PROTECT YOUR PRIVACY FROM WEBSITE PIRACY
PART 1: INTRODUCTION

PART 2: COOKIES
PART 3: WEB BUGS

PART 4: SNIFFERS
PART 1

INTRODUCTION
INTRODUCTION

Generally, three technological mechanisms are used in order to track your surfing activities:

- Cookies
- Web bugs
- Web tracking
PART 2

- COOKIES
COOKIES

...But what is a cookie?
A cookie is a short piece of data, no code, which is sent from a web server to a web browser when that browser visits the server’s site. It is used to maintain information.
Types of cookies:

- Temporary

Temporary cookies, also called session cookies, are stored temporarily in your browser's memory and are deleted as soon as you end the session by closing the browser.
Permanent cookies are stored permanently on your computer's hard drive and, if deleted, will be recreated the next time you visit the sites that placed them there.
Where did the term cookies come from?

- According to an article written by Paul Bonner for Builder.Com on 11/18/1997:

"Lou Montulli, currently the protocols manager in Netscape's client product division, wrote the cookies specification for Navigator 1.0, the first browser to use the technology."
### STATISTICS:

**MOST FAMOUS COOKIES**

<table>
<thead>
<tr>
<th>Cookie Name</th>
<th>% of sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPSESSIONID*</td>
<td>41.1%</td>
</tr>
<tr>
<td>PHPSESSID</td>
<td>10.9%</td>
</tr>
<tr>
<td>JSESSIONID</td>
<td>4.1%</td>
</tr>
<tr>
<td>SITESERVER</td>
<td>3.7%</td>
</tr>
<tr>
<td>CFTOKEN</td>
<td>3.6%</td>
</tr>
<tr>
<td>CFID</td>
<td>3.6%</td>
</tr>
<tr>
<td>ASP.NET_SessionId</td>
<td>2.7%</td>
</tr>
<tr>
<td>cookietest</td>
<td>2.6%</td>
</tr>
<tr>
<td>permcookietest</td>
<td>2.6%</td>
</tr>
<tr>
<td>CookieStatus</td>
<td>2.6%</td>
</tr>
<tr>
<td>nuid</td>
<td>2.2%</td>
</tr>
</tbody>
</table>
How a cookie file looks

Counter_Cookie 7
www.yourplace.com/Java/ 0
2650889984 28260821 234549904
29177426 *
How it works (1)

Cookies are based on a two stage procedure:

1st Stage:

- The cookie is stored
How it works (2)

- *Web server creates a specific cookie*

- *Web browser stores the cookie in the cookie list*
How it works (3)

2nd Stage:

- At the second stage the cookie is automatically transferred from the user’s machine to a web server, containing essential information.
What kind of information can a server get from a browser (1)

- IP address
- Type of browser being used
What kind of information can a server get from a browser (2)

- Favorite websites

- Surfing activities
What kind of information can a server get from a browser (3)

- Types of operational systems
USES OF COOKIES (1)

- *Cookies and shopping sites:*

  Whenever you visit a shopping website a cookie is used for tracking your shopping activities. When you buy a product this product is added to a shopping cart, but this shopping cart is the cookie’s ID name.
USES OF COOKIES (2)

- **Cookies and homepages:**
  Cookies are used to create customized home pages. When you ask for a homepage the cookies are also sent in order to tell to the server which items to display.
USES OF COOKIES (3)

- *Cookies and buying activity:*

One of the most common and annoying uses of cookies is when they become tracking devices. This device tracks the browsing and buying activity of an individual user.
PREVENTING THEM (1)

This is the most secure way to prevent them:

*In Internet Explorer*

- Choose View
- Click the Internet Options command
PREVENTING THEM (2)

- Click the Advanced tab
- Click the Disable All Cookie Use option
PREVENTING THEM (3)

In Netscape:

- choose the Edit Options command
- click on Advanced
- click the Disable Cookies option
PREVENTING THEM (4)

- After that, no cookies will be stored on your system.
- You will need to turn cookies back on if you want to use any online services that require them.
PREVENTING THEM (5)

- You can also choose the option to prompt you before accepting a cookie, but with many sites you will be continually closing the warning dialog box.
BLOCKING SOFTWARE (1)

Install software packages that work with your web browser to control who can send you a cookie.

In these packages, you choose which sites can send you a cookie and which can not.
BLOCKING SOFTWARE (2)

If you want to use cookies in some instances and not in others, some of these packages may be very helpful.
PART 3

- WEB BUGS
WEB BUGS (1)

Do you know what a web bug is?

A Web Bug is a graphic on a Web page or in an Email message that is designed to monitor who is reading the Web page or Email message.
WEB BUGS (2)

- Web Bugs are often invisible because they are typically only 1-by-1 pixel in size. They are represented as HTML IMG tags.
WEB BUGS (3)

For example:

```html
<img src="http://ad.doubleclick.net/ad/pixel.quicken/NEW" width=1 height=1 border=0>
```
WEB BUGS (4)

<IMG WIDTH=1 HEIGHT=1 border=0 SRC="http://media.preferences.com/ping?ML_SD=IntuitTE_Intuit_1x1_RunOffSite_Any &db_afcr=4B31-C2FB-10E2C&event=reghome&group=register& time=1999.10.27.20.5 6.37">
Other names that web bugs are known by

- Clear "GIF"
- Invisible "GIFs"
- 1-by-1 "GIFs"
What information is sent to a server when a Web Bug is viewed? (1)

- The IP address of the computer
- The URL of the page that the Web Bug is located on
What information is sent to a server when a Web Bug is viewed? (2)

- The URL of the Web Bug image
- The time the Web Bug was viewed
What information is sent to a server when a Web Bug is viewed? (3)

- The type of browser that caught the Web Bug image
- A previously set cookie value
USES OF WEB BUGS (1)

- Creating personal profiles
- Collecting information about web browsers
USES OF WEB BUGS (2)

- Counting the exact number of people visiting a specific website
Web bugs & e-mail (1)

The connection between web bugs and e-mails:

- A Web Bug can be used to find out if a particular e-mail message has been read by someone and if so, when the message was read.
Web bugs & e-mail (2)

- A Web Bug can provide the IP address of the receiver if the receiver is attempting to remain anonymous.
Web bugs & e-mail (3)

- Within an organization, a Web Bug can give an idea of how often a message is being forwarded and read.
An example for how a web bugs looks in an e-mail

- `<img width='1' height='1'
  src="http://www.m0.net/m/logopen02.asp
  vid=3&catid=370153037&email=SMITHS
  %40tiac.net" alt="">

- `<IMG SRC="http://email.bn.com/cgi-bin/flosensing?x=ABYoAEhouX">"
HOW TO PROTECT

- Turn off cookies
Be careful

- Learn more about websites’ dangers
- Be informed
PART 4

SNIFFERS
SNIFFER

- What is this???

- A program or a device that monitors data travelling over a network.
USE OF SNIFFERS

- Check on information
  (especially about passwords)
HOW TO DETECT (1)

- To detect a sniffing device that only collects data and does not respond to any of the information requires physically checking each individual internet connection on your computer.
HOW TO DETECT (2)

- It is also impossible to remotely check by sending a packet or ping if a machine is sniffing. A sniffer running on a machine puts the interface into promiscuous mode, which accepts all the packets.
HOW TO STOP THEM (1)

Stopping sniffing attacks:

- Active hubs
- Decipherment
HOW TO STOP THEM (2)

- Kerberos
  (network system for preventing attacks from the internet)

- One-time password technology
HOW TO STOP THEM (3)

- Non-promiscuous interfaces