

Source: SA1

Title: CRs to 22.078 on Interaction between CAMEL control of MO-SMS and Call Barring & ODB

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	092	2	R99	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	F	3.6.0	3.7.0
22.078	093	2	Rel-4	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	A	4.1.0	4.2.0
22.078	094	1	Rel-5	Interaction between CAMEL control of MO-/MT-SMS and Call Barring & ODB	A	5.1.0	5.2.0

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

Tdoc S1C01070
(revision of S1C01057)

CHANGE REQUEST

22.078 CR 092 rev **2** Current version: **3.6.0**

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

Title:	Interaction between CAMEL control of MO-SMS and Call Barring & ODB		
Source:	SA1		
Work item code:	CAMEL3	Date:	06/02/2001
Category:	F Non-critical change, agreed by consensus	Release:	R99
	<i>Use <u>one</u> of the following categories:</i>	<i>Use <u>one</u> of the following releases:</i>	
	F (essential 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)	
		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change: Section 18.8 in 3GPP TS 22.078 V3.6.0 specifies the interworking between CAMEL and the supplementary service "Call Barring" (CB). Section 18.8 has sub sections for the individual Call Barring categories (section 18.8.1 – 18.8.5). For each sub section, the interaction, if any, between CAMEL and the specific Call Barring category is specified for Mobile Originated calls, Mobile Forwarded calls or Mobile Terminated calls, in as far as applicable.

The "Call Barring" supplementary service is also applicable to Mobile Originated Short Message Service (MO SMS).

The network feature "Operator Determined Barring" (ODB) is also applicable to MO SMS.

The applicability of CB and ODB to Short Message Service is specified in 3GPP TS 23.040, sections 3.5 and 3.6.

The interaction between CAMEL and CB for MO SMS and the interaction between CAMEL and ODB for MO SMS is currently not reflected in 3GPP TS 22.078.

The present CR proposes new subclauses to sections 18.8 to remedy the above described omission.

Summary of change: Specifying the interaction between CAMEL control of MO SMS and CB & ODB.

Consequences if not approved:	Manufacturers may incorrectly implement CAMEL control of Mobile Originated SMS.
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Clauses affected:	18.8
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Other specs affected:	<input checked="" type="checkbox"/> Other core specifications	22.078 (R4), 22.078 (R5)
	<input type="checkbox"/> Test specifications	
	<input type="checkbox"/> O&M Specifications	

Other comments:	
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*** First Modified Section ***

18.8 Call Barring

NOTE: CAMEL may be used to establish forwarded-legs and CAMEL based re-routing-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL2\$)

18.8.1 Barring of all outgoing calls

18.8.1.1 Mobile originated calls

No interaction. The Barring of all outgoing calls supplementary service will be invoked. Thus, originating CAMEL based services will not be invoked.

18.8.1.2 Forwarded Calls

No interaction. If the Barring of all outgoing calls supplementary service is active and operative, it shall prevent the registration or activation of Call Forwarding as specified in TS 22.082.

18.8.1.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The Barring of all outgoing calls supplementary service will be invoked. No CAMEL service for Mobile Originated SMS will be invoked.

18.8.2 Barring of outgoing international calls

18.8.2.1 Mobile originated calls

No interaction. Any originating CAMEL based services shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.2.2 Forwarded Calls

No interaction. The interaction between call forwarding and call barring is not be modified by CAMEL. This means that the interaction is applied prior to the invocation of call forwarding. When call forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) then the VPLMN or IPLMN shall not apply outgoing call barring services.

\$(begin\$(CAMEL2\$)

If the served subscriber is provided with TIF-CSI the network shall not check the interaction of call forwarding services with this barring program, i.e.:

- The registration or activation of Call Forwarding is accepted even if this barring program is active and operative;
- The activation of this barring program is accepted even if a Call Forwarding supplementary service is active.

When Call Forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) the VPLMN or IPLMN shall not invoke outgoing Call Barring services.

\$(end\$(CAMEL2\$)

NOTE: This behaviour means that CAMEL may be used to establish forwarded-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL1\$)

18.8.2.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The CAMEL Service for Mobile Originated SMS shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.3 Barring of outgoing international calls except those directed to the HPLMN country

As for Barring of outgoing international calls (see subclause 18.8.2).

