definition for LCS in PS domain	5.0.0	5.1.0
Dec 2002	S_18	SP-020734	018	--	Corrections on parameter Destination Number	5.1.0	5.2.0
Dec 2002	S_18	SP-020736	021	--	Corrections on LCS error cause definitions	5.1.0	5.2.0
Dec 2002	S_18	SP-020738	022	--	IPv4-IPv6 co-existence in PS charging	5.1.0	5.2.0
Dec 2002	S_18	SP-020738	023	--	Correction of the list of parameters of the QoS profile (requested and negotiated)	5.1.0	5.2.0
Dec 2002	S_18	SP-020738	024	--	Extension of CDR encoding	5.1.0	5.2.0
Mar 2003	S_19	SP-030055	025	--	Addition of SGSN's Mobile Country Code (MCC) and Mobile Network Code (MNC) on G-CDR - alignment with CN4's 29.060	5.2.0	5.3.0
Jun 2003	S_20	SP-030270	026		Correction of "Cause Code"	5.3.0	5.4.0

End of document