



M.A.C.E.

**Macomb Area
Computer Enforcement
Task Force**

Internet Safety Presentation

Reserve Deputy Keith Thome



Agenda

- **Your Data**
- **Social Engineering**
- **Identity Theft**
 - **Equifax Data Breach**
- **Email Scams**
- **Using Secure Websites**
- **2017 Threats**
- **What MACE Is Doing to Help**



Your Data





Your Data

Personal data is **VALUEABLE!!**

"I don't have anything anyone would be interested in...."

Your Information

- Assume identities
- Purchase goods
- Hide activity



Your Computer

- Launch cyber attacks
- Send spam
- Spread malicious code

Personally Identifiable Information (PII)

Name

Address

SSN#

Email address

Social Networking Accounts/Passwords

Family Information

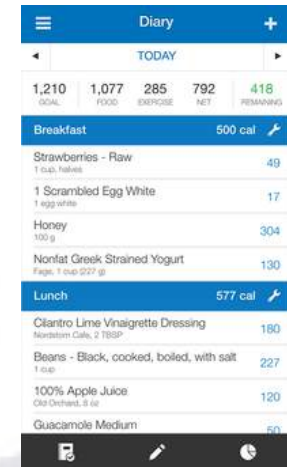
Medical Information

Financial Information



We Are Data Generators

- Tracking Apps
 - MyFitnessPal
 - MapMyRun
 - Games
- Wearable Devices
 - Fitbit
 - Apple Watch
- Social Media



	DIGAL	FOOD	EXPENSE	NET	REMAINING
Breakfast					500 cal
Strawberries - Raw					49
1 cup, Yell...					
1 Scrambled Egg White					17
1 eggwhite					
Honey					304
100 g					
Nonfat Greek Strained Yogurt					130
1 cup, 2% ...					
Lunch					577 cal
Cilantro Lime Vinaigrette Dressing					180
Meddium C...					
Beans - Black, cooked, boiled, with salt					227
1 cup					
100% Apple Juice					120
Old Orchard, 5 oz					
Guacamole Medium					50



Your Data

Changes in How We View Data Privacy

2001:

- Don't talk to strangers on the internet.

2017:

- Share everything with strangers on the internet.
- Meet them in real life.
- Get in their car and let them drive you around.
- Marry them even.



The Problem with Data

- Data is Pervasive
- Data is Portable
- Data is Durable
- Data is Complex
- Data is largely unmanaged
- Data is VALUABLE

