17 – Usability of privacy policies and the dimensions of privacy notice

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w/ special guest Florian Schaub

March 17, 2015

05-436 / 05-836 / 08-534 / 08-734
Usable Privacy and Security

Carnegie Mellon University
CyLab

isr institute for SOFTWARE RESEARCH

Engineering & Public Policy

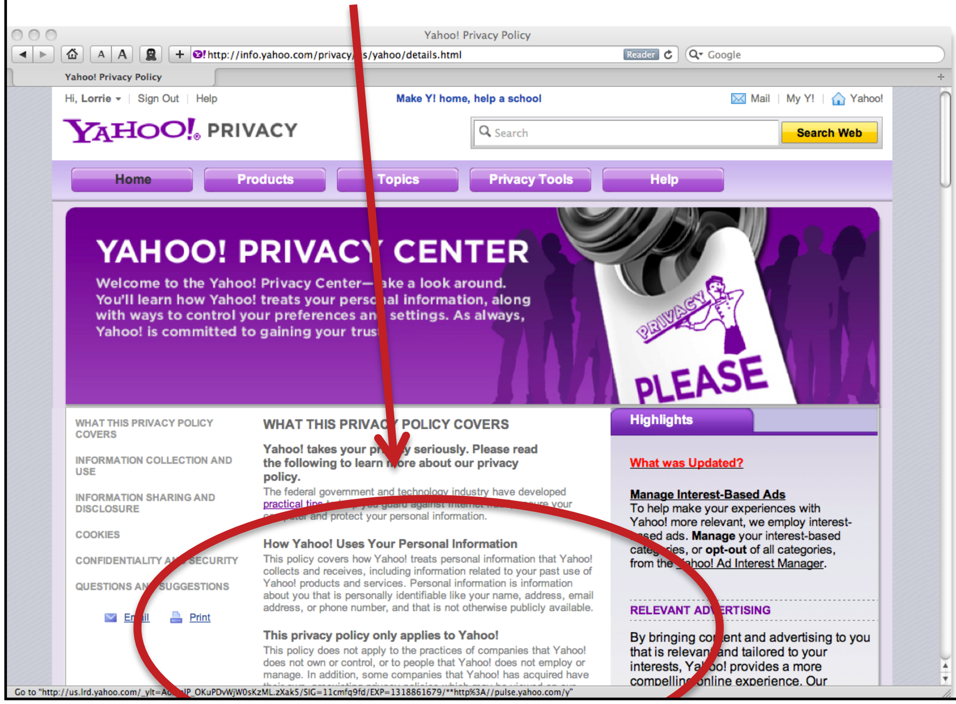
CyLab Usable Privacy & Security Laboratory
HTTP://CUPS.CS.CMU.EDU

Notice and choice

Protect privacy by giving people control over their information

Notice about data collection and use

Choices about allowing their data to be collected and used in that way


Yahoo! Privacy Policy
http://info.yahoo.com/privacy/ s/yahoo/details.html
Reader
Google
Yahoo! Privacy Policy
Hi, Lorrie
Sign Out
Help
Make Y! home, help a school
Mail
My Y!
Yahoo!
YAHOO! PRIVACY
Search
Search Web
Home
Products
Topics
Privacy Tools
Help
PRIVACY
PLEASE
WHAT THIS PRIVACY POLICY COVERS
INFORMATION COLLECTION AND USE
INFORMATION SHARING AND DISCLOSURE
COOKIES
CONFIDENTIALITY A SECURITY
QUESTIONS AN SUGGESTIONS
Em il
Print
Highlights
What was Updated?
Go to "http://us.lrd.yahoo.com/_ylt=A IP_OKuPDvWjW0sKzML.zXak5/SIG=11cmfq9fd/EXP=1318861679/**http%3A//pulse.yahoo.com/y"

YAHOO! PRIVAC CENTER

Welcome to the Yahoo! Privacy Center— ake a look around. You'll learn how Yahoo! treats your perso al information, along with ways to control your preferences an settings. As always, Yahoo! is committed to gaining your trus

WHAT THIS PRIVAC POLICY COVERS

Yahoo! takes your pr y seriously. Please read the following to learn ore about our privacy policy.

The federal government and technology industry have developed practical tip ure your and protect your personal information.

How Yahoo! Uses Your Personal Information

This policy covers how Yahoo! treats personal information that Yahoo! collects and receives, including information related to your past use of Yahoo! products and services. Personal information is information about you that is personally identifiable like your name, address, email address, or phone number, and that is not otherwise publicly available.

This privacy policy only applies to Yahoo!

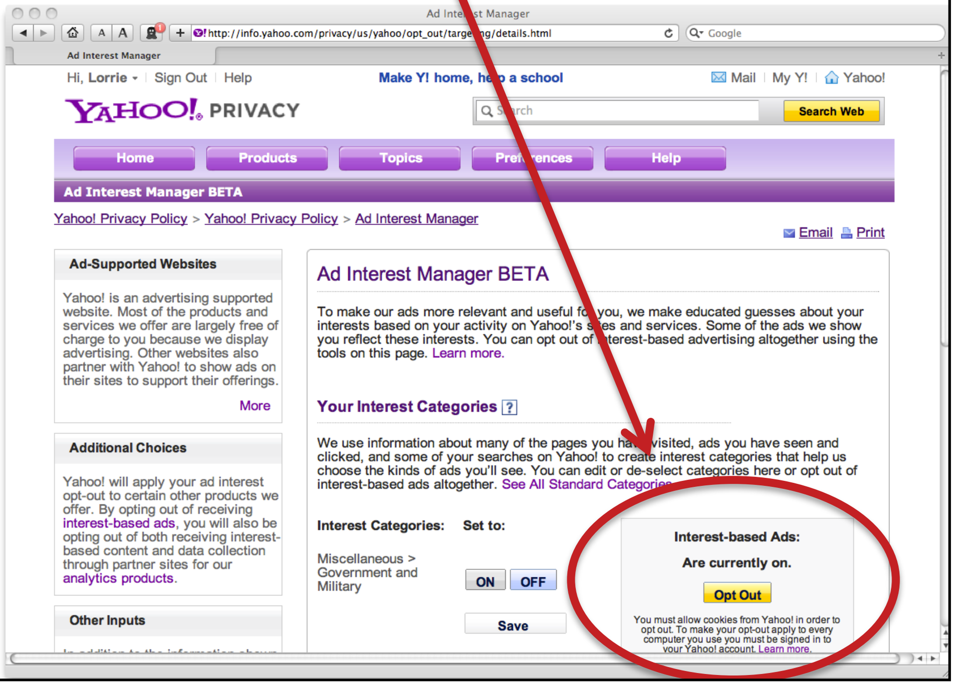
This policy does not apply to the practices of companies that Yahoo! does not own or control, or to people that Yahoo! does not employ or manage. In addition, some companies that Yahoo! has acquired have

Manage Interest-Based Ads

To help make your experiences with Yahoo! more relevant, we employ interest- sed ads. **Manage** your interest-based cate ries, or **opt-out** of all categories, from the ahoo! Ad Interest Manager.

RELEVANT AD ERTISING

By bringing co ent and advertising to you that is relevan and tailored to your interests, Ya oo! provides a more compellin online experience. Our



Ad-Supported Websites

Yahoo! is an advertising supported website. Most of the products and services we offer are largely free of charge to you because we display advertising. Other websites also partner with Yahoo! to show ads on their sites to support their offerings.

Additional Choices

Yahoo! will apply your ad interest opt-out to certain other products we offer. By opting out of receiving interest-based ads, you will also be opting out of both receiving interest-based content and data collection through partner sites for our analytics products.

Other Inputs

Ad Interest Manager BETA

To make our ads more relevant and useful fo you, we make educated guesses about your interests based on your activity on Yahoo!'s s es and services. Some of the ads we show you reflect these interests. You can opt out of terest-based advertising altogether using the tools on this page. Learn more.

Your Interest Categories

We use information about many of the pages you ha visited, ads you have seen and clicked, and some of your searches on Yahoo! to create interest categories that help us choose the kinds of ads you'll see. You can edit or de-select categories here or opt out of interest-based ads altogether. See All Standard Categories

Interest Categories: **Set to:**

Miscellaneous > Government and Military

Interest-based Ads:

Are currently on.

You must allow cookies from Yahoo! in order to opt out. To make your opt-out apply to every computer you use you must be signed in to your Yahoo! account. Learn more.

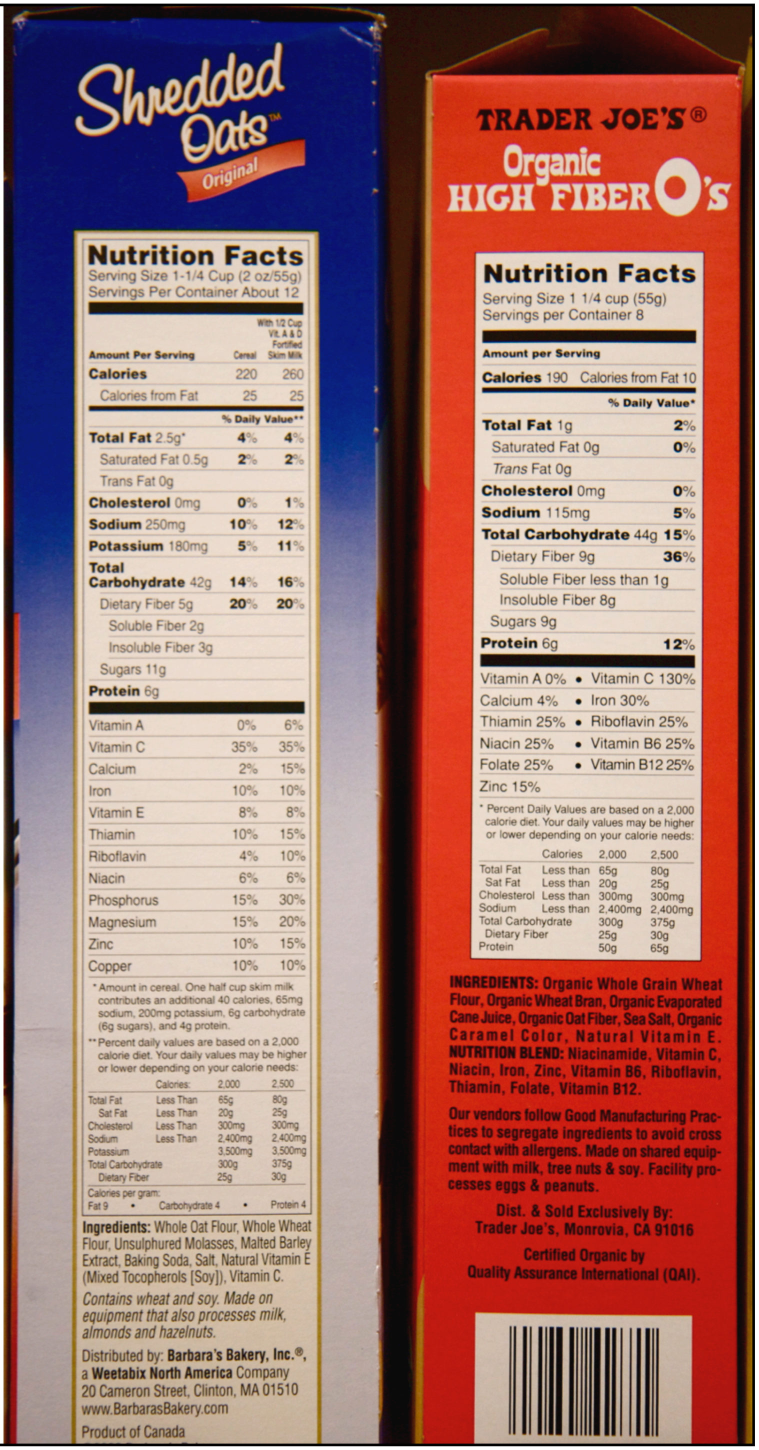
Nobody wants to read privacy policies

“the notice-and-choice model, as implemented, has led to long, incomprehensible privacy policies that consumers typically do not read, let alone understand”

– *Protecting Consumer Privacy in an Era of Rapid Change.* Preliminary FTC Staff Report. December 2010.

Towards a privacy “nutrition label”

- Standardized format
  - People learn where to find answers
  - Facilitates policy comparisons
- Standardized language
  - People learn terminology
- Brief
  - People find info quickly
- Linked to extended view
  - Get more details if needed



Nutrition Facts
Serving Size 1-1/4 Cup (2 oz/55g)
Servings Per Container About 12

Amount Per Serving	Cereal	With 1/2 Cup Vit. A & D Fortified Skim Milk
Calories	220	260
Calories from Fat	25	25
	% Daily Value**	
Total Fat 2.5g*	**4**%	**4**%
Saturated Fat 0.5g	**2**%	**2**%
Trans Fat 0g		
Cholesterol 0mg	**0**%	**1**%
Sodium 250mg	**10**%	**12**%
Potassium 180mg	**5**%	**11**%
Total Carbohydrate 42g	**14**%	**16**%
Dietary Fiber 5g	**20**%	**20**%
Soluble Fiber 2g		
Insoluble Fiber 3g		
Sugars 11g		
Protein 6g		
Vitamin A	0%	6%
Vitamin C	35%	35%
Calcium	2%	15%
Iron	10%	10%
Vitamin E	8%	8%
Thiamin	10%	15%
Riboflavin	4%	10%
Niacin	6%	6%
Phosphorus	15%	30%
Magnesium	15%	20%
Zinc	10%	15%
Copper	10%	10%

* Amount in cereal. One half cup skim milk contributes an additional 40 calories, 65mg sodium, 200mg potassium, 6g carbohydrate (6g sugars), and 4g protein.

** Percent daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less Than	65g	80g
Sat Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300mg
Sodium	Less Than	2,400mg	2,400mg
Potassium		3,500mg	3,500mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Ingredients: Whole Oat Flour, Whole Wheat Flour, Unsulphured Molasses, Malted Barley Extract, Baking Soda, Salt, Natural Vitamin E (Mixed Tocopherols [Soy]), Vitamin C.

Contains wheat and soy. Made on equipment that also processes milk, almonds and hazelnuts.

Distributed by: **Barbara's Bakery, Inc.®**, a **Weetabix North America** Company
20 Cameron Street, Clinton, MA 01510
www.BarbarasBakery.com

Product of Canada

Nutrition Facts
Serving Size 1 1/4 cup (55g)
Servings per Container 8

Amount per Serving	
Calories 190	Calories from Fat 10
	% Daily Value*
Total Fat 1g	**2**%
Saturated Fat 0g	**0**%
Trans Fat 0g	
Cholesterol 0mg	**0**%
Sodium 115mg	**5**%
Total Carbohydrate 44g	**15**%
Dietary Fiber 9g	**36**%
Soluble Fiber less than 1g	
Insoluble Fiber 8g	
Sugars 9g	
Protein 6g	**12**%

Vitamin A 0% • Vitamin C 130%
Calcium 4% • Iron 30%
Thiamin 25% • Riboflavin 25%
Niacin 25% • Vitamin B6 25%
Folate 25% • Vitamin B12 25%
Zinc 15%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Protein		50g	65g

INGREDIENTS: Organic Whole Grain Wheat Flour, Organic Wheat Bran, Organic Evaporated Cane Juice, Organic Oat Fiber, Sea Salt, Organic Caramel Color, Natural Vitamin E. **NUTRITION BLEND:** Niacinamide, Vitamin C, Niacin, Iron, Zinc, Vitamin B6, Riboflavin, Thiamin, Folate, Vitamin B12.

Our vendors follow Good Manufacturing Practices to segregate ingredients to avoid cross contact with allergens. Made on shared equipment with milk, tree nuts & soy. Facility processes eggs & peanuts.

Dist. & Sold Exclusively By:
Trader Joe's, Monrovia, CA 91016

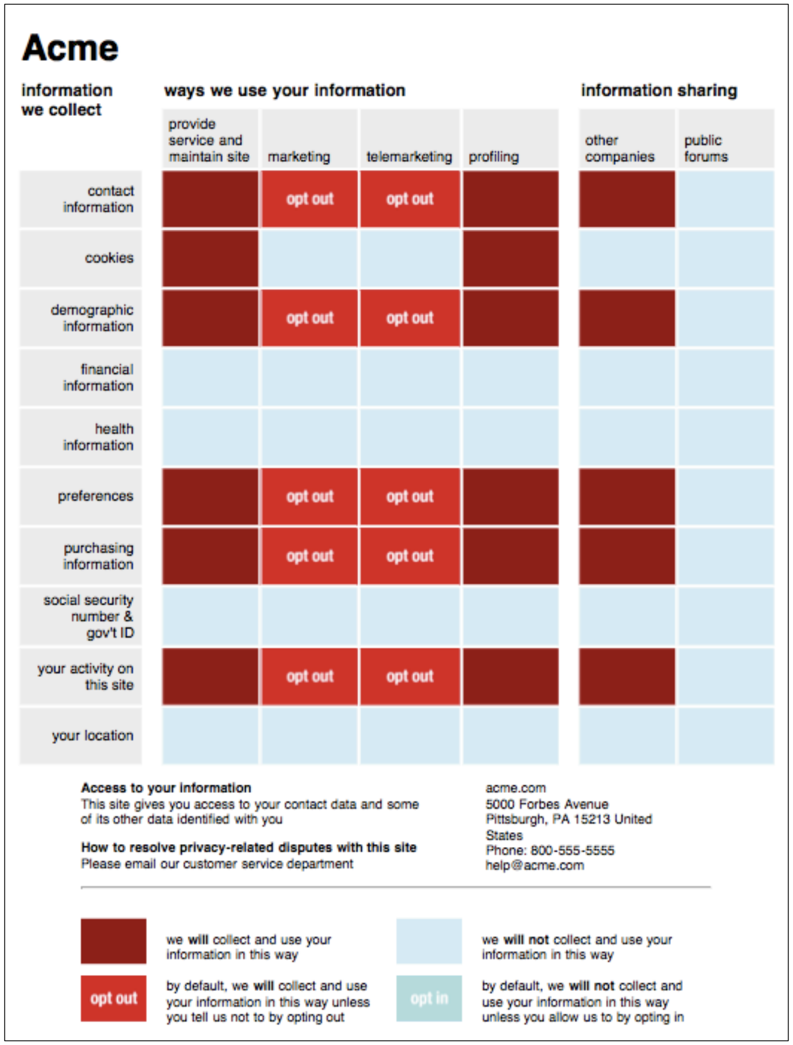
Certified Organic by
Quality Assurance International (QAI).

Iterative design process

- Series of studies
  - Focus groups
  - Lab studies
  - Online studies
- Metrics
  - Reading-comprehension (accuracy)
  - Time to find information
  - Ease of policy comparison
  - Subjective opinions, ease, fun, trust

P.G. Kelley, J. Bresee, L.F. Cranor, and R.W. Reeder. A "Nutrition Label" for Privacy. SOUPS 2009.

P.G. Kelley, L.J. Cesca, J. Bresee, and L.F. Cranor. Standardizing Privacy Notices: An Online Study of the Nutrition Label Approach. CHI2010.



Acme

information we collect	ways we use your information				information sharing	
	provide service and maintain site	marketing	telemarketing	profiling	other companies	public forums
contact information	■	opt out	opt out	■	■	□
cookies	■	□	□	■	□	□
demographic information	■	opt out	opt out	■	■	□
financial information	□	□	□	□	□	□
health information	□	□	□	□	□	□
preferences	■	opt out	opt out	■	■	□
purchasing information	■	opt out	opt out	■	■	□
social security number & gov't ID	□	□	□	□	□	□
your activity on this site	■	opt out	opt out	■	■	□
your location	□	□	□	□	□	□

Access to your information
This site gives you access to your contact data and some of its other data identified with you

How to resolve privacy-related disputes with this site
Please email our customer service department

acme.com
5000 Forbes Avenue
Pittsburgh, PA 15213 United States
Phone: 800-555-5555
help@acme.com

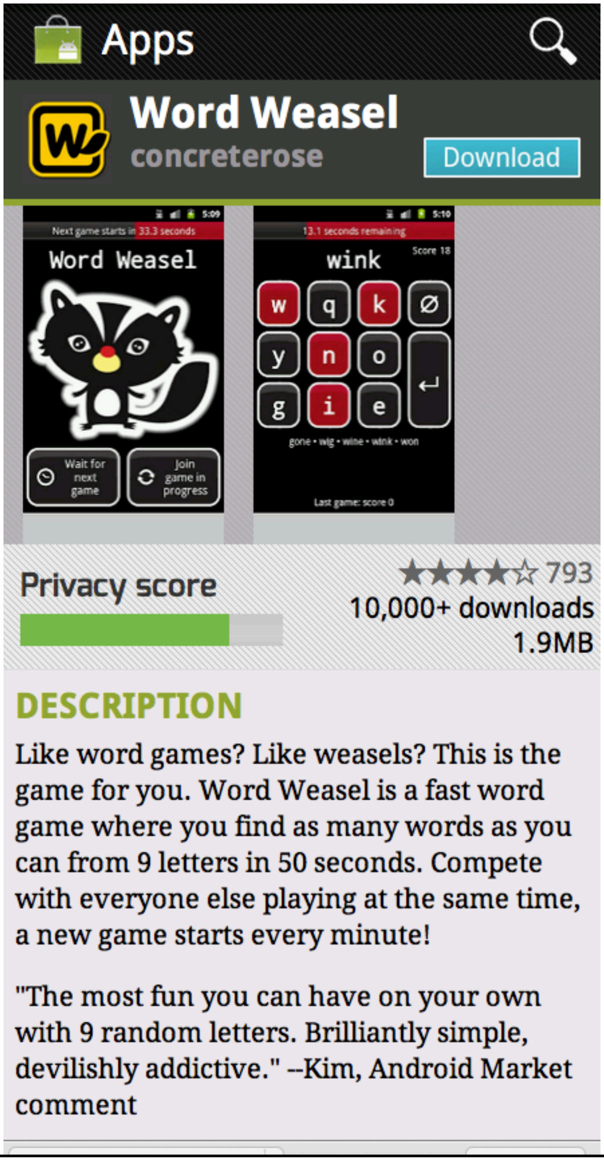
■ we **will** collect and use your information in this way

□ we **will not** collect and use your information in this way

opt out — by default, we **will** collect and use your information in this way unless you tell us not to by opting out

opt in — by default, we **will not** collect and use your information in this way unless you allow us to by opting in

Privacy label for Android



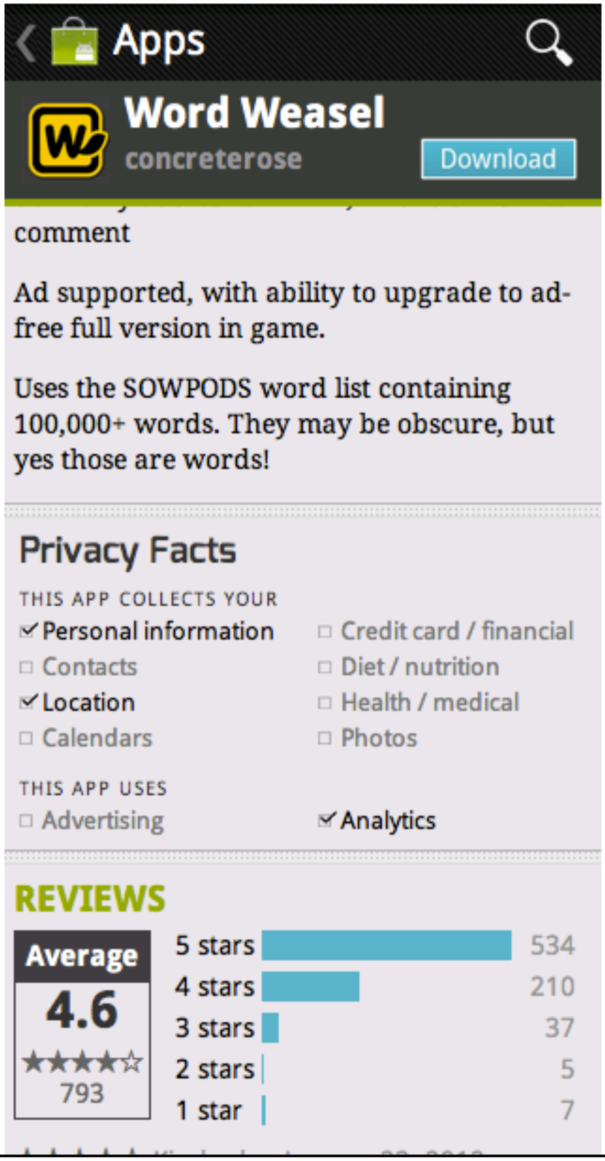
Privacy score

★★★★☆ 793
10,000+ downloads
1.9MB

DESCRIPTION

Like word games? Like weasels? This is the game for you. Word Weasel is a fast word game where you find as many words as you can from 9 letters in 50 seconds. Compete with everyone else playing at the same time, a new game starts every minute!

"The most fun you can have on your own with 9 random letters. Brilliantly simple, devilishly addictive." --Kim, Android Market comment



comment

Ad supported, with ability to upgrade to ad-free full version in game.

Uses the SOWPODS word list containing 100,000+ words. They may be obscure, but yes those are words!

Privacy Facts

THIS APP COLLECTS YOUR

☑ Personal information	□ Credit card / financial
□ Contacts	□ Diet / nutrition
☑ Location	□ Health / medical
□ Calendars	□ Photos

THIS APP USES

□ Advertising	☑ Analytics

REVIEWS

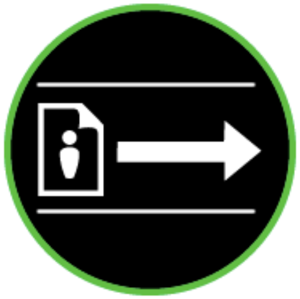
Average
4.6
★★★★☆
793

5 stars	534
4 stars	210
3 stars	37
2 stars	5
1 star	7

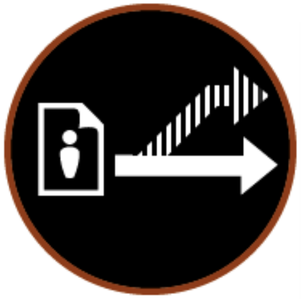
Privacy Icons

http://www.azarask.in/blog/post/privacy-icons/

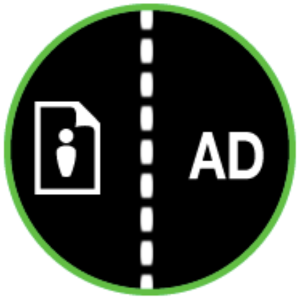
2010



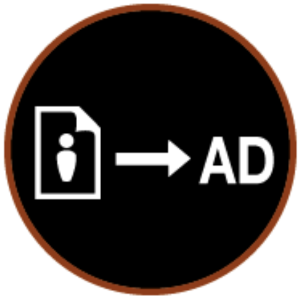
Your Data is Used Only for the Intended Use



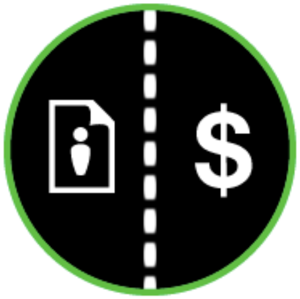
Your Data May be Used for Purposes You Do Not Intend



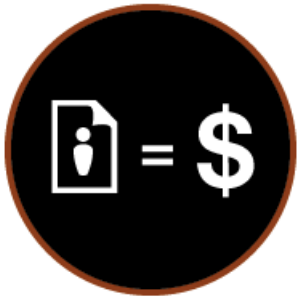
Your data is never given to advertisers.



