

OMA Mobile Augmented Reality Work Program Overview

3rd International Augmented Reality Standards Meeting

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OMA Mobile Augmented Reality Working Group



OMA – Overview

More than 135 members from across the mobile value chain

- Founded June 2002
- Operators, terminal and software vendors, content and entertainment providers

Primary deliverables - Interoperable Service Enablers

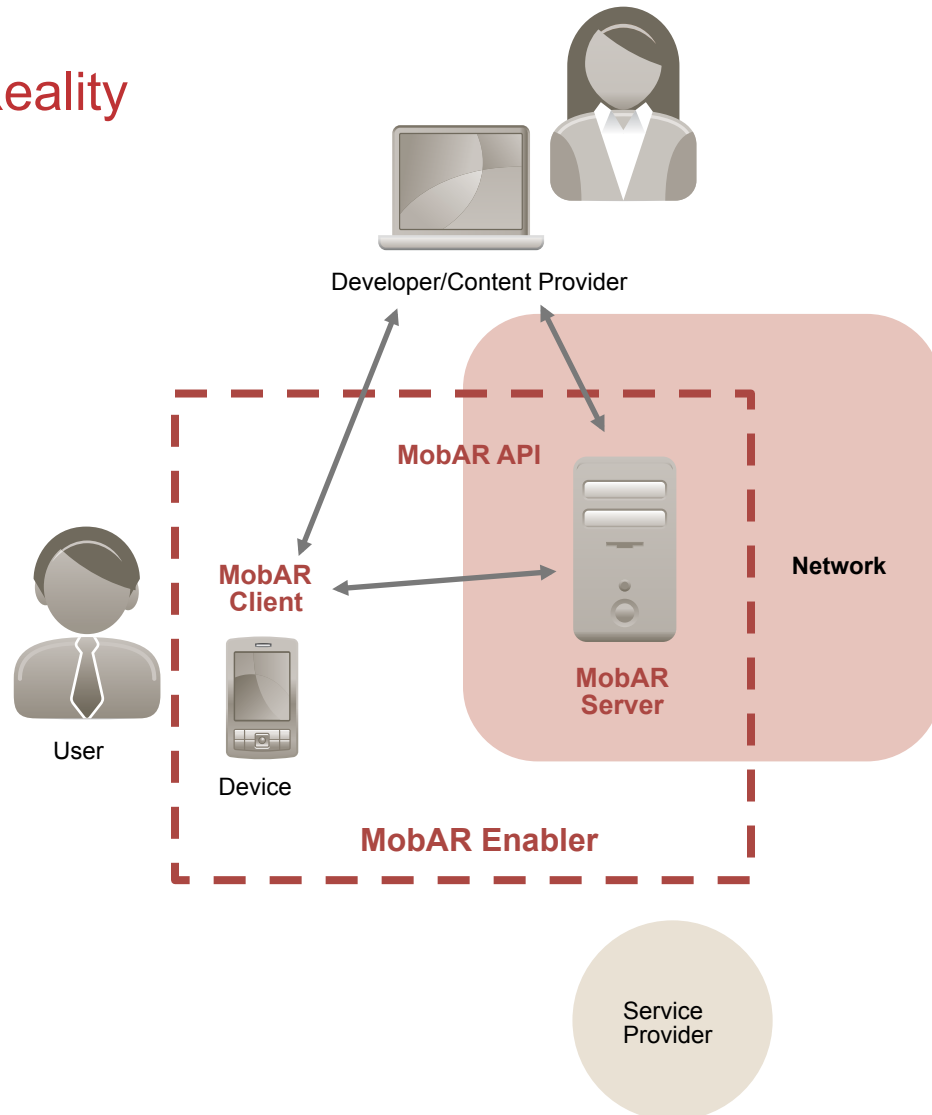
- OMA Service Enablers consist of software technologies used as building blocks in the development, deployment and operation of applications and services in both fixed and mobile environments. OMA Enablers are defined as specifications that are published by OMA in Enabler Release packages.

Collaboration with other bodies—50 strong relationships including ETSI and 3GPP/3GPP2 -- reduces fragmentation and duplication of effort

OMA Mobile Augmented Reality (MobAR) Ecosystem

**The OMA MobAR Enabler
main functionalities include:**

- AR Content Data format
- AR Transport and Interfaces
- AR Client features
- Security & Privacy

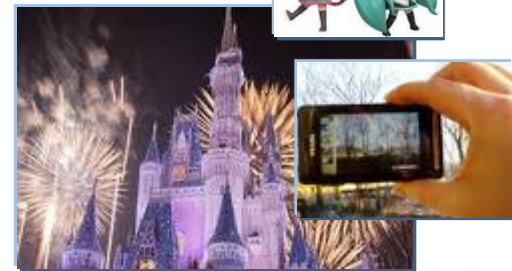


OMA MobAR Use Cases (1/2)

- The OMA AR enabler enhances the user experience in real time scenarios such as travel. Users can access key Points of Interest (POI) in their general vicinity and retrieve geo-localized multimedia content and information in camera views on their mobile phone.



- The OMA AR enabler offers a rich user experience in Gaming scenarios. Using their mobile phones, players can interact with other players in real time, accessing clues, game routes, puzzles, riddles and hidden landmarks that allows them to accumulate points and continue playing.