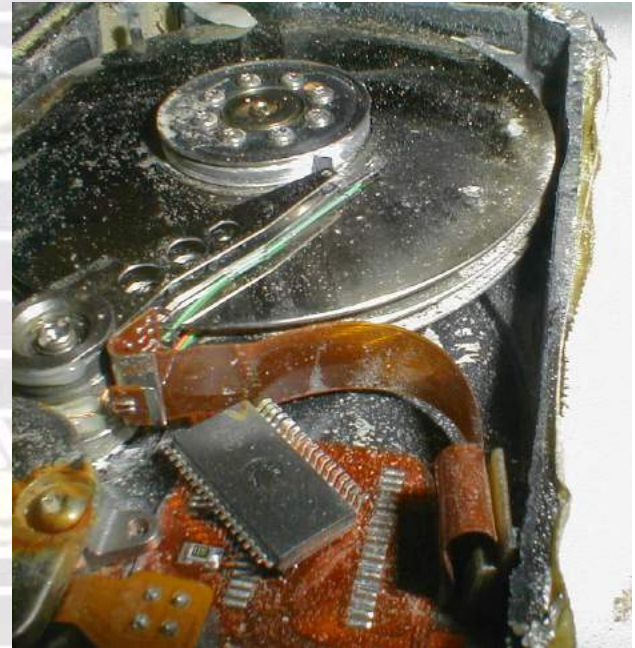
Company	First Name	Last Name	E-mail Address	Business Phone	Job Title
Company H	Elizabeth	Andersen		(123)555-0100	Purchasing Repres
Company R	Catherine	Autier Miconi		(123)555-0100	Purchasing Repres
Company C	Thomas	Axen		(123)555-0100	Purchasing Repres
Company Q	Jean Philippe	Bagel		(123)555-0100	Owner
Company A	Anna	Bedecs		(123)555-0100	Owner
Company L	John	Edwards		(123)555-0100	Purchasing Manage
Company S	Alexander	Eggerer		(123)555-0100	Accounting Assista
Company W	Michael	Entin		(123)555-0100	Purchasing Manage
Company P	Daniel	Goldschmidt		(123)555-0100	Purchasing Repres
Company B	Antonio	Gratacos Solsona		(123)555-0100	Owner
Company N	Carlos	Grilo		(123)555-0100	Purchasing Repres
Company X	Jonas	Hasselberg		(123)555-0100	Owner
Company K	Peter	Krschne		(123)555-0100	Purchasing Manage
Company O	Helena	Kupkova		(123)555-0100	Purchasing Manage
Company D	Christina	Lee		(123)555-0100	Purchasing Manage
Company CC	Soo Jung	Lee		(123)555-0100	Purchasing Manage
Company T	George	Li		(123)555-0100	Purchasing Manage
Company Z	Run	Liu		(123)555-0100	Accounting Assista
Company M	Andre	Ludick		(123)555-0100	Purchasing Repres
Company I	Sven	Mortensen		(123)555-0100	Purchasing Manage
Company E	Martin	O'Donnell		(123)555-0100	Owner
Company F	Francisco	Pérez-Olaeta		(123)555-0100	Purchasing Manage
Company BB	Amritansh	Raghav		(123)555-0100	Purchasing Manage
Company V	Luciana	Ramos		(123)555-0100	Purchasing Assista
Company Y	John	Rodman		(123)555-0100	Purchasing Manage
Company U	Bernard	Tham		(123)555-0100	Accounting Manage
Company AA	Karen	Toh		(123)555-0100	Purchasing Manage
Company J	Roland	Wacker		(123)555-0100	Purchasing Manage
Company G	Ming-Yang	Xie		(123)555-0100	Owner



How durable/pervasive is data?

"When we got it, it was two hunks of metal stuck together. We couldn't even tell it was a hard drive. It was burned and the edges were melted....."

Jon Edwards has extracted the contents of a hard drive that was on-board the doomed Space Shuttle Columbia in 2003, meaning that it survived the disintegration of the shuttle while it was 39 miles above the surface of the earth and traveling 12,000 miles an hour."



Your Data

Multiple Copies / Multiple Locations

- Facebook
 - 3 Data Centers Worldwide
- Microsoft
 - 2 Data Centers Worldwide
 - 100,000 Servers
- Amazon
 - 7 Data Centers Worldwide
 - 450,000 Servers
- Google
 - 13 Data Centers
 - 900,000 Servers





Your Data

Your data is largely unmanaged

- Your data exists on servers you cannot control
- When your data is deleted, it is not actually removed
- Your data resides on servers that are largely insecure
- **The #1 source of data theft is via insecure websites!!!!**