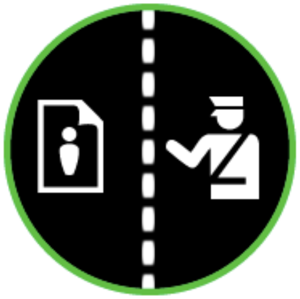
Site gives your data to advertisers.



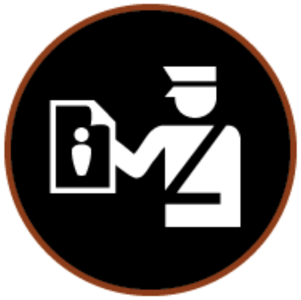
Your data is never bartered or sold.



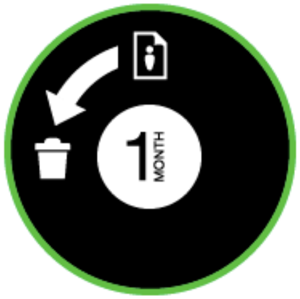
Your data may be bartered or sold.



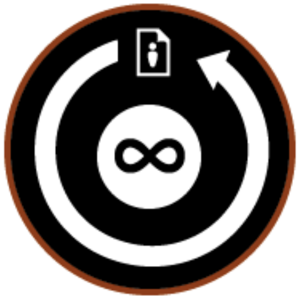
Data is given to law enforcement only when legal process is followed.



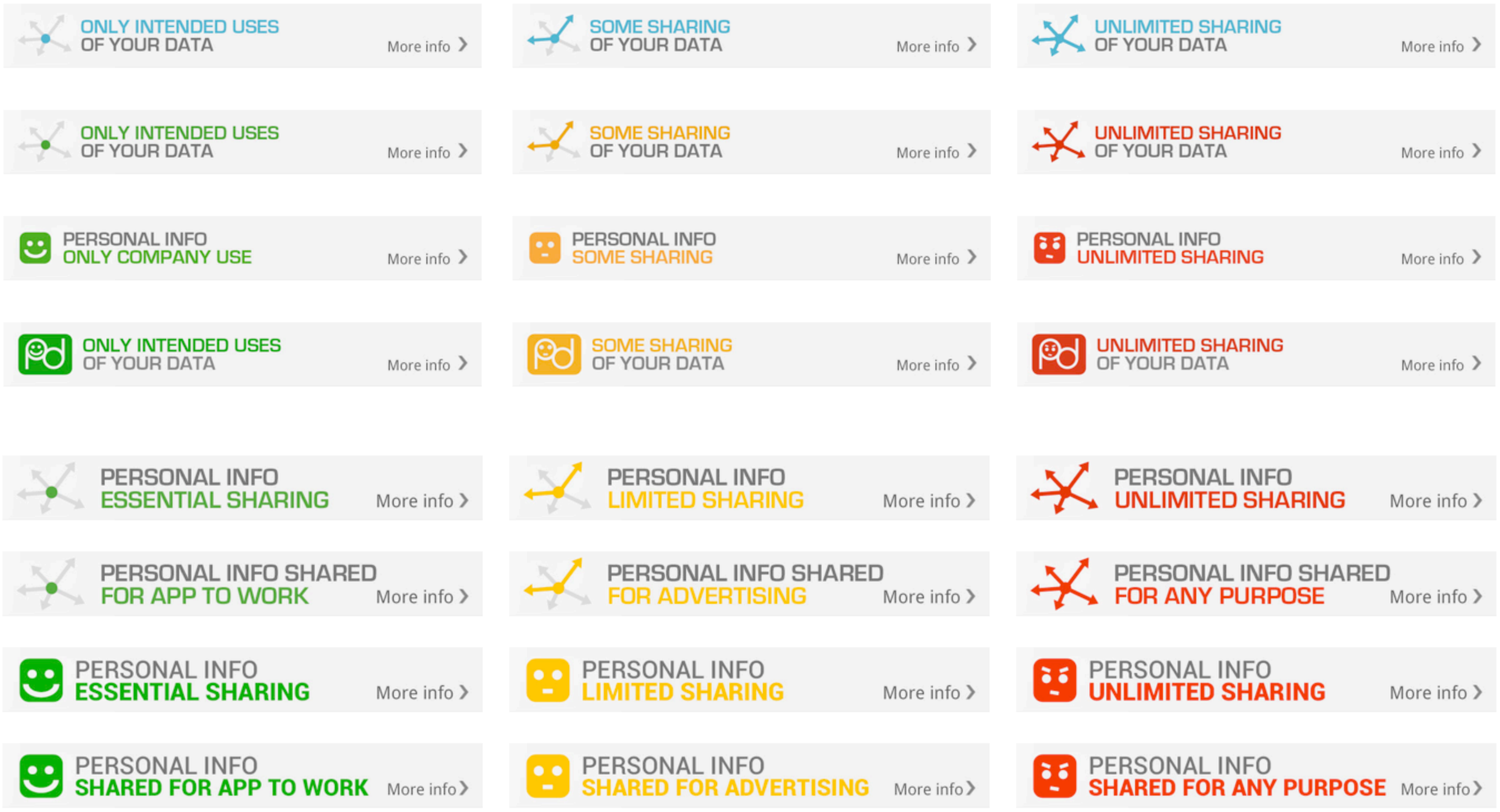
Data may be given to law enforcement even when legal process is not followed.



Your data is kept for less than 1 month.

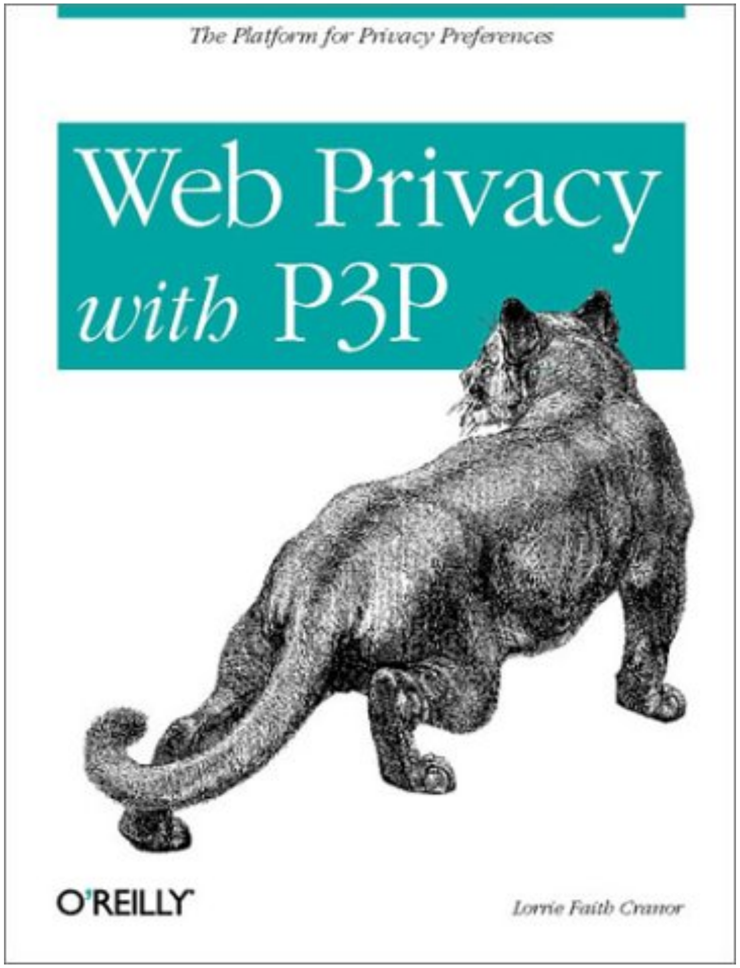


Your data may be kept indefinitely.


ONLY INTENDED USES OF YOUR DATA More info
SOME SHARING OF YOUR DATA More info
UNLIMITED SHARING OF YOUR DATA More info
ONLY INTENDED USES OF YOUR DATA More info
SOME SHARING OF YOUR DATA More info
UNLIMITED SHARING OF YOUR DATA More info
PERSONAL INFO ONLY COMPANY USE More info
PERSONAL INFO SOME SHARING More info
PERSONAL INFO UNLIMITED SHARING More info
ONLY INTENDED USES OF YOUR DATA More info
SOME SHARING OF YOUR DATA More info
UNLIMITED SHARING OF YOUR DATA More info
PERSONAL INFO ESSENTIAL SHARING More info
PERSONAL INFO LIMITED SHARING More info
PERSONAL INFO UNLIMITED SHARING More info
PERSONAL INFO SHARED FOR APP TO WORK More info
PERSONAL INFO SHARED FOR ADVERTISING More info
PERSONAL INFO SHARED FOR ANY PURPOSE More info
PERSONAL INFO ESSENTIAL SHARING More info
PERSONAL INFO LIMITED SHARING More info
PERSONAL INFO UNLIMITED SHARING More info
PERSONAL INFO SHARED FOR APP TO WORK More info
PERSONAL INFO SHARED FOR ADVERTISING More info
PERSONAL INFO SHARED FOR ANY PURPOSE More info

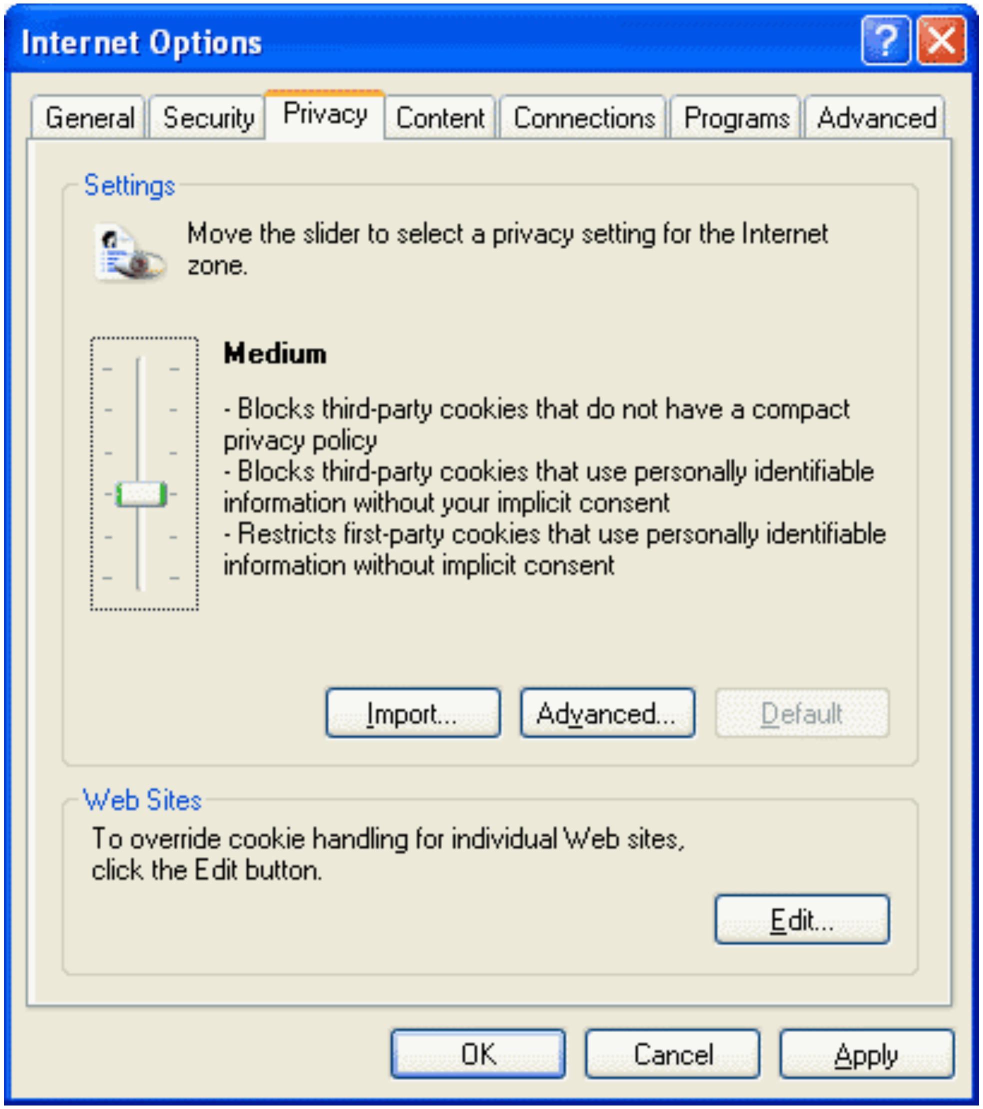
Smartphone App Privacy Icon Study Conducted for LifeLock, Inc. by Cranor et al., 2013

Let your computer read for you



- Platform for Privacy Preferences (P3P)
- W3C specification for XML privacy policies
  - Proposed 1996
  - Adopted 2002
- Optional P3P compact policy HTTP headers to accompany cookies
- Lacks incentives for adoption

P3P in IE6



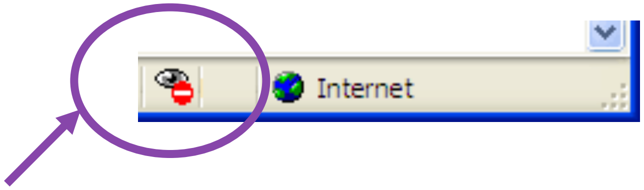
Move the slider to select a privacy setting for the Internet zone.

Medium

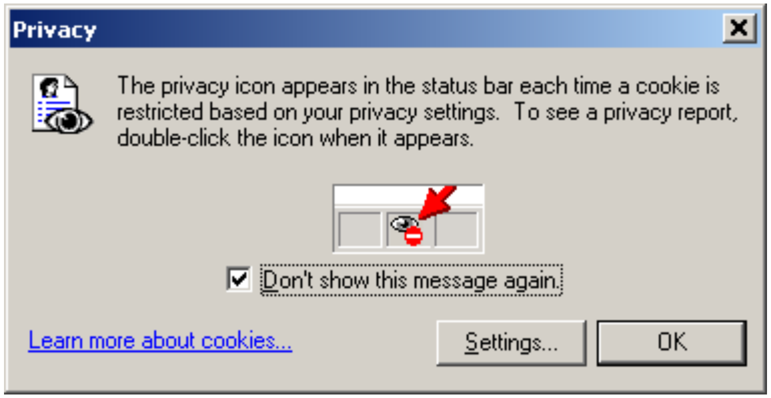
- Blocks third-party cookies that do not have a compact privacy policy
- Blocks third-party cookies that use personally identifiable information without your implicit consent
- Restricts first-party cookies that use personally identifiable information without implicit consent

To override cookie handling for individual Web sites, click the Edit button.

Automatic processing of compact policies only; third-party cookies without compact policies blocked by default

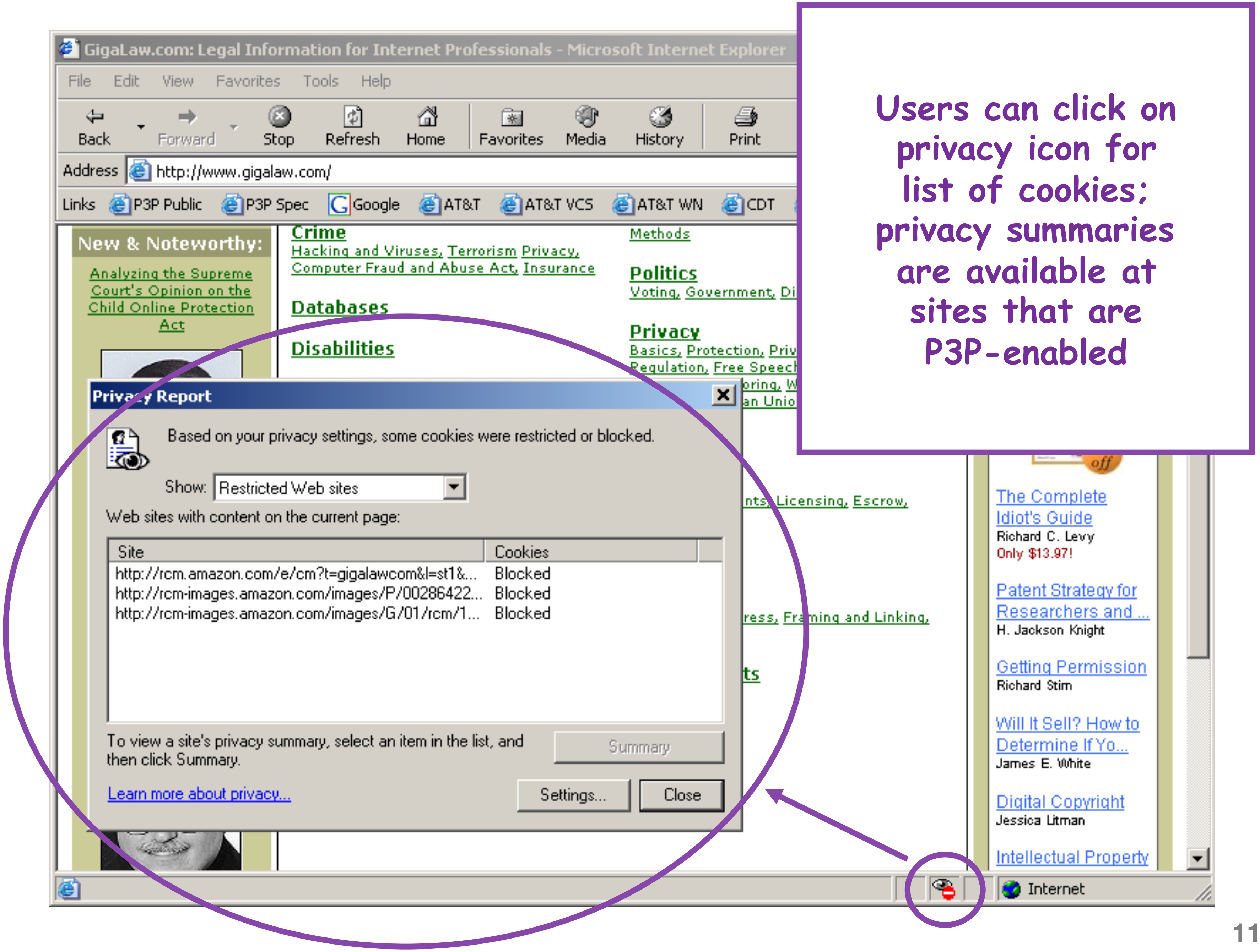


Privacy icon on status bar indicates that a cookie has been blocked – pop-up appears the first time the privacy icon appears



The privacy icon appears in the status bar each time a cookie is restricted based on your privacy settings. To see a privacy report, double-click the icon when it appears.

☑ Don't show this message again.


GigaLaw.com: Legal Information for Internet Professionals - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Forward
Stop
Refresh
Home
Favorites
Media
History
Print
Address http://www.gigalaw.com/
Links P3P Public P3P Spec Google AT&T AT&T VCS AT&T WN CDT
New & Noteworthy:
Analyzing the Supreme Court's Opinion on the Child Online Protection Act
Crime
Hacking and Viruses, Terrorism Privacy, Computer Fraud and Abuse Act, Insurance
Methods
Politics
Voting, Government, Di
Databases
Privacy
Basics, Protection, Priv
Disabilities
Regulation, Free Speech
oring, W
an Unio
nts, Licensing, Escrow,
ress, Framing and Linking,
ts
off
The Complete Idiot's Guide
Richard C. Levy
Only $13.97!
Patent Strategy for Researchers and ...
H. Jackson Knight
Getting Permission
Richard Stim
Will It Sell? How to Determine If Yo...
James E. White
Digital Copyright
Jessica Litman
Intellectual Property
Internet

Privacy Report

Based on your privacy settings, some cookies were restricted or blocked.

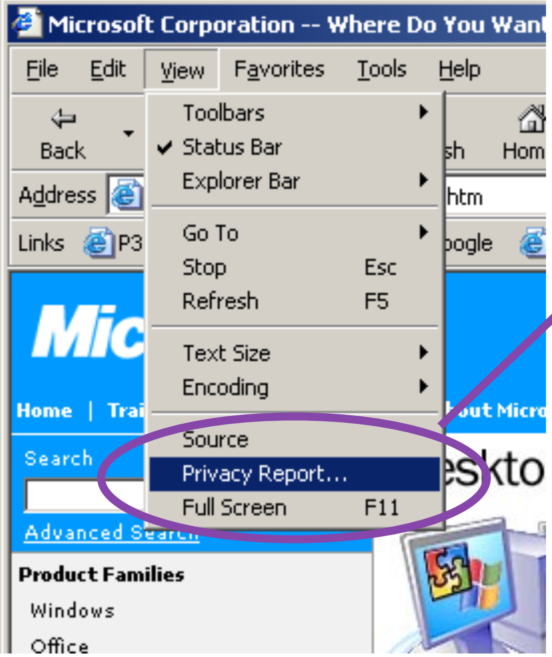
Show: Restricted Web sites

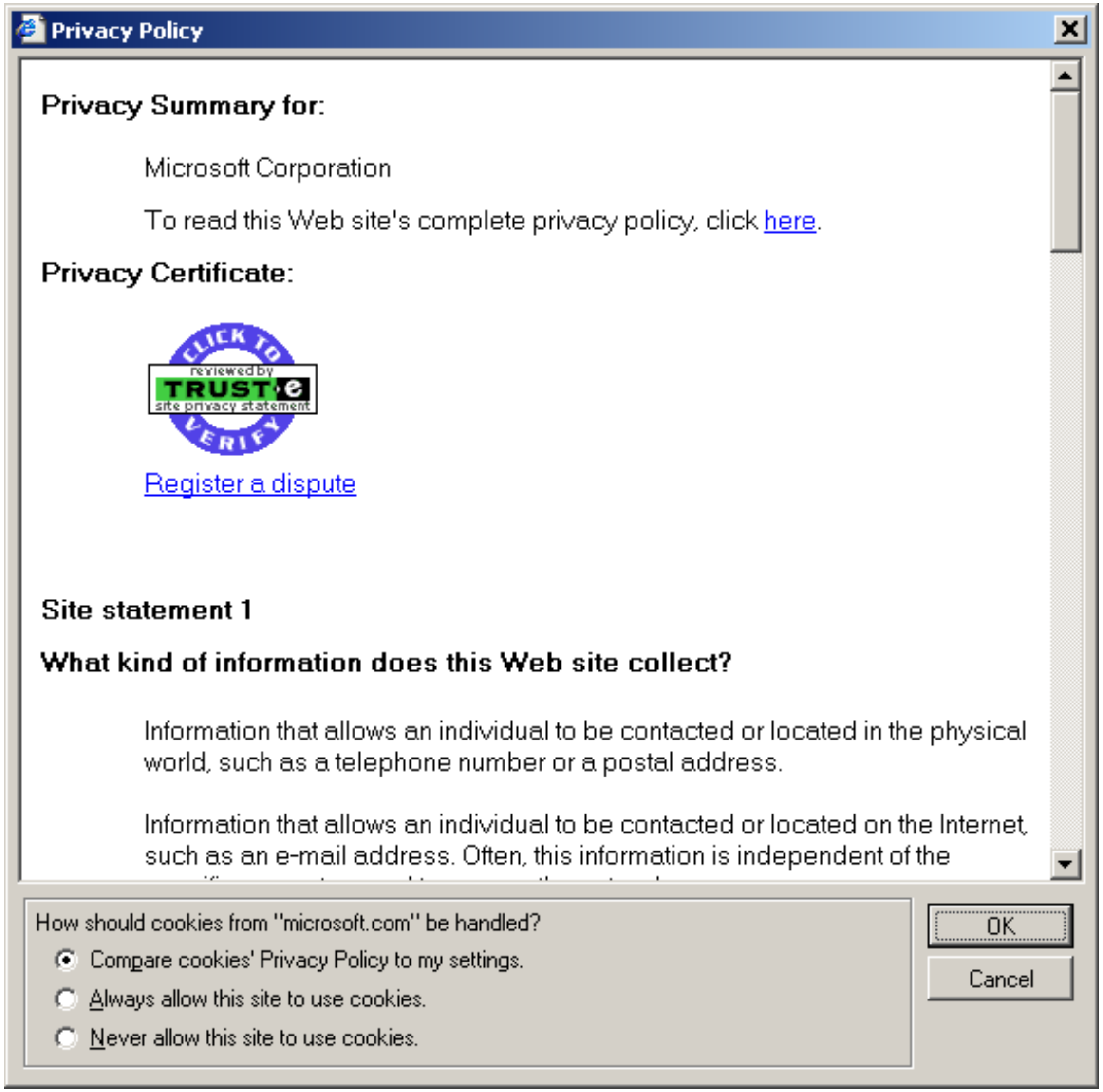
Web sites with content on the current page:

Site	Cookies
http://rcm.amazon.com/e/cm?t=gigalawcom&l=st1&...	Blocked
http://rcm-images.amazon.com/images/P/00286422...	Blocked
http://rcm-images.amazon.com/images/G/01/rcm/1...	Blocked

To view a site's privacy summary, select an item in the list, and then click Summary.

Users can click on privacy icon for list of cookies; privacy summaries are available at sites that are P3P-enabled





Privacy Summary for:

Microsoft Corporation

To read this Web site's complete privacy policy, click here.

Privacy Certificate:

Register a dispute

Site statement 1

What kind of information does this Web site collect?

Information that allows an individual to be contacted or located in the physical world, such as a telephone number or a postal address.

Information that allows an individual to be contacted or located on the Internet, such as an e-mail address. Often, this information is independent of the

How should cookies from "microsoft.com" be handled?

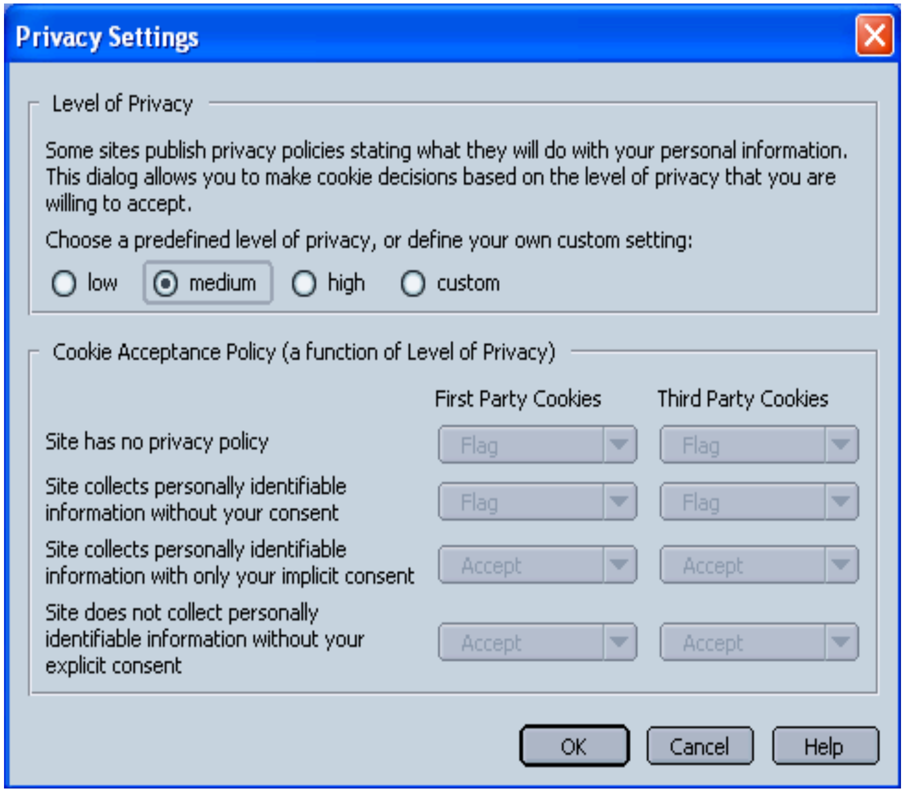
● Compare cookies' Privacy Policy to my settings.