18.8.4 Barring of all incoming calls

No interaction. The Barring of all incoming calls supplementary service shall be invoked. Thus, terminating CAMEL based services will not be invoked.

18.8.5 Barring of incoming calls when roaming

Same as Barring of all incoming calls (see subclause 12.8.4).

19 Interactions with Operator Determined Barring (ODB)

19.1 Barring of all outgoing calls

Same principle as for subclause 18.8.1.

19.2 Barring of all outgoing international calls

Same principle as for subclause 18.8.2.

19.3 Barring of all outgoing international calls except those directed to the home PLMN country

Same principle as for subclause 18.8.3.

19.4 Barring of outgoing calls when roaming outside the home PLMN country

If the subscriber is outside her home PLMN country the Barring of outgoing calls when roaming outside the home PLMN country service will be invoked. Thus, originating CAMEL based services will not be invoked.

19.5 Barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.6 Barring of outgoing inter-zonal calls except those directed to the home PLMN country

Same principle as for subclause 18.8.2.

19.7 Barring of outgoing international calls except those directed to the home PLMN country AND barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.8 Barring of outgoing premium rate calls

Same principle as for subclause 19.2. The serving network analyses the destination number to determine whether the destination corresponds to a premium rate number. The handling will be the same both for Premium rate information and Premium rate entertainment.

19.9 Barring of incoming calls

Same principle as for subclause 12.8.4.

19.10 Barring of incoming calls when roaming outside the home PLMN country

Same principle as for subclause 18.8.5.

19.11 Barring of incoming calls when roaming outside the zone of the home PLMN country

Same principle as for subclause 18.8.5.

19.12 Operator Specific Barring

No interaction. Any originating or terminating CAMEL based services shall be invoked before Operator Specific Barring of type 1,2,3,4. Operator Specific Barring is applicable only when the subscriber registered in the HPLMN.

NOTE: Operators should be aware of this interaction when defining Operator Specific ODB categories.

19.13 Barring of Supplementary Services Management

No interaction.

19.14 Barring of registration of forwarded-to numbers

No interaction. The HPLMN will apply the barring of registration of the forwarded-to number as specified in TS 22.041 and TS 23.015.

If the served subscriber is provided with TIF-CSI the HPLMN shall not check the forwarded-to number; hence only the category Barring of registration of any call forwarded-to number will take effect. - \$(CAMEL2\$

19.15 Barring of invocation of call transfer

No interaction. The serving network will apply the barring of invocation of call transfer as specified in TS 22.041 and TS 23.015 after any CAMEL handling of the call legs to be joined by the ECT invocation.

If the CSE instructs the serving network to bar the invocation of call transfer involving a specific call leg, this instruction shall have priority over the possible Operator Determined Barring of invocation of call transfer. - \$(CAMEL3\$)

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

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

Tdoc S1C01071
(revision of S1C01059)

CHANGE REQUEST

22.078 CR 093 rev **2** Current version: **4.1.0**

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

Title:	Interaction between CAMEL control of MO-SMS and Call Barring & ODB		
Source:	SA1		
Work item code:	CAMEL3	Date:	06/02/2001
Category:	A	Release:	REL-4
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
F (essential 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)	
		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change:	<p>Section 18.8 in 3GPP TS 22.078 V3.6.0 specifies the interworking between CAMEL and the supplementary service "Call Barring" (CB). Section 18.8 has sub sections for the individual Call Barring categories (section 18.8.1 – 18.8.5). For each sub section, the interaction, if any, between CAMEL and the specific Call Barring category is specified for Mobile Originated calls, Mobile Forwarded calls or Mobile Terminated calls, in as far as applicable.</p> <p>The "Call Barring" supplementary service is also applicable to Mobile Originated Short Message Service (MO SMS).</p> <p>The network feature "Operator Determined Barring" (ODB) is also applicable to MO SMS.</p> <p>The applicability of CB and ODB to Short Message Service is specified in 3GPP TS 23.040, sections 3.5 and 3.6.</p> <p>The interaction between CAMEL and CB for MO SMS and the interaction between CAMEL and ODB for MO SMS is currently not reflected in 3GPP TS 22.078.</p> <p>The present CR proposes new subclauses to sections 18.8 to remedy the above described omission.</p>
Summary of change:	Specifying the interaction between CAMEL control of MO SMS and CB & ODB.

