

The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

THEN

VS

NOW

**COMPUTER
PROCESSING
SPEED**

5 GHZ PROCESSING SPEED

5 GHz

20
TIMES
FASTER

**HARD DRIVE
CAPACITY**

4.5

4

**EXTERNAL
DATA STORAGE**

3.5

3

**INTERNET
ACCESS/SPEED**

2.5

2

**INTERNET
BANDWIDTH**

1.5

**NUMBER OF
WEB SITES**

1

200 MHz

400 MHz

Pentium

Pentium II

AMD FX-9590

The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

COMPUTER
PROCESSING
SPEED

**HARD DRIVE
CAPACITY**

EXTERNAL
DATA STORAGE

INTERNET
ACCESS/SPEED

INTERNET
BANDWIDTH

NUMBER OF
WEB SITES



**THEN
340MB**

The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

NOW: 5TB (15,420 TIMES LARGER)

COMPUTER
PROCESSING
SPEED

**HARD DRIVE
CAPACITY**

EXTERNAL
DATA STORAGE

INTERNET
ACCESS/SPEED

INTERNET
BANDWIDTH

NUMBER OF
WEB SITES

**THEN
340MB**



The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

THEN: DISKETTE

VS

NOW: FLASH DRIVE

COMPUTER
PROCESSING
SPEED

HARD DRIVE
CAPACITY

**EXTERNAL
DATA STORAGE**

INTERNET
ACCESS/SPEED

INTERNET
BANDWIDTH

NUMBER OF
WEB SITES



Diskette Capacity: 1.44MB



**1,089 TIMES
MORE STORAGE**

Thumb Drive Capacity: 5TB

The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

THEN

VS

NOW

COMPUTER
PROCESSING
SPEED

HARD DRIVE
CAPACITY

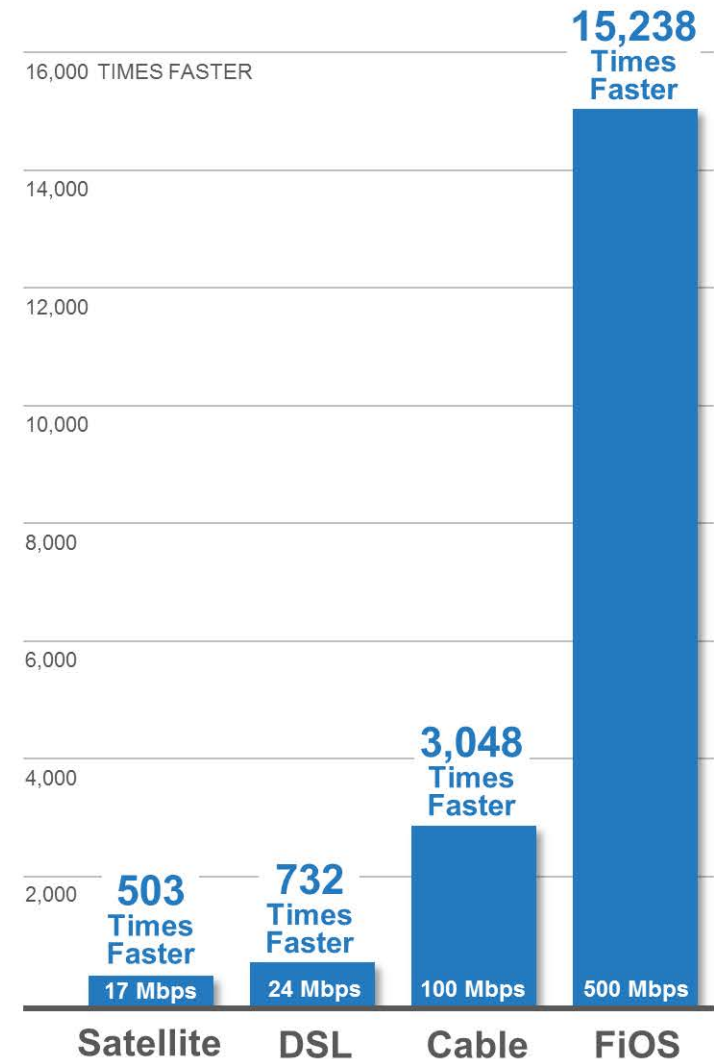
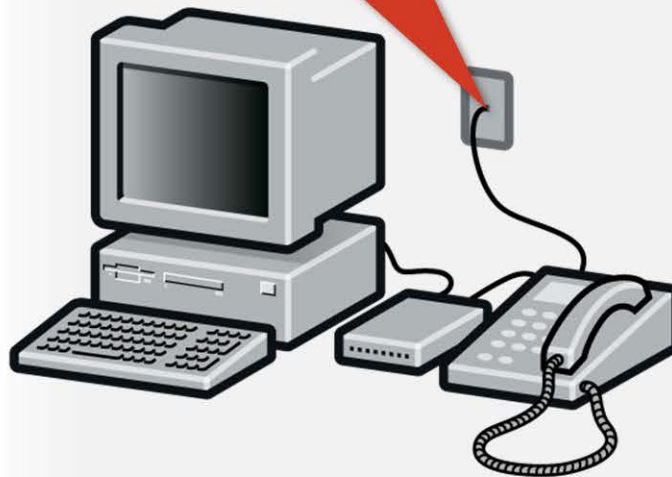
EXTERNAL
DATA STORAGE

INTERNET
ACCESS/SPEED

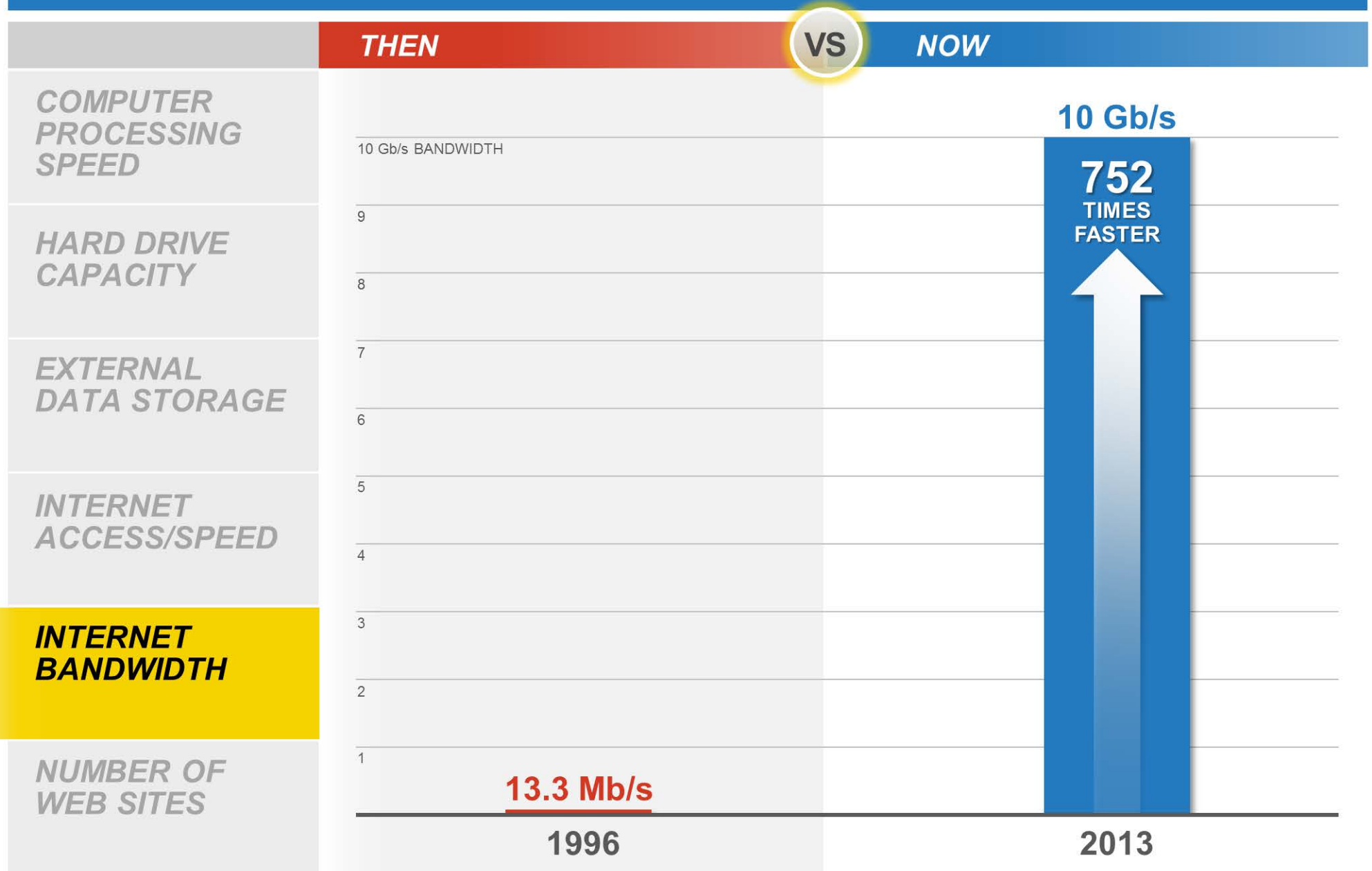
INTERNET
BANDWIDTH

NUMBER OF
WEB SITES

DIAL-UP CONNECTION:
33.6 Kilobits, Per Second



The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed



The World Was a **VERY DIFFERENT** Place When the Patented Technology Was Being Developed

THEN: JANUARY 1996

VS

NOW: 2013

COMPUTER
PROCESSING
SPEED

HARD DRIVE
CAPACITY

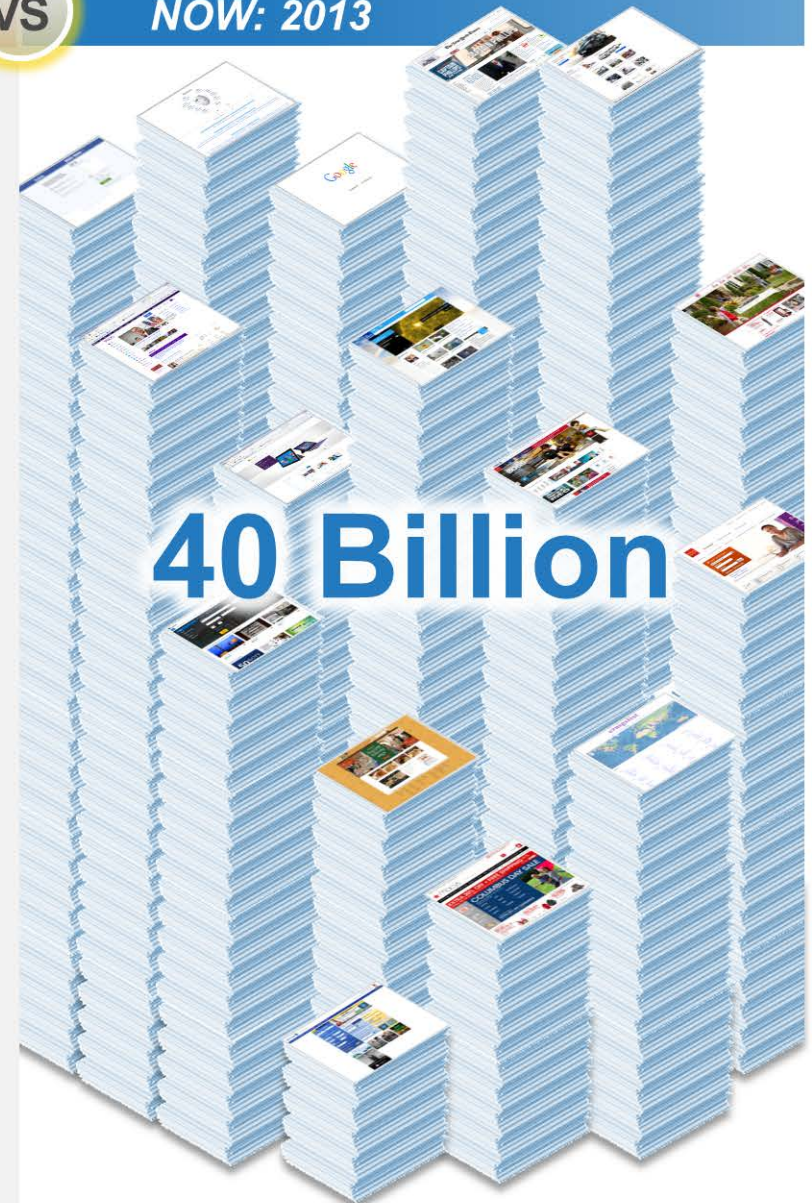
EXTERNAL
DATA STORAGE

INTERNET
ACCESS/SPEED

INTERNET
BANDWIDTH

NUMBER OF
WEB SITES

100,000



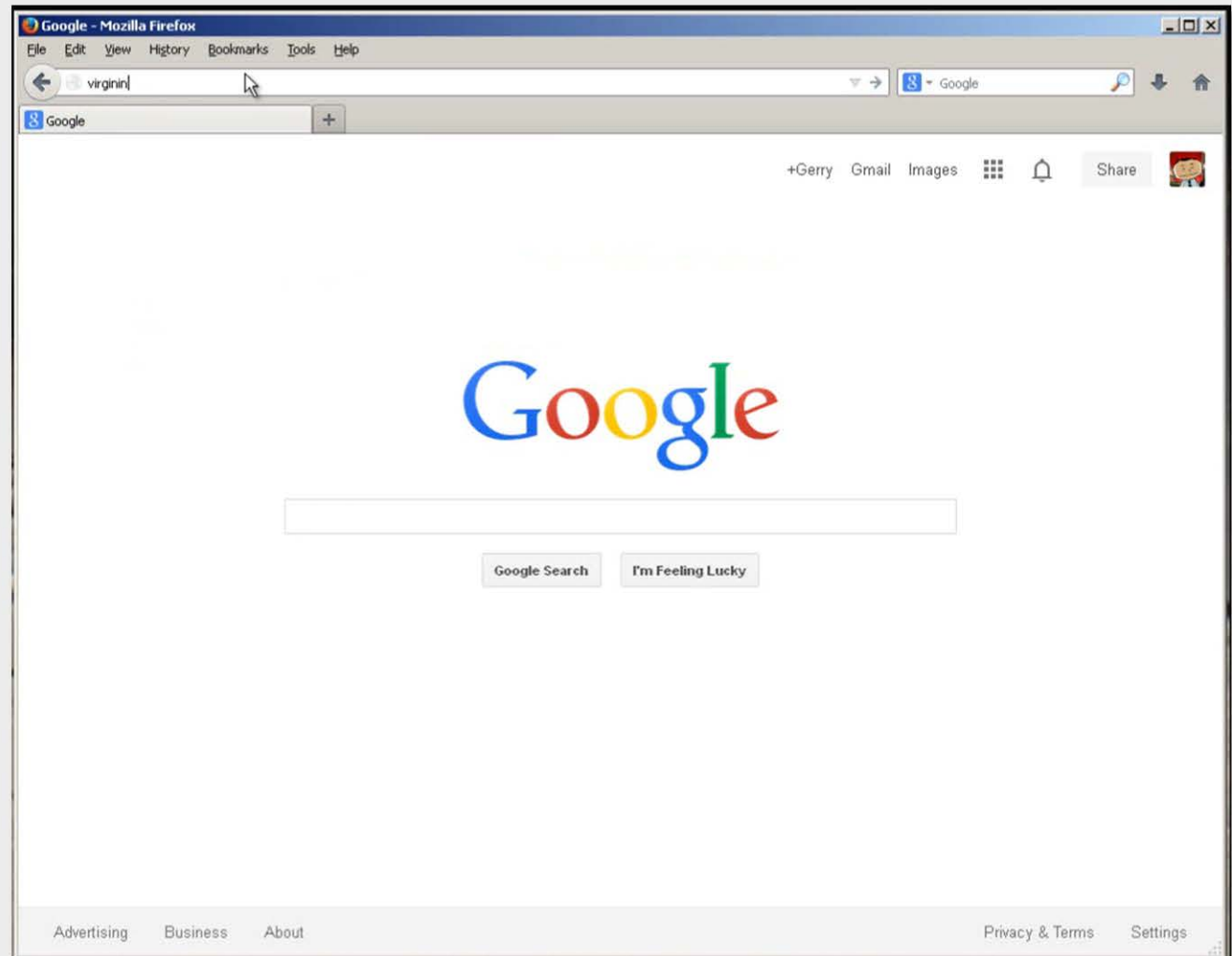
What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

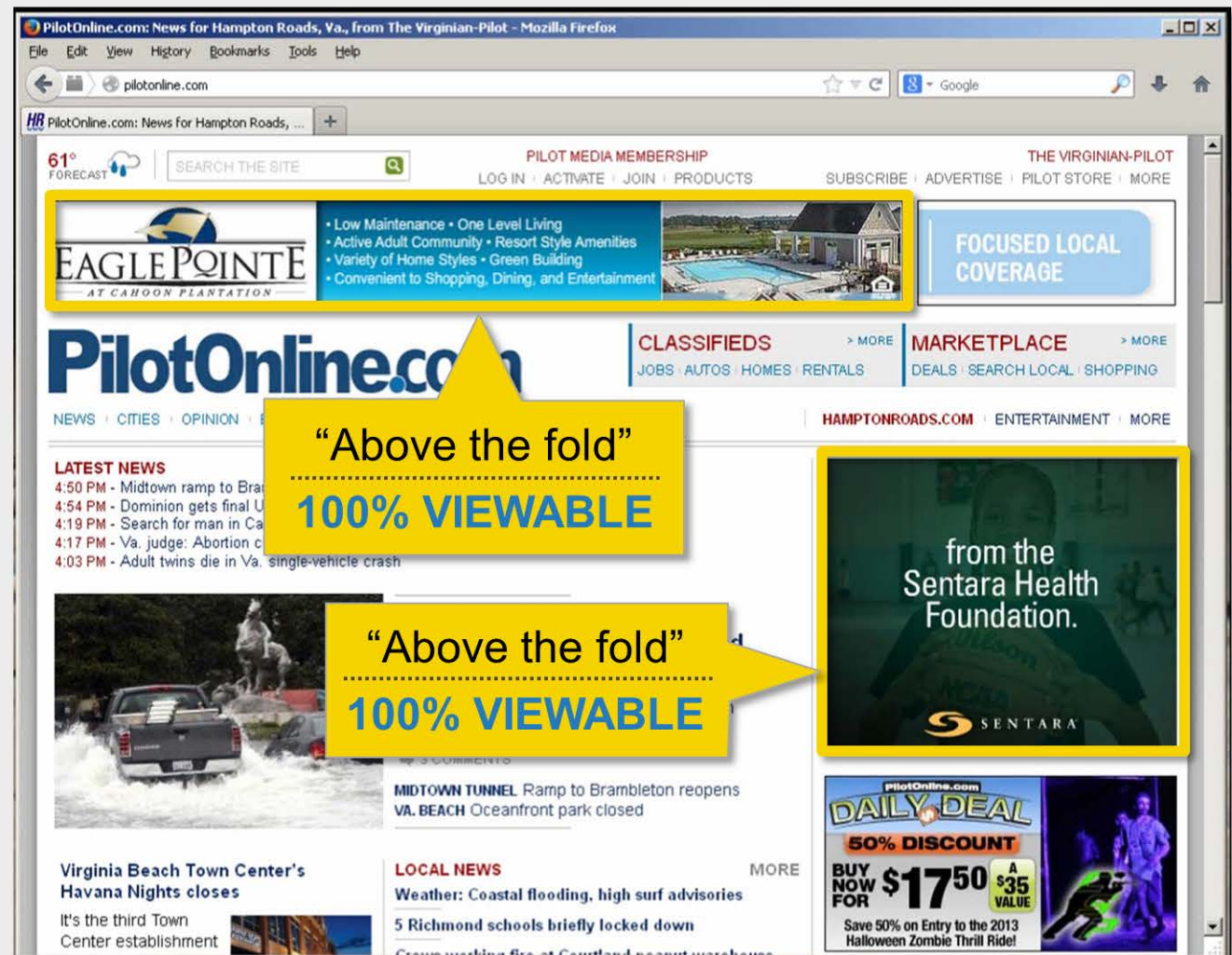
- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
100% VIEWABLE