○ Always allow this site to use cookies.

○ Never allow this site to use cookies.

Privacy summary report is generated automatically from full P3P policy

P3P in Netscape 7



Privacy Settings

Level of Privacy

Some sites publish privacy policies stating what they will do with your personal information. This dialog allows you to make cookie decisions based on the level of privacy that you are willing to accept.

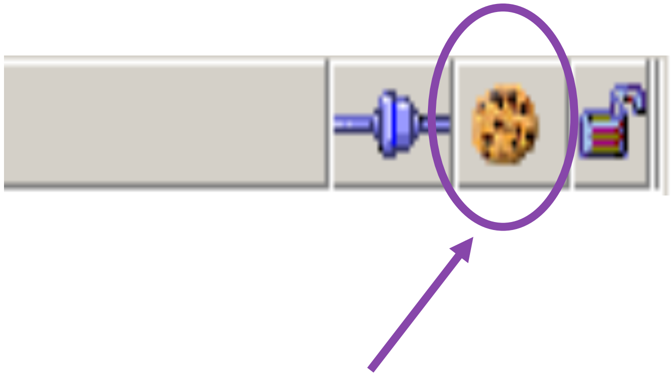
Choose a predefined level of privacy, or define your own custom setting:

○ low ● medium ○ high ○ custom

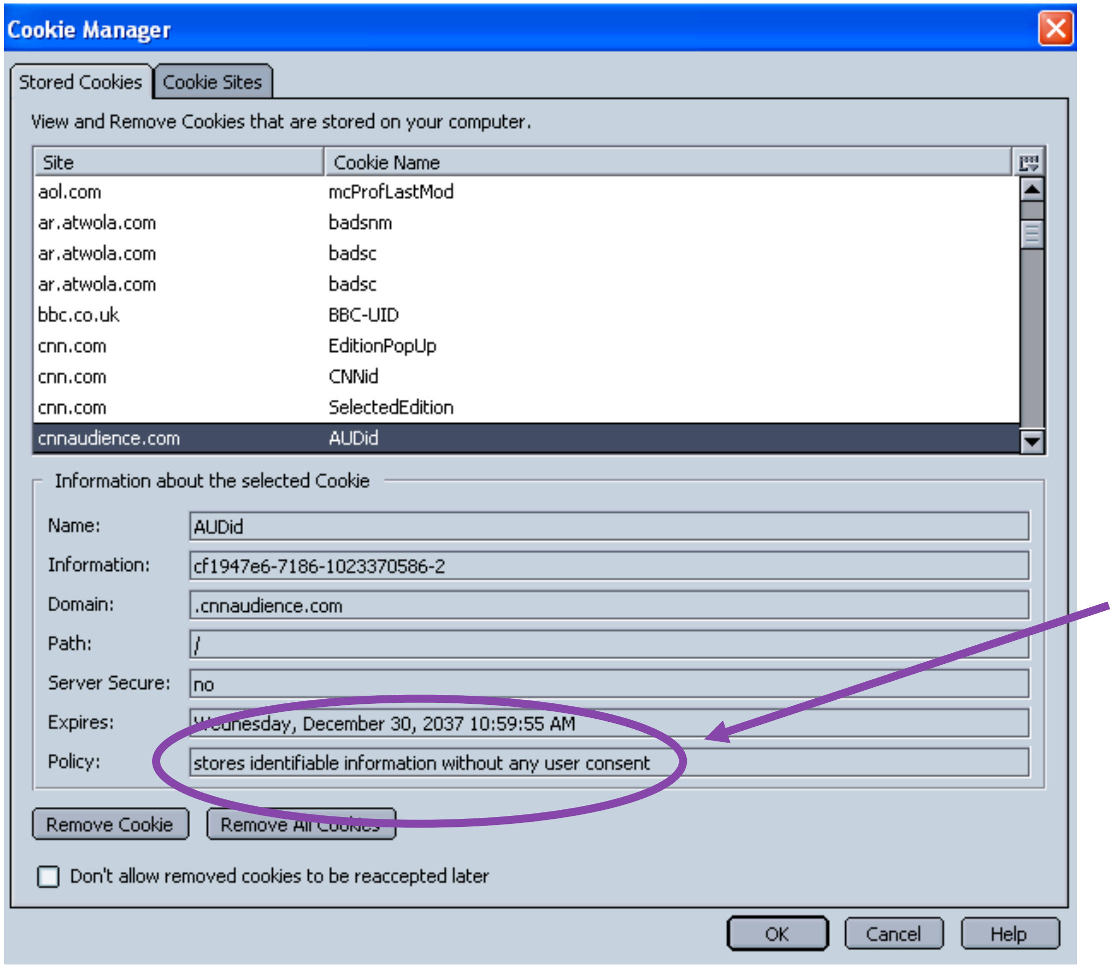
Cookie Acceptance Policy (a function of Level of Privacy)

	First Party Cookies	Third Party Cookies
Site has no privacy policy	Flag	Flag
Site collects personally identifiable information without your consent	Flag	Flag
Site collects personally identifiable information with only your implicit consent	Accept	Accept
Site does not collect personally identifiable information without your explicit consent	Accept	Accept

Preview version similar to IE6, focusing, on cookies; cookies without compact policies (both first-party and third-party) are "flagged" rather than blocked by default



Indicates flagged cookie



View and Remove Cookies that are stored on your computer.

Site	Cookie Name
aol.com	mcProfLastMod
ar.atwola.com	badsnm
ar.atwola.com	badsc
ar.atwola.com	badsc
bbc.co.uk	BBC-UID
cnn.com	EditionPopUp
cnn.com	CNNid
cnn.com	SelectedEdition
cnnaudience.com	AUDid

Information about the selected Cookie

Name: AUDid

Information: cf1947e6-7186-1023370586-2

Domain: .cnnaudience.com

Path: /

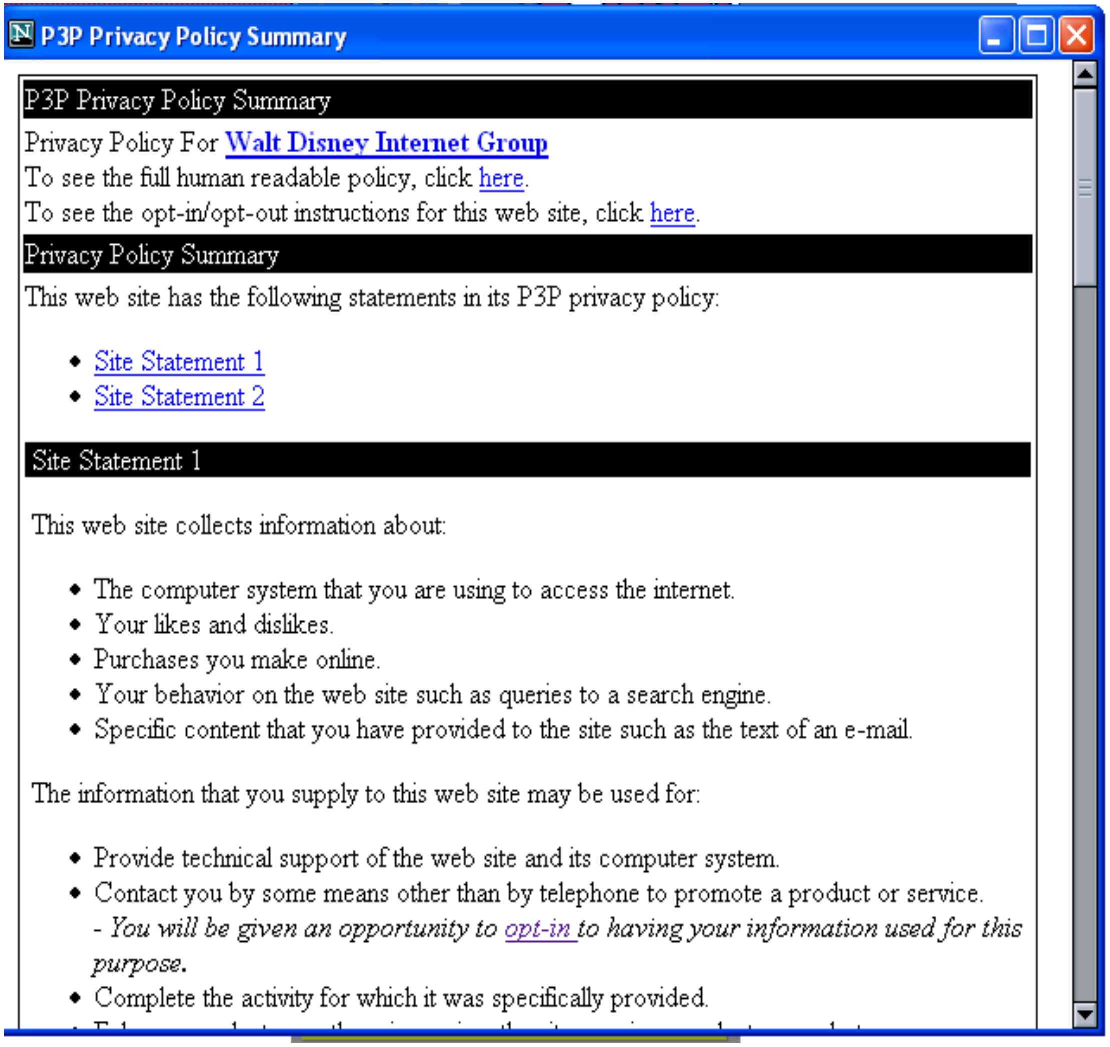
Server Secure: no

Expires: Wednesday, December 30, 2037 10:59:55 AM

Policy: stores identifiable information without any user consent

□ Don't allow removed cookies to be reaccepted later

Users can view English translation of (part of) compact policy in Cookie Manager



P3P Privacy Policy Summary

Privacy Policy For **Walt Disney Internet Group**

To see the full human readable policy, click here.

To see the opt-in/opt-out instructions for this web site, click here.

Privacy Policy Summary

This web site has the following statements in its P3P privacy policy:

- Site Statement 1
- Site Statement 2

Site Statement 1

This web site collects information about:

- The computer system that you are using to access the internet.
- Your likes and dislikes.
- Purchases you make online.
- Your behavior on the web site such as queries to a search engine.
- Specific content that you have provided to the site such as the text of an e-mail.

The information that you supply to this web site may be used for:

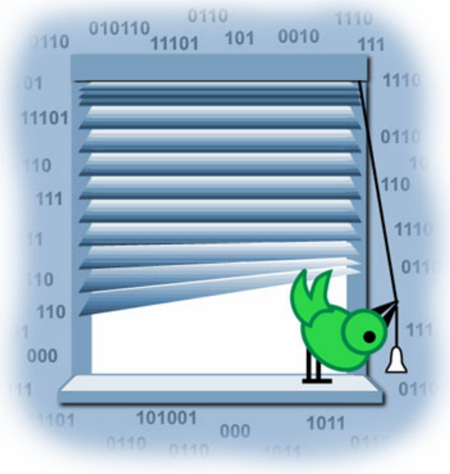
- Provide technical support of the web site and its computer system.
- Contact you by some means other than by telephone to promote a product or service.
  - *You will be given an opportunity to opt-in to having your information used for this purpose.*
- Complete the activity for which it was specifically provided.

A policy summary can be generated automatically from full P3P policy

What’s in a P3P policy?

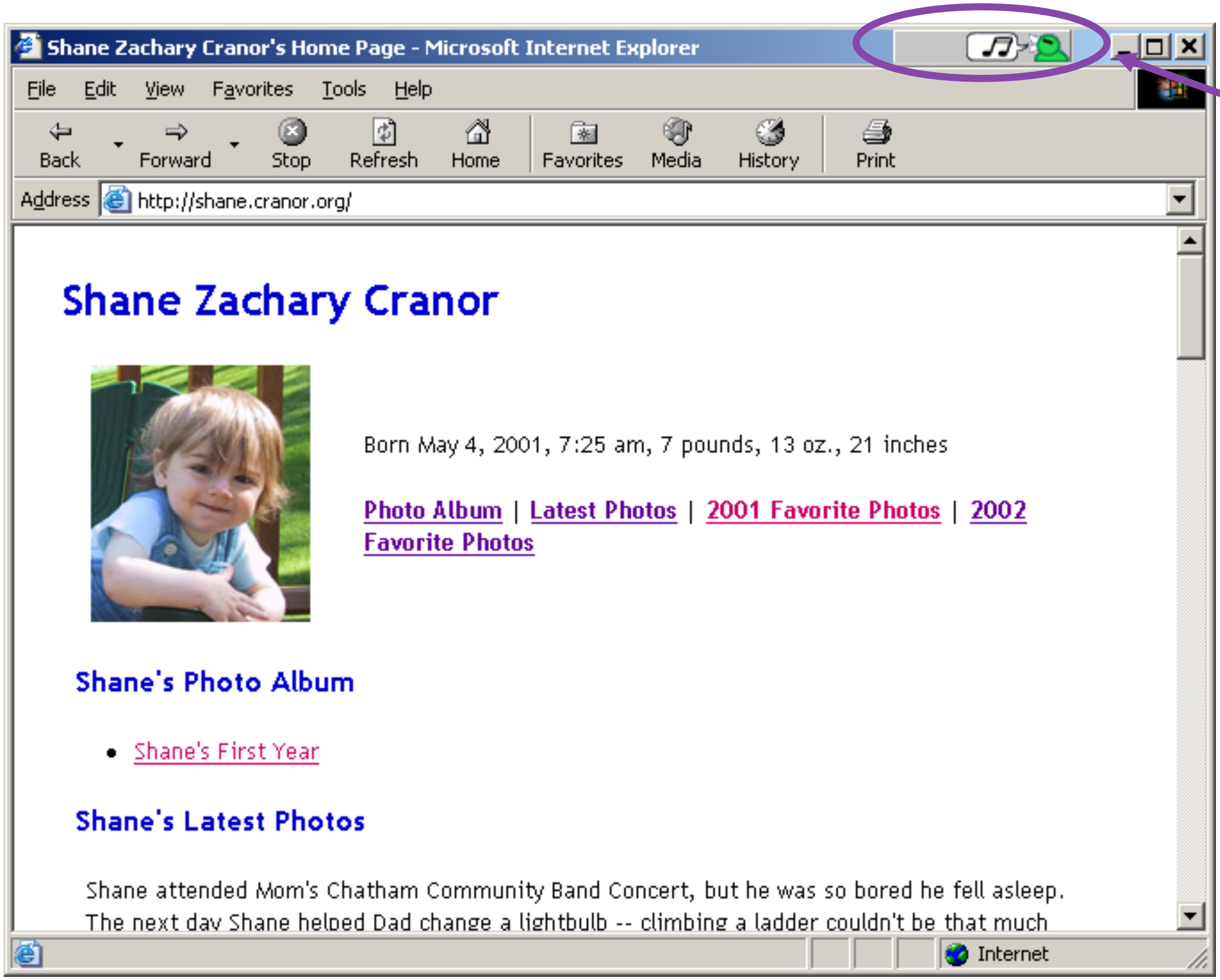
- Name and contact information for site
- The kind of access provided
- Mechanisms for resolving privacy disputes
- The kinds of data collected
- How collected data is used, and whether individuals can opt-in or opt-out of any of these uses
- Whether/when data may be shared and whether there is opt-in or opt-out
- Data retention policy

AT&T Privacy Bird



- Free download of beta from http://privacybird.com/
- “Browser helper object” for IE 5.01/5.5/6.0
- Reads P3P policies at all P3P-enabled sites automatically
- Puts bird icon at top of browser window that changes to indicate whether site matches user’s privacy preferences
- Clicking on bird icon gives more information
- Current version is information only – no cookie blocking

Chirping bird is privacy indicator



Shane Zachary Cranor's Home Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Favorites Media History Print
Address http://shane.cranor.org/
Internet

Shane Zachary Cranor

Born May 4, 2001, 7:25 am, 7 pounds, 13 oz., 21 inches

Photo Album | Latest Photos | 2001 Favorite Photos | 2002 Favorite Photos

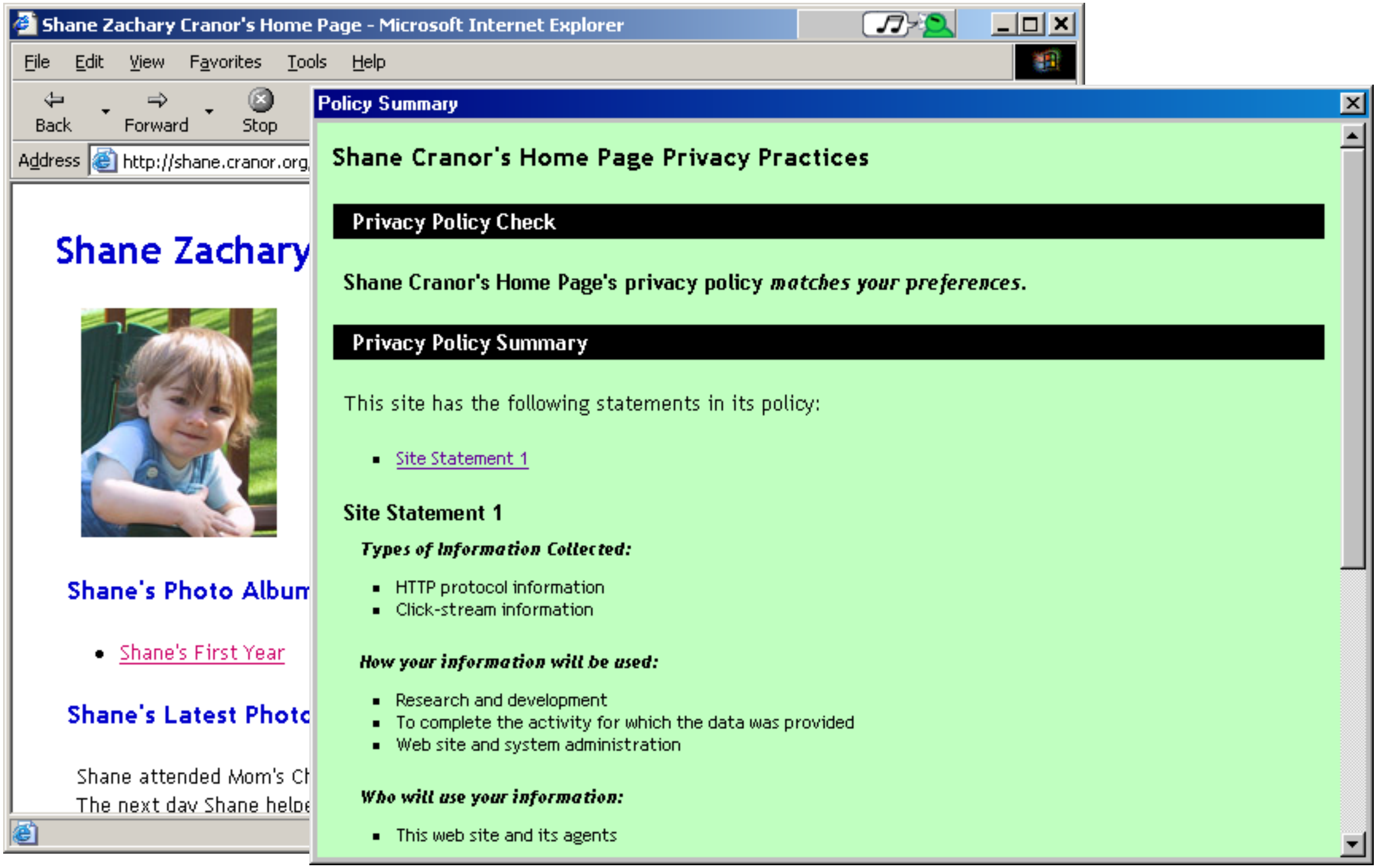
Shane's Photo Album

- Shane's First Year

Shane's Latest Photos

Shane attended Mom's Chatham Community Band Concert, but he was so bored he fell asleep. The next day Shane helped Dad change a lightbulb -- climbing a ladder couldn't be that much

Click on the bird for more info



Shane Cranor's Home Page Privacy Practices

Privacy Policy Check

Shane Cranor's Home Page's privacy policy *matches your preferences.*

Privacy Policy Summary

This site has the following statements in its policy:

- Site Statement 1

Site Statement 1

Types of Information Collected:

- HTTP protocol information
- Click-stream information

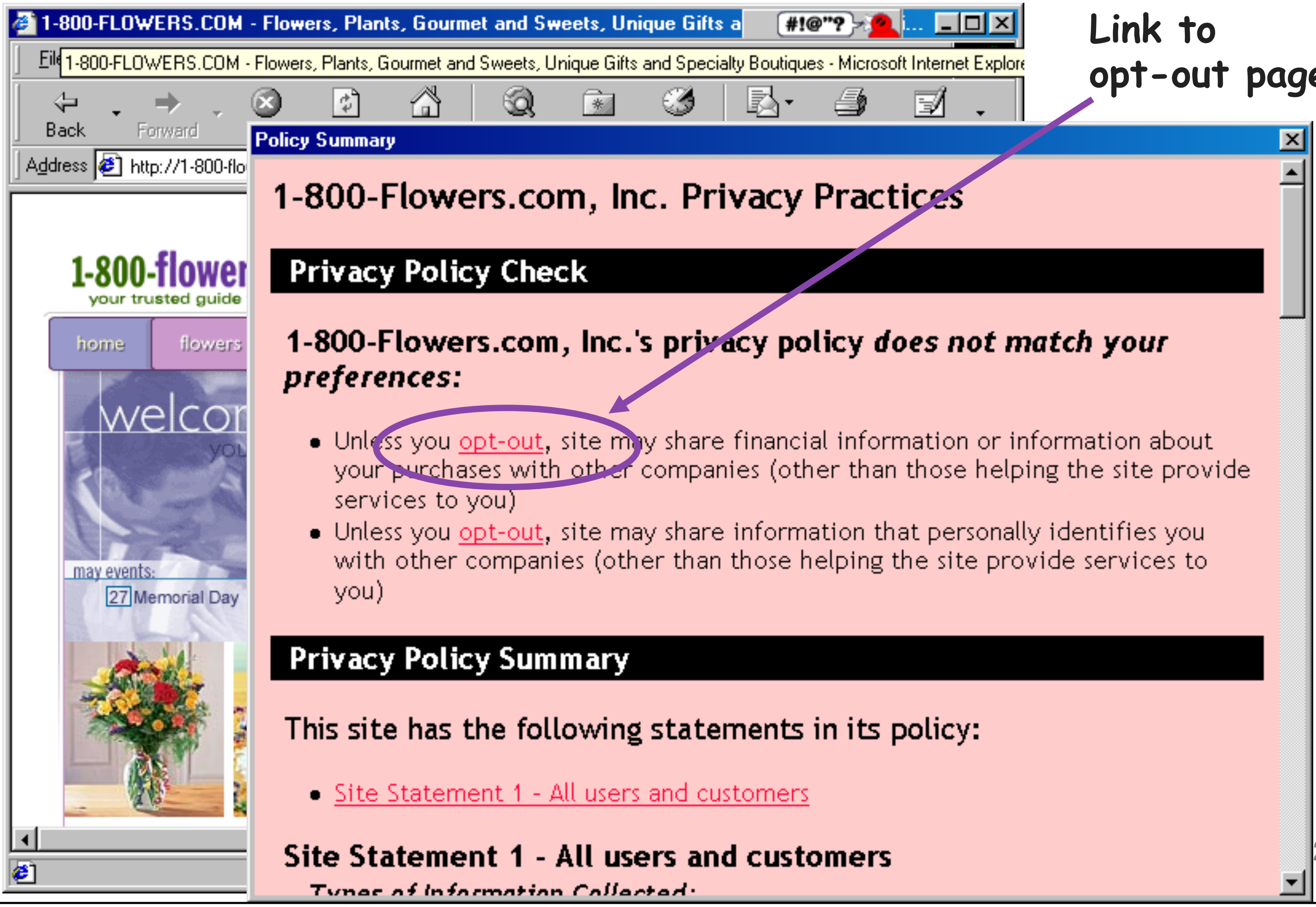
How your information will be used:

- Research and development
- To complete the activity for which the data was provided
- Web site and system administration

Who will use your information:

- This web site and its agents

Privacy policy summary - mismatch


1-800-FLOWERS.COM - Flowers, Plants, Gourmet and Sweets, Unique Gifts a
#!@"?
File
1-800-FLOWERS.COM - Flowers, Plants, Gourmet and Sweets, Unique Gifts and Specialty Boutiques - Microsoft Internet Explorer
Back
Forward
Address
http://1-800-flo
1-800-flower
your trusted guide
home
flowers
welcom
you
may events:
27 Memorial Day
Policy Summary

1-800-Flowers.com, Inc. Privacy Practices

Privacy Policy Check

1-800-Flowers.com, Inc.'s privacy policy *does not match your preferences:*

- Unless you opt-out, site may share financial information or information about your purchases with other companies (other than those helping the site provide services to you)
- Unless you opt-out, site may share information that personally identifies you with other companies (other than those helping the site provide services to you)

Privacy Policy Summary

This site has the following statements in its policy:

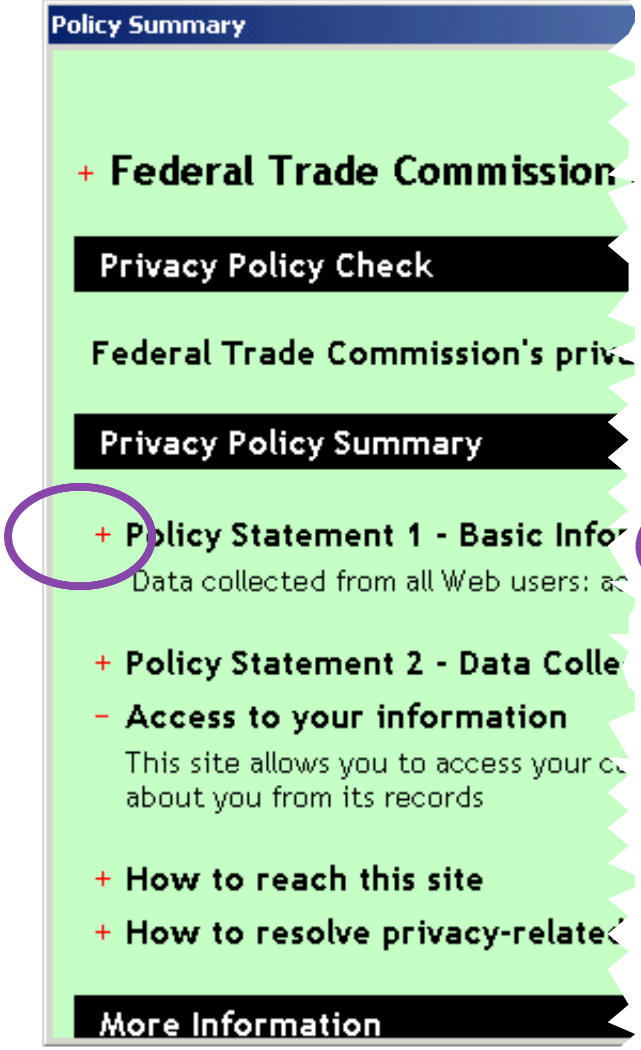
- Site Statement 1 - All users and customers

Site Statement 1 - All users and customers

Types of Information Collected:

