Security Vulnerabilities

Heads Up!

Ladue Chapel Presbyterian Church

R. Scott Granneman
Denise Lieberman

1.2

Notes & URLs for this presentation can be found...

» underneath the link to this slide on granneman.com
» at files.granneman.com/presentations/ladue-chapel/
Security-Vulnerabilities.txt

Scott Granneman

Interviews

Ladue Chapel

Exploring HTML5 & CSS

Advanced CSS

HTML to CSS to Responsive Web Design

Responsive Web Design for Designers

Web Design

Archived Presentations

Creative Commons License

Scott Grann... in a Web development company in St. Louis, Missouri. Scott has written six books, contributed ... r SecurityFocus and *Linux Magazine*. He is an Adjunct Professor at Washington University in St. Louis ... n technology, security, web development, & the Internet. As a Principal of WebSanity, he plans, devel... states using an open source, UNIX-based content management system. He has given presentatio... eaking to people.

Key S

Pages you're

Personal

- Publications
- Summer Vacation 2007: The Plains

Teaching

- Web Development Key Links
- Wash U: Website Design & Development Syllabus
- Webster U (Comp Sci): Intro to Web Programming Syllabus
- ...ming Syllabus (8-Week)

Open "http://www.granneman.com/presentations/" in a new tab or window

www.granneman.com

Basics

What's *security*?

"Computer security is the effort to create a secure computing platform, designed so that agents (users or programs) can only perform actions that have been allowed." —Wikipedia

Security is a *process*, not a product

The C.I.A. triangle

» Confidentiality
» Integrity
» Availability

The C.I.A. triangle expanded

» Confidentiality
» Integrity
» Availability

» Privacy
» Identification
» Authentication
» Authorization
» Accountability

Confidentiality

Only those with sufficient privileges may access specified information

Integrity

Ensures information is...
» Whole
» Complete
» Uncorrupted

Corruption can occur during...
» Compilation
» Storage
» Transmission

Availability

Information accessible to authorized users without interference or obstruction & in the required format

"Users" can be either people or computers

Privacy

Information is used only for purposes known to the data's owner

Identification

Ability to recognize individual users

Essential to establishing levels of access & authorization

Authentication

User proves their claimed identity

Authorization

After identity is authenticated, assures that the user has been authorized by the proper authority to access, update, or delete information

Accountability

Assurance that every action can be attributed back to a named person or an automated process, often through logging

Malware

Not every bad thing on a computer is a virus!

"*Malware*, short for *malicious software*, is any software used to disrupt computer operation, gather sensitive information, or gain access to private computer systems" —Wikipedia

Virus

Worm

Spyware

Trojan Horse

Rootkit

Ransomware

Virus

Self-replicating

Infects another program & uses that to spread

Alters the way a computer operates

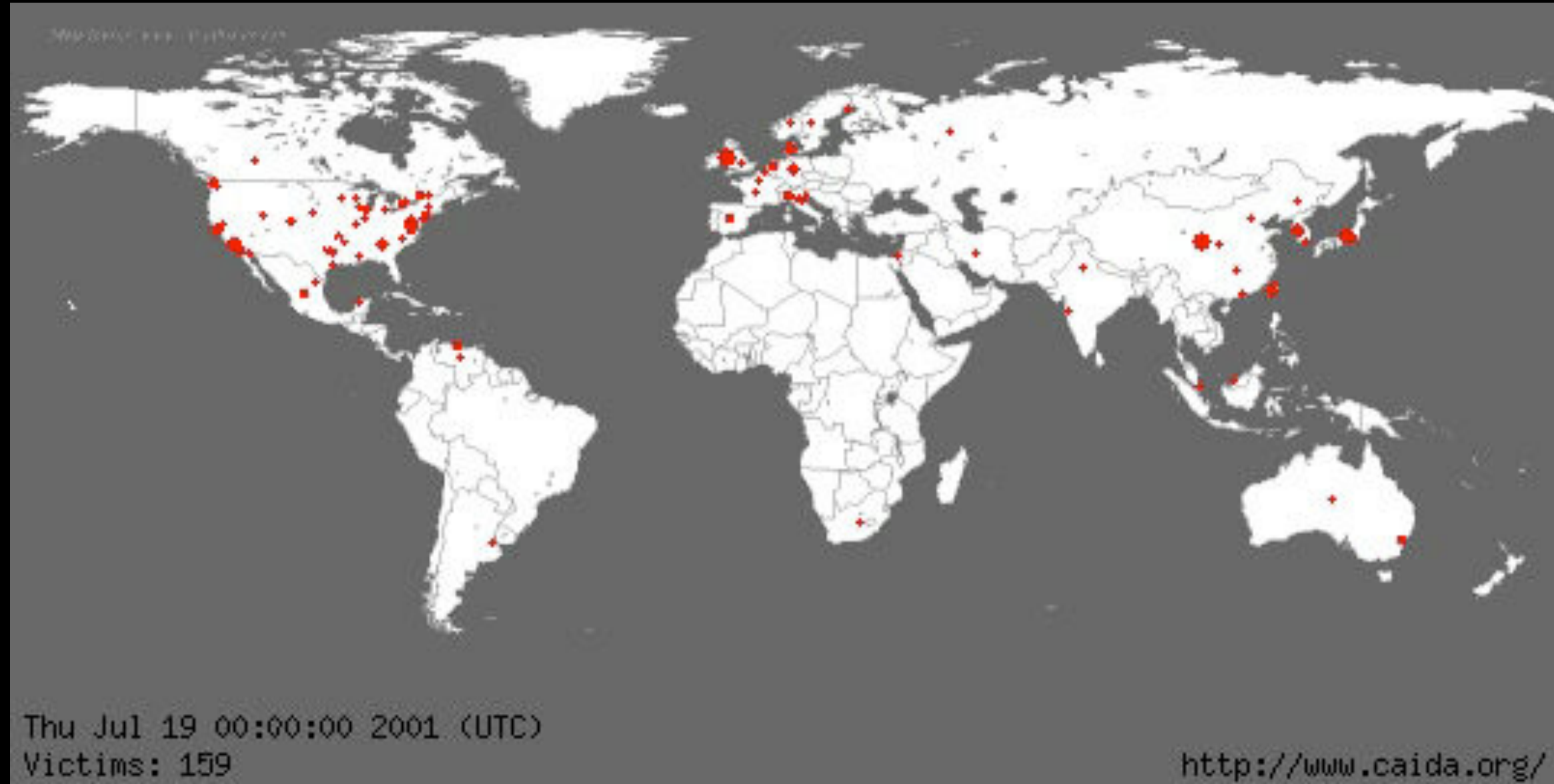PC: "114,000 known viruses for PCs."
Mac: "PCs. But not Macs."

