


**3GPP TSG SA WG4 Meeting #80**  
**San Francisco, CA, U.S.A., 4 - 8 August 2014** **S4-140989**  
revision of S4-140962

Source: TSG SA WG4 Codec  
Title: New Work Item on "Media Handling Aspects of IMS-based Telepresence"  
Document for: Approval  
Agenda Item: 15

## 3GPP™ Work Item Description

For guidance, see [3GPP Working Procedures](#), article 39; and [3GPP TR 21.900](#).

Title \*: Media Handling Aspects of IMS-based Telepresence

Acronym \*: IMS\_TELEP\_S4

Unique identifier \*

1 3GPP Work Area \*

	Radio Access
	Core Network
X	Services

2 Classification of WI and linked work items

2.0 Primary classification \*

This work item is a ... \*

	Study Item (go to 2.1)
X	Feature (go to 2.2)
	Building Block (go to 2.3)
	Work Task (go to 2.4)

2.1 Study Item

Related Work Item(s) (if any)		
Unique ID	Title	Nature of relationship

Go to §3.

Explanation of field 8/7/12 2:10 PM

**Comment [1]:** Document numbers are allocated by the Working Group Secretary. Use the format of document number specified by the [3GPP Working Procedures](#).

John M Meredith 4/14/11 10:48 AM

**Comment [2]:** Consider the title of the work item carefully, and keep the text reasonably brief. Avoid titles already in use, including in previous Releases. Do not mention the intended Release in the title, since timescales may change and move the item to a later Release. Once assigned, avoid changing the title in any substantive way, even if this means the title no longer embraces the full scope of the intended work, as the contents of that work becomes clearer with the passage of time.

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**Comment [3]:** This code will appear in the work plan and is to be used on Change Requests relating to this work item; see  
"A word on WI codes/acronyms" at  
<http://www.3gpp.org/Management/WorkPlan.htm>.  
The code proposed by the originator of the work item may be changed at approval time by the TSG if the original proposal is deemed inappropriate.

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**Comment [4]:** Leave this blank for new work items. For revisions, insert the unique\_id value allocated by the Work Plan Coordinator; see <http://www.3gpp.org/ftp/Specs/html-info/WI-List.htm>.

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**Comment [5]:** Put an X in **one or more** of the boxes.

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**Comment [6]:** Put an X in **one** of the boxes in the table below. A work item must be classed as one and one only of the listed categories. For more guidance, see 3GPP TR 21.900 §6.0.2.

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**Comment [7]:** WIs are identified by their  
· title: see guidance above  
· unique\_id: a numeric value which, once allocated, **never** changes  
· alphabetic (or alphanumeric) code (acronym): for guidance, see "A word on WI codes/acronyms" at <http://www.3gpp.org/Management/WorkPlan.htm>.

## 2.2 Feature

Related Study Item or Feature (if any) *		
Unique ID	Title	Nature of relationship
530142	Stage 1 for IMS-based Telepresence (Release 12)	Use cases and requirements on IMS-based telepresence specified by SA1 in TS 22.228
580001	CT part of IMS-based Telepresence - Stage 3 (Release 12)	Normative work by CT1, CT3 and CT4 on core network aspects of IMS-based telepresence

Go to §3.

## 2.3 Building Block

Parent Feature (or Study Item)		
Unique ID	Title	

This work item is ... \*

	Stage 1 (go to 2.3.1)
	Stage 2 (go to 2.3.2)
	Stage 3 (go to 2.3.3)
	Test spec (go to 2.3.4)
	Other (go to 2.3.5)

### 2.3.1 Stage 1

Source of external requirements (if any) *		
Organization	Document	Remarks

Go to §3.

### 2.3.2 Stage 2 \*

Corresponding stage 1 work item		
Unique ID	Title	TS

Other source of stage 1 information		
TS or CR(s)	Clause	Remarks

If no identified source of stage 1 information, justify: \*

Go to §3.

### 2.3.3 Stage 3 \*

Corresponding stage 2 work item (if any)		
Unique ID	Title	TS

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**Comment [8]:** Identify any work, possibly in a previous Release, which gave rise the current Feature.

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**Comment [9]:** Normally, put an X in one box only. In simple cases, a single WID can be used to specify two or more stages. For guidance on the definition of stages, see 3GPP TR 21.900 §4.1.

