

Invitation à la soutenance publique de thèse

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

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Master ingénieur civil informaticien

UsiGesture: A Structured Method for Engineering Pen-Based Gestures in Graphical User Interfaces

Creating user interfaces integrating pen-based gesture recognition is difficult and consists in many challenges such as creating the graphical user interface, selecting the appropriate recognition mechanisms (algorithms and datasets), incorporating this mechanism in the user interface, collaborating with an heterogeneous team and following the right workflow, etc.

UsiGesture is aimed at providing a contribution in the field of Engineering of Interactive Systems by supporting the work of engineers, programmers and designers during the elaboration of graphical user interfaces integrating pen-based gesture recognition on 2D surfaces. It proposes methodological guidance for incorporating pen-based gestures into graphical user interfaces through a structured method that consists of: a Concrete User Interface model supporting gestures, a step-wise approach based on this model, and a supporting software environment.

More specifically, UsiGesture enables gesture recognition mechanism selection thanks to a first tool allowing to build various datasets and perform comparative studies to assess the best algorithms to choose depending on the application context. UsiGesture proposes a meta-model describing the gestures and recognition mechanisms, directly linked to UsiXML concrete meta-model. Based on this meta-model, a second tool has been developed to let developers compose user interfaces with recognition components thanks to a wysiwyg approach, along with an approach built around this tool to activate a good workflow and collaboration between the different stakeholders involved in the process.

Jeudi 13 octobre 2016 à 09h00

Auditoire BARB 94
Place Sainte Barbe, 1
1348 Louvain-la-Neuve



Membres du jury :

Prof. Jean Vanderdonckt (UCL), promoteur
Prof. Christophe De Vleeschouwer (UCL), président
Dr. Adrien Coyette (UCL), secrétaire
Prof. Gaëlle Calvary (Grenoble INP, France)
Prof. Oscar Pastor (Universitat Politècnica de València, Spain)
Dr. Suzanne Kieffer (UCL)