Table	Action	Records	Type	Collation	Size	Overhead	
columns_priv		29	MyISAM	utf8_bin	30.9 KLB	-	
db		1	MyISAM	utf8_bin	6.4 KLB	-	
event		0	MyISAM	utf8_general_ci	2.0 KLB	-	
func		0	MyISAM	utf8_bin	1.0 KLB	-	
general_log		0	CSV	utf8_general_ci	unknown	-	
help_category		37	MyISAM	utf8_general_ci	24.0 KLB	-	
help_keyword		425	MyISAM	utf8_general_ci	97.8 KLB	-	
help_relation		304	MyISAM	utf8_general_ci	23.9 KLB	-	
help_topic		479	MyISAM	utf8_general_ci	369.6 KLB	-	
host		0	MyISAM	utf8_bin	2.0 KLB	-	
ndb_binlog_index		0	MyISAM	latin1_swedish_ci	1.0 KLB	-	
plugin		0	MyISAM	utf8_bin	1.0 KLB	-	
proc		6	MyISAM	utf8_general_ci	12.1 KLB	-	
procs_priv		0	MyISAM	utf8_bin	4.0 KLB	-	
servers		0	MyISAM	utf8_general_ci	1.0 KLB	-	
slow_log		0	CSV	utf8_general_ci	unknown	-	
tables_priv		4	MyISAM	utf8_bin	11.3 KLB	-	
time_zone		0	MyISAM	utf8_general_ci	1.0 KLB	-	
time_zone_leap_second		0	MyISAM	utf8_general_ci	1.0 KLB	-	
time_zone_name		0	MyISAM	utf8_general_ci	1.0 KLB	-	
time_zone_transition		0	MyISAM	utf8_general_ci	1.0 KLB	-	
time_zone_transition_type		0	MyISAM	utf8_general_ci	1.0 KLB	-	
user		6	MyISAM	utf8_bin	2.4 KLB	-	
23 table(s)		Sum	1,891	MyISAM	latin1_swedish_ci	594.6 KLB	0 B

EQUIFAX®



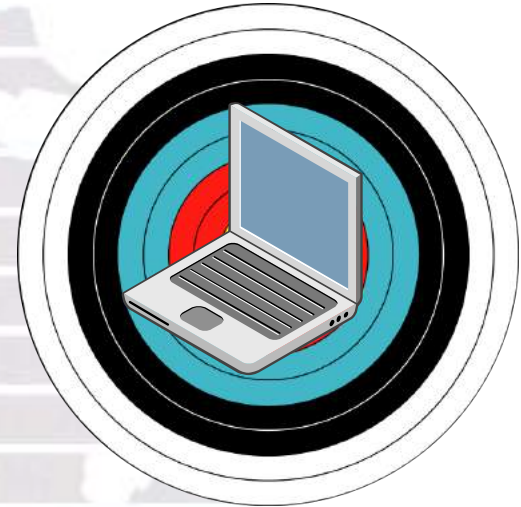
Your Data

- Nothing is free.
- Information is an asset.
- It is very easy to figure out your personal information based on what you reveal.
- You leave a "digital wake" with everything you post online; it may never go away.
- Computers, smartphones, video game console etc. are NOT televisions.



How To Be A Target

- Too much data offered to websites voluntarily
- Unpatched operating system or software
- Going to questionable websites or clicking links in unsolicited email
- Not running **UPDATED** security software
- Disposing of old storage drives improperly
- Not using a router or hardware firewall with a broadband (Cable/DSL) connection
- Using P2P to obtain “pirated” software, movies or songs
- Unsecured Wireless Access Points



