



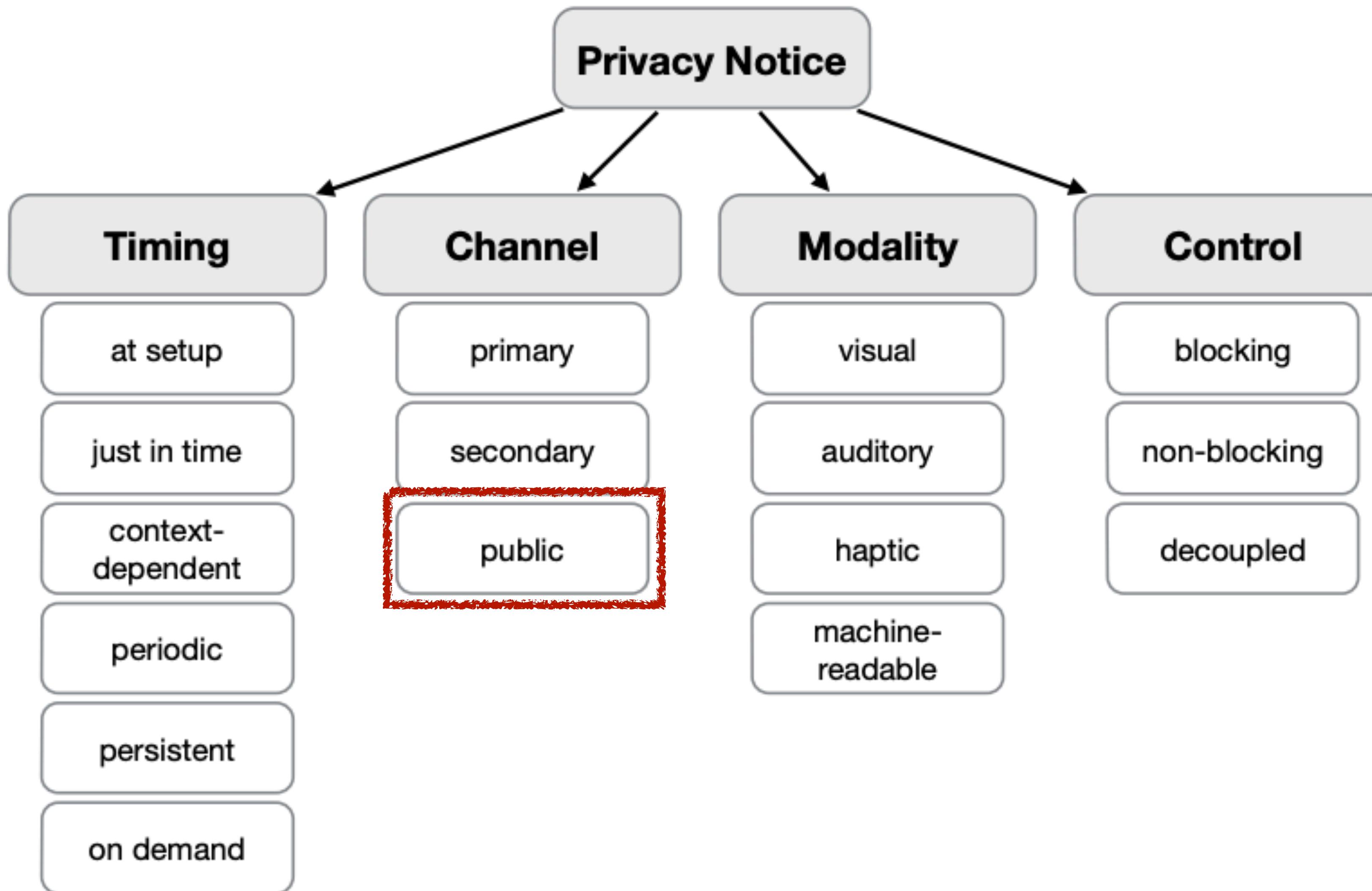
Haojian Jin

Recap: Permissions

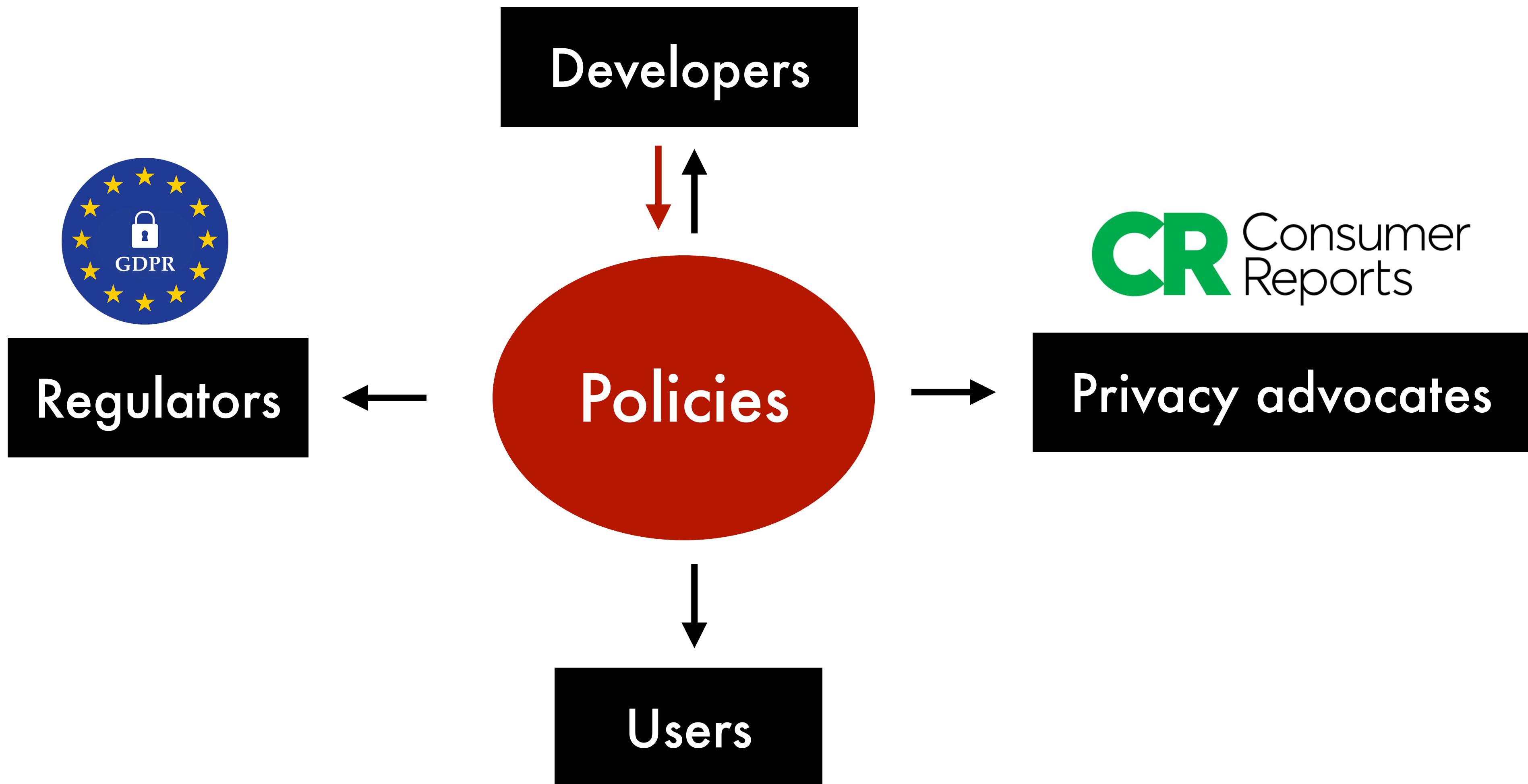
- Systems
 - Android permission
 - Cookie banner consent
 - OAuth
- Privacy principles
 - Control/Notice/Consent/Usability

Todays' topic: Policies

- New York Times Privacy Policy
 - Still state of the art for privacy notices
 - But no one reads these



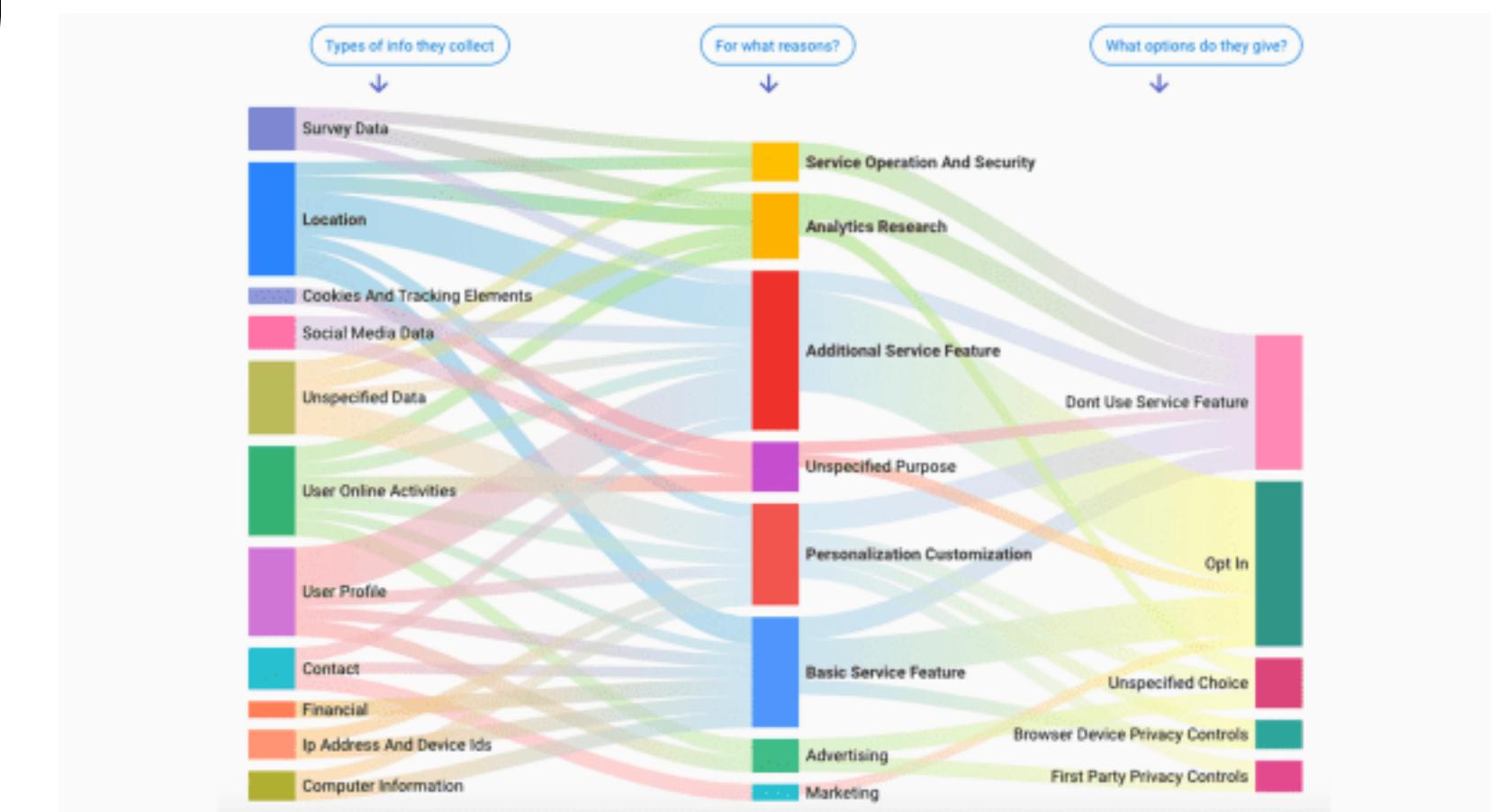
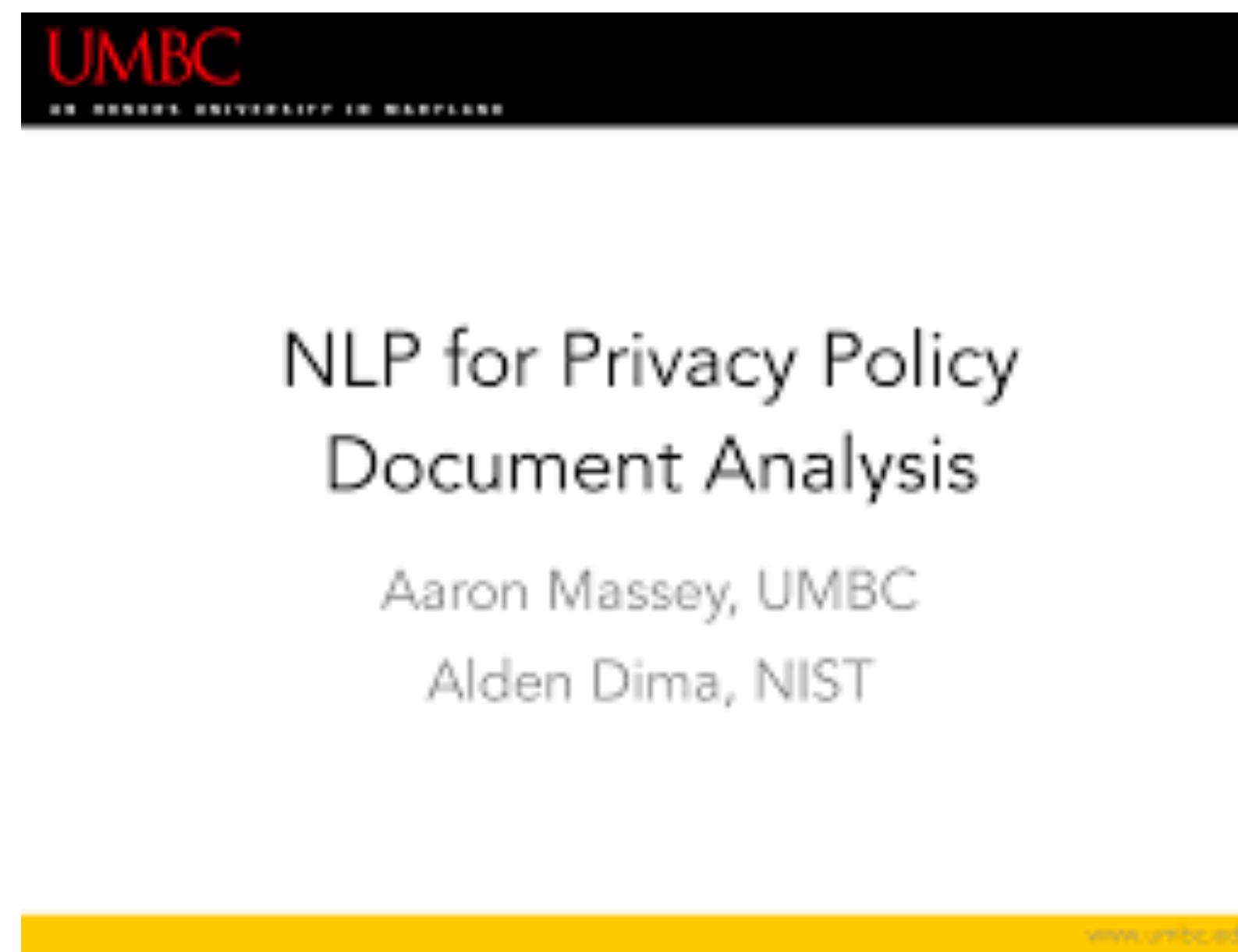
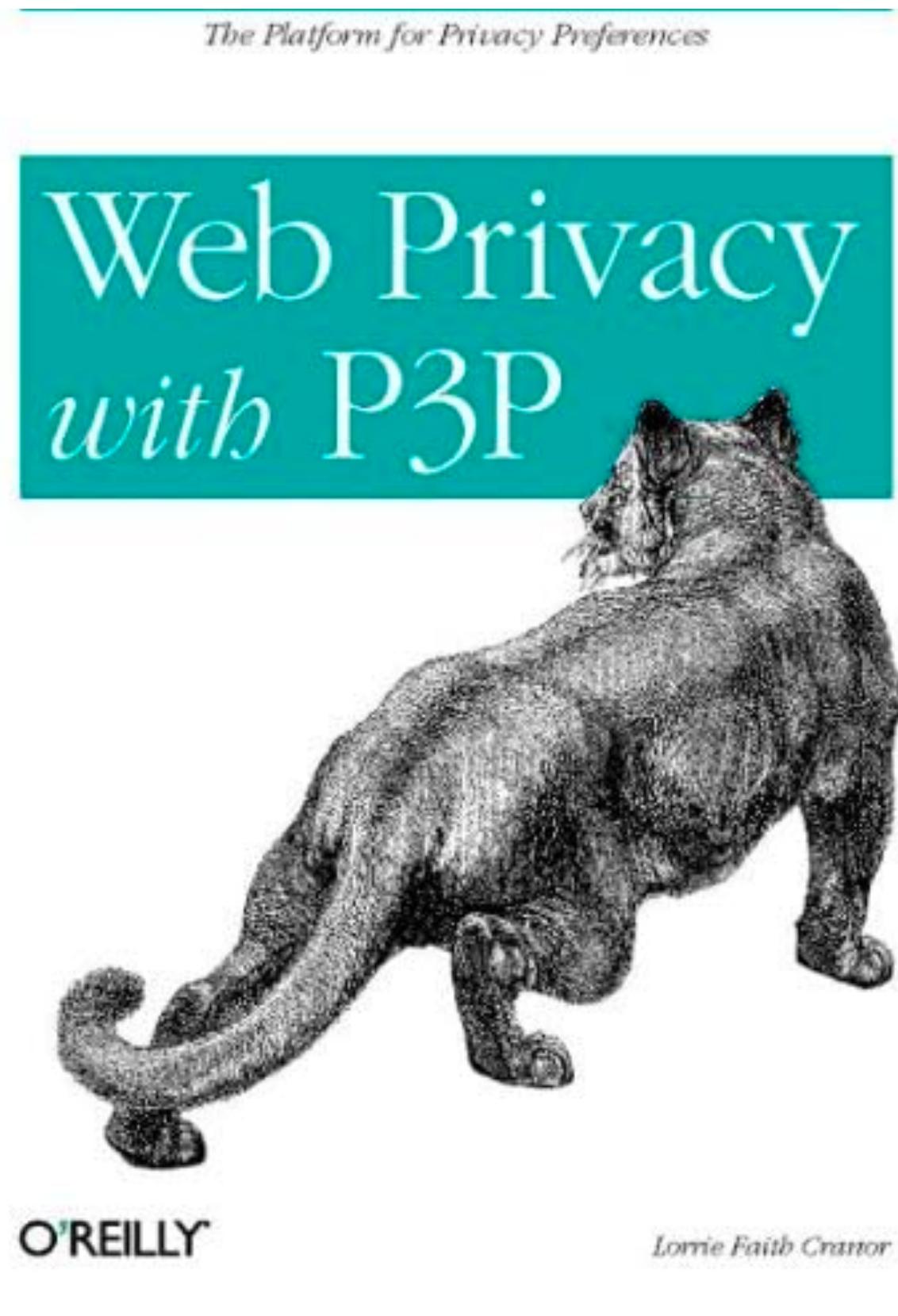
Stakeholders around privacy policies



Major problems around policies

- Many developers still do not offer privacy notices/policies.
- Developers may lie in the policies.
- Developers' policies may be vague.
- Developers' policies may be hard to understand.
- Developers may only offer all-or-nothing policies.
- Users need to interact with 100+ services. No time to read/control individually.

3 decades of research and deployment!



P3P

NLP

Visualization

Original Idea behind P3P

- A framework for automated privacy discussions
 - Web sites disclose their privacy practices in standard machine-readable formats
 - Web browsers automatically retrieve P3P privacy policies and compare them to users' privacy preferences
 - Sites and browsers can then negotiate about privacy terms

P3P History

- Idea discussed at November 1995 FTC meeting
- Ad Hoc “Internet Privacy Working Group” convened to discuss the idea in Fall 1996
- W3C began working on P3P in Summer 1997
 - Several working groups chartered with dozens of participants from industry, non-profits, academia, government
 - Numerous public working drafts issued, and feedback resulted in many changes
 - Early ideas about **negotiation and agreement ultimately removed**
Automatic data transfer added and then removed Patent issue stalled

P3P History

- W3C began working on P3P in Summer 1997
 - Numerous public working drafts issued, and feedback resulted in many changes
 - Early ideas about negotiation and agreement ultimately removed
 - Automatic data transfer added and then removed
 - Patent issue stalled progress, but ultimately became non-issue
- P3P issued as official W3C Recommendation on April 16, 2002 <http://www.w3.org/TR/P3P/>

P3P 1.0 - A first step

- Offers an easy way for web sites to communicate about their privacy policies in a standard machine-readable format
 - Can be deployed using existing web servers
- This will enable the development of tools that:
 - Provide snapshots of sites' policies
 - Compare policies with user preferences
 - Alert and advise the user

What do users want?

