

# Dynamic and Adaptive Hypertext: Generic Frameworks, Approaches and Techniques

Paul De Bra

Department of Computer Science  
Eindhoven University of Technology,  
P.O. Box 513, 5600 MB Eindhoven  
the Netherlands  
+31-40-247-2733  
debra@win.tue.nl

Mykola Pechenizkiy

Department of Computer Science  
Eindhoven University of Technology,  
P.O. Box 513, 5600 MB Eindhoven  
the Netherlands  
+31-40-247-4977  
m.pechenizkiy@tue.nl

## WORKSHOP OVERVIEW

Dynamic generation of hypertext and its adaptation and personalization to particular users is a powerful and useful concept. It is particularly helpful for the reduction of the information overload such as is frequently experienced on the Internet. But it is equally helpful for guiding users towards “interesting” topics, products, artifacts or descriptions thereof in electronic shops, libraries or museums, or for filtering appropriate items from a general or domain-specific news feed.

Reference models and generic architectures unify a community and provide a leading generic model and/or architecture that spawns research activities in many directions. Examples of such generic models are AHAM [2] for adaptive hypermedia and FOHM for open hypermedia. A nice example of a resulting generic implementation is the AHA! system [1] that was last described in ACM Hypertext’06.

The research fields of hypertext and adaptive hypermedia (or adaptive web-based information systems) however, have been growing rapidly during the past ten years and this has resulted in a plethora of new terms, concepts, models and prototype systems [3]. As a result the established models no longer include many of the recent new concepts and phenomena. In particular, open corpus adaptation, ontologies, group adaptation, social network analysis and data mining tools for adaptation are not or at least insufficiently supported.

## Categories & Subject Descriptors

H.5.4 [Information Interfaces And Presentation]:  
Hypertext/Hypermedia – *Architectures, Theory.*

## General Terms

Human Factors, Standardization, Theory.

## Keywords

adaptation, authoring, dynamic hypertext.

## Main topics addressed

The DAH’09 Workshop provides a focused international forum for researchers to discuss new developments in generic methods and technologies for dynamic and adaptive hypertext. Topics discussed during the workshop include:

- Adaptation and personalization
  - open-corpus adaptation
  - group adaptation
  - higher order adaptation
  - sharing of user models
- Adaptive/Dynamic Hypertext authoring
  - authoring conceptual adaptation models
- Data mining for
  - user modeling
  - domain modeling
  - automatic generation of adaptation rules

The scientific programme overview, the workshop summary report and the link to online proceedings can be found at <http://www.win.tue.nl/~mpechen/conf/dah09/>

## Workshop Programme Committee

Paul De Bra (Chair), TU Eindhoven, the Netherlands;  
Mykola Pechenizkiy (Chair), TU Eindhoven, the Netherlands;  
Peter Brusilovsky, University of Pittsburg, USA;  
Dominik Heckmann, DFKI, Germany;  
Nicola Henze, University of Hannover, Germany;  
Geert-Jan Houben, TU Delft, the Netherlands;  
Riccardo Mazza, SUPSI, University of Lugano, Switzerland;  
David E Millard, University of Southampton, UK;  
Vincent Wade, Trinity College Dublin, Ireland;  
Yang Wang, University of California, Irvine, USA.

## Acknowledgements

Special thanks to the PC Members for their invaluable help and to the contributors for their interest.

## References

- [1] De Bra, P., Aerts, A., Berden, B., de Lange, B., Rousseau, B., Santic, T., Smits, D., Stash, N., AHA! The Adaptive Hypermedia Architecture, *Proceedings of the 14th ACM Hypertext Conference*, pp. 81-84, Nottingham, 2003.
- [2] De Bra, P., Houben, G.J., Wu, H., AHAM: a Dexter-based reference model for adaptive hypermedia, *Proc. of the 10<sup>th</sup> ACM Hypertext Conference*, pp. 147-156, Darmstadt, 1999.
- [3] Knutov E., De Bra P., Pechenizkiy M. 2008. AH 12 Years Later: a Comprehensive Survey of Adaptive Hypermedia Methods and Techniques, (to appear) *New Review of Hypermedia and Multimedia*.