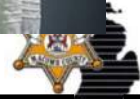
Social Engineering





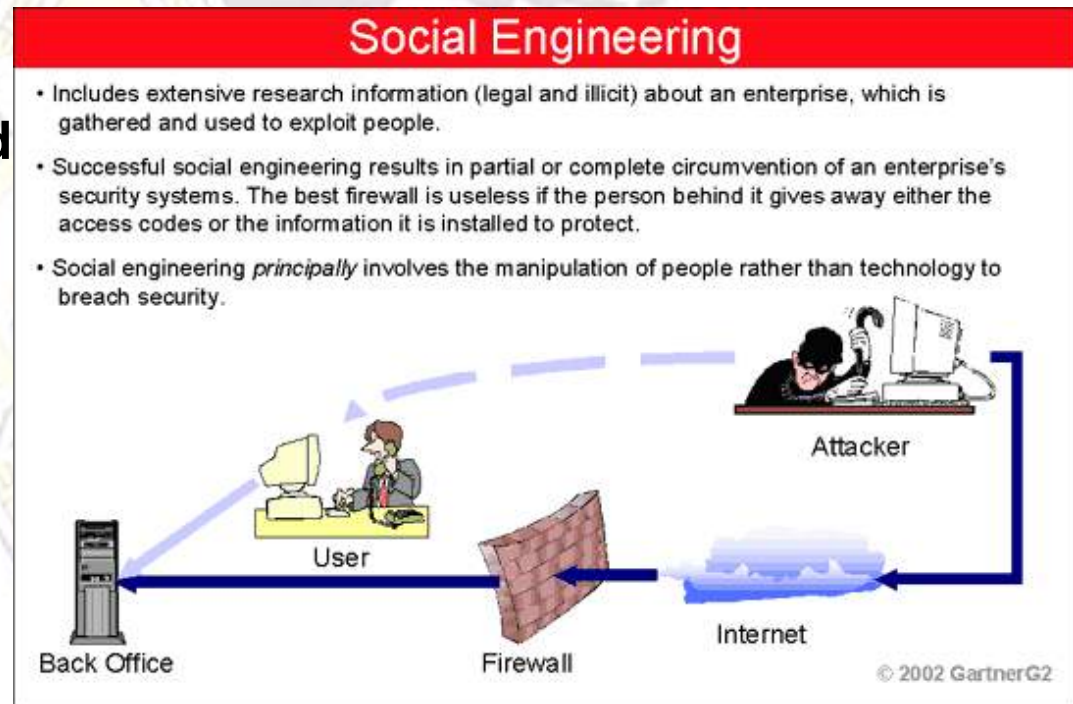
Social Engineering

- Exploits the human trait of trust and willingness to help.
- Lack of awareness makes this a efficient avenue.
- A “Con-Game” x1000
- Physical interaction is just as likely as email, phone calls, etc.
- Situational
 - Takes advantage of uncertainty
- Appeal based
 - Appeal to Fear
 - Appeal to Vanity
 - Appeal to Greed
 - Appeal to Morality



Social Engineering

In most cases, the easiest and most effective way to steal your data is simply making a phone call and “asking” for it.



Identity Theft



Identity Theft

- In public places, for example, criminals may engage in "shoulder surfing"
- Gaining information through Dumpster Diving is very lucrative
- The easiest way is via online exploits (phishing, spyware, etc.)



Information = \$\$



Identity Theft

- Use a shredder to destroy PII documents
- Avoid giving information to people you don't know
- Avoid clicking unsolicited links that have been sent to you
- Use a layered security solution (AntiVirus, Firewall, IPS)
- Know what you are clicking on
- When checking out at stores, cover credit card numbers and CV codes





Identity Theft

What Happened?

- July 2017 over 143 million individuals personal information was exposed:
 - Names
 - Social Security numbers
 - Birth Dates
 - Some Driver's License Numbers Credit Card Numbers
 - "certain dispute documents with personal identifying information for approximately 182,000 U.S. consumers."
- Still under investigation
- Largest Data Breach in U.S. History



Source: Krebs on Security

<https://krebsonsecurity.com/2017/09/the-equifax-breach-what-you-should-know/>





Identity Theft

What You Can Do About It

- Check their site to see if you are affected (it is safe to assume that YOU are!)
 - <https://www.equifaxsecurity2017.com/>
- Check your credit reports from Equifax, Experian, and TransUnion
 - <https://annualcreditreport.com>
- Put a freeze on your credit account with:
 - Equifax — 1-800-349-9960
 - Experian — 1-888-397-3742
 - TransUnion — 1-888-909-8872
- File your 2017 taxes as early as possible
- Monitor your existing credit card and bank accounts closely
 - Consider implementing Fraud Alerts with your banks and credit card providers



Source: Federal Trade Commission

<https://www.consumer.ftc.gov/blog/2017/09/equifax-data-breach-what-do>



Social Media





Social Media

A few things to keep in mind:

- **Social networking sites like Facebook DO NOT have any obligation to protect your privacy**
- **The images you post may have location information attached**
- **Many employers, colleges, schools, organizations, etc., run online background checks to view your online presence**
- **Deleting your account does NOT mean your account is deleted**





Social Media

Easily Determined Security Questions

Security Questions And Answers

Please select three different questions and enter an answer for each.

