SOFTWARE TOOL AND METHOD FOR MODELLING DEVICE-INDEPENDENT WEB APPLICATIONS

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RESUM

The Web Engineering Group of the department of Languages and Information Systems at the University of Alicante has developed a pre-competitive method and an accompanying software tool to assist the design of device-independent Web Applications. This revolutionary software, based on standards for Information Systems Object Oriented analysis and design (UML, OCL, XML), supplies:

- An environment for modelling personalized and device-independent user interfaces.

- Powerful model compilers for automated generation of operative interfaces in the main Internet-related languages (HTML/CSS, XML, ASP's, JSP's, PHP...).

- Connection between the generated interfaces and underlying legacy systems and/or Web Services.

This powerful technology can increase the productivity in the development of web applications in a significant way. The University of Alicante is seeking for partners interested in acquiring the rights, establishing R+D projects for the development of software based on this technology and/or participating in European Projects.

AVANTATGES I ASPECTES INNOVADORS

1. Two new views to capture relevant user interface properties:

The OO-H method extends the traditional views – those that capture the static and dynamic properties of an application – with two new complementary diagrams. The navigational access diagram (NAD) defines a navigation view, and the abstract presentation diagram (APD) gathers the concepts related to presentation. Both the NAD and the APD capture the interface related design information with the aid of a set of patterns, defined in an interface pattern catalogue integrated in the OO-H method proposal.

2. Increased level of abstraction:

The OO-H method increases the level of abstraction at which Web interfaces are defined, and is therefore much closer to the conceptual space (domain problem) than other proposals.

3. Interface usability improvement:

Our approach is user centred (as it relies on user requirements) and object oriented. This fact allows the use of the knowledge domain implicit in object-oriented models to improve the interface usability. The inclusion of a pattern catalogue and the way these patterns are applied to the different diagrams to modify both the model and the final implementation are closely related to this usability concept and are one of the main contributions of our method.

4. Automatic Generation of prototypes close to the end application:

As a final result, our approach generates prototypes very close to the end application. Very low modifications are needed to get a fully functional version of the modelled application (web).

5. Easy integration:

The OO-H method centres on defining and integrating Web interfaces with existing business modules. As a result, the OO-H method specifically provides mechanisms for invoking services, selecting the possibly complex parameters to be passed to a given method, dealing with invocation errors, and so on. Finally, starting from a UML-compliant conceptual modelling approach facilitates the OO-H method's integration with other proposals.

COL·LABORACIÓ BUSCADA

The Department of Information Systems and Languages of the University of Alicante is seeking for the following partners:

- End users and/or distributors interested in acquiring this technology.
-Partners willing to develop specific applications out of this technology, establish further research projects, submitting EU RTD proposals, etc.