## Online Privacy

T-110.5220 Usability and Security

## First, the topics situation

Today (8.2.2011) is the deadline to send your topic to me at <a href="mailto:kristiina.karvonen@hiit.fi">kristiina.karvonen@hiit.fi</a>

Here's some Q/A related to the essay and the course:

Q: can I combine given topics into one?

A: yes, this becomes "your own topic", e.g. "privacy and identity"

Q: can I write in Finnish?

A: yes, you can write in English, Finnish, Swedish or German (these are the only languages I know – sorry!).

Q: There's so much work on the course for just 3 cr, can you change that?

A: Sorry to hear but I'm afraid it's not up to me. I'll take the message to the department but it's unlikely to change anything.

Q: What's an open-book exam?

A: it means that rather than having to remember things by heart, you need to apply what you've learned and analyse what you've read. It means you can bring any material you like to the exam and also have access to the Internet during the exam.

However, you have to answer the exam yourself, not by being connected to your usable security guru friend online or by posting exam questions to online forums during the exam! (as if any of you would go as low as this! ©)

Q: What kind of questions are there in the exam?

A: Old exams can be found in Noppa course pages.

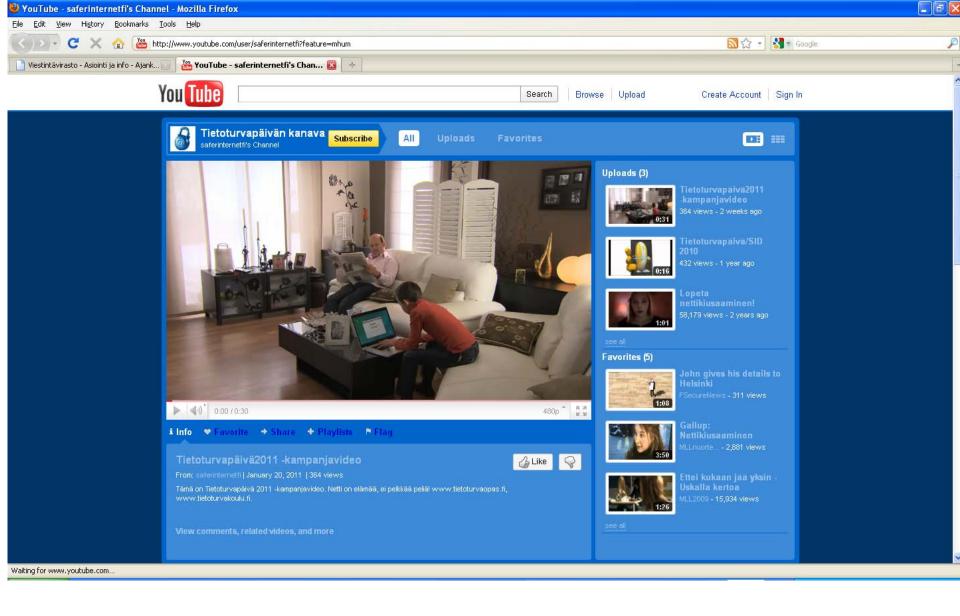
(security + privacy) = trust



http://www.youtube.com/user/saferinternetfi?feature=mhum#p/a/f/0/eWr1iy-1IrM



http://www.youtube.com/user/saferinternetfi?feature=mhum





# sulake

### http://www.sulake.com/blog/entries/2011-02-04\_Habbometre\_Safer\_Internet\_

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### Habbometre: Safer Internet Day

Friday, Feb 4, 2011 / Writer: Merja Turpeinen, Communications

To mark Safer Internet Day 2011, Habbo Hotel's February edition of the global Habbometre poll asked over 36,000 teens from around the world about their online behavior. The teens were asked what they think about online safety and identity, providing valuable insights into how young people view their virtual lives.



Fitting with this year's Safer Internet Day theme " It's more than a game, it's your life", Habbo asked its community whether they behave the same online as they do in real life. Just over a quarter of respondents (26%) stated that their behavior online and offline doesn't change. The remaining respondents felt that their behavior was different 'always' or 'most of the time'.