Security Question:

What is the first name of the best man at your wedding?

Security Answer:

Security Question:

In what city is your vacation home?

Security Answer:

Security Question:

Where did you meet your spouse for the first time?

Security Answer:

Current Password

For Security reasons, please provide your current password to confirm your identity.

Current Password:

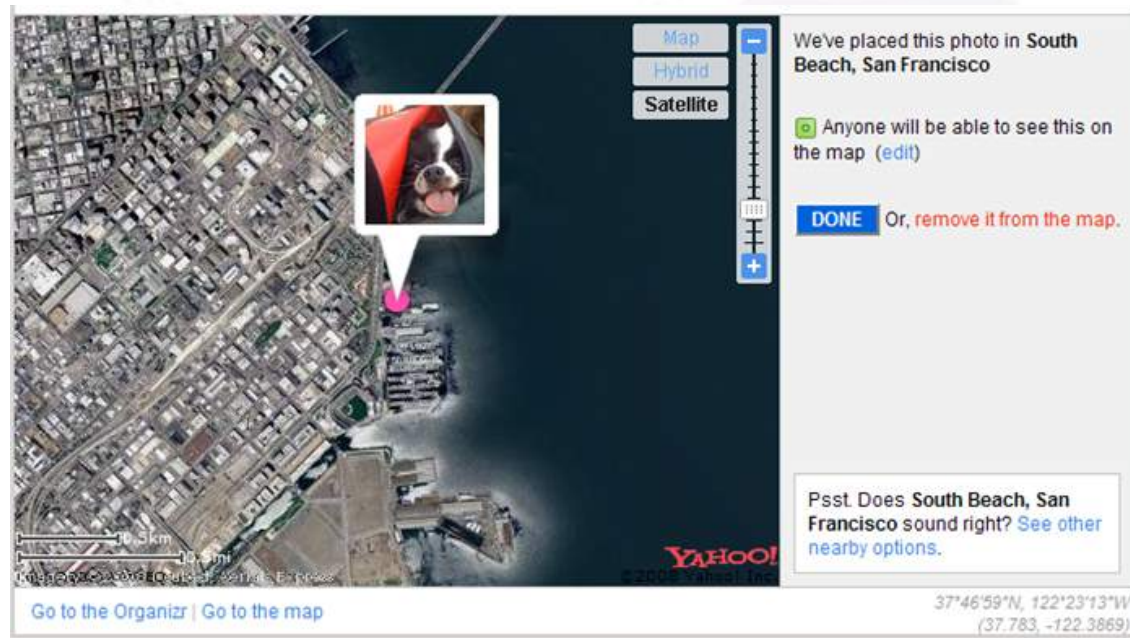
CANCEL

NEXT



Social Media

➤ Info and Photos you put on the internet will be probably be out there forever. Is this data useful to a crook?



Map
Hybrid
Satellite

We've placed this photo in South Beach, San Francisco

Anyone will be able to see this on the map ([edit](#))

DONE Or, [remove it from the map.](#)

Psst Does South Beach, San Francisco sound right? [See other nearby options.](#)

37°46'59"N, 122°23'13"W
(37.783, -122.3869)

