

Incorporating Social Navigation into a Usable Security System

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Abstract:

Security and usability is an evolving field of research, growing bigger by the years as the conclusions are drawn that security systems that are not understood by their users are as good as no security at all. Theoretically secure systems are no guarantee for security. Instead they have to be understood by the end users to become effectively secure.

The Impromptu file sharing application is one of the test beds used by the Swirl research group of the University of California, Irvine, US. Impromptu makes visible the configuration, activity and implications of available security measures, thereby allowing end user to make informed security choices resulting in increased effective security.

In this report I will describe my experiences and findings of the design, implementation and user study of my four new extensions to the Impromptu application. These extensions are four distinct features that display temporal history within a session and also the relationship between users and sessions. These four features are to give the users a better understanding of their situation and the activities in the session, thereby aid them in assessing their own security.

This report will describe the theory behind the design, my design of the features, the selection criteria for the features chosen, the implementation process and the problems encountered, the user study design and finally the results of the study.

My four new extensions of the Impromptu were described and published in the "Seeing Further: Extending Visualizations as a Basis for Usable Security" paper that was presented at the 2006 Symposium On Usable Privacy and Security (SOUPS) conference, Pittsburgh, United States.