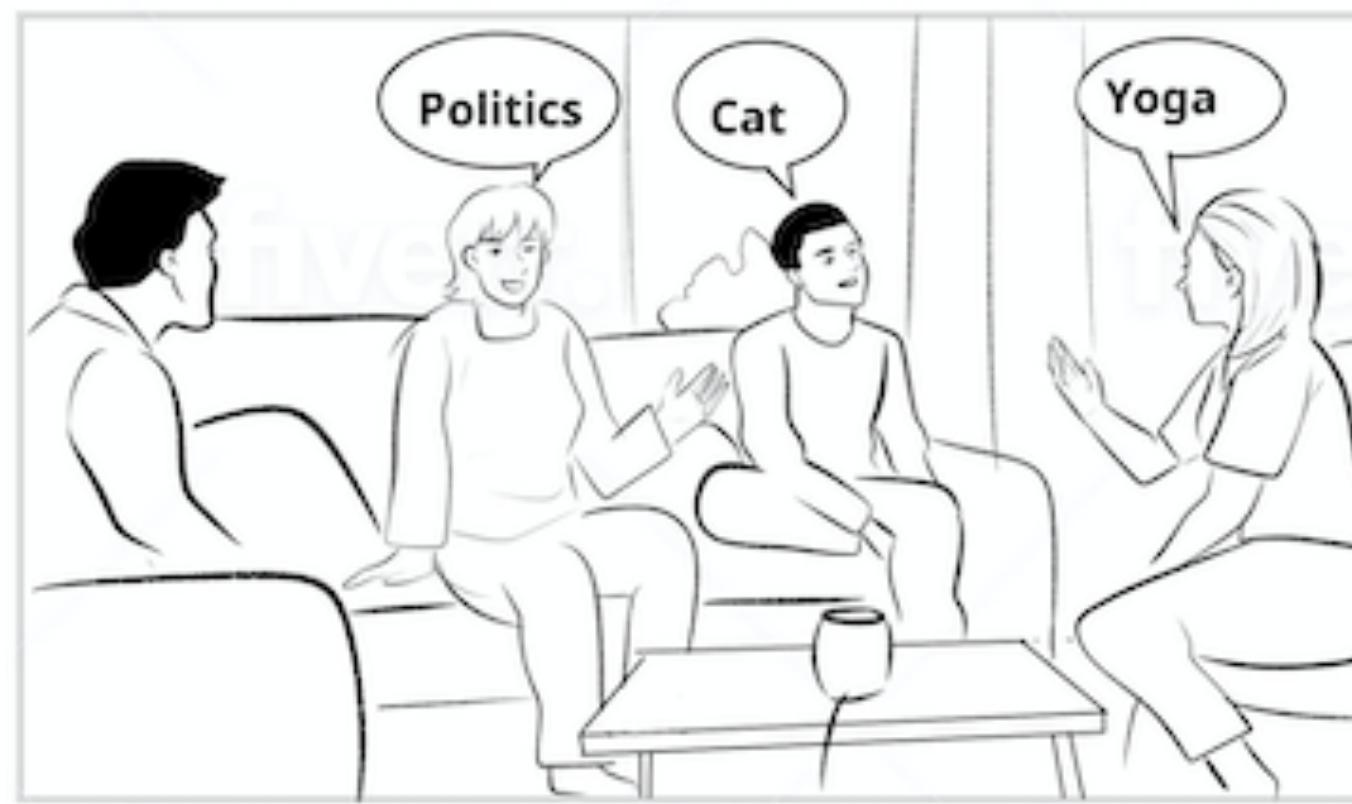


Exploring the Needs of Users for Supporting Privacy-Protective Behaviors in Smart Homes [CHI'22]
Haojian Jin, Boyuan Guo, Rituparna Roychoudhury
Yaxing Yao, Swarun Kumar, Yuvraj Agarwal, Jason I. Hong

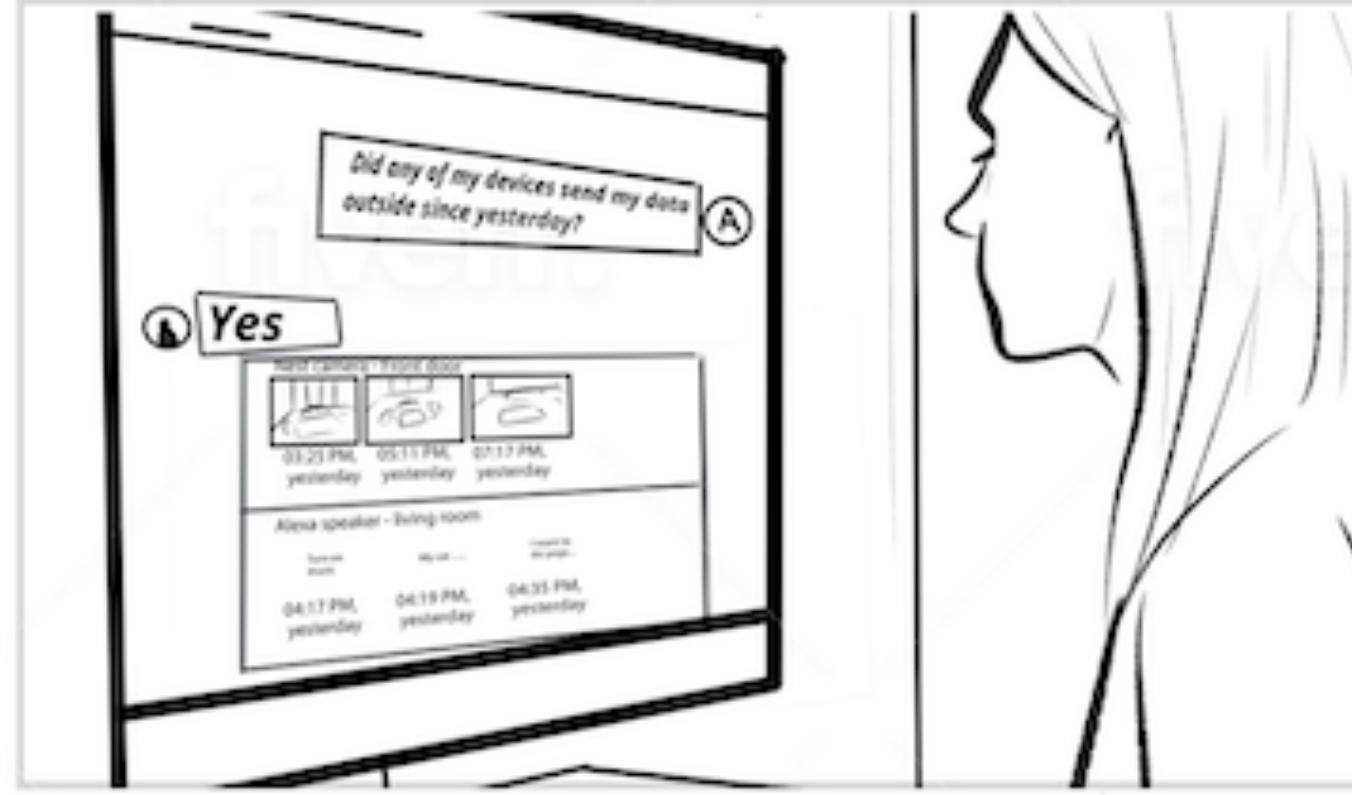
Method

Generate storyboards about privacy protection

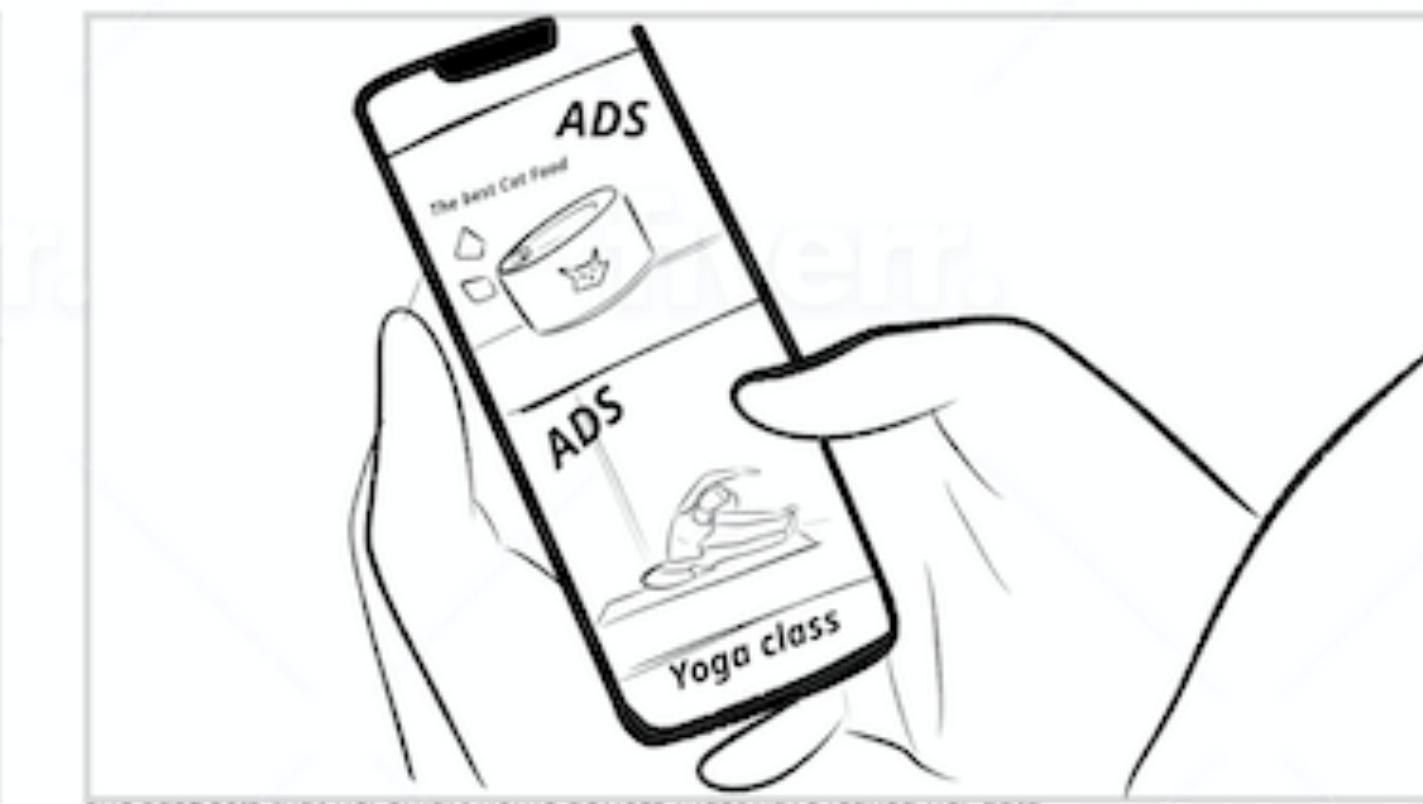
Context



Privacy
protection
concept



Problem

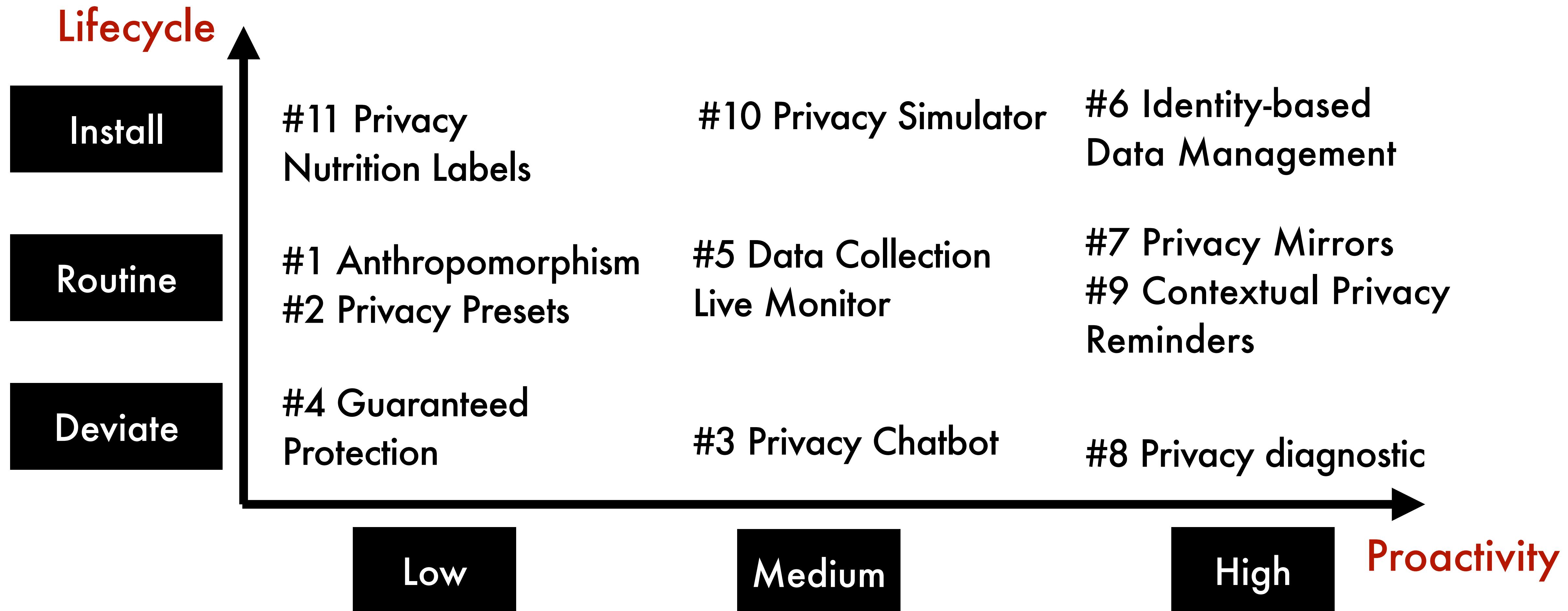


Users'
reactions



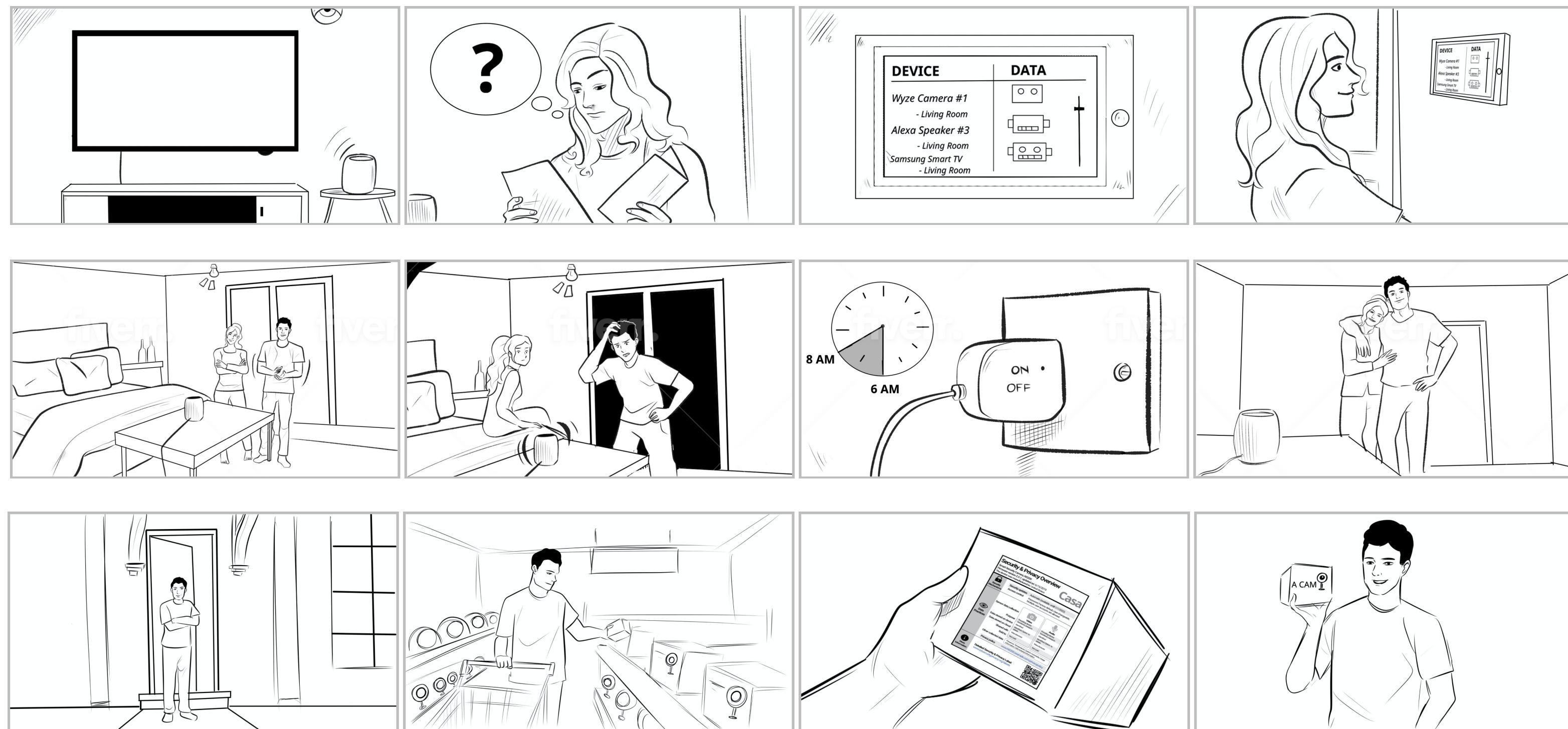
Method

Seek privacy protection concepts to address needs



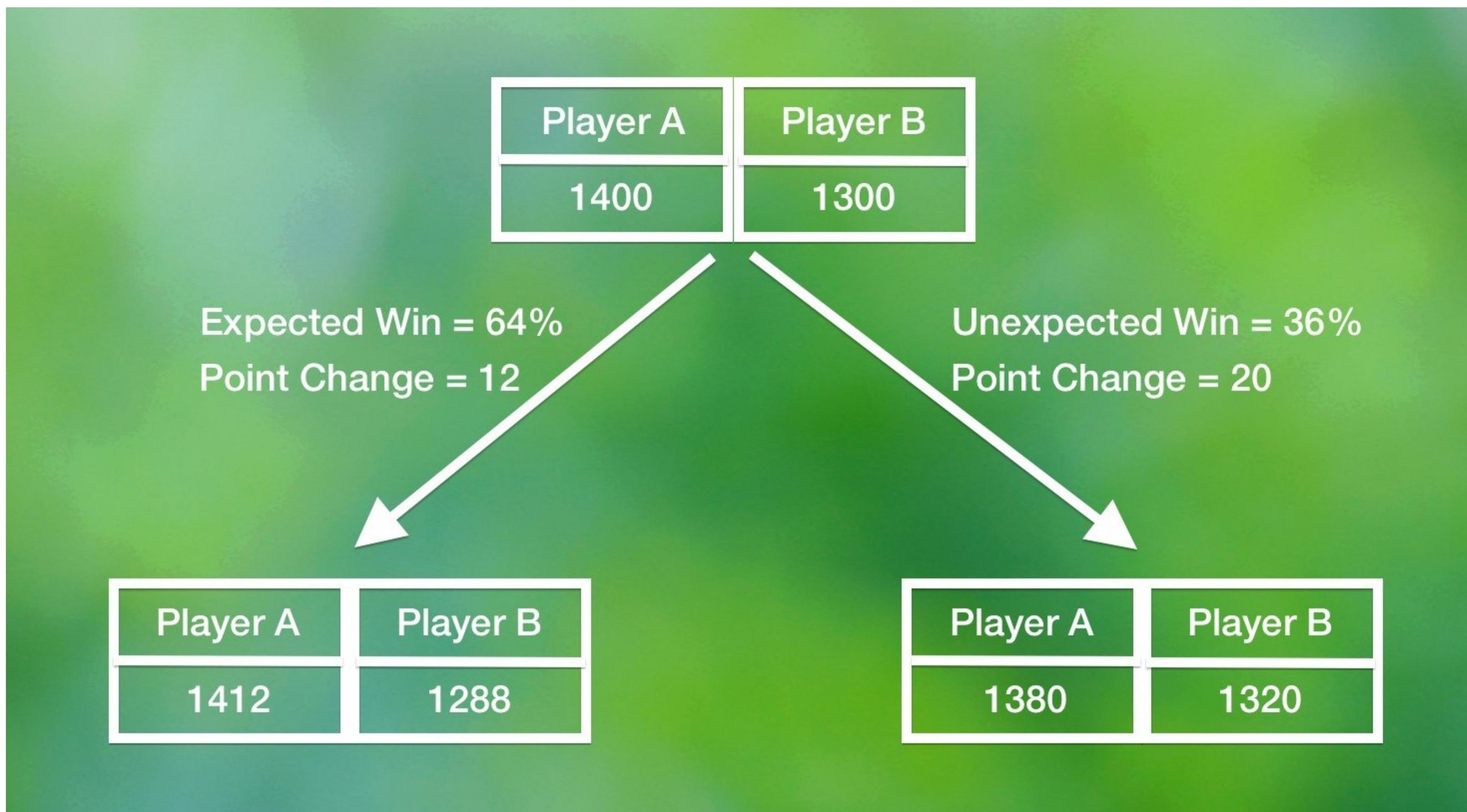
Method

Speed dating surveys (N=227)



Each participant **critiques** and **ranks** three storyboards.