Sentara Ad:
100% VIEWABLE

Farm Fresh Ad:
NOT viewable

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

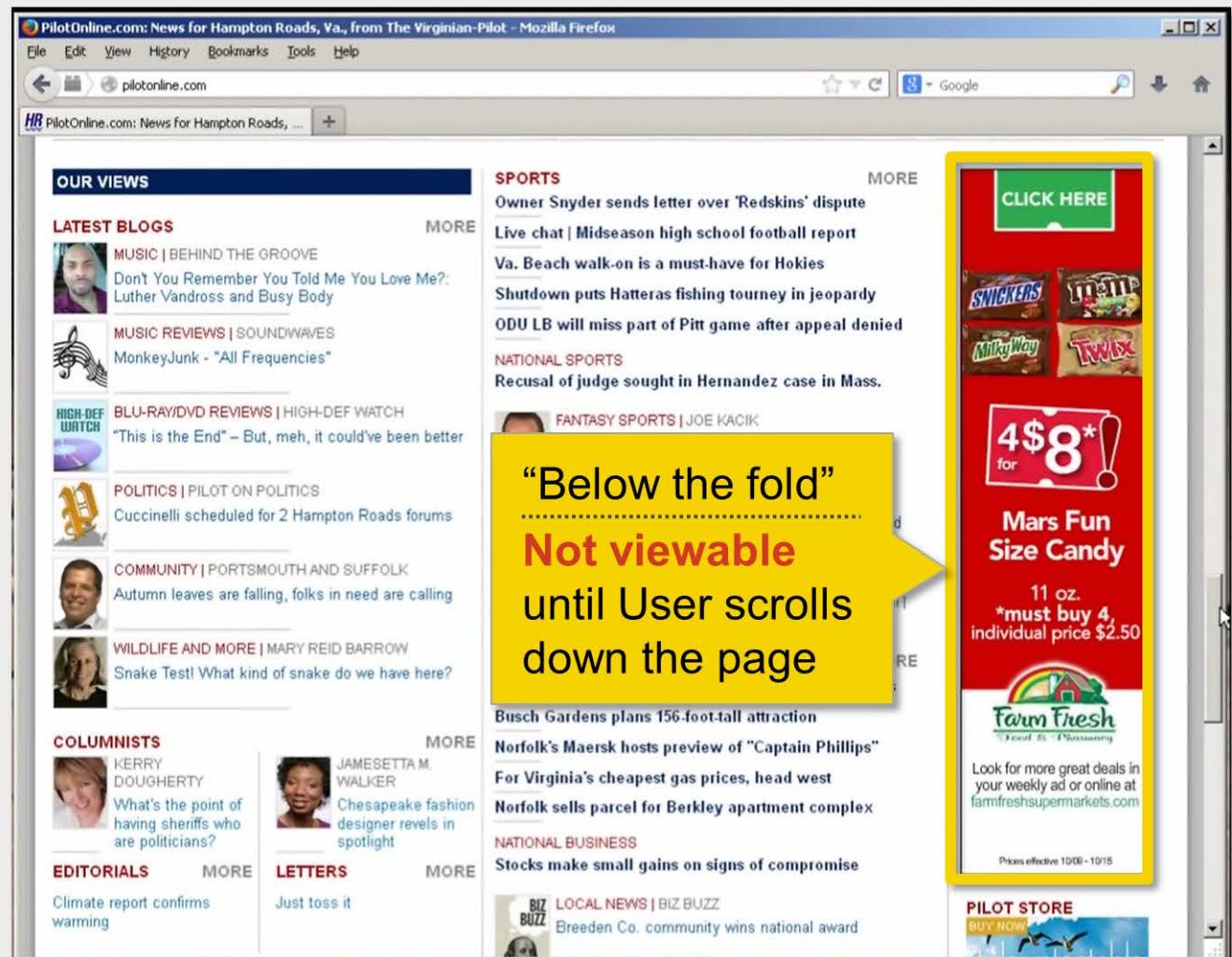
- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
NOT viewable

Sentara Ad:
NOT viewable

Farm Fresh Ad:
100% VIEWABLE

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
NOT viewable

Sentara Ad:
NOT viewable

Farm Fresh Ad:
100% VIEWABLE

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

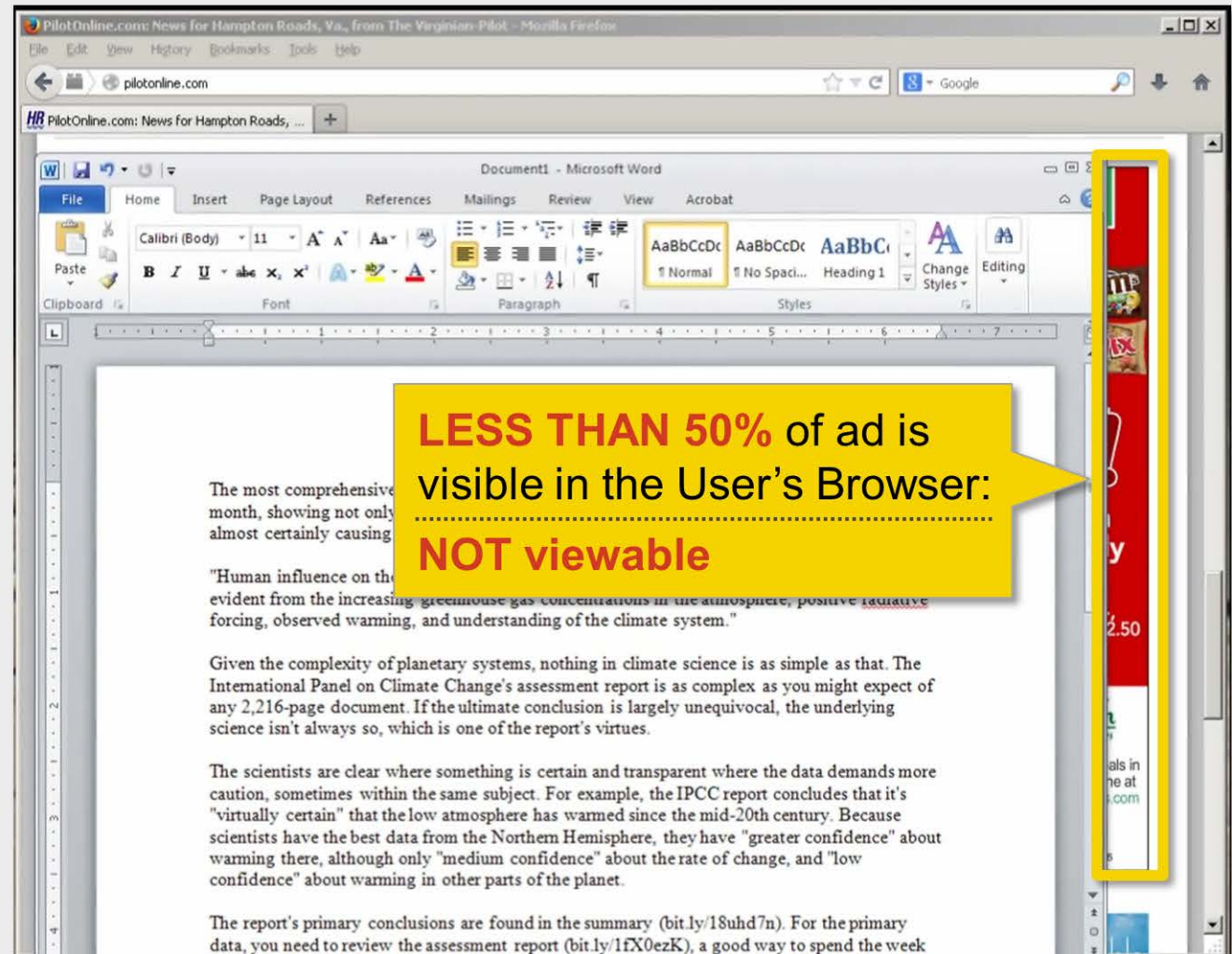
- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
NOT viewable

Sentara Ad:
NOT viewable

Farm Fresh Ad:
NOT viewable

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

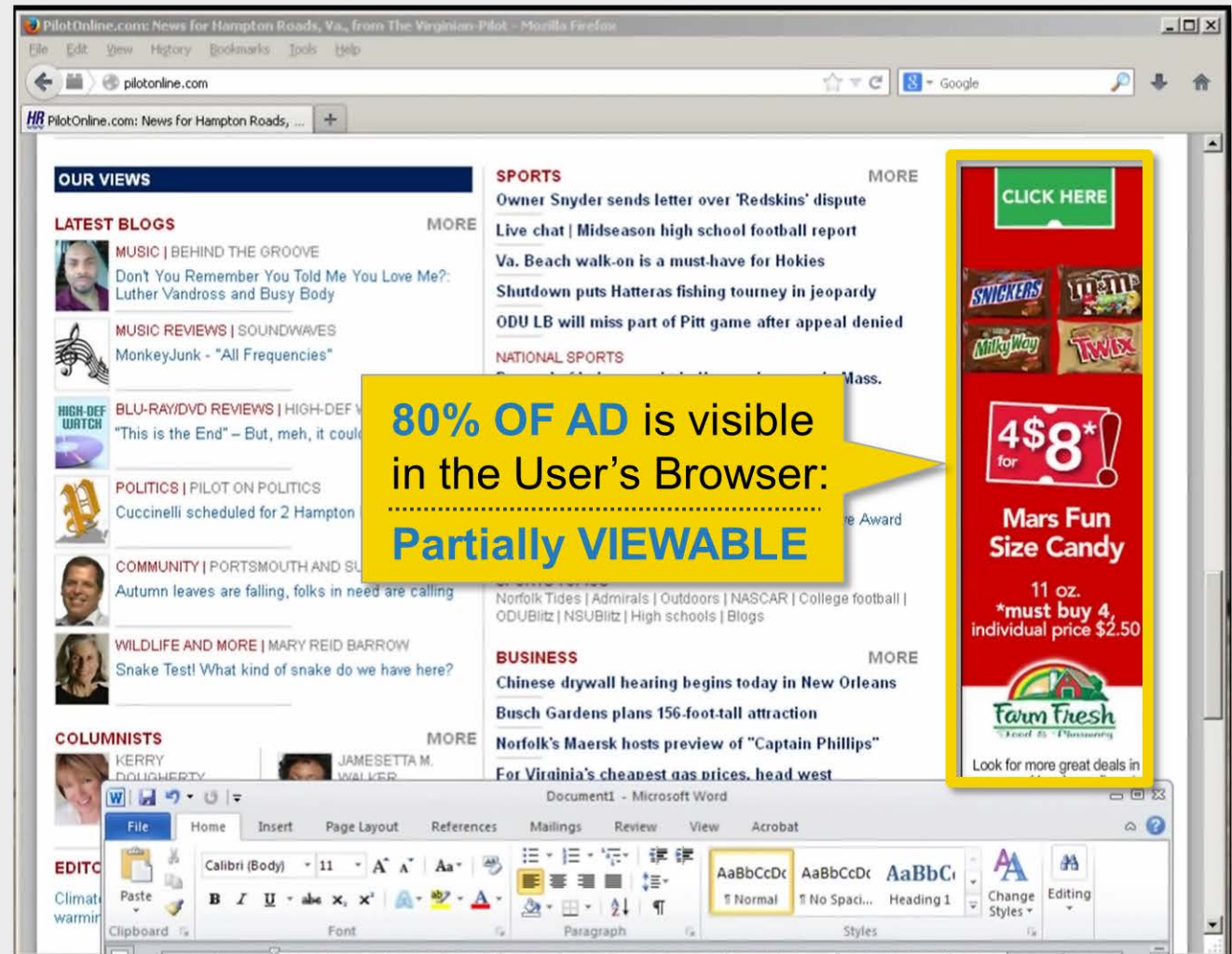
- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
NOT viewable

Sentara Ad:
NOT viewable

Farm Fresh Ad:
Partially VIEWABLE

USER'S WEB BROWSER



What Is Viewability?

3MS INITIATIVE STANDARD

A digital ad impression is considered “in view” if:

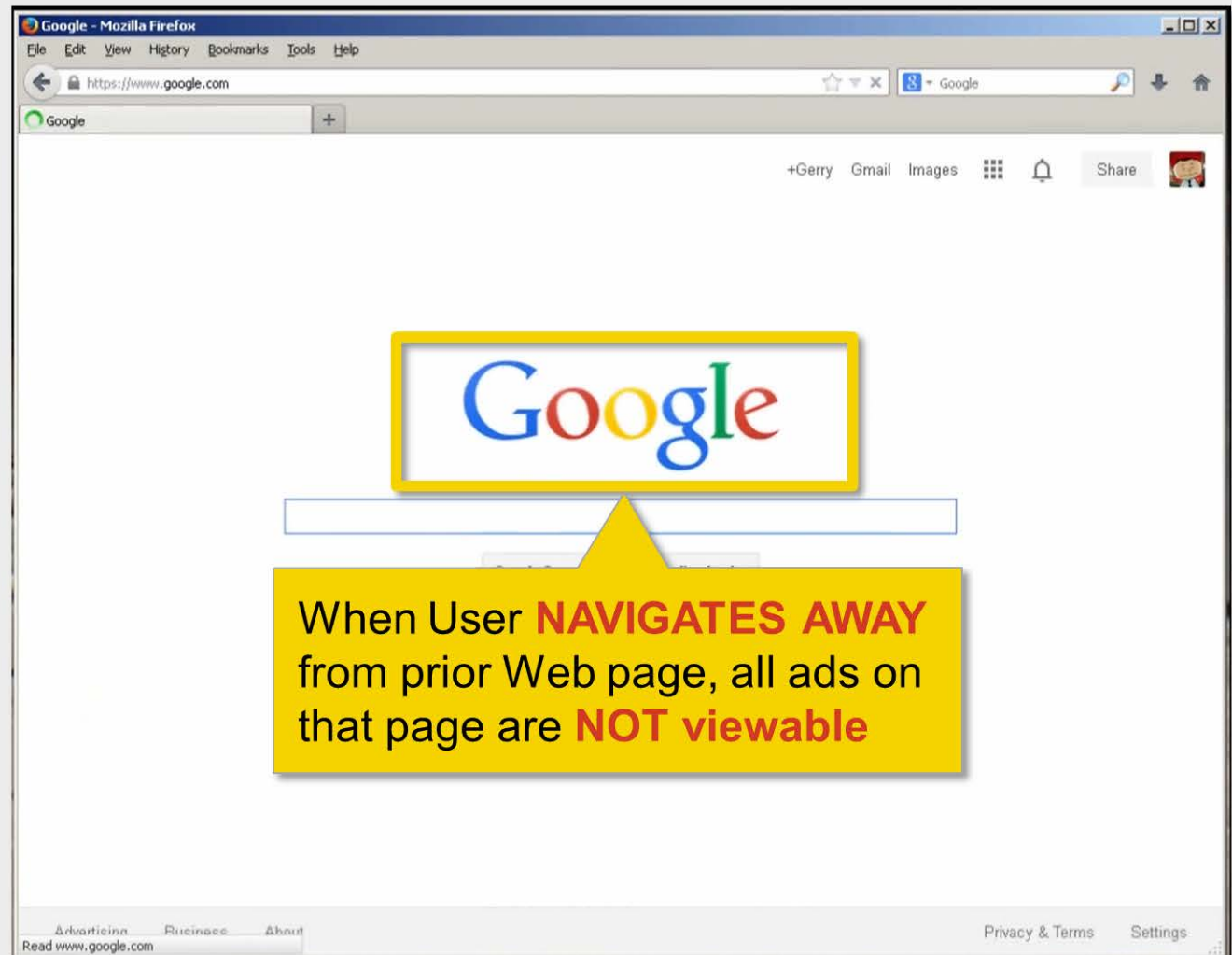
- **AT LEAST HALF** of the ad (50% of the pixels) is visible in a User's Web Browser
- For at least **ONE CONTINUOUS SECOND**