Link to opt-out page

Expand/collapse added in beta 1.2



Policy Summary

+ **Federal Trade Commission**

Privacy Policy Check

Federal Trade Commission's priv

Privacy Policy Summary

+ **Policy Statement 1 - Basic Infor**

Data collected from all Web users: ac

+ **Policy Statement 2 - Data Colle**

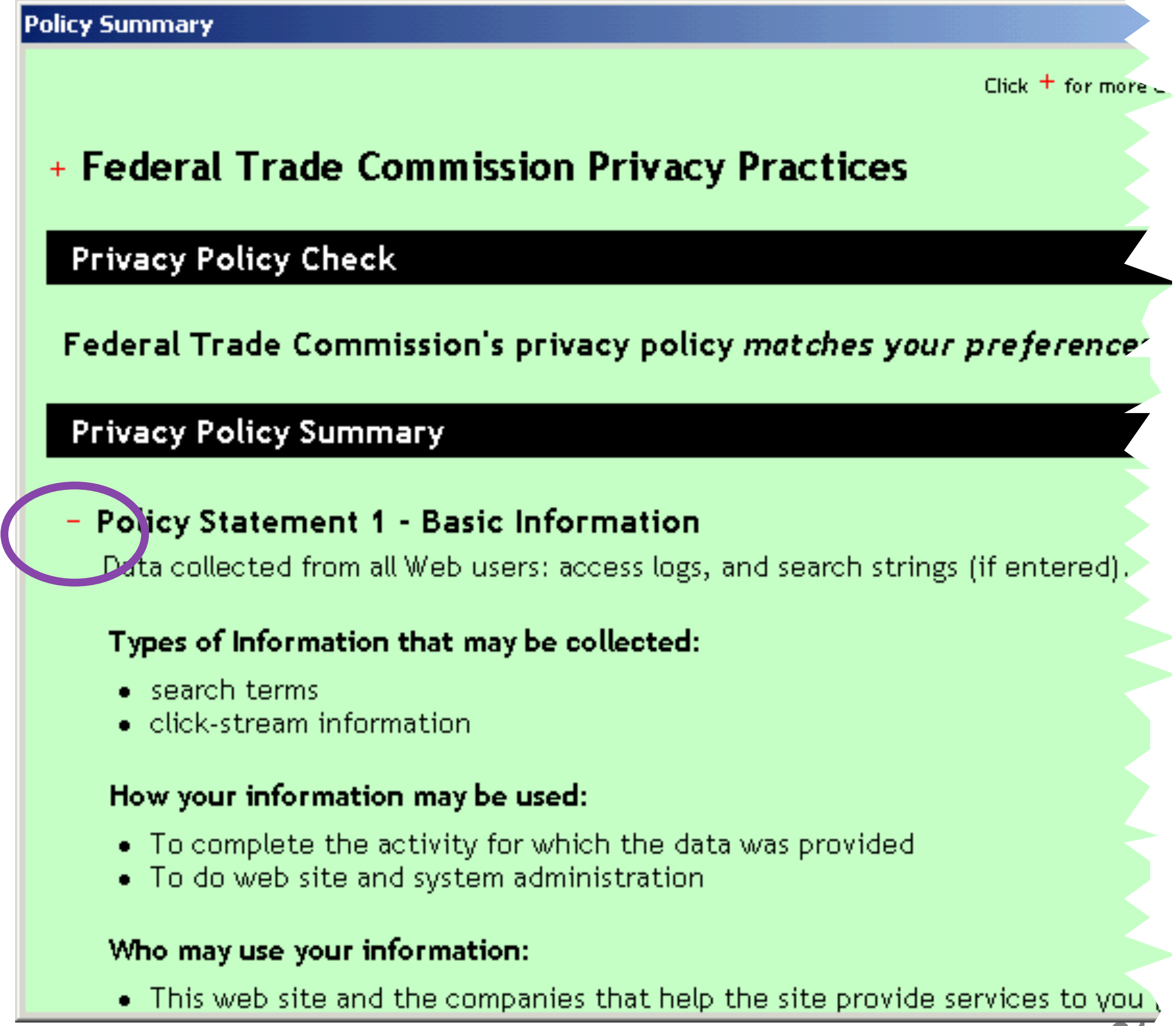
− **Access to your information**

This site allows you to access your co about you from its records

+ **How to reach this site**

+ **How to resolve privacy-relate**

More Information



Policy Summary

Click + for more

+ **Federal Trade Commission Privacy Practices**

Privacy Policy Check

Federal Trade Commission's privacy policy *matches your preference*

Privacy Policy Summary

− **Policy Statement 1 - Basic Information**

Data collected from all Web users: access logs, and search strings (if entered).

Types of Information that may be collected:

- search terms
- click-stream information

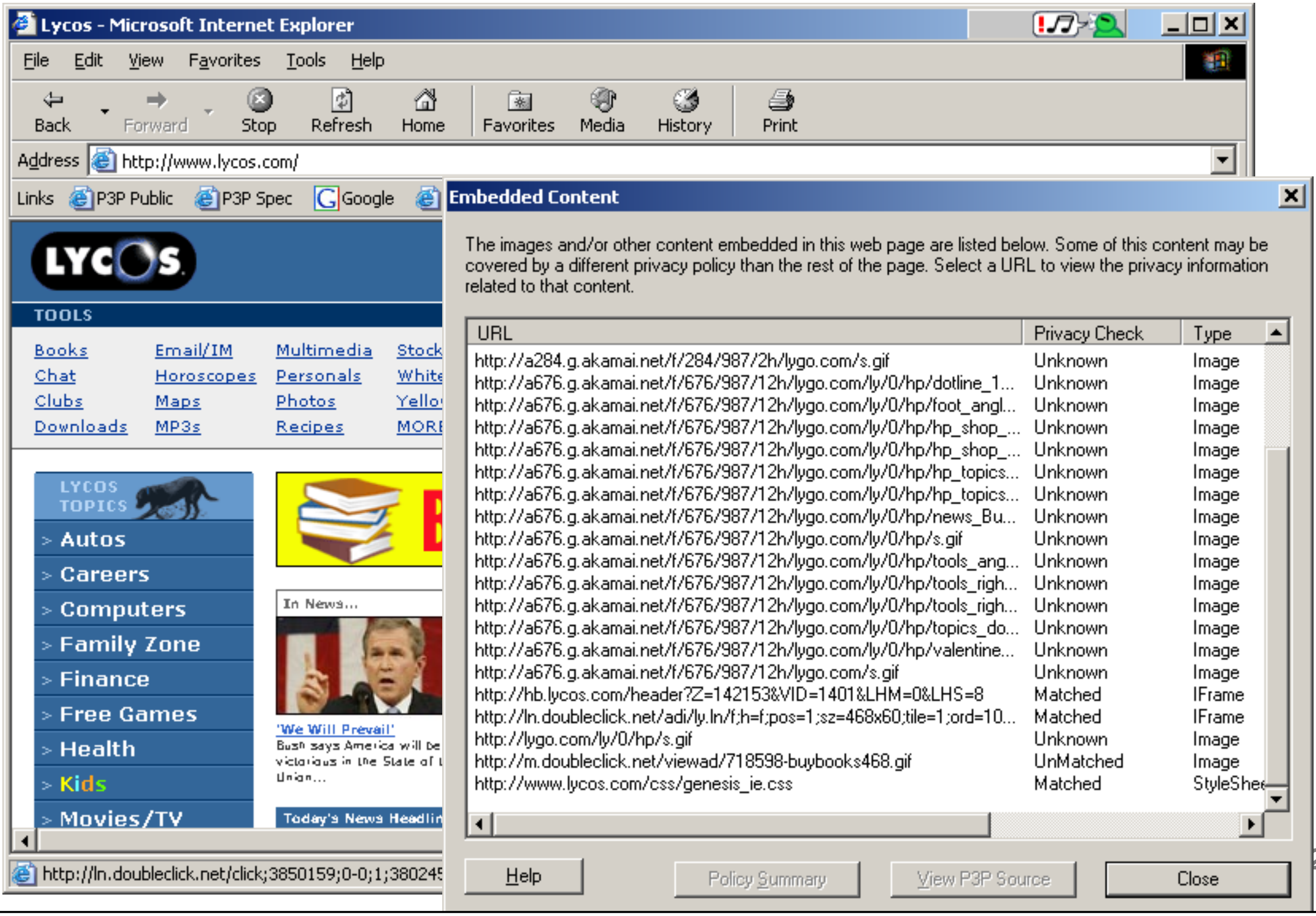
How your information may be used:

- To complete the activity for which the data was provided
- To do web site and system administration

Who may use your information:

- This web site and the companies that help the site provide services to you

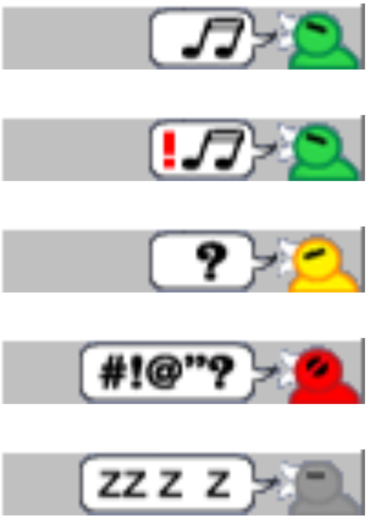
Bird checks policies for embedded content

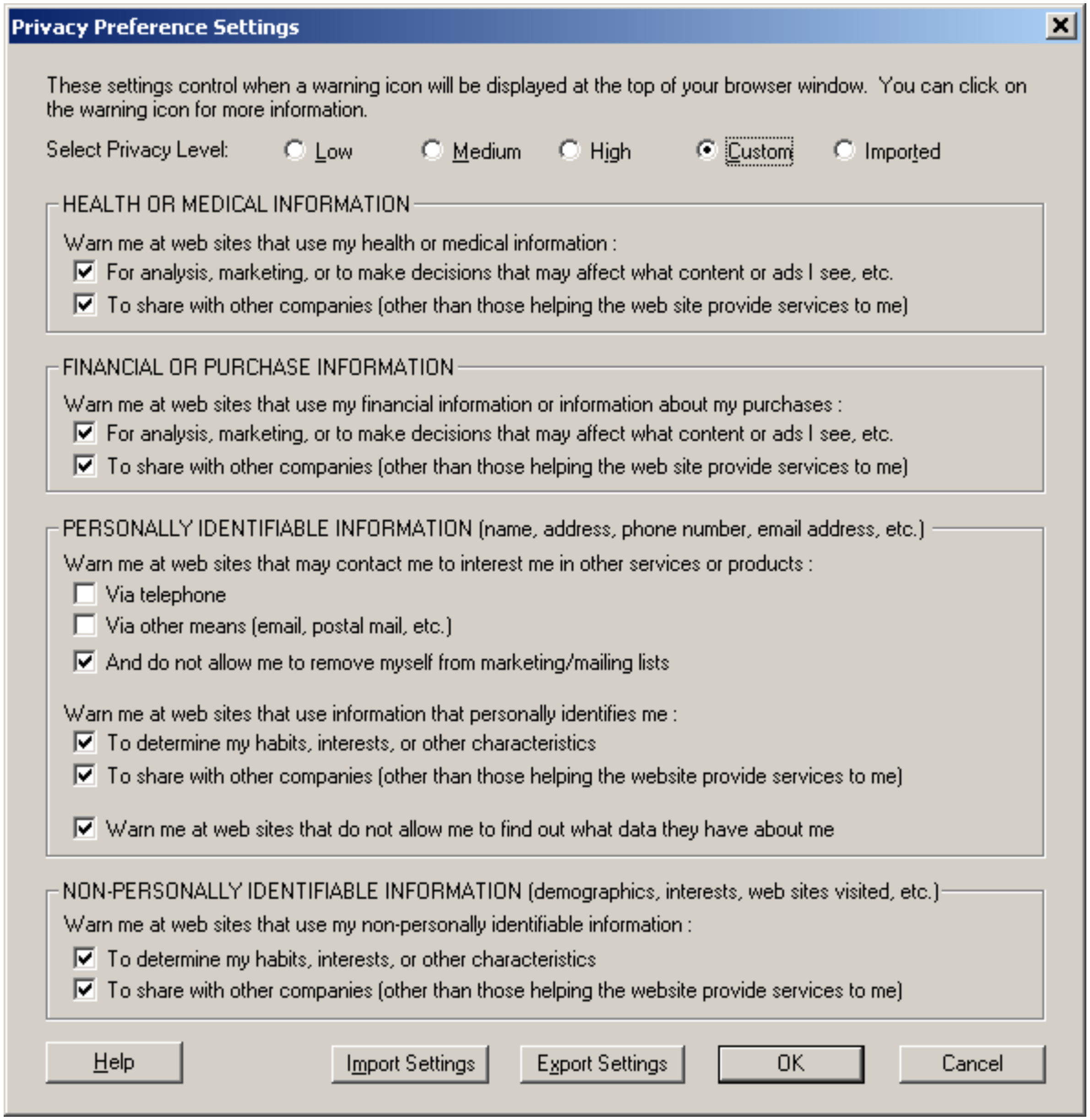


The images and/or other content embedded in this web page are listed below. Some of this content may be covered by a different privacy policy than the rest of the page. Select a URL to view the privacy information related to that content.

URL	Privacy Check	Type
http://a284.g.akamai.net/f/284/987/2h/lygo.com/s.gif	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/dotline_1...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/foot_angl...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/hp_shop_...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/hp_shop_...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/hp_topics...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/hp_topics...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/news_Bu...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/s.gif	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/tools_ang...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/tools_righ...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/tools_righ...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/topics_do...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/ly/0/hp/valentine...	Unknown	Image
http://a676.g.akamai.net/f/676/987/12h/lygo.com/s.gif	Unknown	Image
http://hb.lycos.com/header?Z=142153&VID=1401&LHM=0&LHS=8	Matched	IFrame
http://ln.doubleclick.net/adi/ly.ln/f;h=f;pos=1;sz=468x60;tile=1;ord=10...	Matched	IFrame
http://lygo.com/ly/0/hp/s.gif	Unknown	Image
http://m.doubleclick.net/viewad/718598-buybooks468.gif	UnMatched	Image
http://www.lycos.com/css/genesis_ie.css	Matched	StyleShe

Privacy Bird icons





Privacy Preference Settings

These settings control when a warning icon will be displayed at the top of your browser window. You can click on the warning icon for more information.

Select Privacy Level: ○ Low ○ Medium ○ High ● Custom ○ Imported

HEALTH OR MEDICAL INFORMATION

Warn me at web sites that use my health or medical information :

- ☑ For analysis, marketing, or to make decisions that may affect what content or ads I see, etc.
- ☑ To share with other companies (other than those helping the web site provide services to me)

FINANCIAL OR PURCHASE INFORMATION

Warn me at web sites that use my financial information or information about my purchases :

- ☑ For analysis, marketing, or to make decisions that may affect what content or ads I see, etc.
- ☑ To share with other companies (other than those helping the web site provide services to me)

PERSONALLY IDENTIFIABLE INFORMATION (name, address, phone number, email address, etc.)

Warn me at web sites that may contact me to interest me in other services or products :

- □ Via telephone
- □ Via other means (email, postal mail, etc.)
- ☑ And do not allow me to remove myself from marketing/mailing lists

Warn me at web sites that use information that personally identifies me :

- ☑ To determine my habits, interests, or other characteristics
- ☑ To share with other companies (other than those helping the website provide services to me)

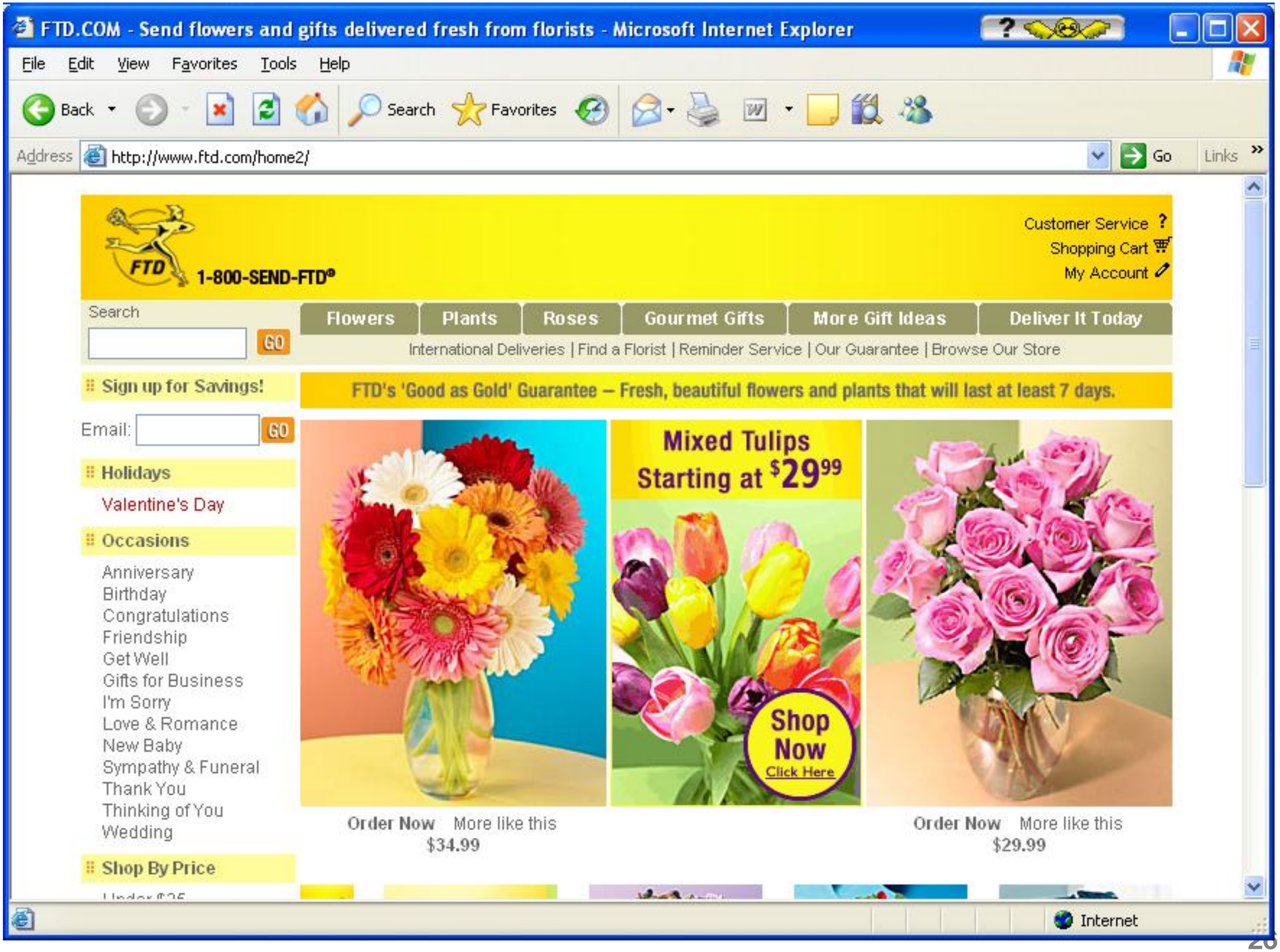
☑ Warn me at web sites that do not allow me to find out what data they have about me

NON-PERSONALLY IDENTIFIABLE INFORMATION (demographics, interests, web sites visited, etc.)

Warn me at web sites that use my non-personally identifiable information :

- ☑ To determine my habits, interests, or other characteristics
- ☑ To share with other companies (other than those helping the website provide services to me)

Example:
Sending flowers


FTD.COM - Send flowers and gifts delivered fresh from florists - Microsoft Internet Explorer
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Address
http://www.ftd.com/home2/
Go
Links
Internet

FTD 1-800-SEND-FTD®

Customer Service ?
Shopping Cart
My Account

Search GO

Flowers | Plants | Roses | Gourmet Gifts | More Gift Ideas | Deliver It Today

International Deliveries | Find a Florist | Reminder Service | Our Guarantee | Browse Our Store

Sign up for Savings!

Email: GO

FTD's 'Good as Gold' Guarantee – Fresh, beautiful flowers and plants that will last at least 7 days.

Holidays

Valentine's Day

Occasions

Anniversary
Birthday
Congratulations
Friendship
Get Well
Gifts for Business
I'm Sorry
Love & Romance
New Baby
Sympathy & Funeral
Thank You
Thinking of You
Wedding

Shop By Price

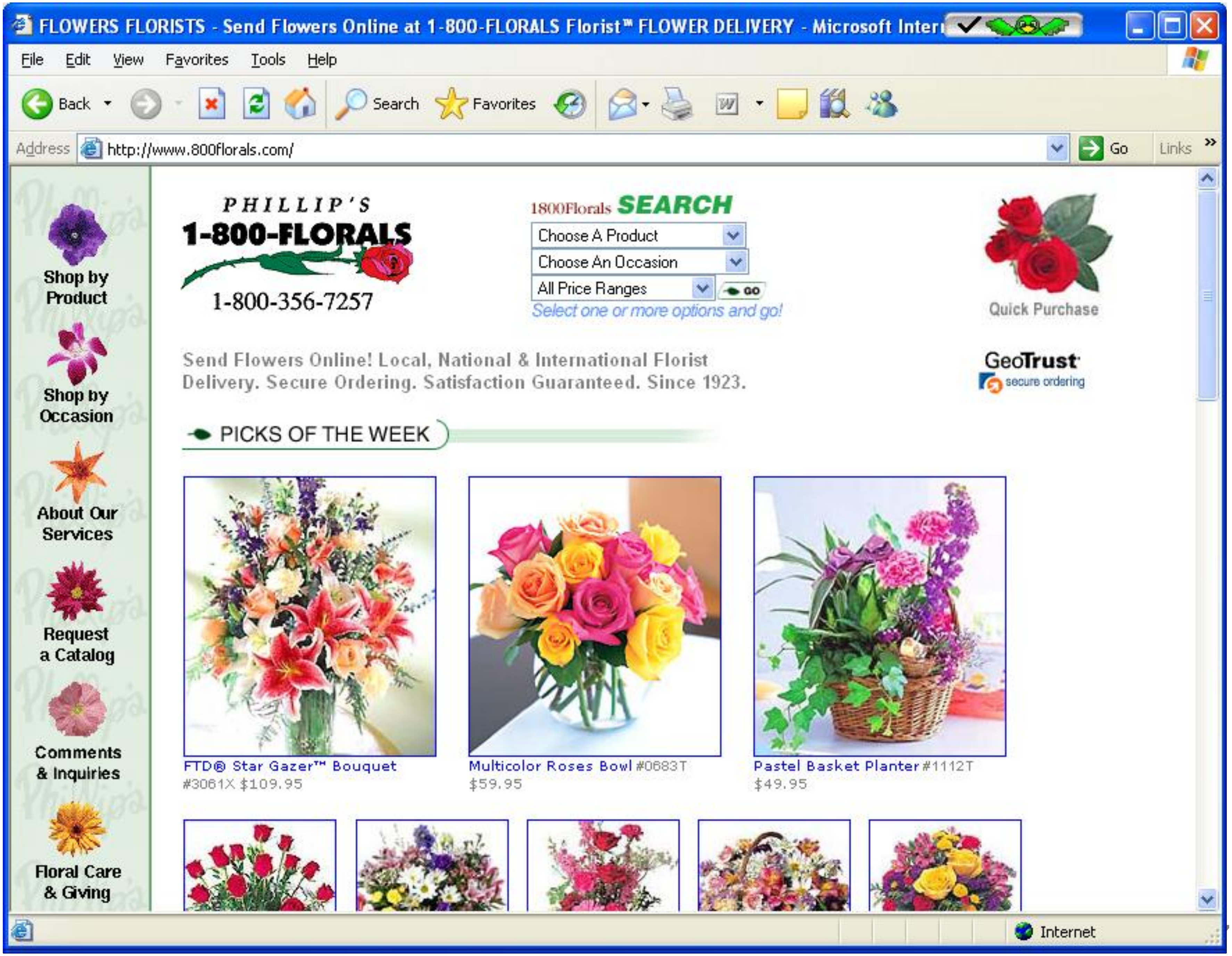
Under $25

Mixed Tulips Starting at $29.99

Shop Now Click Here

Order Now More like this
$34.99

Order Now More like this
$29.99



http://www.800florals.com/

Select one or more options and go!

Send Flowers Online! Local, National & International Florist Delivery. Secure Ordering. Satisfaction Guaranteed. Since 1923.

PICKS OF THE WEEK

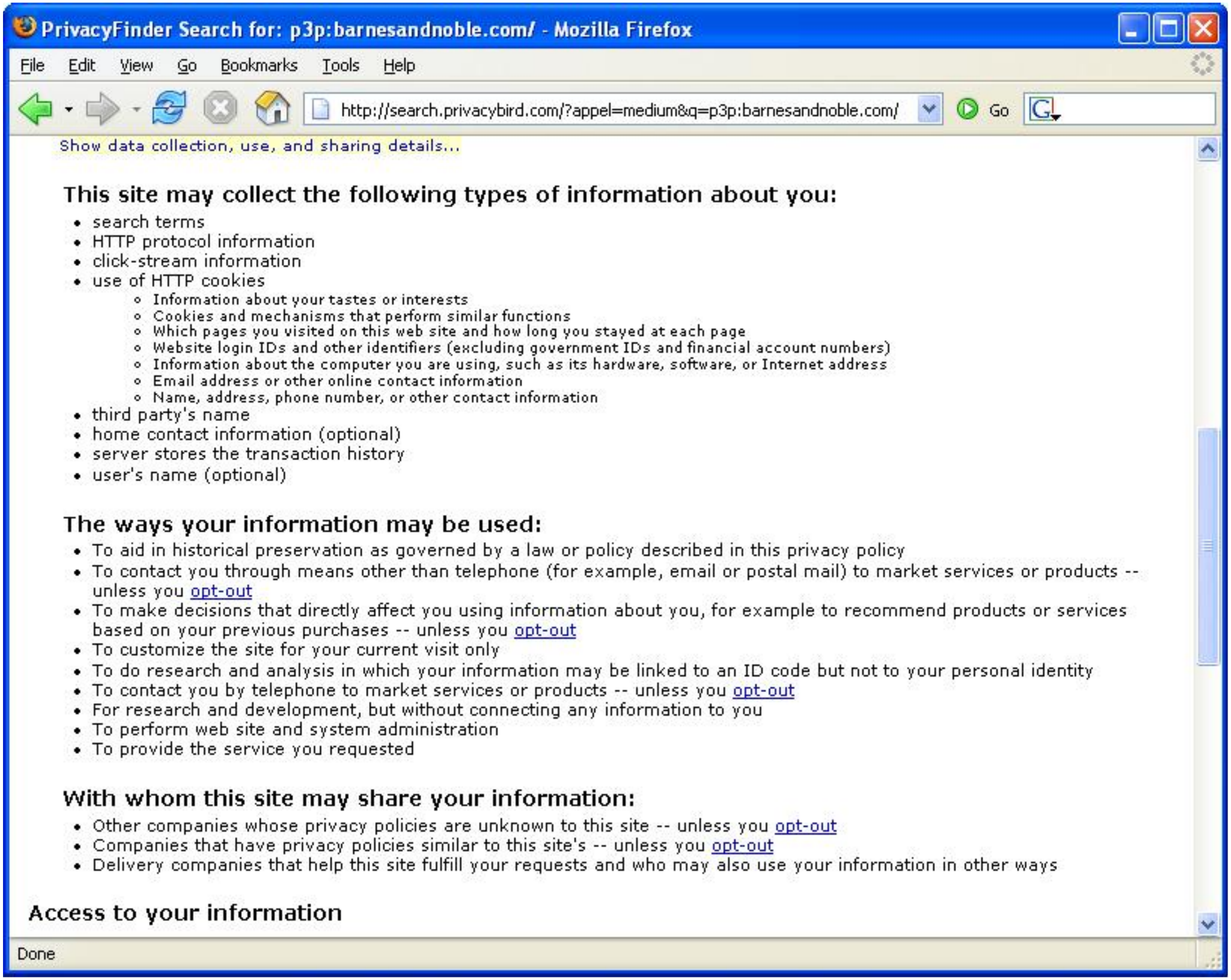
FTD® Star Gazer™ Bouquet #3061X $109.95

Multicolor Roses Bowl #0683T $59.95

Pastel Basket Planter #1112T $49.95

Privacy Finder

- Prototype developed at AT&T Labs, improved and deployed by CUPS
- Uses Google or Yahoo! API to retrieve search results
- Checks each result for P3P policy
- Evaluates P3P policy against user’s preferences
- Reorders search results
- Composes search result page with privacy annotations next to each P3P-enabled result
- Users can retrieve “Privacy Report” similar to Privacy Bird policy summary



PrivacyFinder Search for: p3p:barnesandnoble.com/ - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
http://search.privacybird.com/?appel=medium&q=p3p:barnesandnoble.com/
Go

Show data collection, use, and sharing details...

