

Publications

- N. Colineau, C. Paris and M. Wu. Actionable Information Delivery. In *Revue d'Intelligence Artificielle (RSTI – RIA)*, Special Issue on Tailored Information Delivery, 18(4), Sept. 2004.
- C. Paris, M. Wu, K. Vander Linden, M. Post and S. Lu. Myriad: An Architecture for Contextualized Information Retrieval and Delivery. In *AH2004: International Conference on Adaptive Hypermedia and Adaptive Web-based Systems*. August, The Netherlands.
- C. Müller-Tomfelde, C. Paris and D. Stevenson. Interactive Landmarks: Linking Virtual Environments with Knowledge-Based Systems. In *OZCHI 2004*, Wollongong, Australia, Nov 2004.
- C. Müller-Tomfelde. Interaction Sound Feedback in a Haptic Virtual Environment to Improve Motor Skill Acquisition. In *The 10th International Conference on Auditory Displays*, Sydney, July 6-9, 2004.
- R. Wilkinson and M. Wu. Evaluation Experiments and Experience from the Perspective of Interactive Information Retrieval. In *Third Workshop on Empirical Evaluation of Adaptive Systems*, in conjunction with AH2004.
- M. Wu and G. Muresan, *et al.* Human versus Machine in the Topic Distillation Task. In *The 27th SIGIR Conference*, July 2004, Sheffield, UK.

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Information Engagement Newsletter

December 2004

Another year coming to an end... Besides the projects described briefly here, our work on other projects is continuing, particularly in these areas:

- skill, a project on producing an environment for effective training through multimodal instructions and feedback. Christian has been joined by Jenny Christensson on the project. With an academic background in informatics and interaction design, Jenny has joined our team to write her MSc thesis concerning the optimisation of the learning curve for motor skill training in a haptic environment, with surgical training as framework.
- The impact of information delivery: Ming is pursuing studies to evaluate the impact of delivery on a user's performance and experience.

See the publications on these projects listed in the newsletter. We also took part in a number of professional activities. To name a few:

- Cécile was one of the co-chair for the Australasian Language Technology Workshop (ALTW), Sydney, December: <http://www.altw.asn.au/events/altw2004/>
- Shijian reviewed for OZCHI 2004 (Wollongong, NSW), Nathalie for ALTW, and Christian for the ICAD 2004 the Listening to the Mind Listening sonification concert and CHI 2005 Interactivity Submissions.
- Cécile participated in the 25th anniversary of the Department of Computer Science at Columbia University.



ICT Centre

Task-Driven Information Delivery

This year is our final year on the project on information delivery for air combat operators. To conclude this work, we decided to concentrate on demonstrating our platform flexibility, and, in particular, demonstrating that it is easy to change and adapt both content and presentation of the information.

Our approach is based on a clear separation between the engines (i.e., presentation planner) and the resources (i.e., rules and models). It implies also the provision of alternative strategies and a mechanism to choose between them at run time. Thus, the techniques we use provide:

- Variability with the ability to vary the content and its presentation according to the delivery context;
- Scalability by ensuring the amount of additional effort required to support any adaptation scales with the amount of new content provided; and,
- Affordability by providing reusable and flexible mechanisms.

To demonstrate our flexible approach to tailored information delivery, we have developed a scenario that illustrates:

- The ability to create original, reusable and adaptable content;
- The flexibility to combine alternative design and presentation techniques;
- The facility to navigate and interact within the information space; and,
- The capability to deliver on a range of different platforms with minimal adaptation.

Myriad: A Flexible Architecture for contextualised Information Retrieval and Delivery

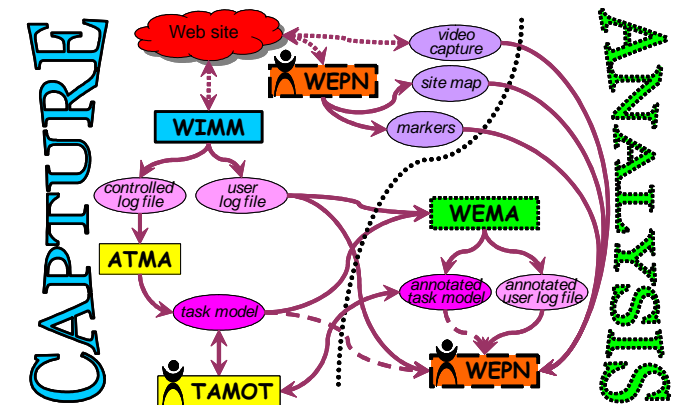
Knowledge workers are increasingly dependent upon the availability of the right information at the right time. Alarming, they spend 15% to 30% of their time looking for information – and are unsuccessful up to 50% of the time. Search only provides part of the solution. There's often a big gap between providing a list of search results, and actually helping users to efficiently complete tasks. Limitations of the results delivered by current search engines include:

- Providing the user with too much information (not all of it relevant);
- Requiring the user to manually combine and aggregate the information;
- Requiring the user to manually determine how information from multiple sources relates to other information; and
- Requiring the user to organise the data to suit their task.

The challenges for an information access system come in both retrieval and delivery. First, the system must be able to obtain information from heterogeneous databases and document collections. Second, the system must be able to aggregate and deliver the information retrieved from these various sources in a manner that is useful to the user, suiting his or her needs at that time. Myriad is a flexible and configurable framework that supports the construction of information access systems that perform context-guided information retrieval and delivery. This work is in collaboration with Prof. K. Vander Linden, Calvin College, USA.

WAUTER – in collaboration with the University of Melbourne

The WWW is now ubiquitous, and yet its usability is still of major concern. Usability testing methods are able to identify flaws prior to the launch of a site. However, their application typically involves direct observation, requiring availability of participants and evaluators in a synchronised manner. This, in turn, implies tight schedules with little leeway for flexibility. In this project, we are developing WAUTER (Web Automatic Usability Testing EnviRonment), a suite of open source tools to assist in web usability evaluation, capturing and comparing intended vs. actual use of a web site. The environment is shown below. WAUTER harnesses web user visits to do so and is also intended to support remote evaluation.



This project is a collaborative project with Dr Sandrine Balbo, Department of Information Systems at the University of Melbourne, supported by the University of Melbourne - CSIRO collaborative research program.