PC: "114,000 known viruses for PCs."
Mac: "PCs. But not Macs."

Worm

Self-replicating

Uses a network to send copies of itself to other computers

Spreads without human intervention

Thu Jul 19 00:00:00 2001 (UTC)
Victims: 159
http://www.caida.org/

July 2001: Code Red worm infects 359,000 Microsoft Web servers

Defaces websites to say "HELLO! Welcome to http://www.worm.com! Hacked By Chinese!"

Thu Jul 19 00:00:00 2001 (UTC)
Victims: 159
http://www.caida.org/
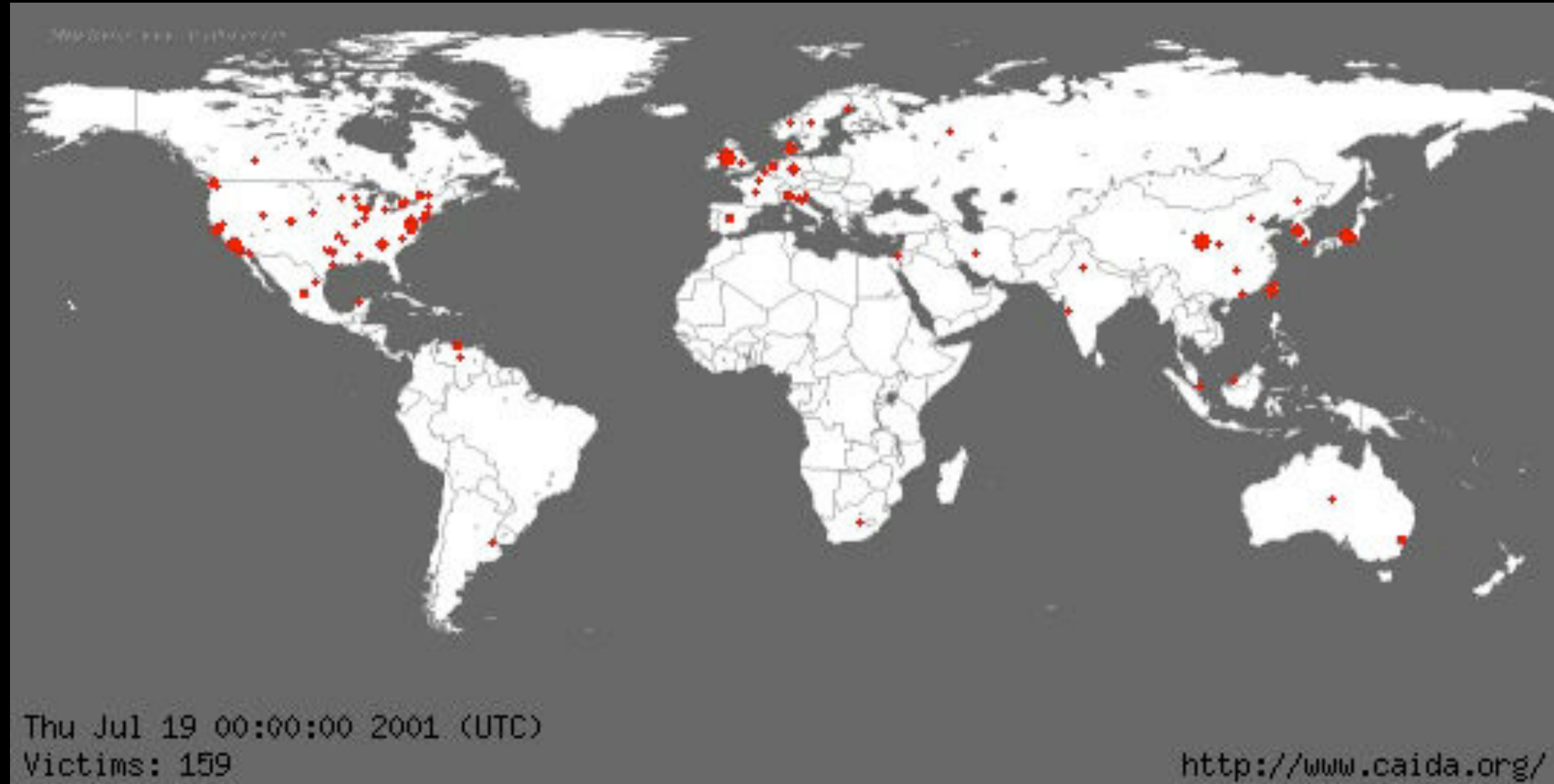
July 2001: Code Red worm infects 359,000 Microsoft Web servers

Defaces websites to say "HELLO! Welcome to http://www.worm.com! Hacked By Chinese!"