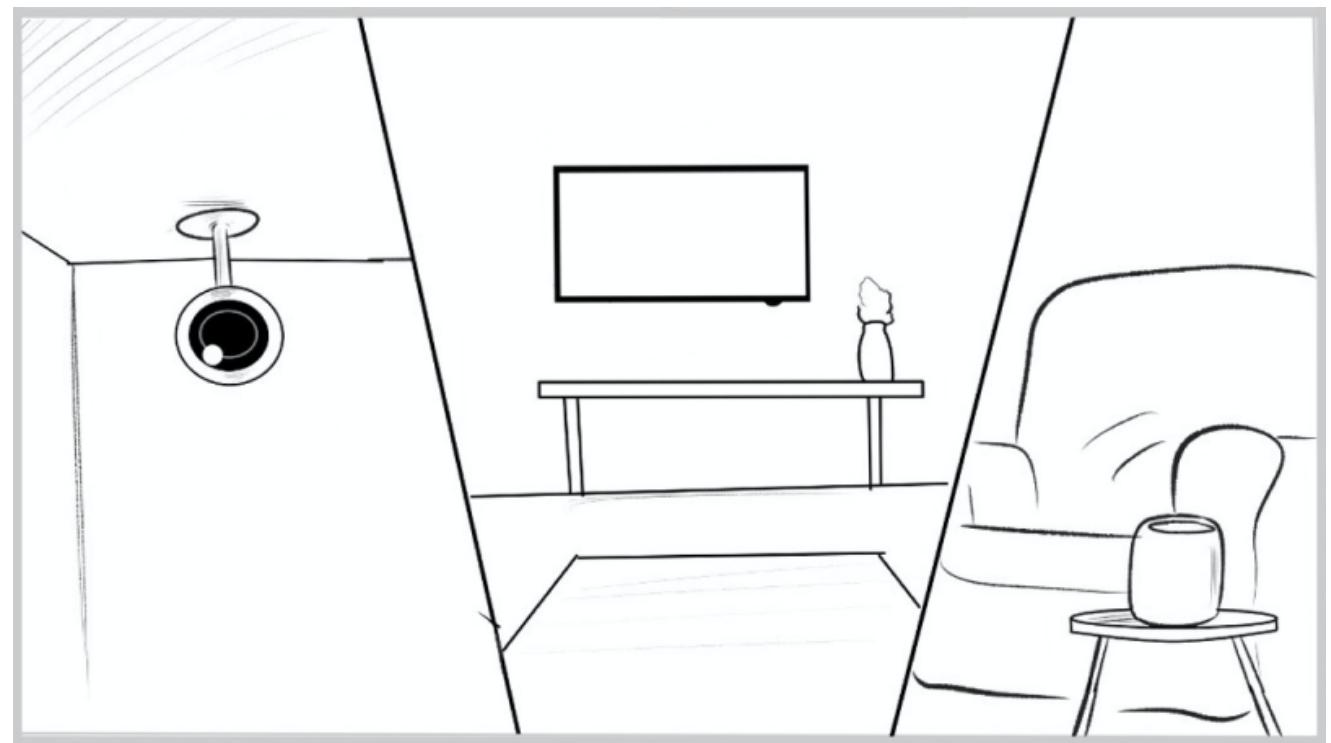
The Plackett-Luce method



similar to how the rating system ranks chess players.

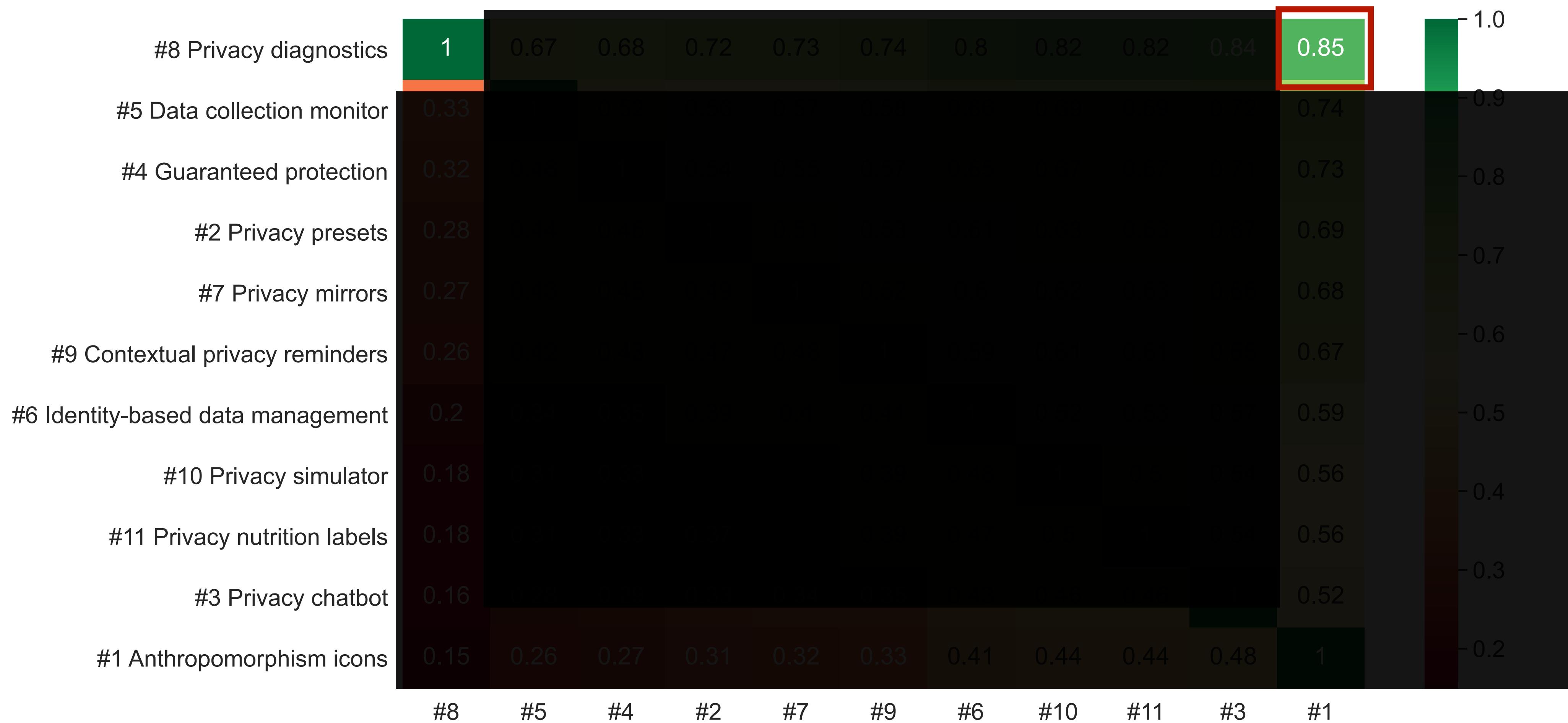
Most favored concept

Privacy diagnostics



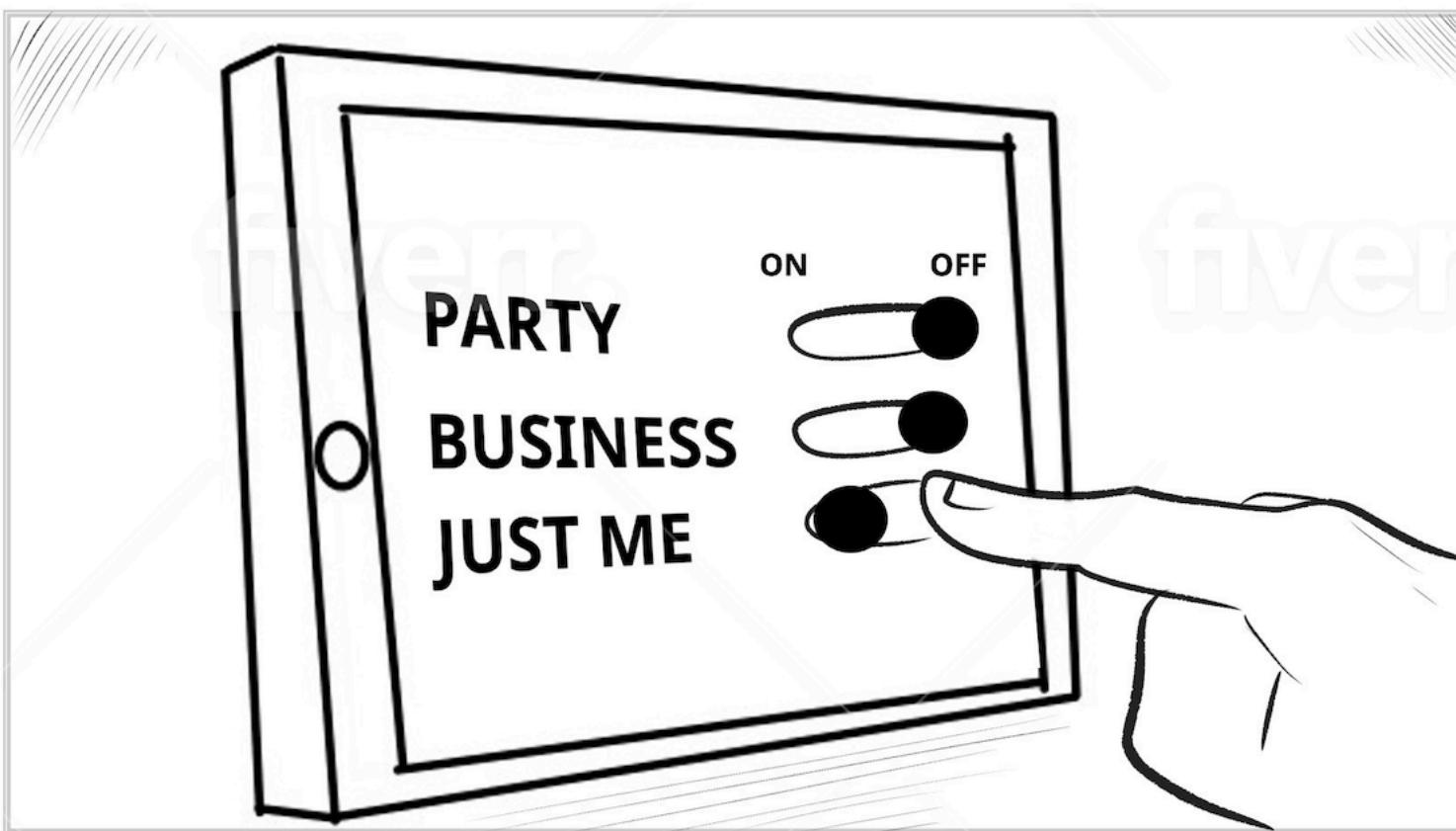
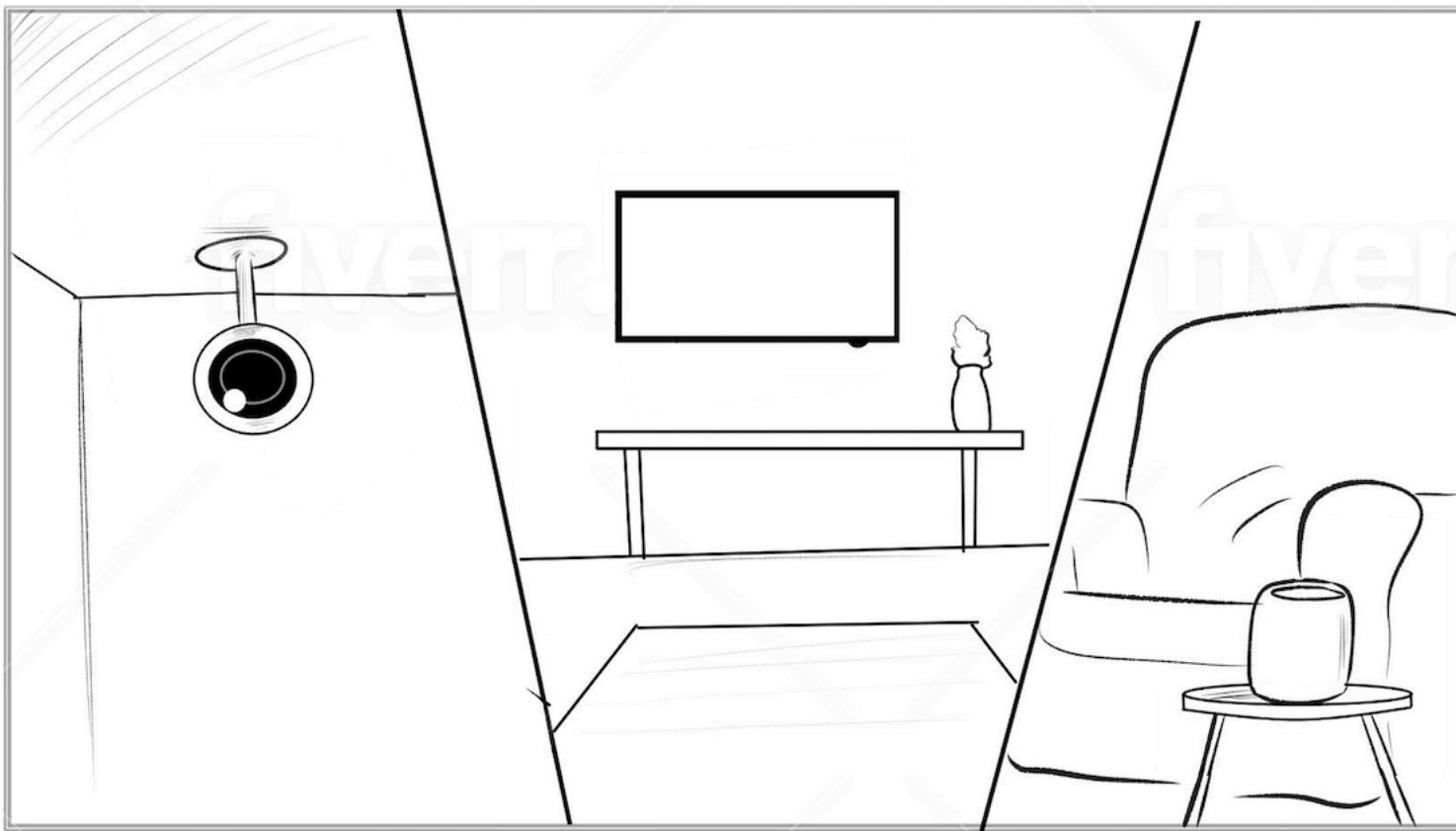
Note: storyboards in the surveys have captions.

Merge partial rankings into a global order



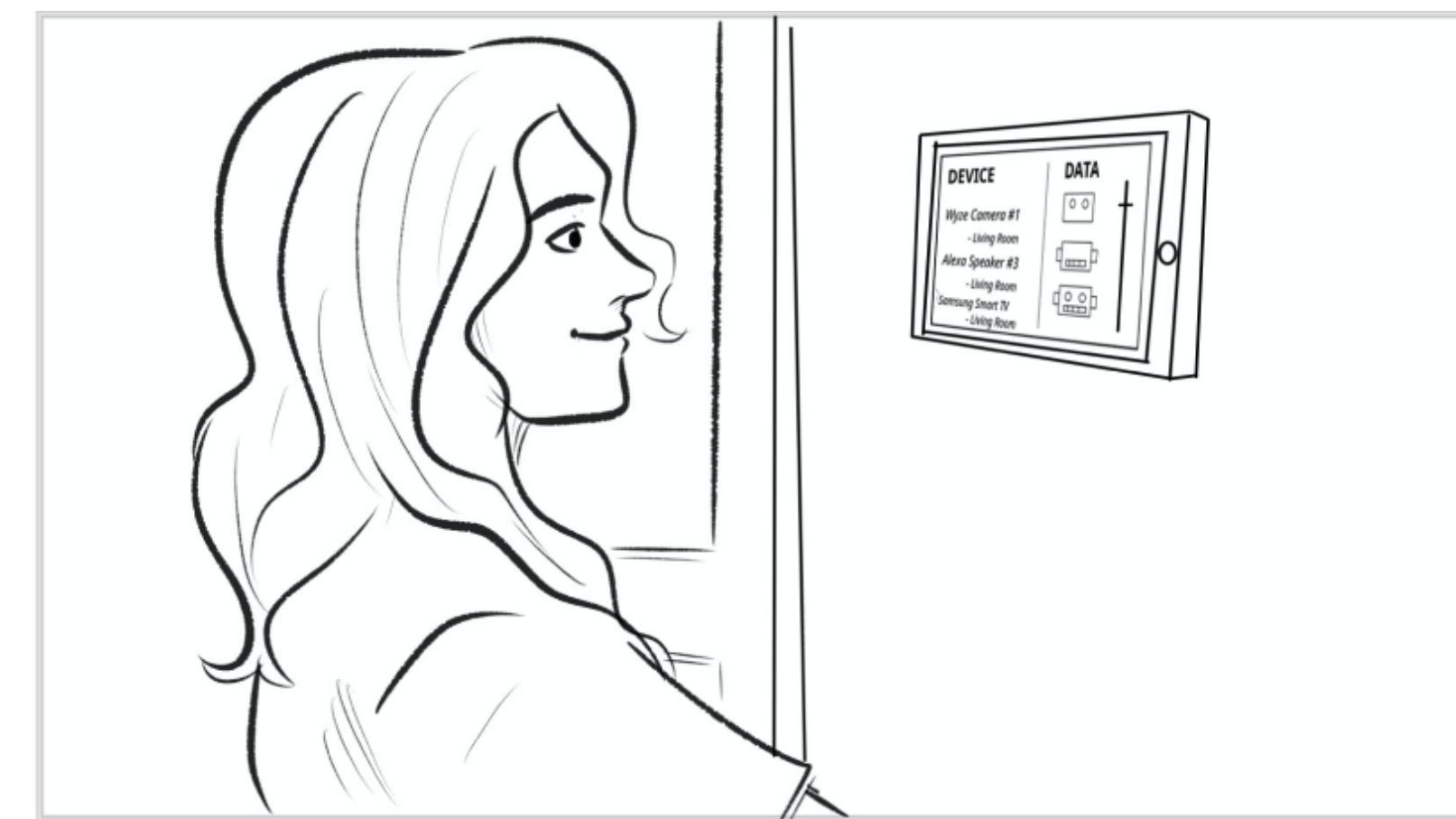
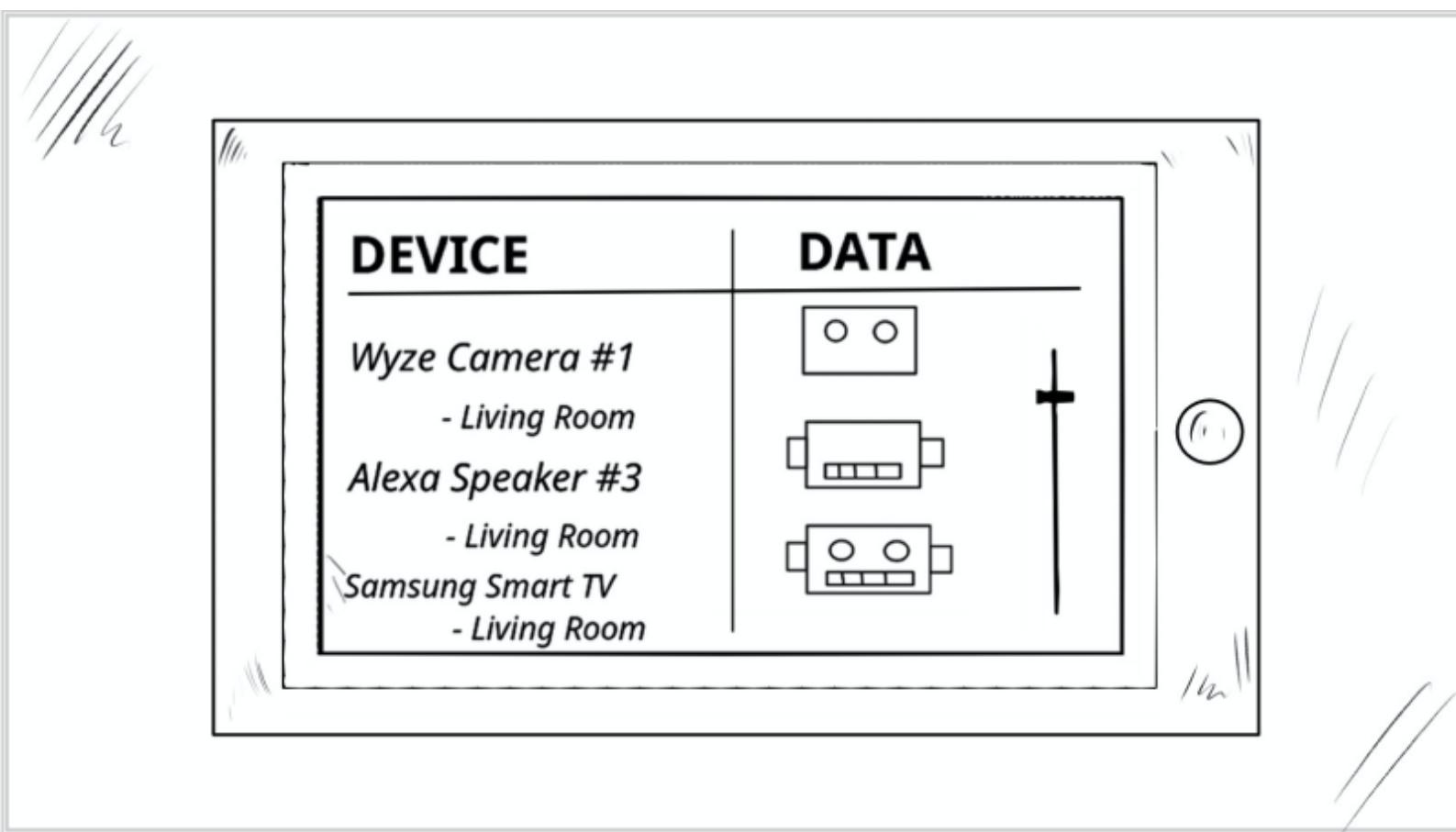
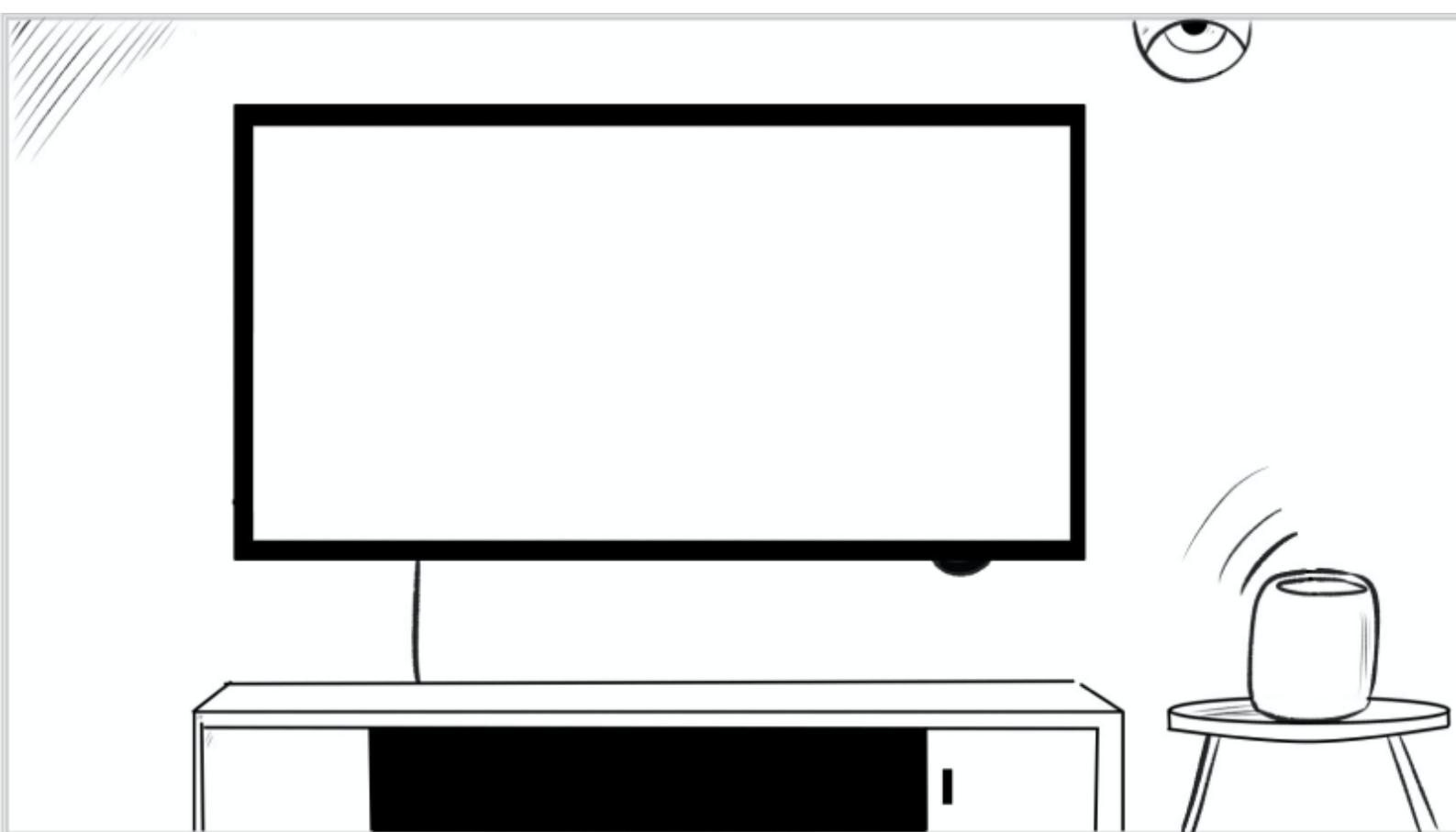
Privacy presets, 4th

