Preface

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Fortunately for the editor, it is an easy task to write an introduction to this new journal. The need for computer systems that automatically adapt to their current users is generally acknowledged, and it has become evident that they can acquire such an ability on a large scale only if they possess *models of their current users* that contain assumptions about the users' background knowledge, their goals and plans in consulting the system, and their preferences, misconceptions and attitudes.

Research in the field of user modeling investigates how such assumptions can be automatically created, represented and exploited by the system in the course of an interaction with the user. Seminal work on user modeling dates back to the late seventies. Since the mid-eighties, these questions have been intensively explored in four different disciplines: natural-language systems in artificial intelligence research, intelligent tutoring systems, human-computer interaction, and information retrieval. The field has grown dramatically in the last few years. Two International Workshops on User Modeling have taken place thus far: one in Maria Laach, Germany, in 1986 and another in Honolulu, HI, in 1990; the next will follow in 1992 in Dagstuhl, Germany. Other workshops were organized in England in 1987, in Northern Ireland in 1990, and at the IJCAI-91 conference in Sydney. Panels and tutorials on user modeling took place at several major conferences. A number of survey articles on user modeling appeared recently, including (Kass and Finin, 1988; Wahlster and Kobsa, 1989; McTear, 1989; Kok, 1991) and, with focus on student modeling in intelligent tutoring systems, (Dede, 1986; Visetti and Dague, 1987; Van Lehn, 1988; Kass, 1989). A collection of important papers pertaining to user models in natural-language systems and AI dialog systems were published in (Kobsa and Wahlster, 1988) and (Kobsa and Wahlster, 1989), respectively.¹ Bibliographies of the field appeared in (Van Arragon, 1987; Kobsa, 1988; Kobsa and Wahlster, 1989).

The launching of a journal dedicated to this field seems only a logical consequence. *User Modeling and User-Adapted Interaction* will be a publication forum for high-quality papers that contribute to research on the automatic adaptation of computer systems to their current users, and partic-

¹ Since these survey publications are easily accessible, the editor is saved from having to write a survey article for this issue!

ularly on the construction of user models by computer systems. The journal should bring together the various research directions in different disciplines that investigate these problems. Research thereon has thus far been pursued rather independently in the fields of Artificial Intelligence, Intelligent Tutoring Systems, Human-Computer Interaction, Information Retrieval, and related areas. Relevant papers from the fields of Psychology, Linguistics and the Instructional Sciences will also be considered if they bear implications for the design of computational systems.

A prominent characteristic of this journal is its extensive exploitation of electronic communication and electronic publishing. Papers written in LaTeX (with the figures in LaTeX or Postscript) may be submitted by electronic mail. Their titles and abstracts are then forwarded by e-mail to UMUI's 18 board members and some of its nearly 50 special reviewers with various fields of expertise, in order to solicit volunteers for a review. LaTeX papers are sent to volunteers by e-mail, and the evaluation comes in the same way to the editor and to the authors. The publisher, finally, can directly produce the journal from the LaTeX sources. Currently, two third of UMUI's submissions already come as LaTeX files. Papers that were not written in LaTeX must be submitted in hardcopy, but the publisher will produce the journal article from a plain text file of the author's paper, if available.

This procedure benefits the authors, the editor, the reviewers, and the publisher. Reviewers do not receive papers unexpectedly, but are informed about incoming submissions and can pick those papers in which they are interested and which they are willing to review within a certain period of time. Both the quality and the punctuality of the reviews is thereby considerably improved. UMUI aims at evaluating papers within two months, i.e., in a period which is shorter than that required by most major conferences for submission evaluation. UMUI's success rate in this respect is currently above 80%. Since LaTeX papers can be directly processed by the publisher, the error rate is minimized and the production costs are decreased. The publisher has developed special document and bibliography style files that can be used by the authors right from the beginning in the writing of their papers. Authors thereby get a high degree of control over the final layout of their work.