Eagle Pointe Ad:
NOT viewable

Sentara Ad:
NOT viewable

Farm Fresh Ad:
NOT viewable

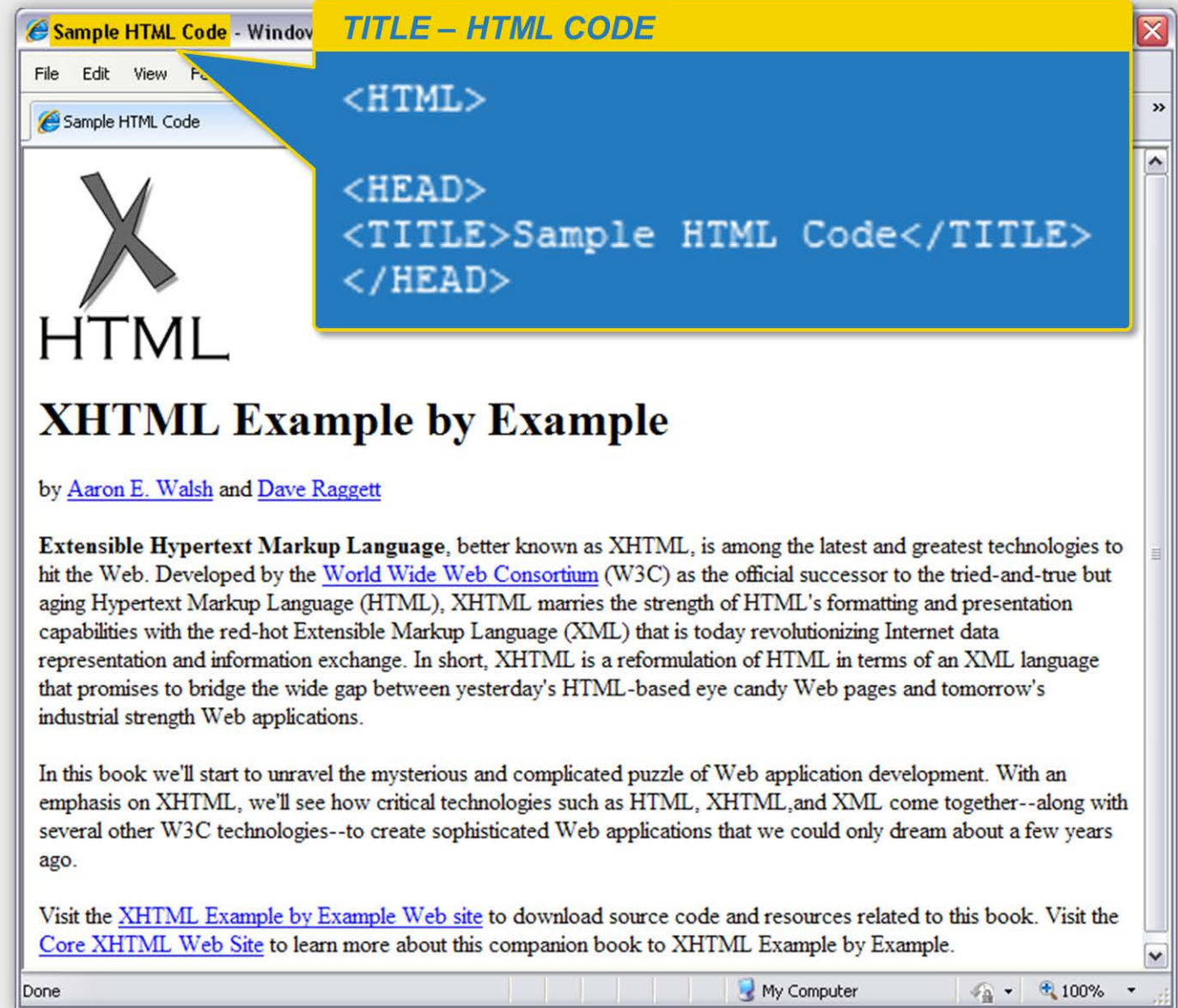
USER'S WEB BROWSER



HTML: HyperText Markup Language

The Standard Language Used to Create Web Pages


SAMPLE WEB PAGE



HTML: HyperText Markup Language

The Standard Language Used to Create Web Pages

SAMPLE WEB PAGE



The screenshot shows a Windows Internet Explorer window titled "Sample HTML Code". The address bar displays "Sample HTML Code". The main content area shows a yellow square with a large 'X' and the text "HTML". A yellow callout box points to the code, titled "IMAGE - HTML CODE", containing the following HTML code:

```
<BODY BGCOLOR="white">  
<P><IMG SRC="images/logo.png"  
ALT="logo" WIDTH="128" HEIGHT="128"></P>
```

Below the code, the page title is "XHTML Example by Example". The author information is "by [Aaron E. Walsh](#) and [Dave Raggett](#)". The main text reads:

Extensible Hypertext Markup Language, better known as XHTML, is among the latest and greatest technologies to hit the Web. Developed by the [World Wide Web Consortium \(W3C\)](#) as the official successor to the tried-and-true but aging Hypertext Markup Language (HTML), XHTML marries the strength of HTML's formatting and presentation capabilities with the red-hot Extensible Markup Language (XML) that is today revolutionizing Internet data representation and information exchange. In short, XHTML is a reformulation of HTML in terms of an XML language that promises to bridge the wide gap between yesterday's HTML-based eye candy Web pages and tomorrow's industrial strength Web applications.

In this book we'll start to unravel the mysterious and complicated puzzle of Web application development. With an emphasis on XHTML, we'll see how critical technologies such as HTML, XHTML, and XML come together--along with several other W3C technologies--to create sophisticated Web applications that we could only dream about a few years ago.

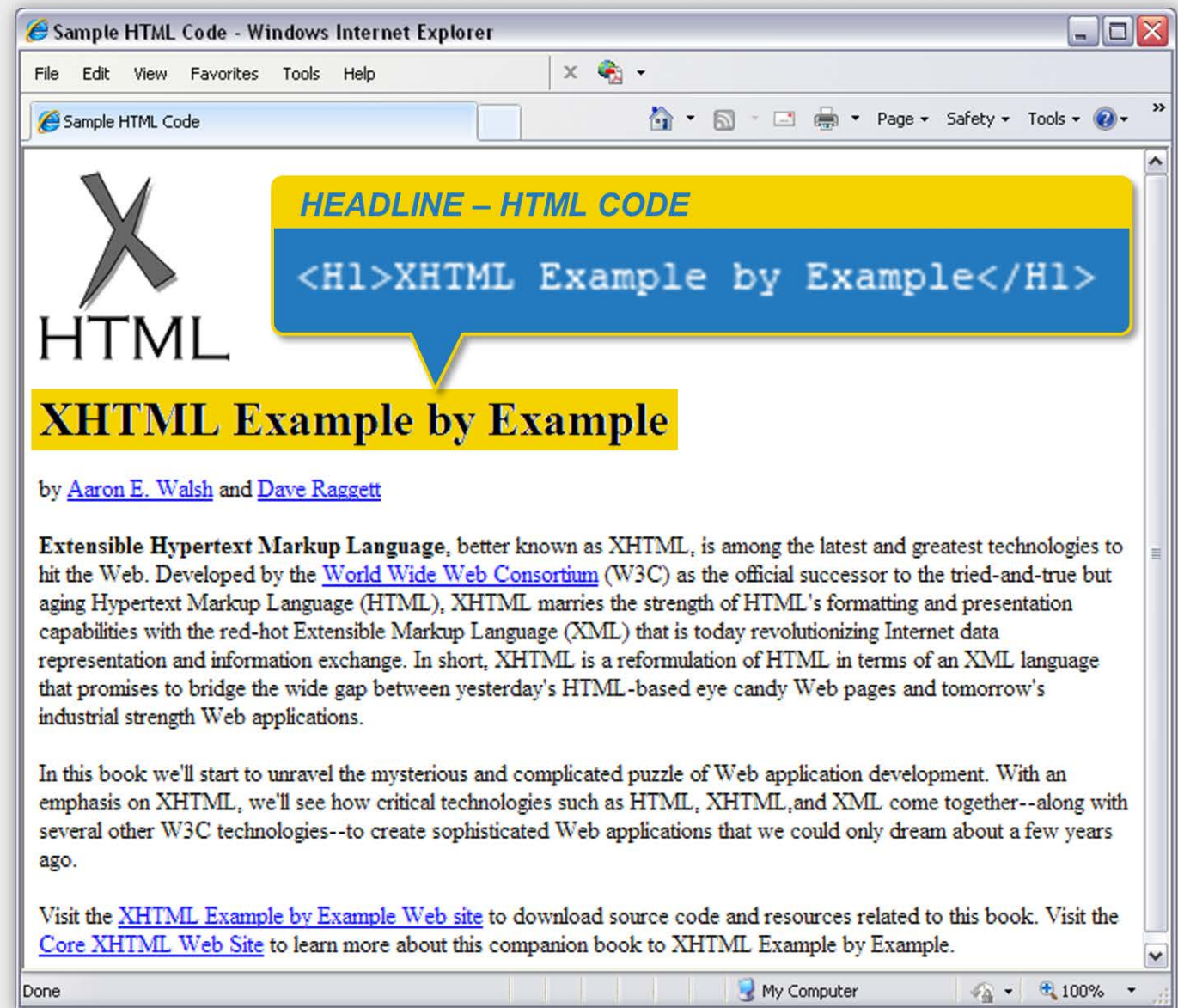
Visit the [XHTML Example by Example Web site](#) to download source code and resources related to this book. Visit the [Core XHTML Web Site](#) to learn more about this companion book to XHTML Example by Example.

The status bar at the bottom shows "Done", "My Computer", and "100%".

HTML: HyperText Markup Language

The Standard Language Used to Create Web Pages

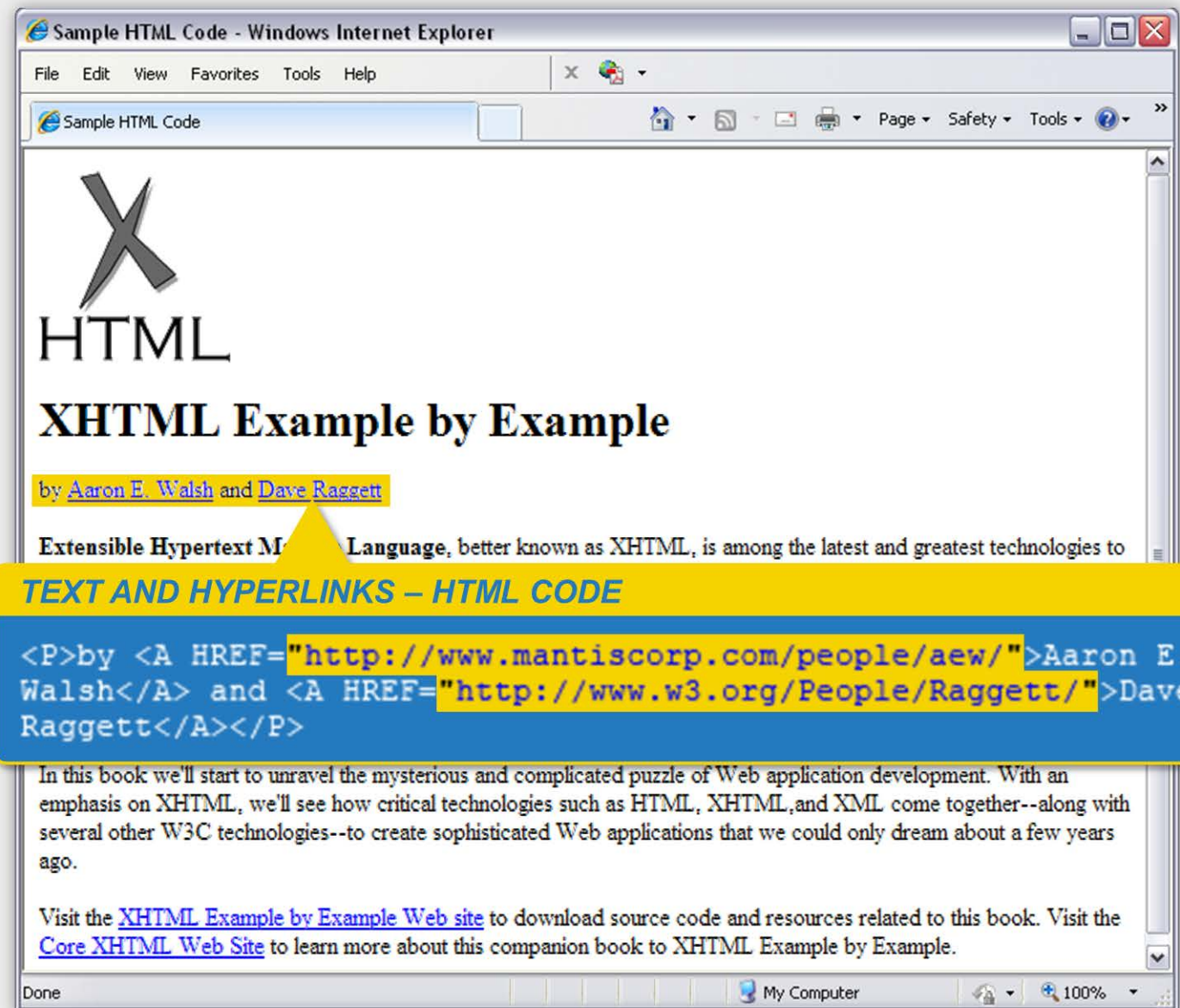
SAMPLE WEB PAGE



HTML: HyperText Markup Language

The Standard Language Used to Create Web Pages

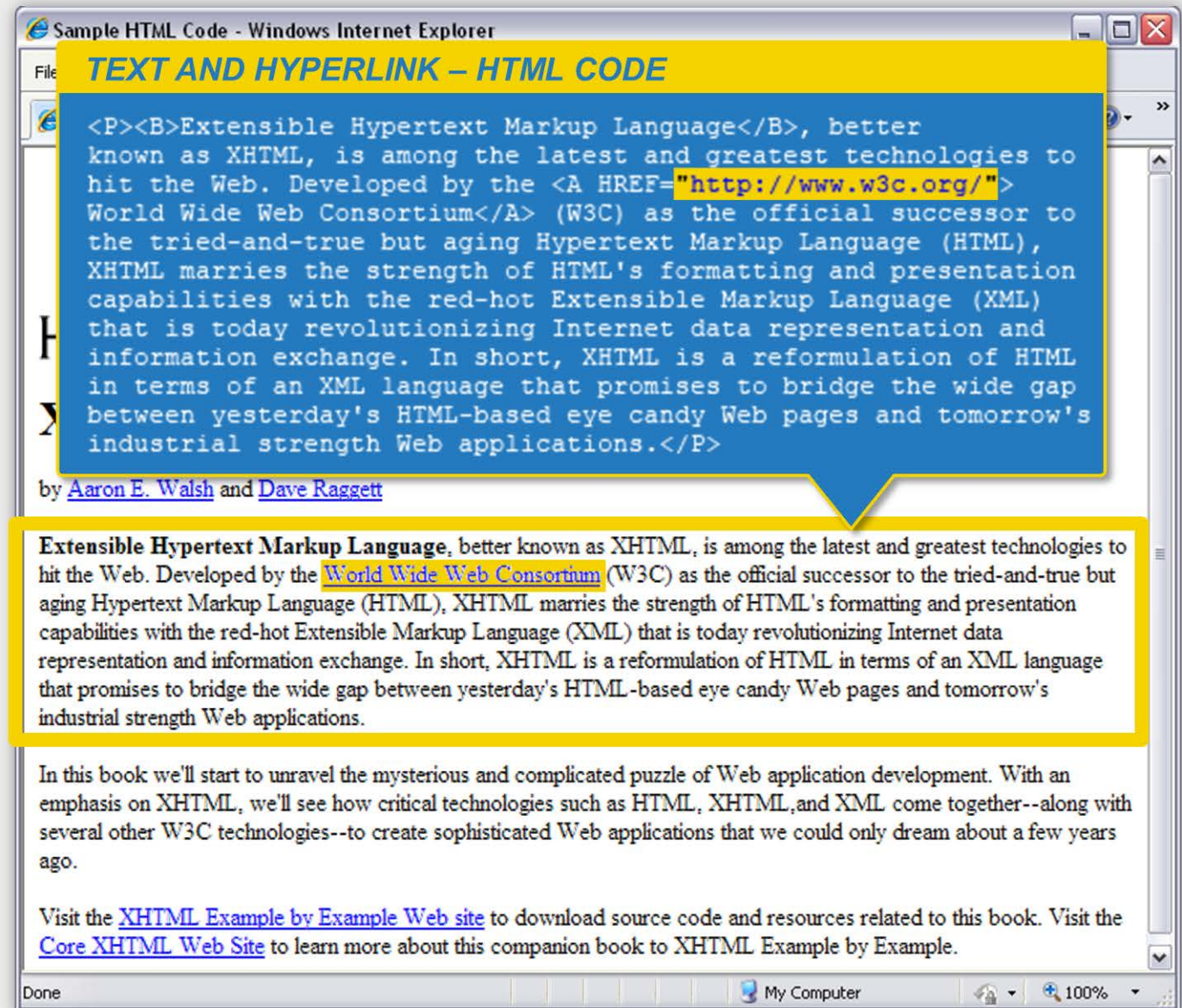
SAMPLE WEB PAGE



HTML: HyperText Markup Language

The Standard Language Used to Create Web Pages

SAMPLE WEB PAGE



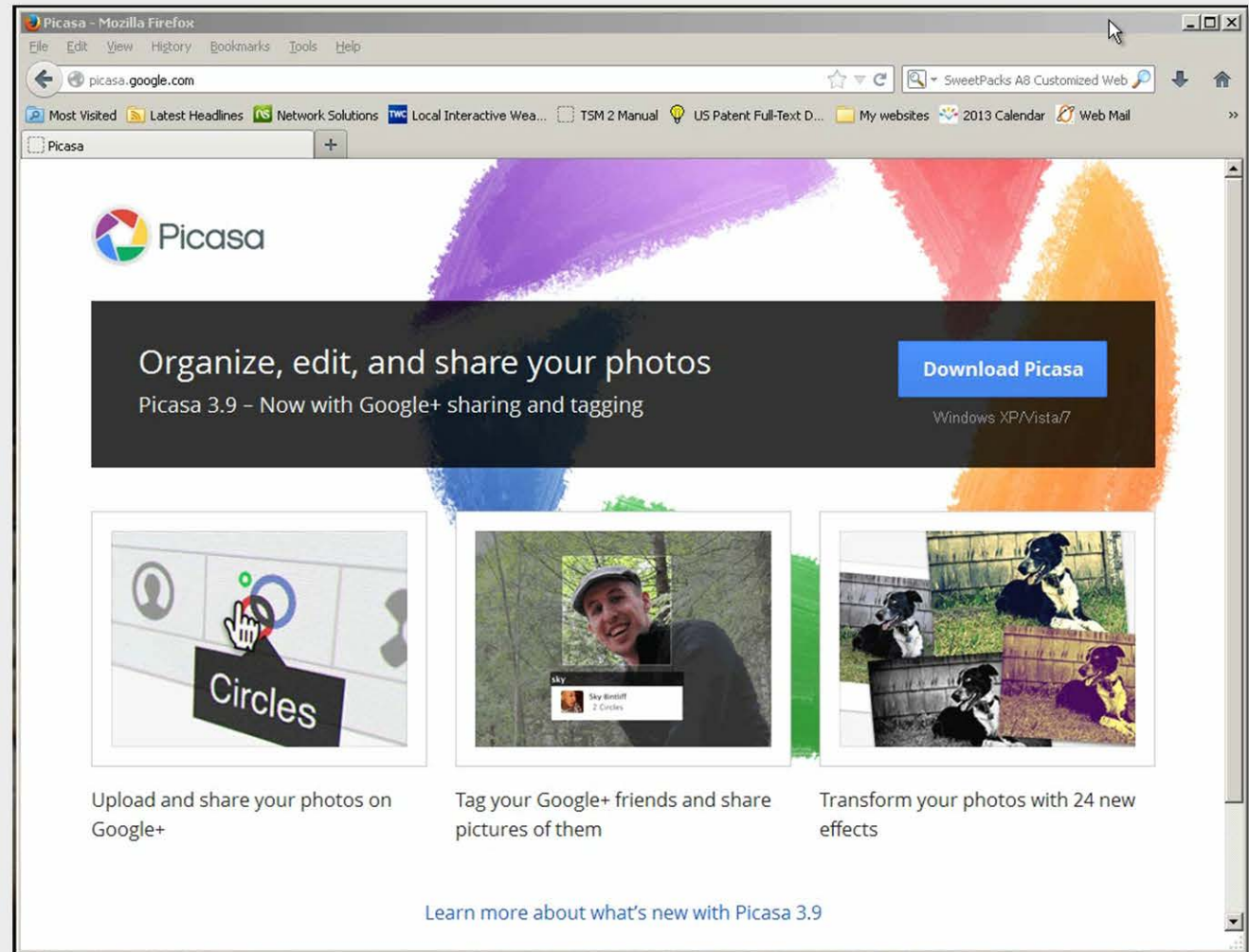
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

User navigates to the Web page containing the software he wants to install.



