

Source: SA1
Title: CRs to 22.078 on Support of previous phases of CAMEL
Document for: Approval
Agenda Item: 7.1.3

Spec	CR	Re v	Phas e	Subject	Cat	Versio n- Curren t	Versio n-New
22.078	076	1	R99	Support of previous phases of CAMEL	F	3.6.0	3.7.0
22.078	077	2	Rel-4	Support of previous phases of CAMEL	A	4.1.0	4.2.0
22.078	078	3	Rel-5	Support of previous phases of CAMEL	F	5.1.0	5.2.0

3GPP TSG-SA1 CAMEL Meeting #5
 Austin, USA, 30th January – 1st February 2001

Tdoc S1C01028
 (rev of S1C01004)

CR-Form-v3			
CHANGE REQUEST			
22.078	CR	076	rev 1
		Current version:	3.6.0

Proposed change affects: (U)SIM ME/UE Radio Access Network Core Network

Title:	Support of previous phases of CAMEL		
Source:	SA1		
Work item code:	CAMEL3	Date:	06/02/2001
Category:	F	Release:	R99
Use <u>one</u> of the following categories: F (essential 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)	

Reason for change:	If an IPLMN or VPLMN supports CAMEL Phase 3, it should be possible for the CSE to offer the roamed subscriber CAMEL Phase 1 and Phase 2 services.
Summary of change:	States that if an IPLMN or VPLMN supports CAMEL Phase 3, it shall also support CAMEL Phase 2 and CAMEL Phase 1.
Consequences if not approved:	CAMEL Phase 1 and 2 services cannot be offered to subscribers whilst roaming in CAMEL Phase 3 only networks.

Clauses affected:	1	
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	22.078 (R4)
Other comments:		

*** First Modified Section ***

1 Scope

This standard specifies the stage 1 description for the CAMEL feature (Customised Applications for Mobile network Enhanced Logic) which provides the mechanisms to support services consistently independently of the serving network. The CAMEL features shall facilitate service control of operator specific services external from the serving PLMN. The CAMEL feature is a network feature and not a supplementary service. It is a tool to help the network operator to provide the subscribers with the operator specific services even when roaming outside the HPLMN.

CAMEL is developed in phases. The following phases exist:

- CAMEL phase 1. This is the default phase in this specification. Text which is applicable only to phase 1 is marked with the formal designator - \$(CAMEL1\$)
- CAMEL phase 2. Material which applies for CAMEL phase 2 and later phases is marked with the formal designation - \$(CAMEL2\$) for a single subclause or paragraph, and with the formal designation \$(begin\$(CAMEL2\$) ... \$(end\$(CAMEL2\$) for multiple paragraphs.
- CAMEL phase 3. Material which applies for CAMEL phase 3 and later phases is marked with the formal designation - \$(CAMEL3\$) for a single subclause or paragraph, and with the formal designation \$(begin\$(CAMEL3\$) ... \$(end\$(CAMEL3\$) for multiple paragraphs.

A VPLMN or IPLMN supporting CAMEL phase 2 shall also support CAMEL phase 1, so far as it is applicable to the network entities concerned. -\$(CAMEL2\$).

A VPLMN or IPLMN supporting CAMEL phase 3 shall also support CAMEL phase 2 and CAMEL phase 1, so far as it is applicable to the network entities concerned. For instance, an SGSN has no capability defined for CAMEL phase 2 or CAMEL phase 1. -\$(CAMEL3\$).

The CAMEL feature is applicable

- To mobile originated and mobile terminated call related activities;
- As a CAMEL phase 2 function, to supplementary service invocations - \$(CAMEL2\$);
- as a CAMEL Phase 3 function, to SMS MO, to GPRS sessions and PDP contexts, to the control of HLR subscriber data, to the control of network signalling load - \$(CAMEL3\$).

The mechanism described addresses especially the need for information exchange among the VPLMN, HPLMN and the CAMEL Service Environment (CSE) for support of such operator specific services. Any user procedures for operator specific services are outside the scope of this standard.

This specification describes the interactions between the functions of the VPLMN, HPLMN, IPLMN and the CSE.

The second phase of CAMEL enhances the capabilities of phase 1. The following capabilities are added:

- Additional event detection points;
- Interaction between a user and service using announcements, voice prompting and information collection via in band interaction or USSD interaction;
- Control of call duration and transfer of Advice of Charge Information to the mobile station;
- The CSE can be informed about the invocation of the supplementary services ECT, CD and MPTY;
- For easier post-processing, charging information from a serving node can be integrated in normal call records.

The third phase of CAMEL enhances the capabilities of phase 2. The following capabilities are added:

- Support of facilities to avoid overload ;
- Capabilities to support Dialed Services;

- Capabilities to handle mobility events, such as (Not-)reachability and roaming;
- Control of GPRS sessions and PDP contexts;
- Control of mobile originating SMS through both circuit switched and packet switched serving network entities;
- Interworking with SoLSA (Support of Localised Service Area). Support for this interworking is optional;
- The CSE can be informed about the invocation of the GSM supplementary service CCBS.

Detailed information is given in the respective sections.

****** End Of Document ******

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 (rev of S1C01029)

CR-Form-v3	
CHANGE REQUEST	
22.078 CR 077	rev 2 Current version: 4.1.0

Proposed change affects: (U)SIM ME/UE Radio Access Network Core Network

Title:	Support of previous phases of CAMEL		
Source:	SA1		
Work item code:	CAMEL3	Date:	06/02/2001
Category:	A	Release:	REL-4
	Use <u>one</u> of the following categories: F (essential 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)

Reason for change:	If an IPLMN or VPLMN supports CAMEL Phase 3, it should be possible for the CSE to offer the roamed subscriber CAMEL Phase 1 and Phase 2 services.
Summary of change:	States that if an IPLMN or VPLMN supports CAMEL Phase 3, it shall also support CAMEL Phase 2 and CAMEL Phase 1.
Consequences if not approved:	CAMEL Phase 1 and 2 services cannot be offered to subscribers whilst roaming in CAMEL Phase 3 only networks.

Clauses affected:	1	
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	22.078 (R99)
Other comments:		

***** First Modified Section *****

1 Scope

This standard specifies the stage 1 description for CAMEL feature (Customised Applications for Mobile network Enhanced Logic) which provides the mechanisms to support services consistently independently of the serving network. The CAMEL features shall facilitate service control of operator specific services external from the serving PLMN. The CAMEL feature is a network feature and not a supplementary service. It is a tool to help the network operator to provide the subscribers with the operator specific services even when roaming outside the HPLMN.

CAMEL is developed in phases. The following phases exist:

- CAMEL phase 1. This is the default phase in this specification. Text that are only applicable to phase 1 are characterised with the formal designator - \$(CAMEL1\$)
- CAMEL phase 2. It is characterised where necessary with the formal designation - \$(CAMEL2\$) and sometimes with an indication of CAMEL phase 2. - \$(CAMEL2\$)
- CAMEL phase 3. It is characterised where necessary with the formal designation - \$(CAMEL3\$) and sometimes with an indication of CAMEL phase 2. - \$(CAMEL3\$)

A VPLMN or IPLMN supporting CAMEL phase 2 shall also support CAMEL phase 1, so far as it is applicable to the network entities concerned. -\$(CAMEL2\$)

A VPLMN or IPLMN supporting CAMEL phase 3 shall also support CAMEL phase 2 and CAMEL phase 1, so far as it is applicable to the network entities concerned. For instance, an SGSN has no capability defined for CAMEL phase 2 or CAMEL phase 1. -\$(CAMEL3\$)

The CAMEL feature is applicable

- to mobile originated and mobile terminated call related activities;
- as a CAMEL phase 2 function, to supplementary service invocations - \$(CAMEL2\$);
- as a CAMEL Phase 3 function, to SMS MO, to GPRS sessions and PDP contexts, to the control of HLR subscriber data, to the control of network signalling load - \$(CAMEL3\$).

The mechanism described addresses especially the need for information exchange among the VPLMN, HPLMN and the CAMEL Service Environment (CSE) for support of such operator specific services. Any user procedures for operator specific services are outside the scope of this standard.

This specification describes the interactions between the functions of the VPLMN, HPLMN, IPLMN and the CSE.

The second phase of CAMEL enhance the capabilities of phase 1 and are included in this standard. Following capabilities are added:

- Additional event detection points.
- Interaction between a user and service using announcements, voice prompting and information collection via in band interaction or USSD interaction.
- Control of call duration and transfer of Advice of Charge Information to the mobile station.
- The CSE can be informed about the invocation of supplementary services (e.g ECT, CD, MPTY).
- For easy postprocessing, charging information from a serving node can be integrated in normal call records.

The third phase of CAMEL enhances the capabilities of phase 2. Following capabilities are added :

- Support of facilities to avoid overload situations.
- Capabilities to support Dialed Services.

