Privacy and Social Networks

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Roadmap

- The changing nature of social networks
  - The single sign-on authority in the Internet
  - The single personalization service based on plug-ins
  - The support for mobile users
- How does this nature interact with privacy?
- What research areas need to be addressed?
The Changing nature of Social Networks

- Social Networks used to be the place
  - To share our photos and
  - Chat with our friends
  - A place to “hang out” with our friends

- Over the past few years they are re-defining themselves to become
  - The single-sign-on authority on the Internet
  - The single personalization service on the Internet
  - A location-based service for a mobile world
Single sign-on

Docstoc.com is requesting permission to do the following:

- **Access my basic information**
  Includes name, profile picture, gender, networks, user ID, list of friends, and any other information I've shared with everyone.

- **Send me email**
  Docstoc.com may email me directly at markatos@ics.forth.gr. Change

- **Post to my Wall**
  Docstoc.com may post status messages, notes, photos, and videos to my Wall

- **Access my data any time**
  Docstoc.com may access my data when I'm not using the application.

Logged in as Evangelos Markatos (Not You?)

[Allow] [Don’t Allow]
Single sign-on

Foursquare is requesting permission to do the following:

- **Access my basic information**
  Includes name, profile picture, gender, networks, user ID, list of friends, and any other information I've shared with everyone.

- **Post to my Wall**
  Foursquare may post status messages, notes, photos, and videos to my Wall.

- **Access my data any time**
  Foursquare may access my data when I'm not using the application.

- **Check-ins**
  Foursquare may read my check-ins and friends' check-ins.

- **Access my profile information**
  Birthday and Current City

By proceeding, you agree to the Foursquare Terms of Service and Privacy Policy. Report App.

Logged in as Evangelos Markatos (Not You?)

Allow | Don’t Allow
Single sign on and privacy

- Single sign-on applications request permission
  - to send me email
  - to access my data
    - even when I am not using the application
  - to post on my wall
  - to know which my friends are
    - Are my friends comfortable with that?
      - Do I need to ask (have I asked?) their permission before I sign on?

- Of course people may refuse it
  - but then again, they will not be signed on

- Is the personalization worth the loss in privacy?
Social plug-ins

This Season  Back to School  Grow. Cook. Eat.

Follow eHow

Like  145,673 people like this. Be the first of your friends.

+1  288  Follow  @ehow  21.5K followers

114,000

More than 114,000 people
Social plug-ins trends

- 20% of top 10K sites have social plugins

Facebook for Websites Usage Trends

Allows a user to make a website more sociable and connected with integrations from the hugely popular Facebook website.
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Social Plugins and privacy

- Web sites that use social plugins
  - Give me a personalized version of their site
  - May let the social network know that I have visited them
    - But, in this case
      - Social networks may discover a large percentage of the sites I (my social network ID) visit
      - Up to 20% of the sites I visit
- Is this the end of anonymous browsing?
The mobile nature of social networks
Privacy and Mobile social networks

- Is it OK for all my “friends” to know where I am?
  - even if their account is compromised?
  - even when I go to the doctor?
- Can potential robbers
  - know when I am not at home?
  - know when I am on vacation?
- Can stalkers get this information as well?
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What needs to be done?

- Understand these new types of interactions with privacy:
  - How are they being launched?
  - What is their impact?
  - How can we detect them?
  - How can we stop them?
  - Can we roll back past decisions to release private information?
Privacy

- Help users gain control of their data
- Protect them from disclosing their data
  - Do I really need to send all these tracking cookies around?
- Detect attempts
  - to correlate data
  - to de-anonymize user accounts by correlation
Conclusions

- The nature of social networks is changing
  - The single sign-on authority in the Internet
  - The single personalization service based on plug-ins
  - The support for mobile users
- This nature interacts with privacy
- We need to address this problem
Privacy and Social Networks

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