Even though a guarter said that their behavior does not change online vs. offline, only 16% of teenagers surveyed said they use their real name on all social networks. This suggests many teens split their identities across a mixture of online networks. In France this figure drops to only 3%, compared to the Netherlands where 34% say they use their real name on all social networks.

Refreshingly, more than half of teens (56%) are as aware of their safety online as they are in the real world. Spanish teens were least aware of their online safety, while French were most. The survey also highlighted young people as having a strong appreciation and awareness of their friends' privacy with 82% stating that they have never used somebody else's online identity without their knowledge or permission. Teens from Finland were most tempted to use a friends' identity, with 16% admitting to doing it at least once.

The Habbometre is a monthly poll of Habbo users globally. Check out



- Habbometre: Safer Internet Day
- Habbo virtual goods sales hit all-time high in December
- Habbo Hotel's Record Year 2010 in numbers
- Habbometre: Teen Holiday Celebrations
- Introducing Wired: User Created Games on a whole new level!
- Habbometre: Movies - where teens are watching films
- It gets better also in Habbo Hotel!
- Teen superstar Emily Osment to visit Habbo Hotel prior to MTV European Music Awards
- Teens demand better leisure spaces
- Beyonce smells better than Britney according to UK teens





### Phishing Activity Trends Report, 2<sup>nd</sup> Quarter / 2010

#### **Phishing Report Scope**

apwg\_report\_q2\_2010.pdf (applicati... 💠

The quarterly APWG Phishing Activity Trends Report analyzes phishing attacks reported to the APWG by its member companies, its Global Research Partners, through the organization's website at <a href="http://www.antiphishing.org">http://www.antiphishing.org</a> and by email submissions to <a href="mailto:reportphishing@antiphishing.org">reportphishing@antiphishing.org</a>. APWG also measures the evolution, proliferation and propagation of crimeware drawing from the research of our member companies. In the last half of this report you will find tabulations of crimeware statistics and related analyses and results of a TLD phishing abuse survey.

#### **Phishing Defined**

Phishing is a criminal mechanism employing both *social* engineering and technical subterfuge to steal consumers' personal identity data and financial account credentials. Social-engineering schemes use spoofed e-mails

### Classified Ads Sector Breaks Out in Q2 As Rapidly Expanding Phishing Vector



Classifieds emerged as a major non-traditional phishing vector



"Could become as important a journalistic tool as the Freedom of Information Act." - Time Magazine

WikiLeaks is a non-profit media organization dedicated to bringing important news and information to the public. We provide an innovative, secure and anonymous way for independent sources around the world to leak information to our journalists. We publish material of ethical, political and historical significance while keeping the identity of our sources anonymous, thus providing a universal way for the revealing of suppressed and censored injustices.

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WikiLeaks relies on its supporters in order to stay strong. Please keep us at the forefront of anti-censorship and support us today. You can also read more about WikiLeaks, our mission and objectives.

#### Cablegate: 250,000 US Embassy Diplomatic Cables

2010-11-28

On Sunday 28th Novembre 2010, Wikileaks began publishing 251,287 leaked United States embassy cables, the largest set of confidential documents ever to be released into the public domain. The documents will give people around the world an unprecedented insight into the US Government's foreign activities.

#### All released leaks archived

2010-11-28

Due to recent attacks on our infrastructure, we've decided to make sure everyone can reach our content. As part of this process we're releasing archived copy of all files we ever released - that's almost 20,000 files. The archive linked here contains a torrent generated for each file and each directory.

