Source: **SA1**

Title: **Release 5 CRs to 22.078 on various subjects**

Document for: **Approval**

Agenda Item: **7.1.3**

SA Doc	Spec	CR	Rev	Phase	Cat	Subject	Old Vers	New Vers	SA1 Doc
SP-020653	22.078	150		Rel-5	F	LS on Disappearance of CN2 endorsed CAMEL4 22.078 CR	5.8.0	5.9.0	S1-022218
SP-020653	22.078	151		Rel-5	F	CAMEL: Remove References to the old Annex A in 22.078	5.8.0	5.9.0	S1-022157
SP-020653	22.078	152		Rel-5	F	CAMEL: Removal of media type as a trigger criterion for CAMEL/IMS	5.8.0	5.9.0	S1-022306

CR-Form-v7

CHANGE REQUEST

⌘	**22.078** CR	**150**	⌘ **rev**		⌘	Current version:	**5.8.0**	⌘	

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: ⌘	Change "CAMEL-connected" to "CAMEL-PDP context active" state	
Source: ⌘	SA1	
Work item code:⌘	CAMEL4	***Date:*** ⌘ 11/11/2002

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:
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: ⌘	CAMEL is using the state <<connected>> to say that there is at least a PDP context active. However, this state doesn't correspond to the 3G state <<PMM connected>> and can be missinterpreted.
Summary of change:⌘	Proposal to change CAMEL <<connected>> into CAMEL <<PDP context active>>
Consequences if ⌘ **not approved:**	Possible mixing of CAMEL states and 3G states.

Clauses affected: ⌘			

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

Other comments: ⌘	This new name is used in 23.078 and in 29.002.

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.

Start of CR
First modification

3   Definitions and abbreviations

Operator Specific Service (OSS): Any non-standardised service offered to a mobile user.

Interrogating PLMN (IPLMN): The PLMN which interrogates the HPLMN for information to handle a mobile terminating call.

CAMEL Service Environment (CSE): A CSE is a logical entity which processes activities related to Operator Specific Services (OSS).

Route select failure: A condition when routeing to the called party fails. Route Select Failure can be reported in an existing relationship or a new relationship can be initiated.

Service event: A specific event of a process which may be used as part of an operator specific service.

Initial service event: A service event which triggers the establishment of a relationship between the CSE and the controlled entity.

Subsequent service event: A service event which is reported in the context of an existing relationship between the CSE and the reporting entity.

Service procedure: A part of the CAMEL feature to be used when a specific CAMEL service event is detected.

Network CAMEL Service Information (N-CSI): Identifies services offered by the serving PLMN operator equally for all subscribers.

  NOTE: These services may also be provided using a technology other than CAMEL.

CAMEL Subscription Information (CSI): Identifies that CAMEL support is required for the subscriber and the identities of the CSEs to be used for that support. The CSI also contains information related to the OSS of the subscriber, e.g. Service Key.

The OSS may include both services provisioned for individual subscribers and services provisioned equally for all users of a VPLMN.

Location Area Code: Indicates the global identity of that part of the service area of a VLR in which the subscriber is currently located, and in which the subscriber will be paged for mobile terminated traffic

Location Information: The location information shall be an identification of the location of the served subscriber.

The following location information shall be sent to the CSE (if available):

- **Geographical information** indicates the location (latitude and longitude) of the served subscriber. When Cell ID or Location Area Code is known the latitude and longitude may be calculated as the nominal central point of the cell or of the location area; alternative mechanisms for determining latitude and longitude may also be supported. The uncertainty of the indicated location is part of the geographical information.

- **Geodetic Information** provides the same functional capability as geographical information; however it is encoded differently.

- **Cell ID** indicates the global identity of the current or last cell which the subscriber is using or has used if the subscriber is using GERAN. The VPLMN shall update the stored Cell ID at establishment of every radio connection and whenever the subscriber is handed over between cells.

- **Routing Area ID** indicates the global identity of the current or last GPRS routing area which the subscriber is using or has used if the subscriber is using GERAN radio access in a GPRS serving network.

- **Service Area ID** indicates the global identity of the current or last service area which the subscriber is using or has used if the subscriber is using UTRAN radio access. The VPLMN shall update the stored Service Area ID at establishment of every radio connection and whenever the subscriber is handed over between service areas.

- **VLR number** is the number of the serving VLR stored in the HPLMN.

- **Location status** indicates whether or not the location information has been confirmed by radio contact. If the location information has not been confirmed by radio contact a time stamp is sent indicating the time elapsed since the last radio contact with the subscriber.

