

**Title:** Liaison Statement on Service change and fallback for UDI/RDI multimedia calls  
**Source:** SA1  
**Agenda item:** 5.2  
**Document for:** INFORMATION

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**TSG-SA WG 1 (Services) meeting #15**  
**Saalfelden, Austria, 11-15th February 2002**

**S1-020610**

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**To:** CN  
**Cc:** CN1, CN3, CN4  
**Response to:** LS (N1-020455) on Service change and fallback for UDI/RDI multimedia calls from CN WG1.

**Contact Person:**

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**Attachments:** S1-020609 [CR to TS 22.101 v5.4.0]  
S1-020611 [proposed modification to the WID]

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**1. Overall Description:**

SA1 would like to thank CN1 for their information on the progress of the Work Item "Service change and UDI fallback".

SA1 has decided to add service requirements for service change and fallback, as well as for privacy. Please find the approved document from SA1#15 attached (S1-020609).

SA1 wants to emphasize that it considers interworking with ISUP networks to be important, and that the work item on Service change and fallback for UDI/RDI multimedia calls shall cover this issue. A proposed revised work item description is included with this LS (S1-020611).

SA1 proposes CN to proceed with the specification of this functionality.

**2. Actions:**

**To CN group.**

**ACTION:** SA1 asks CN group to include ISUP interworking to the scope of the work item Service change and UDI fallback. A proposed revised version is included with this LS (S1-020611).

**3. Date of Next SA1 Meetings:**

| Title      | Date           | Location         | Country |
|------------|----------------|------------------|---------|
| SA1 Adhocs | 8 – 12 Apr 02  | Sophia Antipolis | France  |
| SA1#16     | 13 – 17 May 02 | Victoria         | Canada  |

CR-Form-v4

## CHANGE REQUEST

⌘ **22.101 CR 087** ⌘ ev - ⌘ Current version: **5.4.0** ⌘  
**Spec Title:** Service Principles ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

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

|                        |  |                 |  |
|------------------------|--|-----------------|--|
| <b>Title:</b>          | ⌘ Service change and fallback for UDI/RDI multimedia calls   |                 |  |
| <b>Source:</b>         | ⌘ ERICSSON L.M   |                 |  |
| <b>Work item code:</b> | ⌘ SCUDIF   | <b>Date:</b>    | ⌘ 2002-02-13   |
| <b>Category:</b>       | ⌘ <b>B</b><br>Use <u>one</u> of the following categories:<br><b>F</b> (correction)<br><b>A</b> (corresponds to a correction in an earlier release)<br><b>B</b> (addition of feature),<br><b>C</b> (functional modification of feature)<br><b>D</b> (editorial modification)<br>Detailed explanations of the above categories can be found in 3GPP TR 21.900. | <b>Release:</b> | ⌘ <b>REL-5</b><br>Use <u>one</u> of the following releases:<br>2 (GSM Phase 2)<br>R96 (Release 1996)<br>R97 (Release 1997)<br>R98 (Release 1998)<br>R99 (Release 1999)<br>REL-4 (Release 4)<br>REL-5 (Release 5) |

|                                      |  |
|--------------------------------------|--|
| <b>Reason for change:</b>            | ⌘ The service change and fallback for UDI/RDI multimedia calls (WI "service change and UDI fallback" from CN3) is not covered in the specification |
| <b>Summary of change:</b>            | ⌘ Service change and fallback for UDI/RDI multimedia calls added; privacy aspects linked to service change to multimedia added.                    |
| <b>Consequences if not approved:</b> | ⌘ Information related to the work item is missing from the specification   |

|                              |   |  |  |
|------------------------------|---|--|--|
| <b>Clauses affected:</b>     | ⌘ 7.2.1   |  |  |
| <b>Other specs affected:</b> | ⌘ <input checked="" type="checkbox"/> Other core specifications   | ⌘ TR 23.972, TS 24.008, TS 27.001, TS 29.007 |  |
|                              | <input type="checkbox"/> Test specifications  |  |  |
|                              | <input type="checkbox"/> O&M Specifications   |  |  |
| <b>Other comments:</b>       | ⌘ This change is consistent with the other core specifications, which are already approved in their respective working groups (N1, N3). |  |  |

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.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.

**\*\*\* First modified section \*\*\*****7.2.1 Circuit Switched (CS) multimedia calls**

The following basic requirements are to be supported for CS multimedia [24]:

- CS multimedia shall be based on a 3GPP specific subset of H.324M.
- All call scenarios shall be supported, i.e. Mobile Originating and Mobile Terminating call against Mobile, ISDN and PSTN call party.
- Single and multiple numbering schemes shall be supported.
- Fallback to speech (TS 11 [14]) shall be supported from 3.1kHz Ext. PLMN multimedia bearer, i.e. if setup of the multimedia call fails the call will be set up as a speech call.
- Service change and fallback shall be supported for UDI/RDI multimedia bearer and speech, to allow fallback to a less preferred service if the preferred service is unsupported, and to change the service between speech and multimedia during the call.
- CS Multimedia call is a Bearer Service, which utilises Synchronous Transparent Data service.
- Different bitrates as specified at 22.002 [21] shall be supported.
- Supplementary services apply to multimedia calls as for Synchronous Transparent Data service according to 22.004[5].
- When accepting a multimedia call with service change, the user shall be able to request a service change to speech before the call is answered, such that the multimedia path is never actually connected through to the user's phone;
- The user shall be able to deny a service change to multimedia during the call.