Spyware

Gathers information about you & your computer use

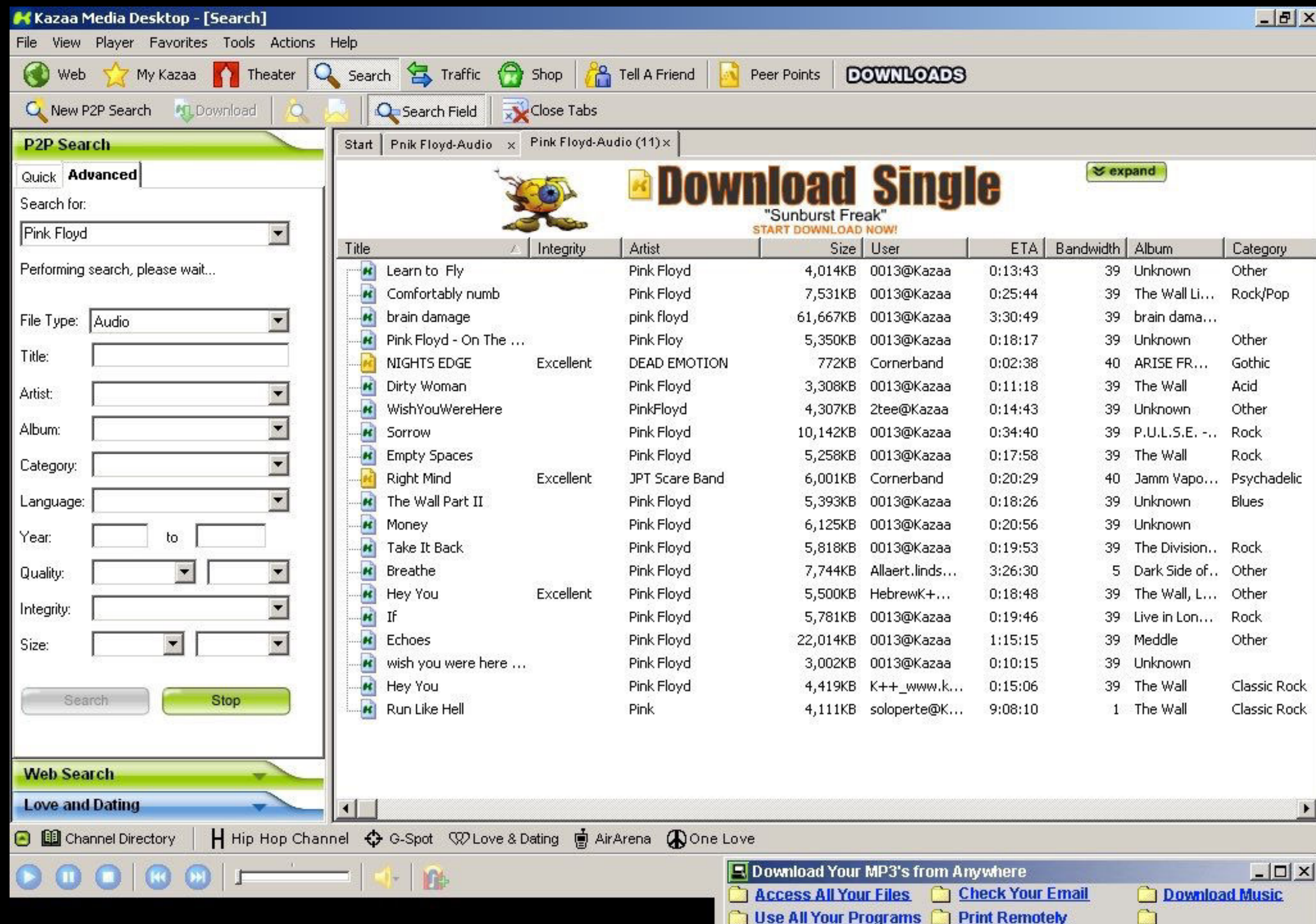Transmits information to an external entity without your knowledge or informed consent

Mac: "I run Mac OS X, so I don't have to worry about your spyware and viruses."

Mac: "I run Mac OS X, so I don't have to worry about your spyware and viruses."

How do you get spyware?

1. You willingly install spyware-laden software
2. Drive-by installs via your Web browser (much rarer nowadays)

KaZaA

9.4 Embedded Third Party Software

9.4.1 Cydoor [is an] advertising delivery program, which may display ... banner ads, e-commerce offers, news headlines and other value-added content...

9.4.2 TopSearch ... regularly downloads an index of available Altnet content ... which can be displayed in your search results...

9.4.3 Bullguard P2P ... guard[s] your computer from virus attacks by quarantining and deleting files downloaded via P2P that may have a virus...

9.4.4 GAIN AdServer ... identifies your interests based on ... your computer usage and uses that information to deliver advertising messages to you...

9.4.5 InstaFinder ... redirect[s] your URL typing errors to InstaFinder...

Trojan Horse

Malicious program that disguises itself as legitimate software

Looks harmless or useful, but hides something harmful (e.g., a rootkit or ransomware)

Troy (2004)

Rootkit

Malware designed to give remote operator full control over a computer

Masks its existence, often by modifying anti-malware software

Very difficult to detect

Malwarebytes Anti-Rootkit BETA v1.01.0.1021

Malwarebytes

Overview

Introduction

Update

Scan System

Cleanup

Scan System:

Scan Progress:

C:\WINDOWS\Fonts\ega80869.fon

Malware Found: **3**

Disk Size: 42949672960 bytes

Sector size: 512 bytes

Scanning physical sectors of unpartitioned space on drive 0 (1-2047-83866080-83886080)...

Sectors 1 - 107 --> [Forged physical sectors]

Done!

Performing system, memory and registry scan...

Infected: c:\Users\Labuser\AppData\Local\Temp\msimg32.dll --> [Rootkit.0Access]

Scan targets:

☑ Drivers   ☑ Sectors   ☑ System

Cancel

⚠ **Warning:** Malware found!

Previous   Next

Only solution is usually to wipe the computer & reinstall everything

Ransomware

CryptoLocker

Your personal files are encrypted!

Your important files **encryption** produced on this computer: photos, videos, documents, etc. Here is a complete list of encrypted files, and you can personally verify this.

Encryption was produced using a **unique** public key RSA-2048 generated for this computer. To decrypt the files you need to obtain the **private key**.