Users prefer **simple** solutions that can **offer more controls**



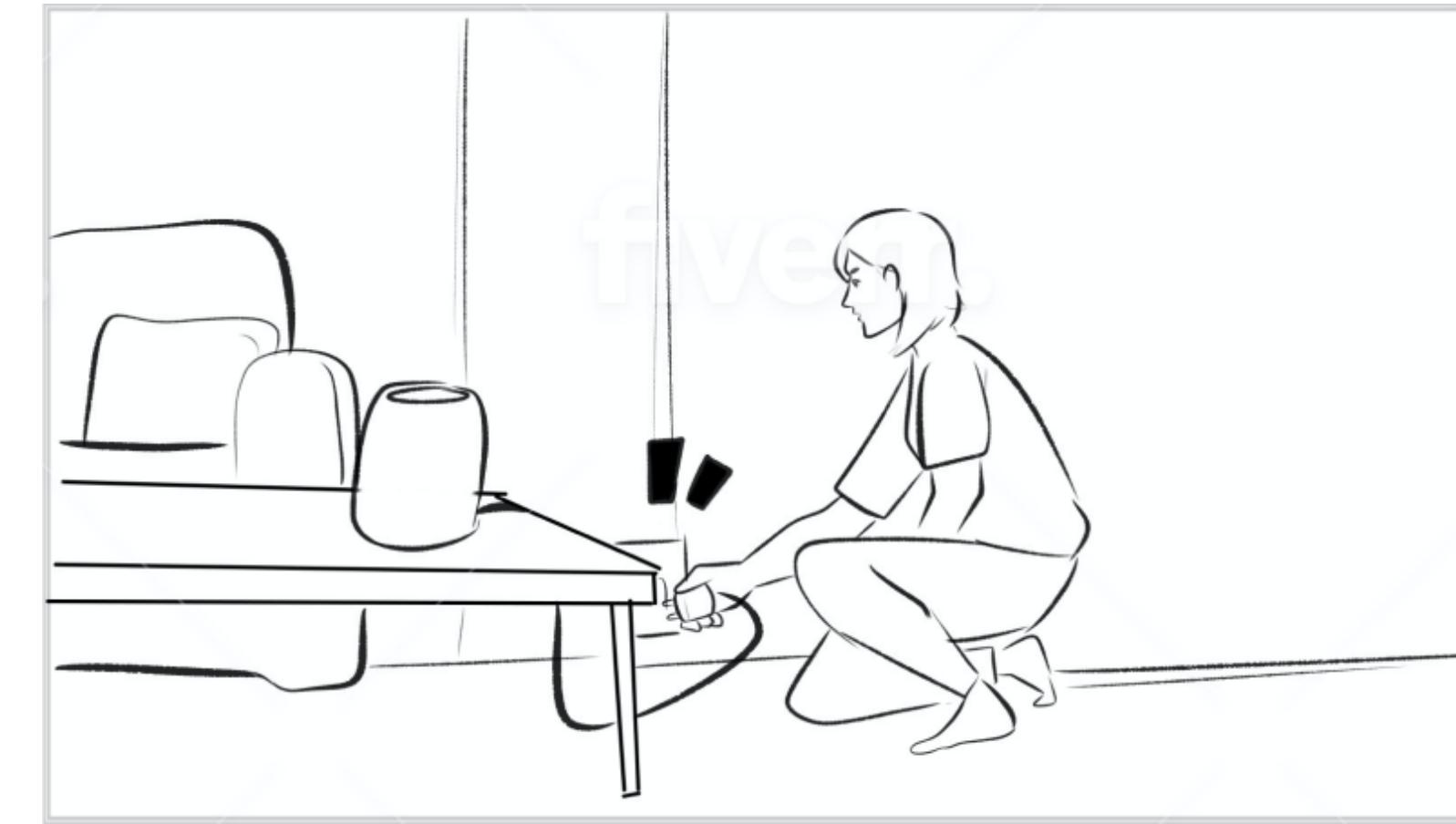
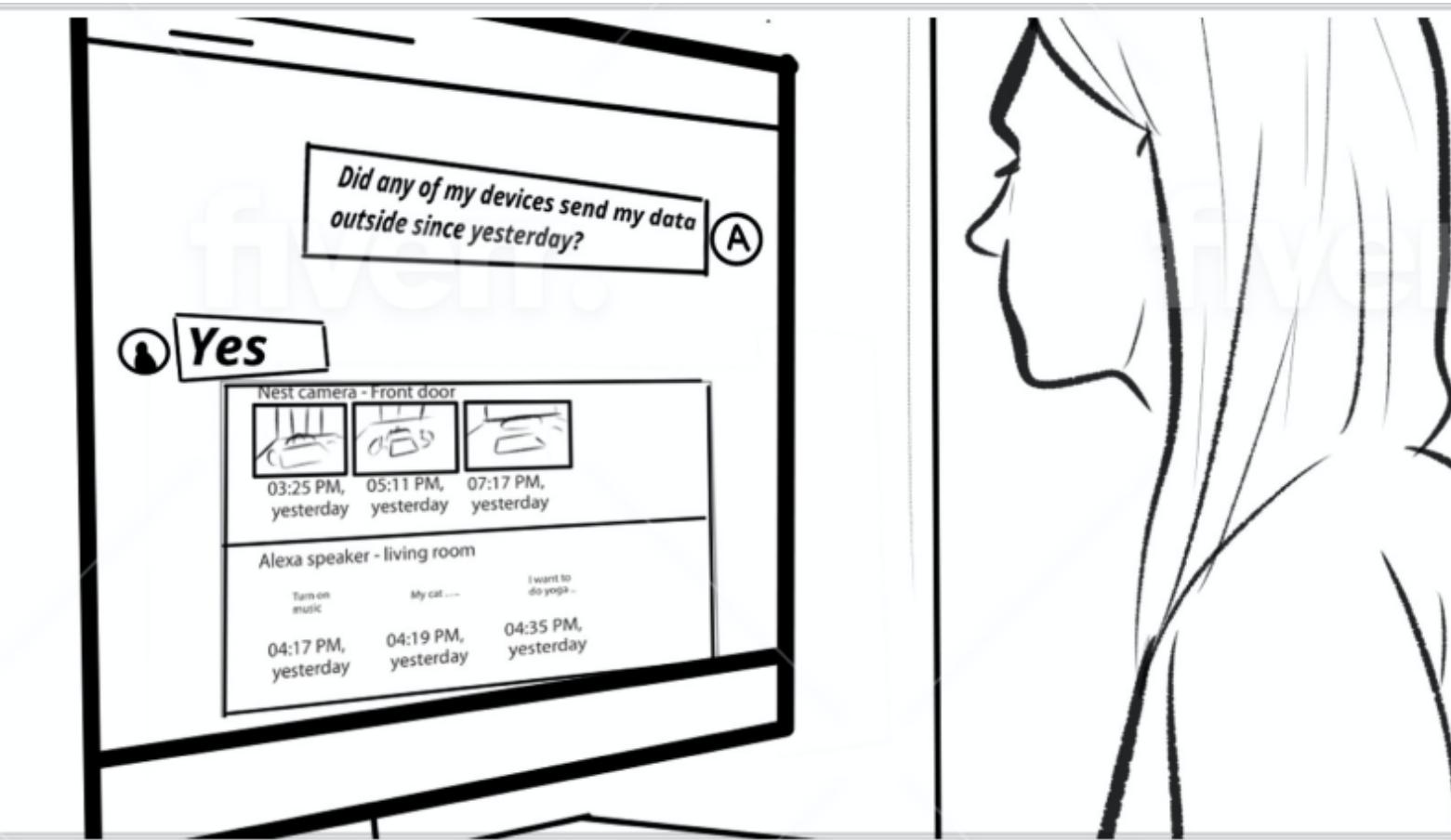
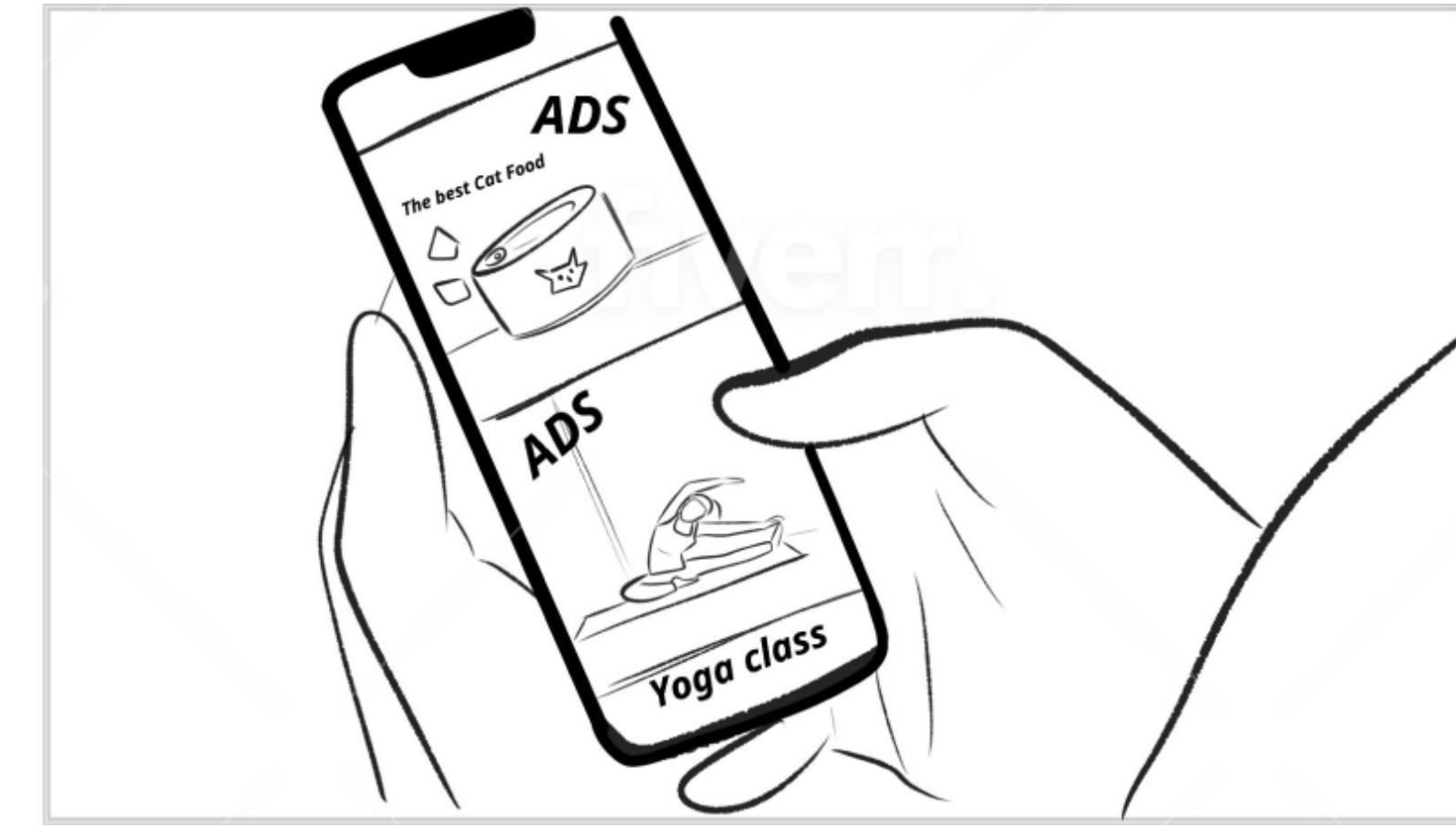
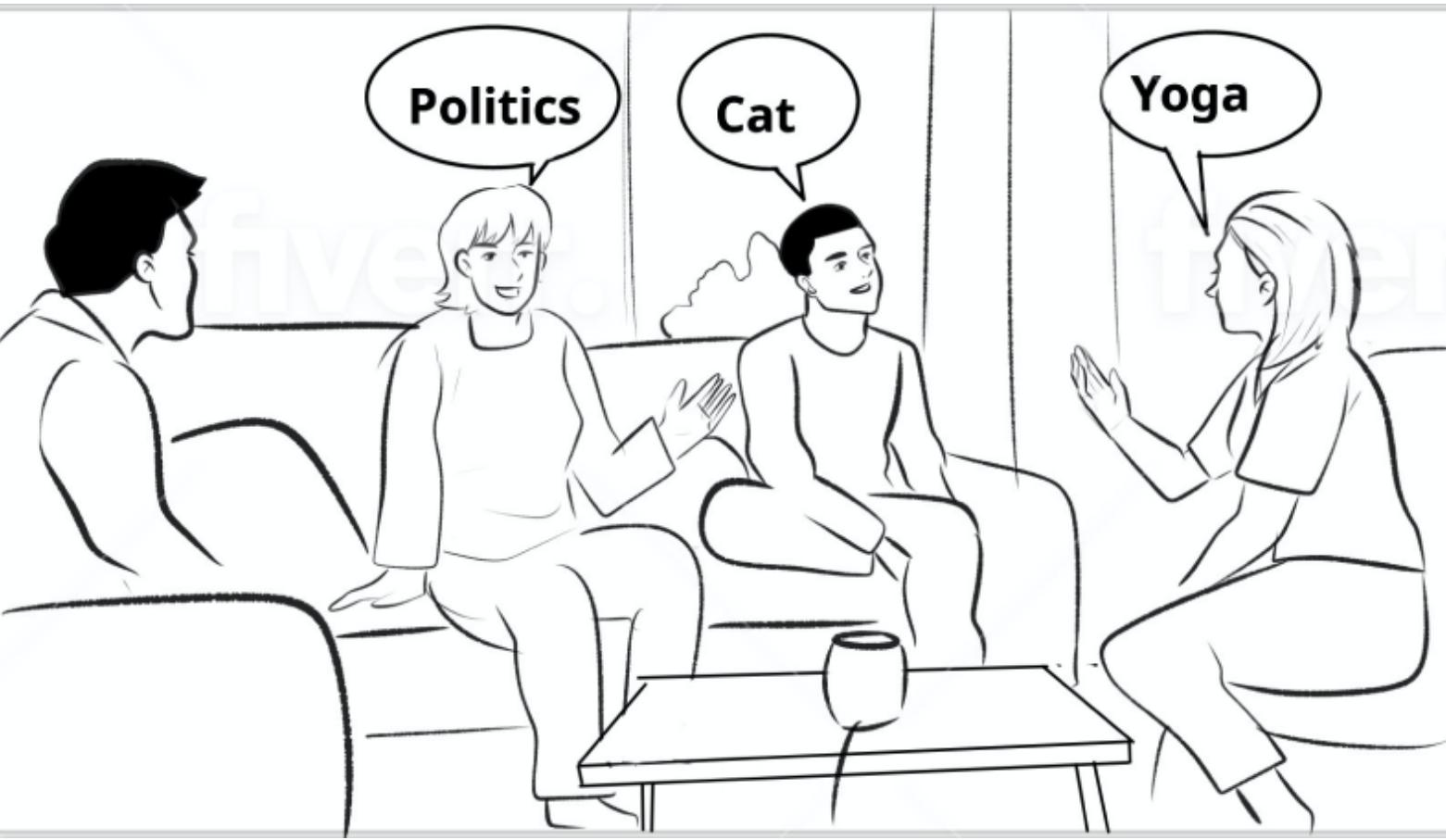
Anthropomorphism icons, 11th

A solutions that can do not offer controls



Privacy chatbot, 10th

Users prefer **proactive** and **preventative** solutions



P3P is part of the solution

- P3P1.0 helps users understand privacy policies but is not a complete solution
 - **Seal programs and regulations:** help ensure that sites comply with their policies
 - **Anonymity tools:** reduce the amount of information revealed while browsing
 - **Encryption tools:** secure data in transit and storage
 - **Laws and codes of practice:** provide a base line level for acceptable policies

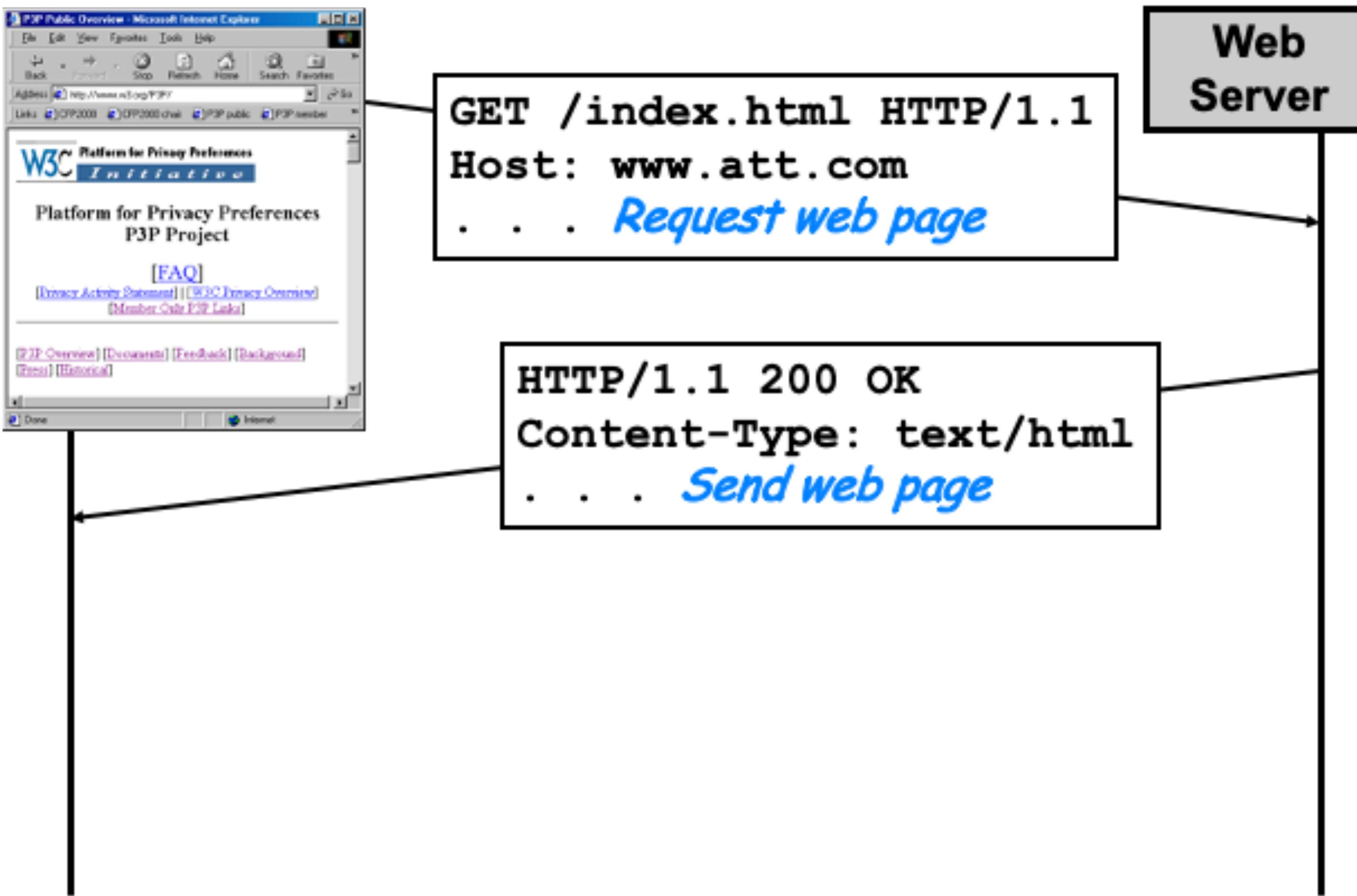
The basics

- P3P provides a standard XML format that web sites use to encode their privacy policies
 - Sites also provide XML “policy reference files” to indicate which policy applies to which part of the site
 - Sites can optionally provide a “compact policy” by configuring their servers to issue a special P3P header when cookies are set
 - No special server software required
 - User software to read P3P policies called a “P3P user agent”