All W



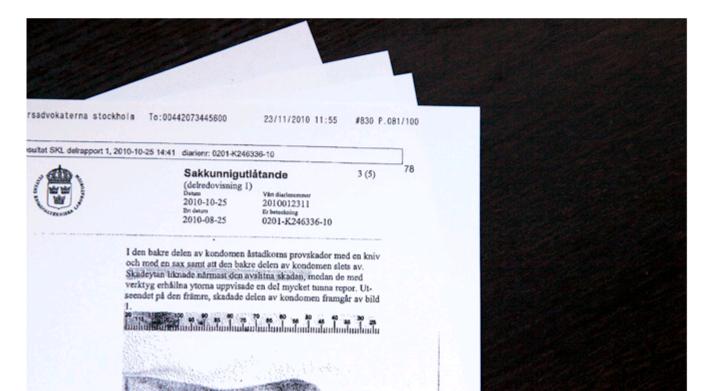


PRIVACY, CRIME AND SECURITY ONLINE

PREVIOUS POST NEXT POST

### Documents in Julian Assange Rape Investigation Leak Onto Web

By Juha Saarinen M February 2, 2011 | 5:35 pm | Categories: WikiLeaks





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### Links to previous

Wikileaks: <a href="http://www.wikileaks.ch/">http://www.wikileaks.ch/</a>

Wired article: <a href="http://www.wired.com/threatlevel/2011/02/wikileaks-">http://www.wired.com/threatlevel/2011/02/wikileaks-</a>

sweden/

APWG report:

http://www.antiphishing.org/reports/apwg\_report\_q2\_2010.pdf

Habbo report: <a href="http://www.sulake.com/blog/entries/2011-02-04">http://www.sulake.com/blog/entries/2011-02-04</a> Habbometre\_Safer\_Internet\_Day.html

The security day at youtube:

http://www.youtube.com/user/saferinternetfi?feature=mhum http://www.youtube.com/user/saferinternetfi?feature=mhum#p/a/f/0/eWr1iy-1lrM

# What is "privacy"?

a state A PLACE an experience

```
Different thing for different
Societies
Cultures
Organizations
Groups
Individuals
```

## Thesaurus says...

### Privacy is

"the quality or state of being apart from company or observation, that is, seclusion" (1a),

or "freedom from unauthorised intrusion, one's right to privacy" (1b).

In the archaic sense, privacy can also mean "a place of seclusion" (2).

"secrecy" (3a) or "a private matter, secret" (3b).

### Definitions for privacy

- "The ability of individuals to control the terms under which their personal information is acquired and used"
- "Individuals' capabilities in a particular social situation to control what they consider to be personal data"
- "The ability and/or right to protect one's personal secrets. It extends to the ability and/or right to prevent invasions of one's personal space"

Daniel Solove: Understanding Privacy, Harvard University Press 2008
http://docs.law.gwu.edu/facweb/dsolove/Understanding-Privacy/

# 4 key ingredients for privacy

### Impenetrability

"being free from unwanted intrusion"

### **Exclusion**

"being alone"

### Restriction

"being able to limit access to information about oneself"

### **Control**

"having control over information about oneself"

Daniel Solove: Understanding

Daniel Solove: Understanding Privacy, Harvard University Press 2008

http://docs.law.gwu.edu/facweb/dsolove/Understanding-Privacy/

### Privacy is...

- = protecting information
- = controlling access

What information?

Access to what?

Dick Hardt | Founder & CEO, Sxip Identity

http://identity20.com/media/OSCON2005/

### Identity

Private information = makes up your identity What is digital identity?

Threats to privacy include Identity theft

What is considered private may vary

### Privacy is also...

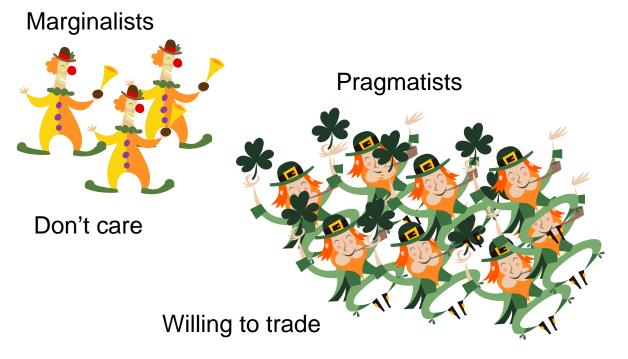
- Contextual
  - Bound to a specific situation.
- Nuanced
  - Irrational, unconscious, implicit, emotional,
  - hard to put into words

...and usually you don't even have to.

### In real world, users...

- Have very complex and refined relationships with eachother, and they can handle all of it quite well.
- People have a need to present a "face" to others.
  - Telling only partial truth
- Expect things and people behave as usual, in the "normal" way.
  - If not, they get quite bothered.

