Privacy that Matters: Designing IT Artifacts for Privacy Protection France Bélanger and Robert E. Crossler

Summary (472 for text; 28 for document list: 500 words)

Drs. Bélanger and Crossler's research over the last five years, together with a variety of colleagues, has targeted improving information privacy practices of individuals of diverse backgrounds and experience levels. The privacy enhancing IT artifacts have been used in broader IS research seeking to understand and improve individuals' privacy practices. Following design science guidelines (Hevner et al. 2004) and consistent with recent calls for design science research related to information privacy (Bélanger and Crossler 2011; Xu and Bélanger 2013), Robert and France have developed an artifact to protect the privacy of vulnerable users on mobile devices (Privacy Helper©2013; (e.g., Bélanger and Crossler 2013)) children on the Web (POCKET©2008; (e.g., Bélanger et al. 2013; Hiller et al. 2008)), and the general population (PESS; (e.g., Xu et al. 2012)). Furthermore, in their research, Drs. Bélanger and Crossler combine research approaches, with behavioral research used to inform their kernel theories and the design of their artifacts, and action research used to evaluate their designs. Their design of Privacy Helper has led to the development of an mPETA – Mobile Privacy Education, Training and Awareness – program that provides tests of both Privacy Helper and various approaches to mPETA. Several organizations have agreed to participate in the tests of the program. Overall, Drs. Bélanger and Crossler's research on privacy artifacts has resulted in four IS journal articles (mentioned above plus Bélanger and Crossler 2011), one book chapter (Bélanger et al. 2009), and nine conference proceedings (e.g., Crossler and Bélanger 2011; Crossler and Bélanger 2013; Crossler et al. 2007; Crossler et al. 2008).

Privacy Helper is a smartphone application for privacy education and training developed for both the iOS and Android platforms. It is also complemented with a website. The Privacy Helper provides smartphone users with a friendly guide to assist them in aligning their smartphone settings with what their information privacy views are. This guide is available to users in both a menu-based text format that tells them what to do and in a voice format that plays step-by-step instructions to guide them through the process of changing privacy settings.

POCKET is a browser add-on tool that provides an automated, effective and easy interface for parents to allow their children to disclose only certain information to websites or online merchants without requiring constant supervision. It is intended to provide protection of online information privacy for children as stated by the legal requirement of the Children's Online Privacy Protection Act (COPPA) of 1998.

Privacy Enhancing Support System (PESS) is a browser add-in that evaluates websites' privacy practices using three tools: privacy-enhancing control tool for user personal data (PEControl), privacy-enhancing search feature (PESearch), and privacy-enhancing review tool for sharing user ratings and reviews on vendors' privacy practices (PEReview). The three tools are integrated into one end-user application and embedded into browsers to provide decision support for privacy decisions and evaluations.

Supporting documents (articles):

- a. Decision Support Systems 2013 on POCKET
- b. WITS 2013 on Privacy Helper
- c. American Business Law Journal 2008 on POCKET
- d. Decision Support Systems 2012 on PESS

References

- Bélanger, F., and Crossler, R.E. "Privacy in the Digital Age: A Review of Information Privacy Research in Information Systems," *MIS Quarterly* (35:4) 2011, pp 1017-1041.
- Bélanger, F., and Crossler, R.E. "Research in Progress: The Privacy Helper ©2013: A Tool for Mobile Privacy," Workshop for Information Technology and Systems (WITS), Milan, Italy, 2013.
- Bélanger, F., Crossler, R.E., Hiller, J.S., Hsiao, M., and Park, J.-P. "POCKET: A Tool for Protecting Children's Privacy Online, Decision Support Systems," *54* (2:1161-1173) 2013.
- Bélanger, F., Crossler, R.E., Hiller, J.S., Park, J.-M., and Hsiao, M. "Children Online Privacy: Issues with Parental Awareness and Control, Annals of Emerging Research," in: *Information Assurance, Security and Privacy Services,* H.R. Rao and S. Upadhyaya (eds.), Emerald Group Publishing, 2009, pp. 311-333.
- Crossler, R.E., and Bélanger, F. "Determinants of Online Privacy Protection Behaviors," IFIP WG8.11/11.13 Dewald Roode Workshop on Information Security, Blacksburg, VA, 2011.
- Crossler, R.E., and Bélanger, F. "Mobile Information Privacy Protection Practices (MIP³)," IFIP WG8.11/11.13 Dewald Roode Workshop on Information Security, Buffalo, NY, 2013.
- Crossler, R.E., Bélanger, F., Hiller, J.S., Aggarwal, P., Channakeshava, K., Bian, K., Park, J.-M., and Hsiao, M. "Parents and the Internet: Privacy Awareness, Practices, and Control," Proceedings of the America's Conference on Information Systems (AMCIS), Keystone, Colorado, 2007.
- Crossler, R.E., Bélanger, F., Hiller, J.S., Park, J.-M., Hsiao, M., Channakeshava, K., Bian, K., and Korbich, E. "Determinants of Protection Behaviors For Online Privacy of Children," Proceedings of the 39th Annual Meeting of the Decision Sciences Institute, Baltimore, MD, 2008.
- Hevner, A.R., March, S.T., Park, J., and Ram, S. "DESIGN SCIENCE IN INFORMATION SYSTEMS RESEARCH," *MIS Quarterly* (28:1) 2004, pp 75-105.
- Hiller, J.S., Bélanger, F., Hsiao, M., and Park, J.-M. "POCKET Protection," *American Business Law Journal* (45:3) 2008, pp 417-453. ** Recipient of the 2008 Hoeber Excellence in Research Award.
- Xu, H., and Bélanger, F. "Information Systems Journal Special Issue on: Reframing Privacy in a Networked World," *Information Systems Journal* (23:4) 2013, pp 371-375.
- Xu, H., Crossler, R.E., and Bélanger, F. "A Value Sensitive Design Investigation of Privacy-Enhancing Tools in Web Browsers," *Decision Support Systems* (54:1) 2012, pp 424-433.