R209 Essay: Usable security

Chongyang Shi (cs940)

October 17, 2017

This essay provides a synthesis of three papers focused on usable security. While being a subfield of human-computer interaction (HCI), usable security may present a very different set of challenges from broader user-centred design principles [1, Abs.]. Two user-facing security systems were studied: user interface for PGP 5.0 [1] and the airline check-in kiosk [2], in addition to a generalised study on the state of usable security [3].

- 1 Summaries of research
- 2 Key themes of research
- 2.1 Sell security to users on incentives, not on endless mandates
- 2.2 Simplify organisation goals to ease mandates on users
- 2.3 Provide the user with minimal information required for security
- 3 Ideas of current context
- 4 Literature review

References

- [1] A. Whitten and J. D. Tygar, "Why johnny can't encrypt: A usability evaluation of pgp 5.0." in *USENIX Security Symposium*, vol. 348, 1999.
- [2] B. Glass, G. Jenkinson, Y. Liu, M. A. Sasse, and F. Stajano, "The usability canary in the security coal mine: A cognitive framework for evaluation and design of usable authentication solutions," arXiv preprint arXiv:1607.03417, 2016.
- [3] C. Herley, "More is not the answer," IEEE Security & Privacy, vol. 12, no. 1, pp. 14-19, 2014.