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

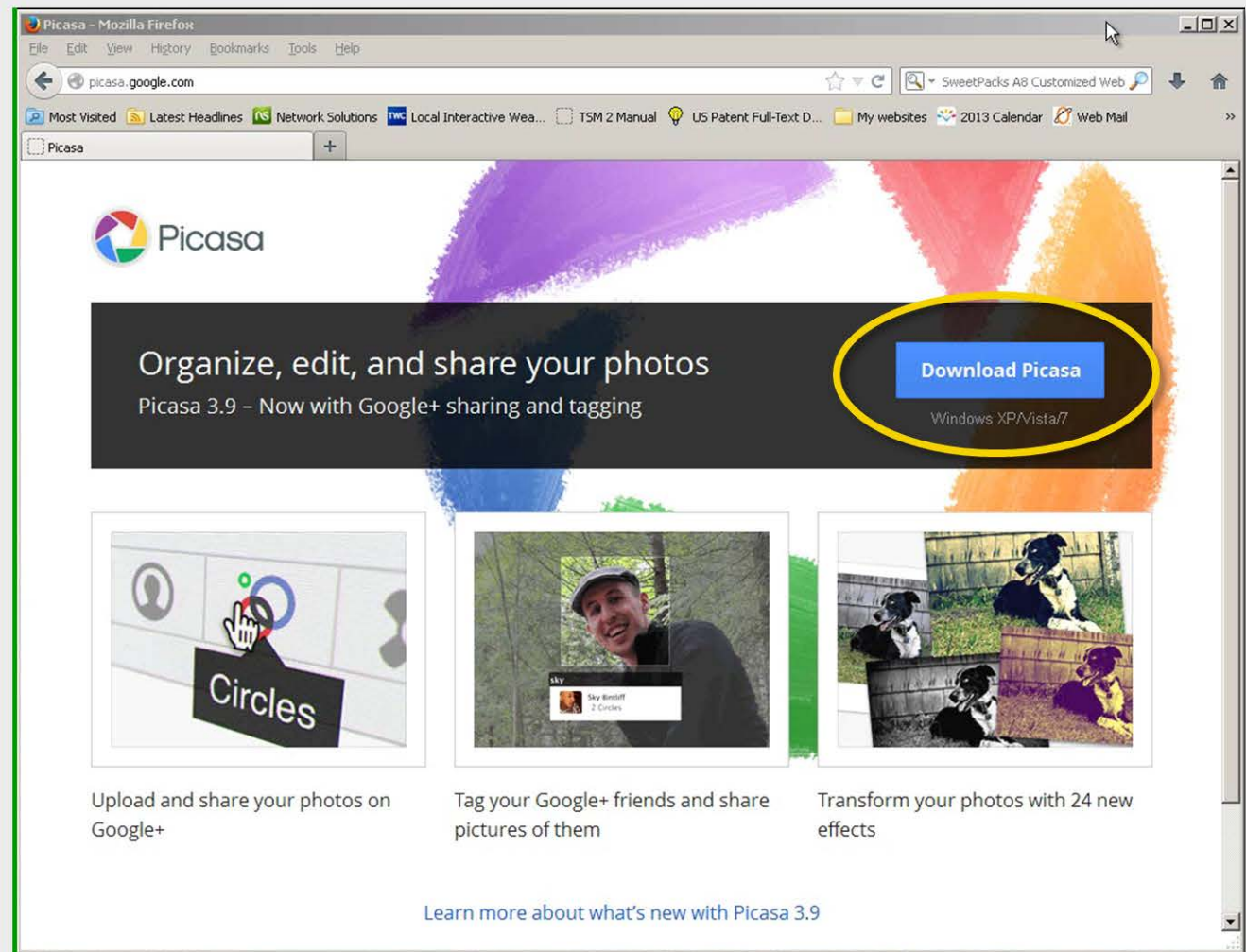
END USER'S COMPUTER

USER ACTION REQUIRED:

Click on the
"DOWNLOAD" button.



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

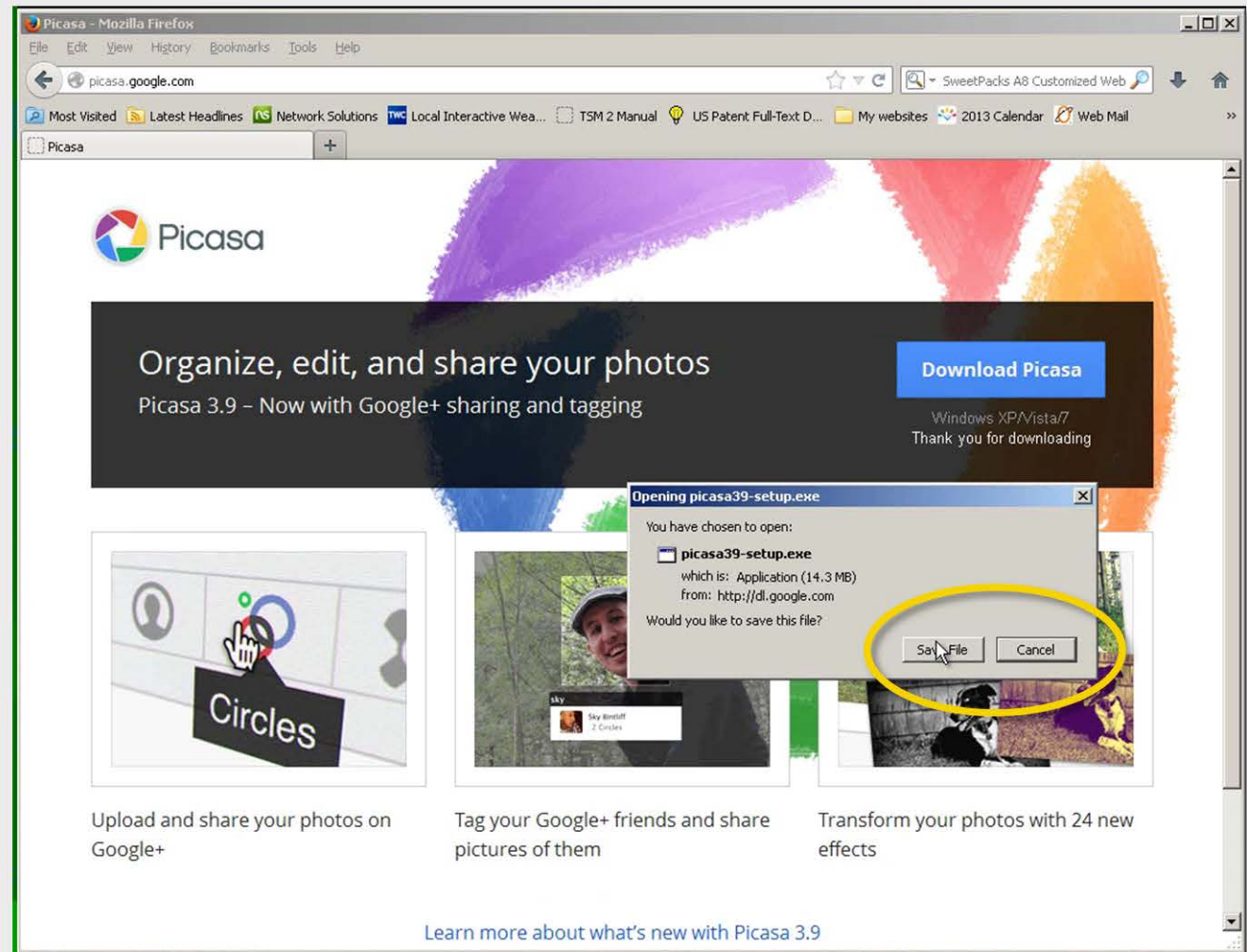
END USER'S COMPUTER

USER ACTION REQUIRED:

User must choose to
"Save File" or **"Cancel"**
the download request.



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

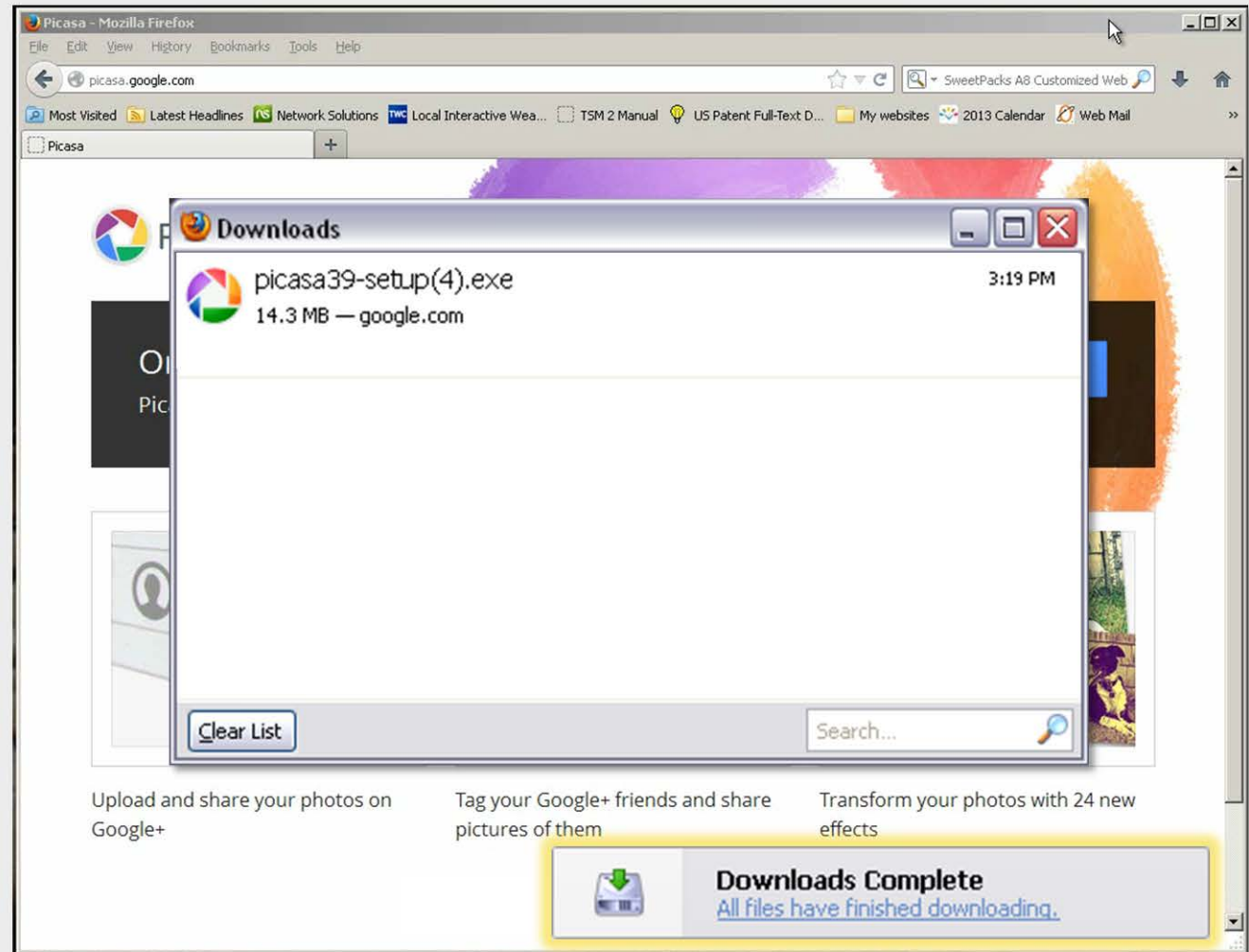
END USER'S COMPUTER

PROGRESS BAR informs User of download progress.

User is informed
**"DOWNLOAD
IS COMPLETE."**



END USER'S DISPLAY MONITOR



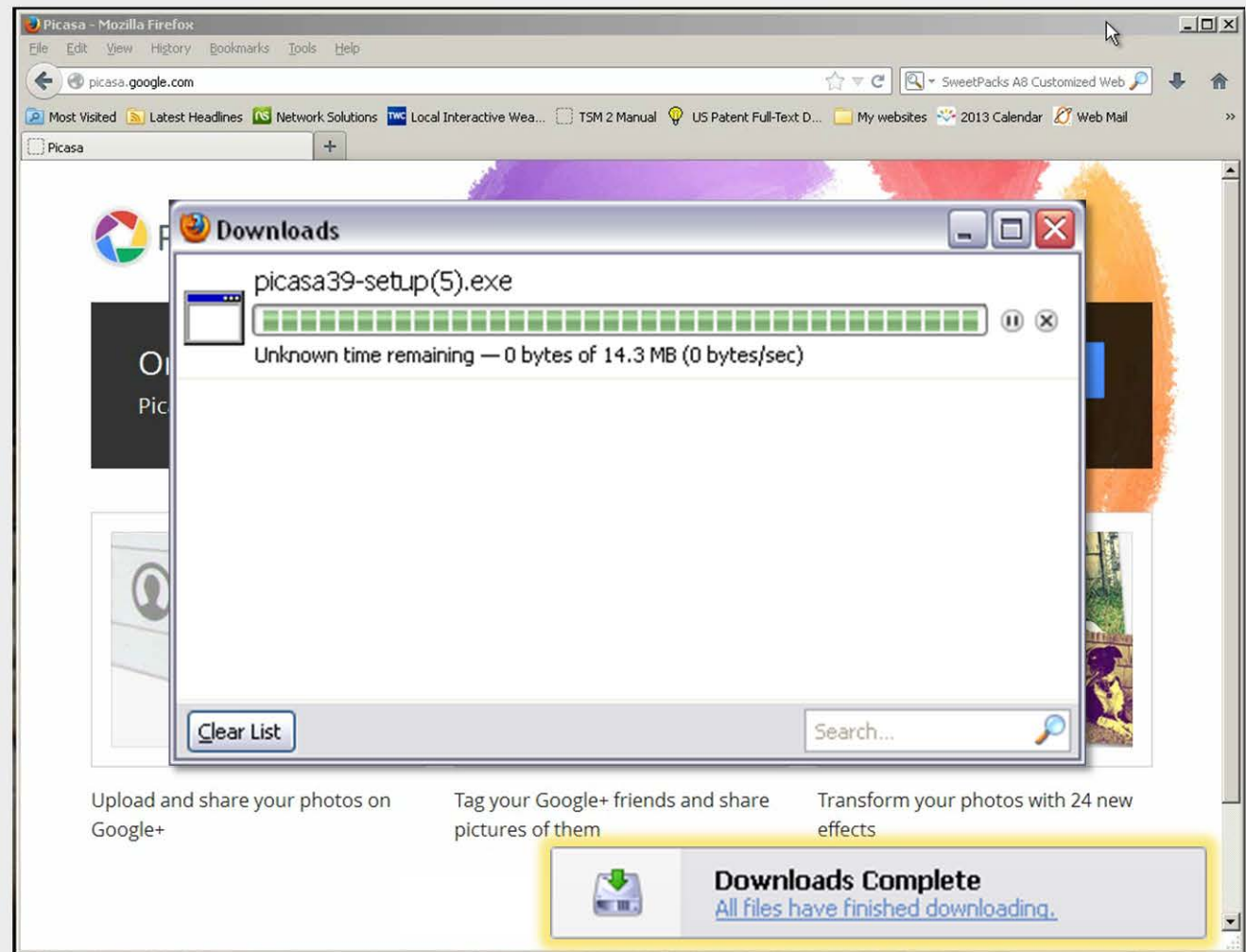
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

PROGRESS BAR informs User of download progress.



END USER'S DISPLAY MONITOR

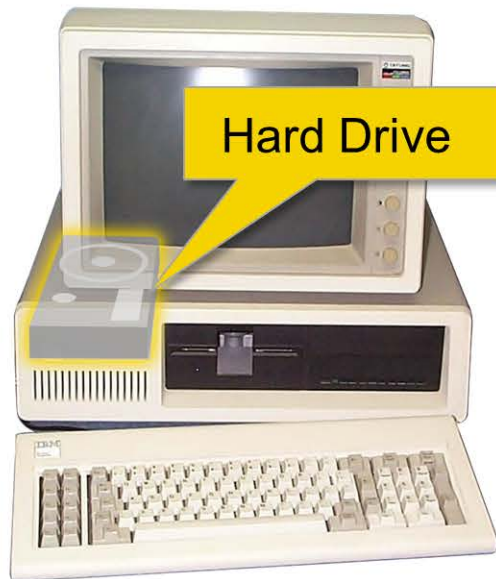


Example of a Computer Program Being **INSTALLED** on the End User's Computer

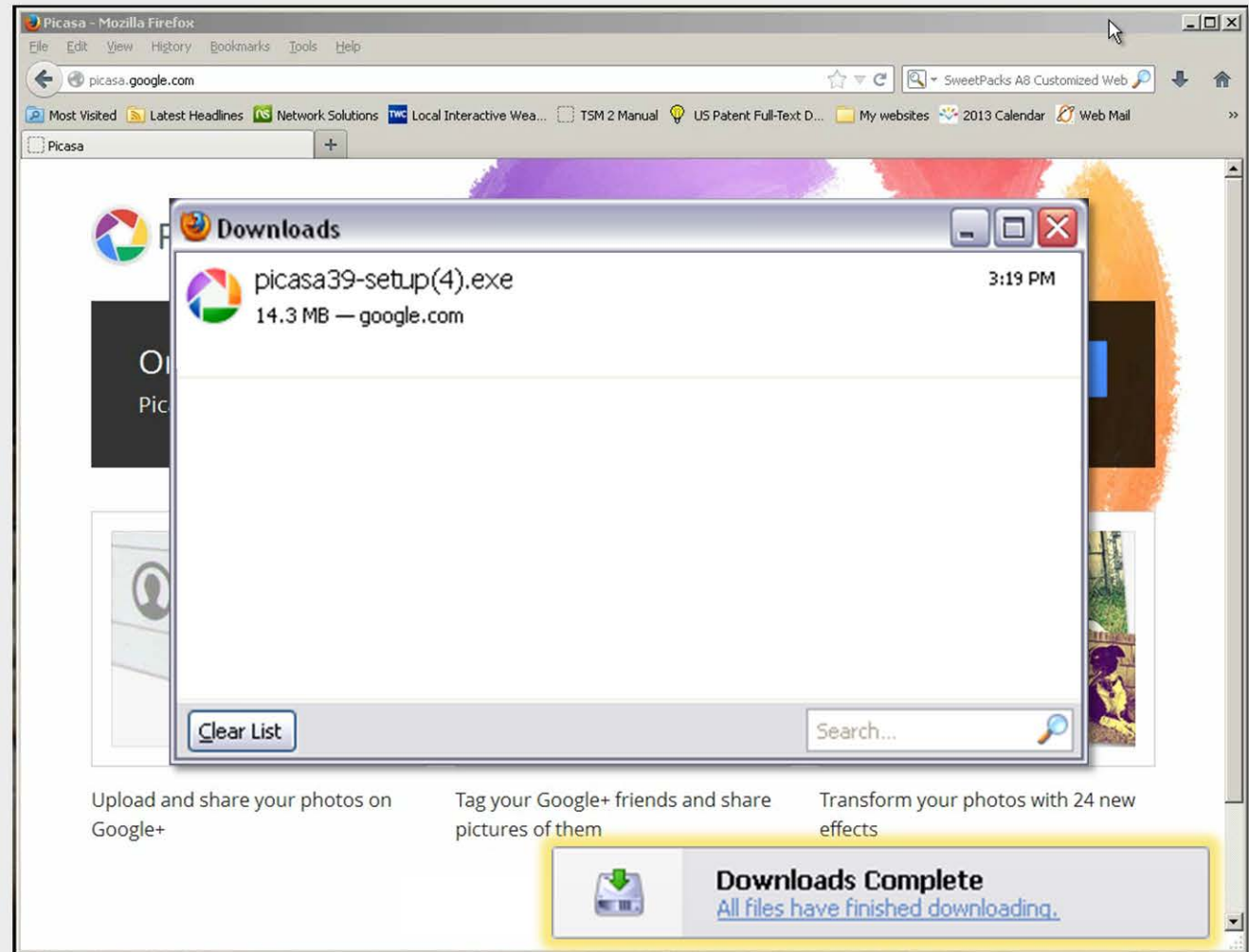
END USER'S COMPUTER

PROGRESS BAR informs User of download progress.