- **Location number** is the number received on the incoming circuit (for an incoming call) or to be sent on the outgoing circuit (for an outgoing call).

Service Key: An identifier of the OSS which shall be transparent to the IPLMN/VPLMN.

Subscriber Status: An indication of the status of a subscriber, determined by the state of the subscriber's MS. The subscriber status depends on the domain for which it is requested:

The **Subscriber Status in the circuit switched domain** can take one of three values:

- **CAMEL-busy**: The MS is engaged in a mobile-originated or mobile-terminated circuit-switched call.

- **Network determined not reachable**: The network can determine from its internal data that the MS is not reachable. This includes detached and purged mobile stations.

- **Assumed idle**: The MS is not CAMEL-busy or network determined not reachable.

The **Subscriber Status in the packet switched domain** can take one of five values:

- **Detached:** The network can determine from its internal data that the MS is not registered to the GPRS data network.

- **CAMEL-attached, MS not reachable for paging:** The MS is registered to the GPRS data network, but there are no PDP contexts active for this MS; the GPRS data network can determine from its internal data that the MS is not reachable for paging.

- **CAMEL-attached, MS may be reachable for paging:** The MS is registered to the GPRS data network, but there are no PDP contexts active for this MS; the GPRS data network has not determined from its internal data that the MS is not reachable for paging.

- **CAMEL-PDP context active~~connected~~, MS not reachable for paging:** The MS is registered to the GPRS data network, and there is at least one PDP context active for this MS; the GPRS data network can determine from its internal data that the MS is not reachable for paging. The status includes the information for each active PDP context, as specified in 3GPP TS 23.060 [13].

- **CAMEL-PDP context active~~connected~~, MS may be reachable for paging:** The MS is registered to the GPRS data network, and there is at least one PDP context active for this MS; the GPRS data network has not determined from its internal data that the MS is not reachable for paging. The status includes the information for each active PDP context, as specified in 3GPP TS 23.060 [13].

GPRS session: The period during which the GPRS subscriber is registered to the GPRS data network. A GPRS session starts when the GPRS subscriber attaches to the GPRS data network. It ends when the GPRS subscriber detaches from the GPRS data network.

PDP Context: A transaction for the exchange of data between an MS and a peer entity, which is addressed by the Access Point Name. A PDP context starts when the request from a GPRS subscriber successfully establishes the PDP context and ends when the subscriber deactivates the PDP context.

PDP: Packet Data Protocol (as defined in TS 22.060 [6])

Carrier Identification Code: Identifies uniquely the Carrier (NAEA).

Carrier Selection Information: An indication of whether the subscriber selected a carrier, or the carrier is predefined for the subscriber (NAEA).

Originating Line Identification: Identifies uniquely the subscriber to be charged for the usage of the carrier (NAEA).

Charge Number: Identifies uniquely the organisation to be charged for the usage of the carrier (NAEA).

North American Equal Access (NAEA): A service used in the North American region whereby a subscriber may select the carrier to be used for long distance calls.

Subscribed Dialled Services: Identifies a set of at most ten service numbers. The served subscriber can originate calls by entering a service number for the destination. This is in addition to the possibility to route calls by entering the destination number. Each service number is defined at the HPLMN operator's discretion. The set of service numbers forms part of the subscriber's profile, whether she is registered in the HPLMN or another PLMN.

Call Party Handling (CPH): A method of manipulating call legs which includes creating new parties in a call, placing individual call parties on hold, reconnecting them to the group of call parties and disconnecting individual call parties.

CPH Configuration: One or more groups of call legs that share a common dialogue to the CSE.

Call Leg: The connection joining the call party to the CPH configuration.

Call Party: A party (e.g. served subscriber, called party, PSTN subscriber etc.) in the CPH configuration.

IP multimedia session (IPMM session): See [11] for definition.

IM CN subsystem (IP Multimedia Core Network subsystem): See [11] for definition.

IM application level registration: See [12] for definition.

First modification end
End of CR

CR-Form-v7

CHANGE REQUEST

	22.078 CR	**151**	**⌘ rev**	**-**	**⌘**	Current version:	**5.8.0**	**⌘**

*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: ⌘	Remove references to the old Annex A	
Source: ⌘	SA1 (Lucent Technologies)	
Work item code:⌘	TEI5	***Date:*** ⌘ 08/10/2002
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:
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 stage 1 specification for CAMEL/IMS still references tables and subclauses from Annex A. Since Annex A has been removed from this specification, any references to this Annex must be deleted.
Summary of change:⌘	This CR proposes the following changes: - Remove any references to Annex A. - Remove references to Tables Y.1 & Y.2. These tables do not exist and is not necessary for the same reason that the Tables A.1 & A.2 were removed. The same information is available in the stage 2 specifications.
Consequences if not approved: ⌘	Confusing specification.

