New software is next wave for net surfers

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With an estimated 12 billion websites online, it's not always easy finding the exact site you want. However, University of Alberta computer scientists have developed software they believe will make surfing the Web faster and easier.

The software uses machine learning technology to predict the information needs of web surfers by refining search engine queries and filtering out irrelevant search results based on surfers' past surfing results.

WebIC is a "complete web recommendation system" said one of its creators, Tingshao Zhu, a PhD candidate in the U of A Department of Computing Science. "Surfing the Web can be time-consuming and frustrating, but this product can simplify things a lot."

The software can be incorporated with search engines or be downloaded directly onto to individual computers. It works by anticipating users' needs; users can click on an icon that leads to suggested sites the user may be looking for, which is a step beyond the usual search engine index retrievals. It can also be used to filter e-mails and find specific articles online - not simply direct you to related sites.

"On most search engines the order of the keyed words is very important as the associations are made sequentially," Zhu said. "But our software uses machine learning to transfer human inquiries into the type of inquiries a computer can fully understand. Our system can point you directly to the sites that you want and not just to sites that are related to

your keyed words."

Zhu and his colleagues have refined their software over the past five years, testing it extensively with good success among U of A business students and the general public. They are now creating a spin-off company to sell their invention. They hope to have a product on the market by the end of 2006.

An article about WebIC has been published in the current issue of the journal Intelligent Techniques for Web Personalization.

"I'm quite sure that our product is unique. Anyone can use it for any purpose to find anything they want on the Web," Zhu added. "I think we've made a breakthrough, and it's really exciting to create something that you think can help a lot of people."

Canada's National Science and Engineering Research Council, the Alberta Ingenuity Centre for Machine Learning, and the Social Sciences and Humanities Research Council of Canada have all sponsored this research.

Source: University of Alberta