This site may collect the following types of information about you:

- search terms
- HTTP protocol information
- click-stream information
- use of HTTP cookies
    - Information about your tastes or interests
    - Cookies and mechanisms that perform similar functions
    - Which pages you visited on this web site and how long you stayed at each page
    - Website login IDs and other identifiers (excluding government IDs and financial account numbers)
    - Information about the computer you are using, such as its hardware, software, or Internet address
    - Email address or other online contact information
    - Name, address, phone number, or other contact information
- third party's name
- home contact information (optional)
- server stores the transaction history
- user's name (optional)

The ways your information may be used:

- To aid in historical preservation as governed by a law or policy described in this privacy policy
- To contact you through means other than telephone (for example, email or postal mail) to market services or products -- unless you opt-out
- To make decisions that directly affect you using information about you, for example to recommend products or services based on your previous purchases -- unless you opt-out
- To customize the site for your current visit only
- To do research and analysis in which your information may be linked to an ID code but not to your personal identity
- To contact you by telephone to market services or products -- unless you opt-out
- For research and development, but without connecting any information to you
- To perform web site and system administration
- To provide the service you requested

With whom this site may share your information:

- Other companies whose privacy policies are unknown to this site -- unless you opt-out
- Companies that have privacy policies similar to this site's -- unless you opt-out
- Delivery companies that help this site fulfill your requests and who may also use your information in other ways

Access to your information

Done

Demo

No P3P syntax checking in IE

- IE accepts P3P policies containing bogus tokens or missing required tokens
- Example of valid compact policy:

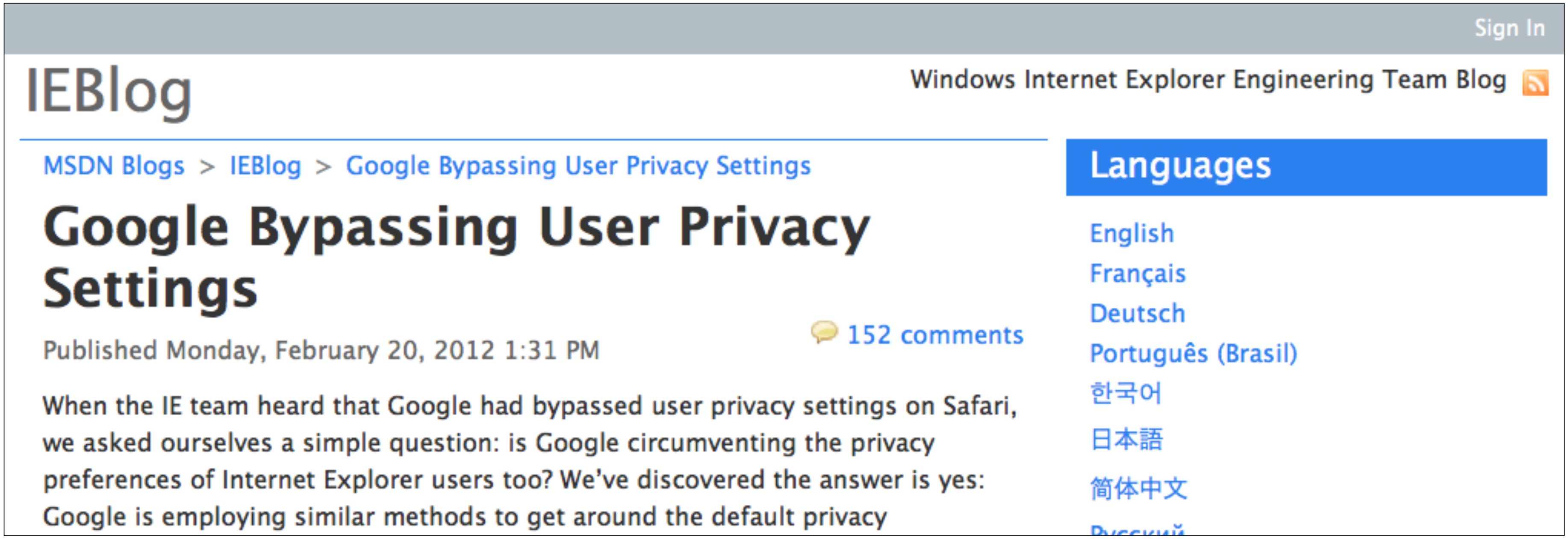
rockyou® **CAO DSP COR CURa ADMa DEVa OUR IND PHY ONL UNI COM NAV INT DEM PRE**

- Examples of invalid policies accepted by IE:

amazon.com **AMZN**

facebook **Facebook does not have a P3P policy. Learn why here: http://fb.me/p3p**

P. Leon, L. Cranor, A. McDonald, and R. McGuire. Token Attempt: The Misrepresentation of Website Privacy Policies through the Misuse of P3P Compact Policy Tokens. WPES 2010.


Sign In
IEBlog
Windows Internet Explorer Engineering Team Blog
MSDN Blogs > IEBlog > Google Bypassing User Privacy Settings
Languages
English
Français
Deutsch
Português (Brasil)
한국어
日本語
简体中文
Русский

Google Bypassing User Privacy Settings

Published Monday, February 20, 2012 1:31 PM

152 comments

When the IE team heard that Google had bypassed user privacy settings on Safari, we asked ourselves a simple question: is Google circumventing the privacy preferences of Internet Explorer users too? We've discovered the answer is yes: Google is employing similar methods to get around the default privacy

Google

Microsoft uses a "self-declaration" protocol (known as "P3P") dating from 2002 …. It is well known – including by Microsoft – that it is impractical to comply with Microsoft's request while providing modern web functionality.

Carnegie Mellon University School of Computer Science

Towards Usable Privacy Policies:

The Usable Privacy Policies Project

Florian Schaub

March 17, 2015

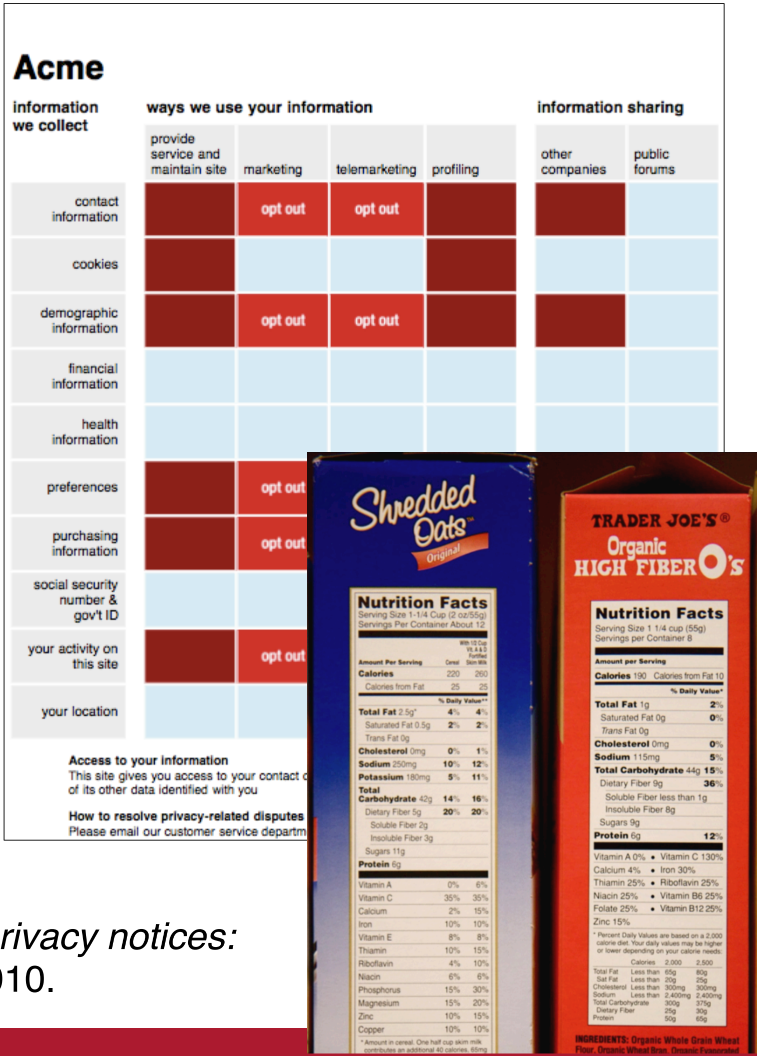
Why privacy policies?

- Transparency about a service provider’s data practices
- Notice & Choice framework in the US
- Informed(?) user consent

- Goal: Reduce power asymmetry between provider and user

Proposals to improve notices

- Summary interfaces and layered privacy policies
  - e.g. privacy nutrition labels, short notices, privacy icons
- Machine-readable privacy policies (e.g. P3P, DNT)



Acme

information we collect	provide service and maintain site	marketing	telemarketing	profiling	other companies	public forums
contact information	■	opt out	opt out	■	■	□
cookies	■	□	□	■	□	□
demographic information	■	opt out	opt out	■	■	□
financial information	□	□	□	□	□	□
health information	□	□	□	□	□	□
preferences	■	opt out				
purchasing information	■	opt out				
social security number & gov't ID	□	□				
your activity on this site	■	opt out				
your location	□	□				

ways we use your information: provide service and maintain site, marketing, telemarketing, profiling

information sharing: other companies, public forums

Access to your information
This site gives you access to your contact d
of its other data identified with you

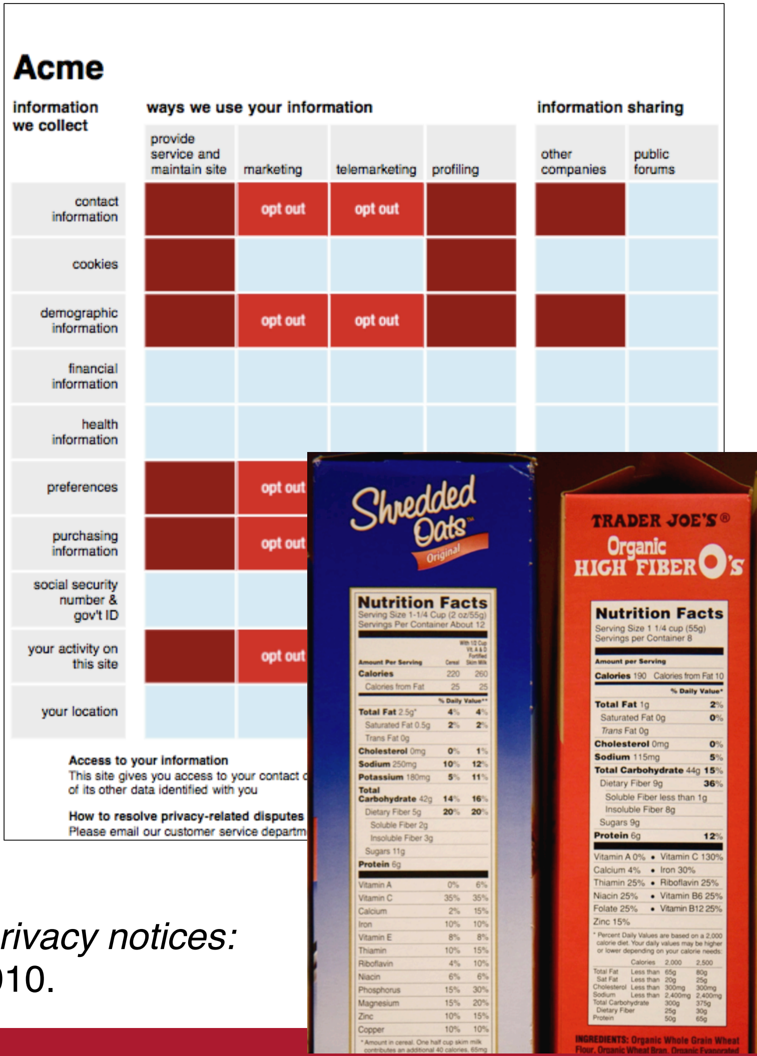
How to resolve privacy-related disputes
Please email our customer service departm

P. G. Kelley, L. Cesca, J. Bresee & L. F. Cranor *Standardizing privacy notices: an online study of the nutrition label approach,* CHI '10, ACM 2010.

Proposals to improve notices

- Summary interfaces and layered privacy policies
  - e.g. privacy nutrition labels, short notices, privacy icons
- Machine-readable privacy policies (e.g. P3P, DNT)

- **Lack of industry support & adoption incentives**



Acme

information we collect	ways we use your information: provide service and maintain site	marketing	telemarketing	profiling	information sharing: other companies	public forums
contact information	🟥	opt out	opt out	🟥	🟥	🟦
cookies	🟥	🟦	🟦	🟥	🟦	🟦
demographic information	🟥	opt out	opt out	🟥	🟥	🟦
financial information	🟦	🟦	🟦	🟦	🟦	🟦
health information	🟦	🟦	🟦	🟦	🟦	🟦
preferences	🟥	opt out				
purchasing information	🟥	opt out				
social security number & gov't ID	🟦	🟦				
your activity on this site	🟥	opt out				
your location	🟦	🟦				

Access to your information
This site gives you access to your contact d
of its other data identified with you

How to resolve privacy-related disputes
Please email our customer service departm

Shredded Oats™ Original

Nutrition Facts
Serving Size 1-1/4 Cup (2 oz/55g)
Servings Per Container About 12

Amount Per Serving	Cereal	With 1/2 Cup Vit. A & D Fortified Skim Milk
Calories	220	260
Calories from Fat	25	25
	% Daily Value**	
Total Fat 2.5g*	**4%**	**4%**
Saturated Fat 0.5g	**2%**	**2%**
Trans Fat 0g		
Cholesterol 0mg	**0%**	**1%**
Sodium 250mg	**10%**	**12%**
Potassium 180mg	**5%**	**11%**
Total Carbohydrate 42g	**14%**	**16%**
Dietary Fiber 5g	**20%**	**20%**
Soluble Fiber 2g		
Insoluble Fiber 3g		
Sugars 11g		
Protein 6g		
Vitamin A	0%	6%
Vitamin C	35%	35%
Calcium	2%	15%
Iron	10%	10%
Vitamin E	8%	8%
Thiamin	10%	15%
Riboflavin	4%	10%
Niacin	6%	6%
Phosphorus	15%	30%
Magnesium	15%	20%
Zinc	10%	15%
Copper	10%	10%

* Amount in cereal. One half cup skim milk contributes an additional 40 calories, 65mg

TRADER JOE'S® Organic HIGH FIBER O's

Nutrition Facts
Serving Size 1 1/4 cup (55g)
Servings per Container 8

Amount per Serving	
Calories 190 Calories from Fat 10	
	% Daily Value*
Total Fat 1g	**2%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 115mg	**5%**
Total Carbohydrate 44g	**15%**
Dietary Fiber 9g	**36%**
Soluble Fiber less than 1g	
Insoluble Fiber 8g	
Sugars 9g	
Protein 6g	**12%**

Vitamin A 0% • Vitamin C 130%
Calcium 4% • Iron 30%
Thiamin 25% • Riboflavin 25%
Niacin 25% • Vitamin B6 25%
Folate 25% • Vitamin B12 25%
Zinc 15%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Protein		50g	65g

INGREDIENTS: Organic Whole Grain Wheat Flour, Organic Wheat Bran, Organic Evaporated

P. G. Kelley, L. Cesca, J. Bresee & L. F. Cranor *Standardizing privacy notices: an online study of the nutrition label approach*, CHI '10, ACM 2010.

The Usable Privacy Policies Project

- NSF SaTC Frontier project (3.5 years)
- Principal investigators:
  - Norman Sadeh (Lead PI, CMU)
  - Alessandro Acquisti (CMU)
  - Travis Breaux (CMU)
  - Lorrie Cranor (CMU)
  - Aleecia McDonald (Stanford)
  - Joel Reidenberg (Fordham)
  - Noah A. Smith (CMU)

www.usable**privacy**.org

Carnegie
Mellon
University

FORDHAM UNIVERSITY
THE JESUIT UNIVERSITY OF NEW YORK

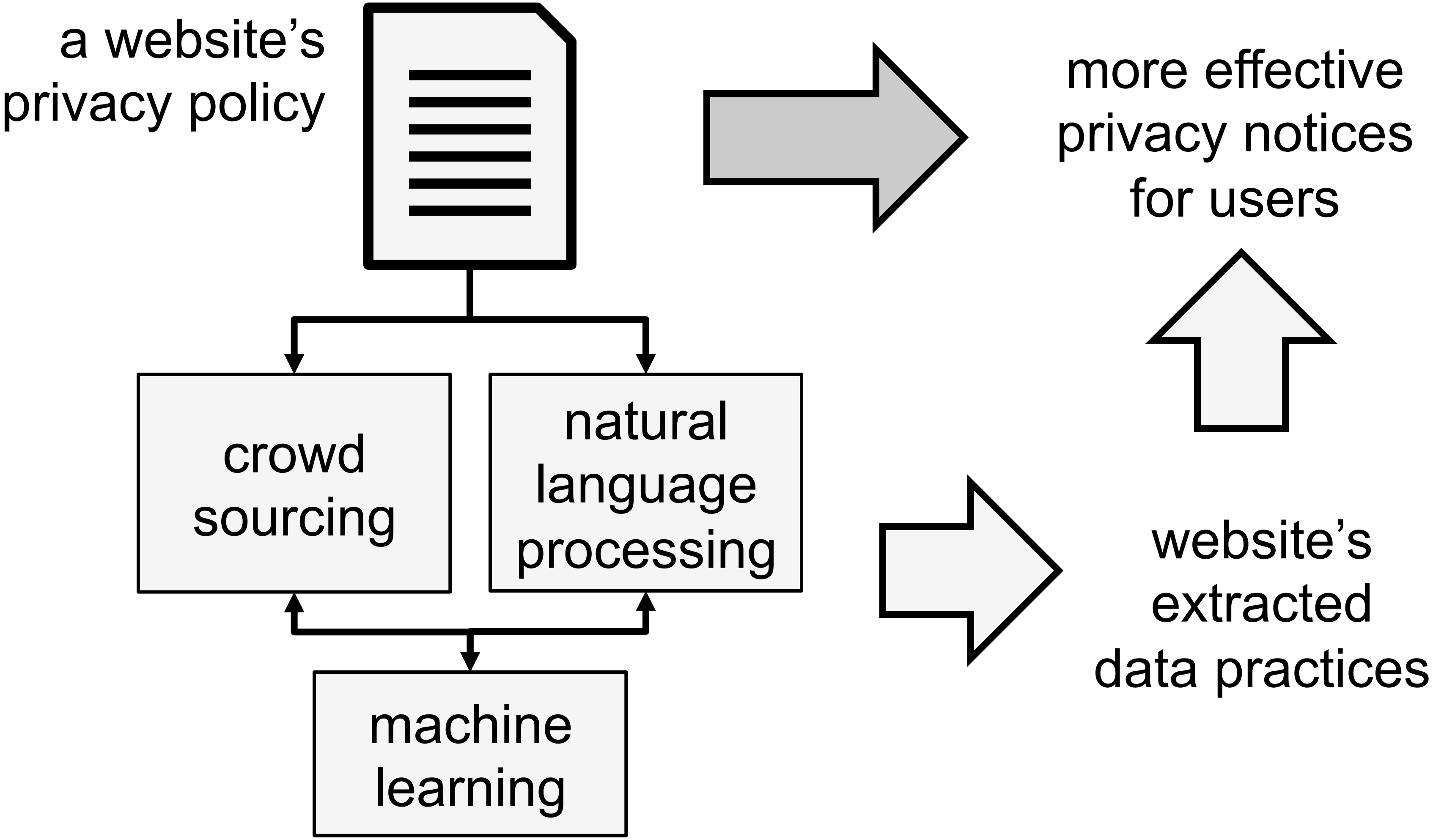
Stanford University

NSF

Our approach

- **Semi-automatically extract data practices from privacy policies** by combining crowdsourcing, machine learning & natural language processing
- Understanding and modeling **user's privacy preferences** to focus on data practices users care about
- Provide **effective user interfaces** for privacy notices
- **Large-scale analysis** of website privacy policies

General idea



a website's privacy policy

more effective privacy notices for users

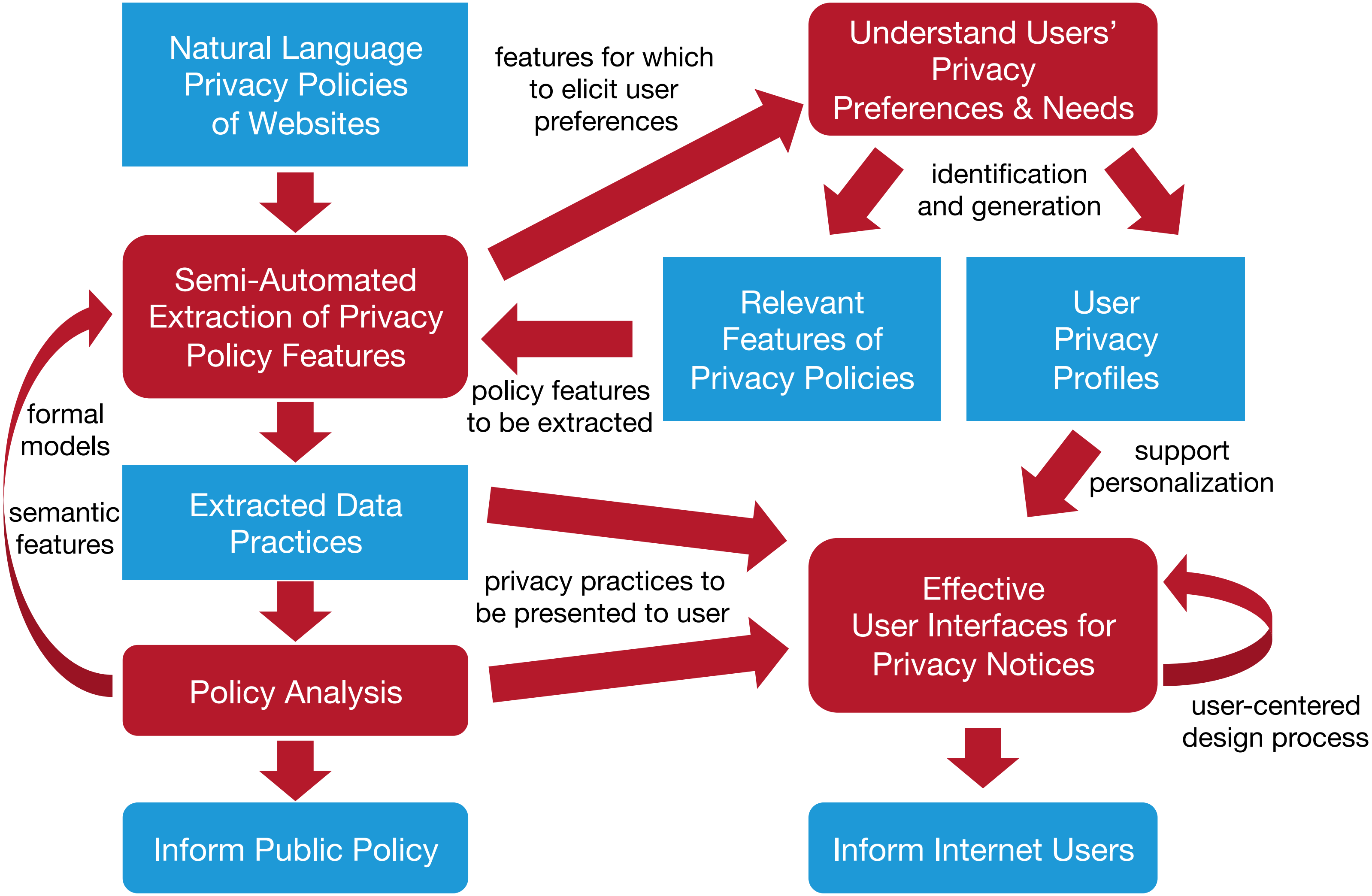
crowd sourcing

natural language processing

machine learning

website's extracted data practices

Overall Approach

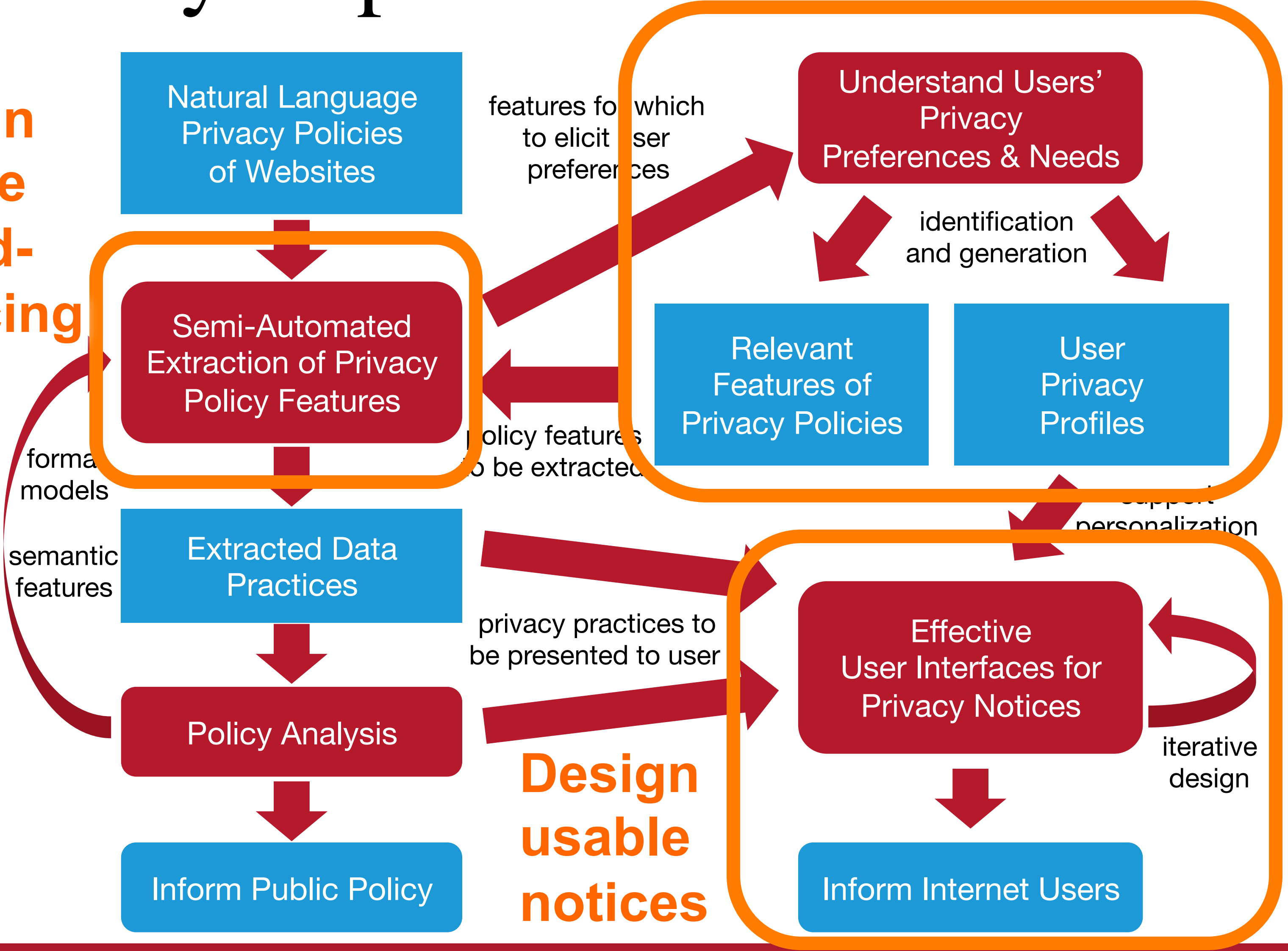

Natural Language Privacy Policies of Websites
features for which to elicit user preferences
Understand Users' Privacy Preferences & Needs
identification and generation
Semi-Automated Extraction of Privacy Policy Features
Relevant Features of Privacy Policies
User Privacy Profiles
policy features to be extracted
formal models
semantic features
support personalization
Extracted Data Practices
privacy practices to be presented to user
Effective User Interfaces for Privacy Notices
Policy Analysis
user-centered design process
Inform Public Policy
Inform Internet Users