# Individual differences: privacy level



**Fundamentalists** 



No compromises

Varying demands for level of privacy and expressions of privacy

→ different demands for privacy UI

# Individual differences: types of concerns

### Different types of concerns

- Unauthorized access to my data
- Reuse of my personal data
- Enclosing my data to third parties
- What kind of data about me is saved?
- Are they building a profile of me?
- Can I correct the errors?
- Can I withdraw any information?
- Other?

# Examples of Privacy invasive technologies

- Location tracking (cell phones, GPS devices that phone home, etc.)
- RFID
- Transit cards
- Computer software that phones home
- Devices that phone home
- Video cameras (hidden cameras, cell phones)
- Personalized ecommerce sites
- Automobile data recorders
- Face recognition
- Other?

## What's privacy invading?

- In groups of 3-4 people
  - Discuss your idea of privacy violating technologies/services/situations
  - Prepare a list of 3 most concerning ones (vote to get a joint list)
  - Time: 10 minutes

### In practice...

How effectively can user protect information that is *considered* private?

Concerns *risk*, its perception, and its management.

What are seen as risks?

How well can users see the consequences of their actions?

What makes users feel safe?

There are trade-offs.

### The trade-offs

- Awareness vs. Privacy
  - Awareness = knowing what others are doing
    - = knowing who is around
    - → the "others" have to give out private information about themselves for this
- Primary vs. Secondary goal
  - "I want that book from Amazon!"
  - → I have to give them my credit card info, along with a lot of personal information

### What about law?

# Legal privacy protection ("tietosuoja")

- Basic right that guarantees privacy for an individual citizen
- = (personal) information about and individual is not available to unauthorised subjects
- In the background is an implicit assumption of the existence of privacyenhancing technologies

## **Privacy Protection Act**

# The personality protection for an individual includes privacy as

- territory
- Intimacy
- self-portrait and identity
- legal capacity
- principles of transparency and secrecy
- publicity of judicial proceedings
- publicity and concealment of public documents

### How binding is it?

- Legal intervention and regulation is desirable for users
- However, legislation that cannot be enforced should not exist
  - → gives wrong type of assurance

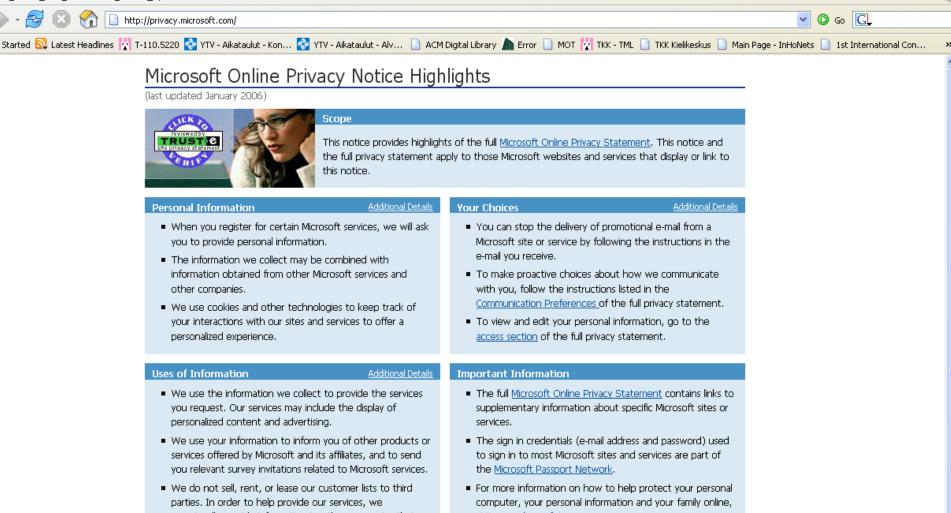
# "The Holy Trinity of the Internet"

- 1. Nature of the media
- 2. Geographically dispersed
- 3. Nature of the contents

 Seen as effectively preventing the ideal privacy from happening in the online world

# How to get information about online privacy?

Privacy statements and claims



occasionally provide information to other companies that work on our behalf.

