A Social Networking-Based Access Control Scheme for Personal Content

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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  - Copies of social network become inconsistent and out-of-date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!

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