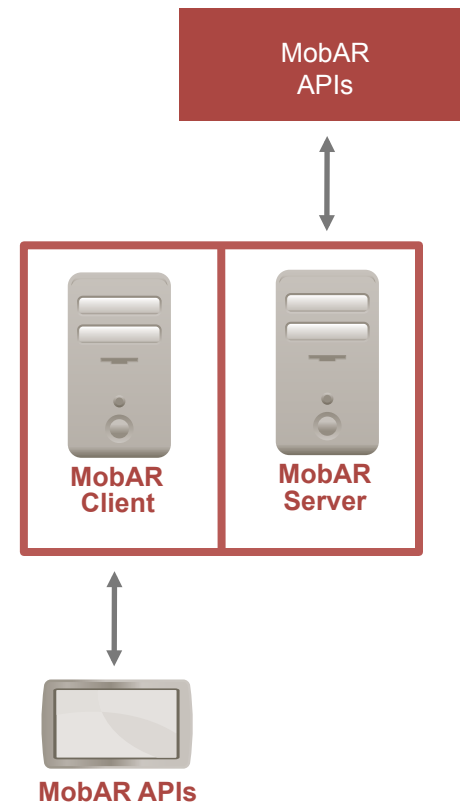
OMA MobAR Use Cases (2/2)

Usage of the AR technology in an Exposure scenario

- The OMA MobAR Enabler implementation exposes its information and capabilities to third-party applications via (client and network) APIs.

Several customization scenarios can be achieved:

- BASIC use of MobAR Network API: Customize AR content—for example, a sports equipment manufacturer may provide AR content for advertising in their retail shops.
- INTERMEDIATE use of MobAR Client API: The AR application running on the device adds new functionalities to those provided by the MobAR Client. No customization is applied to the AR Content.
- ADVANCED use of MobAR Client API and MobAR Network API: The developer can exploit both sets of APIs to implement a stunning AR application.





Benefits of a Mobile AR Standard

- Augmented Reality blends interactive media with the real world in a contextualized and localized format.
- In conjunction with the appealing features offered by AR, the increasing growth of technology and the availability of infrastructure and hardware has encouraged the creation of AR applications with particular focus on the mobile sphere.
- This unique, intuitive user interaction provided by MobAR has the potential to change the way users get information. An example is sharing information through the camera view based on visual images rather than through traditional browsers where information is in narrative or text format.
- Currently, there is no industry-wide standard for mobile AR applications. This has generated concerns about fragmentation across the AR eco-system. OMA MobAR is addressing this issue, and cooperates with other bodies in order to reduce fragmentation.
- Benefits of a standard enabler for mobile Augmented Reality
 - A long-term, sustainable framework for mobile AR will assure the cross-platform exchange of and universal access to AR content.
 - Content providers, including casual users and professionals, may create AR content that can be transported, stored and viewed using different browsers.
 - Light-weight application development by profiling existing complex specifications will lead to the creation of a minimum feature set necessary for the mobile AR services and content interoperability.
 - A standard AR enabler will ensure filtering and personalization of AR content to limit information overload.

OMA MobAR Activity

OMA's first release of the MobAR Enabler will focus on the following work areas:

- Defining use cases and developing requirements
- Scouting existing industry standards that are best suited for mobile AR applications
- Defining the architecture of AR client and server components and their interactions
- Identifying and/or creating extensions of industry standards to fulfill specific use cases
- Creating overall framework for mobile AR applications that can be profiled for different use cases

Timeline

- OMA began work on the MobAR enabler in November 2010. OMA is on schedule to publish OMA MobAR 1.0 by the end of 2011.

Conclusions and Next Steps

- To supply the mobile industry with mobile AR service standards, it is essential to accomplish the first release of technical specifications at the earliest possible date.
- OMA intends to collaborate with related and suitable standards interested in MobAR including OGC, W3C and others (to be identified as the work progresses).
- The following “AR content data format” activities conducted in OGC and W3C have been identified as areas of potential interest to the OMA:
 - W3C: A liaison activated with the Points Of Interest (POI) WG in accordance with their declared mission “to develop technical specifications for the representation of Points of Interest information”.
 - OGC: There is a potential relationship with Geography Markup Language (GML) and Keyhole Markup Language (KML) for grammar and models to express geographic data visualization.
- Delegating the actual specification of extensions for industry standards by the responsible SDOs is currently under consideration. (There is the possibility that a request may be made to external SDOs to develop the actual specification of extensions required by OMA MobAR in coordination with OMA.)



More Information

- OMA Mobile Augmented Reality (MobAR):
 - Champion: Carmen Criminisi, Telecom Italia, carmen.criminisi@telecomitalia.it
 - Approved Work Item:
http://member.openmobilealliance.org/ftp/Public_documents/TP/Permanent_documents/OMA-WID_0203-MobAR-V1_0-20101109-A.zip
- OMA Communications Contact
Bobby Fraher, External Communications Manager
bobby@agilis-communications.com
- 2011 Q1 OMA Quarterly Newsletter
http://www.openmobilealliance.org/comms/pages/OMA_quarterly_2011_vol_1.htm
- Full list of OMA Mobile Service Enablers
<http://www.openmobilealliance.org/Technical/releaseprogram.aspx>
- Interested in joining the OMA
<http://www.openmobilealliance.org/Membership/default.aspx>