#### How to Contact Us

For more information about our privacy practices, go to the full Microsoft Online Privacy Statement. Or write us using our Web form.

Microsoft is a TRUSTe licensee and you may contact TRUSTe if a privacy question is not properly addressed.

Microsoft Privacy, Microsoft Corporation One Microsoft Way Redmond, WA 98052

visit our online safety resources.

### Microsoft Online Privacy Statement

(last updated: January 2006) view the privacy notice highlights



Microsoft is committed to protecting your privacy. Please read the Microsoft Online Privacy Statement below and also any supplemental information listed to the right for additional details about particular Microsoft sites and services that you may use.

This Microsoft Online Privacy Statement applies to data collected by Microsoft through the majority of its Web sites and services, as well as its offline product support services. It does not apply to those Microsoft sites, services and products that do not display or link to this statement or that have their own privacy statements.

#### Collection of Your Personal Information

In order to access some Microsoft services, you will be asked to sign in with an e-mail address and password, which we refer to as your credentials. In most cases, these credentials will be part of the Microsoft Passport Network, which means you can use the same credentials to sign in to many different Microsoft sites and services, as well as those of select Microsoft partners. By signing in on one Microsoft site or service, you may be automatically signed into other Microsoft sites and services. If you access our services via a mobile phone, you may also use your telephone number and a PIN as an alternative credential to your username and password. As

#### Supplemental Privacy Information

- Maps & Virtual Earth
- Messenger
- Microsoft Passport Network
- MSN Sites & Services
- MSN Premium Software
- Microsoft Office Live
- Office Online
- Support Services
- Windows Live
- WindowsMedia.com
- Windows OneCare
- Xbox

#### Related Links

- Security at Home
- Trustworthy Computing
- FTC Privacy Initiatives

part of creating your credentials, you may also be requested to provide questions and secret answers, which we use to help verify your identity and assist in resetting your password, as well as an alternate email address. Some services may require added security, and in these cases, you may be asked to create an additional security key. Finally, a unique ID number will be assigned to your credentials which will be used to identify your credentials and associated information.

At some Microsoft sites, we ask you to provide personal information, such as your e-mail address, name, home or work address or telephone number. We may also collect demographic information, such as your ZIP code, age, gender, preferences, interests and favorites. If you choose to make a purchase or sign up for a paid subscription service, we will ask for additional information, such as your credit card number and billing address, that is used to create a Microsoft billing account.

We may collect information about your visit, including the pages you view, the links you click and other actions taken in connection with Microsoft sites and services. We also collect certain standard information that your browser sends to every website you visit, such as your IP address, browser type and language, access times and referring Web site addresses.

When you receive newsletters or promotional e-mail from Microsoft, we may use web beacons (described <u>below</u>), customized links or similar technologies to determine whether the e-mail has been opened and which links you click in order to provide you more focused e-mail communications or other information.

In order to offer you a more consistent and personalized experience in your interactions with Microsoft, information collected through one Microsoft service may be combined with information obtained through other Microsoft services. We may also supplement the information we collect with information obtained from other companies. For example, we may use services from other companies that enable us to derive a general geographic area based on your IP address in order to customize certain services to your geographic area.



#### Google Privacy Center

Home

About Google

Privacy Highlights

Privacy Policy

Privacy FAQ

Terms of Service

More privacy info:

- 3D Warehouse
- Desktop
- Documents &
- Spreadsheets
- Gmail
- Groups
- Orkut
- Personalized Homepage
- · Personalized Search
- Store
- Talk
- Toolbar for IE.
- Toolbar for Firefox
- Video Player
- Web Accelerator

Find on this site:

Search

#### Google Privacy Policy Highlights

October 14, 2005

At Google we recognize that privacy is important. This document outlines the types of personal information we receive and collect when you use Google's services, as well as some of the steps we take to safeguard information. We hope this will help you make an informed decision about sharing personal information with us.

