Trust Management in Online Social Networks

Cian Malone. Supervisor: Dr. Declan O’Sullivan

Introduction

Goal
- To develop and evaluate an application for the Facebook Platform to determine the applicability of a personalisable, specialisable, and multi-faceted model of trust to the network.

State of the Art
- Existing social networks incorporating trust, such as Advogato, Epinions, and FilmTrust, use single-faceted values for rating trust, which cannot capture all users' subjective views of trust.
- Karl Quinn’s multi-faceted, personalisable, specialisable model of trust allows for context-specific trust unique to each user’s personal opinions about trust.
- Bo Fu's miniOSN project adapted that trust model to evaluate its applicability to a prototype Online Social Network, but did not implement the model’s personalisation features.

Research Questions
- Do Facebook users feel a need for trust-based privacy control?
- Which factors of trust do Facebook users feel are most important to their online social relationships?
- Which features must a trust-based privacy control application provide?

Entrust for Facebook

Model-View-Controller Architecture
- The router passes control to required Controller, which interacts with the Model classes to retrieve or update persistent trust data and the Facebook API to interact with the social graph. The Controller then passes data to the relevant View script.
- The layout template is applied to each View script before being rendered on the Facebook application Canvas page.

Conclusion

- Facebook users intuitively use trust when making privacy decisions on the site.
- Facebook users value honesty, credibility, reliability, and reputation most highly when dealing with online friends.
- The features of Entrust would be valuable if integrated into the network.
- The multi-faceted nature of the underlying trust model allows users to express their own subjective opinions about the meaning of trust with respect to their Facebook relationships.

Further Information

- Contact Information
  - Web: http://www.cs.tcd.ie/~cimalone
  - Email: cimalone@cs.tcd.ie
- Poster available for download from: