**3GPP TSG-CN Meeting #22**                                          **NP-030524**

**10th - 12th December. Maui, Hawaii.**

**Source:**         **3GPP TSG CN2**

**Title:**          **CR on Release 5 WI CAMEL4**

**Agenda item:**    **8.3**

**Document for:**    **APPROVAL**

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**This document contains a CR on Rel-5 WI CAMEL4. The document was approved by CN2 and is forwarded to CN#22 for approval.**

| WG_tdoc | Title | Spec | CR | Rev | Cat | Rel | C_Ver |
|---|---|---|---|---|---|---|---|
| N2-030539 | Using Suppress T-CSI in ICA for NP call legs | 23.078 | 641 | | F | Rel-5 | 5.5.1 |

# CHANGE REQUEST

| ⌘ | **23.078 CR** | 641 | ⌘**rev** | ⌘ | Current version: | 5.5.1 | ⌘ |

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

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|---|---|---|
| ***Title:*** ⌘ | Using Suppress T-CSI in ICA for NP call legs | |
| ***Source:*** ⌘ | Ericsson | |
| ***Work item code:*** ⌘ | CAMEL4 | ***Date:*** ⌘ 24 October 2003 |
| ***Category:*** ⌘ | **F** (agreed by consensus) | ***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)

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)

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***Reason for change:*** ⌘

The current Call Party Handling definition does not allow for a ***Personal Ring Back Tone*** kind of service.

An instance of such service may require that the Called Party leg in the GMSC be placed on hold, prior to call answer. Whilst the called party is in the held state, call establishment to that party continues. I.e., the GMSC would continue with sending the 2nd SRI to HLR, route the call to the VMSC etc.

Meanwhile, the service may apply User Interaction towards the calling party, e.g. for the purpose of playing a personalised ring tone.

When the called party answers, the User Interaction is terminated and the called party is moved from the held state to Call Segment 1.

From a service point of view, the placing of the called party in the held state may be done at Alerting or at Call establishment.

A similar service may be envisaged for MO call establishment.

However, these kind of services are not feasible with the current CPH definition of CAMEL Phase 4. Reason is that the CAP Operation Split Leg, which is used to split a call leg off from Call Segment has the pre-condition that the leg to be split shall be in the Active state. That pre-condition prevents the usage of SplitLeg at call establishment or at DP Alerting. And as a resul, the above described kind of Personal Ring Back Tone Service is not possible.

Possible solutions include (but may not be limited to):

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(1) modify the pre-conditions for Split Leg, allowing for SplitLeg at call set up or at DP Alerting.

This may imply impact on SDL modelling.

(2) Use Disconnect Leg, to disconnect the called party leg, followed by Initiate Call Attempt, to create a replacement called party leg. As a result of ICA, the replacement leg will be placed in a separate Call Segment. The service may now apply User Interaction to the Calling Party.

However, re-creating a leg of the Called Party results in looping for the MT call case: the GMSC would start a new MT call handling process, resulting in MAP SRI to the HLR, resulting in T-CSI to be sent to the GMSC.

To overcome the loop, the service should have the capability to suppress CAMEL handling for the leg created with ICA. That would enabhle the service logic to create the outgoing leg, using the same MSISDN as was used for the MT call leg establishment in the first place. The newly created leg (the NP leg) then results in the GMSC sending SRI to the HLR with "suppress T-CSI". The HLR now retrieves the MSRN from the VLR and the call is established to the VMSC.

Ericsson favours option (2). To accomplish this, it is should be allowed to include the Suppress T-CSI IE in the ICA Information Flow for NP call legs.

Currently, the ICA Information Flow for NC call legs includes the Suppress T-CSI IE. Hence, GMSCs shall have the capability to convey this IE from CAP ICA to MAP SRI. The similar capability shall therefore be used for NP call legs.

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|---|---|---|
| ***Summary of change:*** ⌘ | Allow the usage of the "Suppress T-CSI" IE in the ICA Information Flow for NP call legs. | |
| ***Consequences if not approved:*** ⌘ | Personal Ring Back Tone services can not be built with CAMEL Phase 4. | |

| | | |
|---|---|---|
| ***Clauses affected:*** ⌘ | 4.6.2.15 | |

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

| | | |
|---|---|---|
| ***Other comments:*** ⌘ | (1) TS 29.078 specifies the suppress-T-CSI parameter in the ICA Operation, but does not restrict this parameter to NC call legs. Hence, the present CR does not require an accompanying change to TS 29.078. | |
| | (2) TS 22.078 specifies the following for new calls ("NC calls", section 8.2): | |

- ***The CSE shall be able to instruct the HPLMN to suppress the triggering of terminating CAMEL-based services in the VPLMN for the served subscriber.***
- ***The CSE shall be able to instruct the IPLMN to suppress the triggering of terminating CAMEL-based services in the IPLMN for the served subscriber.***

A similar clause may be needed for the creation of additional parties in a call ("NP calls", section 8.1.1).

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**\*\*\* For Information – extracts from 3GPP TS 29.078 V5.5.0 \*\*\***

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```
InitiateCallAttemptArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    destinationRoutingAddress       [0] DestinationRoutingAddress {bound},
    extensions                      [4] Extensions {bound}                 OPTIONAL,
    legToBeCreated                  [5] LegID                              OPTIONAL,
    newCallSegment                  [6] CallSegmentID {bound}              OPTIONAL,
    callingPartyNumber              [30] CallingPartyNumber {bound}        OPTIONAL,
    callReferenceNumber             [51] CallReferenceNumber               OPTIONAL,
    gsmSCFAddress                   [52] ISDN-AddressString                OPTIONAL,
    suppress-T-CSI                  [53] NULL                              OPTIONAL,
    ...
    }
```

# 11.21 InitiateCallAttempt procedure

## 11.21.1 General Description

...

### 11.21.1.1 Parameters

### 11.21.1.1.1 Argument Parameters

…

- suppress-T-CSI:
  This parameter indicates that the T-CSI for the served subscriber shall be suppressed for this call leg.

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

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# 4.6    Description of information flows

## 4.6.1    gsmSSF to gsmSCF information flows

…

## 4.6.2    gsmSCF to gsmSSF information flows

…

### 4.6.2.15    Initiate Call Attempt

#### 4.6.2.15.1    Description

This IF is used to request the gsmSSF to create a new party in an existing call (NP), or to create a completely new call (NC). The created leg is an originating call. The address information provided by the gsmSCF is used.

#### 4.6.2.15.2    Information Elements

| Information element name | NC | NP | Description |
|---|---|---|---|
| Destination Routeing Address | M | M | This IE contains the called party number towards which the call is to be routed.<br>For calls to an MS this can e.g. be (but shall not be limited to) the MSISDN (for routeing via a GMSC) or the MSRN received from the HLR (for routeing direct to the VMSC). |
| Calling Party Number | M | - | This IE identifies which number shall be regarded as the calling party for the created call. |
| Leg To Be Created | M | M | This IE indicates the legID to be assigned to the newly created party. The leg ID shall be 3 or higher. |
| New Call Segment | M | M | This IE indicates the CS ID to be assigned to the newly created call segment. |
| Call Reference Number | M | - | This IE may be used by the gsmSCF for inclusion in a network optional gsmSCF call record. The call reference number is included by the MSC in the call record. |
| gsmSCF Address | M | - | This IE contains the address of the gsmSCF which initiated the new call. This IE is required for a unique Call Reference. |
| Suppress T-CSI | O | O | This IE indicates that T-CSI shall be suppressed on the terminating leg. |

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**\*\*\*\* End of Document \*\*\*\***

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