#### Scope

This notice offers highlights of the full <u>Google Privacy Policy</u>, which describes in detail the privacy practices that apply to Google's products, services and websites worldwide (collectively, Google's "services"). You can also get more information about the privacy practices for specific Google services in the navigation bar to the left of this notice.

#### Personal information and other data we collect

- Google collects personal information when you register for a Google service or otherwise voluntarily provide such information. We may combine personal information collected from you with information from other Google services or third parties to provide a better user experience, including customizing content for you.
- Google uses <u>cookies</u> and other technologies to enhance your online experience and to learn about how you use Google services in order to improve the quality of our services.
- Google's servers automatically record information when you visit our website or use some of our products, including the URL, IP address, browser type and language, and the date and time of your request.
- Read more in the full privacy policy.

#### Uses

- We may use personal information to provide the services you've requested, including services that display customized content and advertising.
- We may also use personal information for auditing, research and analysis to operate and improve Google technologies and services.
- We may share <u>aggregated non-personal information</u> with third parties outside of Google.
- When we use third parties to assist us in processing your personal information, we require that they comply with our Privacy Policy and any other appropriate
  confidentiality and security measures.
- We may also share information with third parties in limited circumstances, including when complying with legal process, preventing fraud or imminent harm, and
  ensuring the security of our network and services.
- Google processes personal information on our servers in the United States of America and in other countries. In some cases, we process personal information on a server outside your own country.
- . Read more in the full privacy policy.

#### Your choices

- We offer you choices when we ask for personal information, whenever reasonably possible. You can find more information about your choices in the privacy notices or FAQs for specific services.
- You may decline to provide personal information to us and/or refuse cookies in your browser, although some of our features or services may not function properly as a
  result.
- We make good faith efforts to provide you access to your personal information upon request and to let you correct such data if it is inaccurate and delete it, when
  reasonably possible.
- Read more in the full privacy policy.

#### More information

For information about specific Google services, please check the relevant privacy notice in the navigation bar to the left. Google is a member of the EU/US Safe Harbor Program.



