Invitation à la soutenance publique de thèse

Pour l'obtention du grade de Docteur en Sciences de l'Ingénieur

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Master de recherche en informatique

A Model-based Approach for Mixed-Initiative Context-aware Adaptation of Graphical User Interface

Context-aware adaptation is the key to the success of a user interaction and a support for usability. This fact is recognized and empiricially assessed by the HCI community. A significant amount of research has been conducted to design and develop context-aware adaptation in interactive applications in order to streamline the user interface development lifecycle. It has to be noted that adaptations could lead to the end-users' frustrations and the interaction downfall when they do not meet the users' needs and expectations. Thereby 'Context-awareness" as well as 'user-centeredness' become crucial to improve the quality of interaction. In this sense, adapting user interfaces 'intelligently' in the executing environment in response to context changes, such as: location, resources and platform rather than fulfilling user preferences and needs, enhances the interaction. Nevertheless, most interface adaptations are managed at design time, instead of corresponding to the situation and the ambient-context. An accurate and successful adaptation should be context-aware, user-centered and have a crosscutting impact on software patterning and appearance at runtime, with an insignificant cost. This is what this thesis proposal is aimed at.

In order to address the aforementioned shortcomings of bridging the gap between adaptation goals and user expectations, this thesis provides a methodology for developing mixed-initiative adaptive user interfaces. It supports an agile runtime adaptation capitalizing on user interventions. It outlines an approach that conveys an extensive characterization and covers the entire decision-making process as regards a runtime mixed-initiative context-aware adaptation. Along with practical implementation guidance, two support tools instantiating the methodology were developed for the generation of a mixed-initiative user interfaces. Diverse instantiations are proposed, exploiting Machine Learning (ML) potential to improve UI intelligibility considering the user preferences at runtime.

Mardi 21 juin 2016 à 9h00

Salle Urbain Vaes
Bâtiment Doyen
Place Rabelais
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Membres du jury :

Prof. Jean Vanderdonckt (UCL), promoteur
Prof. Christophe De Vleeschouwer (UCL), président
Prof. Manuel Kolp (UCL), secrétaire
Prof. Gaëlle Calvary (Grenoble Institute of Technology, France)
Prof. Olfa Daassi (Université de Tunis, Tunisie)
Prof. Vivian Genaro Motti (George Mason University, Virginia, USA)