Call for Participation

International Workshop on
Digital Object Memories in the Internet of Things
(DOME-IoT 2010)

September 26, 2010. Copenhagen, Denmark
In conjunction with the 2010 ACM Conference on Ubiquitous Computing (UbiComp 2010)

Extended Submission Deadline: July 16, 2010

Digital Object Memories comprise hardware and software components that physically and/or conceptually associate digital information with real-world objects in an application-independent manner. Such information can take many different forms (structured data and documents, pictures, audio/video streams, etc.) and originate from a variety of sources (automated processes, sensors in the environment, users, etc.). If constantly updated, Digital Object Memories over time provide a meaningful record of an object's history and use.

From a *technical point of view*, Digital Object Memories provide an open-loop infrastructure for the exchange of object-related information across application and environment boundaries. Besides fostering information reuse and reducing the risk of information inconsistencies, they such allow for novel classes of applications in which rich object histories are created and exploited.

From the *user's point of view*, Digital Object Memories create a new design space for everyday interactions. Physical objects could become sites for their owners' personal stories, but also afford people the opportunity to explore an object's provenance and connections to other elements of physical and digital life. In this sense there is the potential for designers to augment or even transform our relationship with objects and the services that they mediate.

Objects with digital memories might contain all required technology on their own, or may connect with other artifacts in the physical environment that are tagged with computational intelligence, memory, sensors, and actuators in the *Internet of Things*. Collaboratively, such networks of objects can enhance the process of automated or semi-automated Digital Object Memory creation, as well as the exploitation of the resulting memories.

DOME-IoT is a merged event of two successful workshop series, DIPSO 2007-09 in conjunction with UbiComp 2007-09 and DOMe 2009 in conjunction with IE 2009.

Goals and Topics

The primary goal of the workshop is to bring together technical experts, artists, designers, and possible end-users of Digital Object Memories in order to discuss technical, social, privacy, and legal implications of object memory systems, to establish a common view on requirements to digital memories, and to leverage cooperation in future activities. The workshop will be organized around panels and structured discussion.

Suggested topics that could be discussed at DOME-IoT include (but are not limited to):

- *Architectures*: General architectures and middleware approaches which allow for the realization of object memory functionality. This includes infrastructures for the centralized or distributed capturing, organizing, storing, and exploiting of object-related information, directly on the physical object itself or based on some remote infrastructure.
- *Memory Content Representation and Modeling*: Formats for memory content items, discussion of standards and best-practice knowledge concerning the representation of object-related knowledge.
- *Memory Creation*: Technologies and concepts for the manual, semi-automatic, or automatic creation of whole memories or single memory entries. This includes physical sensor readings, information inferred from external sources, and user-generated content.
- *Data Mining*: Information stored in a digital object memory might be analyzed in order to discover typical usage patterns or anomalies. Such information might help human users or other environments to better deal with smart items.
- *Human Memory Access*: This topic comprises technologies and concepts to make an object memory's content accessible to human users. One of the major challenges here is how to structure, relate, prepare, and explain the wide variety of diverse data that might be contained in the memory due to its open nature.
- *Applications*: Novel application scenarios of Digital Object Memories and existing prototypes.
- *Privacy and Legal Aspects*: Who "owns" the data stored in an object's memory, who can access/delete/correct it? How long must/should memory content be stored, and can trust be established for the object memory?
- *Social Implications*: Object memories have the potential to change the way we perceive our surrounding. Not only humans now can tell their personal story, but every object potentially allows us to investigate its history and understand how our world is connected. This might fundamentally influence our relation to objects and other humans, too.

Format and Submission Guidelines

We accept two types of submissions to DOME-IoT 2010: Position statements which must not exceed 2 pages and technical papers as well as descriptions of design studies which must not exceed 6 pages (2-column ACM SIGCHI format each). Both types of submissions have equal chances of being accepted. All accepted submissions will be distributed to the workshop participants on site and will be published on the workshop's website. We additionally plan to publish high-quality technical papers and descriptions of design studies in a special journal issue after the workshop.

Detailed format and submission instructions including style templates for MS Word and LaTex are provided at the workshop's website (http://www.dfki.de/dome-workshop/2010/).

Important Dates

- **July 16, 2010**: Submission of manuscripts and design studies (extended)
- **August 16, 2010**: Notification of acceptance (updated)
- **August 27, 2010**: Submission of revised manuscripts (updated)
- **September 26, 2010**: Workshop

Organizers

- Michael Schneider (DFKI Saarbrücken, Germany)
- Alexander Kröner (DFKI Saarbrücken, Germany)
- Peter Stephan (DFKI Kaiserslautern, Germany)
- Thomas Plötz (Newcastle University, UK)
- Fahim Kawsar (Lancaster University, UK)
- Gerd Kortuem (Lancaster University, UK)

Program Committee

- Kaori Fujinami (Tokyo University of Agriculture and Technology, Japan)
- Aart van Halteren (Philips Research, Netherlands)
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- Marc Roelands (Bell Labs, Belgium)
- Jon Rogers (University of Dundee, UK)
- Chris Speed (Edinburgh College of Art, UK)
- Frédéric Thiesse (University of St. Gallen, Switzerland)

Further Information

Workshop website: http://www.dfki.de/dome-workshop/2010/
Contact organizers: dome-workshop@dfki.de