The **single copy** of the private key, which will allow you to decrypt the files, located on a secret server on the Internet; the server will **destroy** the key after a time specified in this window. After that, **nobody and never will be able** to restore files...

To obtain the private key for this computer, which will automatically decrypt files, you need to pay **300 USD / 300 EUR** / similar amount in another currency.

Click «Next» to select the method of payment.

Any attempt to remove or damage this software will lead to the immediate destruction of the private key by server.

Private key will be destroyed on
10/20/2013
12:37 PM

Time left
72 : 34 : 50

Next >>

CryptoLocker

Payment for private key

Bitcoin

- Choose the amount of payment:

  `2 BTC`

- Send coins to the following address:

Attention!

⚠ Make sure that you enter the payment information correctly! Each incorrect attempt will reduce the time to destroy the private key in half!

Are you sure you entered your payment information correctly?

[Yes]   [No]

Time left

43 : 30 : 40

[<< Back]   [PAY]

CryptoLocker

Payment for private key

Private key will be destroyed on
10/13/2013
1:21 PM

Time left

71 : 33 : 17

Choose a convenient payment method and click «Next»:

Bitcoin (most cheap option) ▼

₿bitcoin

Bitcoin is a cryptocurrency where the creation and transfer of bitcoins is based on an open-source cryptographic protocol that is independent of any central authority. Bitcoins can be transferred through a computer or smartphone without an intermediate financial institution.

You have to send **2 BTC** to Bitcoin address ███████████████████ and specify the Transaction ID on the next page, which will be verified and confirmed.

Home Page
Getting started with Bitcoin

<< Back   Next >>

CryptoLocker

Files decryption

Your payment information is activated!

Search and recovery of encrypted files!

-> Decrypting previously encrypted files <-
Scanning all disks for encrypted files

C:\Documents and Settings\Administrator\My Documents\My Pictures\...\P1010459.JPG

Files scanned:	931
Files recovered:	931
Errors:	0

Ransomware

» Malware that restricts access to an infected computer
» Demands that the user pay a ransom to the malware operators via an anonymous payment system (e.g., Bitcoin) so they remove the restriction

YOUR COMPUTER HAS BEEN LOCKED!

This operating system is locked due to the violation of the federal laws of the United States of America! (Article 1, Section 8, Clause 8; Article 202; Article 210 of the Criminal Code of U.S.A. provides for a deprivation of liberty for four to twelve years.)
Following violations were detected:
Your IP address was used to visit websites containing pornography, child pornography, zoophilia and child abuse. Your computer also contains video files with pornographic content, elements of violence and child pornography! Spam-messages with terrorist motives were also sent from your computer.
This computer lock is aimed to stop your illegal activity.

To unlock the computer you are obliged to pay a fine of $200.

You have **72 hours** to pay the fine, otherwise you will be **arrested**.

You must pay the fine through �
To pay the fine, you should enter the digits resulting code, which is located on the back of your ▒▒▒ in the payment form and press OK (if you have several codes, enter them one after the other and press OK).

OK

Cryptoviral extortion

» Ransomware that encrypts files on the system's hard drive
» User must pay ~$300 within ~72 hours
» No ransom means the encryption key is deleted, so files are inaccessible forever

41% of victims choose to pay

Different ransomware operators have made between
$3–27 million

Social Engineering

Social engineering, AKA, people will tell you anything if you sound authoritative

Ask

What's the easiest way to get sensitive information from people?

What's the easiest way to get sensitive information from people?

Just ask

"This is campus IT support. We've had a problem, & we need to reset everyone's passwords on the network. What's your current username? Good. And your current password? OK, thanks. Your new password will be `URGu11ib1e`. Try that in 24 hours after we've fixed the problem."

Mallory posts an ad looking for a nanny

References & full resumé required

Alice responds, sending all info

Mallory never responds to Alice

"Oh well," Alice thinks

Mallory posts an ad looking for a job as a nanny

Look

What's another easy way to get sensitive information from people?

What's another easy way to get sensitive information from people?

Look for it

Bank statements

Paycheck stubs

Personal letters

Applications

Transcripts

Org charts

Contact lists

Memos

Reports

Floppies

CDs

Hard drives

Credit card statements

Garbage cans are a gold mine

The old "password on a sticky" trick

Your network admin gets an anonymous call: people are posting passwords on sticky notes

The word goes out to all employees: take down your sticky notes!

...& the office dumpster now overflows with password-filled scraps of paper

What's a *packet sniffer*?

A program and/or device that captures the data passing through a network

» Where data is coming from
» Where data is going
» What the data is

www.wireshark.org

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: http contains facebook ▼ ➕Expression... 🅰 Clear ✔ Apply