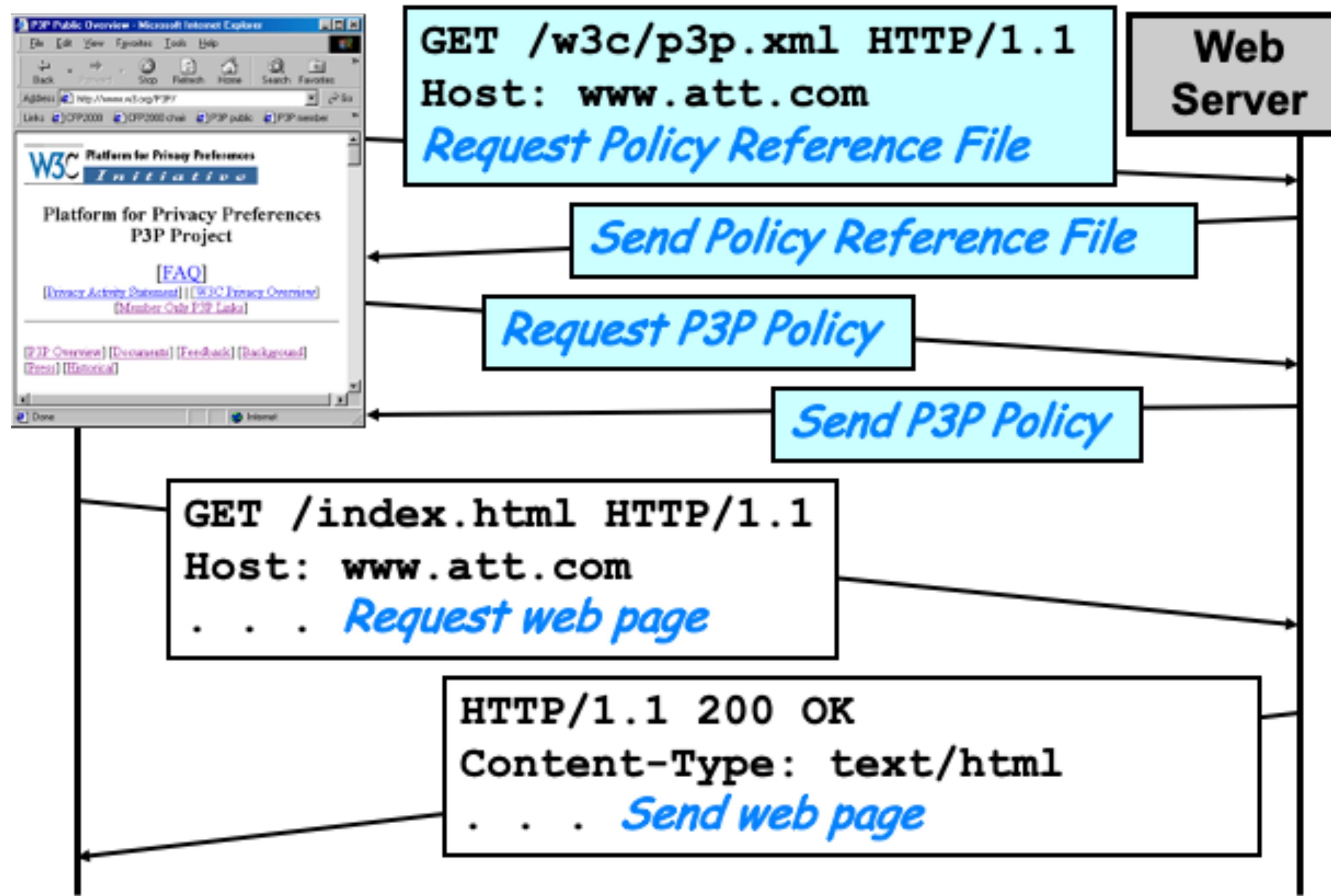
P3P1.0 Spec Defines

- A standard vocabulary for describing set of uses, recipients, data categories, and other privacy disclosures
 - A standard schema for data a Web site may wish to collect (base data schema)
 - An XML format for expressing a privacy policy in a machine readable way
 - A means of associating privacy policies with Web pages or sites
 - A protocol for transporting P3P policies over HTTP

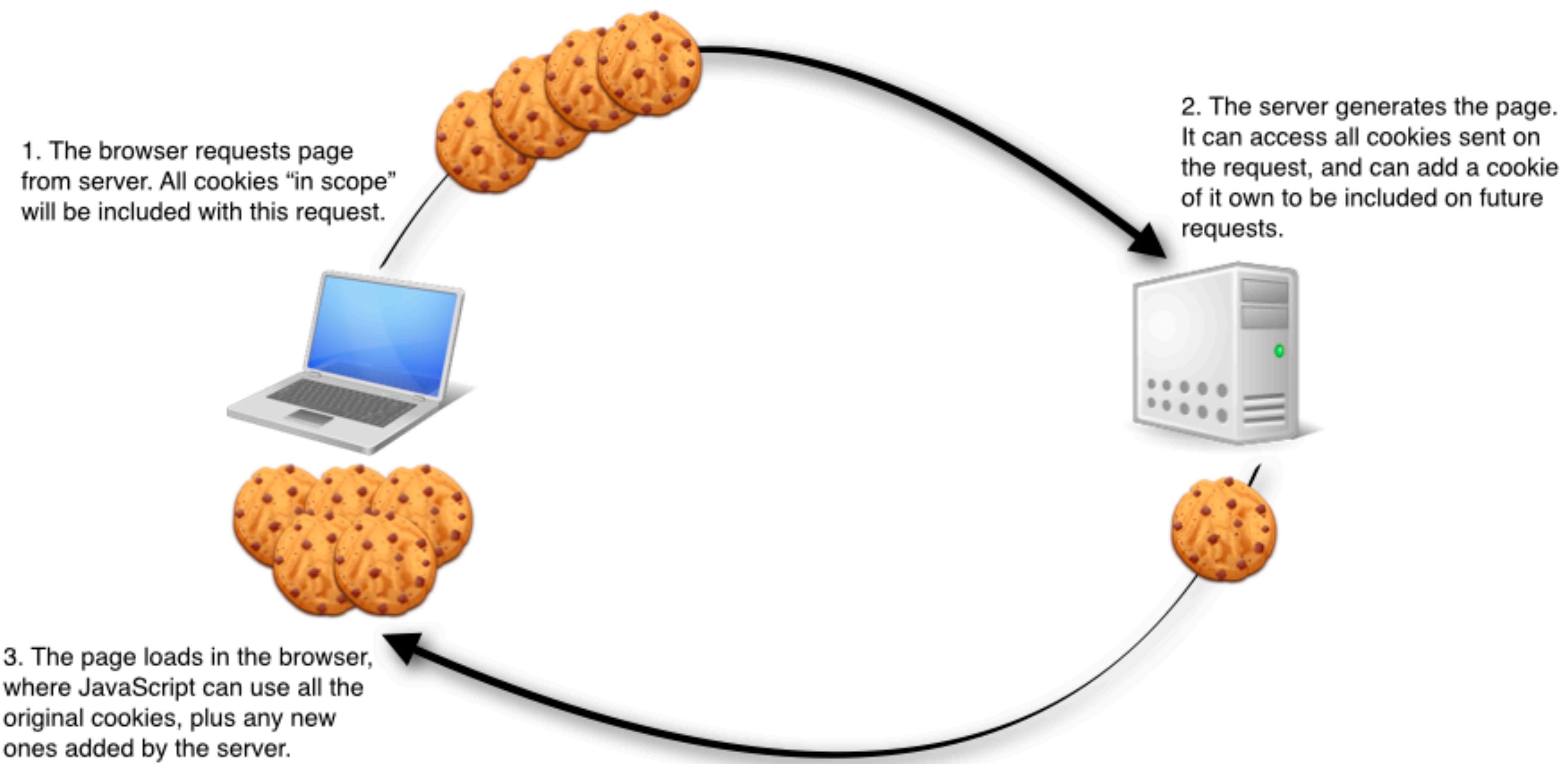
A simple HTTP transaction



... with P3P 1.0 added



Cookie: stateless to stateful



Policies often change

- P3P clients can check a privacy policy each time it changes
- P3P clients can check privacy policies on all objects in a web page, including ads and invisible images



<http://adforce.imgis.com/?adlink|2|68523|1|146|ADFORCE>

Policies often change?

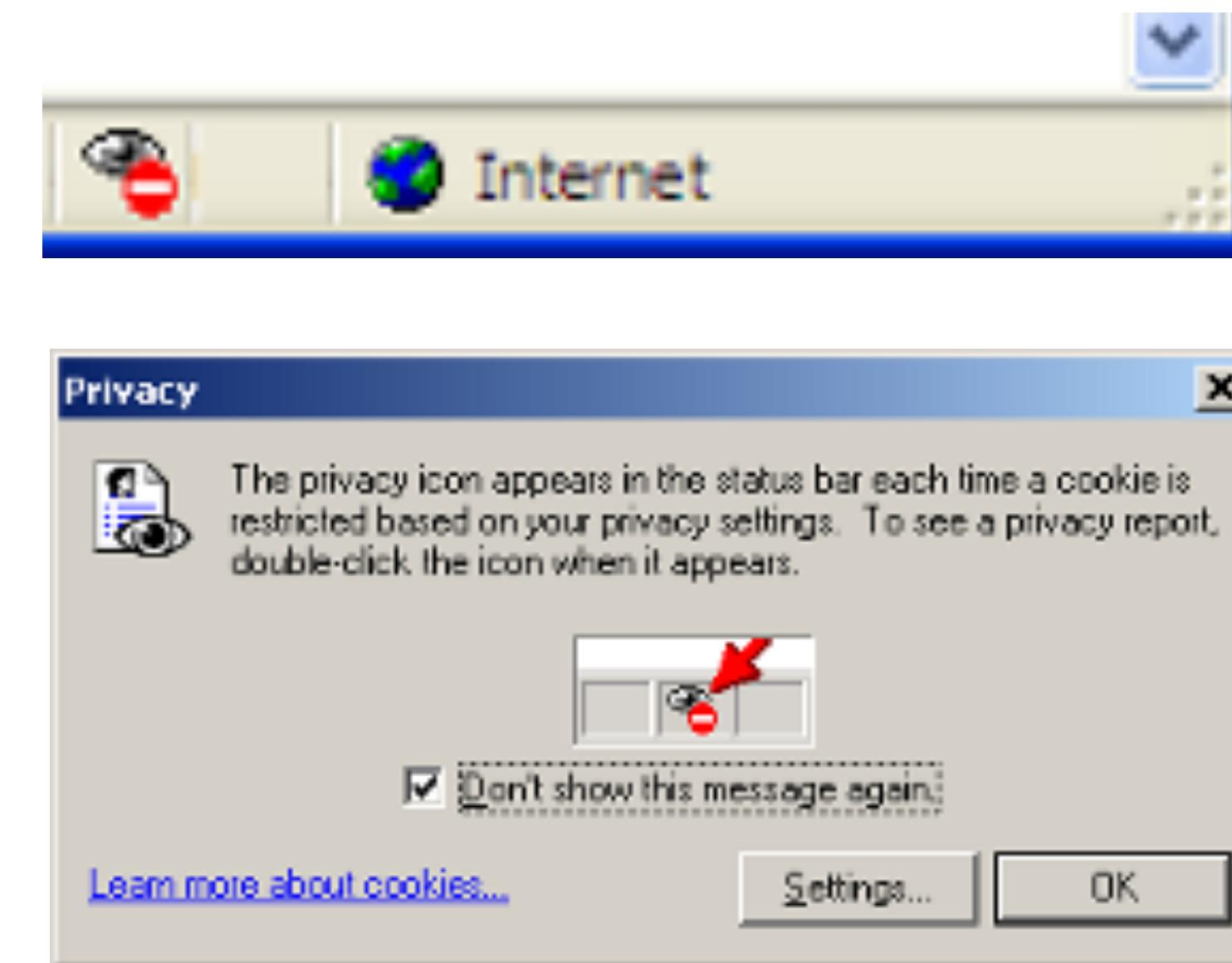
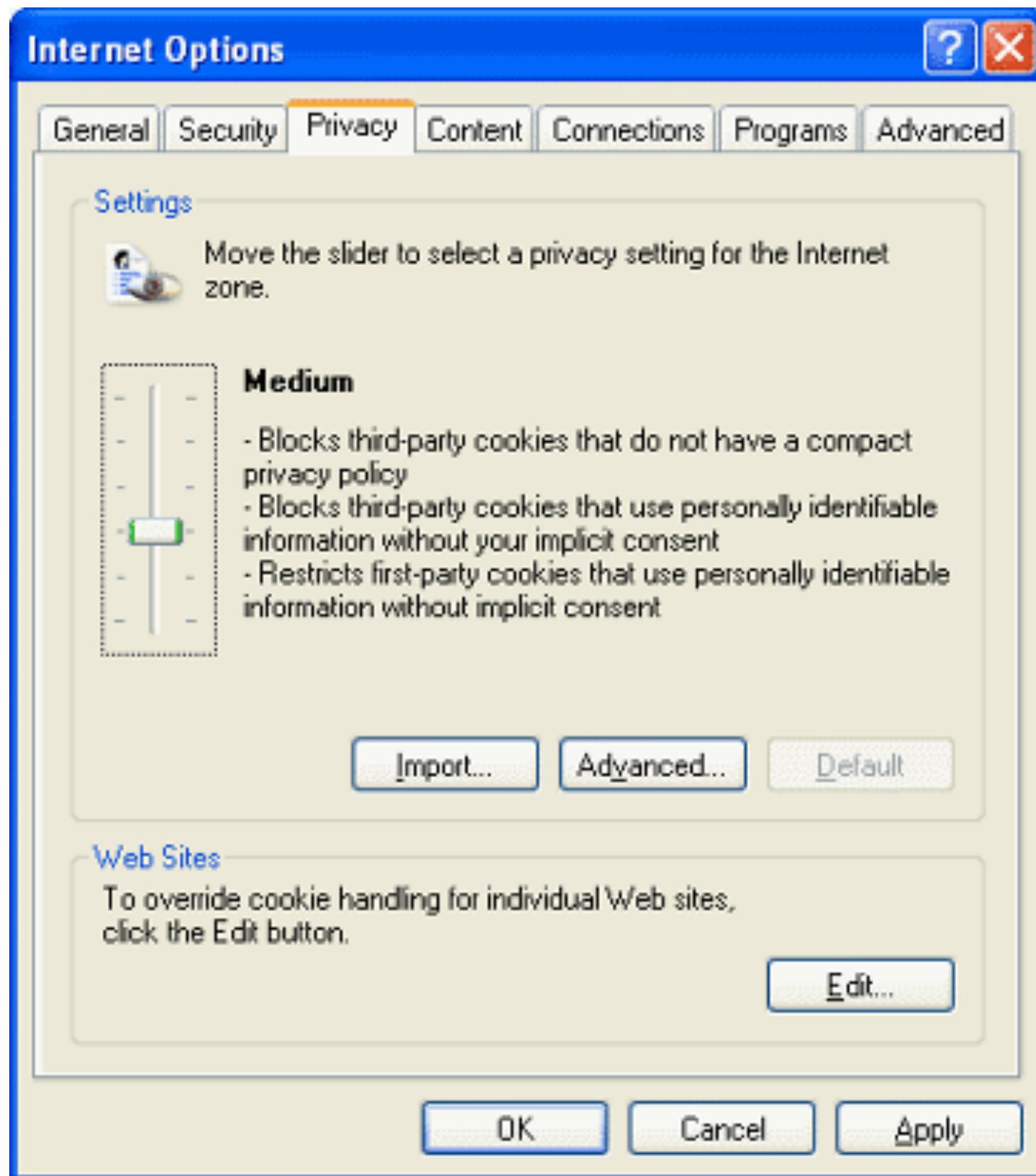
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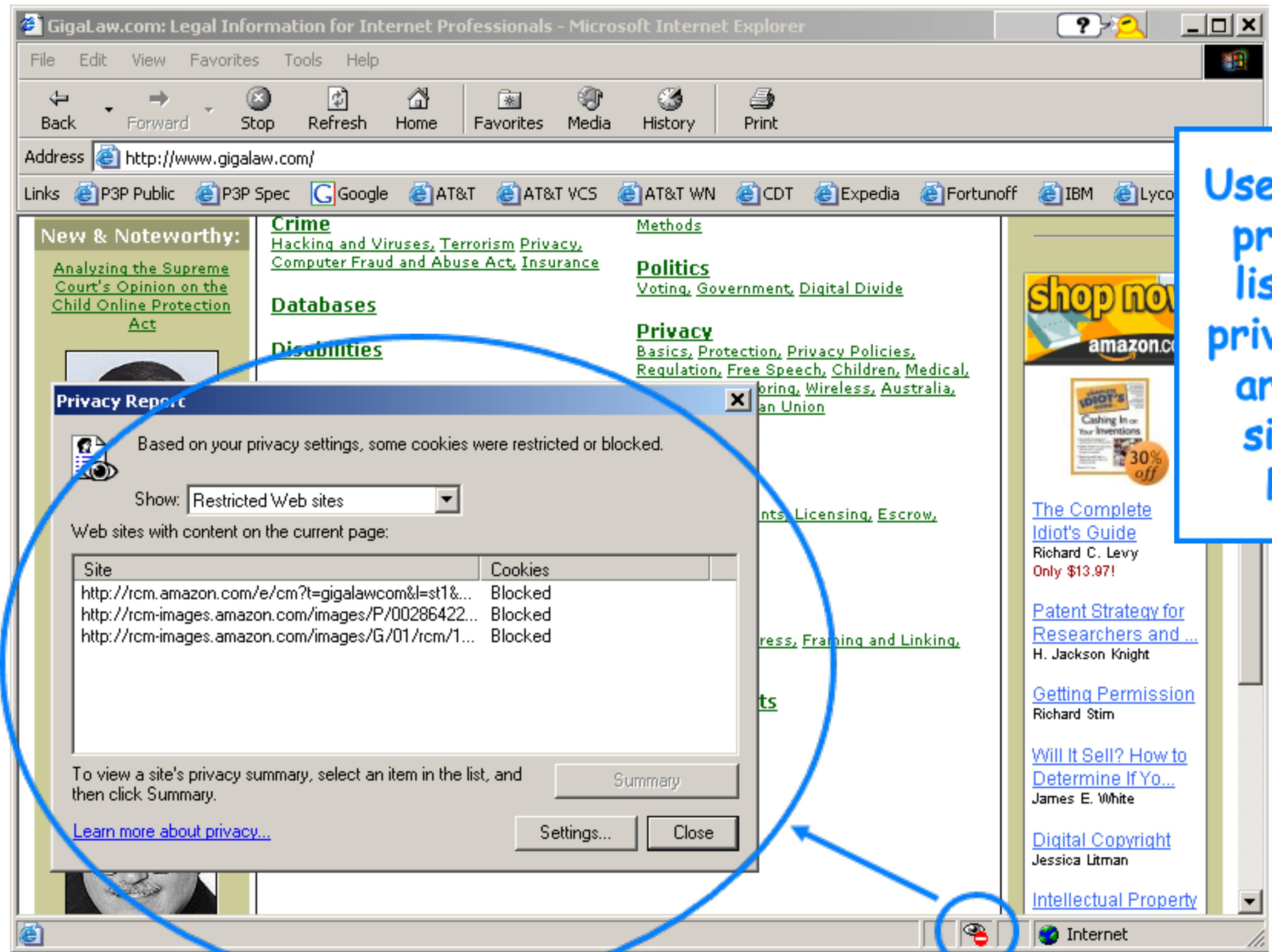
<http://adforce.imgis.com/?adlink|2|68523|1|146|ADFORCE>

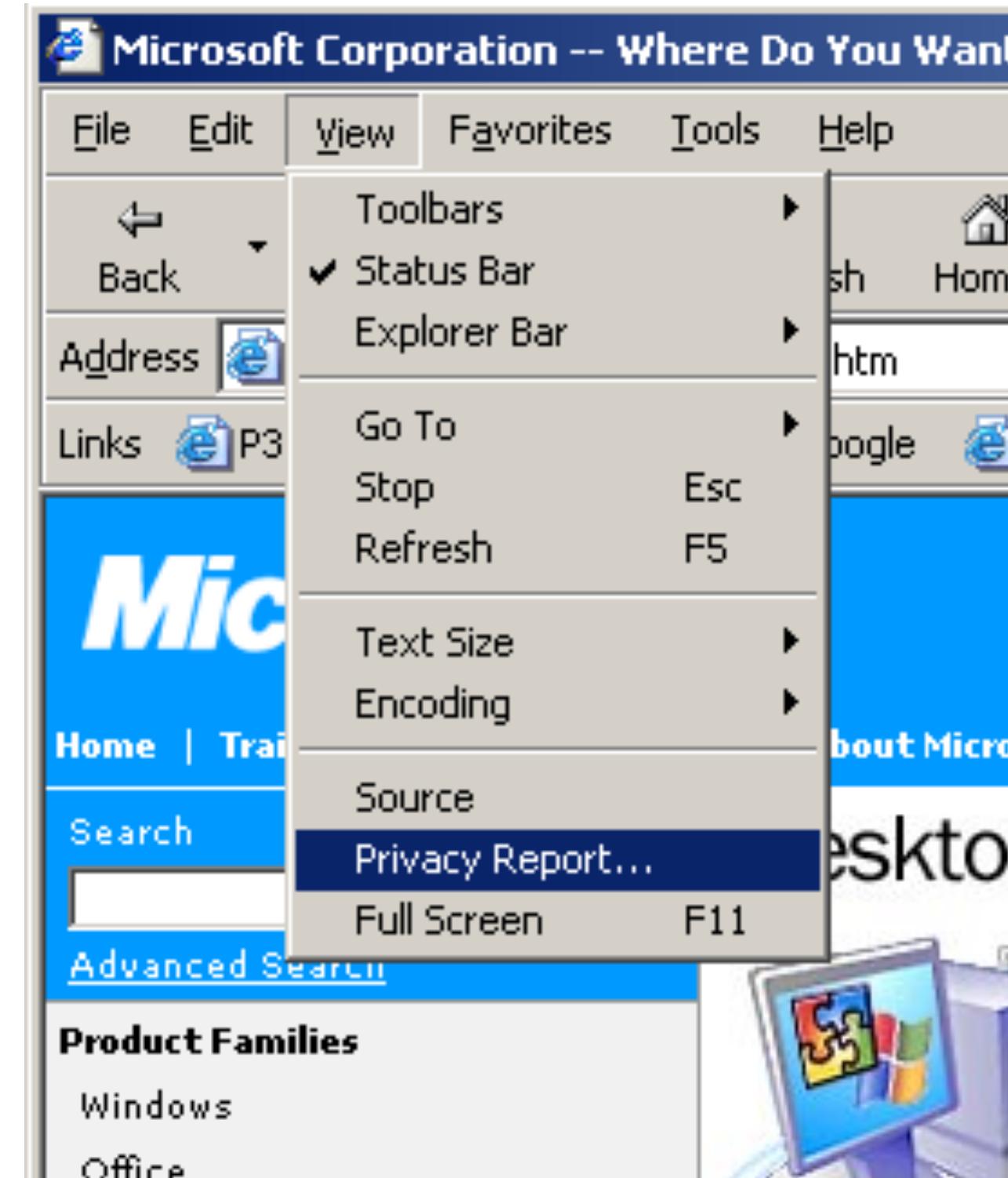
P3P in IE 6

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





Privacy summary report is generated automatically from full P3P policy

Privacy Policy

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.

