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Interactive Systems

Design, Specification, and Verification

12th International Workshop, DSVIS 2005
Newcastle upon Tyne, UK, July 13-15, 2005
Revised Papers



Springer

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Library of Congress Control Number: 2006925462

CR Subject Classification (1998): H.5.2, H.5, I.3, D.2, F.3

LNCS Sublibrary: SL 2 – Programming and Software Engineering

ISSN 0302-9743
ISBN-10 3-540-34145-5 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-34145-1 Springer Berlin Heidelberg New York

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springer.com

© Springer-Verlag Berlin Heidelberg 2006
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11752707 06/3142 5 4 3 2 1 0

Preface

The 12th year of this workshop brought further development to familiar themes but also welcomed inclusion of less familiar topics such as “experience” and “quality-based design.” The two keynote speakers, Cliff Jones and Peter Wright, described contrasting research and in so doing added zest to the meeting, emphasising the interdisciplinary breadth of the problems of interactive system design and verification. Cliff Jones, taking an approach that is familiar to the workshop faithful, discussed the role that a careful formal framing plays in specifying how an interactive system relies on its environment, including users. Peter Wright, in contrast, discussed the nature of human experience and how new conceptions of user experience can critically inform interaction design theory, principles and practice.

As usual, the submitted papers placed a strong emphasis on task representation as a means of modelling the requirements for the interactive system. CTT appears to be emerging as a defacto standard for describing tasks within this community and several papers describe model-orientated approaches based on task representation. Montero et al. address a broad framework rendered in terms of a tool, while Ponsard et al. give a specific example of model-based design and Nobrega et al. deal with the more specific issue of mapping CTT to UML. Other papers consider different aspects of conceptualising the design. Paterno and Volpe consider how to move from sketches or informal descriptions to task representations, while Paquette and Schneider deal with templates that ease the process of producing task descriptions. Naghsh et al. on the other hand consider annotations and paper prototypes. A further set of papers deals with the peculiar and novel requirements of mobile and migratory applications. Hence there are papers about platform fusion (Dupuy-Chessa et al.), a taxonomy of migratory user interfaces (Berti et al.). As usual there are papers that concern the modelling and analysis of properties such as moding (Gow et al.), menus (Zhang et al.), the verification of haptic algorithms (de Boeck et al.) and group interactions (ter Beek et al.).

Other papers hint at the more radical agenda suggested by Peter Wright’s keynote address. The paper by Dix et al. addresses a framework for thinking about the design of computer interfaces that support performance. Two papers discuss how distributed cognition issues might be addressed in design. Blandford and Furniss’s paper draws on claims analysis and distributed cognition, while Campos and Doherty fold an analysis of information resources into a formal approach. Finally, Lee et al. address an approach to measuring user preferences using utility trade-offs.

The workshop stimulated new ideas, working groups reflected on present and future issues in the community. We fully expect that the meeting triggered significant collaborations. The location of the workshop, the North East of England, is an area full of character and history. Overall the workshop was a rewarding and illuminating experience.

From the 60 or so papers that were submitted to the conference, the reviewers worked hard to get down to the 20 papers included in these proceedings. Submissions

came from a range of countries, including the UK, Italy, France, Belgium, Spain, Korea, Canada, USA, Portugal, Ireland, Brazil and Switzerland.

The papers are organised into six themes reflecting common issues and approaches explored by the accepted papers. In addition, four papers summarise break-out discussions. These centre on issues that the workshop participants chose as being important in future research that might be presented in later DSVIS meetings. In summary, we hope that the proceedings will give the reader a feeling for the values and goals of the community and provide a context that links all of the papers presented here.

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