Usability Aspects

Understand what data practices are relevant

Design usable crowd-sourcing tasks

Design usable notices


Natural Language Privacy Policies of Websites
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features for which to elicit user preferences
Understand Users' Privacy Preferences & Needs
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Relevant Features of Privacy Policies
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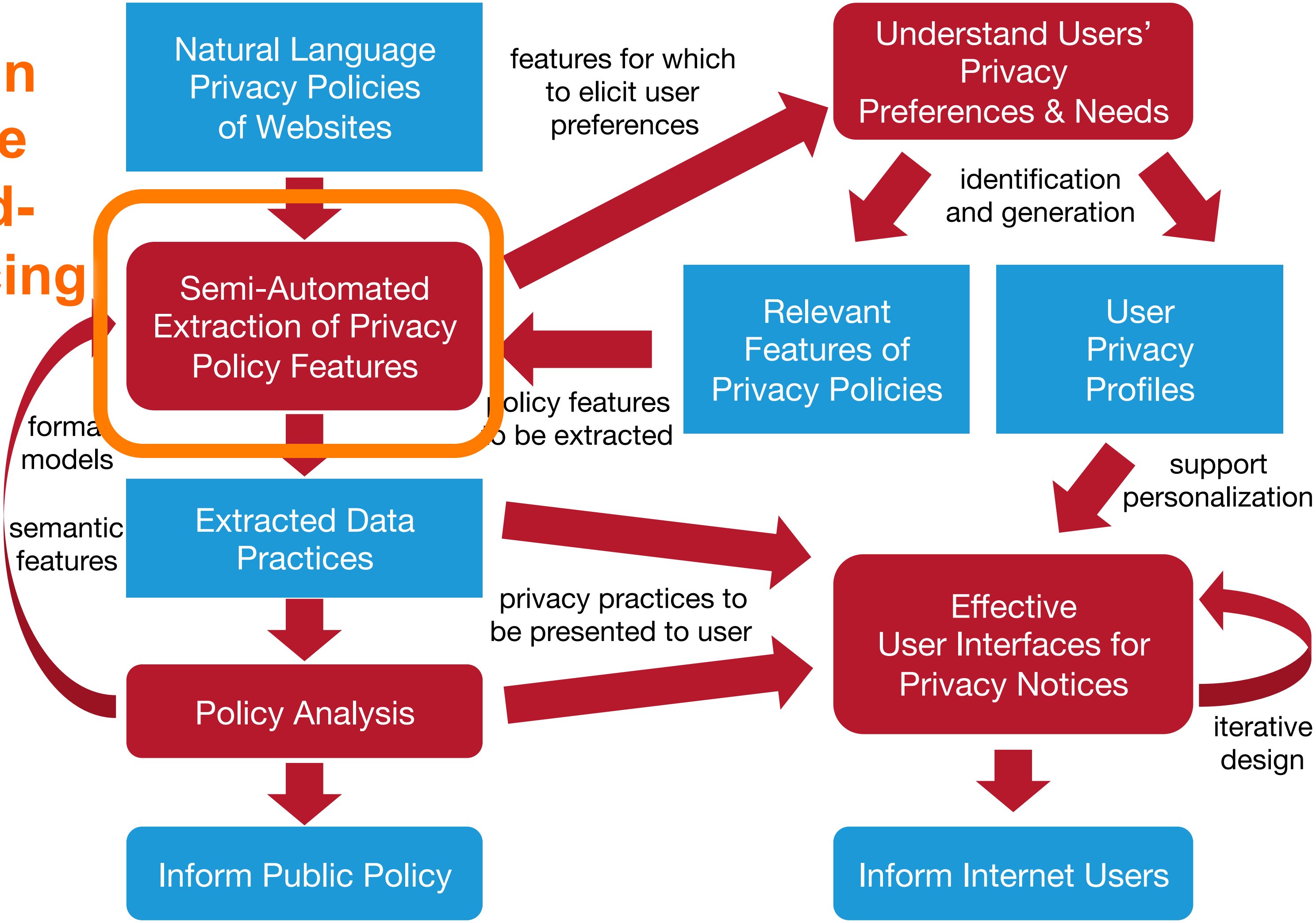

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Relevant data practices

- Analysis of 165 US federal class action cases
- Analysis of 116 FTC enforcement complaints
  - Unauthorized **disclosure of personal information**
  - Surreptitious **collection of personal information**
  - Unlawful **retention of personal information**
  - Failure to secure personal information

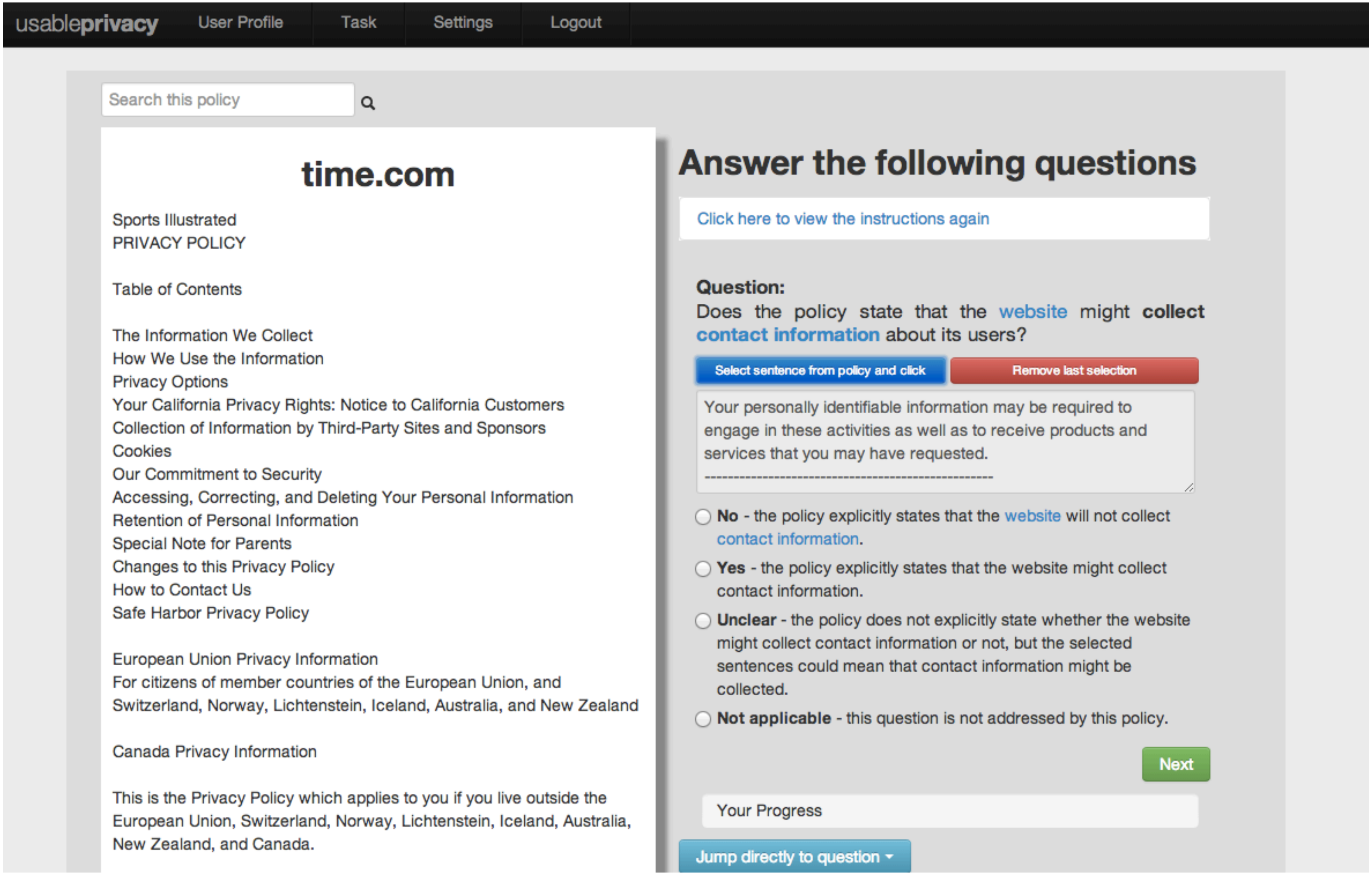
- Prior studies on privacy preferences & concerns
  - information types: **contact, location, financial health**

J. R. Reidenberg, N.C. Russell, A. J. Callen, S. Qasir, T. B. Norton, *Privacy harms and the effectiveness of the notice and choice framework,* I/S: Journal of Law and Policy for the Information Society, (to appear). Available on SSRN.

Crowdsourcing privacy policy extractions

- Not your typical crowdsourcing task
- Challenges
  - obtain **high quality annotations**
  - with **manageable cost**
  - from **non-expert crowd workers**
  - from **complex policy documents**

Privacy policy annotation tool



time.com

Sports Illustrated
PRIVACY POLICY

Table of Contents

The Information We Collect
How We Use the Information
Privacy Options
Your California Privacy Rights: Notice to California Customers
Collection of Information by Third-Party Sites and Sponsors
Cookies
Our Commitment to Security
Accessing, Correcting, and Deleting Your Personal Information
Retention of Personal Information
Special Note for Parents
Changes to this Privacy Policy
How to Contact Us
Safe Harbor Privacy Policy

European Union Privacy Information
For citizens of member countries of the European Union, and Switzerland, Norway, Lichtenstein, Iceland, Australia, and New Zealand

Canada Privacy Information

This is the Privacy Policy which applies to you if you live outside the European Union, Switzerland, Norway, Lichtenstein, Iceland, Australia, New Zealand, and Canada.

Answer the following questions

Click here to view the instructions again

Question:
Does the policy state that the website might **collect contact information** about its users?

Your personally identifiable information may be required to engage in these activities as well as to receive products and services that you may have requested.

○ **No** - the policy explicitly states that the website will not collect contact information.

○ **Yes** - the policy explicitly states that the website might collect contact information.

○ **Unclear** - the policy does not explicitly state whether the website might collect contact information or not, but the selected sentences could mean that contact information might be collected.

○ **Not applicable** - this question is not addressed by this policy.

Your Progress

Privacy policy annotation tool

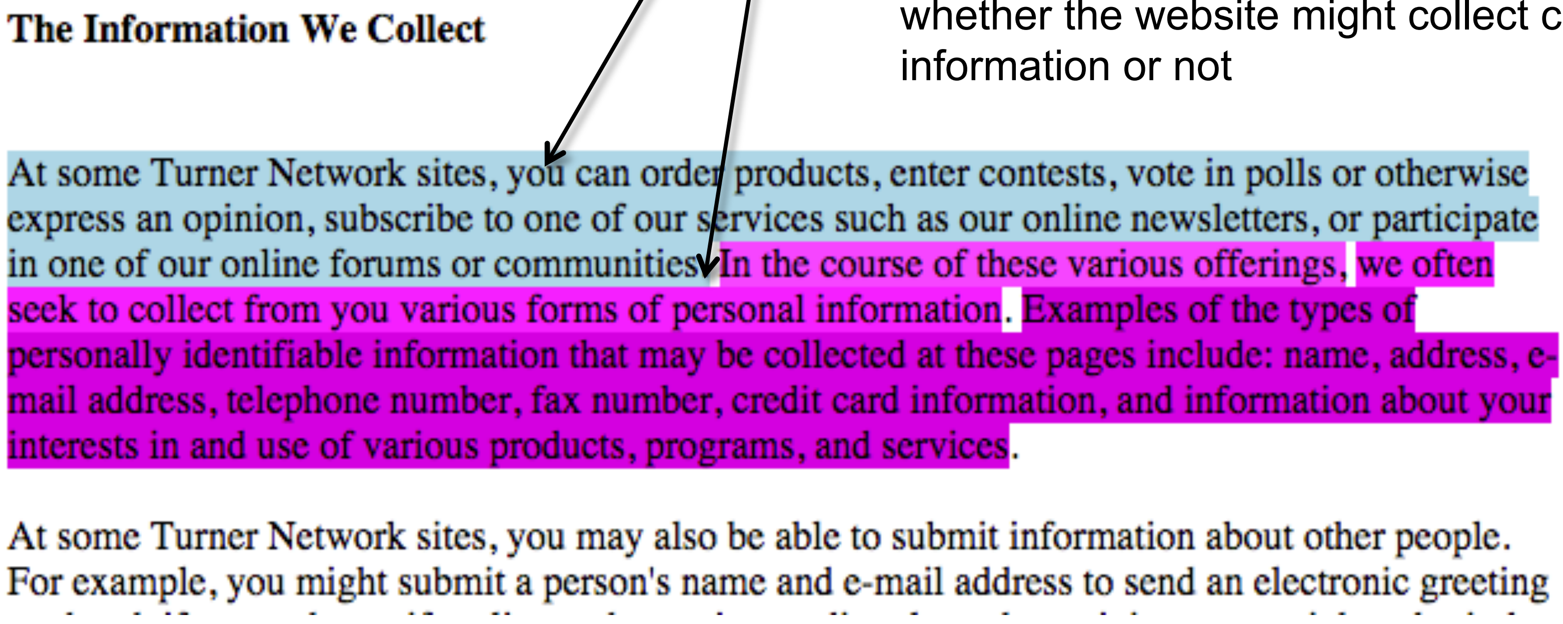
- Iterative design
- Goals & insights
  - policy and questions visible at same time
  - clear & accessible instructions
  - sequential and go-to navigation
  - sentence selection with undo
  - concise questions & response options, yet understandable
  - keyword definitions
  - unclear is a valid answer

Annotation results

collection of contact information

2x **Yes:** The policy explicitly states that the website might collect contact information

6x **Unclear:** The policy does not explicitly state whether the website might collect contact information or not



The Information We Collect

At some Turner Network sites, you can order products, enter contests, vote in polls or otherwise express an opinion, subscribe to one of our services such as our online newsletters, or participate in one of our online forums or communities. In the course of these various offerings, we often seek to collect from you various forms of personal information. Examples of the types of personally identifiable information that may be collected at these pages include: name, address, e-mail address, telephone number, fax number, credit card information, and information about your interests in and use of various products, programs, and services.

At some Turner Network sites, you may also be able to submit information about other people. For example, you might submit a person's name and e-mail address to send an electronic greeting

Interpretation of privacy policies

- Comparative annotation study with **privacy policy experts, skilled annotators, AMT Crowdworkers** on 6 privacy policies

- **Result Highlights**
  - Data collection relatively easy to identify
  - Data sharing practices more difficult
  - Even experts do not always agree
  - Finer nuances difficult to extract
  - Policy language too ambiguous

Reidenberg et al., *Disagreeable Privacy Policies: Mismatches between Meaning and Users' Understanding,* Berkeley Technology Law Journal (to appear), available on SSRN

How good are crowdworkers?

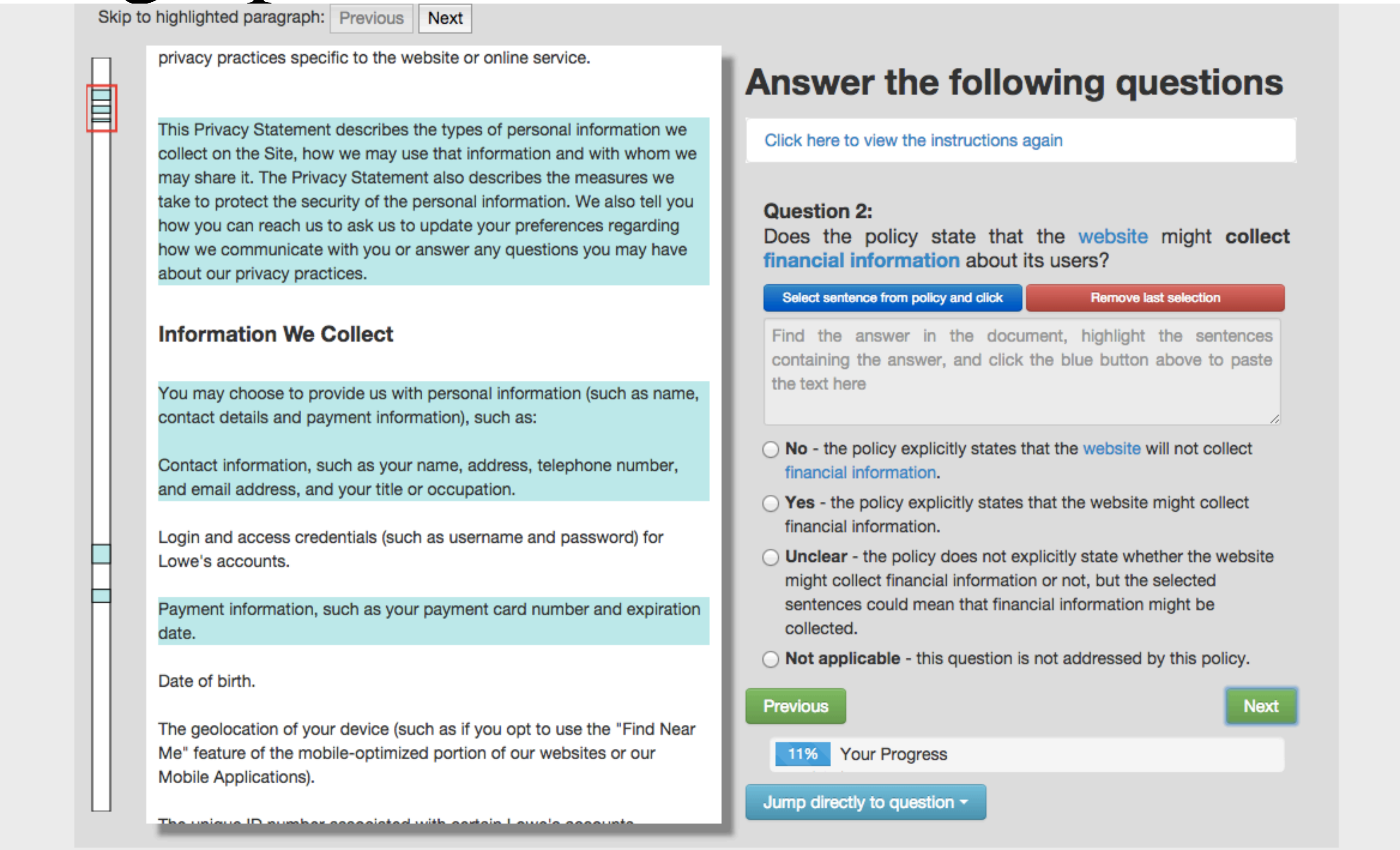
- Only considering answers where 8 of 10 crowdworkers agree:
  - 76% of cases: they agree on **same answer as experts***
  - 2% of cases: they agree on different answer than experts*
  - 22% of cases: crowdworkers do not reach agreement

*3 of 4 experts agree on same answer in 90.1% of cases

Crowdworkers agree with experts or **not at all**

Reidenberg et al., *Disagreeable Privacy Policies: Mismatches between Meaning and Users' Understanding,* Berkeley Technology Law Journal (to appear), available on SSRN

Predicting & highlighting relevant paragraphs



Skip to highlighted paragraph: Previous Next

privacy practices specific to the website or online service.

This Privacy Statement describes the types of personal information we collect on the Site, how we may use that information and with whom we may share it. The Privacy Statement also describes the measures we take to protect the security of the personal information. We also tell you how you can reach us to ask us to update your preferences regarding how we communicate with you or answer any questions you may have about our privacy practices.

Information We Collect

You may choose to provide us with personal information (such as name, contact details and payment information), such as:

Contact information, such as your name, address, telephone number, and email address, and your title or occupation.

Login and access credentials (such as username and password) for Lowe's accounts.

Payment information, such as your payment card number and expiration date.

Date of birth.

The geolocation of your device (such as if you opt to use the "Find Near Me" feature of the mobile-optimized portion of our websites or our Mobile Applications).

The unique ID number associated with certain Lowe's accounts

Answer the following questions

Click here to view the instructions again

Question 2:
Does the policy state that the website might **collect financial information** about its users?

Find the answer in the document, highlight the sentences containing the answer, and click the blue button above to paste the text here

○ **No** - the policy explicitly states that the website will not collect financial information.

○ **Yes** - the policy explicitly states that the website might collect financial information.

○ **Unclear** - the policy does not explicitly state whether the website might collect financial information or not, but the selected sentences could mean that financial information might be collected.

○ **Not applicable** - this question is not addressed by this policy.

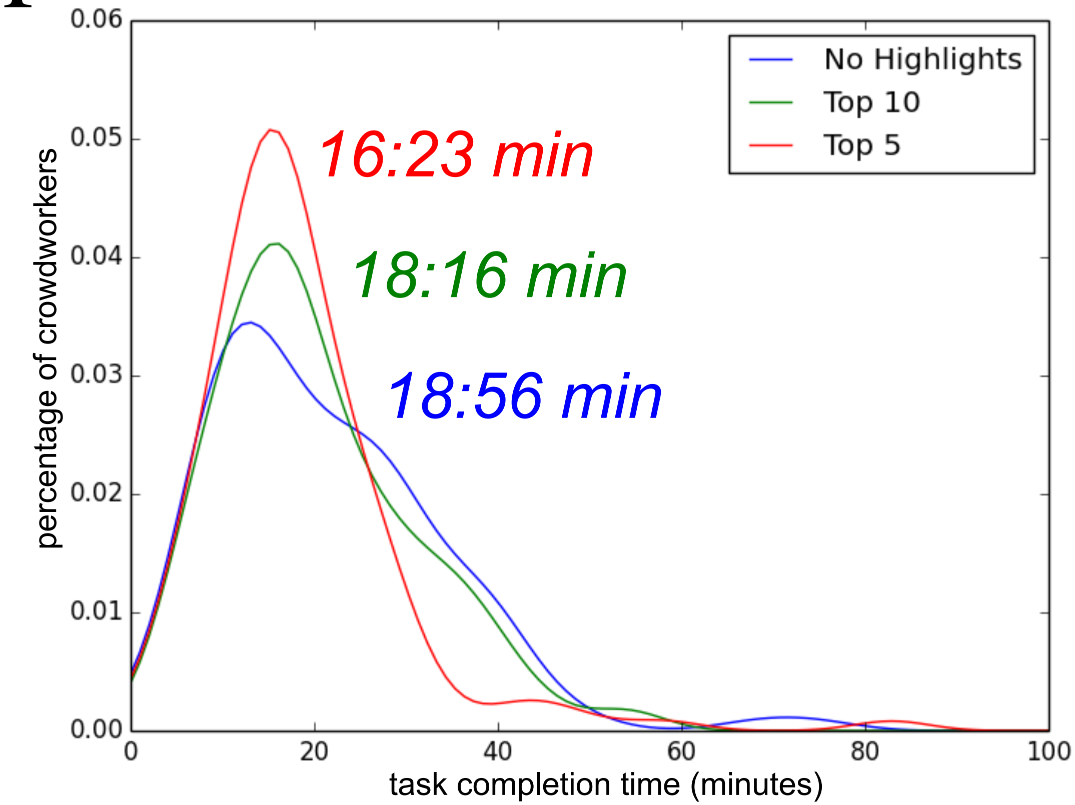
Predicting relevant paragraphs

- Analysis of sentences selected by experts and skilled annotators
  - 110 data practice specific regular expressions
  - Logistic regression to rank paragraphs based on probability of containing the answer to question x
  - Regression features: regex matches, n-grams

- Evaluation study with crowdworkers
  - between subjects crowdworkers (no, 5 or 10 highlights)
  - compared to skilled annotator gold standard data

Highlighting experiment results

- 10 highlights increase accuracy
- 5 highlights significantly faster, but less accurate
- Workers still select text from non-highlighted parts
- Self-reported understanding of legal text increases



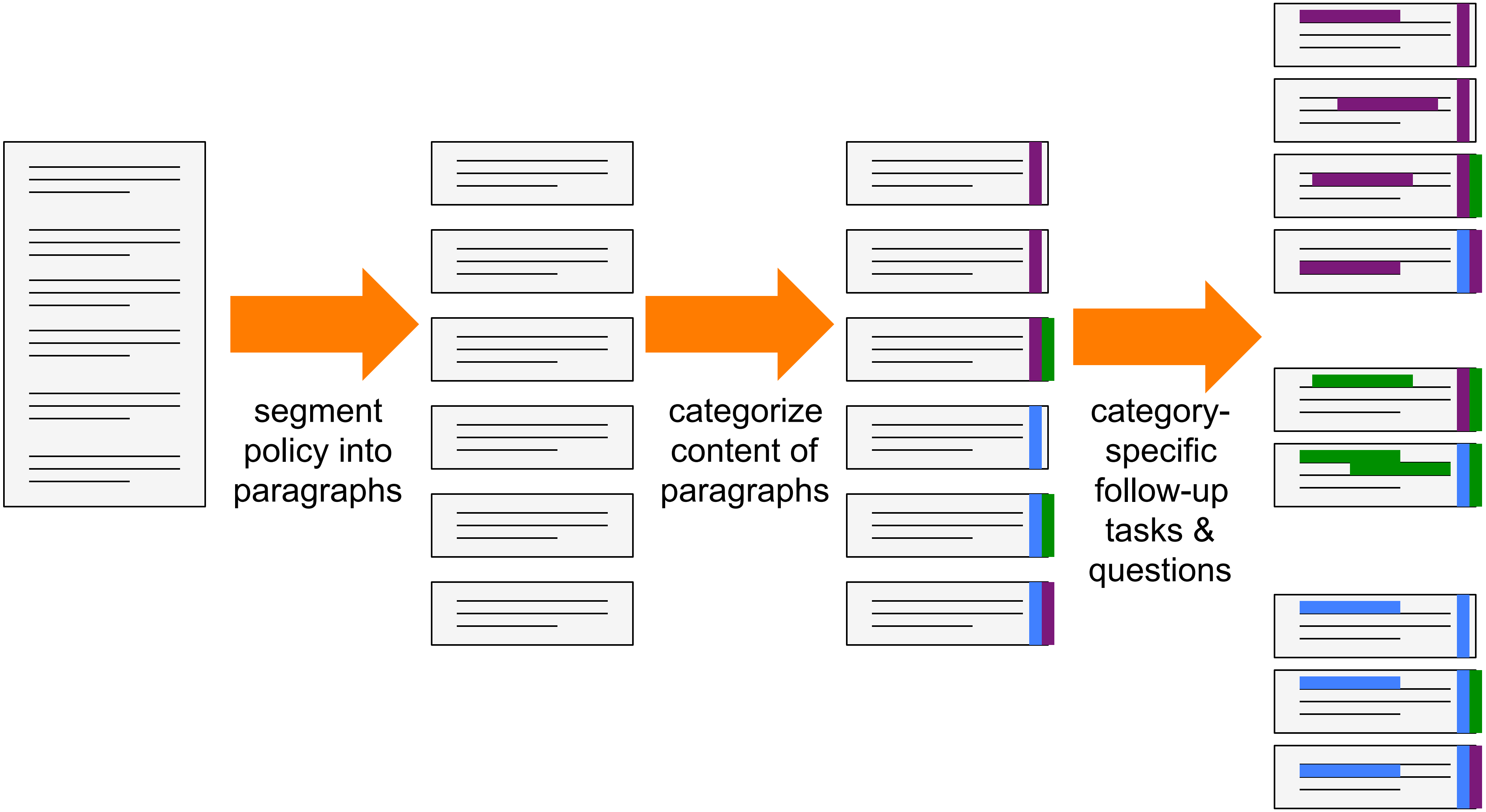
Condition	Correct	Wrong	No Convergence
NOHIGH	76 (84.4%)	4 (4.4%)	10 (11.1%)
TOP05	74 (82.2%)	9 (10 %)	7 (7.8 %)
TOP10	81 (90.0%)	3 (3.3%)	6 (6.7 %)

