

A Social Networking-Based Access Control Scheme for Personal Content

Kiran K. Gollu
U. of Toronto

Stefan Saroiu
U. of Toronto

Alec Wolman
Microsoft Research

Sharing Personal Content Online is a Mess!

- Huge growth of personal content
 - Photos, videos, blog pages, song collections
- Two common ways of sharing it with your friends and family

1. Use e-mail service (e.g., GMail)

- Restrictions due to GMail's bandwidth costs
- Email is based on Push model
 - Inefficient way to share content
- E-mail was never designed to act as a content delivery system!

2. Use Social Networking Sites

- Many content-specific sites with little support for access control
- Users must maintain many copies of social network
 - Copies of social network become inconsistent and out-of-date
 - Users must be registered to upload/access restricted content
 - Redundant information in many cases
- **People have one social network, yet they now must manage several copies of their social network**

Sharing Personal Content Online is a Mess!

- There is a mismatch between people's needs and what today's sites offer!

Separate Social Information from Content Serving

- Observation: today's sites store **both** social information **and** personal content
- Insight: separate them
 - Let people manage social networks
 - Let sites serve content

Our Proposal for Cleaning Up the Mess

Let People Manage Social Networks

- Capture social relations digitally with social attestations
 - Issue signed attestation to your friends, family, buddies, etc...
 - People use attestations to prove their relationships to others
- Maintain **one** social network – personal address book
 - Managed by user
 - No infrastructure component

Let Sites Serve Content

- Sites can offer access control suitable to the needs of personal content
 - Personal content needs social networks
- Social ACLs:
 - Restrict access to private photos to people with “family” attestations
 - Restrict access to private song collections to people with “friend” attestations

New Internet Applications

- Social firewalls
 - Restrict home machine access to friends only
- Social Google Calendar
 - Publish different views of online calendar
 - One view to family, another view to colleagues

Thank you for your attention!

- kkgollu@cs.toronto.edu
- <http://www.cs.toronto.edu/~kkgollu>