No..	Time	Source	Destination	Protocol	Info
13	6.294614	192.168.1.114	66.220.145.13	HTTP	GET /ajax/intent.php?__a=1&filter=h&pending=true&request_type=1
168	106.564880	192.168.1.114	69.63.176.174	HTTP	GET /x/3806658556/false/p_504568267=3 HTTP/1.1
364	272.187522	192.168.1.114	69.63.176.174	HTTP	GET /x/2004290339/false/p_504568267=3 HTTP/1.1
4334	298.940663	192.168.1.139	66.220.145.35	HTTP	GET /p HTTP/1.1
4336	299.056349	192.168.1.139	66.220.145.35	HTTP	GET /x/1262269691/false/p_1158900097=29 HTTP/1.1
4349	299.223074	192.168.1.139	69.63.189.34	HTTP	GET /ajax/presence/reconnect.php?__a=1&reason=0&iframe_loaded=t
4432	299.514930	192.168.1.139	66.220.145.35	HTTP	GET /x/3366637175/false/p_1158900097=0 HTTP/1.1
4433	299.515794	192.168.1.139	66.220.145.35	HTTP	[TCP Out-Of-Order] GET /x/3366637175/false/p_1158900097=0 HTTP/
4444	299.732803	192.168.1.139	69.63.189.34	HTTP	POST /ajax/chat/buddy_list.php?__a=1 HTTP/1.1 (application/x-w
4760	302.490790	192.168.1.139	69.63.189.34	HTTP	GET /ajax/chat/history.php?__a=1&id=1348823550 HTTP/1.1
5088	305.877586	192.168.1.114	69.63.189.31	HTTP	GET /ajax/intent.php?__a=1&filter=h&pending=true&request_type=1
6639	324.403128	192.168.1.139	77.67.87.122	HTTP	GET /hprofile-ak-sf2p/hs649.snc3/27486_100000479785789_586_q.jp
7053	335.333305	192.168.1.139	77.67.87.122	HTTP	GET /hprofile-ak-sf2p/hs309.ash1/23244_883125579_9824_q.jpg HT

```
     Keep-Alive: 115\r\n
     Connection: keep-alive\r\n
     X-SVN-Rev: 244938\r\n
     Referer: http://www.facebook.com/profile.php?id=504568267&v=wall&story_fbid=118384834861439\r\n
     [truncated] Cookie: __utma=87286159.1316193368.1226010709.1257630126.1257734728.87; datr=1233161259-6735bad27950d744d1218866ad8da792d7b1eb02acc1c4
     \r\n
```

```
01b0  35 39 2d 31 2c 75 74 66  2d 38 3b 71 3d 30 2e 37   59-1,utf -8;q=0.7
01c0  2c 2a 3b 71 3d 30 2e 37  0d 0a 4b 65 65 70 2d 41   ,*;q=0.7 ..Keep-A
01d0  6c 69 76 65 3a 20 31 31  35 0d 0a 43 6f 6e 6e 65   live: 11 5..Conne
01e0  63 74 69 6f 6e 3a 20 6b  65 65 70 2d 61 6c 69 76   ction: k eep-aliv
01f0  65 0d 0a 58 2d 53 56 4e  2d 52 65 76 3a 20 32 34   e..X-SVN -Rev: 24
0200  34 39 33 38 0d 0a 52 65  66 65 72 65 72 3a 20 68   4938..Re ferer: h
0210  74 74 70 3a 2f 2f 77 77  77 2e 66 61 63 65 62 6f   ttp://ww w.facebo
0220  6f 6b 2e 63 6f 6d 2f 70  72 6f 66 69 6c 65 2e 70   ok.com/p rofile.p
0230  68 70 3f 69 64 3d 35 30  34 35 36 38 32 36 37 26   hp?id=50 4568267&
0240  76 3d 77 61 6c 6c 26 73  74 6f 72 79 5f 66 62 69   v=wall&s tory_fbi
0250  64 3d 31 31 38 33 38 34  38 33 34 38 36 31 34 33   d=118384 83486143
0260  39 0d 0a 43 6f 6f 6b 69  65 3a 20 5f 5f 75 74 6d   9..Cooki e: __utm
0270  61 3d 38 37 32 38 36 31  35 39 2e 31 33 31 36 31   a=872861 59.13161
0280  39 33 33 36 38 2e 31 32  32 36 30 31 30 37 30 39   93368.12 26010709
0290  2e 31 32 35 37 36 33 30  31 32 36 2e 31 32 35 37   .1257630 126.1257
```

HTTP Referer (http.referer),... Packets: 52773 Displayed: 133 Marked: 0 Profile: Default

File   Edit   View   Go   Capture   Analyze   Statistics   Telephony   Tools   Help

Filter: http contains facebook ▼ ╋Expression... Clear ✓Apply

No..	Time	Source	Destination	Protocol	Info
13	6.294614	192.168.1.114	66.220.145.13	HTTP	GET /ajax/intent.php?__a=1&filter=h&pending=true&request_type=1
168	106.564880	192.168.1.114	69.63.176.174		e/p_504568267=3 HTTP/1.1
364	272.187522	192.168.1.114	69.63.176.174		e/p_504568267=3 HTTP/1.1
4334	298.940663	192.168.1.139	66.220.145.35		
4336	299.056349	192.168.1.139	66.220.145.35		e/p_1158900097=29 HTTP/1.1
4349	299.223074	192.168.1.139	69.63.189.34		onnect.php?__a=1&reason=0&iframe_loaded=t
4432	299.514930	192.168.1.139	66.220.145.35		e/p_1158900097=0 HTTP/1.1
4433	299.515794	192.168.1.139	66.220.145.35		/x/3366637175/false/p_1158900097=0 HTTP/
4444	299.732803	192.168.1.139	69.63.189.34		list.php?__a=1 HTTP/1.1 (application/x-w
4760	302.490790	192.168.1.139	69.63.189.34		.php?__a=1&id=1348823550 HTTP/1.1
5088	305.877586	192.168.1.114	69.63.189.31		_a=1&filter=h&pending=true&request_type=1
6639	324.403128	192.168.1.139	77.67.87.122		hs649.snc3/27486_100000479785789_586_q.j
7053	335.333305	192.168.1.139	77.67.87.122		hs309.ash1/23244 883125579 9824 q.jpg HT

