

Assignment 14:

User Modeling, Learning on Demand, and HFAs

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1. What did you find

1.1. Interesting about the article?

The article is overall very interesting. What the WEST system did for educational purpose is inspiring to me. It makes analysis, identify patterns and only intervene at a proper time. I've ever developed some educational software; at that time I only considered a rule-based system to constrain users not to do incorrect things. I also like the discussion from Figure 4 to Figure 6.

1.2. Not interesting about the article?

About the evolution of HCI, I prefer the text at http://sigchi.org/cdg/cdg2.html#2_2_1-2.2.1 Historical Roots {p. 8}.

2. What do you consider the main message of the article?

It talks about user modeling and how computers provide help to individual user with different context.

3. Which computer systems have you encountered which have a User Modeling Component?

Amazon can store recent browsed books for each user and recommend related book with similar flavor.

I use MS Chinese input system which can automatically sort words so that the words with high frequency will show up at the front of the list.

3.1. Was the User Modeling Component beneficial or detrimental?

It is really situation dependent, such as:

- how much gain it can bring (e.g. if the component will affect the performance of the system while the performance is crucial to the system, then the user modeling component would be considered detrimental);
- how well it has been done (e.g. how the intrusiveness has been dealt with);

Both examples I gave above (Amazon suggestion system and MS Chinese

input system) are beneficial doubtlessly. But according to the general ideas about user model, it can be detrimental, for example: my experience is when I search for some functionality that I need for some task, I always learn something else during the process. I learn from mistakes and lessons and it is a little hard for me to imagine how things will go if the system can only tell me the right thing.

3.2. How was the information in the user model accumulated?

Every time when a user uses a system, keep updating users' profile. How to accumulate information depends on how complicated the system is.

For the game, "How the West was won", the way to accumulate the information is very simple. There should be a data structure like a table that records the optimal solution, all other possible moves and the move a specific user takes. After some time, the system can recognize the pattern how a user plays the game then give proper suggestions. It is similar for chess – of course the prerequisite is the player is someone like me.

For a system indicated as Figure 6 in the paper, first people need to know it is reasonable to classify users into 4 categories, and then to develop a template for each category. For some specific systems more complicated such as a geometric modeling system or photoshop, it is possible to apply knowledge-based help system for tutorials as well as to store usage patterns.

3.3. Would a User Modeling Component be feasible and useful for the Swiki environment of our class? Which benefits could it provide?

I think I have not had a good understanding about what can be a user modeling component so that I will just apply what I've just learnt from this paper. Swiki is neither an educational environment nor a design environment. It is possible and feasible to add knowledge-based help system to it even though I personally don't fancy it very much because it is already simple enough. What I would like to do is to add some functionality to it so that we could study the usage pattern of Swiki as a HFA. In fact, after obtaining these data, it would be reasonable to analyze if a user modeling component is useful or not.