Consequences if not approved:	Manufacturers may incorrectly implement CAMEL control of Mobile Originated SMS.
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Clauses affected:	18.8
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Other specs affected:	<input checked="" type="checkbox"/> Other core specifications	22.078 (R99), 22.078 (R5)
	<input type="checkbox"/> Test specifications	
	<input type="checkbox"/> O&M Specifications	

Other comments:	
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***** First Modified Section *****

18.8 Call Barring

NOTE: CAMEL may be used to establish forwarded-legs and CAMEL based re-routing-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL2\$)

18.8.1 Barring of all outgoing calls

18.8.1.1 Mobile originated calls

No interaction. The Barring of all outgoing calls supplementary service will be invoked. Thus, originating CAMEL based services will not be invoked.

18.8.1.2 Forwarded Calls

No interaction. If the Barring of all outgoing calls supplementary service is active and operative, it shall prevent the registration or activation of Call Forwarding as specified in TS 22.082.

18.8.1.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The Barring of all outgoing calls supplementary service will be invoked. No CAMEL service for Mobile Originated SMS will be invoked.

18.8.2 Barring of outgoing international calls

18.8.2.1 Mobile originated calls

No interaction. Any originating CAMEL based services shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.2.2 Forwarded Calls

No interaction. The interaction between call forwarding and call barring is not be modified by CAMEL. This means that the interaction is applied prior to the invocation of call forwarding. When call forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) then the VPLMN or IPLMN shall not apply outgoing call barring services.

\$(begin\$(CAMEL2\$)

If the served subscriber is provided with TIF-CSI the network shall not check the interaction of call forwarding services with this barring program, i.e.:

- The registration or activation of Call Forwarding is accepted even if this barring program is active and operative;
- The activation of this barring program is accepted even if a Call Forwarding supplementary service is active.

When Call Forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) the VPLMN or IPLMN shall not invoke outgoing Call Barring services.

\$(end\$(CAMEL2\$)

NOTE: This behaviour means that CAMEL may be used to establish forwarded-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL1\$)

18.8.2.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The CAMEL Service for Mobile Originated SMS shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.3 Barring of outgoing international calls except those directed to the HPLMN country

As for Barring of outgoing international calls (see subclause 18.8.2).

18.8.4 Barring of all incoming calls

No interaction. The Barring of all incoming calls supplementary service shall be invoked. Thus, terminating CAMEL based services will not be invoked.

18.8.5 Barring of incoming calls when roaming

Same as Barring of all incoming calls (see subclause 12.8.4).

19 Interactions with Operator Determined Barring (ODB)

19.1 Barring of all outgoing calls

Same principle as for subclause 18.8.1.

19.2 Barring of all outgoing international calls

Same principle as for subclause 18.8.2.

19.3 Barring of all outgoing international calls except those directed to the home PLMN country

Same principle as for subclause 18.8.3.

19.4 Barring of outgoing calls when roaming outside the home PLMN country

If the subscriber is outside her home PLMN country the Barring of outgoing calls when roaming outside the home PLMN country service will be invoked. Thus, originating CAMEL based services will not be invoked.

19.5 Barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.6 Barring of outgoing inter-zonal calls except those directed to the home PLMN country

Same principle as for subclause 18.8.2.

19.7 Barring of outgoing international calls except those directed to the home PLMN country AND barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.8 Barring of outgoing premium rate calls

Same principle as for subclause 19.2. The serving network analyses the destination number to determine whether the destination corresponds to a premium rate number. The handling will be the same both for Premium rate information and Premium rate entertainment.

19.9 Barring of incoming calls

Same principle as for subclause 12.8.4.

19.10 Barring of incoming calls when roaming outside the home PLMN country

Same principle as for subclause 18.8.5.

19.11 Barring of incoming calls when roaming outside the zone of the home PLMN country

Same principle as for subclause 18.8.5.

