Researcher Modeling in Personalized Digital Library

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Researchers use digital libraries to either find solutions to particular problems concerning their current research or just to keep track with the newest trends in areas of their interest. However, the amount of information in digital libraries grows exponentially. This has two serious consequences. Firstly, many interesting works are unnoticed. Secondly, researchers spend too much time reading articles that turn out low-quality, unrelated to their current research or unrelated to their other interests. These kinds of problems are nowadays solved with recommendation systems or more effectively with personalized recommendation systems.

The core of every personalized system is its user model. User model is built from user data and is used to personalize any feature of the personalized system. Model creation process and representation depend on availability of user data and requirements of personalized features [1]. They also depend on domain of user modeling. For example, user knowledge is essential in educational domain [2], but in domain of digital libraries, other characteristics of the user like interests can become more important.

We propose a user model, which is based on data analysis from Annota digital library organization service[1] [3]. The model will leverage

- articles the user has read
- tags the user has used
- folders the user has used
- terms the user has searched for
- search results the user has read

The model enables to add personalization to or improve existing personalization services in multiple features of Annota system such as:

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[1] http://annota.fiit.stuba.sk

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- searching articles,
- article recommendation,
- organization of articles in folders,
- article summarization.

Based on available user data and evaluation options, we will seek for suitable representation and creation process of researcher (user) model in domain of digital libraries.

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References

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