Challenges

- Long completion times
- Adapt number of workers to question difficulty
- Interpretative ambiguity

Annotation task workflow

Annotation task workflow

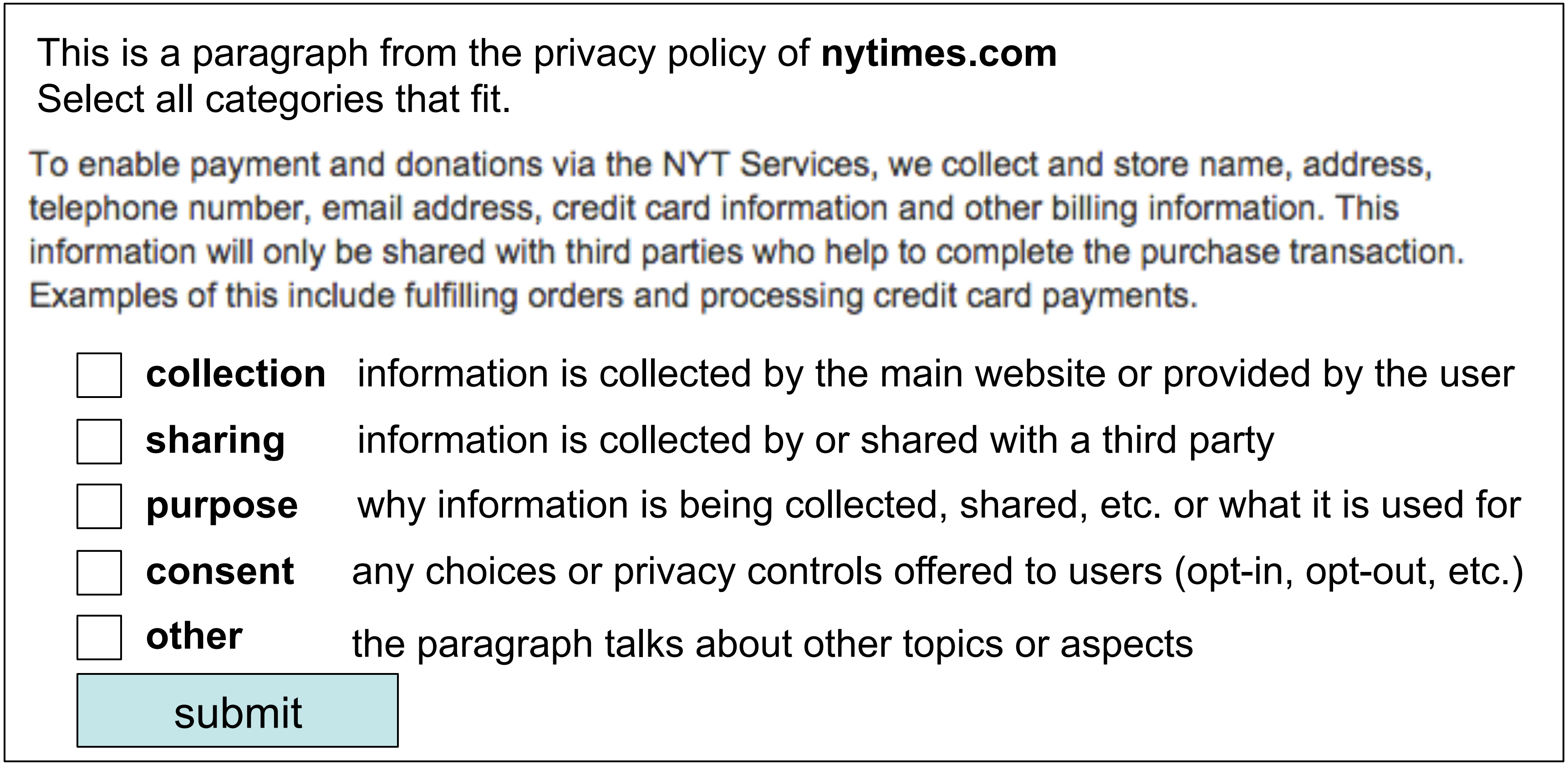


segment policy into paragraphs

categorize content of paragraphs

category-specific follow-up tasks & questions

Categorize paragraphs



This is a paragraph from the privacy policy of **nytimes.com**
Select all categories that fit.

To enable payment and donations via the NYT Services, we collect and store name, address, telephone number, email address, credit card information and other billing information. This information will only be shared with third parties who help to complete the purchase transaction. Examples of this include fulfilling orders and processing credit card payments.

□ **collection** information is collected by the main website or provided by the user

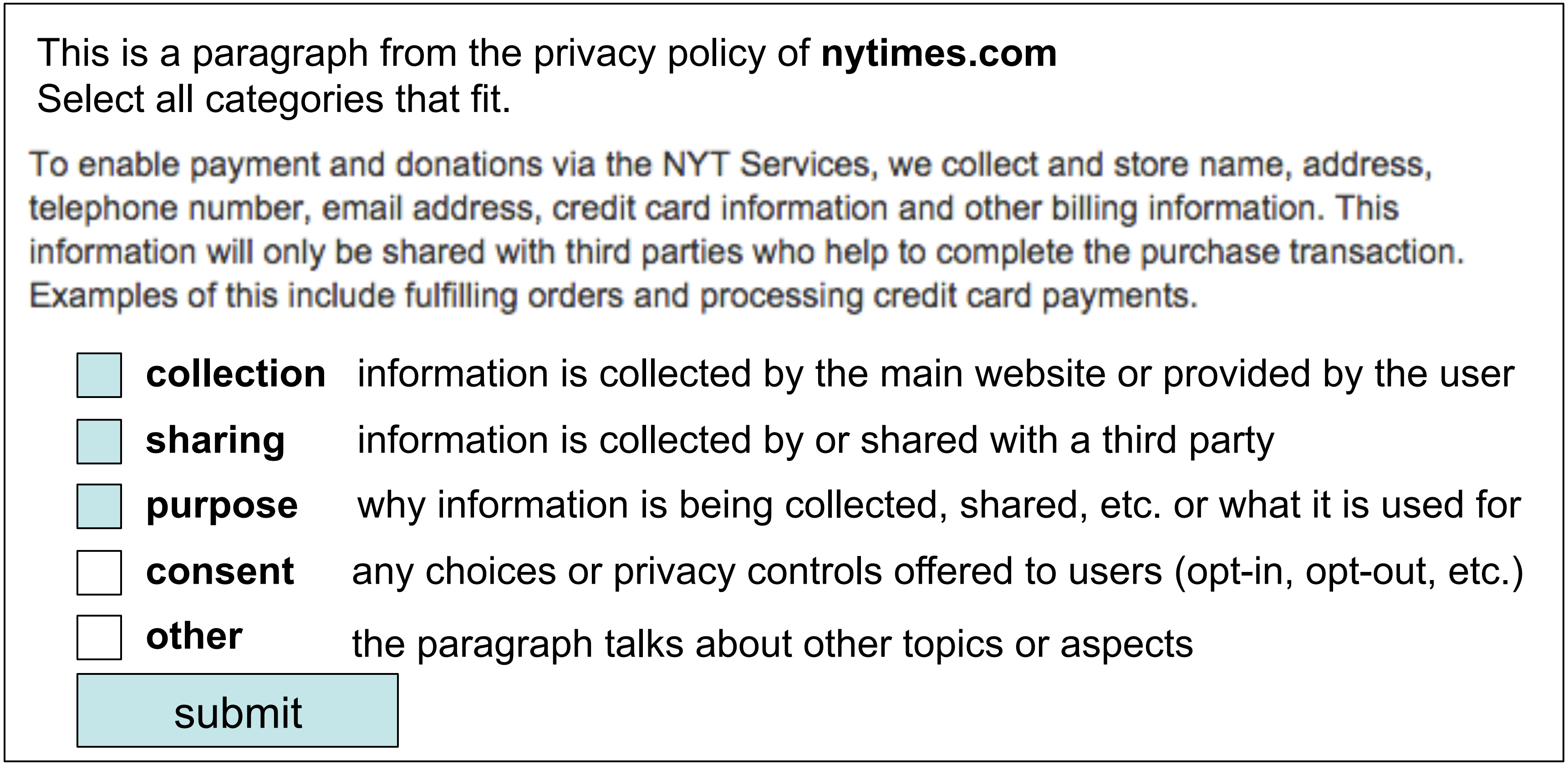
□ **sharing** information is collected by or shared with a third party

□ **purpose** why information is being collected, shared, etc. or what it is used for

□ **consent** any choices or privacy controls offered to users (opt-in, opt-out, etc.)

□ **other** the paragraph talks about other topics or aspects

Categorize paragraphs



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- □ **other** the paragraph talks about other topics or aspects

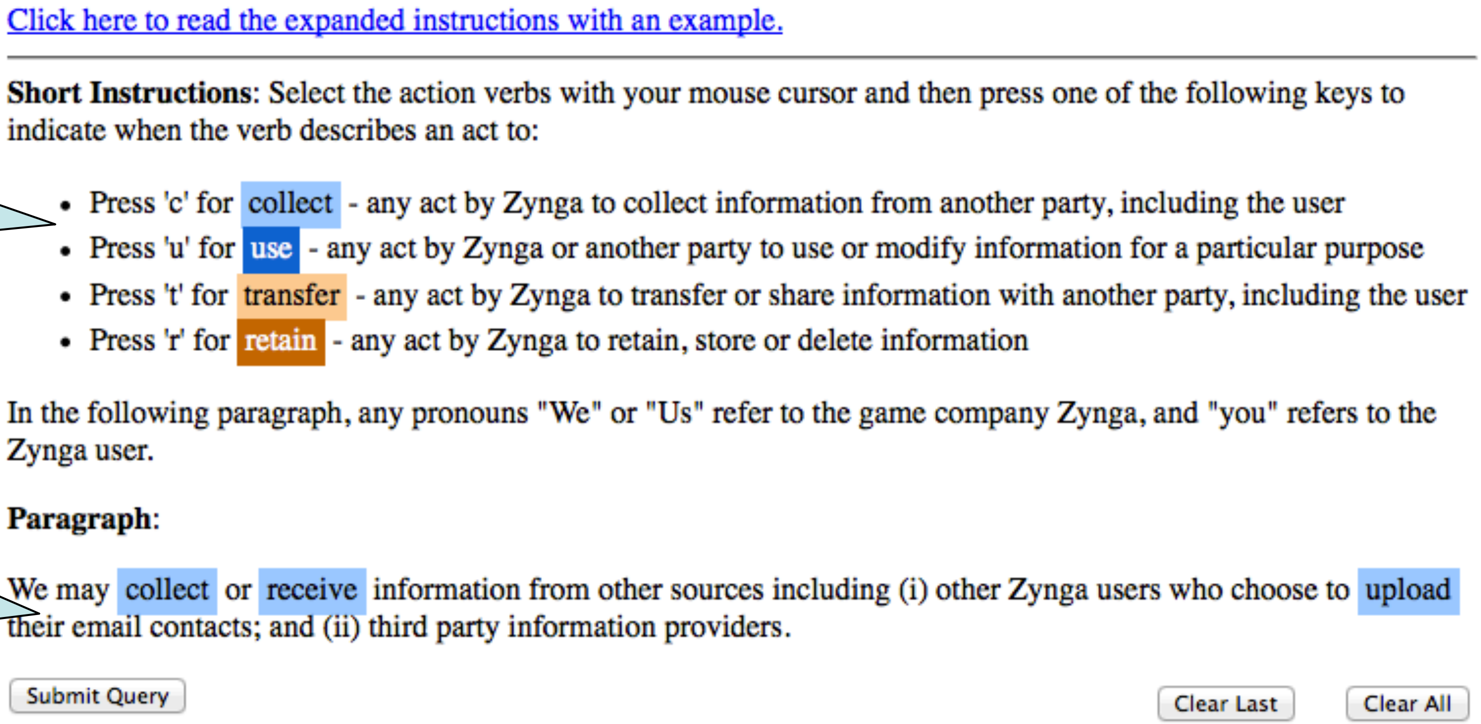
Category-specific follow-up tasks

- For each label ask label-specific follow-up questions
- Worker selects answer option and marks respective text.
- Example: collection
  - What information collected?
  - For what purpose?
- Example: third party sharing
  - Shared with whom?
  - For what purpose?
  - Use limitations?

Category-specific follow-up tasks

Response options for categorization

Select relevant words and press button



Click here to read the expanded instructions with an example.

Short Instructions: Select the action verbs with your mouse cursor and then press one of the following keys to indicate when the verb describes an act to:

- Press 'c' for collect - any act by Zynga to collect information from another party, including the user
- Press 'u' for use - any act by Zynga or another party to use or modify information for a particular purpose
- Press 't' for transfer - any act by Zynga to transfer or share information with another party, including the user
- Press 'r' for retain - any act by Zynga to retain, store or delete information

In the following paragraph, any pronouns "We" or "Us" refer to the game company Zynga, and "you" refers to the Zynga user.

Paragraph:

We may collect or receive information from other sources including (i) other Zynga users who choose to upload their email contacts; and (ii) third party information providers.

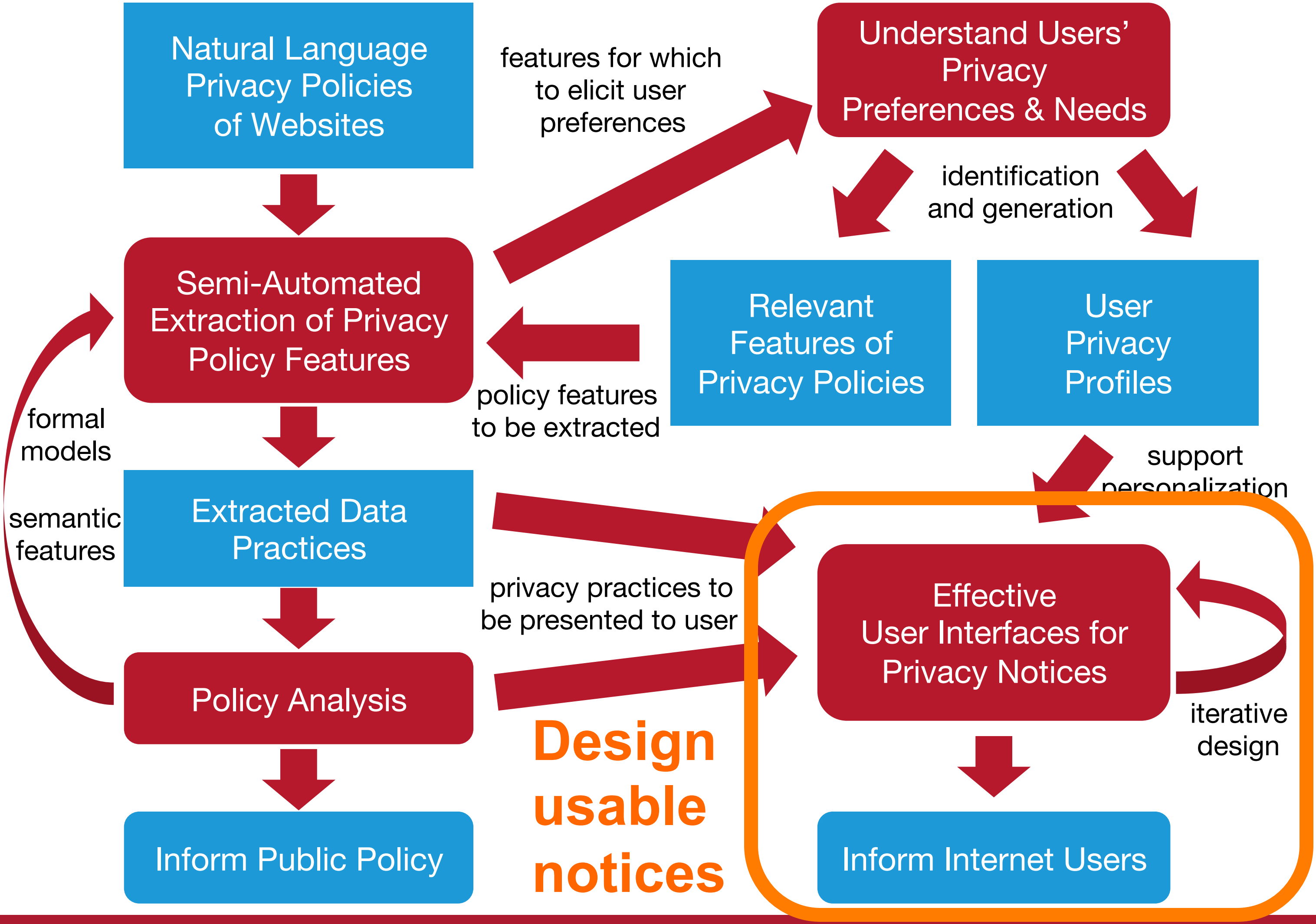
Travis Breaux & Florian Schaub, *Scaling Requirements Extraction to the Crowd: Experiments with Privacy Policies,* RE 2014.

Advantages & Challenges

- Fine-granular annotation rather than holistic interpretation

- Recombination of results
- Disambiguating scope
- Determining the required number of annotators

Effective Privacy Notices



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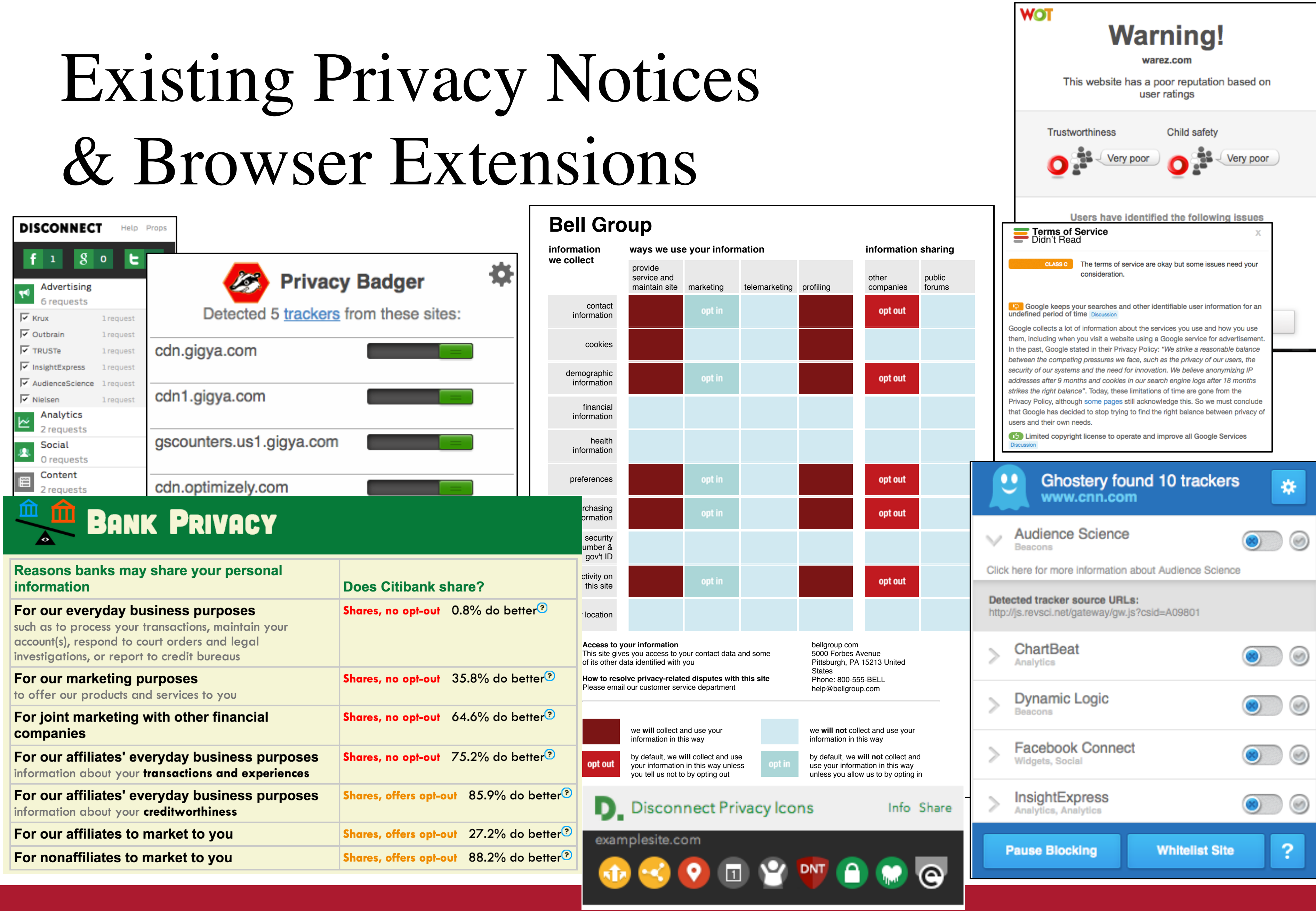
Design usable notices

Existing Privacy Notices & Browser Extensions



WOT

Warning!

warez.com

This website has a poor reputation based on user ratings

Users have identified the following issues

Terms of Service Didn't Read

The terms of service are okay but some issues need your consideration.

Google keeps your searches and other identifiable user information for an undefined period of time Discussion

Google collects a lot of information about the services you use and how you use them, including when you visit a website using a Google service for advertisement. In the past, Google stated in their Privacy Policy: *"We strike a reasonable balance between the competing pressures we face, such as the privacy of our users, the security of our systems and the need for innovation. We believe anonymizing IP addresses after 9 months and cookies in our search engine logs after 18 months strikes the right balance"*. Today, these limitations of time are gone from the Privacy Policy, although some pages still acknowledge this. So we must conclude that Google has decided to stop trying to find the right balance between privacy of users and their own needs.

Limited copyright license to operate and improve all Google Services Discussion

DISCONNECT

Advertising	6 requests
☑ Krux	1 request
☑ Outbrain	1 request
☑ TRUSTe	1 request
☑ InsightExpress	1 request
☑ AudienceScience	1 request
☑ Nielsen	1 request
Analytics	2 requests
Social	0 requests
Content	2 requests

Privacy Badger

Detected 5 trackers from these sites:

- cdn.gigya.com
- cdn1.gigya.com
- gscounters.us1.gigya.com
- cdn.optimizely.com

Bell Group

information we collect	ways we use your information: provide service and maintain site	ways we use your information: marketing	ways we use your information: telemarketing	ways we use your information: profiling	information sharing: other companies	information sharing: public forums
contact information	■	opt in	□	■	opt out	□
cookies	■	□	□	■	□	□
demographic information	■	opt in	□	■	opt out	□
financial information	□	□	□	□	□	□
health information	□	□	□	□	□	□
preferences	■	opt in	□	■	opt out	□
rchasing ormation	■	opt in	□	■	opt out	□
security umber & gov't ID	□	□	□	□	□	□
ctivity on this site	■	opt in	□	■	opt out	□
location	□	□	□	□	□	□

Access to your information
This site gives you access to your contact data and some of its other data identified with you

How to resolve privacy-related disputes with this site
Please email our customer service department

bellgroup.com
5000 Forbes Avenue
Pittsburgh, PA 15213 United States
Phone: 800-555-BELL
help@bellgroup.com

■	we **will** collect and use your information in this way	□	we **will not** collect and use your information in this way
opt out	by default, we **will** collect and use your information in this way unless you tell us not to by opting out	opt in	by default, we **will not** collect and use your information in this way unless you allow us to by opting in

BANK PRIVACY

Reasons banks may share your personal information	Does Citibank share?
For our everyday business purposes such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus	Shares, no opt-out 0.8% do better?
For our marketing purposes to offer our products and services to you	Shares, no opt-out 35.8% do better?
For joint marketing with other financial companies	Shares, no opt-out 64.6% do better?
For our affiliates' everyday business purposes information about your **transactions and experiences**	Shares, no opt-out 75.2% do better?
For our affiliates' everyday business purposes information about your **creditworthiness**	Shares, offers opt-out 85.9% do better?
For our affiliates to market to you	Shares, offers opt-out 27.2% do better?
For nonaffiliates to market to you	Shares, offers opt-out 88.2% do better?