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**Comment [10]:** Identify any requirements specified in, eg, an OMA specification, and which need to be considered during the elaboration of the current stage 1 work.

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**Comment [11]:** It is recommended that the stage 1 specification justifying the stage 2 work be identified. This will typically be in a 3GPP stage 1 TS (give the TS number if already allocated) or, if no TS is yet available, in the corresponding WID (give the Unique ID value). Alternatively, it is possible that the stage 1 is to be found in the publication of another body, in which case the second table should be used; be as explicit as possible in identifying the stage 1.

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**Comment [12]:** Briefly explain why no stage 1 is necessary. If the stage 1 is specified by a body other than 3GPP, then identify the source and explain why stage 1 harmonization with 3GPP is not needed. This situation is exceptional.

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**Comment [13]:** It is recommended that the stage 2 be identified, or, if none, the stage 1 work which gives rise to the stage 3 WID being specified. Occasionally a stage 3 work item will arise from implicit provisions of another stage 3 TS, or even a Change Request to an existing stage 3 TS (which must itself be associated with a work item).

Else, corresponding stage 1 work item		
Unique ID	Title	TS

Other justification		
TS or CR(s) Or external document	Clause	Remarks

If no identified source of stage 2 information, justify: \*

Go to §3

### 2.3.4 Test spec \*

Related Work Item(s)		
Unique ID	Title	TS

Go to §3.

### 2.3.5 Other \*

Related Work Item(s)			
Unique ID	Title	Nature of relationship	TS / TR

Go to §3.

### 2.4 Work task \*

Parent Building Block		
Unique ID	Title	TS

## 3 Justification \*

During Release 12, use cases and requirements on IMS-based telepresence were introduced by SA1 into TS 22.228 to enable telepresence support in IMS applications. In TS 22.228, telepresence is defined as a conference with interactive audio-visual communications experience between remote locations, where the users enjoy a strong sense of realism and presence between all participants (i.e., as if they are in same location) by optimizing a variety of attributes such as audio and video quality, eye contact, body language, spatial audio, coordinated environments and natural image size. A telepresence system is defined as a set of functions, devices and network elements which are able to capture, deliver, manage and render multiple high quality interactive audio and video signals in a telepresence conference. An appropriate number of devices (e.g. cameras, screens, loudspeakers, microphones, codecs) and environmental characteristics are used to establish telepresence.

The core network aspects of IMS-based telepresence have been addressed by the CT groups (CT1, CT3, CT4), including incorporation of new tools into IMS as defined by IETF's Controlling mUltiple streams for tElepresence (CLUE) WG (see more from: <https://datatracker.ietf.org/wg/clue/charter/>) that achieves media advertisement and configuration to facilitate controlling and negotiating multiple spatially related media streams in an IMS conference supporting telepresence, taking into account capability information, e.g., screen size, number of screens and cameras, codecs, etc., so that sending system, receiving system, or intermediate system can make decisions about transmitting, selecting, and rendering media streams.

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**Comment [14]:** Briefly explain why no stage 2 is necessary. If the stage 21 is specified by a body other than 3GPP, then identify the source and explain why stage 2 harmonization with 3GPP is not needed. This situation is exceptional.

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**Comment [15]:** All testing items must be associated with the provisions of a testable, stage 3, requirement.

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**Comment [16]:** This clause is intended to be used in rare cases where the work does not fit into the foregoing classifications.

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**Comment [17]:** For guidance on the use of work tasks, see 3GPP TR 21.900 §6.0.2

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**Comment [18]:** Explain in sufficient detail why this work is needed.

This work item aims to specify the media handling aspects of IMS-based telepresence in 3GPP services. This includes specification of codec requirements for a telepresence UE (TP UE), which is expected to not only support MTSI UE media handling capabilities, but also more advanced media handling capabilities. Other SA4-level media handling aspects such as media configuration and session control, data transport, media adaptation, QoS handling and interworking with MTSI are also within scope of this work item.

No impact is expected in service requirements or architecture.

## 4 Objective \*

The objective of this Work Item is to specify the media handling aspects of IMS-based telepresence in 3GPP services.