Go to the Organizr | Go to the map





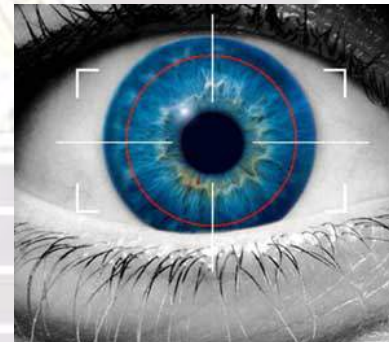
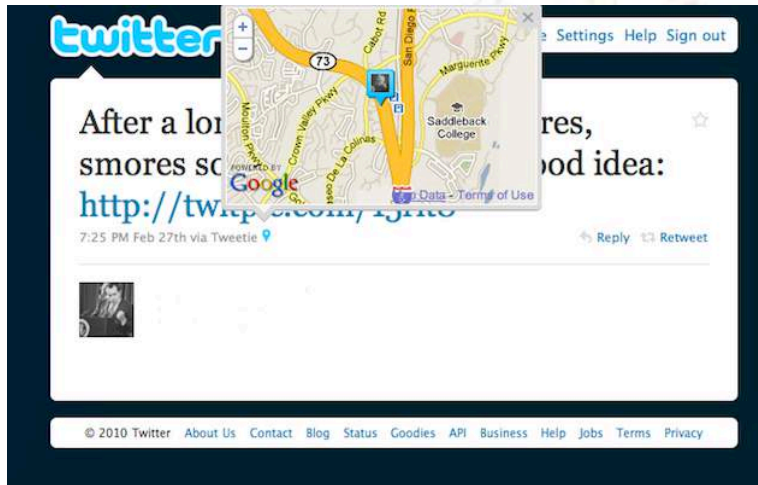
Social Media

Sharing on Facebook

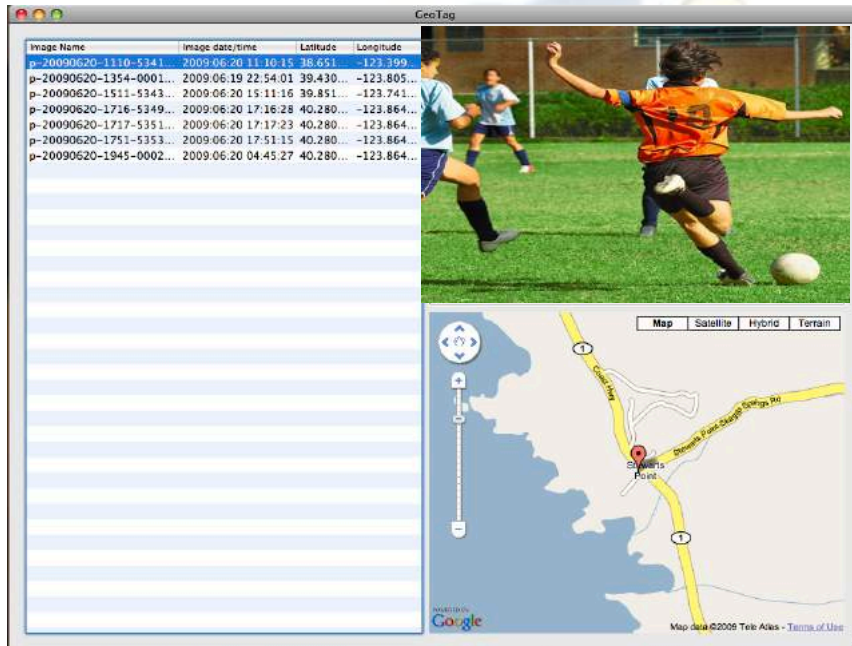
Everyone	Everyone
Friends of friends	My status, photos, and posts
Friends only	Bio and favorite quotations
Recommended	Family and relationships
Custom ✓	Photos and videos I'm tagged in
	Religious and political views
	Birthday
	Can comment on posts
	Places I check in to [?]
	Contact information
	Customise settings

Normally having a device keep track and report on your movements would be seen as an invasion of privacy. So would be inviting strangers to ask you about “anything.”

The Internet and the pursuit of fame has changed this thinking.



Social Media



Another consideration is **GEOTAGGING**. This feature is fast becoming enabled by default on cameras, cellphones and smartphones.



Social Media

Hey Criminals!!!
We're Not
Home!!!




Email Scams





Email Scams



Alert! Your Online Account Has Been Limited 

ChaseOnline to you - May 20 [More Details](#)

CHASE 

Dear Customer,

Your Online Account Has Been Limited.

Verify Your Online Account Today, Please click the "Log In" link below to verify your Chase Bank Online Account. Please click to visit our website below and enter the correct information.

[Log In](#)

JPMorgan Chase & Co.


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Email Scams



Account Notification! 