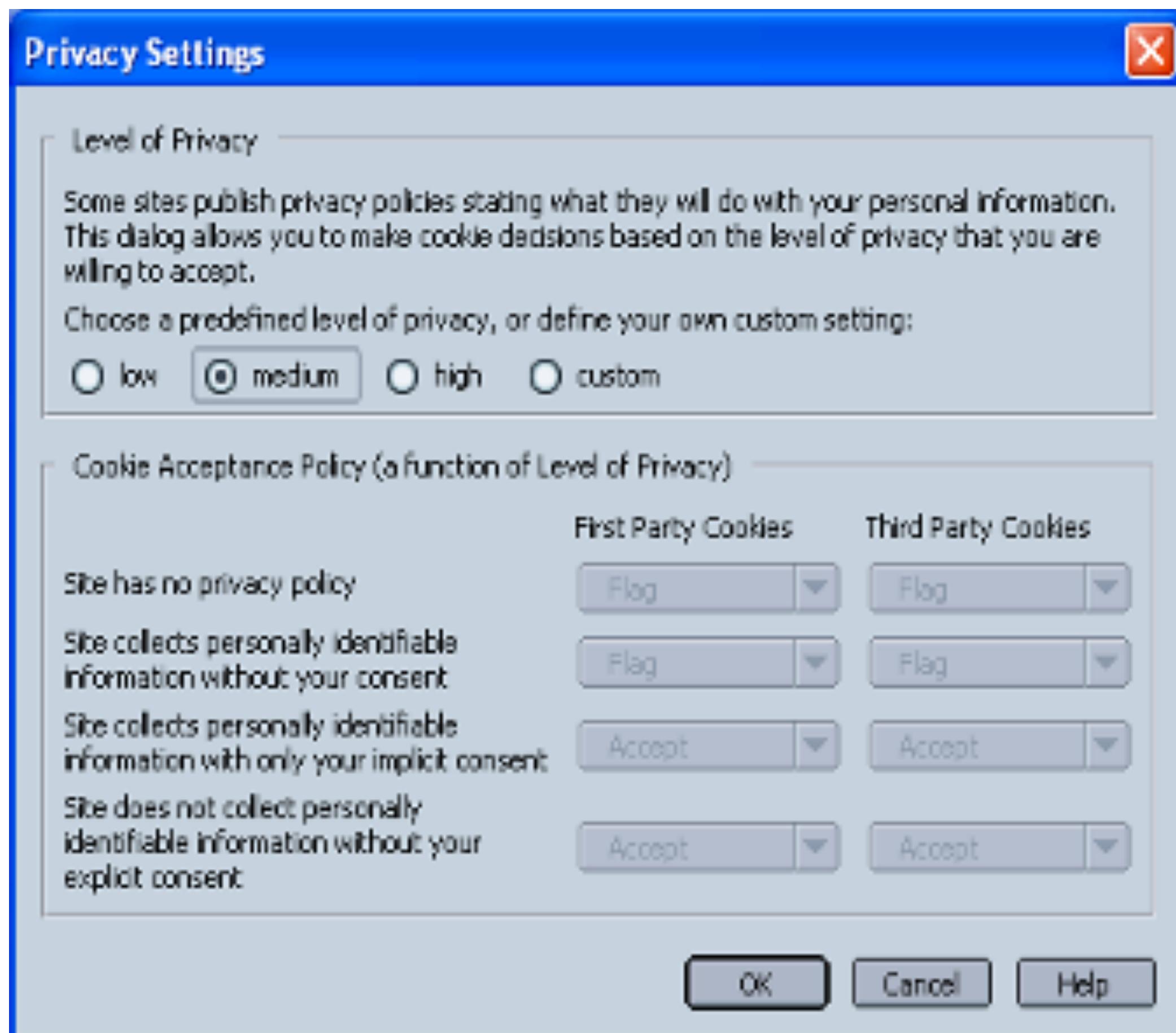
Information that allows an individual to be contacted or located on the Internet, such as an e-mail address. Often, this information is independent of the

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

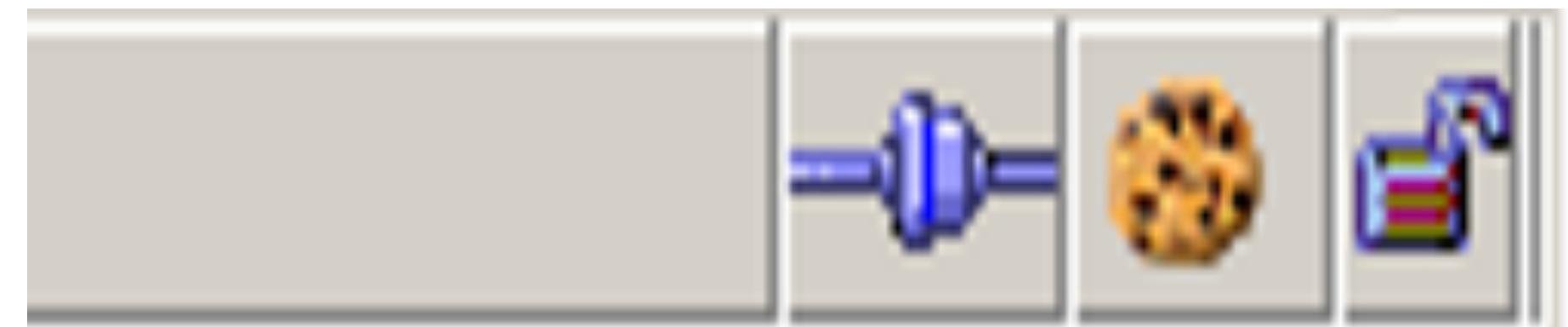
Compare cookies' Privacy Policy to my settings.
 Always allow this site to use cookies.
 Never allow this site to use cookies.

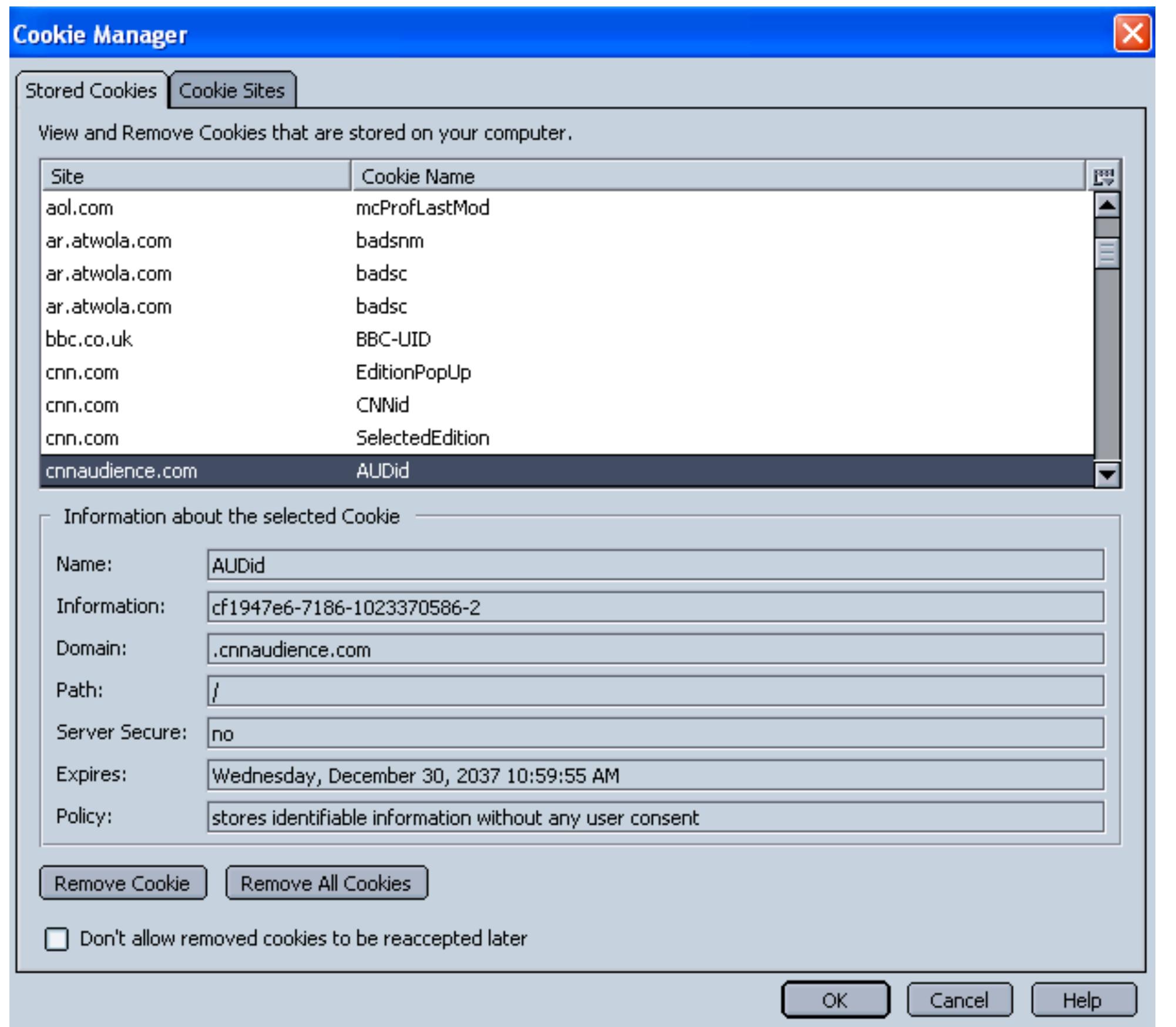
OK **Cancel**

P3P in Netscape 7



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





**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

Important info in privacy policies

- Different users are looking for different things, but many common elements
 - What information will be collected about me?
 - How will it be used?
 - Will it be shared with other companies?
 - Will it be used to send me unsolicited marketing?
 - How can I opt-out? (but many users not aware this is possible)
 - Our findings consistent with other studies

Why web sites adopt P3P

- Demonstrate corporate leadership on privacy issues
 - Show customers they respect their privacy
 - Demonstrate to regulators that industry is taking voluntary steps to address consumer privacy concerns
- Distinguish brand as privacy friendly
- Prevent IE6 from blocking their cookies
- Anticipation that consumers will soon come to expect P3P on all web sites
- Individuals who run sites value personal privacy

P3P early adopters

- News and information sites – CNET, About.com, BusinessWeek
- Search engines – Yahoo, Lycos
- Ad networks – DoubleClick, Avenue A
- Telecom companies – AT&T
- Financial institutions – Fidelity
- Computer hardware and software vendors – IBM, Dell, Microsoft
- Retail stores – Fortunoff, Ritz Camera
- Government agencies – FTC, Dept. of Commerce
- Non-profits - CDT

Web site adoption of P3P

- AT&T Labs study surveyed 5,856 Web sites on May 6 2003 and found 538 with P3P policies
 - Adoption rates highest among most popular web sites ~30% of top 100 sites have adopted P3P

Web site adoption of P3P

- Large number of P3P policies contain technical errors
 - Most errors due to use of old versions of P3P specification or minor technical issues
 - 7% of P3P-enabled sites have severe errors such as missing required components
 - Not uncommon for web standards to be implemented incorrectly, but errors may be more problematic with P3P
 - Software, W3C P3P validation service, online resources, and books available to help sites get it right (many resources available for free)

Legal issues

- P3P specification does not address legal standing of P3P policies or include enforcement mechanisms
- P3P specification requires P3P policies to be consistent with natural-language privacy policies
 - P3P policies and natural-language policies are not required to contain the same level of detail
 - Typically natural-language policies contain more detailed explanations of specific practices

Legal issues

- In some jurisdictions, regulators and courts may treat P3P policies equivalently to natural language privacy policies
- The same corporate attorneys and policy makers involved in drafting natural-language privacy policy should be involved in creating P3P policy

Privacy policy

Designed to be read by a human

Can contain fuzzy language with “wiggle room”

Can include as much or as little information as a site wants

Easy to provide detailed explanations

Sometimes difficult for users to determine boundaries of what it applies to and when it might change

Web site controls presentation

P3P policy

Designed to be read by a computer

Mostly multiple choice – sites must place themselves in one “bucket” or another

Must include disclosures in every required area

Limited ability to provide detailed explanations

Precisely scoped

User agent controls presentation

P3P Interface design challenges

- P3P 1.0 specification focuses on interoperability, says little about user interface
 - P3P 1.1 spec will provide explanations of P3P vocabulary elements suitable for display to end users
- P3P user agents typically need user interfaces for:
 - informing users about web site privacy policies
 - configuring the agent to take actions on the basis of a user's privacy preferences

Informing users about privacy is difficult

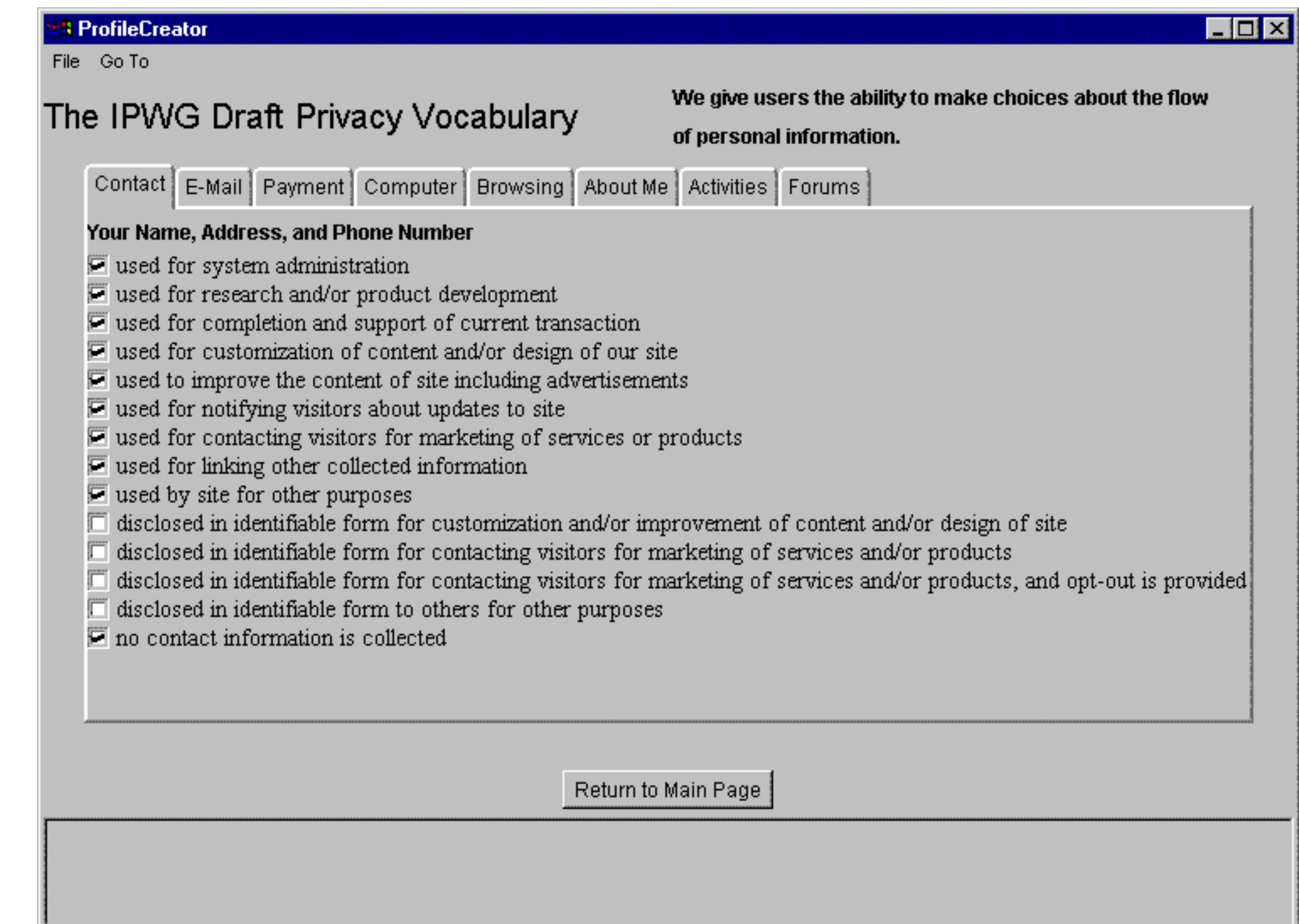
- Privacy policies are complex
 - Over 36K combinations of P3P “multiple choice” elements
 - Users are generally unfamiliar with much of the terminology used by privacy experts
 - Users generally do not understand the implications of data practices
 - Users are not interested in all of the detail of most privacy policies
 - Which details and the level of detail each user is interested in varies

Specifying privacy preferences is difficult

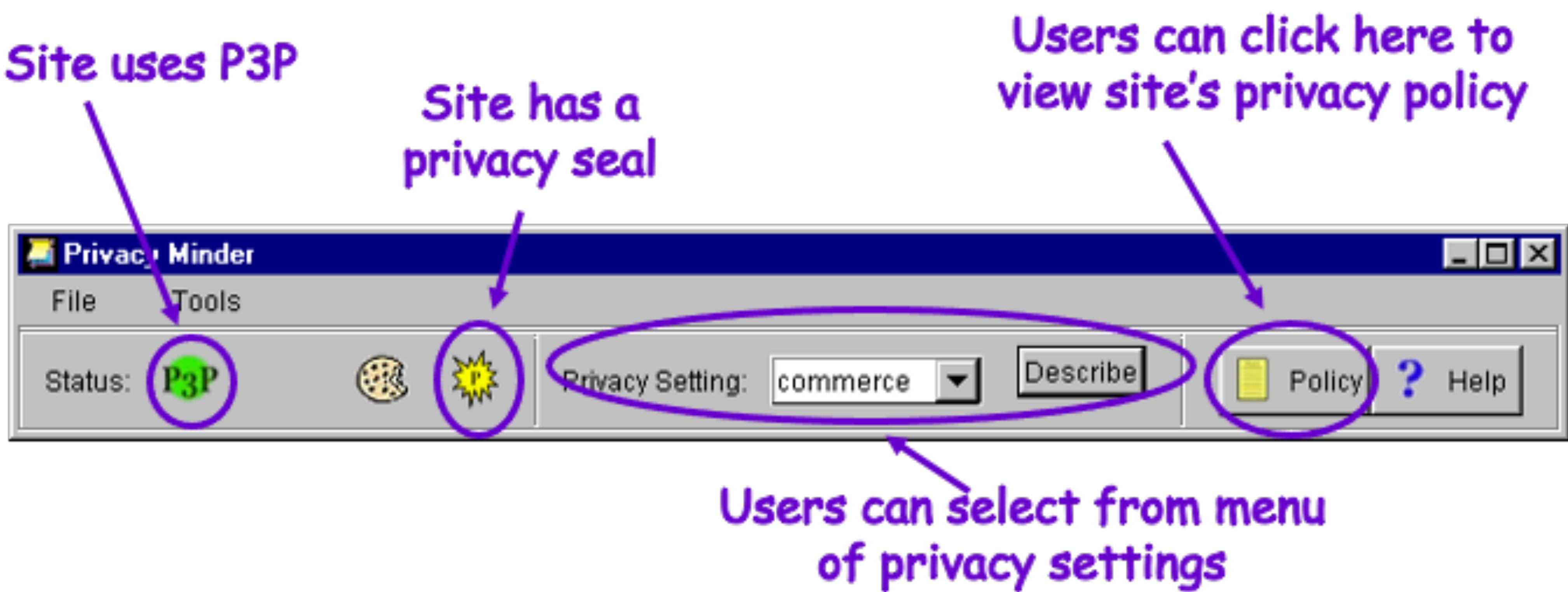
- Privacy policies are complex
- User privacy preferences are often complex and nuanced
- Users tend to have little experience articulating their privacy preferences
- Users are generally unfamiliar with much of the terminology used by privacy experts

Iterative design approach

- Based on pre-W3C draft of P3P vocabulary with 3 fields,
 $7 \times 9 \times 2 = 126$ combinations of elements
- Preference interface eliminated the impractical combos, combined 2 dimensions: $7 \times 14 = 98$ combinations
- 10 preconfigured settings added to make interface appear less complex



Privacy Minder



[Set My Preferences](#)

[Privacy Check Results](#)

[View Privacy Rules \(APPEL\)](#)

[Site's Privacy Policy \(in XML\)](#)

[Demo User Agent Help](#)

Web sites can:

1. Collect only the data necessary to process my specific request

Visited site
OK for visited site
can share this info



2. PLUS: Collect data for *internal uses* only (choose one):

• Only data that **does not** reveal my identity



• Data that **does** identify me except for medical and/or financial information



• **Any** data about me, including medical and/or financial information



3. PLUS: Collect data for other purposes:

• Collect data that **does not** identify me for *profiling*



• Collect data that **does** identify me for *profiling*



• Collect data that **does** identify me for *marketing purposes*



Features you may require from Web site:

I
Require

Ability to remove myself from marketing/mailing lists



Ability to find out what data they have about me



Note: filling out this form does not prevent a web site from collecting data -- it only informs you when the site's policy violates your privacy preferences so you can decide whether to visit the site and/or supply information.