Clauses affected: ⌘	B.2 & B.3

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

Other comments: ⌘	

**** First modified section ****

B.2.1   Initial contact with the CSE

When the IM CN subsystem initiates contact with the CSE, the IPMM session processing is suspended and the IM CN subsystem waits for instructions from the CSE. It shall be possible to specify which of the following initial events shall initiate contact with the CSE:

-    Called identity received at the IM CN subsystem,

-    Analysis of called identity

-    Unsuccessful IPMM session setup.

~~For mobile originated IPMM sessions, the information listed in table Y.1 shall be provided to the CSE [Note: table Y.1 yet to be provided and shall be based on the same principle as table A.1].~~ After initial contact with the CSE, the CSE shall provide the IM CN subsystem with further instructions as detailed in table C-1.

**** Next modified section ****

B.2.3   Subsequent events reported to the CSE

After initial contact with the CSE ~~as detailed in sub clause A.2.1~~, the CSE may request the IM CN subsystem to detect and report subsequent events. These events are listed below. With each of these events, the CSE shall indicate the type of monitoring (ie suspension of IPMM session processing or notification). If the CSE requests the suspension of IPMM session processing, it shall provide the IM CN subsystem with further instructions as detailed in table C-1. ~~For mobile originated IPMM sessions, the information listed in table Y.1 shall be provided to the CSE [Note: table Y.1 yet to be provided and shall be based on the same principle as table A.1]~~

The subsequent events that may be detected by the IM CN subsystem and reported to the CSE are:

-    The called party answers;

-    Additional information received from the originating party;

-    TheIPMM session is disconnected;

-    The originating party abandons the IPMM session;

-    Unsuccessful IPMM session setup. The following events shall be possible:

    -    The called party is busy;

-    The called party does not respond in specified time period;

-    The called party can not be reached.

**** Next modified section ****

B.2.4   Instruction by the CSE

After initial contact with the CSE, or after the reporting of subsequent events to the CSE, the CSE shall be able to instruct the IM CN subsystem with the following;

- To bar the IPMM session;

- To arm one or more subsequent events;

- To perform the charging activity;

- To perform the in-band user interaction;

- To continue the IPMM session;

- To continue the IPMM session with modified information;

- To release the IPMM session.

The combination of the event reported to the CSE and the instruction by the CSE is provided in the table C-1. For mobile originated IPMM sessions, the information listed in table Y.2 shall be provided by the CSE [Note: table Y.2 yet to be provided and shall be based on the same principle as table A 2]

Table C-1 Actions performed by the CSE at specific service event for MO and MT IP multimedia session can be found in Annex AAC.

**** Next modified section ****

B.3.1   Initial contact with the CSE

It shall be possible to specify which of the following initial service events shall initiate contact with the CSE:

- Incoming IPMM session to subscriber;

- Detection of unsuccessful IPMM session establishment.

   Unsuccessful IPMM session establishment may be caused by:

- Called subscriber busy;

- Called subscriber not reachable;

- No answer from called subscriber in specified time period.

When the IM CN subsystem initiates contact with the CSE, the IPMM session processing is suspended and the IM CN subsystem waits for instructions from the CSE. For mobile terminated IPMM sessions, the information listed in table Y.1 shall be provided to the CSE [Note: table Y.1 yet to be provided and shall be based on the same principle as table A.1]. After initial contact with the CSE, the CSE shall provide the IM CN subsystem with further instructions as detailed in table C-1.

**** Next modified section ****

B.3.3   Subsequent events reported to the CSE

After initial contact with the CSE as detailed in sub-clause A.3.1, the CSE may request the IM CN subsystem to detect and report subsequent events. These events are listed below. With each of these events, the CSE shall indicate the type

of monitoring (ie suspension of IPMM session processing or notification). If the CSE requests the suspension of IPMM session processing, it shall provide the IM CN subsystem with further instructions as detailed in table C-1. ~~For mobile terminated IPMM sessions, the information listed in table Y.1 shall be provided to the CSE [Note: table Y.1 yet to be provided and shall be based on the same principle as table A.1].~~

The subsequent events that may be detected by the IM CN subsystem and reported to the CSE are:

- The called party is alerted

- The called party answers;

- Additional information received from the terminating party;

- The IPMM session is disconnected;

- The calling party abandons;

- Unsuccessful IPMM session setup. The following events shall be possible:

- The called party does not respond in specified time period.

