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Authors: M. Duckworth, Ed. A. Pepperell S. Wenger
Acano Vidyo

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Framework for Telepresence Multi-Streams

Abstract

This document defines a framework for a protocol to enable devices in a telepresence conference to interoperate. The protocol enables communication of information about multiple media streams so a sending system and receiving system can make reasonable decisions about transmitting, selecting, and rendering the media streams. This protocol is used in addition to SIP signaling and Session Description Protocol (SDP) negotiation for setting up a telepresence session.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 7841.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <https://www.rfc-editor.org/info/rfc0000>.

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1. Introduction

Current telepresence systems, though based on open standards such as RTP [...]

A Provider MAY include as much or as little of the original source Capture information as it requires.

The spatial-related attributes of an MCC indicate its area of capture and point of capture within the scene, just like any other media capture. The spatial information does not imply anything about how other captures are composed within an MCC.

For example: a virtual scene could be constructed for the MCC capture with two Video Captures with a "MaxCaptures" attribute set to 2 and an "Area of Capture" attribute provided with an overall area. Each of the individual Captures could then also include an "Area of Capture" attribute with a subset of the overall area. The Consumer would then know how each capture is related to others within the scene, but not the relative position of the individual captures within the composed capture.

Here is an example using <artwork>.

Capture Scene #1	
VC1	<pre>AreaofCapture=(0,0,0)(9,0,0) (0,0,9)(9,0,9)</pre>
VC2	<pre>AreaofCapture=(10,0,0)(19,0,0) (10,0,9)(19,0,9)</pre>
MCC1(VC1,VC2)	<pre>MaxCaptures=2 AreaofCapture=(0,0,0)(19,0,0) (0,0,9)(19,0,9)</pre>

Capture Scene #1
CSV(MCC1)

Table 1: TEST A: Example of MCC and Single Media Capture Attributes

Here is an example using <td> with align=right.

Capture Scene #1	
VC1	AreaofCapture=(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=(10,0,0)(19,0,0) (10,0,9)(19,0,9)
MCC1(VC1,VC2)	MaxCaptures=2 AreaofCapture=(0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)	

Table 2: TEST B: Example of MCC and Single Media Capture Attributes

Capture Scene #1	
VC1	AreaofCapture=(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=(10,0,0)(19,0,0) (10,0,9)(19,0,9)
MCC1(VC1,VC2)	MaxCaptures=2 AreaofCapture=(0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)	

Table 3: TEST Bx: Example of MCC and Single Media Capture Attributes

Here is an example using .

Capture Scene #1	
VC1	AreaofCapture=(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=(10,0,0)(19,0,0) (10,0,9)(19,0,9)
MCC1(VC1,VC2)	MaxCaptures=2 AreaofCapture=(0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)	

Table 4: TEST C: Example of MCC and Single Media Capture Attributes

Capture Scene #1		
VC1	AreaofCapture=	(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=	(10,0,0)(19,0,0) (10,0,9)(19,0,9)
MCC1(VC1,VC2)	MaxCaptures= AreaofCapture=	2 (0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)		

Table 5: TEST D: Example of MCC and Single Media Capture Attributes

Capture Scene #1		
VC1	AreaofCapture=	(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=	(10,0,0)(19,0,0) (10,0,9)(19,0,9)

Capture Scene #1		
MCC1(VC1,VC2)	MaxCaptures=	2
	AreaofCapture=	(0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)		

Table 6: TEST E: Example of MCC and Single Media Capture Attributes

This is similar to B:

Capture Scene #1		
VC1	AreaofCapture=	(0,0,0)(9,0,0) (0,0,9)(9,0,9)
VC2	AreaofCapture=	(10,0,0)(19,0,0) (10,0,9)(19,0,9)
MCC1(VC1,VC2)	MaxCaptures=	2
	AreaofCapture=	(0,0,0)(19,0,0) (0,0,9)(19,0,9)
CSV(MCC1)		

Table 7: TEST F: Example of MCC and Single Media Capture Attributes

The subsections below describe the MCC-only attributes.

Authors' Addresses

Mark Duckworth (EDITOR)

Andover, MA 01810

United States of America

Email: mrducky73@outlook.com

Andrew Pepperell

Acano

Uxbridge

United Kingdom

Email: apeppere@gmail.com

Stephan Wenger

Vidyo, Inc.

433 Hackensack Ave.

Hackensack, NJ 07601

United States of America

Email: stewe@stewe.org