[Save my preferences](#)

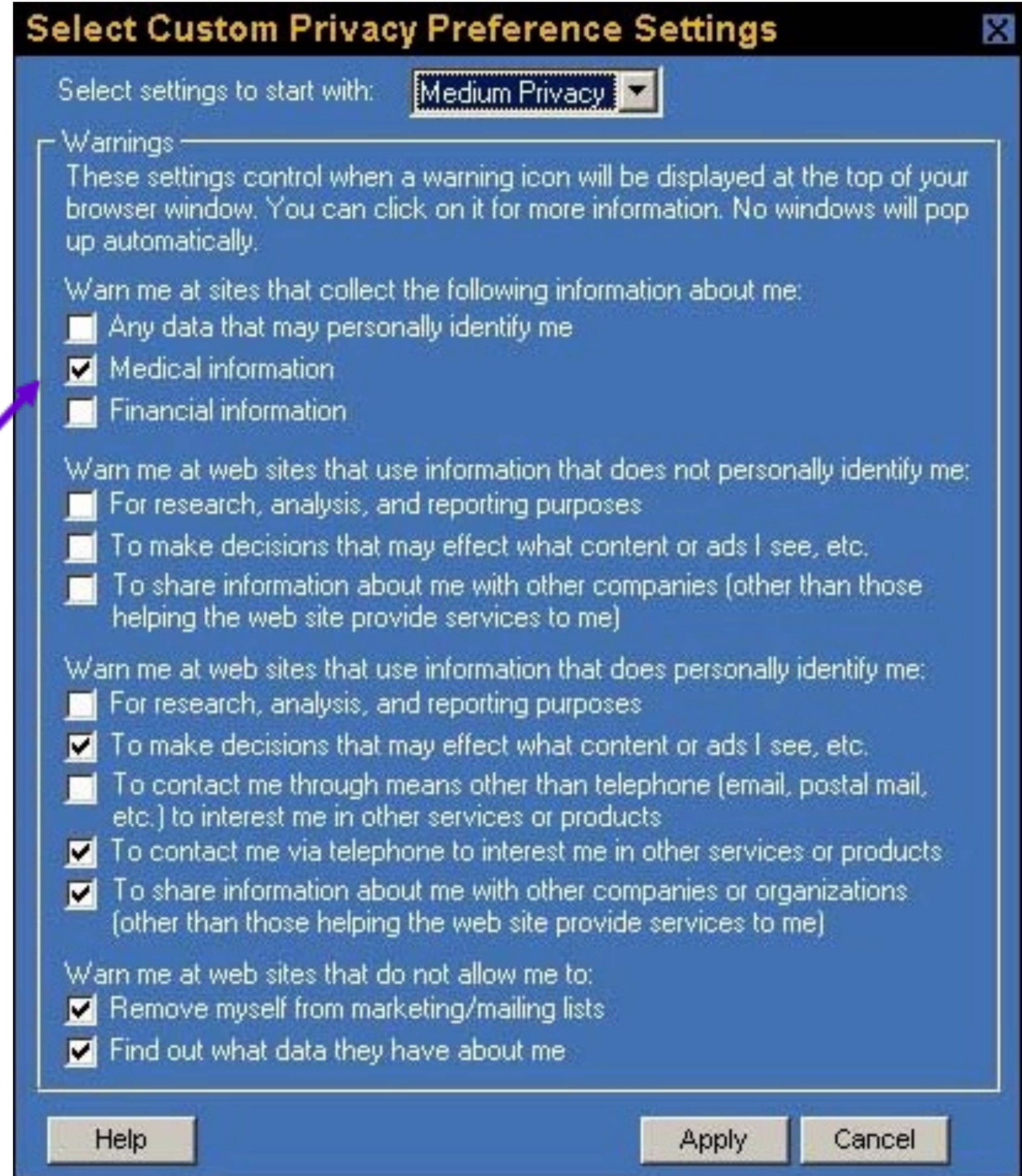
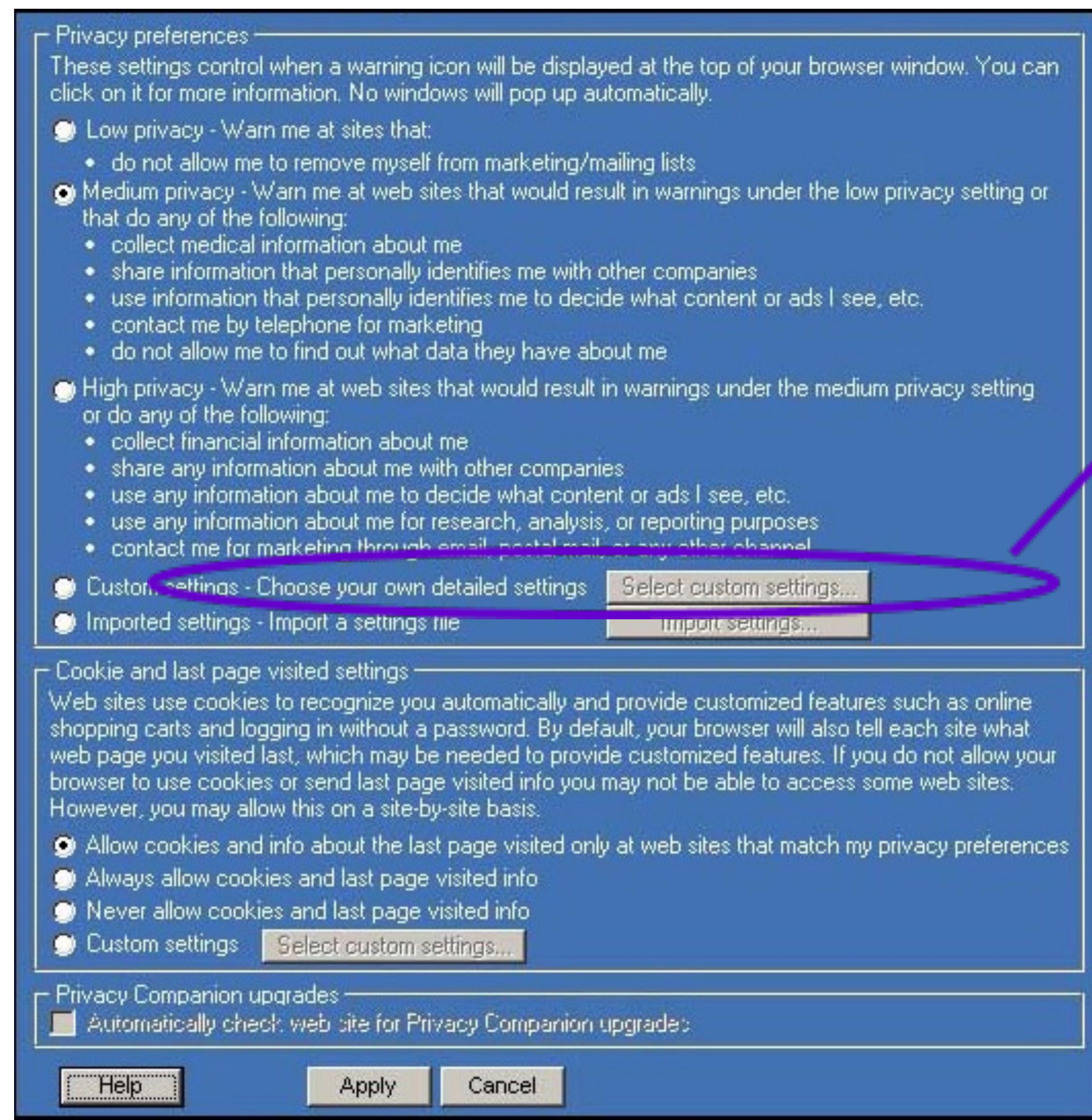
Definitions of italicized terms

Internal uses includes such things as completing transactions, troubleshooting customer problems, and customizing website content to customers' interests, but **not** marketing or profiling

Profiling means collecting data about your interests and habits to predict other things you might want or do

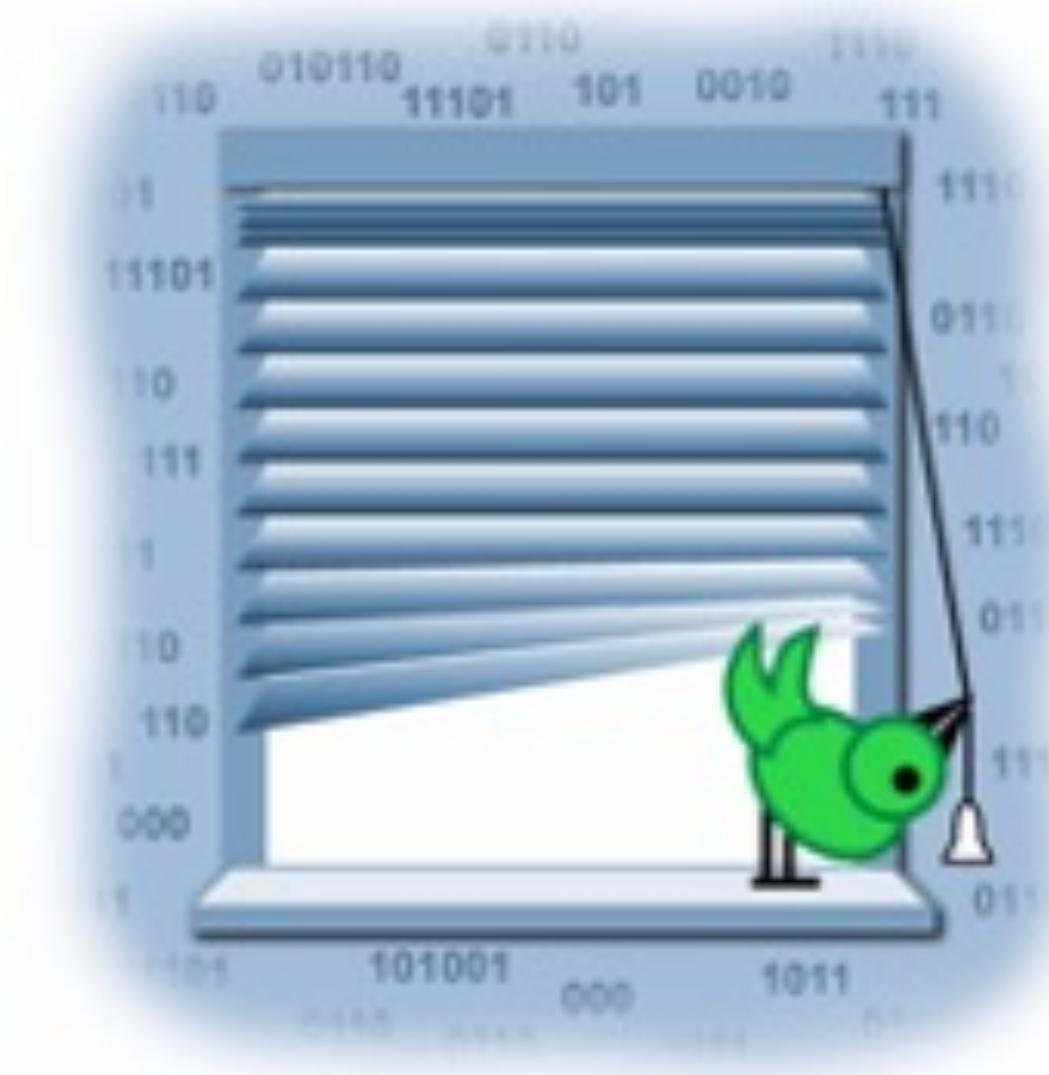
Marketing purposes means contacting you to try to interest you in other products

Sharing info means selling or giving data to organizations or people external to the organization represented on the website



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/

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 Zachary Cranor's Home Page - Microsoft Internet Explorer

File Edit View Favorites Tools

Back Forward Stop Refresh

Address http://shane.cranor.org/

Shane Zachary Ci



Bor

Photo

Fav

Shane's Photo Album

- [Shane's First Year](#)

Shane's Latest Photos

Shane attended Mom's Chatha
The next day Shane helped Da

Policy Summary

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

The screenshot shows a Microsoft Internet Explorer window with the title bar "1-800-FLOWERS.COM - Flowers, Plants, Gourmet and Sweets, Unique Gifts a" and the address bar "http://1-800-flowers.com/flowers/welcome.asp". The main content area displays a "Policy Summary" window titled "1-800-Flowers.com, Inc. Privacy Practices". Inside this window, there is a "Privacy Policy Check" section with the message: "1-800-Flowers.com, Inc.'s privacy policy **does not match your preferences:**". Below this, a bulleted list details two potential privacy concerns:

- 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)

Below the check section is a "Privacy Policy Summary" section with the text: "This site has the following statements in its policy:" followed by a bullet point linking to "Site Statement 1 - All users and customers". At the bottom of the summary window, it says "Turner et al Information Collected".

Expand/collapse

Policy Summary	Policy Summary
<p>+ Federal Trade Commission Privacy Practices</p> <p>Privacy Policy Check</p> <p>Federal Trade Commission's privacy policy matches your preferences.</p> <p>Privacy Policy Summary</p> <p>+ Policy Statement 1 - Basic Information Data collected from all Web users: access logs, and search strings (if entered).</p> <p>+ Policy Statement 2 - Data Collected</p> <p>- Access to your information This site allows you to access your complete file about you from its records</p> <p>+ How to reach this site</p> <p>+ How to resolve privacy-related complaints</p> <p>More Information</p>	<p>+ Federal Trade Commission Privacy Practices</p> <p>Privacy Policy Check</p> <p>Federal Trade Commission's privacy policy matches your preferences.</p> <p>Privacy Policy Summary</p> <p>- Policy Statement 1 - Basic Information Data collected from all Web users: access logs, and search strings (if entered).</p> <p>Types of information that may be collected:</p> <ul style="list-style-type: none">• search terms• click-stream information <p>How your information may be used:</p> <ul style="list-style-type: none">• To complete the activity for which the data was provided• To do web site and system administration <p>Who may use your information:</p> <ul style="list-style-type: none">• This web site and the companies that help the site provide services to you (such as payment processing, data analysis, and hosting)

Bird checks policies for embedded content

Lycos - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Favorites Media History Print

Address http://www.lycos.com/

Links P3P Public P3P Spec Google

Embedded Content

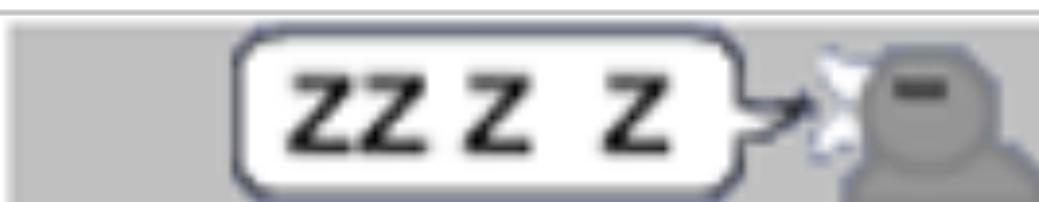
The images and/or other content embedded in this web page are listed below. Some of this content may be covered by a different privacy policy than the rest of the page. Select a URL to view the privacy information related to that content.

URL	Privacy Check	Type
http://a284.g.akamai.net/l/284/987/2h/lygo.com/s.gif	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/dolline_1...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/footer_ang...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/hp_shop_...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/hp_shop_...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/hp_topics...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/hp_topics...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/news_Bu...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/s.gif	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/tools_eng...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/tools_righ...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/tools_righ...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/topics_d...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/ly/0/hp/valentine...	Unknown	Image
http://a676.g.akamai.net/l/676/987/12h/lygo.com/s.gif	Unknown	Image
http://hb.lycos.com/header?2=142153&VID=1401&LHM=0&LHS=8	Matched	IFrame
http://ln.doubleclick.net/adify.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/718598buybooks468.gif	UnMatched	Image
http://www.lycos.com/css/genesis_ie.css	Matched	StyleSheet

Help Policy Summary View P3P Source Close

http://ln.doubleclick.net/dick;3850159;0-0;1;380248

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)

Help

Import Settings

Export Settings

OK

Cancel

Evaluating P3P user agents

- Questions
 - Does P3P user agent perform useful function?
 - Can users use it effectively?
- Evaluation techniques
 - User survey
 - Laboratory study

Privacy Bird user survey

- 20,000 downloads in first six months of beta trial
- Users asked whether they were willing to participate in survey when they downloaded software
- 2000 email addresses randomly selected from those willing to participate
- Sent invitation to fill out online 35-question survey
- 17% response rate

General evaluation of Privacy Bird

- Frequent criticism: too many yellow birds!
 - In August 2002, E& Y reported 24% of to 100 domains visited by US Internet users were P3P enabled
- Average usefulness on 5 point scale (5=very useful)
 - Today: 2.9
 - If most web sites P3P-enabled: 4.0
 - If Privacy Bird could block cookies at sites with red bird: 4.1
- Average ease-of-use on 5 point scale (5=very easy)
 - Installation: 4.6
 - Changing privacy settings: 3.9
 - Understanding policy summary: 3.3

What's wrong with P3P?

P3P is dead, long live P3P!

I didn't attend the W3C's [Do Not Track](#) and Beyond Workshop last week, but I heard reports from several attendees that instead of looking forward, participants spent a lot of time looking backwards at last decade's W3C web privacy standard, the [Platform for Privacy Preferences \(P3P\)](#). P3P is a computer-readable language for privacy policies. The idea was that websites would post their privacy policies in P3P format and web browsers would download them automatically and compare them with each user's privacy settings. In the event that a privacy policy did not match the user's settings, the browser could alert the user, block cookies, or take other actions automatically. Unlike the [proposals for Do Not Track being discussed by the W3C](#), P3P offers a rich vocabulary with which websites can describe their privacy practices. The machine-readable code can then be parsed automatically to display a privacy "nutrition label" or icons that summarize a site's privacy practices.

Having personally spent a good part of seven years working on the P3P 1.0 specification, I can't help but perk up my ears whenever I hear P3P mentioned. I still believe that P3P was, and still is, a really good idea. In hindsight, there are all sorts of technical details that should have been worked out differently, but the key ideas remain as compelling today as they were when first discussed in the mid 1990s. Indeed, with increasing frequency I have discussion with people who are trying to invent a new privacy solution that actually looks an awful lot like P3P.

Sadly, the P3P standard is all but dead and practically useless to end users. While P3P functionality has been built into the Microsoft Internet Explorer (IE) web browsers for the past decade, today thousands of websites, including some of the web's most popular sites, post bogus P3P "compact policies" that [circumvent the default P3P-based cookie-blocking system in Internet Explorer](#). For example, Google transmits the following compact policy, which tricks IE into believing that Google's privacy policy is consistent with the default IE privacy setting and therefore its cookies should not be blocked.

P3P:CP="This is not a P3P policy! See
<http://www.google.com/support/accounts/bin/answer.py?hl=en&answer=15165>"

<https://lorrie.cranor.org/blog/2012/12/03/p3p-is-dead-long-live-p3p/>

Cookie blocked/not saved in IFRAME in Internet Explorer

The concept was born in 2002 and it baffles me that this outdated and legally unimplemented concept is still forced upon developers within IE. If this header doesn't have have any legal ramifications this header should be ignored (or alternatively, generate a warning or notification in the console). Not enforced! I'm now forced to put a line in my code (and send a header to the client) that does absolutely nothing.

In short - to keep IE happy - add the following line to your PHP code (Other languages should look similar)

```
header('P3P: CP="Potato"');
```

Problem solved, and IE is happy with this potato.

Share Follow

edited Dec 9, 2014 at 22:38

community wiki

4 revs, 2 users 97%

Ruben

P3P

The screenshot shows a Microsoft Learn page with the following details:

- Header:** Microsoft Learn Documentation Training Certifications Q&A Code Samples Assessments Shows Events Search previous version Sign in
- Alert Bar:** ⓘ We're no longer updating this content regularly. Check the [Microsoft Product Lifecycle](#) for information about how this product, service, technology, or API is supported. Recommended Version X
- Filter Sidebar:** Filter by title (P3P is no longer supported, VBScript is no longer supported, VML is no longer supported, XML data islands are no longer supported, Internet Explorer compatibility changes by version, Document Compatibility, Internet Explorer Application)
- Page Content:** ... / Legacy feature support changes /

P3P is no longer supported

Article • 12/15/2016 • 2 minutes to read

The *Platform for Privacy Preferences 1.0 (P3P 1.0)* is obsolete in Windows 10 (Microsoft Edge and all modes of Internet Explorer 11 for Windows 10).