User is informed
**"DOWNLOAD
IS COMPLETE."**



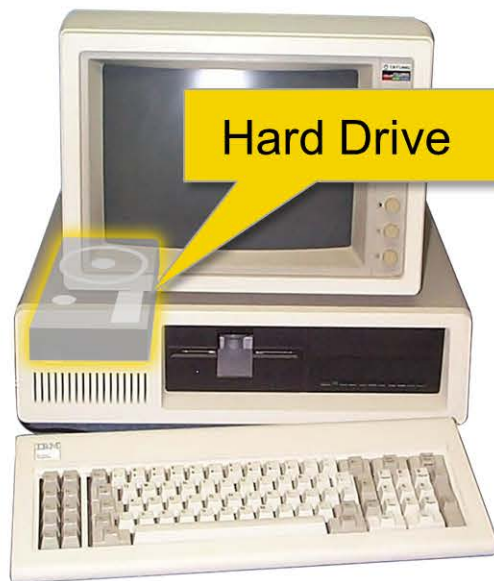
END USER'S DISPLAY MONITOR



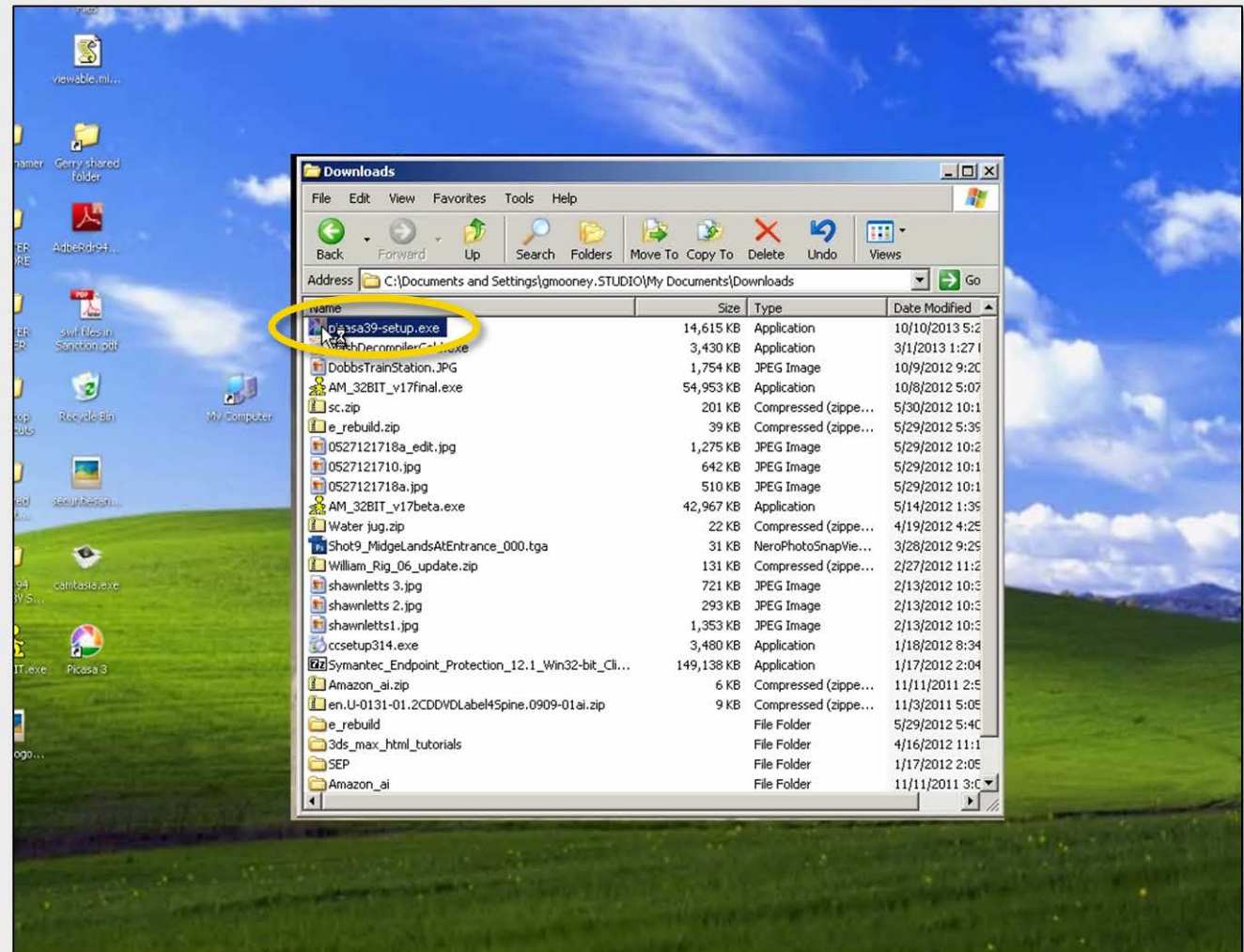
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

File is **SAVED** on User's Computer.



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

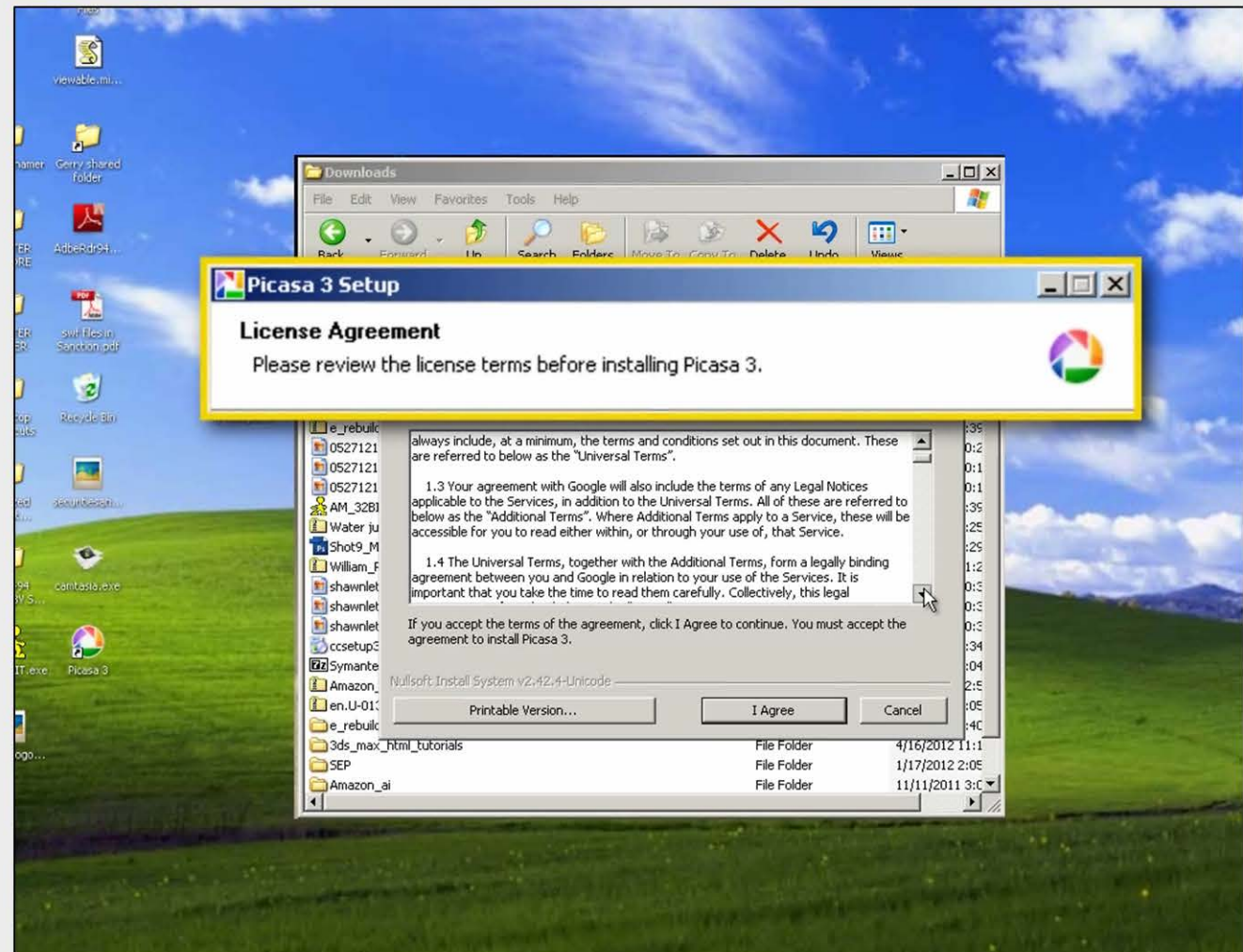
END USER'S COMPUTER

USER ACTION REQUIRED:

User must review terms of License Agreement and click **"I AGREE."**



END USER'S DISPLAY MONITOR

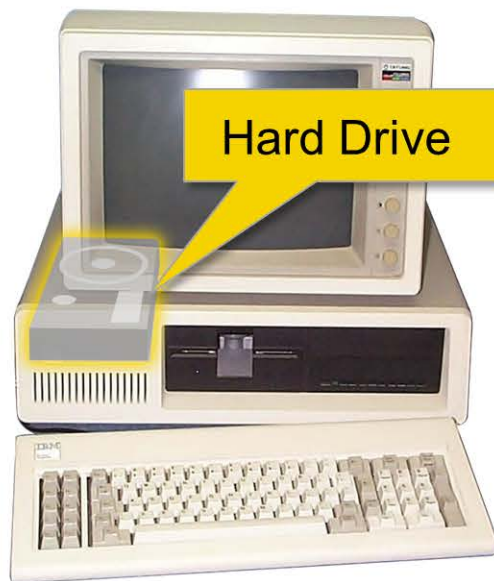


Example of a Computer Program Being **INSTALLED** on the End User's Computer

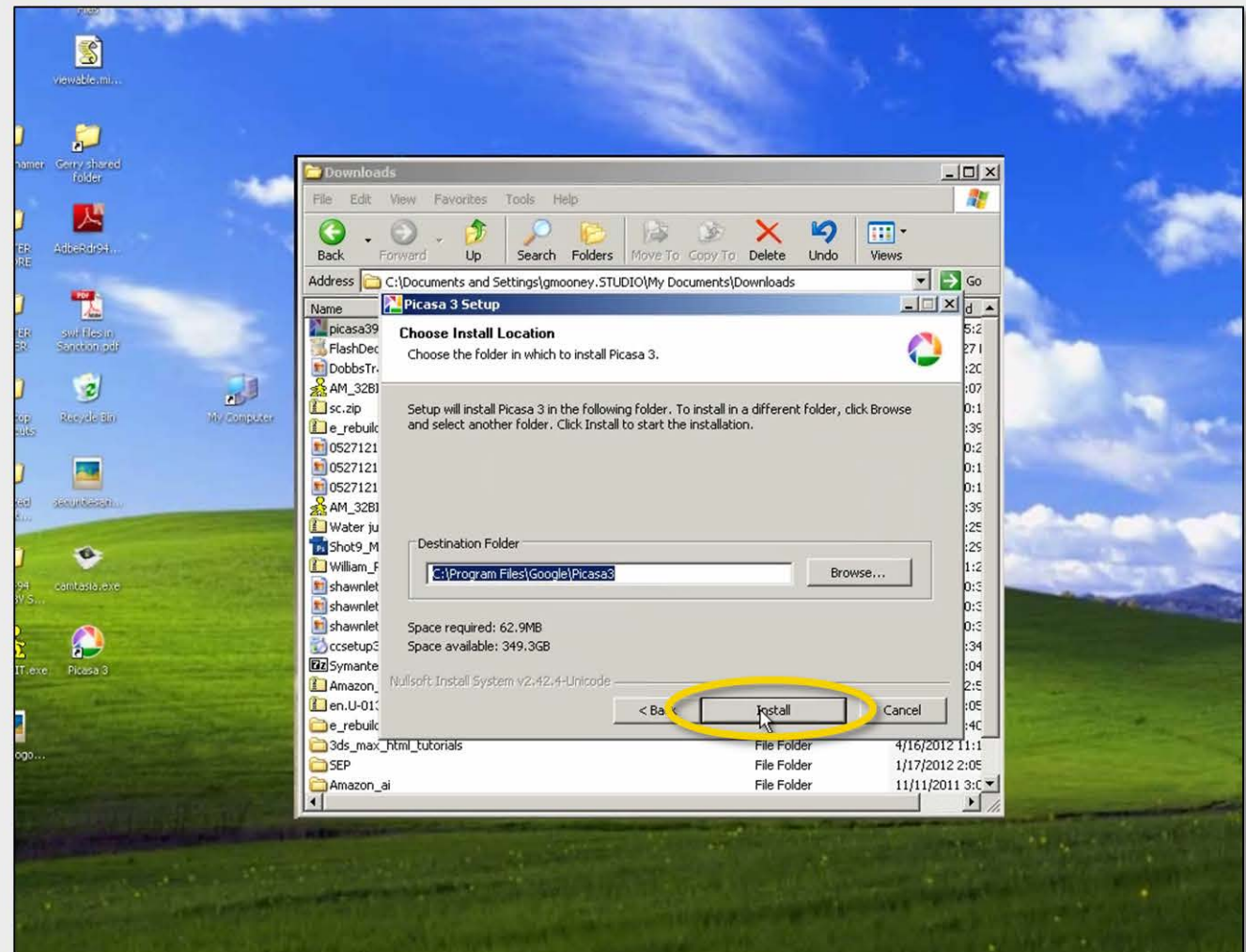
END USER'S COMPUTER

USER ACTION REQUIRED:

User must review terms of License Agreement and click **"I AGREE."**



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

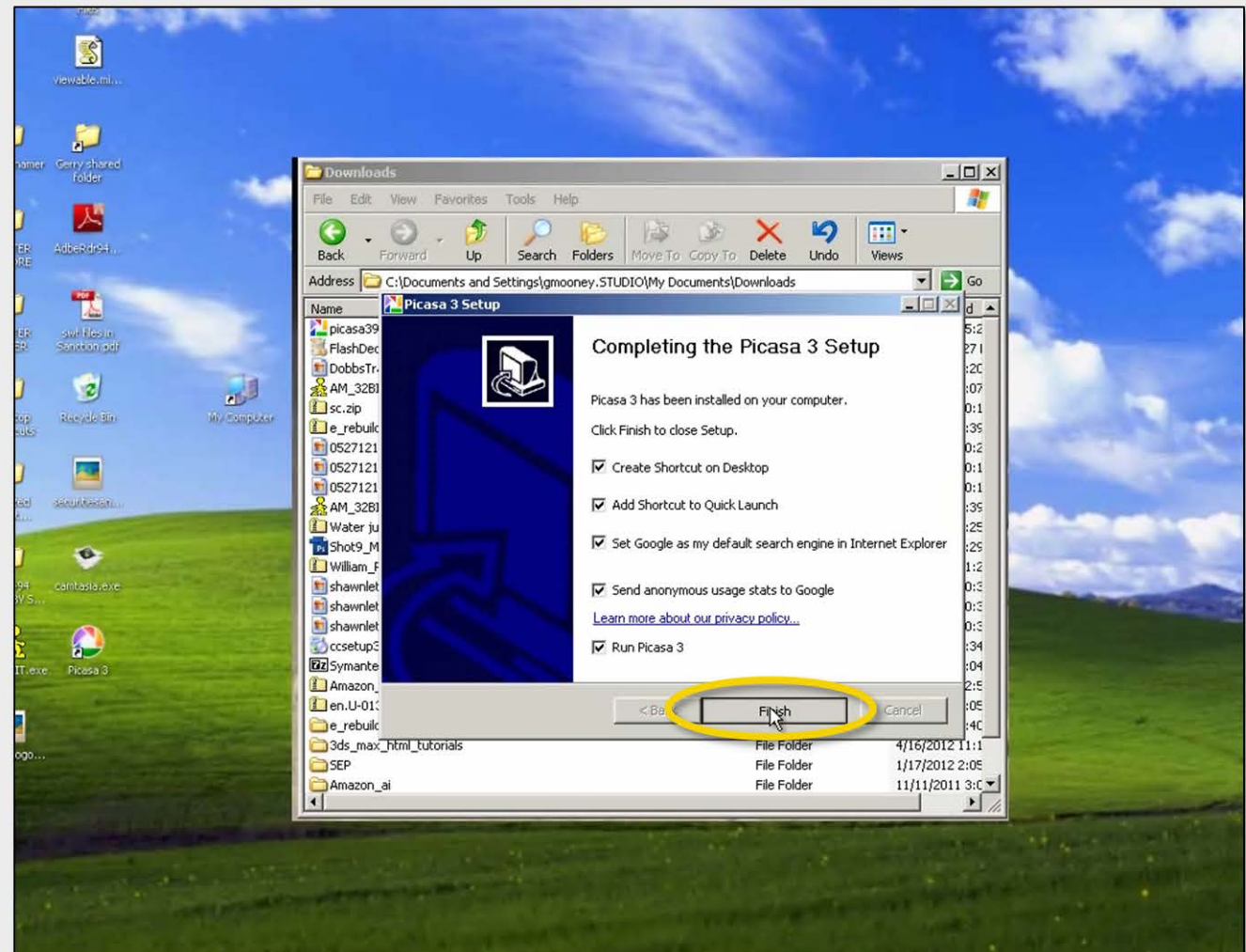
END USER'S COMPUTER

USER ACTION REQUIRED:

Click on **"FINISH"** to complete installation.



