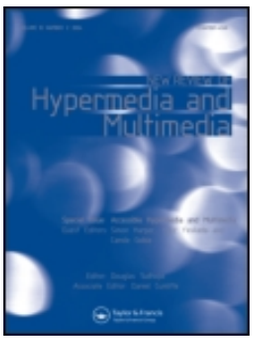

New Review of Hypermedia and Multimedia

ISSN: 1361-4568 (Print) 1740-7842 (Online) Journal homepage: https://www.tandfonline.com/loi/tham20

Introduction to the Special Issue on Adaptive Hypermedia

Paul De Bra , Jill Freyne & Shlomo Berkovsky

To cite this article: Paul De Bra , Jill Freyne & Shlomo Berkovsky (2013) Introduction to the Special Issue on Adaptive Hypermedia, New Review of Hypermedia and Multimedia, 19:2, 81-83, DOI: 10.1080/13614568.2013.821320

To link to this article: https://doi.org/10.1080/13614568.2013.821320

New Review of Hypermedia and Multimedia, 2013
Vol. 19, No. 2, 81–83, http://dx.doi.org/10.1080/13614568.2013.821320

Taylor & Francis
Taylor & Francis Group

Introduction to the Special Issue on Adaptive Hypermedia

In modern hypertext and web-based information systems, the presented hypertext structure (information pages, connected with links) is increasingly partially or completely generated, processed, filtered, adjusted, or personalized before it reaches its users. The dynamic nature and separation of content and links was initiated by the open hypermedia paradigm; the introduction of personalization was facilitated by the adaptive hypermedia community. The computational or adaptive aspects are consistently being found in narrative, (adaptive) story-telling, technology-enhanced learning, e-culture, recommender systems, and business information systems.

The existence of the conference on User Modeling, Adaptation and Personalization (UMAP) and of the Adaptive Hypermedia track at the ACM Hypertext Conference illustrates the active, diverse nature of this research community and the widespread interest in personalization and adaptation in various types of systems and domains. For this special issue, we published an open invitation for contributions but also specifically targeted recent contributors to the UMAP and ACM Hypertext conferences. This resulted in five diverse papers for this special issue, illustrating both the depth of this research field and the widespread areas in which adaptive hypermedia is being applied and from which inspiration is drawn for new developments.

The paper "Evolutionary authoring tool for adaptive hypermedia with multi-modal navigation," by Medina, Molina-Ortiz, Padilla-Zea, Cabera-Cuevas, Garcia-Cabrera, and Parets-Llorca, describes a model, called SEM-HP and an incremental design process leading up to a layered architecture of AHS and the different modes of navigation permitted by that system. Two case studies are included, considering both the author and end-user perspective.

Navigation is also the focus of the paper "Progressor: social navigation support through open social student modeling," by Hsiao, Bakalov, Brusilovsky, and König-Ries. It describes *Progressor*, an innovative Web-based tool based on the concepts of social navigation and open student modeling that helps students in finding the most relevant resources. So instead of an author (in SEM-HP) it is the collective behavior of users that generates the adaptation in the navigation.

The paper "The narrative approach to personalisation," by Conlan, Staikopoulos, Hampson, Lawless, and O'Keeffe, takes yet another approach to adaptive navigation. Runtime reconciliation between a personalization

strategy and a number of contextual models is used to generate personalized pathways. The *narrative approach* has been studied empirically in the context of the ELEKTRA, 80Days, and AMAS projects, showing a diverse range of real-world applications.

The paper "Automatically producing tailored web materials for public administration", by Colineau, Paris, and Vander Linden, considers *content adaptation* rather than navigation. Using demographic information, obtained from users, informational materials for public programs are automatically tailored to each individual. An evaluation study has revealed that users prefer the tailored materials over generic ones and that the process of gathering the needed demographic data does not significantly slow down the information-seeking task.

Whereas these four papers target specific applications or application areas the final paper, "GALE: a generic open source extensible adaptation engine," by De Bra, Knutov, Smits, Stash, and Ramos, describes an adaptive hypermedia platform that is *general purpose* and highly extensible. GALE allows for adaptation of *content*, *presentation*, and *navigation*. Experiments with students have shown that very different adaptive applications can be built using GALE and that programmers can create extensions to GALE in a matter of a few weeks. GALE hopes to significantly reduce the development effort of researchers and developers of adaptive applications by offering a technological base platform that others can build upon rather than developing new systems from scratch.

The contributions to this special issue demonstrate that the research field of adaptation and personalization is very much alive and spreading into more and more aspects of the information-rich society we live in.

Paul De Bra
Department of Computer Science
Eindhoven University of Technology
Eindhoven, the Netherlands
Email: debra@win.tue.nl

Jill Freyne and Shlomo Berkovsky
Information Engineering Laboratory
CSIRO, Epping, Australia
Email: Jill.Freyne@csiro.au; Shlomo.Berkovsky@csiro.au

Organizational issues

Authors are welcome to submit papers relevant to the general scope of the NRHM at any time. NRHM submissions and reviewing are conducted via ScholarOne's Manuscript Central, the Taylor & Francis journal management system: http://mc.manuscriptcentral.com/tham. We are interested in exploiting possibilities of the digital medium, and authors who wish to include a digital component are encouraged to contact the Editors with any questions. We also welcome proposals for future Special Issue themes, which should be directed to the Editors.

The journal's website is http://www.tandfonline.com/toc/tham20/current. Online articles are available from the website in both PDF and HTML formats. The Introduction to an NRHM issue is available free, while articles can be viewed by subscribers or purchased individually.