Context menu:
- Mark Packet (toggle)
- 🕐 Set Time Reference (toggle)
- Apply as Filter ▶
- Prepare a Filter ▶
- Conversation Filter ▶
- Colorize Conversation ▶
- SCTP ▶
- **Follow TCP Stream**
- Follow UDP Stream
- Follow SSL Stream
- Copy ▶
- Decode As...
- Print...
- Show Packet in New Window

```
Keep-Alive: 115\r\n
Connection: keep-alive\r\n
X-SVN-Rev: 244938\r\n
Referer: http://www.facebook.com/profile.php?id=504568267&v=wall&story
[truncated] Cookie: __utma=87286159.1316193368.1226010709.1257630126.1    ad27950d744d1218866ad8da792d7b1eb02acc1c4
\r\n
```

```
0000  00 21 29 c8 71 84 00 1f  5b d0 be 27 08 00 45 00   .!).q... [..'..E.
0010  04 cf 51 22 40 00 40 06  4f 03 c0 a8 01 72 42 dc   ..Q"@.@. O....rB.
0020  91 0d e8 25 00 50 a8 01  8d a8 55 fa 64 2e 80 18   ...%.P.. ..U.d...
0030  ff ff 7b af 00 00 01 01  08 0a 2e 40 90 e4 89 1b   ..{..... ...@....
0040  8d f1 47 45 54 20 2f 61  6a 61 78 2f 69 6e 74 65   ..GET /a jax/inte
0050  6e 74 2e 70 68 70 3f 5f  5f 61 3d 31 26 66 69 6c   nt.php?_ _a=1&fil
0060  74 65 72 3d 68 26 70 65  6e 64 69 6e 67 3d 74 72   ter=h&pe nding=tr
0070  75 65 26 72 65 71 75 65  73 74 5f 74 79 70 65 3d   ue&reque st_type=
0080  31 20 48 54 54 50 2f 31  2e 31 0d 0a 48 6f 73 74   1 HTTP/1 .1..Host
0090  3a 20 77 77 77 2e 66 61  63 65 62 6f 6f 6b 2e 63   : www.fa cebook.c
00a0  6f 6d 0d 0a 55 73 65 72  2d 41 67 65 6e 74 3a 20   om..User -Agent:
00b0  4d 6f 7a 69 6c 6c 61 2f  35 2e 30 20 28 4d 61 63   Mozilla/ 5.0 (Mac
00c0  69 6e 74 6f 73 68 3b 20  55 3b 20 49 6e 74 65 6c   intosh;  U; Intel
00d0  20 4d 61 63 20 4f 53 20  58 20 31 30 2e 35 3b 20    Mac OS  X 10.5;
```

Follow TCP Stream

Stream Content

GET /ajax/intent.php?__a=1&filter=h&pending=true&request_type=1 HTTP/1.1
Host: www.facebook.com
User-Agent: Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10.5; en-US; rv:1.9.2.3) Gecko/20100401 Firefox/3.6.3
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
X-SVN-Rev: 244938
Referer: http://www.facebook.com/profile.php?id=504568267&v=wall&story_fbid=118384834861439
Cookie: __utma=87286159.1316193368.1226010709.1257630126.1257734728.87;
datr=1233161259-6735bad27950d744d1218866ad8da792d7b1eb02acc1c44d0580c; lxe=yunicornechu%40yahoo.com; xs=6937dd979d5f3e2ae4e4ae22912f65c9;
lo=hExjWSXqWGyly5VASXeUeQ; lxr=1; locale=en_US; c_user=504568267; sct=1272591608; sid=3; x-referer=http%3A%2F%2Fwww.facebook.com%2F%3Fref%
3Dlogo%23%2Fprofile.php%3Fid%3D504568267%26v%3Dwall%26story_fbid%3D118384834861439;
presence=DJ273608322G14H0L504568267A3BF273608325110WMblcMsndPBbloMbvtP273590669BctP273604456BsbPBtA_7bQBuctP273608321BsA0QBblADacA29V273608
8222Z284BlcPBcvrADrA0.96BtsP273588495QQQ; cur_max_lag=2; e=n

[12968 bytes missing in capture file]Ys....x.....
m..Z.......ek.-!
J*%.k...........I.....W..!
.,...!D5...d.k.z.x..2.gv!..O.......|."..+.
... S....e.......b..+..M....~B.-......>.6..tEu,..f..K/.._z...2w...a....Q...#6..t..O.$......r.......l..
.......K..w.p..,.......a(........].>

Find   Save As   Print   Entire conversation (10512 bytes)   ○ ASCII ○ EBCDIC ○ Hex Dump ○ C Arrays ● Raw

Help   Filter Out This Stream   Close

X Follow TCP Stream

Stream Content

```
GET /ajax/intent.php?__a=1&filter=h&pending=true&request_type=1 HTTP/1.1
Host: www.facebook.com
User-Agent: Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10.5; en-US; rv:1.9.2.3) Gecko/20100401 Firefox/3.6.3
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
X-SVN-Rev: 244938
Referer: http://www.facebook.com/profile.php?id=504568267&v=wall&story_fbid=118384834861439
Cookie: __utma=87286159.1316193368.1226010709.1257630126.1257734728.87
datr=1233161259-6735bad27950d744d1218866ad8da792d7b1eb02acc1c44d0580c; lxe=yunicornechu%40yahoo.com; xs=6937dd979d5f3e2ae4e4ae22912f65c9;
lo=hExjWSXqWGyly5VASXeUeQ; lxr=1; locale=en_US; c_user=504568267; sct=1272591608; sid=3; x-referer=http%3A%2F%2Fwww.facebook.com%2F%3Fref%
3Dlogo%23%2Fprofile.php%3Fid%3D504568267%26v%3Dwall%26story_fbid%3D118384834861439;
presence=DJ273608322G14H0L504568267A3BF273608325110WMblcMsndPBbloMbvtP273590669BctP273604456BsbPBtA_7bQBuctP273608321BsA0QBblADacA29V27360
8222Z284BlcPBcvrADrA0.96BtsP273588495QQQ; cur_max_lag=2; e=n

[12968 bytes missing in capture file]Ys....x.....
m..Z.......ek.-!
J*%.k.........I.....W..!
.,...!D5...d.k.z.x..2.gv!..0.......|."..+.
... S....e.....b..+..M.....~B.-......>.6..tEu,..f..K/.._z...2w...a.....Q...#6..t..0.$......r.........l..
.......K..w.p..,.......a(.........].>
```

🔍 **F**ind	📄 **S**ave As	🖨 **P**rint

Entire conversation (10512 bytes) ▼   ○ ASCII ○ EBCDIC ○ Hex Dump ○ C Arrays ● Raw

🛟 **H**elp   ☑ Filter Out This Stream   ✖ **C**lose

View Photos of Kathryn (936)
View Videos of Kathryn (3)
Send Kathryn a Message

And when things start to happen, don't worry. Don't stew. Just go right along. You'll start happening too.

