Making Decisions about Privacy: Interactive and Adaptive Solutions

presented by

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Abstract:
Privacy concerns are an important barrier to the growth of e-commerce, e-health, social networks, and ubiquitous computing. While some researchers have argued that people make privacy decisions in a calculated manner (i.e. privacy calculus), others have shown that they are often amenable to decision biases. How can we help users to balance the benefits and risks of information disclosure in a user-friendly manner, so that they can make good privacy decisions? In my talk I introduce interactive and user-tailored approaches to provide user-friendly privacy decision support. In the first part of the talk, I will demonstrate how the form auto-completion tool in modern browsers may counteract users' objective privacy decisions: these tools make it so easy to submit a fully completed form that users may skip weighing the benefits and risks of disclosing a certain piece of information in a specific situation. I designed two new auto-completion tools that subtly encourage users to make better privacy decisions, and tested these new tools against a traditional auto-completion tool in an online user experiment. The results of the study demonstrate that these new tools improve upon the traditional auto-completion tool by making people more considerate of a website’s purpose in deciding what to disclose. In the second part of the talk, I will discuss a way to alleviate some of the burden of making privacy decisions. I propose a privacy adaptation procedure that offers tailored privacy decision support. Using data science techniques, this procedure predicts users’ privacy preferences and behaviors based on their past behavior and known characteristics. It then provides automatic “adaptive default” settings in line with users’ disclosure profile. I demonstrate the privacy adaptation procedure in a demographics-based recommender system that tailors the order of demographic data requests to the privacy preferences of the user.

Bio:
Bart Knijnenburg is an Informatics PhD candidate at UC Irvine who works on privacy decision-making and user-centric evaluation of adaptive systems. He holds a B.S. in Innovation Sciences and an M.S. in Human-Technology Interaction from the Eindhoven University of Technology, The Netherlands, and an M.A. in Human-Computer Interaction from Carnegie Mellon University. His research lives at www.usabart.nl. Bart’s work mainly involves controlled experiments of systems that are designed to support users’ decision making processes. Bart is the most prolific first-author in the ACM conference on recommender systems, and he has developed a framework for user-centric evaluation that has become a de facto standard in the field. In the field of usable privacy, Bart studies consumers’ privacy in the realm of social networks, personalized e-commerce, and e-health. His work is supported by industry partners such as Google, Samsung and Intel, as well as a research grant from the National Science Foundation.

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