Bank Of America to you - Nov 4 2011 [More Details](#)

Bank of America 

Dear Valued Member,

We were unable to process your most recent payment. Did you recently change your bank, phone number or credit card?

To ensure that your service is not interrupted, please update your billing information today by clicking [Update Your Account Information](#). We're available 24 hours a day, 7 days a week.

Sincerely,

BankOfAmerica Security Department.





Email Scams



Wrong delivery address

USPS to you - Apr 10 [More Details](#)

Label_Parcel_USPS_13-114.zip

Notification,

Courier service couldn't make the delivery of your parcel.
Status deny/lt. not right specified size and the weight of parcel.

LOCATION:Huntsville
STATUS OF YOUR ITEM: sorting
SERVICE: Expedited Shipping
NUMBER OF YOUR ITEM:U571864131NU
FEATURES: No

The label of your parcel is enclosed to the letter.
Print a label and show it at your post office.

Attention!
If the parcel isn't received within 30 working days our company will h
each day of keeping over limited time.

You can find the information about the procedure and conditions of parce

Thank you for using our services.
USPS Global Services.





Email Scams



IMPORTANT ACCOUNT INFORMATION FROM VERIZON WIRELESS.

Your current bill for your account is now available online in My Verizon

Total Balance Due: \$1599.48

Keep in account amount

http://shutup poker.com/ndkyqlfz/index.html
Click to follow link

> [View and Pay Your Bill](#)

Want to simplify payments?

> [Enroll in Auto Pay](#)

Thank you for choosing Verizon Wireless.



My Verizon is also available 24/7 to assist you with:

- Viewing your usage
- Updating your plan
- Adding Account Members
- Paying your bill
- Finding accessories for your devices
- And much, much more...

AMERICA'S LARGEST AND MOST RELIABLE HIGH SPEED WIRELESS NETWORK.



Using Secure Web-Sites





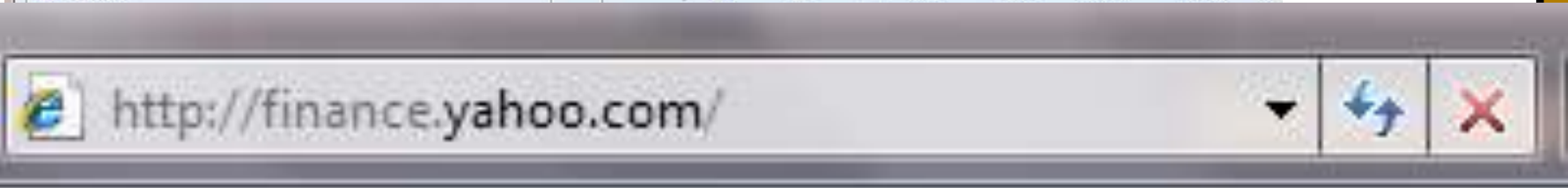
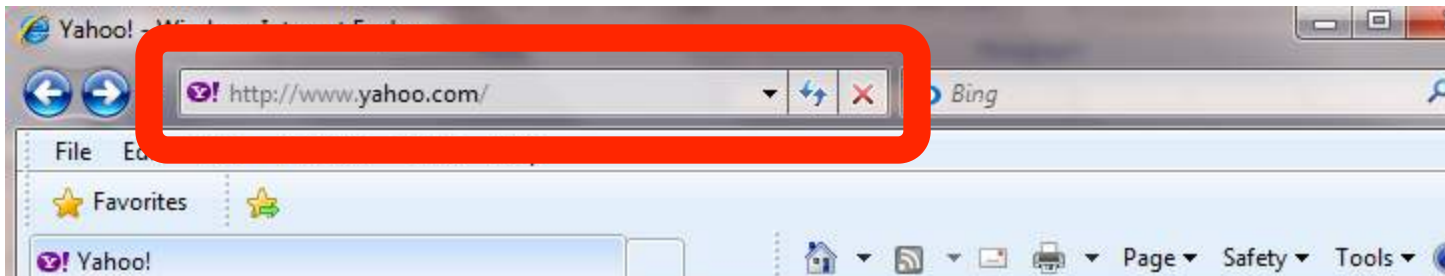
Using Secure Web-Sites

