

Serenoa Newsletter

Multidimensional Context-Aware Adaptation of Service Front-ends

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Serenoa News

Serenoa project reaches in 2013 its last and third year. The end of the project has been extended in one month, and it will be concluded by September 2013. The final review meeting will take place afterwards in Brussels, Belgium.

At this stage, the project generated several outcomes, such as: tools, conceptual methodologies, models, languages and dissemination actions. Examples include:

- **Tools:** Authoring Environments as web-based Quill, and SAP editor, W4 Rule Editor
- **Methods:** CADS (Design Space), CARF (Reference Framework)
- **Models:** Reference Models in UML and OMG-MOF
- **Languages:** ASFE-DL and AAL-DL
- **Prototypes:** avatar-based interaction for e-health domain, and houseware picking with head-mounted device and augment reality
- **Actions:** workshops, newsletters, scientific publications, participation in events, and deliverables.

This final period of the project is concerned with the convergence and conclusion of all the outcomes obtained so far. The final goal consists in generating a unified and seamless platform that provides support for context-aware applications which are able to adapt themselves in an optimal manner.

This fifth newsletter is dedicated to describe our latest achievements and to detail our planned steps for the coming months.

In this newsletter you find further information about our communication channels and progress of the project. In case of suggestions, comments or doubts, please contact us at: serenoa@tid.es

Next Deliverables

For the final period of the project there are 14 deliverables planned.

Regarding the technical concepts, the deliverables include results about: languages (ASFE-DL, AAL-DL), reference models, Serenoa framework, adaptation engine, context of use runtime infrastructure, prototypes and evaluation process.

Regarding the conceptual and management aspects, the deliverables include: outlook, exploitation plan, standardization actions, industrial advisory report, and dissemination, collaboration and communication activities.

Events

CASFE'2013 Workshop

Date: June 24th, 2013

Organizers:

Fabio Paternò (CNR – ISTI)

Francisco Javier Caminero Gil (TID)

Vivian Genaro Motti (UCL)



The second Serenoa workshop – CASFE'2013 will take place co-located with the EICS Conference at University of London, in London - England. The CASFE Workshop is dedicated to discuss and promote the context-aware adaptation domain. The topics of interest involved include: mobile development, multi-modal applications, approaches for adaptation development, conceptual frameworks, prototypes, demonstrations and evaluation with end users.

<http://www.serenoa-fp7.eu/casfe2013/>

<http://serenoa-fp7.eu>



<http://www.tid.es>



<http://www.uclouvain.be>



<http://giove.isti.cnr.it>



<http://www.sap.com>



<http://www.w3c.org>



<http://www.w4global.com>



<http://www.fundacionctic.org>

Mobile World Conference 2013

W3C's booth focused on the benefits of the Open Web Platform, consisting of a suite of standards for Web technologies including HTML5 for use on a wide variety of devices, and a lower cost and simpler alternative to using native application development techniques.

Dave Raggett presented best practices for responsive design in which a blend of client and server side techniques are used to adapt Web applications to the context of use. Given the increasing variety of devices, authoring for multiple contexts of use is a challenging activity, even with lots of guidelines that have already been published.

There is a need for better tools as many businesses have yet to adapt their websites for use on mobile and tablets. W3C proposes the adoption of mobile web best practices as standard guidelines, and provides online training.



<http://www.w3.org/2013/Talks/responsive-design.pdf>

User Interface Design and Adaptation for Multi-Device Environments

By Fabio Paternò
CNR-ISTI, Pisa, Italy



Goals: This course aims to help user interface designers and developers to understand the issues involved in multi-device interactive applications, which can be accessed through mobile and stationary devices even exploiting different interaction modalities (graphical, vocal, tactile, etc.). It will provide a discussion of the possible solutions in terms of concepts, techniques, languages, and tools, with particular attention to Web environments. The tutorial will deal with the various strategies in order to adapt, distribute, and migrate the user interface according to the context of use.

Features: Issues in multi-device interfaces, The influence of the interaction platforms on the suitability of the possible tasks and their structure, Authoring multi-device interfaces, Model-based design of multi-device interfaces, Approaches to automatic adaptation, How to address adaptation to various platforms with different modalities (graphical, vocal, ...), Distributed user interfaces, User interfaces able to migrate and preserve their state

The tutorial will be interesting for interactive software developers and designers who want to understand the issues involved in multi-device interactive applications and the space of the possible solutions. In addition, other researchers who would like to have an update on the state of art and research results in the field will find the tutorial of interest.

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12th Face-to-Face Consortium Meeting

Authoring Tool Workshop

On April 9th, during the 12th Serenoa Consortium Meeting, SAP provided a short workshop to Serenoa partners. This workshop was dedicated to present and explain the authoring tool. This tool enables users to create and edit models of the ASFE-DL and AAL-DL by means of graphical editors. In future steps, evaluation with end users are planned to better identify the costs and benefits of using the tool.