**** Next modified section ****

B.3.4   Instruction by the CSE

After initial contact with the CSE, or after the reporting of subsequent events to the CSE, the CSE shall be able to instruct the IM CN subsystem with the following;

- To bar the IPMM session;

- To arm one or more subsequent events;

- To perform the charging activity;

- To perform the in-band user interaction;

- To continue the IPMM session;

- To continue the IPMM session with modified information;

- To release the IPMM session;

- To suppress tones and announcements which may be played to the calling party, if an unsuccessful IPMM session establishment occurs

The combination of the event reported to the CSE and the instruction by the CSE is provided in the table C-1. ~~For mobile terminated IPMM sessions, the information listed in table Y.2 shall be provided by the CSE [Note: table Y.2 yet to be provided and shall be based on the same principle as table A.2]~~

Table C-1 Actions performed by the CSE at specific service event for MO and MT IP multimedia session can be found in Annex C.

**** End of modified section ****

CR-Form-v7

CHANGE REQUEST

| ⌘ | **22.078** CR | **152** | ⌘ **rev** | **-** | ⌘ | Current version: | **5.8.0** | ⌘ |

*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: ⌘	Removal of Media Type as a trigger criterion for CAMEL/IMS
Source: ⌘	SA1 (Lucent Technologies)
Work item code:⌘	CAMEL4 　　　　　　　　　　***Date:*** ⌘ 08/10/2002
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:
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 stage 1 specification for CAMEL/IMS indicates the use of Media Type data as a trigger criterion as "for further study". Adding this as a trigger criterion indicates a change in the MAP ASN.1 definition for the CAMEL Subscription Information for IMS subscribers. Also, there is not enough service information to support the need to include the Media Type as a criterion for triggering based on the called identity during an IP Multimedia session setup. Therefore, the use of Media Type as a trigger criterion should not be required at this time for CAMEL subscribers in the IM CN.
Summary of change:⌘	This CR includes the following change: - remove Media Type from the list of triggere criteria for notification of CSE based on the called identity during an IP multimedia session setup. - Fixed the alignment of the list for criteria in subclause B.2.2.1
Consequences if not approved: ⌘	Ambiguous specification (i.e. currently, the specification has noted this as "for further study").

Clauses affected: ⌘	B.2.2.1

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

Other comments: ⌘	

**** First modified section ****

B.2.2   Criteria for initial contact with the CSE

B.2.2.1   CSI criteria applicable at IPMM session setup when called identity is received

CSI criteria may be defined for a subscriber for the case when the called identity is received at IPMM session setup .

- Criteria on the called identity; these consist of:

  - The contents of the identity (a list of up to 10 identities may be defined in the criteria)

- The criteria on the called identity may be collectively defined to be either "enabling" triggering criteria or "inhibiting" triggering criteria (see below). The HPLMN may also choose not to define any criteria on the called identity.

- ~~[FFS] Media type~~

****Next modified section ****

B.3   Mobile Terminated Events

B.3.1   Initial contact with the CSE

It shall be possible to specify which of the following initial service events shall initiate contact with the CSE:

- Incoming IPMM session to subscriber;

- Detection of unsuccessful IPMM session establishment.

    Unsuccessful IPMM session establishment may be caused by:

- Called subscriber busy;

- Called subscriber not reachable;

- No answer from called subscriber in specified time period.

When the IM CN subsystem initiates contact with the CSE, the IPMM session processing is suspended and the IM CN subsystem waits for instructions from the CSE. For mobile terminated IPMM sessions, the information listed in table Y.1 shall be provided to the CSE [Note: table Y.1 yet to be provided and shall be based on the same principle as table A.1]. After initial contact with the CSE, the CSE shall provide the IM CN subsystem with further instructions as detailed in table C-1.

B.3.2   Criteria for initial contact with the CSE

B.3.2.1   ~~CSI criteria applicable on detection incoming IPMM session~~Void

~~CSI criteria may be defined for a subscriber for the case when an incoming IPMM session request is detected .~~

~~[FFS] Media type~~

B.3.2.2   CSI criteria applicable on detection of unsuccessful IPMM session establishment

**** End of modified section ****