

ISO/IEC JTC 1/SC 24**Computer graphics, image processing and environmental data representation****Secretariat: BSI (United Kingdom)****Document type:** Meeting Report**Title:** N 4033 WG9-2017-LAE-for-MAR**Status:****Date of document:** 2017-10-25**Expected action:** INFO**No. of pages:** 16**Email of secretary:** charles.whitlock@bsigroup.com**Committee URL:** <http://isotc.iso.org/livelink/livelink/open/jtc1sc24>

Live Actor and Entity Representation in MAR (ISO/IEC CD 18040)

ISO/IEC JTC1 SC24

7-11, August, 2017

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History

At least Four Times Presentation: 2009 ~ 2011

Embedding Real Character into ARC continuum world

Interaction of Real Characters and ARC continuum world.

NWIP: 2012. Dec.(**ISO/IEC 18521**)

ARC concepts and reference model – Part1 : Reference Model

ARC concepts and reference model – Part2 : Physical

Sensors

**ARC concepts and reference model – Part3 : Real Character
Representation**

WD: 2013 ~ Present

- ARC -> MAR

- By reflecting new reference model of MAR

History

Ver.5 of MAR-RM : July, 2014

ISO/IEC WD 18521-3, Version 3

Information technology — Computer graphics, image processing and environmental representation — Mixed and Augmented Reality Concepts and Reference Model – Part 3: Real Character Representation

MARRC-RM: A MAR Reference Model for Real Character Representation

ISO/IEC WD 18521-3 was removed.

At Aug. 2014, it was changed as “**Live Actor and Entity Representation in MAR**”

2016-1-25 ISO/IEC 18040 Live Actor and Entity Representation in MAR

History

ISO/IEC 18040 Information technology — Computer graphics, image processing and environmental representation — Live Actor and Entity Representation in Mixed and Augmented Reality

N Number	Title (Description)	Exp. Action	Due Date	Version Date
<u>3943</u>	N 3943 ISO-IEC CD-18040	VOTE	2017-06-06	2017-04-10

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Scope

- Definitions for a LAE in MAR
- Representation of a LAE
- Representation of properties of a LAE
- Sensing of a LAE in a physical world
- Integration of a LAE into a 2D/3D virtual scene
- Interaction between a LAE and objects in a 2D/3D virtual scene
- Transmission of information related to a LAE in a MAR world