Head-Mounted Device

SAP prototype covers a houseware picking scenario. To interact, users must use a head-mounted device (HMD) that is capable of augmenting the reality in which he or she is located. With such a tool users can better located products stored, by getting live information about their precise locations. Serenoa partners could test the HMD during the 2nd day of the meeting. Currently users interact with a Tablet and visualize the UI in the HMD, as future plans SAP partners plan to use also a smartphone for interaction.

Demo: Proximity as a Context

Cristina Cachón and Javier Rodriguez from CTIC presented a demonstration of an adaptation technique. The application calculates and uses the distance of the user to the screen in order to adjust the font size in a dynamic and automatic manner. The application demonstrated adopts a JavaScript library to process the video and recognize faces. Some potentials for exploring this adaptation techniques have been proposed and discussed.

Living Labs

On April 10th, the 2nd day of the face-to-face meeting Serenoa partners had the opportunity to visit the Living Labs of SAP. Joerg Rett explained the main application goals. Several applications were described, mainly covering urban scenarios and natural catastrophes. Several devices, including: interactive tables, video cameras, and projectors are used to demonstrate the applications and to improve the interaction of the user.



W4 participated on Documentation 2013. The event, a trade show, took place in Paris – La Defense on March 20th and 21st. It targets at industrial solutions to manage contents, data, information and documents.

Several topics related to the life-cycle of information have been covered, such as: content intelligence, cloud computing, mobile devices solutions, social medias, collaborative work, and search engines. More than 5000 visitors with technical and professional profiles, and 170 exhibitors presenting their solutions participated.

Documentation goals aims at: a closer contact with customers, testing novel products, presenting services to professionals, exchanging professional experiences, developing your network, benefiting from the know-how of several exhibitors and world-leader organizations.



UsiXML Final Meeting

The UsiXML Final review meeting took place on March 27th, 2013 In Louvain-la-Neuve, Belgium. UsiXML project started in April 2009 and developed a model-driven language (User Interface eXtensible Mark-up Language) to improve the UI design supporting the $\mu 7$ concept: multi-device, multi-user, multi-cultural, multi-organizational, multi-context, multi-modality and also multi-platform. Industrial and academic partners have been involved in the consortium and contributing to define, model, propose, develop, test and evaluate the UsiXML language. Several case studies, exploitation and dissemination actions have been performed and published. More information about the project is available at: www.usixml.eu



During the final review meeting of UsiXML, Serenoa project has also been presented to the participants. During the posters session, not only the Serenoa project was presented but also dissemination publications have been distributed, such as: newsletter, flyers, call for papers for CASFE'2013 and publications. In this occasion the participants of the event could better understand the project, its current status, potential outcomes and also the goals and achievements that were already reached.



The W3C Model-Based User Interfaces Working Group continues to make progress on its deliverables, with lots of discussion on the meta model for the abstract user interface, and the related Working Group Notes introducing model-based user interface design techniques to an industry audience, and an associated glossary of terms. A face to face is in the planning stage and Red Hat have kindly offered to host the meeting in Munich, most likely in July 2013.

The Working Group is chartered until the end of November 2013. By that time we aim to have advanced the Task Models and Abstract User Interface Models specifications to Candidate Recommendation status. One of the challenges for our upcoming face to face will be to start work on a test suite for verifying interoperability when interchanging user interface models between different design tools. Standards in this area aim to reduce barriers to switching user interface design tools, and to raise the quality of tools through increased competition.

The increasing variety of devices available to users creates huge challenges for businesses, and the current practice of developing applications separately for each platform is pushing up costs. Model-Based techniques together with Web technologies have the potential to make it much easier to to deploy applications across desktop, smart phones, tablets, connected TVs and more.

Further information about this WG is available online at: <http://www.w3.org/2011/01/mbui-wg-charter>

Publications List and Events

RCIS 2013 Full Paper

The paper entitled 'A Computational Framework for Context-aware Adaptation of User Interfaces' was approved in the 7th IEEE International Conference on Research Challenges in Information Science. It will be presented by Vivian Genaro Motti on May 30th in Paris, France.



WWW 2013 Developers' Track

The paper entitled 'Quill: A Collaborative Design Assistant for Cross Platform Web Application User Interfaces' has been approved in WWW'2013 in the Developers Track. The authors, Dave Raggett and Vivian Motti, will present the work during the 22nd International World Wide Web Conference, which will take place in Rio de Janeiro, Brazil from May 13th to 17th.



Informatica' 2013 Keynote Speaker

Jean Vanderdonckt participated as a keynote speaker in the event 'II Conferencia Internacional de Ciencias Computacionales e Informáticas'. Informática'2013 is the 15th International Convention and Fair that took place from March 18th to 22nd in Havana, Cuba.



Proceedings CASFE'2012

The proceedings of the 1st Serenoa workshop, namely CASFE'2012 have been published in CEUR Workshop Proceedings. The papers can be accessed online at: ceur-ws.org/Vol-970