Information

Networks:
Washington University in St. Louis '09
Vanderbilt Grad Student '12

Relationship Status:
Married to
Rebecca Estee

Birthday:
November 25, 1986

Current City:
Saint Louis, MO

Friends

464 friends   See All

Kathryn Austin   🔒 Add as Friend

Wall   **Info**

🔒 Kathryn only shares some of her profile information with everyone. If you know Kathryn, send her a message or add her as a friend.

About Me

Basic Info	Sex:	Female
	Birthday:	November 25, 1986
	Siblings:	Jay Austin
	Parents:	Gene Austin
	Relationship Status:	Married to Rebecca Estee
	Anniversary:	August 20, 2005
	Current City:	Saint Louis, Missouri
	Hometown:	Austin, Texas
	Religious Views:	everything and nothing, including but not limited to: DDR

| Bio | There is always a reason to celebrate. |
| Favorite Quotations | How very special are we, for just a moment to be, part of life's eternal rhyme, how very special are we, to have on our family tree, Mother Earth and Father Time. -Charlotte's Web |

Work and Education

Grad School   **Vanderbilt University '12** M.Fd.

Chat (43)
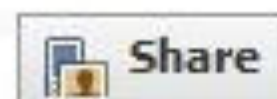
Work and Education

Grad School	**Vanderbilt University '12** M.Ed. Human Development Counseling
College	**Washington University in St. Louis '09**
High School	**Westlake High School '05**

Likes and Interests

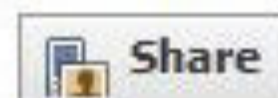|		
Activities	Mentoring, Singing, Geocaching	Mentoring
Interests	Complexity, Simplicity	Complexity
Music	More Fools than Wise, The Bright Light Social Hour, Beastpower	More Fools than Wise
Books	Oh, the Places You'll Go!	Oh, the Places You'll Go!
Television	SpongeBob SquarePants, Degrassi	SpongeBob SquarePants

Show other Pages

Activities	Mentoring, Singing, Geocaching	Mentoring
Interests	Complexity, Simplicity	Complexity
Music	More Fools than Wise, The Bright Light Social Hour, Beastpower	More Fools than Wise
Books	Oh, the Places You'll Go!	Oh, the Places You'll Go!
Television	SpongeBob SquarePants, Degrassi	SpongeBob SquarePants

Contact Information

Contact Info		
	Mobile Number:	5126951475
	Website:	http://fools.wustl.edu
	Facebook Profile:	http://www.facebook.com/austin.kathryn

Firesheep

Appeared October 27, 2010

Firefox extension

Makes *cookie sidejacking* easy

The All-New Kindle: $139

amazon.com Prime

Hello, Ralph S. Granneman. We have recommendations for you. (Not Ralph?)

Ralph's Amazon.com   🎁 Today's Deals   Gifts & Wish Lists   Gift Cards

Your Account | Help

Shop All Departments

Search   All Departments ▾   [   ]   GO   🛒 Cart   Your Lists ▾

Books ▸

Movies, Music & Games ▸

Digital Downloads ▸

Kindle ▸

Computers & Office ▸

Electronics ▸

Home, Garden & Pets ▸

Grocery, Health & Beauty ▸

Toys, Kids & Baby ▸

Clothing, Shoes & Jewelry ▸

Sports & Outdoors ▸

Tools & Home Improvement ▸

Automotive & Industrial ▸

Outfit Your Kindle

Colorful new covers and sleeves. Shop now

Fight the Cold
Visit Our Winter Warm-Up Store
▸ Shop now

Something for Everyone
▸ Shop Gifts & Wish Lists

Great Features, Low Prices
HDTVs under $499
▸ Shop now

amazon
Amazon Windowshop for iPad
Explore and shop like never before
▸ Learn more

Inspired by Your Shopping Trends

Get a Free Gund Bear
For a limited time, when you

Websites

Capture · **Websites** · **Advanced**

Amazon.com
Basecamp
bit.ly
Cisco
CNET
Dropbox
Enom
Evernote
Facebook
Flickr
Foursquare
GitHub
Google
Gowalla
Hacker News
Harvest

Add | Edit | Remove | Import | Export

Websites

Capture · **Websites** · **Advanced**

Foursquare
GitHub
Google
Gowalla
Hacker News
Harvest
Windows Live
New York Times
Pivotal Tracker
ToorCon: San Diego
Slicehost SliceManager
tumblr.com
Twitter
Wordpress
Yahoo
Yelp

Add | Edit | Remove | Import | Export

Google

Google

Advanced Search
Language Tools

Google Search   I'm Feeling Lucky

Find out where to vote today with Google Maps.

Advertising Programs   Business Solutions   About Google

© 2010 - Privacy

Change background image

Google

Google

Hotmail – carlaallen11@hotmai...

Facebook (5)

facebook

Search

Home   Profile   Account ▾

Adam Shriver
Edit My Profile

News Feed

Messages   5,489

Events   111

Friends   586

Responsible Publ...   22

STACS (Student A...

Liberals/Progres...   4

PROGRESSIVES   3

Create Group...

See All

Game Requests   49

Application Requests   48

More   12

You are currently offline. To chat with your friends, go online.

Today is Election Day   What's this? • close

Find your polling place on the U.S. Politics Page and click the "I Voted" button to tell your friends you voted.

07347211
People on Facebook Voted

Thanks for voting!

Amy Graham, Laura Weis, and 712 other friends have voted.

News Feed   Top News • **Most Recent** 300+

Share: Status   Question   Photo   Link   Video

Emily Smith Lecuyer and 16 other friends like a link.

WTF has Obama done so far?
whatthefuckhasobamadonesofar.com

9 hours ago · Share

Stephen Bolen A lot, actually.
9 hours ago 9 7 · Comment · Like

Adam David Scott pardon the address language...still an informative/entertaining site for those okay with strong language.
9 hours ago 3 1 · Comment · Like

Events   See All

What are you planning?