The study phase of the work item will investigate the following:

- Media codecs (speech, video, real-time text) for IMS-based telepresence
- Media configuration including session setup and control procedures for IMS-based telepresence, and media provisioning aspects of capability negotiation based on SDP and CLUE protocols, etc.
- Set-up and control of the individual media streams between clients including interactivity, such as adding and dropping of media components, as well as end-to-end QoS handling, etc. for IMS-based telepresence
- Data transport including usage of RTP / RTCP protocols, RTP profiles, RTP payload formats, RTP mapping, media synchronization, etc. for IMS-based telepresence, e.g., in relation to negotiation and establishment of the CLUE data channel, and exchange of CLUE ADVERTISEMENT and CONFIGURE messages
- Requirements and guidelines for media adaptation in IMS-based telepresence, for example in response to changes of network bandwidth
- Media handling requirements and guidelines for fixed-mobile interworking as well as interworking with MTSI and with GSMA's IMS profile on High-Definition Video Conference (HDVC) service in IR.39

The gap analysis and conclusions for the proposed improvements will be documented in a Technical Report. Study and evaluation of end-to-end quality of experience (QoE) for IMS-based telepresence use cases for various codec, media handling and QoS configurations will be conducted and related findings will also be documented in the technical report.

Upon completion of the study phase, normative work will be produced based on the relevant conclusions in the Technical Report. At a minimum, it is expected that the normative work will result in specification of codec requirements for IMS-based telepresence services which is currently lacking.

Coordination with CT groups is expected in order to address any potential core network impacts of the proposed enhancements.

## 5 Service Aspects

Media handling aspects are defined for IMS-based telepresence.

## 6 MMI-Aspects

No impact.

## 7 Charging Aspects

No impact.

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**Comment [19]:** Give details of the goals to be achieved under this work item. The level of detail required is explained in 3GPP TR 21.900 §6.0.2. Generally, the deeper the work item is in the hierarchy, the greater the level of technical detail need in the WID. For high level items (Study Items, Features), the text of this clause should avoid technical language insofar as possible, and concentrate on the benefits which the work will bring to the 3GPP system or its users.

8 Security Aspects

No impact.

9 Impacts \*

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

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**Comment [20]:** Put an X in one or more boxes. Use the "don't know" row only if the impacts are unpredictable at the time of writing the WID, not as an excuse for failure to consider the greater picture.

10 Expected Output and Time scale \*

New specifications * [If Study Item, one TR is anticipated]						
Spec No.	Title	Prime rsp WG	2ndary rsp WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TR 26.9xy	Study on Media Handling Aspects of IMS-based Telepresence	SA4		SA#68	SA#69	
TS 26.1xy	Telepresence using the IP Multimedia Subsystem (IMS); Media Handling and Interaction	SA4		SA#69	SA#70	
Affected existing specifications * [None in the case of Study Items]						
Spec No.	CR	Subject		Approved at plenary#		Comments

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**Comment [21]:** The time scale for the work is implied by the plenary TSG meeting at which the resulting deliverables will be seen and approved. There is no need to revise the WID if these initial estimates change during the course of the work, unless other significant changes (eg a change of objectives) are also required, in which case the plenary meetings can be corrected and, if known, the formal numbers for the new TSs and TRs given in place of the original placeholder numbers.

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**Comment [22]:** List, in the top part of the table:

- the new specification(s) which will be produced under this work item
- if possible, give the spec series intended (see 3GPP TS 21.900 §4.0);
- identify the remaining three digits with a temporary designation - eg 34.tpw
- in the case of TRs, indicate whether the TR is:
  - xx9xx = intended for publication by the Organizational Partners; or
  - xx.8xx = for internal use of 3GPP and not to be published

11 Work item rapporteur(s) \*

Ozgur Oyman, Intel, Email: ozgur.oyman@intel.com

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**Comment [23]:** List, in the bottom part of the table:

- existing specifications

12 Work item leadership \*

3GPP SA4

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**Comment [24]:** The name of a physical person. If the person is new to 3GPP work, give full contact coordinates, in particular, email address.

13 Supporting Individual Members \*

Supporting IM name
Intel
Huawei Technologies Co. Ltd.
HiSilicon Technologies Co. Ltd
Telecom Italia S.p.A.
ORANGE
Ericsson

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**Comment [25]:** Identify the lead working group (or parent Technical Specification Group) responsible for coordination of the work. Mention also any other groups from which input may be required.

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**Comment [26]:** See 3GPP Working Procedures, article 39, which specifies the minimum number of supporting IMs required (four, at the time of creating the present form), and the duties of those organizations. There is no upper limit to the number of supporting IMs.