END USER'S DISPLAY MONITOR



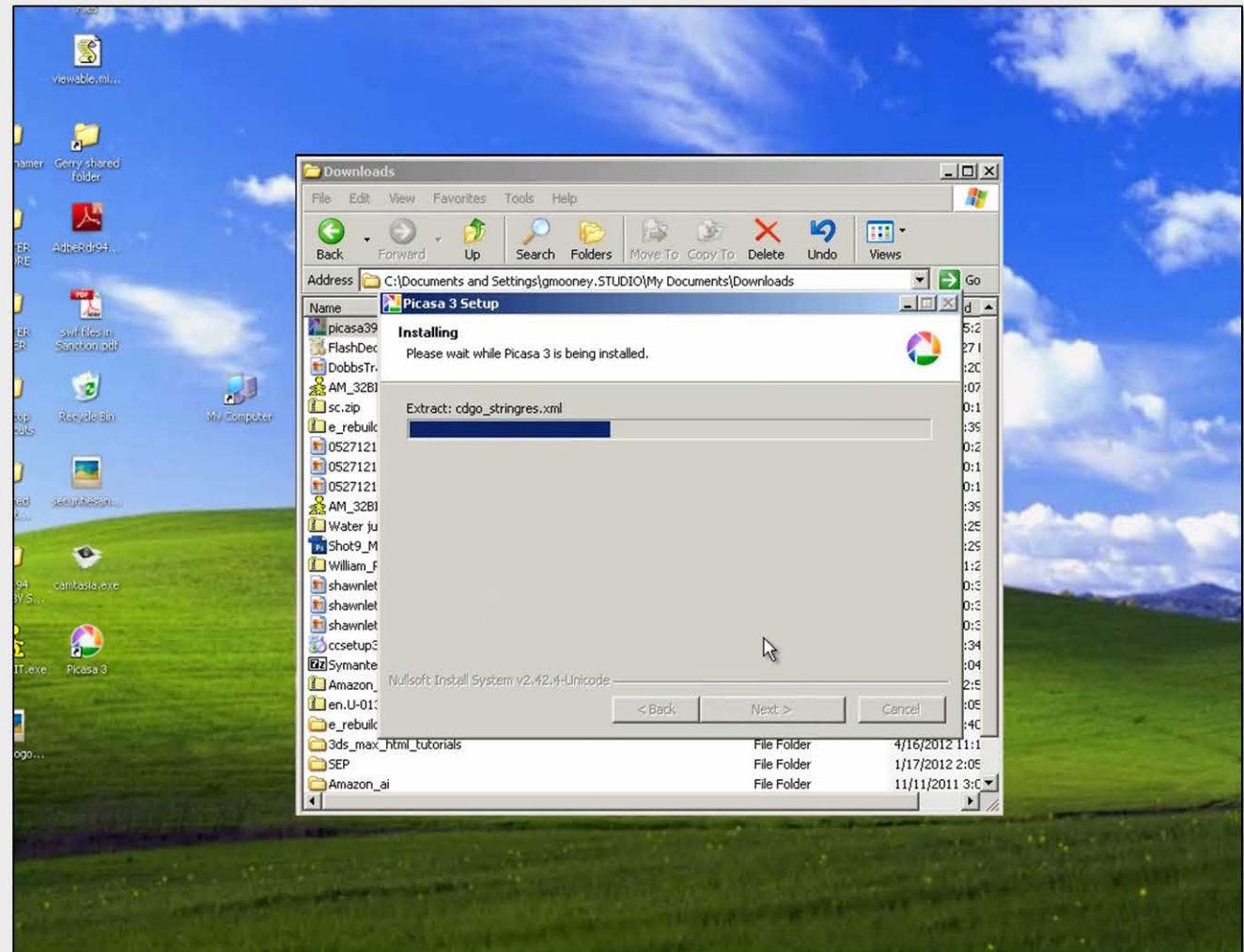
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

PROGRESS BAR informs User of installation progress.



END USER'S DISPLAY MONITOR



Example of a Computer Program Being **INSTALLED** on the End User's Computer

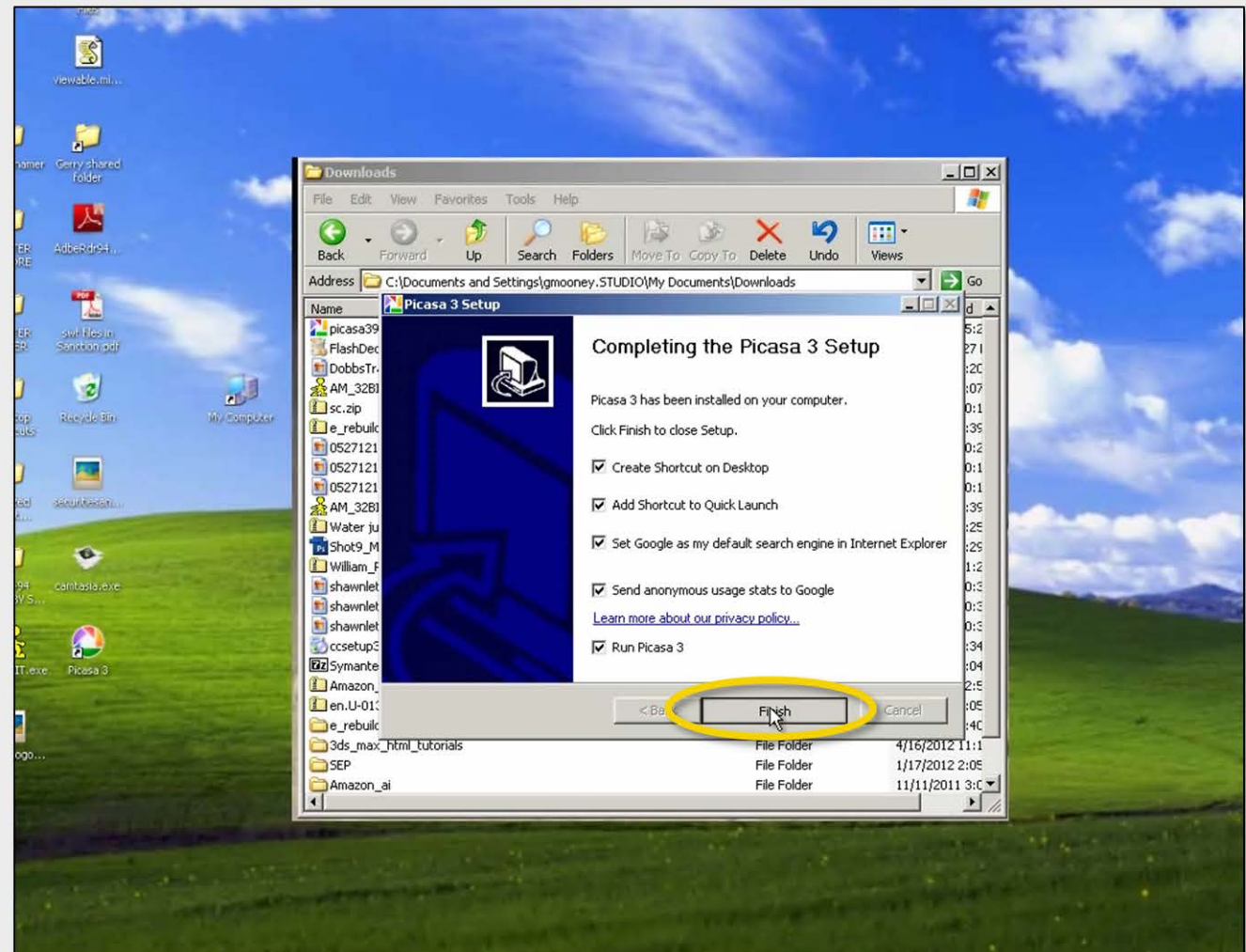
END USER'S COMPUTER

USER ACTION REQUIRED:

Click on **"FINISH"** to complete installation.



END USER'S DISPLAY MONITOR



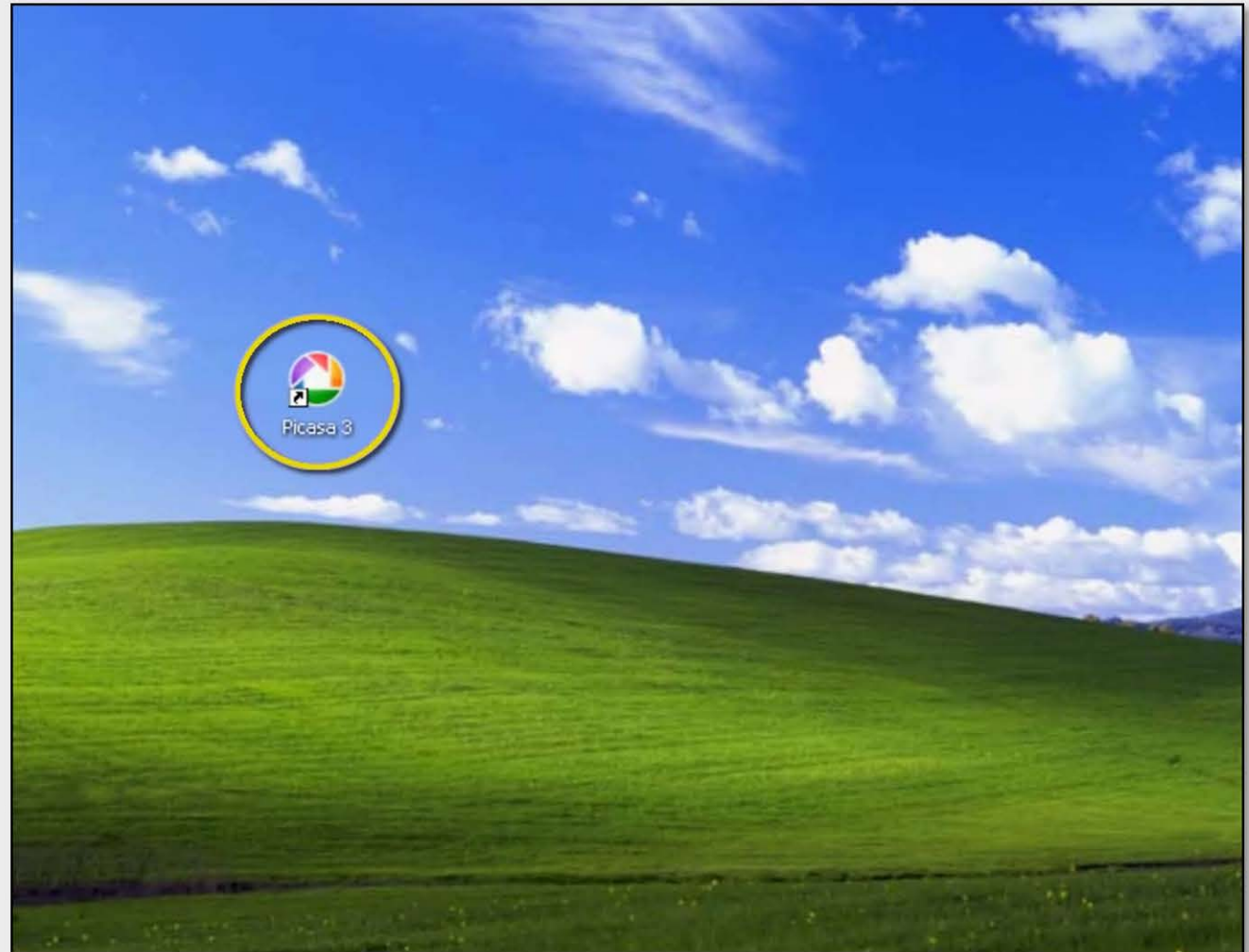
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

A **SHORTCUT** to the software program is placed on the User's Desktop.



END USER'S DISPLAY MONITOR



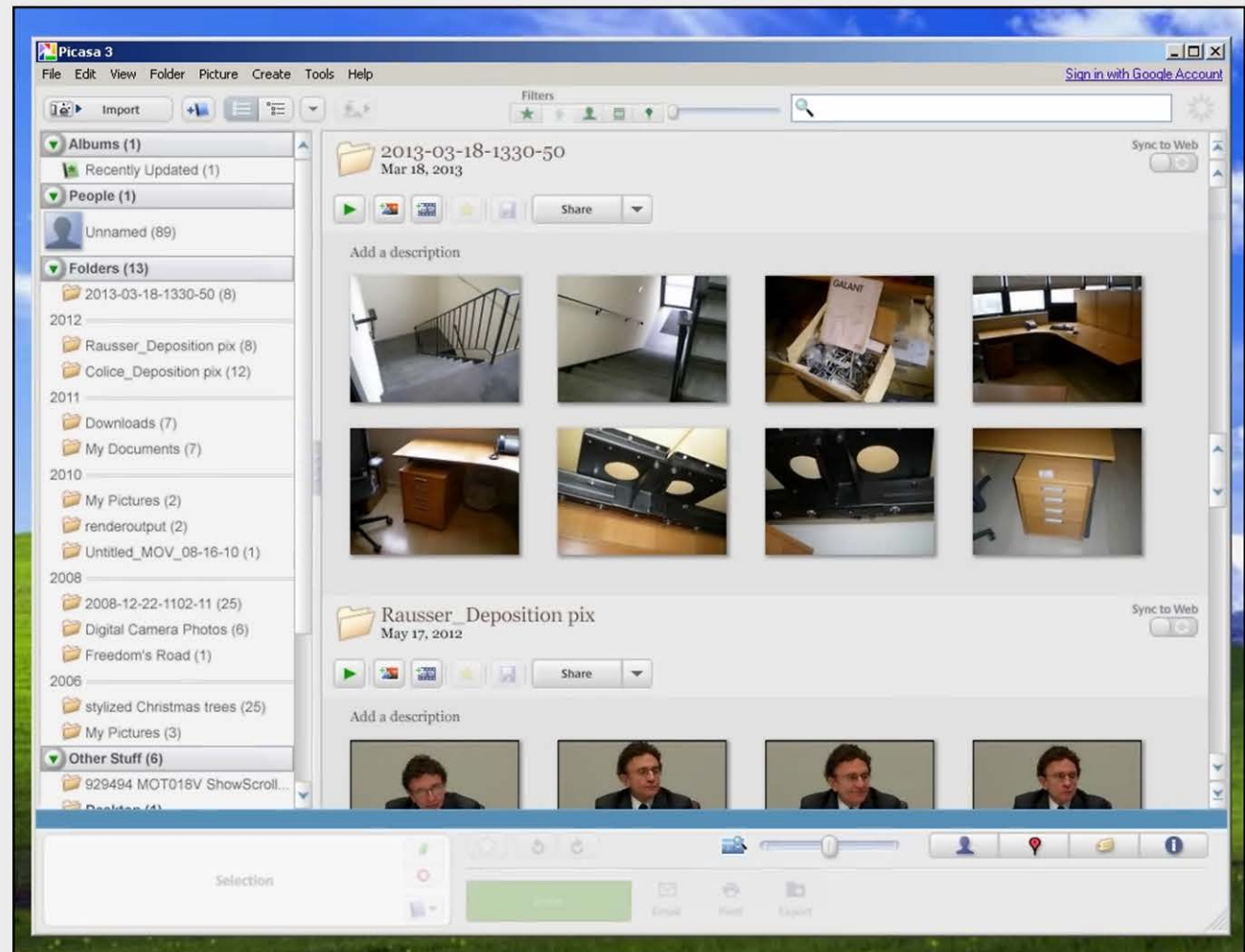
Example of a Computer Program Being **INSTALLED** on the End User's Computer

END USER'S COMPUTER

The **INSTALLED PROGRAM** is now ready and available for use.



END USER'S DISPLAY MONITOR

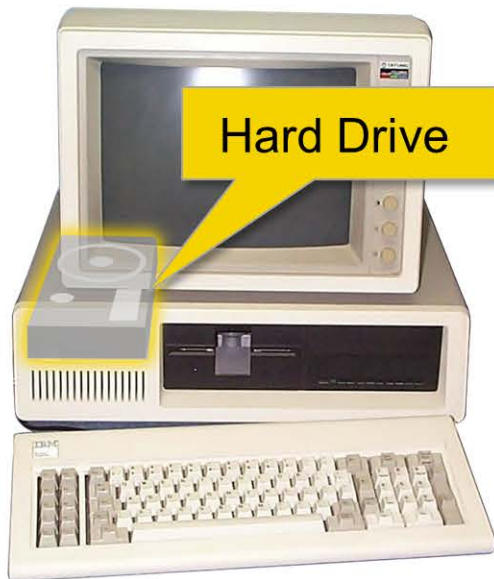


Example of a Computer Program Being **INSTALLED** on the End User's Computer

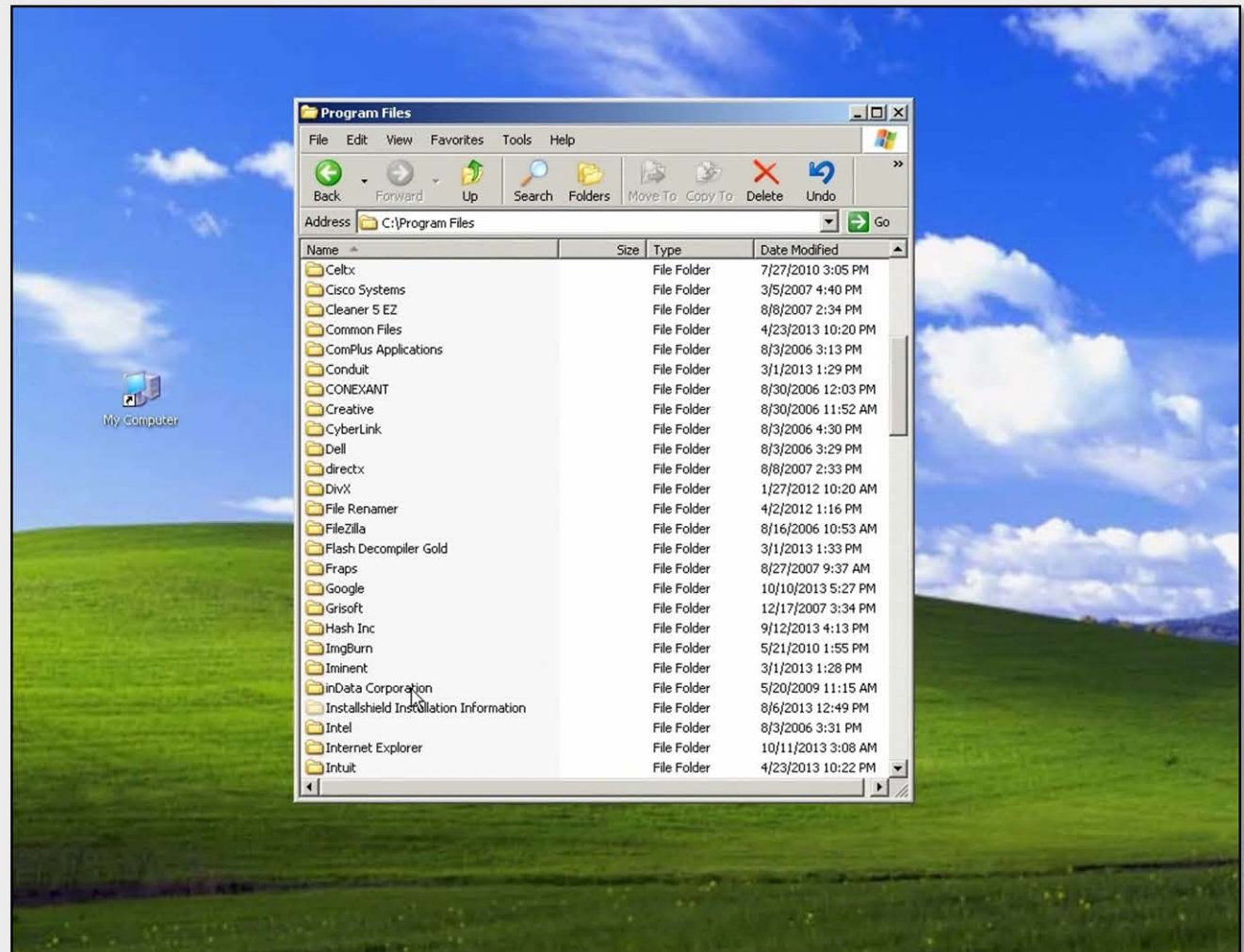
END USER'S COMPUTER

After the User closes the program and navigates away from it, he can:

- **Easily locate** the file on his desktop or hard drive.
- Double-click on the file to **open the program** and have it available for use.



