Justification for Inclusion in NSPW

Privacy Control for E-Services Using Selective Disclosure and Smart Cards

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Justification:

The growth of the Internet has been accompanied by the growth of e-services (e.g. e-commerce, e-health). This proliferation of e-services and the increasing regulatory and legal requirements for personal privacy have fueled the need to protect the personal privacy of e-service users. Existing approaches for privacy protection include data anonymization and pseudonym technology, the use of access control methods, the use of digital rights management methods, and the use of personal privacy policies along with appropriate compliance mechanisms. **These approaches are all predicated on someone or some provider having possession and control of the data to be protected.** In this paper, **we propose a new paradigm for protecting personal privacy in e-services: keeping possession and control over the user's private information in the hands of the user with the help of a trusted authority, removing this possession and control from the e-service provider**. This is accomplished with the use of selective disclosure and smart cards, in conjunction with personal privacy policies. The smart cards hold the user's private information and are provided to users by a trusted authority. The user is able to preserve his/her privacy by keeping his private information in his/her possession and disclosing only non-personally identifiable information to the provider (selective disclosure) in conjunction with his/her privacy policy. We begin by examining privacy legislation to derive the necessary content of personal privacy policies. We then propose a framework for using selective disclosure and smart cards to protect privacy and analyze the security vulnerabilities of our approach.

Attendance Statement: Number of authors wishing to attend the workshop: 1