Disconnect Privacy Icons

examplesite.com

Ghostery found 10 trackers
www.cnn.com

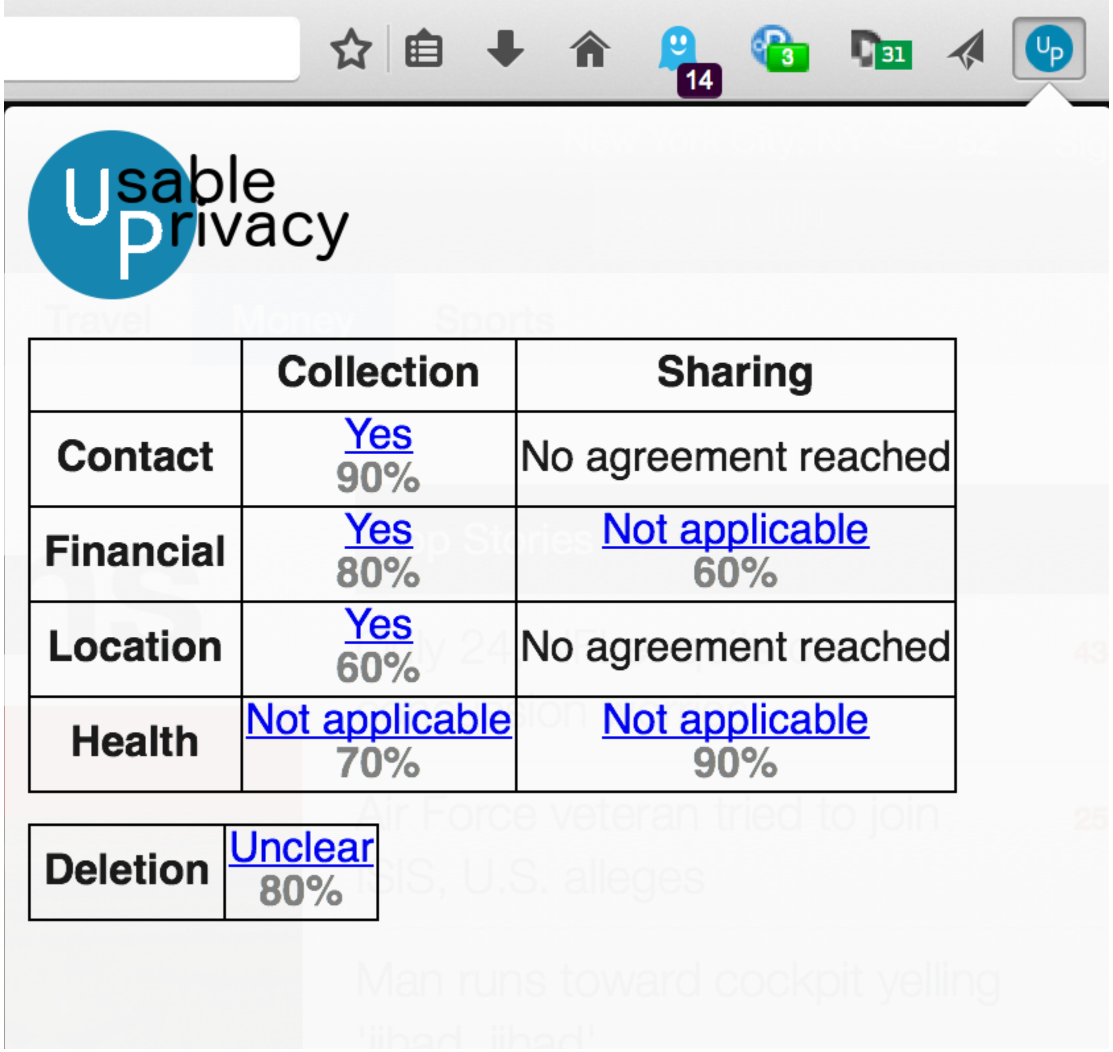
Audience Science
Beacons

Click here for more information about Audience Science

Detected tracker source URLs:
http://js.revsci.net/gateway/gw.js?csid=A09801

ChartBeat	Analytics
Dynamic Logic	Beacons
Facebook Connect	Widgets, Social
InsightExpress	Analytics, Analytics

Version 0



	Collection	Sharing
Contact	Yes 90%	No agreement reached
Financial	Yes 80%	Not applicable 60%
Location	Yes 60%	No agreement reached
Health	Not applicable 70%	Not applicable 90%

Deletion	Unclear 80%

Goals

- Browser extension showing extracted data practices
  - Provide relevant information to users
  - Easy to understand
  - Make information actionable
  - Enable meaningful comparisons

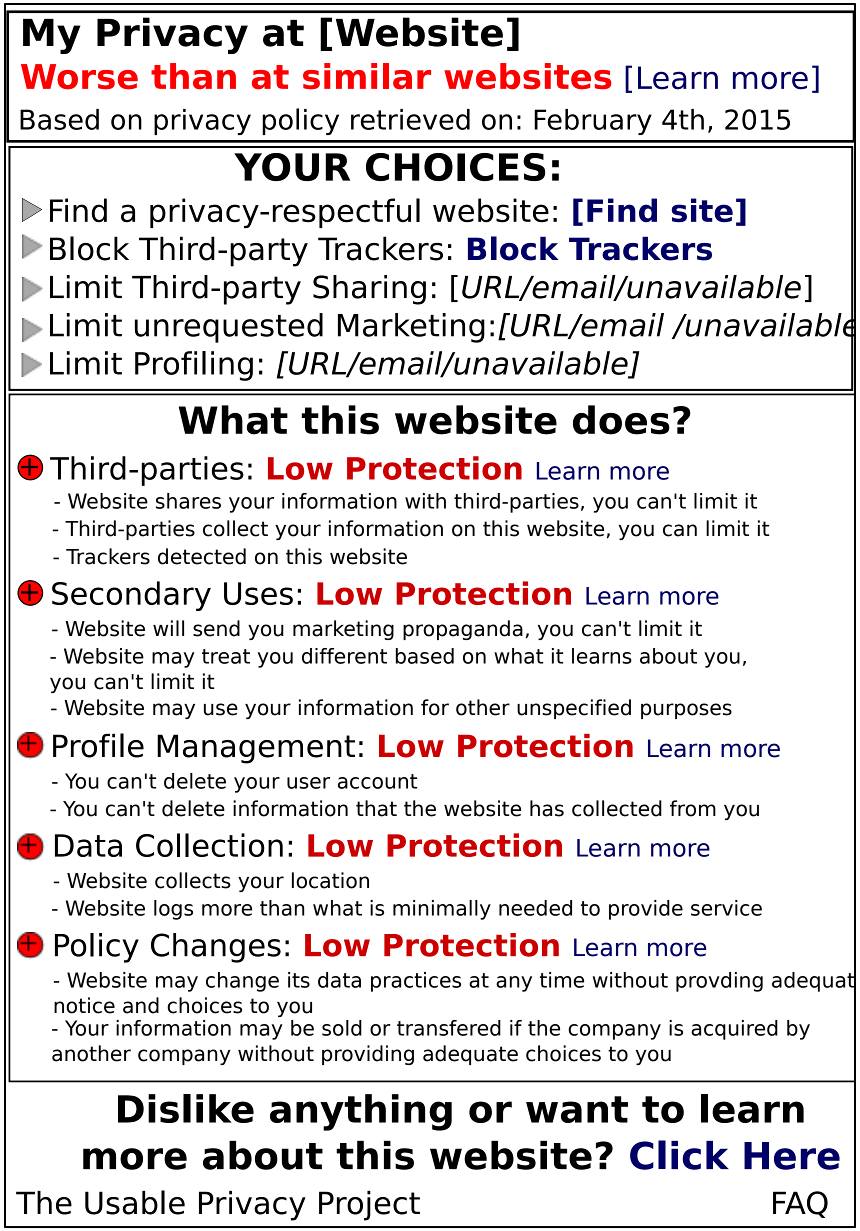
  - Collect users' needs
  - Encourage users to contribute annotations
  - Enable website operators to clarify practices

Design considerations

- Emphasize unexpected data practices
- Provide assessment of data practices
- Provide alternatives
- Avoid jargon and use simplified non-technical wording
- Leverage interactions (e.g., expandable menus, details on demand)
- Encourage users to contribute to annotations

Mockup 1

- Overall assessment
  & relative comparison
- summary of user choices
- summary of data practices
- summary rating per category
- user feedback & contribution



My Privacy at [Website]

Worse than at similar websites [Learn more]

Based on privacy policy retrieved on: February 4th, 2015

YOUR CHOICES:

▶ Find a privacy-respectful website: **[Find site]**

▶ Block Third-party Trackers: **Block Trackers**

▶ Limit Third-party Sharing: [*URL/email/unavailable*]

▶ Limit unrequested Marketing:*[URL/email /unavailable*

▶ Limit Profiling: *[URL/email/unavailable]*

What this website does?

⊕ Third-parties: **Low Protection** Learn more

- Website shares your information with third-parties, you can't limit it
- Third-parties collect your information on this website, you can limit it
- Trackers detected on this website

⊕ Secondary Uses: **Low Protection** Learn more

- Website will send you marketing propaganda, you can't limit it
- Website may treat you different based on what it learns about you, you can't limit it
- Website may use your information for other unspecified purposes

⊕ Profile Management: **Low Protection** Learn more

- You can't delete your user account
- You can't delete information that the website has collected from you

⊕ Data Collection: **Low Protection** Learn more

- Website collects your location
- Website logs more than what is minimally needed to provide service

⊕ Policy Changes: **Low Protection** Learn more

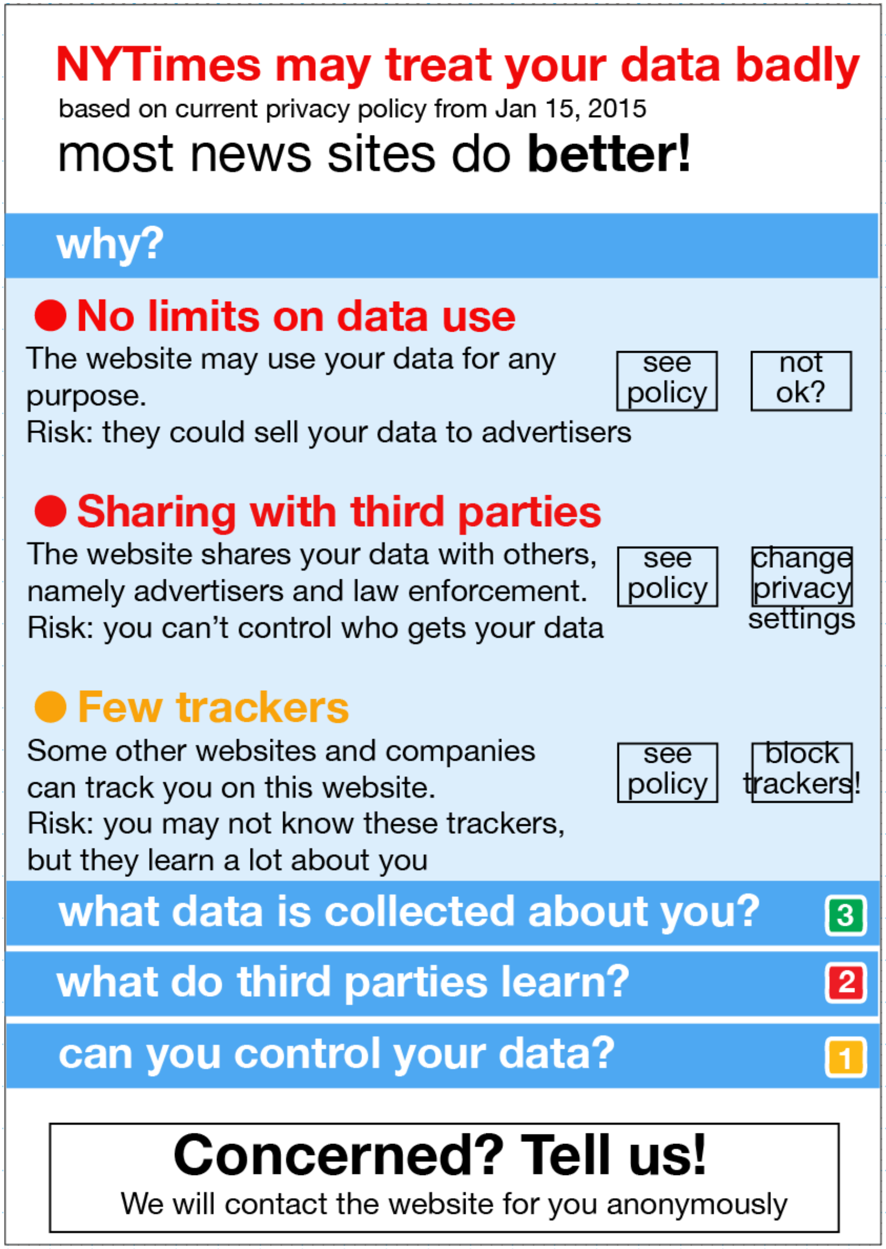
- Website may change its data practices at any time without provding adequat notice and choices to you
- Your information may be sold or transfered if the company is acquired by another company without providing adequate choices to you

Dislike anything or want to learn more about this website? Click Here

The Usable Privacy Project FAQ

Mockup 2

- highlight some practices
- choices and practices integrated
- slider interface to expand practices
- reduced text



NYTimes may treat your data badly

based on current privacy policy from Jan 15, 2015

most news sites do **better!**

why?

● No limits on data use

The website may use your data for any purpose.
Risk: they could sell your data to advertisers

see policy | not ok?

● Sharing with third parties

The website shares your data with others, namely advertisers and law enforcement.
Risk: you can't control who gets your data

see policy | change privacy settings

● Few trackers

Some other websites and companies can track you on this website.
Risk: you may not know these trackers, but they learn a lot about you

see policy | block trackers!

what data is collected about you? 3

what do third parties learn? 2

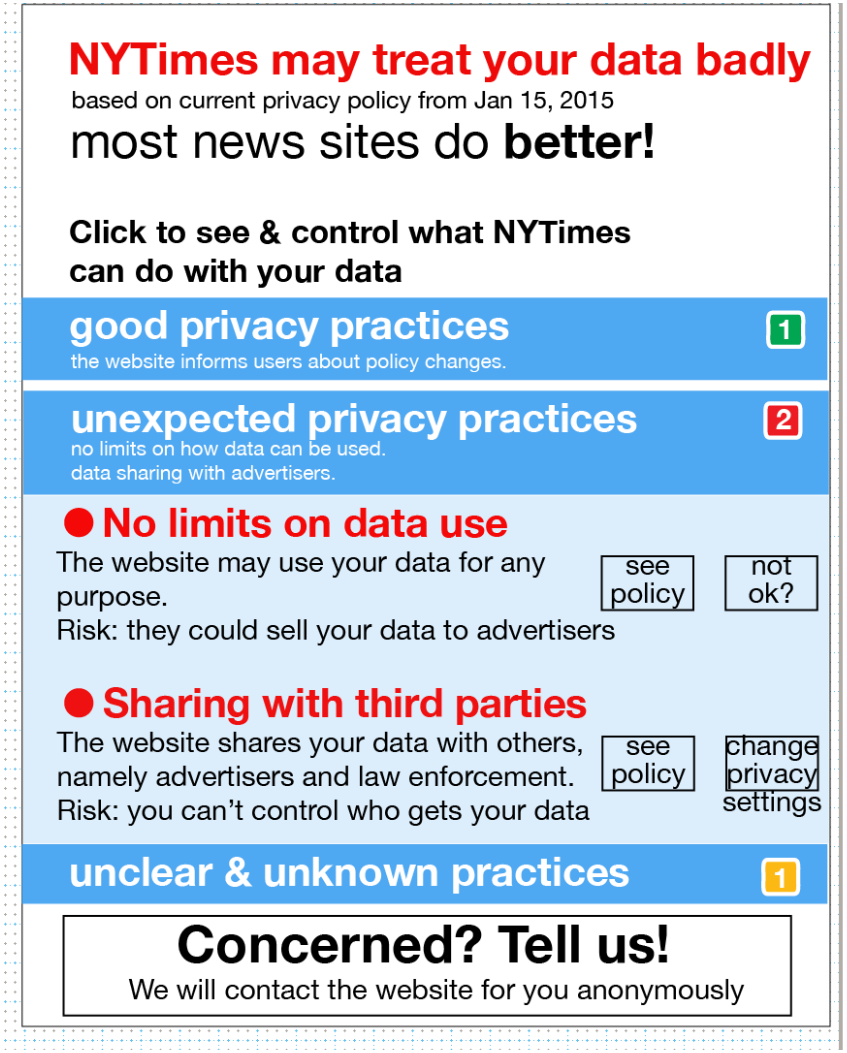
can you control your data? 1

Concerned? Tell us!

We will contact the website for you anonymously

Mockup 3

- sorted by good, bad, unclear data practices



NYTimes may treat your data badly

based on current privacy policy from Jan 15, 2015

most news sites do **better!**

Click to see & control what NYTimes can do with your data

good privacy practices 1

the website informs users about policy changes.

unexpected privacy practices 2

no limits on how data can be used.
data sharing with advertisers.

● **No limits on data use**

The website may use your data for any purpose.
Risk: they could sell your data to advertisers

see policy | not ok?

● **Sharing with third parties**

The website shares your data with others, namely advertisers and law enforcement.
Risk: you can't control who gets your data

see policy | change privacy settings

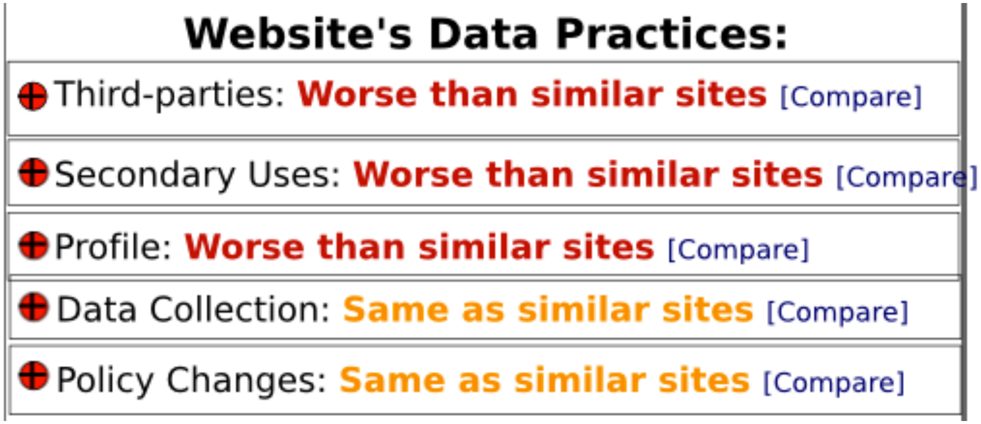
unclear & unknown practices 1

Concerned? Tell us!

We will contact the website for you anonymously

Mockup 4

- emphasize comparison



Website's Data Practices:

⊕ Third-parties: **Worse than similar sites** [Compare]

⊕ Secondary Uses: **Worse than similar sites** [Compare]

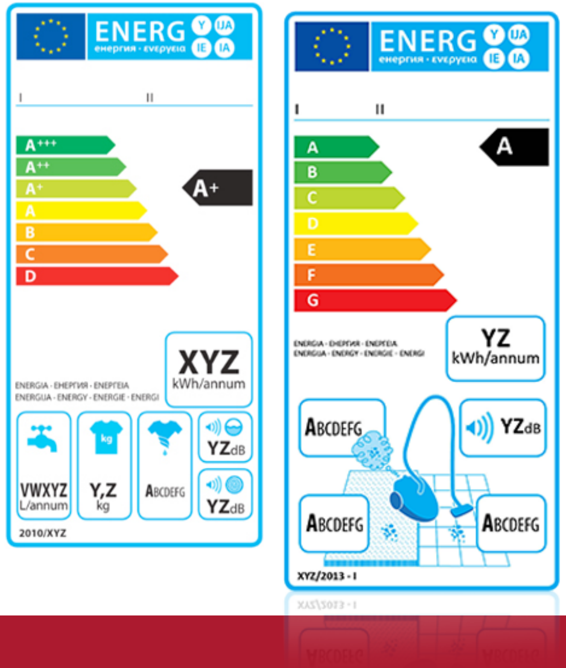
⊕ Profile: **Worse than similar sites** [Compare]

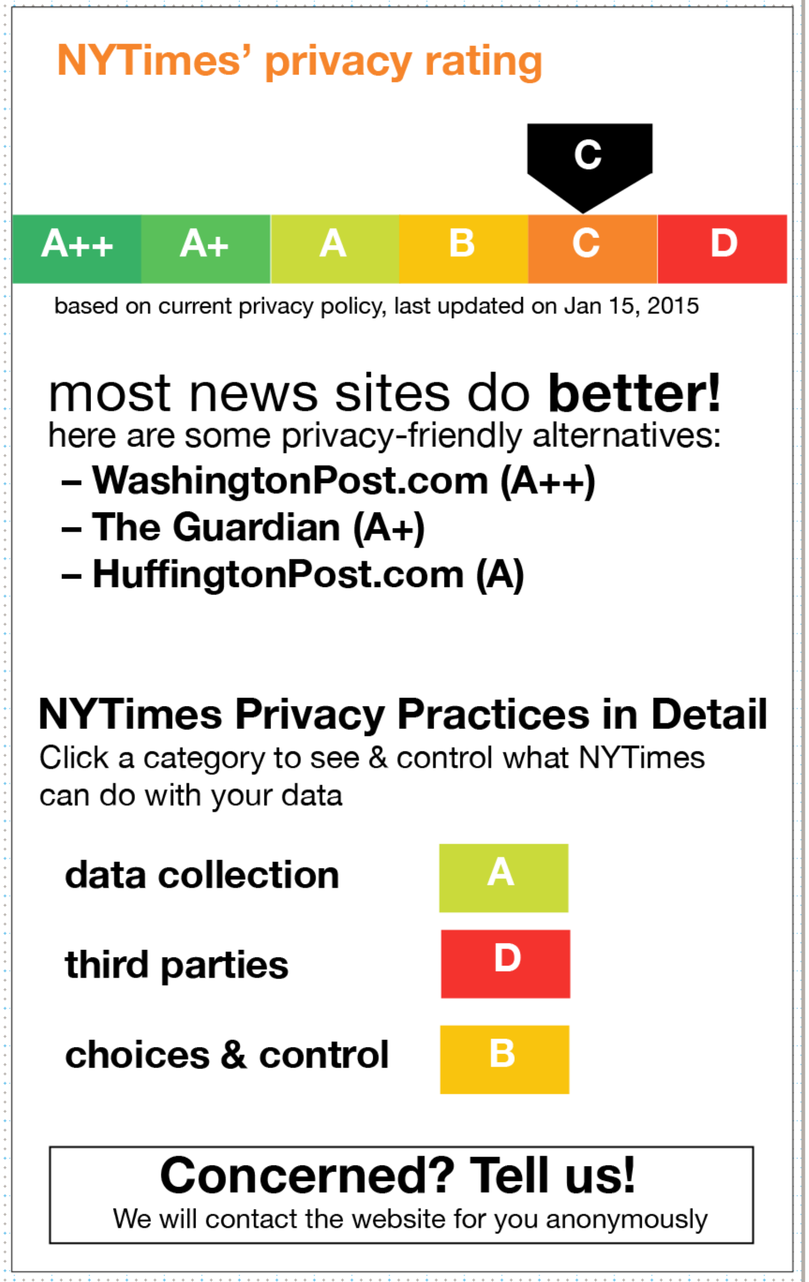
⊕ Data Collection: **Same as similar sites** [Compare]

⊕ Policy Changes: **Same as similar sites** [Compare]

Mockup 5

- rate website on scale
- give specific alternatives
- inspired by energy labels





NYTimes’ privacy rating

C

A++ | A+ | A | B | C | D

based on current privacy policy, last updated on Jan 15, 2015

most news sites do **better!**

here are some privacy-friendly alternatives:

- **WashingtonPost.com (A++)**
- **The Guardian (A+)**
- **HuffingtonPost.com (A)**

NYTimes Privacy Practices in Detail

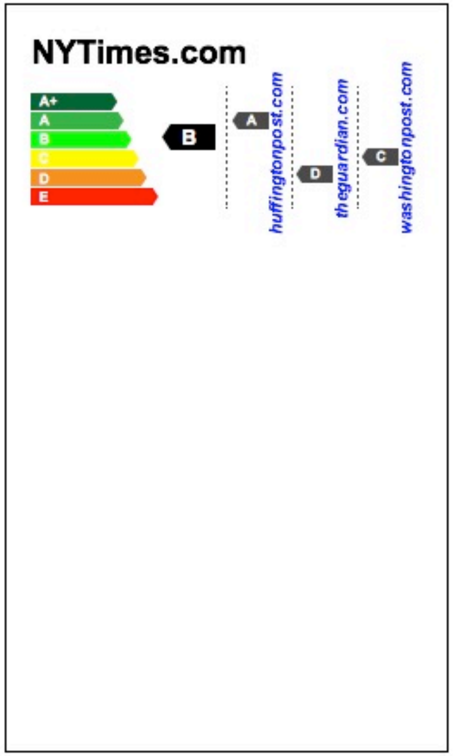
Click a category to see & control what NYTimes can do with your data

data collection	A
third parties	D
choices & control	B

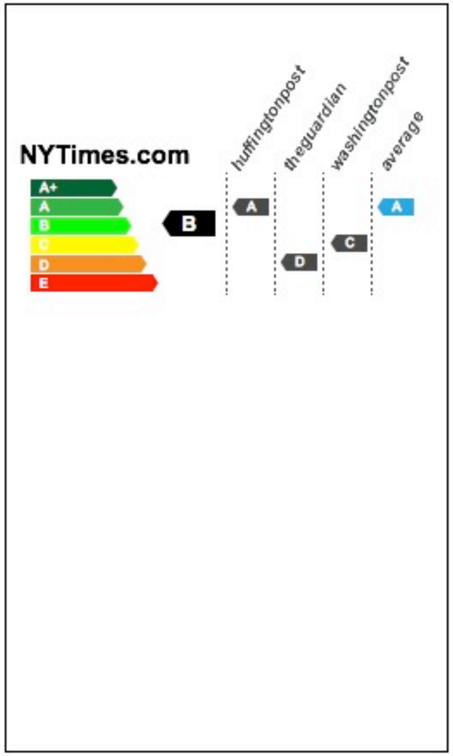
Concerned? Tell us!

We will contact the website for you anonymously

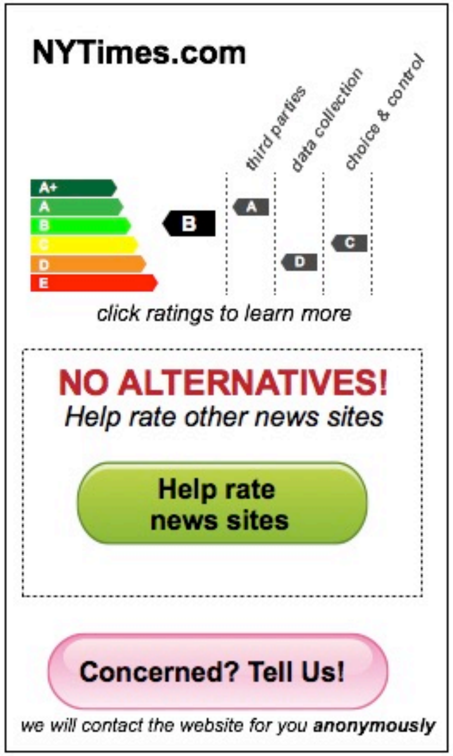
Mockup 6



visual ranking
of alternatives



visualize
average

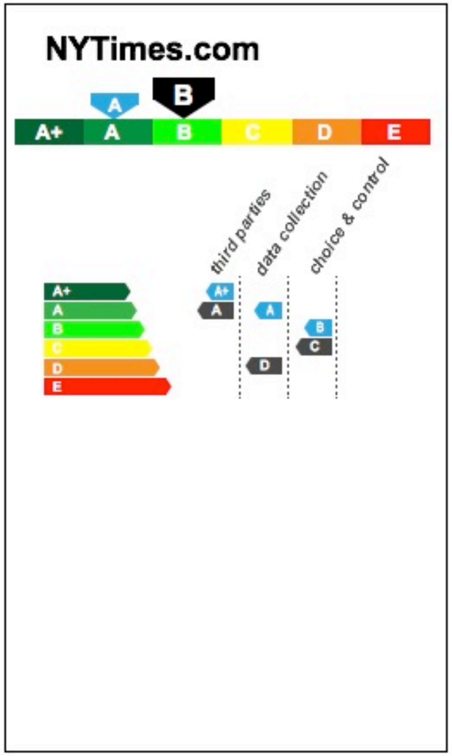


click ratings to learn more

NO ALTERNATIVES!
Help rate other news sites

we will contact the website for you ***anonymously***

overall ranking and
for data practices



average comparisons

Next steps

- Refine plugin design and build functional prototypes
- 2-4 focus groups
  - test and refine terminology and main UI elements
  - participatory design
- Lab study
  - within subjects study to assess usability of few different variants
- Online or field study
  - evaluate final extension at large scale and in different website contexts

Take-aways

- Semi-automatic extraction of data practices from privacy policies with crowdsourcing and NLP/ML
- Provide notices that are relevant, understandable, and actionable
- Truly interdisciplinary effort

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Norman Sadeh et al., *The Usable Privacy Policy Project: Combining Crowdsourcing, Machine Learning and Natural Language Processing to Semi-Automatically Answer Those Privacy Questions Users Care About*, Tech. report CMU-ISR-13-119, CMU, December 2013
http://reports-archive.adm.cs.cmu.edu/anon/isr2013/abstracts/13-119.html