19.12 Operator Specific Barring

No interaction. Any originating or terminating CAMEL based services shall be invoked before Operator Specific Barring of type 1,2,3,4. Operator Specific Barring is applicable only when the subscriber registered in the HPLMN.

NOTE: Operators should be aware of this interaction when defining Operator Specific ODB categories.

19.13 Barring of Supplementary Services Management

No interaction.

19.14 Barring of registration of forwarded-to numbers

No interaction. The HPLMN will apply the barring of registration of the forwarded-to number as specified in TS 22.041 and TS 23.015.

If the served subscriber is provided with TIF-CSI the HPLMN shall not check the forwarded-to number; hence only the category Barring of registration of any call forwarded-to number will take effect. - \$(CAMEL2\$

19.15 Barring of invocation of call transfer

No interaction. The serving network will apply the barring of invocation of call transfer as specified in TS 22.041 and TS 23.015 after any CAMEL handling of the call legs to be joined by the ECT invocation.

If the CSE instructs the serving network to bar the invocation of call transfer involving a specific call leg, this instruction shall have priority over the possible Operator Determined Barring of invocation of call transfer. - \$(CAMEL3\$)

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

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

Tdoc S1C01065
(revision of S1C01034)

CHANGE REQUEST

22.078 CR 094 rev **1** Current version: **5.1.0**

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

Title:	Interaction between CAMEL control of MO-/MT-SMS and Call Barring & ODB		
Source:	SA1		
Work item code:	CAMEL4	Date:	06/02/2001
Category:	A	Release:	REL-5
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
F (essential 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)	
		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change:	<p>Section 18.8 in 3GPP TS 22.078 V5.1.0 specifies the interworking between CAMEL and the supplementary service "Call Barring" (CB). Section 18.8 has sub sections for the individual Call Barring categories (section 18.8.1 – 18.8.5). For each sub section, the interaction, if any, between CAMEL and the specific Call Barring category is specified for Mobile Originated calls, Mobile Forwarded calls or Mobile Terminated calls, in as far as applicable.</p> <p>The "Call Barring" supplementary service is also applicable to Mobile Originated Short Message Service (MO SMS) and Mobile Terminated Short Message Service (MT SMS).</p> <p>The network feature "Operator Determined Barring" (ODB) is also applicable to MO SMS and MT SMS.</p> <p>The applicability of CB and ODB to Short Message Service is specified in 3GPP TS 23.040, sections 3.5 and 3.6.</p> <p>The interaction between CAMEL and CB for MO/MT SMS and the interaction between CAMEL and ODB for MO/MT SMS is currently not reflected in 3GPP TS 22.078.</p> <p>The present CR proposes new subclauses to section 18.8 to remedy the above described omission.</p>
Summary of change:	Specifying the interaction between CAMEL control of MO/MT SMS and CB &

	ODB.	
Consequences if not approved:	Manufacturers may incorrectly implement CAMEL control of Mobile Originated SMS and Mobile Terminated SMS.	
Clauses affected:	18.8	
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	22.078 (R99), 22.078 (R4)
Other comments:	This CR also includes the corrective changes contained in CR 22.078 092.	

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

18.8 Call Barring

NOTE: CAMEL may be used to establish forwarded-legs and CAMEL based re-routing-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL2\$)

18.8.1 Barring of all outgoing calls

18.8.1.1 Mobile originated calls

No interaction. The Barring of all outgoing calls supplementary service will be invoked. Thus, originating CAMEL based services will not be invoked.

18.8.1.2 Forwarded Calls

No interaction. If the Barring of all outgoing calls supplementary service is active and operative, it shall prevent the registration or activation of Call Forwarding as specified in TS 22.082.

18.8.1.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The Barring of all outgoing calls supplementary service will be invoked. No CAMEL service for Mobile Originated SMS will be invoked.

18.8.2 Barring of outgoing international calls

18.8.2.1 Mobile originated calls

No interaction. Any originating CAMEL based services shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.2.2 Forwarded Calls

No interaction. The interaction between call forwarding and call barring is not be modified by CAMEL. This means that the interaction is applied prior to the invocation of call forwarding. When call forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) then the VPLMN or IPLMN shall not apply outgoing call barring services.

