

---

**Source:** SA1  
**Title:** CR to 22.101 on Improvements to CS Video and Voice Service procedures (Rel-6)  
**Document for:** Approval  
**Agenda Item:** 7.1.3

---

Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-23	SP-040091	22.101	146	-	Rel-6	B	Improvements to Circuit Switched Video and Voice Service procedures	6.6.0	6.7.0	S1-040215

# CHANGE REQUEST

⌘ **22.101 CR 146** ⌘ rev - ⌘ Current version: **6.6.0** ⌘

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

<b>Title:</b>	⌘ Improvements to Circuit Switched Video and Voice Service procedures		
<b>Source:</b>	⌘ SA1 (Vodafone)		
<b>Work item code:</b>	⌘ CS-VVS	<b>Date:</b>	⌘ 15/01/2004
<b>Category:</b>	⌘ <b>B</b>	<b>Release:</b>	⌘ REL-6
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		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) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Many operators regard circuit switched video services as a key part of UMTS, however, there are several situations where swapping between video and voice calls is considered to be necessary. These include (but are not limited to):  a) movement from good 3G coverage (i.e. able to support 64 kbit/s uplink) into “fringe 3G coverage” (i.e. able to support voice but not video on the uplink)  b) movement from good 3G coverage into 2G coverage (e.g. at a corner, or entry into a building); and  c) when using voice on a 3G or 2G cell (which is in a 3G coverage area) the user initiates a video session with the person they are speaking to.  Without a reliable mechanism to handle these scenarios the operator community believes that such service loss would not provide satisfactory user experience and as such, a mechanism to switch between video and voice only calls is required.
<b>Summary of change:</b>	⌘ Requirements added to enable both operator and customer friendly transitions between CS video and CS voice calls
<b>Consequences if not approved:</b>	⌘ Unreliable CS multimedia call handling whilst the UE is moving in and out of 3G coverage, resulting in an unsatisfactory customer experience.

<b>Clauses affected:</b>	⌘ 7.2.1
	<input type="checkbox"/> Y <input type="checkbox"/> N

<b>Other specs</b>	⌘	X	Other core specifications	⌘	Refer to WI: 23.009, 23.172, 48.008, 25.413, 24.008 and any others identified during stage 2 work.
<b>Affected:</b>		X	Test specifications		As identified during stage 2 work
		X	O&M Specifications		As identified during stage 2 work
<b>Other comments:</b>	⌘	Work item SP-030788 was approved in SA#22 and it was agreed by SA that this should be for Rel-6.			

### 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.

## 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.
- In the case where a multimedia call includes speech (e.g. video call) then the following requirements apply:
  - A user shall be able to change between a speech and CS Multimedia call, when desired.
  - When the CS Multimedia call is no longer supported, for example due to degraded coverage conditions (including UTRAN to GERAN only transitions), service change shall occur automatically from a CS Multimedia call to speech.
  - When a CS Multimedia call can be supported, for example due to improved coverage conditions (including GERAN only to UTRAN or UTRAN/GERAN transitions), service change back to the CS Multimedia call may be initiated by the network.
  - CS Multimedia is a Bearer Service, which utilises the Synchronous Transparent Data service. Other services may exist which utilise the Synchronous Transparent Data service. Service transition to/from speech described for CS Multimedia in this clause shall only apply to CS Multimedia calls and not Synchronous Transparent Data calls in general.
- Different bitrates as specified at 3GPP TS 22.002 [21] shall be supported.
- Supplementary services apply to multimedia calls as for Synchronous Transparent Data service according to 3GPP TS 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 between CS multimedia and speech during the call.