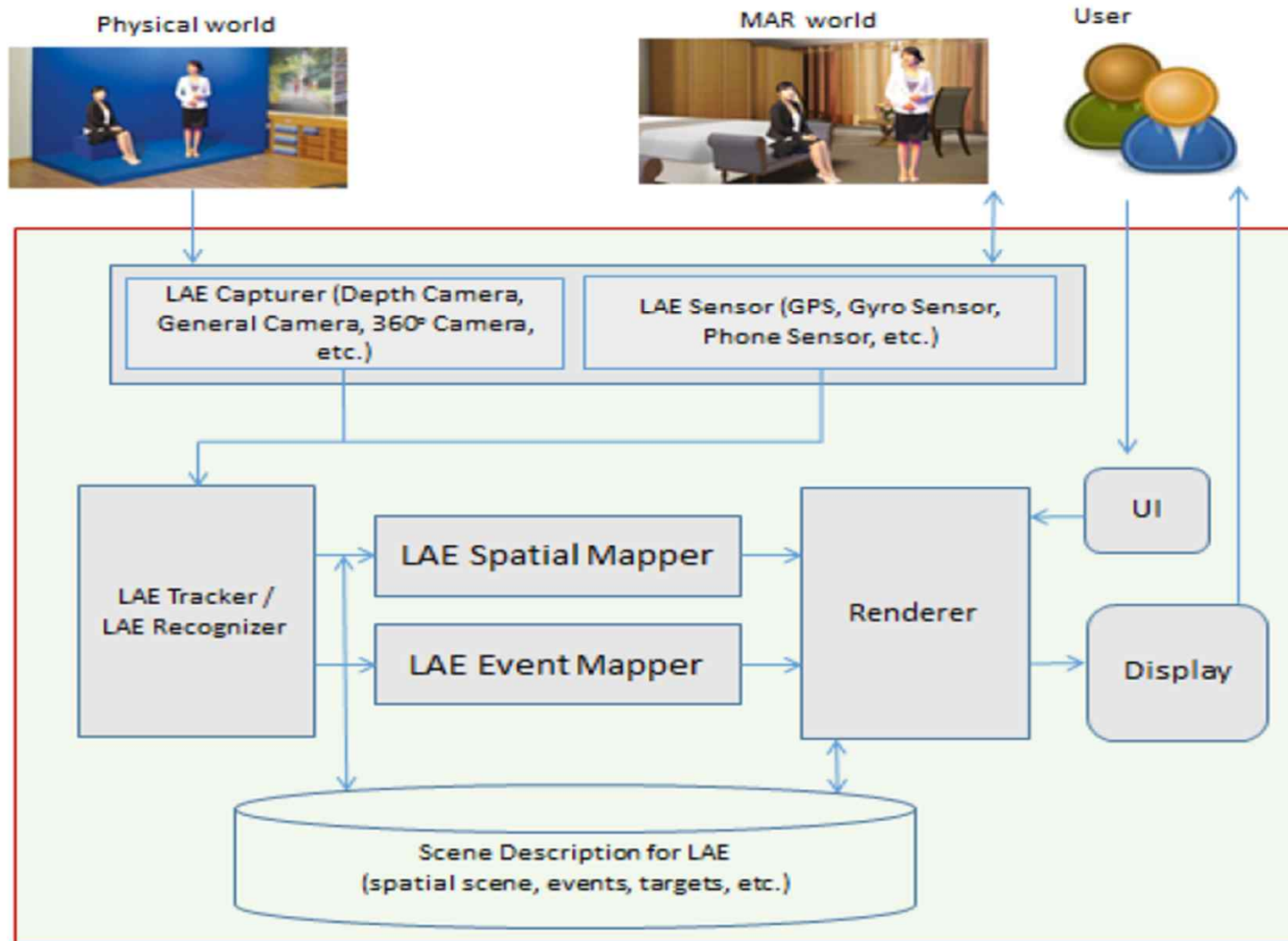
Concepts - overview

- An integrative combination application of 3D videoconferencing, reality-like communication features, presentation/application sharing, and 3D model display within mixed environment.
 - Once live actor and entity in the real world are integrated into a 3D virtual world, their location, movements and interactions should be represented precisely in the 3D virtual world.
 - In the MAR applications, live actor and entity to be embedded in a 3D virtual world must be defined, and their information such as location, actions, and sensing data from their holding equipment, must be able to be transferred between the MAR applications, and between a 3D virtual world and a real world.
-

Concepts - components

- Sensing of a LAE in a physical world from input devices such as a (depth) camera
 - Sensing of information for interaction from input sensors
 - Recognizing and tracking a LAE in a physical world
 - Recognizing and tracking events made by LAEs in a physical world
 - Recognizing and tracking events captured by sensors in a physical world
 - Representation of the physical properties of a LAE in a 3D virtual world
 - Spatial control of a LAE in a 3D virtual world
 - An event interface between a LAE and a 3D virtual world
 - Composite rendering of a LAE into a 3D virtual world
-

Component



Current Status

ISO/IEC CD 18040 – CD 1 Information technology -- Computer graphics, image processing and environmental data representation and coding of audio, picture, multimedia and hypermedia information -- Live actor and entity representation in mixed and augmented reality (MAR)

CD Ballot: June 8, 2017

Member responses:

Votes cast (9)	Australia (SA) China (SAC) France (AFNOR) Japan (JISC) Korea, Republic of (KATS) Russian Federation (GOST R) Switzerland (SNV) United Kingdom (BSI) United States (ANSI)
Comments submitted (2)	Austria (ASI) India (BIS)
Votes not cast (1)	Egypt (EOS)

Comments

Total number of comments: 59 comments

Types	Number	Content
General	15 comments	
Editorial	30 comments	
Technical	14 comments	
Total	59 comments	

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30.60

35.140

Information technology -- Computer graphics, image processing and environmental data representation and coding of audio, picture, multimedia and hypermedia information -- Live actor and entity representation in mixed and augmented reality (MAR)

Future Plan

- Teleconference (Sep/Oct (1st), Dec (2nd))
 - Review and Fix 59 comments
 - Update ISO/IEC 18040 CD document until Dec. 2017
- Due Dates

DIS	FDIS	IS
01/19	7/19	1/20

Future New Item

- Propose Information Model for LAE representation in MAR
 - Define nodes for defining each module
 - Define storing format of LAE related information

Q&A

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