111 event invitations

VOTE to help MedZou Clini...
Happening Now

Random Acts of Kindness
Happening Now

Boycott the Maya Cafe in...
Happening Now

See More ▾

Birthdays: Andy Semler, Brian Hammond, Charles Purnell, Courtney Stirrat, Jenny Vukson, Jeremy Grossberg, Nikki Spencer Show all (9)

Sponsored   Create an Ad

Questions   See All

What h   Chat (Offline)

Google ✕ | Hotmail – carlaallen11@hotmai... ✕ | +

🟦 **Windows Live™**   Hotmail   Messenger   Office   Photos | MSN

Carla Allen ▾

profile | sign out

Hotmail

New   Delete   Junk   Sweep ▾   Mark as ▾   Move to ▾ | 🖨 ⟳

Options ▾   ❓▾

Inbox (16)

Inbox

Search email   🔍

◀ Folders

Show: **All** | Unread | From contacts »

Arrange by ▾

☐	**Brandi Byrd Lamar**	✉	**[sfig] Referral - Arkansas Real Estate Issue**	5:08 PM
☐	**Gregg Larson**	✉	**Re: [sfig] FAM: Wife Ousts Husband from RE Holdi**	5:05 PM
☐	**Shelby_Watson@unigrou**	✉	**Speaker Opportunity**	5:01 PM
☐	**P. Seigfried**	✉	**RE: [sfig] My law practice disappears and I really**	5:01 PM
☐	**Rob Pennell**	✉	**Re: [sfig] *POL* Senators**	5:00 PM
☐	**Charles McCloskey**	✉	**RE: [sfig] New lawyer and new member - book ke**	4:50 PM
☐	**Gaston, Sheree S**	✉	**RE: Oct Deposits**	4:34 PM
☐	**sgardner@gardnerlawfir**	✉	**Re: [sfig] *POL* Senators**	4:24 PM
☐	**Paul Storment**	✉	**Re: [sfig] NLS-Test**	4:23 PM
☐	**Joe DeWoskin**	✉	**[sfig] Structural Engineer or Architect as an exper**	4:18 PM
☐	**Rob Pennell**	✉	**Re: [sfig] *POL* Senators**	3:58 PM
☐	**Rita Holmes-Bobo**	✉	**Re: ROP**	3:57 PM
☐	**Natalie Foster, BarackOb**	✉	**Carla -- how many calls can you make right now?**	3:54 PM
☐ 📎	Kirsten Staples	↩	Election Protection Hotline Reports	3:23 PM
☐ 📎	**Johnson, Mark**	✉	**Karrie Flowers MV Report**	10:23 AM
☐ 📎	**Trina Dyan Clark James**	✉	**Financial reports- November 11, 2010 Jamaa Lean**	8:57 AM
☐	ms.hamilton8@gmail.com	↩	Contract Case	11/01/10
☐	**G S**	✉	**FW: 2010 Homecoming Line Up (Please Forward)**	11/01/10
☐ 📎	M A Lynom	✉	Re: E-Script Donor Transfers	10/28/10

Folders

Junk (405)
Drafts (4)
Sent
Deleted (565)
Adjunct Teaching Mate
Arlington Grove
ARM
B. Willis re Unpaid Invoice
Best Buy
Brenda Joyce Dissolution
Business Expenses (1)
Casino Night
City of Wellston (3)
Client Files
Delta Academy
Delta Dues Confirmation
Discover
DST-SLMAC (4)
FACC Jr. Board (1)
Family Pictures
FTMBC (1)
General (2)
Harris Stowe

🟦 **Windows Live™**

Google · Google · Twitter / Home +

Pssst... the new version of Twitter is here. **Try it now!**

twitter

Home Profile Find People Settings Help Sign out

What's happening?

140

New! Add a location to your tweets. Turn it on – No thanks

Tweet

Latest: 1 less blue dog & 1 less blanche in our government:
http://www.dailykos.com/storyonly/2010/11/2/916298/-Election-
Night-Thread-#9 #upside about 3 hours ago

Home

aschrager 6% points in U.S. Senate race going to 3rd party candidates. Double what usually happens. 2% going to Green, 1% going to Libertarian #covote
3 minutes ago via web
Retweeted by kaymoh114 and 3 others

thereidreport RT @BeachPeanuts Sestak loses. Ugh. / Sestak made it very close. Now PA should get the outsourcing they voted for.
2 minutes ago via Twitterrific
Retweeted by Lehigh389

loriguffey i never thought i'd say this but THANK YOU GEORGE W BUSH for using the executive order with such wild abandon. @BarackObama, take note. #p2
half a minute ago via web

TheKochtopus So we lost #Prop23, big deal. We'll just lobby & buy our way around pollution restrictions like we

stlactivisthub
6,387 tweets

1,090 **1,356** **197**
following followers listed

Who to follow

coreywoodruff
coreywoodruff
Follow

pitchforkmedia
Pitchfork
Follow

view all

Home

@stlactivisthub

Direct Messages 295

Favorites

Retweets

Search

Lists

people

New list · View all

Conclusions

Educate yourself
(& others!)

Don't feel overwhelmed

Thank you!

scott@granneman.com
www.granneman.com
ChainsawOnATireSwing.com
@scottgranneman

Security Vulnerabilities

Heads Up!

Ladue Chapel Presbyterian Church

R. Scott Granneman
Denise Lieberman

1.2

Changelog

2015-10-04 1.2: Added, removed, & changed lots of content
2015-03-25 1.1: Moved to new theme

Licensing of this work

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License.

To view a copy of this license, visit http://creativecommons.org/licenses/by-sa/4.0/.

You are free to:

» *Share* — copy and redistribute the material in any medium or format
» *Adapt* — remix, transform, and build upon the material for any purpose, even commercially

Under the following terms:

Attribution. You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. Give credit to:

Scott Granneman • www.granneman.com • scott@granneman.com

Share Alike. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.

No additional restrictions. You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Questions? Email scott@granneman.com