

INTELLIGENT WIDGET RECONFIGURATION FOR MOBILE PHONES

Peter K.K. Loh, C.T. Lau and B.H. Chan

Nanyang Technological University, Singapore

ABSTRACT

A significant amount of research work in user interface design exists with a proportion of this extendable to mobile phone platforms. Some investigate the effect of user ability on interface generation for mobile applications. Other works analyzed how different contexts and mobile platforms affect the generation of these interfaces. However, most of these existing works require a significant degree of context requirements modeling before interface reconfiguration takes place. Few on-the-fly reconfiguration approaches exist that learn from user interactions as well as contextual information received by a mobile phone. With the explosive growth of new applications for the mobile phone, its user interface is quickly becoming flooded with application widgets. This work investigates some on-the-fly approaches that learn and formulate rules from user interactions and contextual information received by the mobile phone. Performance evaluations demonstrate how a simple neural network-based engine is able to improve the prediction accuracy of the interface reconfiguration in a mobile phone.

Keywords: mobile phone, context-aware, intelligent interface, widget reconfiguration, neural network, rules