Identity and Privacy: Social TV case study

Security and Privacy Working Group

CFP Plenary Meeting

October 29, 2009
The larger agenda

- Larger agenda
- Series of case studies (2-3)
- Architecture/vision paper
What is “social TV” (generally)

- Return to social nature of TV
  - Gathering around TV
  - Coffee break discussion
  - TV-program focused mailing lists

- What this means in 2009
  - TV delivery has evolved
  - Social communications has evolved
  - Are there additional features that can/should be included?
What characteristics are important?

- Convergence of similar supporting capabilities
- Composition: more than the sum or intersection of the parts
- Ability to define privacy constraints
- Probably need to say something about privacy in contexts
Simple example: setup

- Comcast customers
  - Household: name/address (not where bill sent, but that’s important too)
  - Determines content available
  - Parental controls
  - Subject matter: TV content

- Social network
  - Name, location, birthday?
  - Friends
  - Groups
  - Subject matter: shared content - text, photos, video

- Social TV
  - People with shared TV interests
  - Location isn’t part of identity, but may matter in delivery
  - New capabilities
  - Subject matter: something about shared content
Simple example: scenario

• Small group of people who share an interest in TV content (and perhaps some other features)
• Content delivery systems for reasonably simultaneous experience
• “Social networking” features for sharing and exchanging
Simple scenario: story

• One member sees an announcement of a program
• Wants to experience it with friends
• Negotiate a “meeting” time
• The experience
  – Some where audio not viable
  – Some where resource-demanding delivery not possible
  – Experience allows for
    • Viewing
    • Interaction
    • tagging video snippets with group attributes
    • Support “replay” or “delayed play”
Issues: privacy

• Each supporting “app” provides approach to privacy.
  – Facebook has very long list of privacy controls
  – TV provider has privacy policy for information including identity information (name, address, credit card number, etc.) and services (which channels or packages, which pay-per-view, etc.)

• Typically, privacy model in overlay app is independent, but supporting apps have promised their policies.
Issues: Identity

- Convergence: do we need to know whether a member of the group uses Facebook vs. Myspace? Longevity suggests mapping from these to a consolidated model. Same for TV provision.
- Social TV identity may be composite of supporting ids + other features. New app space ⇒ new identity.
What does it look like?

Social Net

Social TV

TV Experience
Conclusions: What are the features

• Focus on “information”: need policies and context for sharing, exposure, etc.
• Privacy policy (expressed in terms of identities) definition
  – Policy language
  – Convergence
  – Composition
  – Extension/abstraction
• Identity definition
  – Ontology
  – Convergence
  – Composition
  – Extension
• Contexts
• What functionality required and trusted
Where is “communication paradigm” going?

- Web
- Search engines
- Sharing and exchanging information
- Not only about ephemeral communication only
- Question of whether can make it more symmetric

Argues for information based, announce/request and event driven communications paradigm
Looking forward

• Complete Social TV case study in next month or two
• Next case study:
  – Something in network management space
  – Your ideas here…
• Beyond that
  – At most one more case study, if needed
  – Overarching white paper, architectural challenges, vision, roadmap of research required
Questions, participation

• Contact me: sollins@csail.mit.edu
• Mailing list privsec@cfp.mit.edu
• Wiki: Privacy and Security WG, accessible from CFP website
• Bi-weekly webex meetings, Wednesday, 12-1pm Eastern Time