\$(begin\$(CAMEL2\$)

If the served subscriber is provided with TIF-CSI the network shall not check the interaction of call forwarding services with this barring program, i.e.:

- The registration or activation of Call Forwarding is accepted even if this barring program is active and operative;
- The activation of this barring program is accepted even if a Call Forwarding supplementary service is active.

When Call Forwarding is invoked (possibly with originating CAMEL services in the forwarding leg) the VPLMN or IPLMN shall not invoke outgoing Call Barring services.

\$(end\$(CAMEL2\$)

NOTE: This behaviour means that CAMEL may be used to establish forwarded-legs which violate conditional outgoing call barring and ODB services. Network operators should take care to avoid problems which may arise because of this interaction. - \$(CAMEL1\$)

18.8.2.3 Mobile Originated Short Message Service \$(CAMEL3\$)

No interaction. The CAMEL Service for Mobile Originated SMS shall be invoked before the Barring of outgoing international calls supplementary service.

18.8.3 Barring of outgoing international calls except those directed to the HPLMN country

As for Barring of outgoing international calls (see subclause 18.8.2).

18.8.4 Barring of all incoming calls

18.8.4.1 Mobile Terminated calls

No interaction. The Barring of all incoming calls supplementary service shall be invoked. Thus, terminating CAMEL based services will not be invoked.

18.8.4.2 Mobile Terminated Short Message Service \$(CAMEL4\$)

No interaction. The Barring of all incoming calls supplementary service shall be invoked. No CAMEL service for Mobile Terminated SMS will be invoked.

18.8.5 Barring of incoming calls when roaming

Same as Barring of all incoming calls (see subclause 12.8.4).

19 Interactions with Operator Determined Barring (ODB)

19.1 Barring of all outgoing calls

Same principle as for subclause 18.8.1.

19.2 Barring of all outgoing international calls

Same principle as for subclause 18.8.2.

19.3 Barring of all outgoing international calls except those directed to the home PLMN country

Same principle as for subclause 18.8.3.

19.4 Barring of outgoing calls when roaming outside the home PLMN country

If the subscriber is outside her home PLMN country the Barring of outgoing calls when roaming outside the home PLMN country service will be invoked. Thus, originating CAMEL based services will not be invoked.

19.5 Barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.6 Barring of outgoing inter-zonal calls except those directed to the home PLMN country

Same principle as for subclause 18.8.2.

19.7 Barring of outgoing international calls except those directed to the home PLMN country AND barring of outgoing inter-zonal calls

Same principle as for subclause 18.8.2.

19.8 Barring of outgoing premium rate calls

Same principle as for subclause 19.2. The serving network analyses the destination number to determine whether the destination corresponds to a premium rate number. The handling will be the same both for Premium rate information and Premium rate entertainment.

19.9 Barring of incoming calls

Same principle as for subclause 12.8.4.

19.10 Barring of incoming calls when roaming outside the home PLMN country

Same principle as for subclause 18.8.5.

19.11 Barring of incoming calls when roaming outside the zone of the home PLMN country

Same principle as for subclause 18.8.5.

19.12 Operator Specific Barring

No interaction. Any originating or terminating CAMEL based services shall be invoked before Operator Specific Barring of type 1,2,3,4. Operator Specific Barring is applicable only when the subscriber registered in the HPLMN.

NOTE: Operators should be aware of this interaction when defining Operator Specific ODB categories.

19.13 Barring of Supplementary Services Management

No interaction.

19.14 Barring of registration of forwarded-to numbers

No interaction. The HPLMN will apply the barring of registration of the forwarded-to number as specified in TS 22.041 and TS 23.015.

If the served subscriber is provided with TIF-CSI the HPLMN shall not check the forwarded-to number; hence only the category Barring of registration of any call forwarded-to number will take effect. - \$(CAMEL2\$

19.15 Barring of invocation of call transfer

No interaction. The serving network will apply the barring of invocation of call transfer as specified in TS 22.041 and TS 23.015 after any CAMEL handling of the call legs to be joined by the ECT invocation.

If the CSE instructs the serving network to bar the invocation of call transfer involving a specific call leg, this instruction shall have priority over the possible Operator Determined Barring of invocation of call transfer. - \$(CAMEL3\$)

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