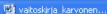


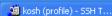


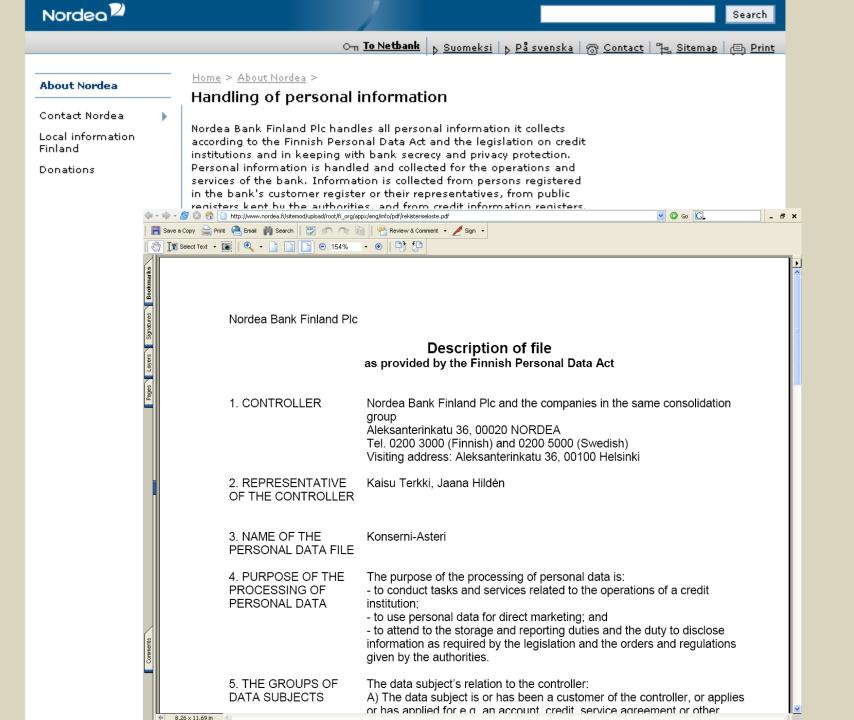












### Choose your privacy settings

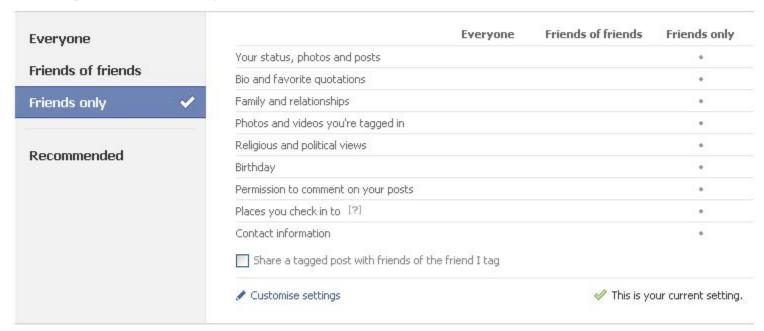
#### Connecting on Facebook

Control basic information your friends will use to find you on Facebook. View settings

#### Sharing on Facebook

cebook

These settings control who can see what you share.





Edit your settings for using apps, games and websites.



Edit your lists of blocked people and apps.

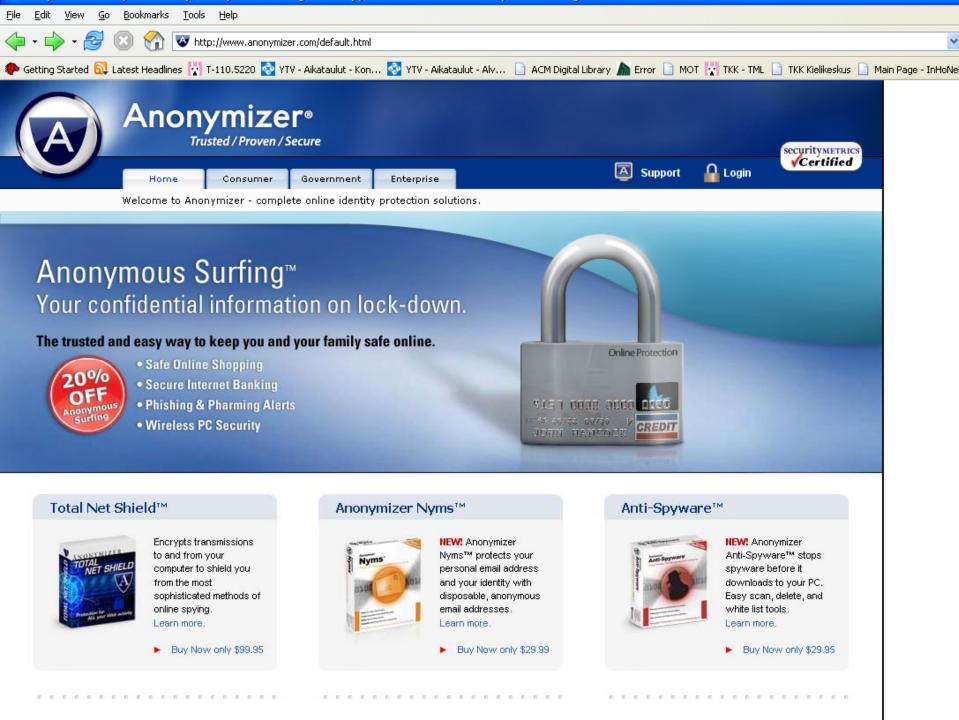


Controlling how you share

Learn more about your privacy on Facebook.

# How to get information on and manage privacy online?

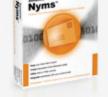
- Privacy statements and claims
- Tools for privacy





computer to shield you from the most sophisticated methods of online spying. Learn more.

Buy Now only \$99.95



personal email address and your identity with disposable, anonymous email addresses. Learn more.

Buy Now only \$29.99



spyware before it downloads to your PC. Easy scan, delete, and white list tools.

Learn more.

Buy Now only \$29.95

#### Press and News

Anonymizer Provides Identity Protection Software Through HP Security Solutions Center (December 4, 2006)

Anonymizer Protects Personal Email Accounts against Spam with New Anonymous, Disposable Email Service (October 10, 2008)

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Have questions about Enterprise or Government solutions? Contact Enterprise or Government Support.

