Technical Specification Group Services and System Aspects Meeting #23, Phoenix, USA, 15 - 18 March 2004

TSGS#23(04)0006

TSG-SA WG1 #23 **S1-040216**
Innsbruck, Austria, 12 - 16 Jan 2004 **Agenda Item: 6.6**

Title: LS on Video Telephony New Requirements

Response to: S1-040083/SERG266_03 on the same subject
Release: Rel-6

Source: **SA1**
To: GSMA SERG
Cc: SA

Contact Person:
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Attachments: SP-030788, S1-040215

1. Overall Description:

SA1 thanks GSMA SERG for their LS introducing a new requirement on video telephony. SA1 would like to inform GSMA SERG that a work item dedicated to video telephony (document SP-030788) has been approved at TSG SA#22.

This Work Item identifies that there are several situations where swapping between video and voice calls is needed. These include (but are not limited to):

a) movement from good 3G coverage (ie able to support 64 kbit/s uplink) into "fringe 3G coverage" (ie able to support voice but not video on the uplink)
b) movement from good 3G coverage into 2G coverage (eg at a corner, or entry into a building); and
c) when using voice on a 2G cell (which is in a 3G coverage area) the customer initiates a video session with the person they are speaking to.

SA1 would like to point out to SERG that the work on this Item has already started within SA1 and that a Change Request to 22.101 on CS Multimedia call has been approved, introducing the new requirements highlighted in the previous section. It has to be noted that the target completion date for the overall work item is SA#25 i.e. September 2004.

SA1 believe that the Work Item covers SERG original requirements in an appropriate manner. However, SERG should review the content of this Work Item to make sure it is fully inline with their requirements.

2. Actions:

To GSMA SERG:

ACTION: SA1 respectfully requests that GSMA SERG review Work Item in SP-030788 and Change Request in S1-040215 and make sure it fully covers operator community's requirements.

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3. Date of Next TSG-SA1 Meetings:

SA1#24	10 – 14 May 2004	Shenzhen, China	ZTE

CR-Form-v7

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 ☒

Title:	⌘	Improvements to Circuit Switched Video and Voice Service procedures
Source:	⌘	Vodafone
Work item code:	⌘	CS-VVS
Date:	⌘	15/01/2004
Category:	⌘	**B**
Release:	⌘	REL-6

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)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

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)*

Reason for change:	⌘	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.
Summary of change:	⌘	Requirements added to enable both operator and customer friendly transitions between CS video and CS voice calls
Consequences if not approved:	⌘	Unreliable CS multimedia call handling whilst the UE is moving in and out of 3G coverage, resulting in an unsatisfactory customer experience.

Clauses affected:	⌘	7.2.1

Y N

Other specs	⌘	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.
Affected:		X		Test specifications	As identified during stage 2 work
		X		O&M Specifications	As identified during stage 2 work
Other comments:	⌘	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.

Technical Specification Group Services and System Aspects **TSGS#22(03)788**
Meeting #22, Maui, Hawaii, USA, 15-18 December 2003 revised 22(03)781

Source: **Vodafone**
Title: **WID on Circuit Switched Video and Voice Service**
Document for: **Approval**
Agenda Item: 4, 6.2, 7.2, 9

Work Item Description

Title: Circuit Switched Video and Voice Service Improvements

1 3GPP Work Area

X	Radio Access
X	Core Network
X	Services

2 Linked work items

none identified

3 Justification

Many operators regard circuit video services as a key part of UMTS. However there is a strong desire to have an effective and user friendly method of providing fall-back to voice-only services when radio conditions change and video mode is no longer available. There are several situations where swapping between video and voice calls is needed. These include (but are not limited to):

a) movement from good 3G coverage (ie able to support 64 kbit/s uplink) into "fringe 3G coverage" (ie able to support voice but not video on the uplink)
b) movement from good 3G coverage into 2G coverage (eg at a corner, or entry into a building); and
c) when using voice on a 2G cell (which is in a 3G coverage area) the customer initiates a video session with the person they are speaking to.

Current stage 3 *interface* specifications appear to contain most of the tools needed to provide this functionality. However, in order to build the service, the system needs specific functionality that is not described in any current TR or TS.. A standardised solution is required to provide interoperability and a consistent user experience.

4 Objective

The objectives are:

1) document any relevant stage 1 requirements
2) compare mechanisms to implement the requirement and based on the chosen solution produce a stage 2 description
3) produce any necessary stage 3 changes (hopefully none are required)

The Release 5 Service Change and UDI Fall Back Mechanism (SCUDIF) is a potential candidate. Enhancements might be required to fulfill the service requirements (e.g. inter RAT handover).

5 Service Aspects

Presentation of the service change to the user needs to be considered. The choice of criteria to trigger the service change needs to balance the desire to hold on to a video service as long as possible against the degradation of the video service under poor service conditions.

6 MMI-Aspects

No specification is expected. However, the output of this WI is needed as a *enabler* for mobile manufacturers to design customer friendly MMIs for this service.

7 Charging Aspects

User charging and Inter-operator accounting for calls which undergo service change needs to be considered.

8 Security Aspects

None anticipated.

9 Impacts

Affects:	UICC apps	ME	AN	CN	Others
Yes			X	X	
No	X				
Don't know		X			Transit networks?

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

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
	Improvements for Circuit Switched Video and Voice Service	SA1		#23	#24	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
22. ???		?	#23	Alternatively requirements may be captured in a new or an existing specification.
22.101		7.2.1 Circuit-switched multimedia calls		
23.009		?	#25	
23.172		Technical realisation of Circuit Switched (CS) multimedia service UDI/RDI fallback and service modification	#25	
48.008		?	#25	
25.413		?	#25	
24.008		?	#25	
?		This list should be completed when the stage 2 is presented to SA “for information”	#25	

11 Work item raporteurs

John Watson (Vodafone Group)

12 Work item leadership

SA 1

13 Supporting Companies

Vodafone Group, Nortel Networks, T-Mobile, Orange, TIM, Ericsson, Siemens, TeliaSonera

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: List of building blocks under this feature

Building Blocks and Work Tasks are anticipated to be identified when the stage 2 is presented “for information”.

14b The WI is a Building Block: parent Feature

(one Work Item identified as a feature)

14c The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)

form change history:
2002-07-04: "USIM" box changed to "UICC apps"