

Personalization Management Systems

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Personalization management systems represent one of the most promising advances in IT and are experiencing widespread adoption in application areas such as customer relationship management, e-commerce interaction and intimacy, and employee development and training. Personalization is concerned with building a closer relationship and understanding the needs of individuals or groups of customers, whether on the Internet or not. IDC Corp. forecasts a 212% annual average growth in personalization applications over the next decade.

This minitrack includes all aspects of the personalization management systems life cycle, including technologies and development. This would include the conceptualization of personalization management systems and their associated constructs, proposed designs and infrastructures, empirical validation of personalization models, and case studies illustrating personalization success and failures. Some key topics include (1) building customer relationships, (2) gathering and analyzing transaction data, and (3) customer/employee education and learning systems.

We solicited papers for this minitrack in the areas of user-behavior tracking technologies (clickstream tracking, hover technologies, pattern recognition); personalization database technologies (collaborative filtering, webhousing, intelligent agents, data mining, profiling, statistical analysis); personalized user interface technologies (content management, streaming audio/video, user, information filtering, user-preference interface design, personalized searching); and customer support technologies (just-in-time customer support, wireless customer service).

Kamis and Davern present a paper entitled, "Personalizing to Product Category Knowledge: Exploring the Mediating Effect of Shopping Tools on Decision Confidence." They posit that the low Product Category Knowledge user may not be able to use the shopping tools as well as the high Product Category Knowledge user, because lower Product Category Knowledge users allocate cognitive power to learning the product attribute space at the expense of using the tool effectively. Alternatively, shopping tools may effectively guide the decision making of low Product Category Knowledge users, but be perceived as too restrictive by high Product Category Knowledge users, thus diminishing their Decision Confidence. The results evidence the potential value of adapting tools to the degree of user Product Category Knowledge. High Product Category Knowledge users may

require less restrictive decision tools to promote Decision Confidence, whereas low Product Category Knowledge users may require simpler tools and more decisional guidance

Turpeinen and Saari present a "System Architecture for Psychological Customization of Communication Technology." Personalization is a process that changes the functionality, interface, information content, or appearance of a system to increase its personal relevance to an individual. Currently most of the emphasis in personalization systems is geared towards the utilitarian aspects of personalized information delivery. However, what is lacking is the customization of information based on its likely emotional and cognitive effects on different users of communication technology. Information presented to individual users or a group of users may be customized on the basis of the immediate emotional and cognitive types of psychological effects it is likely to enable or create in certain individuals or groups. Both content and its way of presentation (modality, visual layouts, ways of interaction, structure) may be varied. This paper explores the design space and presents a basic system architecture to implement Psychological Customization.

Rafaeli, Ravid, and Soroka present a paper entitled, "De-lurking in Virtual Communities: A Social Communication Network Approach to Measuring the Effects of Social Capital." The a-symmetry of activity in virtual communities is of great interest. This project investigates social capital, a situational antecedent of lurking and de-lurking. The authors propose a novel way of measuring social capital, lurking, and de-lurking. What are the triggers to active participation? They try to answer this by mathematically defining a social communication network of activities in authenticated discussion forums. The authors attempt to validate the model by examining the SCN using data collected in a sample of 82 online forums. By analyzing a graph structure of the network at moments of initial postings the authors verify several hypotheses about causes of de-lurking and provide some directions towards measuring active participation in virtual communities.