#### Free Trials

Now **download** our free trials of Anonymizer Anonymous Surfing<sup>™</sup>, Anonymizer Anti-Spyware<sup>™</sup>, and Anonymizer Digital Shredder Lite<sup>™</sup>, and the new Anonymizer Nyms email protection software, in one convenient download. Learn More

Identity protection has become increasingly important. The FTC estimated that close to 10 million people in the US were victims of identity theft last year. Your personal information can be stolen through online spying. In fact, 9 out of 10 computers are infected with spyware, making it critical for people to use anti spyware protection. While you are surfing the Internet, your surfing activity and your keystrokes can be monitored by spyware. To prevent this kind of attack on your privacy, choose an anti spyware solution that will provide identity protection.

Anonymizer anti spyware enforces identity protection and gives you peace of mind when surfing the Internet.

Anonymizer is the leader in anonymous web surfing solutions and also offers free anonymous surfing. Like most people, you may not understand the importance of anti spyware and anonymous surfing programs that protect your online identity. If you don't use an anonymous web surfing solution, your online activities can be tracked. With our anonymous surfing program, your web surfing is kept private and secure with anonymous proxy servers. Anonymizer Anonymous Surfing combines thousands of private anonymous proxy servers with 128-bit SSL technology, the most secure form of encryption available, to ensure the highest level of protection and anonymity. Anonymous Surfing also protects users against pharming and phishing scams.

When you use Anonymizer's anonymous proxy network, your web activity and anonymity are secured. Our Anonymous Surfing program utilizes anonymous proxy servers, which hide your online identity, IP address, web sites you visit, and any other information you transmit. Anonymizer's anti spyware solution and Anonymous Surfing start automatically when you start up your PC, run silently in the background, and do not slow down your Internet connection.

For additional information please visit the following pages: Anonymous Surfing, Anti Spyware, Hiding Your IP Address

#### ut Us | Store Locator | Contact Us | Other Links | Terms of Use | Privacy Policy | Unsubscribe | Affiliate Program

7 Anonymizer, Inc. All rights reserved. Nyms, Anonymous Surfing, Total Net Shield, Total Privacy, Digital Shredder, and Anti-Spyware are trademarks or registered trademarks of Anonymizer, Inc. All other products are property of espective owners.

# How to get information about privacy?

- Privacy statements and claims
  - Hard to understand, looooong and full of jargon
- Tools for privacy
  - E.g. Anonymizer
    - The free software only anonymizes web browsing
    - ...not usage of email, chat, or other services.

## Privacy – demands for design

- Not the users' primary task
  - Make it easy, translucent, no burden
- There are different types of users
  - Provice preferences settings & profiles
- Privacy raises the stakes
  - Allow no (fatal) mistakes. Trial-and-error method will not do
- Systems must respond to the legal and regulatory environment
  - Provide easy ways to update
- Some visibility is needed
  - Give feedback
- Avoid jargon and information overload
  - Speak the user's language BUT there are liability issues, too!

# 5 Pitfalls in the design of privacy

1. Obscuring potential in Show what information may be

Show what information may be disclosed *before* it is actually disclosed. This way, users have grounds for decision-making.

2. Obscuring actual info

Users must know when and what information is being disclosed.

3. Emphasizing configuration over action

Privacy is not a goal in itself. It should not burden the user unnecessarily.

4. Lacking coarse-grain

Access to privacy controls from toplevel in simple steps.

5. Inhibiting established

Existing social practices of disclosure should be enabled also online.

### The do's of privacy info

- Give clear and concise information
- ..in user's language
- ...that is up to date
- ....that has no typos
- .....that is linked to authorities and other relevant bodies
- .....and remember, privacy is not an end in itself.

### Privacy is by nature...

Social

Subjective

Feeling

Based on information

An attitude

Not a goal in itself

what to tell whom when

what is private to me

not entirely rational or explicit

shared or withheld

trusting or distrusting

...just like security.

### Next week

Pause.

 Next lecture 1.3.2011 on Usability of recommendations and reputation

Remember to send in your essay topics!