Support for P3P 1.0 has been removed in Windows 10 and will have minimal ongoing servicing for previous versions of Windows. Recommended practice is to avoid deploying P3P privacy policies on your site.

What is the most broad P3P header that will work with IE?

3 Answers

Sorted by: Highest score (default) ▾



"I want to skip the nasty details of the P3P policy"

31



It is possible to set a P3P HTTP header without valid compact privacy policy attributes.



Facebook does this. Here is the P3P HTTP header from facebook.com:



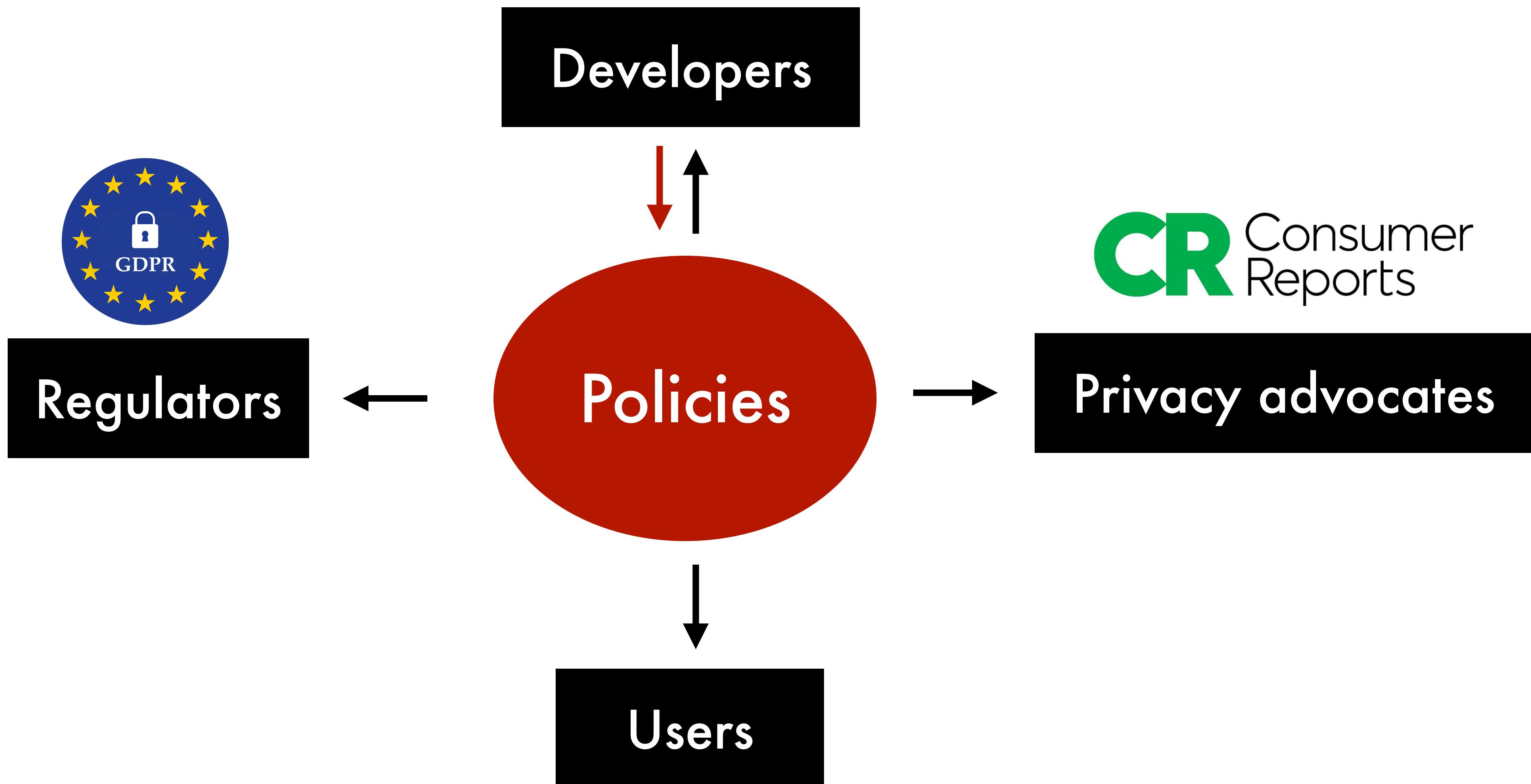
P3P: CP="Facebook does not have a P3P policy. Learn why here: http://fb.me/p3p"

Google does it too:

p3p: CP="This is not a P3P policy! See http://www.google.com/support/accounts/bi

This is accepted by Internet Explorer. For example, IE's "high" privacy setting blocks all

Stakeholders around privacy policies



NLP & Machine Learning

An Empirical Study of Natural Language Parsing of Privacy Policy Rules Using the SPARCLE Policy Workbench

Carolyn A. Brodie
IBM T. J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
914-784-7237
brodiec@us.ibm.com

Clare-Marie Karat
IBM T. J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
914-784-7612
ckarat@us.ibm.com

John Karat
IBM T. J. Watson Research Center
19 Skyline Drive
Hawthorne, NY 10532
914-784-7832
jkarat@us.ibm.com

ABSTRACT

Today organizations do not have good ways of linking their written privacy policies with the implementation of those policies. To assist organizations in addressing this issue, our human-centered research has focused on understanding organizational privacy management needs, and, based on those needs, creating a usable and effective policy workbench called SPARCLE. SPARCLE will enable organizational users to enter policies in natural language, parse the policies to identify policy elements and then generate a machine readable (XML) version of the policy. In the future, SPARCLE will then enable mapping of policies to the organization's configuration and provide audit and compliance tools to ensure that the policy implementation operates as intended. In this paper, we present the strategies employed in the design and implementation of the natural language parsing capabilities that are part of the functional version of the SPARCLE authoring utility. We have created a set of grammars which execute on a shallow parser that are designed to identify the rule elements in privacy policy rules. We present empirical usability evaluation data from target organizational users of the SPARCLE system and highlight the parsing accuracy of the system with the organizations' privacy policies. The successful implementation of the parsing capabilities is an important step towards our goal of providing a usable and effective method for organizations to link the natural language version of privacy policies to their implementation, and subsequent verification through compliance auditing of the enforcement logs.

Categories and Subject Descriptors

H5.2. Information interfaces and presentation: User Interfaces.
K4.1. Public policy issues: Privacy

General Terms

Management, Design, Security, Human Factors

Keywords

Policy, privacy, security, usability, social and legal issues, design.

1. INTRODUCTION

Today organizations are under increasing pressure to ensure that the personal information from their customers, patients, citizens and employees that the organization collects, uses, and stores is protected from both internal and external threats. Both new legislation and social pressures caused by the ever growing number of reports of phishing attacks, identity theft, and other online crime are increasing the pressure on organizations to protect personal information against these threats. Organizations that expose data bear the additional expenses associated with notifying individuals whose data may have been exposed and helping these individuals to limit their risks using techniques ranging from changing account numbers and reissuing credentials to paying for them to enroll in credit watch services to protect against identity theft. The organizations must face these expenses whether the exposure was accidental or the result of a malicious attack. In order to protect against these threats, organizations must put in place well-understood and comprehensive sets of security and privacy policies, educate their staffs on these policies, enforce them, and then audit their enforcement to ensure compliance. These processes are currently difficult for organizations to implement successfully. To further complicate the situation, much of the existing security and privacy technology is designed for use by experts and is difficult for either end users or organizational users who are not security experts to use correctly. Further, using these mechanisms incorrectly can be worse than not using them at all. Whitten and Tygar highlighted this issue while studying the use of email encryption technology when they pointed out that "security mechanisms are only effective when used correctly" and these

Crowd sourcing

The screenshot shows a web-based application for crowdsourcing privacy policy analysis. At the top, a navigation bar includes links for 'usableprivacy', 'User Profile', 'Task', 'Settings', and 'Logout'. A search bar labeled 'Search this policy' is present. The main content area displays the SFGate.com privacy policy page. On the left, there's a sidebar with contact information: 'Privacy policy at SFGate', 'Privacy Policy', 'General Inquiries', and two phone numbers ('415-777-1111' and 'Toll-free USA 800-247-6642'). Below this is a section titled 'Purpose and Scope of this Privacy Policy.' containing detailed legal text about how the company handles user data. To the right, a large box titled 'Answer the following questions' contains a question: 'Does the policy state that the website might collect contact information about its users?'. It includes a blue button 'Select sentence from policy and click' and a red button 'Remove last selection'. A text input field below the question says: 'Find the answer in the document, highlight the sentences containing the answer, and click the blue button above to paste the text here'. Below the input field is a list of four radio button options: '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.', and 'Not applicable - this question is not addressed by this policy.' At the bottom right of the main box is a green 'Next' button. At the very bottom of the page is a footer with 'Your Progress' and a link 'Jump directly to question ▾'.

usableprivacy User Profile Task Settings Logout

Search this policy

sfgate.com

Privacy policy at SFGate
Privacy Policy
General Inquiries

For general inquiries, contact the Chronicle operator.

415-777-1111
Toll-free USA 800-247-6642

Purpose and Scope of this Privacy Policy.

(a) This privacy policy describes how San Francisco Chronicle, a division of Hearst Communications, Inc., publisher of the San Francisco Chronicle, and its Affiliates (collectively, "Newspaper"), treat the Personally Identifiable Information that is collected about you when you visit the web sites, mobile-optimized versions of the web sites, and digital applications to which this policy is linked (collectively, "Covered Sites"). For the purposes of this policy, an entity controlling, controlled by, or under common control with another entity shall be deemed to be an "Affiliate", where control means ownership of 15% or more of the voting stock or other ownership interests. For the purposes of this policy, "Personally Identifiable Information" is information that we can use to identify or contact you as an individual, and includes your name, email address, address, telephone number and any other information that we associate with any of the foregoing. By submitting Personally Identifiable Information through any of our Covered Sites, you agree to the terms of this privacy policy and you expressly consent to the collection, use and disclosure of your Personally Identifiable Information in accordance with this privacy policy.

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?

Select sentence from policy and click Remove last selection

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 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.

Next

Your Progress

Jump directly to question ▾

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 card and, if you order a gift online and want it sent directly to the recipient, you might submit the recipient's name and address. Examples of the types of personally identifiable information that may be collected about other people at these pages include: recipient's name, address, e-mail address, and telephone number.

At certain parts of some of our sites, only persons who provide us with the requested personally identifiable information will be able to order products, programs, and services or otherwise participate in the site's activities and offerings.

We, our third party service providers, advertisers, advertising networks and platforms, agencies, and partners may collect various types of non-personally identifiable information when you visit any of our sites. A

Answer the following questions

[Click here to view the instructions again](#)

Question 3:
Does the policy state that the [website](#) might [collect current location](#) about its users?

[Select sentence from policy and click](#) [Remove last selection](#)

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 [current location](#) information.

Yes - the policy explicitly states that the website might collect current location information.

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

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

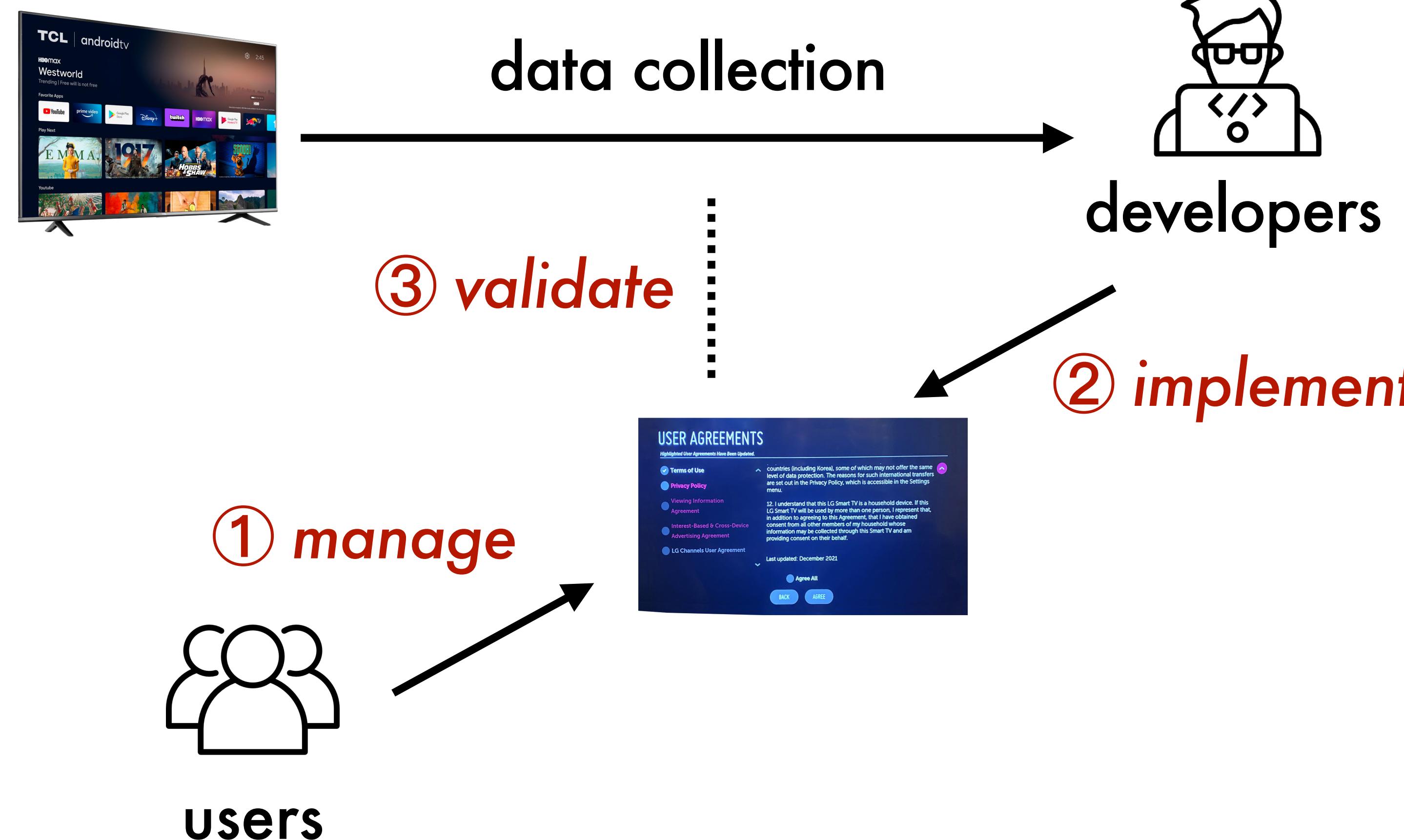
[Previous](#) [Next](#)

22% completed Your Progress

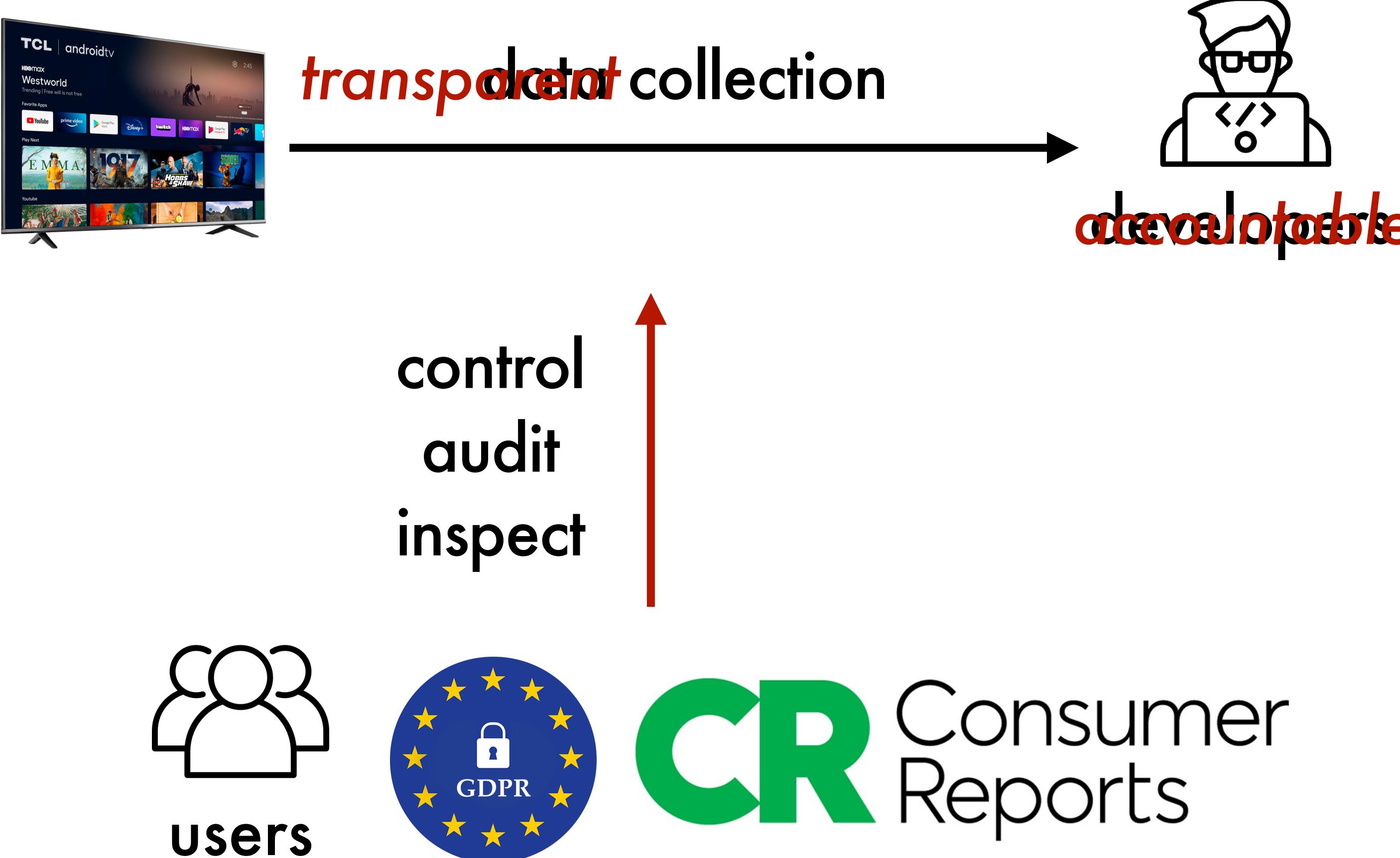
[Jump directly to question ▾](#)

How should we tackle this problem?

They do not work!

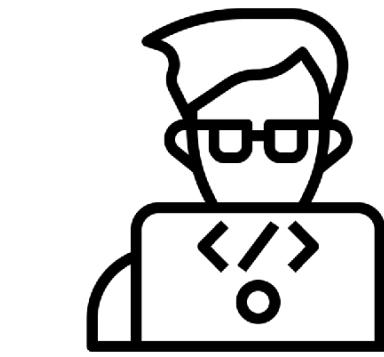


The vision of *Privacy-Sensitive* data collection

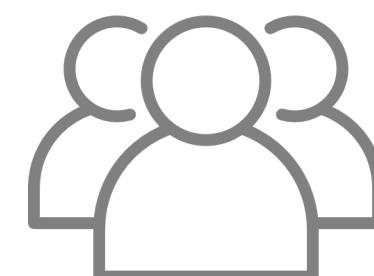


Challenges

① *How to make it transparent?*



② *How to aggregate, automate, and reuse?*



CR Consumer Reports

③ *How to be more accountable?*

Credits

- Privacy Policy, Law and Technology, Introduction to P3P. Lorrie Cranor

App Privacy Labels (iOS 14.3)

Data used to track you

Contact info, identifiers ...

Data linked to you

Purchase history, browsing history, usage
data, financial info, health info ...

Data not linked to you

Identifiers of other devices, sensor data ...



WEATHER UNDERGROUND



Data Used to Track You

The following data may be used to track you and may be owned by other companies:

- 📍 Location
 - Coarse Location
- ⌚ Search History
 - Search History
- 👤 Identifiers
 - Device ID
- 📊 Usage Data
 - Advertising Data
- Other Data
 - Other Data Types



Data Linked to You

The following data, which may be collected and linked to you, may be used for the following purposes:

Third-Party Advertising

- 📍 Location
 - Coarse Location
- ⌚ Search History
 - Search History
- 👤 Identifiers
 - Device ID
- 📊 Usage Data
 - Advertising Data
- Other Data
 - Other Data Types

Developer's Advertising

- ⌚ Purchases
 - Purchase History
- ⌚ Search History
 - Search History
- 👤 Identifiers
 - Device ID
- 📊 Usage Data
 - Product Interaction
 - Advertising Data
 - Other Usage Data
- Other Data
 - Product Interaction

Analytics

- ⌚ Purchases
 - Purchase History
- ⌚ Search History
 - Search History
- 👤 Identifiers
 - Device ID
- 📊 Usage Data
 - Crash Data
 - Performance Data
 - Other Diagnostic Data
- Other Data
 - Other Data Types

App Functionality

- ⌚ Purchases
 - Purchase History
- 📍 Location
 - Precise Location
 - Coarse Location
- 🖼️ User Content
 - Customer Support
- ⌚ Search History
 - Search History
- 👤 Identifiers
 - Device ID
- ⚙️ Diagnostics
 - Crash Data
 - Performance Data
- Other Data
 - Other Data Types

Other Purposes

- ⌚ Purchases
 - Purchase History



Signal



Data Not Linked to You

The following data, which may be collected but is not linked to your identity, may be used for the following purposes:

App Functionality

- ❶ Contact Info