- Capabilities to handle mobility events, such as (Not-)reachability and roaming.
- Control of GPRS sessions and PDP contexts.
- Control of circuit switched mobile originating SMS and packet switched mobile originating SMS.
- Support of SoLSA. Support of Localised Service Area interworking is an optional feature. - \$(CAMEL3\$)
- The CSE can be informed about the invocation of GSM supplementary services (CCBS) - \$(CAMEL3\$)

Detailed information can be found in the respective sections.

****** End Of Document ******

3GPP TSG-SA1 CAMEL Meeting #5
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 (revision of S1C01062)

CR-Form-v3	
CHANGE REQUEST	
22.078 CR 078	rev 3 Current version: 5.1.0

Proposed change affects: (U)SIM ME/UE Radio Access Network Core Network

Title:	Support of previous phases of CAMEL	
Source:	SA1	
Work item code:	CAMEL4	Date: 9 th February 2001
Category:	F	Release: REL-5
	Use <u>one</u> of the following categories: F (essential 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)

Reason for change:	If an IPLMN or VPLMN supports CAMEL Phase 4, it should be possible for the CSE to offer the roamed subscriber services from earlier CAMEL phases
Summary of change:	If an IPLMN or VPLMN supports CAMEL Phase 4, it shall also provide the functionality of all previous CAMEL phases. Phase 4 network signalling shall support interworking with CAMEL Phases 3 and 2.
Consequences if not approved:	CAMEL services cannot be offered to subscribers whose home network supports a CAMEL phase earlier than 4 whilst they are roaming in CAMEL Phase 4 only networks.

Clauses affected:	1
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	

***** First Modified Section *****

1 Scope

This standard specifies the stage 1 description for CAMEL feature (Customised Applications for Mobile network Enhanced Logic) which provides the mechanisms to support services consistently independently of the serving network. The CAMEL features shall facilitate service control of operator specific services external from the serving PLMN. The CAMEL feature is a network feature and not a supplementary service. It is a tool to help the network operator to provide the subscribers with the operator specific services even when roaming outside the HPLMN.

If an IPLMN or VPLMN supports CAMEL Phase 4, it shall also provide the functionality of all previous CAMEL phases.

Phase 4 network signalling shall support interworking with CAMEL Phases 3 and 2.

A VPLMN or IPLMN supporting CAMEL phase 4 shall also support CAMEL phase 2, so far as it is applicable to the network entities concerned. For instance, an SGSN has no capability defined for CAMEL phase 2.

A VPLMN or IPLMN supporting CAMEL phase 4 may also support CAMEL phase 3 and CAMEL phase 1, so far as it is applicable to the network entities concerned.

Support of CAMEL phase 3 and CAMEL phase 2 in a VPLMN or IPLMN supporting CAMEL phase 4 does not imply support of any earlier CAMEL phase.

The CAMEL feature is applicable

- to mobile originated and mobile terminated call related activities;
- to supplementary service invocations;
- to SMS MO, to GPRS sessions and PDP contexts, to the control of HLR subscriber data, to the control of network signalling load.

The mechanism described addresses especially the need for information exchange among the VPLMN, HPLMN and the CAMEL Service Environment (CSE) for support of such operator specific services. Any user procedures for operator specific services are outside the scope of this standard.

This specification describes the interactions between the functions of the VPLMN, HPLMN, IPLMN and the CSE.

The second phase of CAMEL enhances the capabilities of phase 1 where the following capabilities have been added:

- Additional event detection points.
- Interaction between a user and service using announcements, voice prompting and information collection via in band interaction or USSD interaction.
- Control of call duration and transfer of Advice of Charge Information to the mobile station.
- The CSE can be informed about the invocation of supplementary services (e.g ECT, CD, MPTY).
- For easy postprocessing, charging information from a serving node can be integrated in normal call records.

The third phase of CAMEL enhances the capabilities of phase 2. Following capabilities are added :

- Support of facilities to avoid overload situations.
- Capabilities to support Dialed Services.
- Capabilities to handle mobility events, such as (Not-)reachability and roaming.
- Control of GPRS sessions and PDP contexts.
- Control of circuit switched mobile originating SMS and packet switched mobile originating SMS.

- Support of SoLSA. Support of Localised Service Area interworking is an optional feature.
- The CSE can be informed about the invocation of GSM supplementary services (CCBS)

Detailed information can be found in the respective sections.

The fourth phase of CAMEL enhances the capabilities of phase 3. The following capabilities are added:

- CAMEL support for Optimal Routeing of circuit-switched mobile-to-mobile calls;
- The capability for the CSE to create additional parties in an existing call;
- The capability for the CSE to create a new call unrelated to any other existing call;
- Capabilities for the enhanced handling of call party connections.

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