END USER'S DISPLAY MONITOR

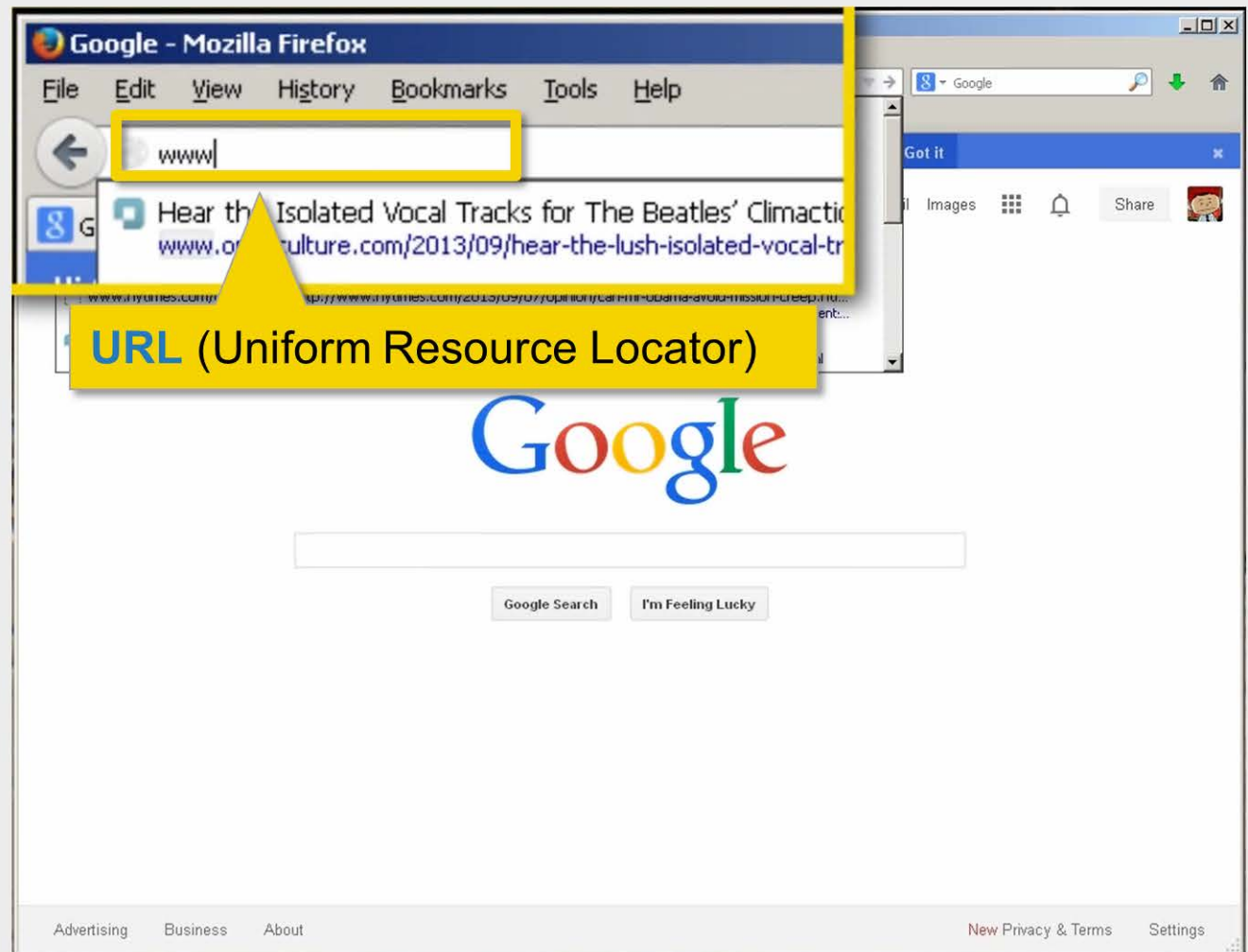


Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

The User types in the **URL** (Uniform Resource Locator) of the Web site they want to view.

USER'S DISPLAY MONITOR



Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

Browser fetches **HTML code** that “defines” the way the Web document appears on the User's screen.

USER'S DISPLAY MONITOR

NFL.com - Official Site of the National Football League - Mozilla Firefox

File Edit View History Bookmarks Tools Help

www.nfl.com

NFL.com - Official Site of the National Footb...

Current Celebrate life's special moments*

The BIG SALE Event! 75% SAVE UP TO

FREE SHIPPING with \$40+ order

SHOP NOW

Sign In | Register

TEAM SITES

Search NFL.com

FANTASY NEWS VIDEO SCORES SCHEDULES STANDINGS STATS WATCH GAMES TICKETS SHOP

ON NFL NETWORK: NFL AM 10:00 AM ET

NYG 21	GB 17	CIN 27	DET 31	STL 38	OKC 24	CAR 35	PIT 19	PHI 31	JAC 19	TEN 13	NO 27	ARI 20	WAS 16	IND 30
CHI 27	BAL 17	BUF 24	CLE 17	HOU 13	KC 24	MIN 10	NYJ 6	TB 20	DEN 35	SEA 20	NE 30	SF 32	DAL 31	SD 10
FINAL	FINAL	FINAL OT	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	FINAL	MON 8:40

OUTS-GLORY

BEST-IN-CLASS 25 HWY MPG⁽¹⁾

Read combine.nflcdn.com

WATCH ALL THE THRILLING WEEK 6 FINISHES AGAIN ONLINE, IN HD

NFL.COM REWARDS COINS: 0

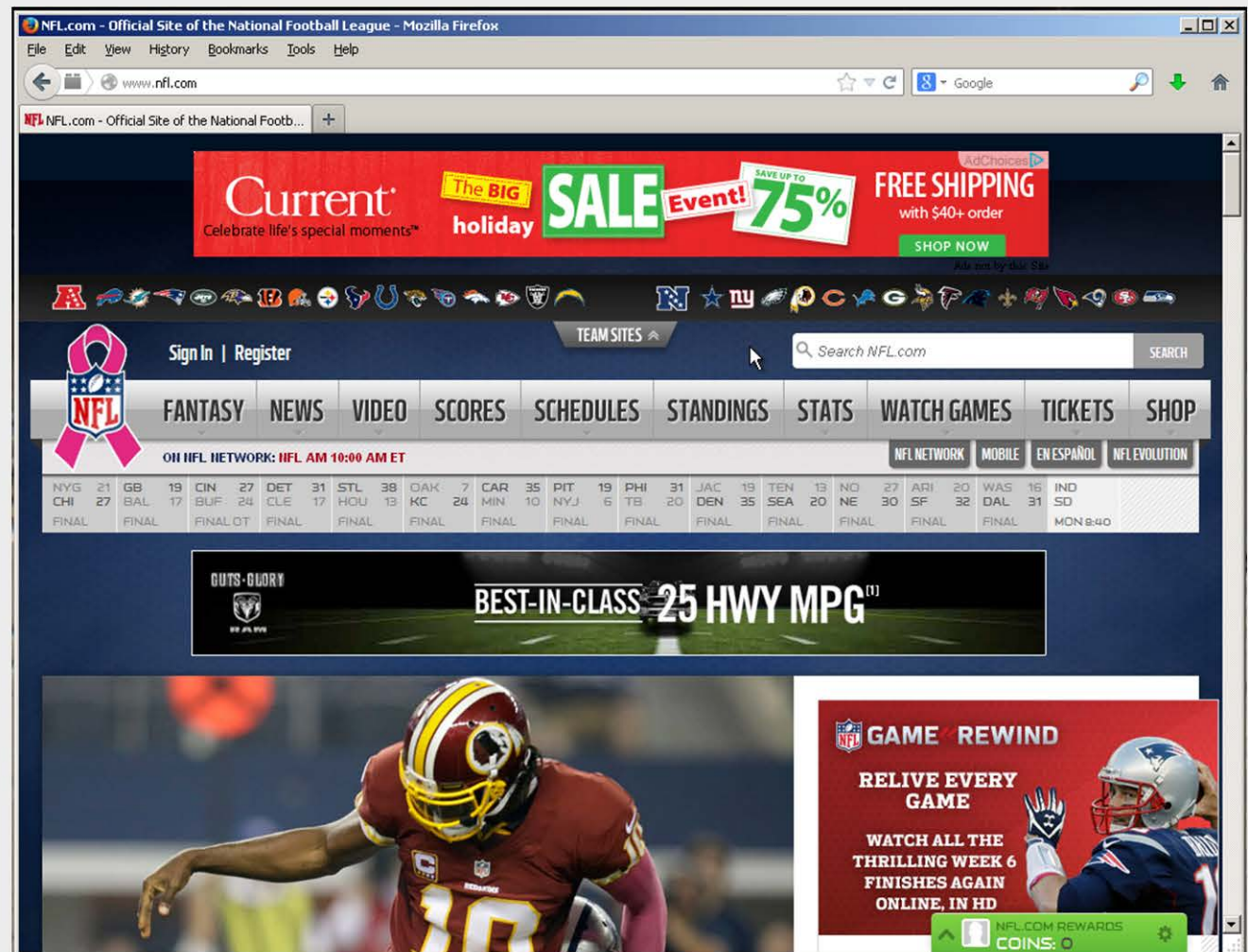
Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

The HTML code is **NOT INSTALLED** on the End User's machine.

- **NO** additional User action required
- **NO** prompt to click "DOWNLOAD"
- **NO** installation progress bar
- **NO** permissions or agreements required by User
- **NO** file permanently saved on User's computer
- **NO** shortcut on User's desktop
- **NO** modification of the User's computer Operating System

USER'S DISPLAY MONITOR



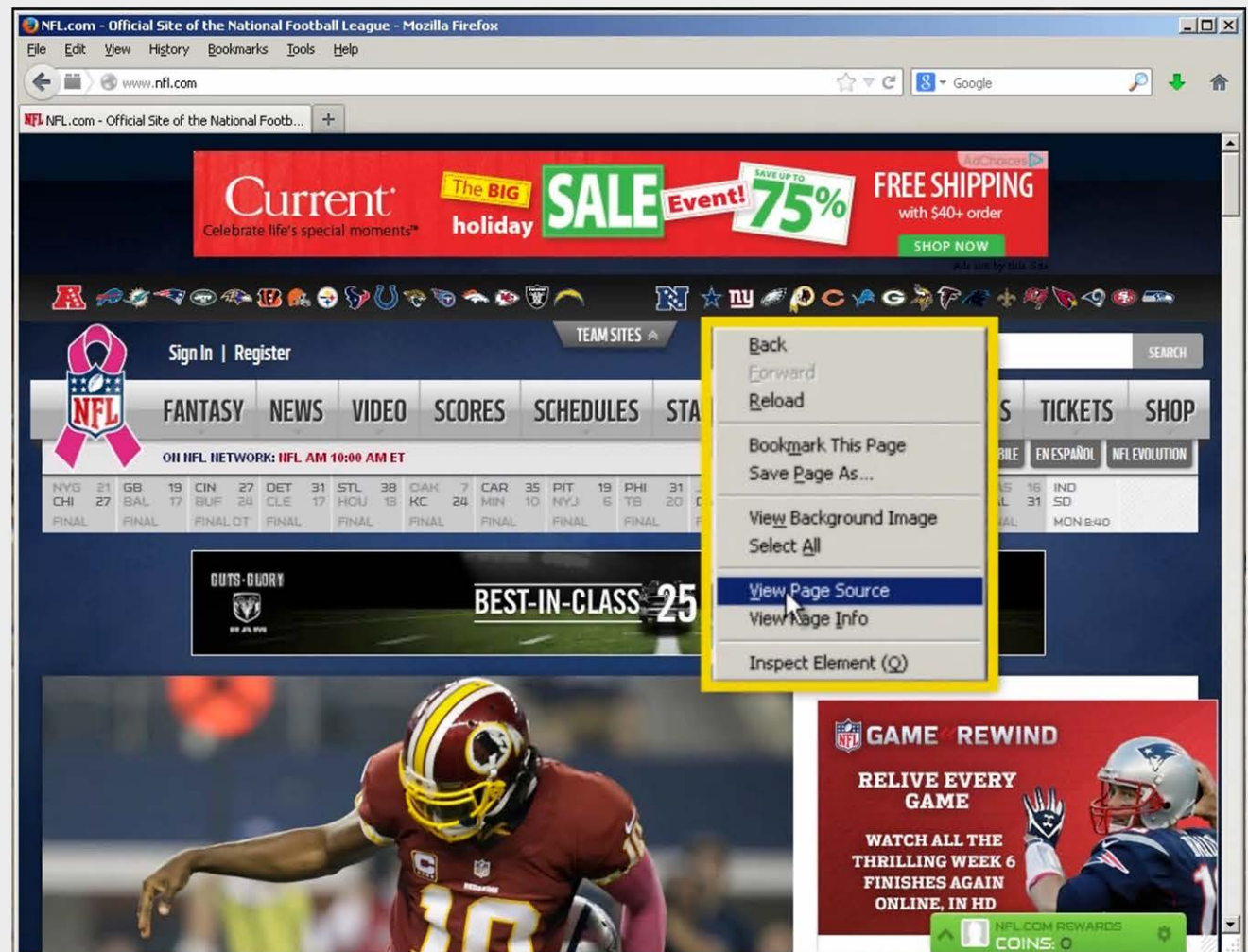
Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

The HTML code is **NOT INSTALLED** on the End User's machine.

- Source code for any Web page can be viewed by right-clicking on the displayed content and choosing "View Page Source."

USER'S DISPLAY MONITOR



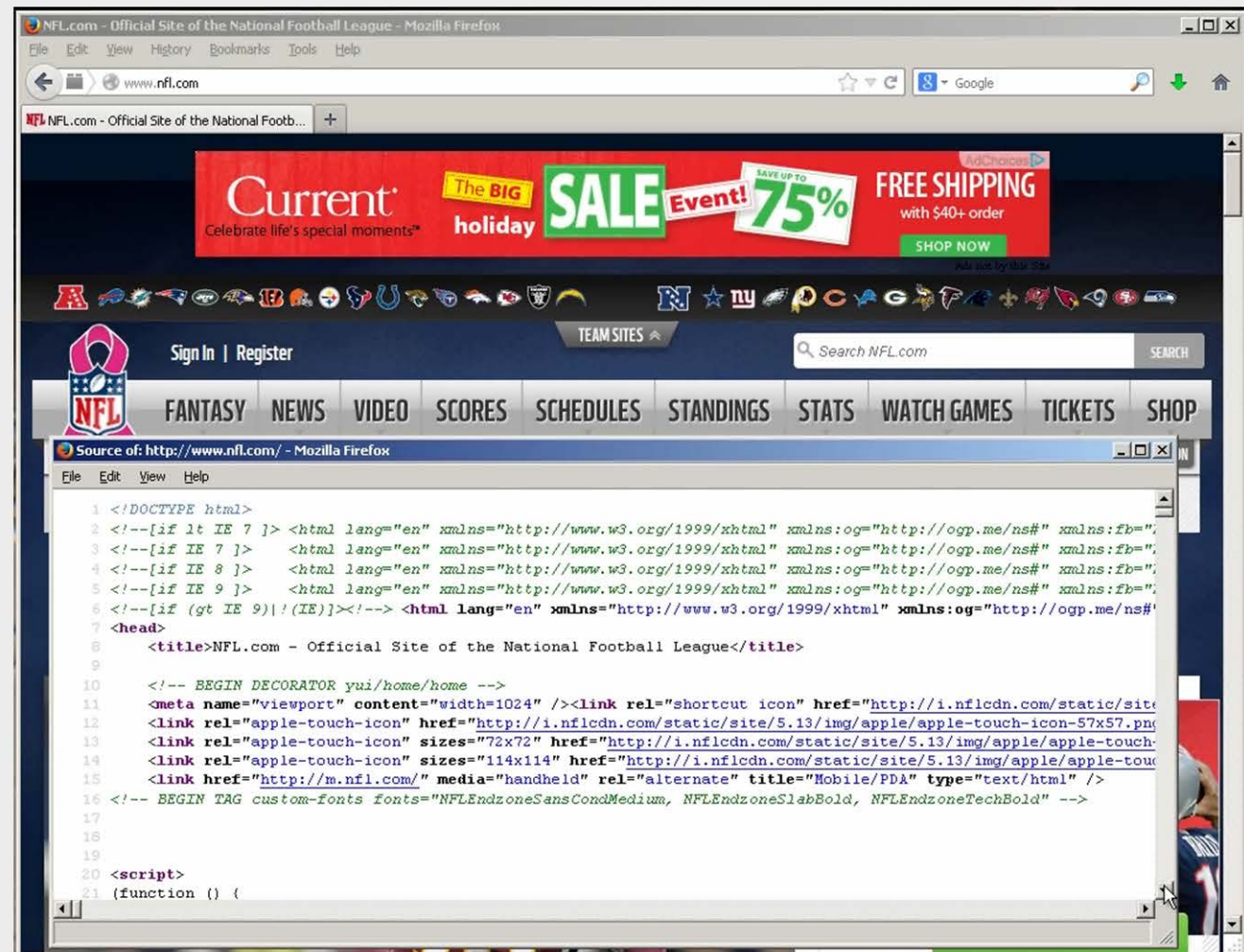
Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

The HTML code is **NOT INSTALLED** on the End User's machine.

- The HTML code resides on the **CONTENT PROVIDER'S SITE**, www.nfl.com.
- **The Browser INTERPRETS** the HTML code and renders the page for display on the User's monitor.