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

Work Item Description**Title: Service Change and UDI Fallback****1 3GPP Work Area**

|   |              |
|---|--------------|
|   | Radio Access |
| X | Core Network |
|   | Services     |

**2 Linked work items**

-

**3 Justification**

CS video telephony via 3G.324M terminals may become a quite expensive service compared to ordinary CS speech because if a user temporarily disables the video stream the invoicing will not be reduced. The user will be charged for both the speech as well as the data bearer (and thus the used bandwidth is not changed). Users may therefore decide not start calling via video telephony service.

In order to make CS video telephony more attractive the user may appreciate the ability to change between CS speech and CS multimedia service by a change of the bearer during the active state of a call. The procedure for invoking this change should be as simple as possible, e.g., by the touch of a button. In this way users save money and video telephony gets more and more used. A convenient way to change between ordinary speech and multimedia (video) can be regarded a key service when introducing UMTS multimedia. It is also a kind of end user test possibility for video telephony.

**4 Objective**

The objective of this work item should be to base service change and fallback from UDI multimedia to speech on the standardised network (also terminal) capability to change the service from CS modem multimedia to speech at fallback after call setup. The same principles should be applied here as well.

- Fallback indication (a speech BC-IE and a modem multimedia BC-IE in SETUP and CALL CONFIRMED) should also be applicable to UDI multimedia and speech.
- At the same time it shall be an indication for a service change capability (of the network and terminal).
- The network should accept a service change (MODIFY is received) after call setup in both directions, speech to multimedia and multimedia to speech. A service change is only allowed between the indicated services at call setup.
- The existing in-call modification to change the call mode (TS 24.008, 5.4.3.4) should be used to change the radio and network resources.
- Core network signalling is using Out-of-Band Transcoder Control (OoBTC) to signal UDI multimedia capabilities across the network at call setup and for service change during the call.

**5 Service Aspects**

When transit networks outside PLMNs are involved the provisioning of service change and fallback can not be guaranteed. [The interworking with ISUP networks shall however be specified.](#)

**6 MMI-Aspects**

No. Implementation dependent.

**7 Charging Aspects**

No.

**8**                    **Security Aspects**  
No

**9**                    **Impacts**

| <b>Affects:</b>   | <b>USIM</b> | <b>ME</b> | <b>AN</b> | <b>CN</b> | <b>Others</b> |
|-------------------|-------------|-----------|-----------|-----------|---------------|
| <b>Yes</b>        |             | X         |           | X         |               |
| <b>No</b>         |             |           | X         |           | X             |
| <b>Don't know</b> | X           |           |           |           |               |

**Expected Output and Time scale (to be updated at each plenary)**

| New specifications               |       |   |                      |   |                         |  |
|----------------------------------|-------|---|----------------------|---|-------------------------|--|
| Spec No.                         | Title | Prime<br>rsp. WG  | 2ndary<br>rsp. WG(s) | Presented for<br>information at<br>plenary# | Approved at<br>plenary# | Comments   |
|                                  |       |   |                      |   |                         |  |
| Affected existing specifications |       |   |                      |   |                         |  |
| Spec No.                         | CR    | Subject   |                      | Approved at plenary#                        |                         | Comments   |
| 29.007                           |       | General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN) |                      | CN#14<br>(Dec 01)                           |                         | Enhancing the fallback from modem multimedia to speech capability by user initiated service change and fallback from UDI multimedia to speech. |
| 24.008                           |       | Mobile radio interface layer 3 specification; Core Network Protocols - Stage 3  |                      | CN#14<br>(Dec 01)                           |                         | Enhancing the fallback from modem multimedia to speech capability by user initiated service change and fallback from UDI multimedia to speech. |
| 27.001                           |       | General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS)   |                      | CN#14<br>(Dec 01)                           |                         | Enhancing the fallback from modem multimedia to speech capability by user initiated service change and fallback from UDI multimedia to speech. |
| 23.153                           |       | Out of Band Transcoder Control - Stage 2  |                      | CN#15<br>(Mar 02)                           |                         | Enhance the current OoBTC procedures to support <a href="#">interworking with ISUP networks during the</a> negotiation of a multimedia codec   |
| 26.103                           |       | Speech Codec List for GSM and UMTS  |                      | SA#15<br>(Mar 02)                           |                         | Add a multimedia codec for negotiation of fallback and service change for UDI multimedia (OoBTC)   |
| <a href="#">22.101</a>           |       | <a href="#">Service principles</a>  |                      | <a href="#">SA#15<br/>(Mar 02)</a>          |                         | <a href="#">Include service requirements for service change and fallback for UDI/RDI multimedia calls</a>                                      |

**11 Work item rapporteurs**

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**12 Work item leadership**  
CN3**13 Supporting Companies**

**14 Classification of the WI (if known)**

|   |                            |
|---|----------------------------|
| X | Feature (go to 14a)        |
|   | Building Block (go to 14b) |
|   | Work Task (go to 14c)      |

14a The WI is a Feature:  
no building blocks under this feature

14b The WI is a Building Block:

14c The WI is a Work Task: