Human-Computer Interaction – INTERACT'03
M. Rauterberg et al. (Eds.)
Published by IOS Press, (c) IFIP, 2003, p. 1096

End User Development

([1])Fabio Paternò, ([2])Alexander Repenning, ([3])Alistair Sutcliffe

([1]) ISTI-CNR, ([2]) University of Colorado, ([3]) UMIST

([1]) Pisa, Italy, ([2]) Boulder, Co, USA, ([3]) Manchester, UK

f.paterno@cnuce.cnr.it, ralex@colorado.edu, ags@co.umist.ac.uk

Abstract: The main purpose of this SIG is to discuss a research agenda in the field of end user development. For this purpose we aim to review the state of art in these field, to give a framework to evaluate current approaches, and to identify promising research lines and the possible results which can be foreseen in the next years.

Keywords: End-users, Development, Context-dependent Interactive Systems, High-level Languages, Usability.

1 Introduction

While some substantial progress has been made in improving the way users can access interactive software systems, developing applications that effectively support users' goals still requires considerable expertise in programming that cannot be expected from most citizens. Thus, one fundamental challenge for the coming years is to develop environments that allow people without particular background in programming to develop their own applications, with the ultimate aim of empowering people to flexibly employ advanced information and communication technologies within the future environments of ambient intelligence. Over the next few years we will be moving from *easy-to-use* to *easy-to-develop interactive systems*.

2 Issues

A growing community of researchers already exists on these topics. We can mention the work done by developing languages suited for non-computer experts; examples are AgentSheets and KidSim/Cocoa/Stagecast. Researchers in the field of end-user development have explored a number of different programming approaches, such as Programming by Example and Visual Programming. In Programming by Examples, a software agent records the interactions between the user and the interface and writes a program that corresponds to the user's actions. The agent can then generalise the program so that it can work in other similar situations. One goal of end-user development environments is to provide a close mapping between the way the developer envisions a problem solution and the expression of that solution in the system implementation. This calls for representations of activities required to reach the users' goal rather than low-level programming environments.

3 Goals

The main purpose of this SIG is to bring about a coherent research agenda in the field of end user development. Therefore we will bring together actors from various fields: adaptability, adaptivity, tailoring of system functionality and user interfaces, the use of annotations for individuals and user groups, and use of effective visual and multimedia representations. Both single and cooperative environments will be of interest.

4 SIG Activity Plan

The kick-off of this SIG is a presentation of a recent research agenda draft carried out in the EUD-Net Network of Excellence (http: //giove.cnuce.cnr.ie/eud.html). The findings summarize earlier discussions amongst network members. After this there will be a number of short presentations, in order to introduce the different development axes. After every presentation there will be room for discussion and exchanging ideas about the presented topic.