All files and instructions that are necessary for electronic submission may be obtained from an automatic mail server. This server also supplies information on journals subscription, on the contents of past and future volumes, and on current and future events in the field of user modeling.

The journal has gotten off to a very good start right from the beginning. The issue at hand will be followed by 10 or 11 papers pertaining to a special issue on plan recognition edited by David Chin from the University of Hawaii (due to the large volume of this issue, it will be split into three parts).

Topics of special issues planned to appear in the future include *Natural-Language Generation and Dialog Planning* (edited by Ursula Wolz from Trenton State College, NJ), *User Modeling in Human-Computer Interaction* (edited by Michael Tauber from the University of Paderborn, Germany), and *Realistic Applications of User Modeling* (edited by Michael McTear from the University of Ulster, Northern Ireland). The papers of David Chin's issue are planned to be supplemented by additional contributions and collected into a book. Authors who would like to contribute to one of these projects are encouraged to contact the respective guest editor very soon.

Last but not least, I would like to thank all the people who helped in various ways in launching this journal. I received important advice on its scope and organization from Wouter Otten, Horst Bunke, Sergei Nirenburg, Robert Trappl, several anonymous reviewers of the journal proposal, the editorial board members, and Martin Scrivener from Kluwer Academic Publishers. Many people at my home base also helped in setting up the organizational environment, notably Doris Borchers, Gabriele Jacquinet, Roman Jansen-Winkel, Parinaz Mohammadzadeh, Wolfgang Wahlster, and most of all, Atari wizard Edgar Röder, and Yvette Cases-Bröhmer, the journal's editorial assistant. All of them contributed significantly to the success of UMuAI.

References

- Dede, C.: 1986, A Review and Synthesis of Recent Research in Intelligent Computer-Assisted Instruction. *International Journal of Man-Machine Studies*, 24:329-353.
- Kass, R. and T. Finin: 1988, Modeling the User in Natural Language Systems. *Computational Linguistics*, 14:5-22.
- Kass, R.: 1989, Student Modeling in Intelligent Tutoring Systems: Implications for User Modeling. In A. Kobsa and W. Wahlster, (eds), *User Models in Dialog Systems*, pages 386-410. Springer, Berlin, Heidelberg, 1989.
- Kobsa, A. and W. Wahlster (eds): 1988, *Computational Linguistics 14(3): Special Issue on User Modeling*. MIT Press, Cambridge, MA, 1988.
- Kobsa, A. and W. Wahlster, (eds): 1989, *User Models in Dialog Systems*. Springer, Berlin, Heidelberg, 1989.
- Kobsa, A.: 1988, A Bibliography of the Field of User Modeling in Artificial Intelligence Dialog Systems. Memo 23, Project XTRA, Department of Computer Science, University Saarbrücken, Germany, 1988.
- Kok, A. J.: 1991, A Review and Synthesis of User Modelling in Intelligent Systems. *The Knowledge Engineering Review*, 6:21-47.
- McTear, M. F.: 1989, User Modelling and Human-Computer Interaction: A Cognitive Science Perspective. *The Irish Journal of Psychology*, 10:333-352.
- Van Arragon, P.: 1987, User Modeling Bibliography. Research Report CS-87-22, Department of Computer Science, University of Waterloo, Waterloo, Ontario, Canada, 1987.
- VanLehn, K.: 1988, Student Modeling. In M. C. Polson and J. J. Richardson (eds), *Foundations of Intelligent Tutoring Systems*, pages 55-78. Erlbaum, Hillsdale, NJ, 1988.

- Visetti, Y. M. and P. Dague: 1987, Plan Inference and Student Modeling in ICAI. In *Proc. of AAAI-87*, pages 77–81, Seattle, WA, 1987.
- Wahlster, W. and A. Kobsa: 1989, User Models in Dialog Systems. In A. Kobsa and W. Wahlster (eds), *User Models in Dialog Systems*, pages 4–34. Springer, Berlin, Heidelberg, 1989.