

AR Standards Community Resource

Hands-free Display and Context Capture Systems and Standards

Version: 1.0

Preamble

The genesis of this document dates back to a side meeting of the ARE2010 called and chaired by Yohan Baillot, during which the proposal was made that open interfaces for hands-free displays and AR devices be forged in collaboration with the manufacturers of systems, subsystems and mobile devices.

In January 2011, an AR Standards community position paper co-authored by Baillot and Perey [was published](#). A [memo to subsystems providers](#) was drafted in March 2011.

Discussions during the [Sixth AR Standards Community Meeting July 23-24 2012 in Geneva](#) led to the formation of a task force for the preparation of this document.

Document History

Author	Version	Date modified	Comments
Christine Perey	1.0	July 27, 2012	Draft Outline

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Purpose

The purposes of this resource are:

- To compile all information available about the standards or protocols available for hardware and software that could be used to achieve open and interoperable hands-free display and contextual capture systems.
- To establish/define/describe three use cases for hands-free devices in which there is believed to be a need for interfaces with mobile devices such as smartphones
- To compile the requirements for devices meeting the use cases defined above
- To recommend specifications for open standards meeting the needs of the above use cases.

Guidelines used in preparation of the document

The contributors to this document will:

- cite their sources in the references section or as links within the document, and
- periodically solicit inputs and feedback from the community, by way of mailing list discussion, remote and face-to-face meetings.

Timeline/output

The document will be drafted in the third quarter of 2012 with the goal of producing a position paper in time for submission at the Seventh AR Standards Community Meeting (submission deadline October 12).

Existing standards

Table of hardware interfaces for video

Standards body	Standard	remarks
MIPI	Display interface	
MIPI	Camera interface	
HDMI	High Definition Multimedia Interface	

Example <http://www.analog.com/en/audiovideo-products/analoghdmidvi-interfaces/adv7533/products/product.html>

Table of hardware interfaces for audio

Standards body	Standard	Remarks
MIPI	SLIMbus	

Table of hardware interfaces for signaling user intent

Standards body	Standard	Remarks

Table of standards for sensor interfaces

Standards body	Standard	Remarks

Table of standards for sensor data format

Standards body	Standard	Remarks
OGC		
ISO	MPEG-V	

Use cases

Use Case #1: Display only

Hands-free display will include:

Block diagram?

Use Case #2: Context Capture

Hands-free context capture system will include:

Block diagram?

Use Case #3: Display and Capture

Requirements

Use Case #1 Requirements

Power requirements for hands-free display

Use Case #2 Requirements

Use Case #3 Requirements

Recommendations