USER'S DISPLAY MONITOR



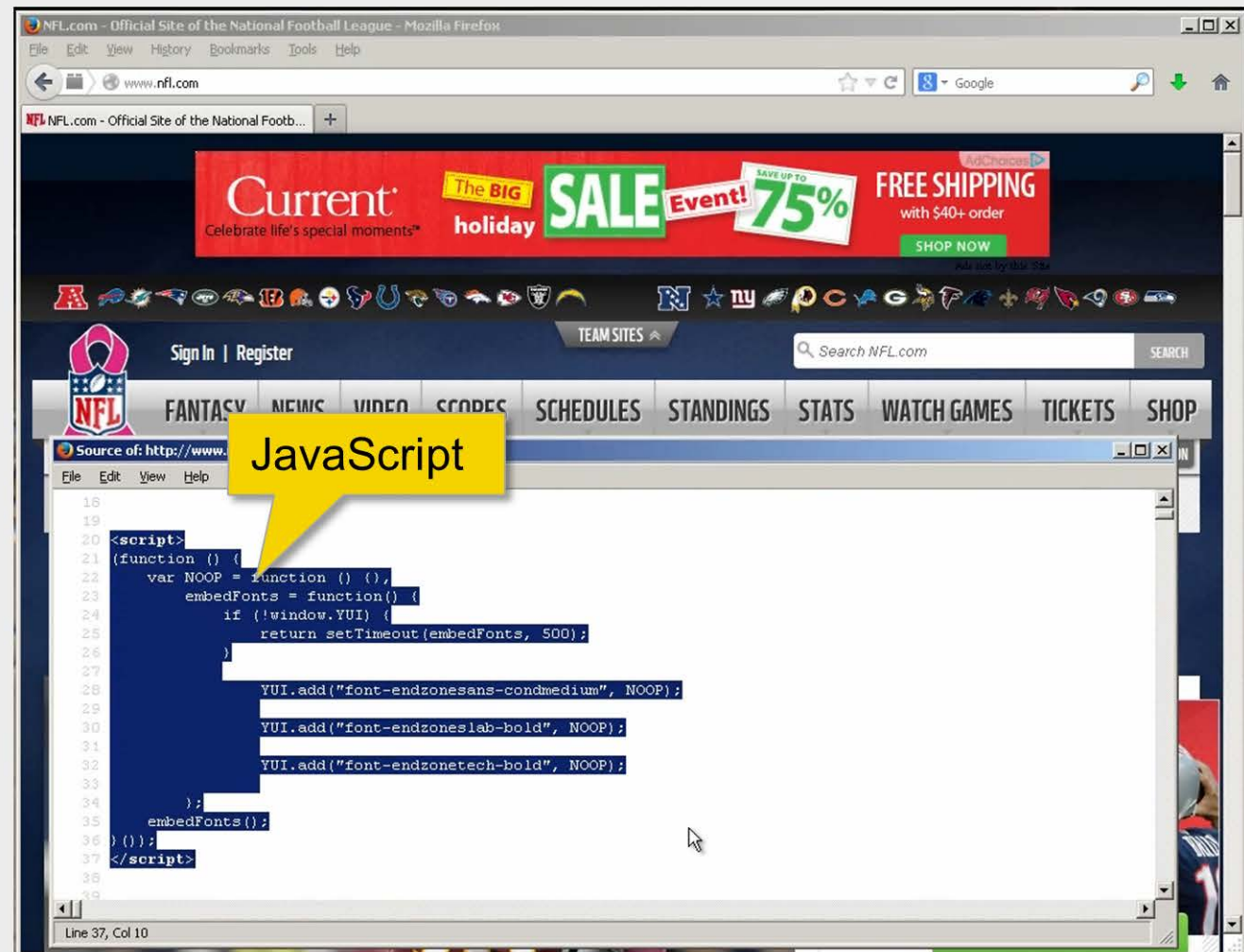
Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

JavaScript within the HTML document is **NOT INSTALLED** on the End User's machine.

- The JavaScript resides on the **CONTENT PROVIDER'S SITE**, www.nfl.com.
- **The Browser INTERPRETS** the JavaScript using its internal **JavaScript engine**.

USER'S DISPLAY MONITOR



Web Pages Are **NOT INSTALLED** on the End User's Computer

USER'S COMPUTER

The HTML code and JavaScript are **NOT INSTALLED** on the End User's machine.

Once the User navigates away from the Web page, the HTML code may be temporarily cached **BUT:**

- It would be extremely **difficult to locate**

USER'S DISPLAY MONITOR

The screenshot shows the 'Information about the Cache Service' window in Mozilla Firefox. The address bar shows 'about:cache?device=disk'. The main content area displays a list of cached files. A yellow box highlights the following URL:

```
http://combine.nflcdn.com/yui/min2/index.php?5.131112120910201360b1db38a2c948d9d5eef1fba47b1348a8e53ff14b=yui.2Fstatic%2F5.13%2Fscripts&f=home-2011/home.js,header-2012/header-2012.js
```

A yellow callout box points to this entry with the text: 'Here's some JavaScript from the NFL Web page. We know this because it ends with .js'

URL	Size	Count	Expiration
http://combine.nflcdn.com/yui/min2/index.php?5.131112120910201360b1db38a2c948d9d5eef1fba47b1348a8e53ff14b=yui.2Fstatic%2F5.13%2Fscripts&f=home-2011/home.js,header-2012/header-2012.js	142 bytes	1	2013-10-15 10:26:45
http://ad.doubleclick.net/activity;src=423;type=invmedia;cat=mr34u7d;ord=1?	42 bytes	1	2013-10-15 10:30:38
http://www.facebook.com/offsite...	421 bytes	1	2013-10-15 10:30:38
http://www.bestwestern.com/img/...	0 bytes	1	2013-10-15 10:30:37
http://www.bestwestern.com/js/myl...	0 bytes	1	2013-10-15 10:30:37
http://1.betrad.com/ct/0 0 0 8575/us/0/1/0/0/0/160/600/242/321/0/pixel.gif?v=1159&ttid=2&d=earthlink.net&r=0.022675216590566927	0 bytes	1	2013-10-15 10:30:19

Web Pages Are **NOT INSTALLED** on the End User's Computer

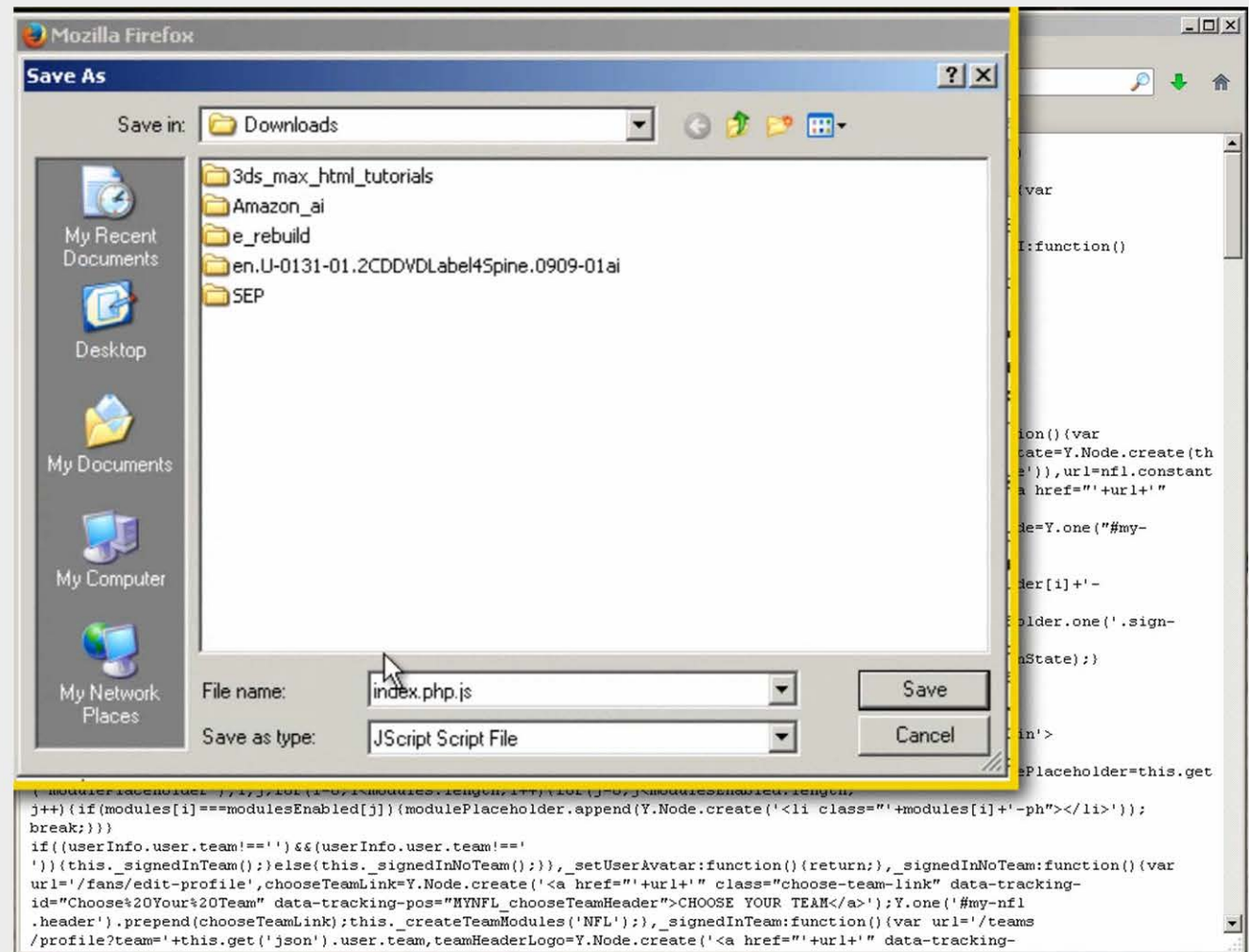
USER'S COMPUTER

The HTML code and JavaScript are **NOT INSTALLED** on the End User's machine.

Once the User navigates away from the Web page, the HTML code may be temporarily cached **BUT:**

- It would be extremely **difficult to locate**
- If you did find the file and tried to run it, the Operating System **would be unable to access or open the file.**

USER'S DISPLAY MONITOR



Web Pages Are **NOT INSTALLED** on the End User's Computer

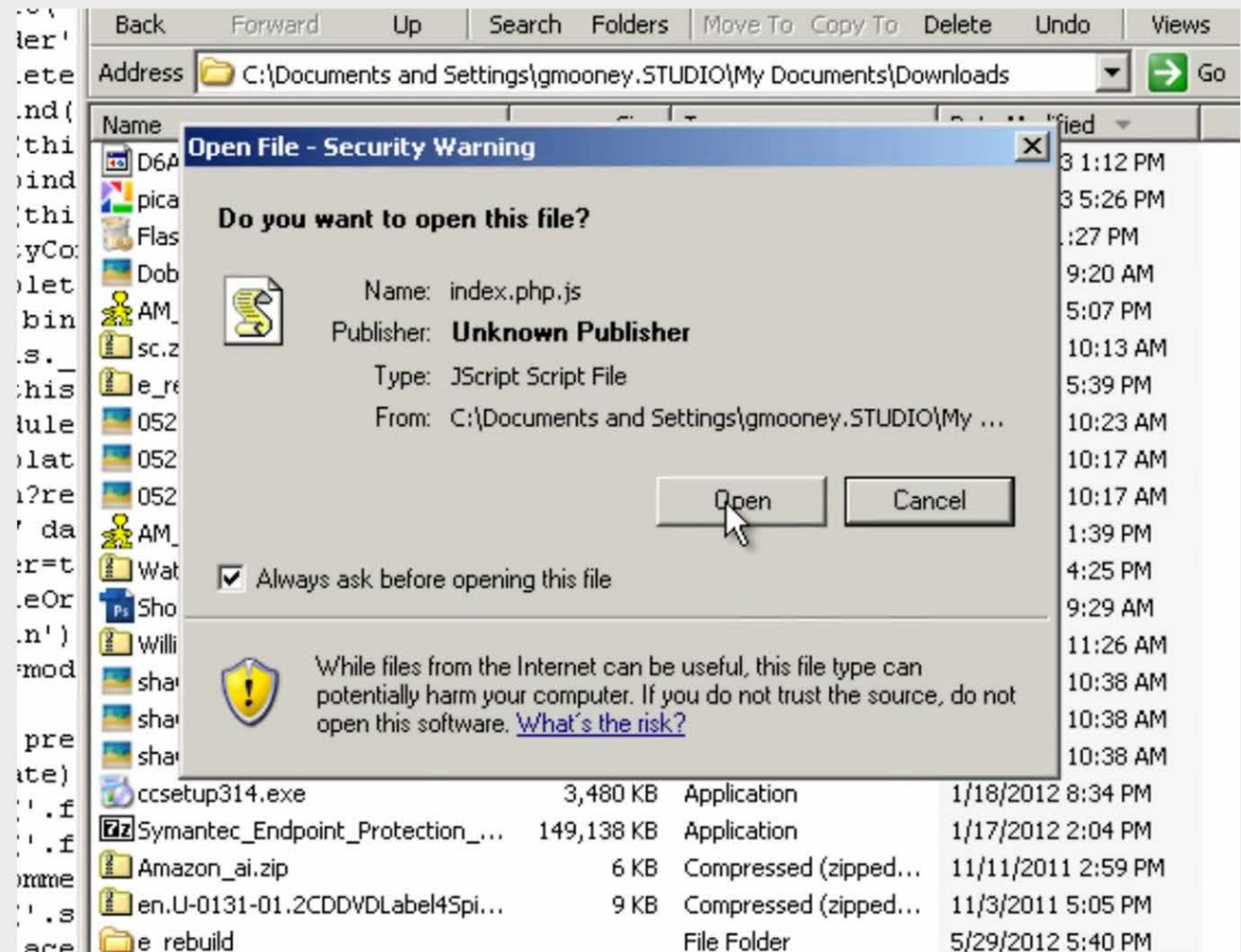
USER'S COMPUTER

The HTML code and JavaScript are **NOT INSTALLED** on the End User's machine.

Once the User navigates away from the Web page, the HTML code may be temporarily cached **BUT:**

- It would be extremely **difficult to locate**
- If you did find the file and tried to run it, the Operating System **would be unable to access or open the file.**

USER'S DISPLAY MONITOR



Web Pages Are **NOT INSTALLED** on the End User's Computer

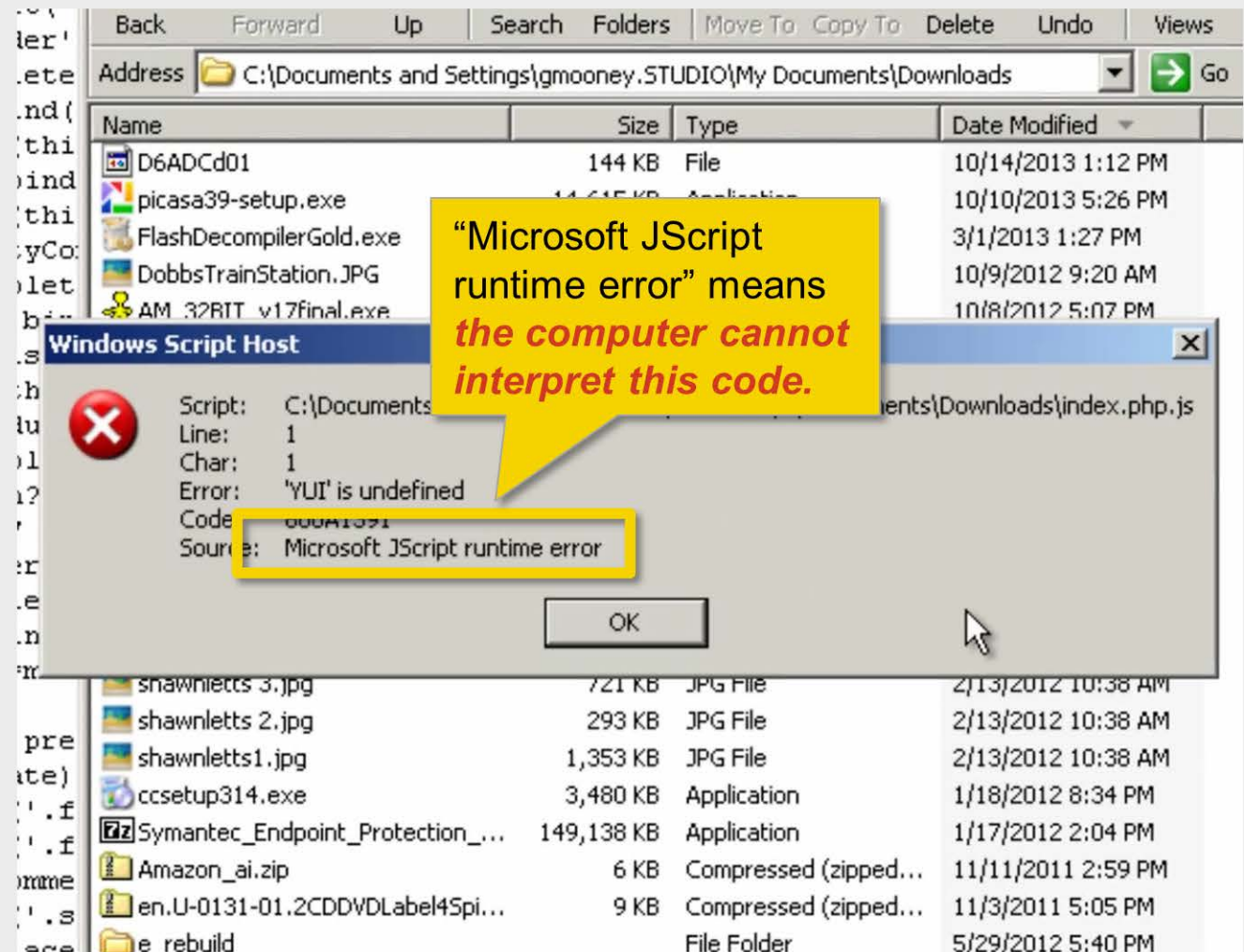
USER'S COMPUTER

The HTML code and JavaScript are **NOT INSTALLED** on the End User's machine.

Once the User navigates away from the Web page, the HTML code may be temporarily cached **BUT:**

- It would be extremely **difficult to locate**
- If you did find the file and tried to run it, the Operating System **would be unable to access or open the file.**

USER'S DISPLAY MONITOR



Back Forward Up Search Folders Move To Copy To Delete Undo Views

Address C:\Documents and Settings\gmooney.STUDIO\My Documents\Downloads Go

Name	Size	Type	Date Modified
D6ADCd01	144 KB	File	10/14/2013 1:12 PM
picasa39-setup.exe	14,615 KB	Application	10/10/2013 5:26 PM
FlashDecompilerGold.exe			3/1/2013 1:27 PM
DobbsTrainStation.JPG			10/9/2012 9:20 AM
AM_32BIT_v17final.exe			10/8/2012 5:07 PM
shawnletts 3.jpg	721 KB	JPG File	2/13/2012 10:38 AM
shawnletts 2.jpg	293 KB	JPG File	2/13/2012 10:38 AM
shawnletts1.jpg	1,353 KB	JPG File	2/13/2012 10:38 AM
ccsetup314.exe	3,480 KB	Application	1/18/2012 8:34 PM
Symantec_Endpoint_Protection_...	149,138 KB	Application	1/17/2012 2:04 PM
Amazon_ai.zip	6 KB	Compressed (zipped...)	11/11/2011 2:59 PM
en.U-0131-01.2CDDVDLabel4Spi...	9 KB	Compressed (zipped...)	11/3/2011 5:05 PM
e rebuild		File Folder	5/29/2012 5:40 PM

Windows Script Host

Script: C:\Documents and Settings\gmooney.STUDIO\My Documents\Downloads\index.php.js
Line: 1
Char: 1
Error: 'YUI' is undefined
Code: 00041021
Source: Microsoft JScript runtime error

OK

"Microsoft JScript runtime error" means the computer cannot interpret this code.