**How do you know if the
Web-Site you are using is
Safe?**





Using Secure Web-Sites



Wednesday, July 4, 2012

YAHOO! SITES

- Autos
- Dating
- Finance (Dow ↑)
- Flickr
- Games
- Horoscopes
- Jobs
- Mail
- Messenger

NOT SECURE

Chill drinks faster than the freezer

A trick that uses salt water will get beverages frosty in just eight minutes.

No bottle opener? No problem >>

- How to load a dishwasher
- Wacky kitchen gadgets
- Update kitchen for less

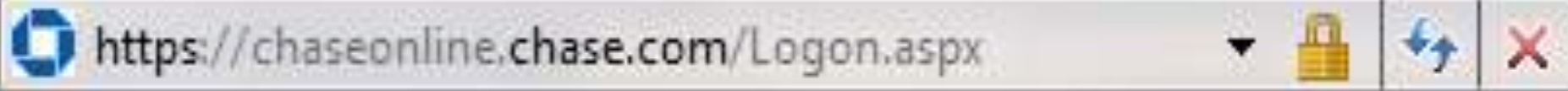
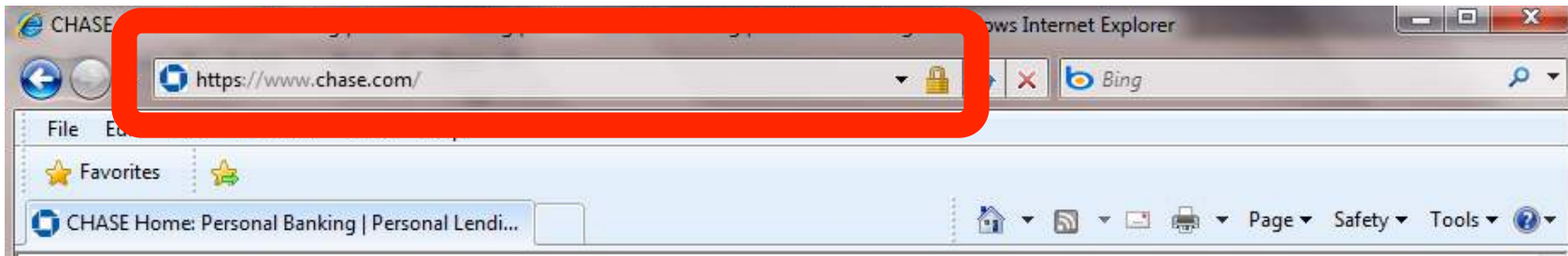
TRENDING NOW

- 01 Melanie Griffi
- 02 Cat lady suic
- 03 Bristol Palin
- 04 Alan Poindex
- 05 Health care f





Using Secure Web-Sites



THIS IS SECURE

New to Chase OnlineSM?
[Set Up Online Access](#)

Returning Users: Log On

User ID:

Password:

Remember my User ID
[Forgot User ID/Password?](#)

[Log On](#)

REFINANCE & SAVE
by possibly lowering your car loan rate

[GET DETAILS >](#)

Personal Banking

- ▶ Savings and CDs
- ▶ Debit Cards
- ▶ Gift Cards
- ▶ Student Center
- ▶ Online & Mobile Banking

Personal Lending

- ▶ Auto Loans
- ▶ Home Equity Loans
- ▶ Mortgage
- ▶ Refinance
- ▶ Student Loans

Business

- ▶ Commercial Banking Revenues over \$20MM
- ▶ Business Credit Cards
- ▶ Merchant Services

Retirement & Investing

- ▶ Annuities & Insurance
- ▶ Investing
- ▶ Retirement Planning

Chase Private Client

▶ It's Time We MetSM

Tell me about...

- ▶ Chase Debit Card CoverageSM for your checking account

News & Announcements

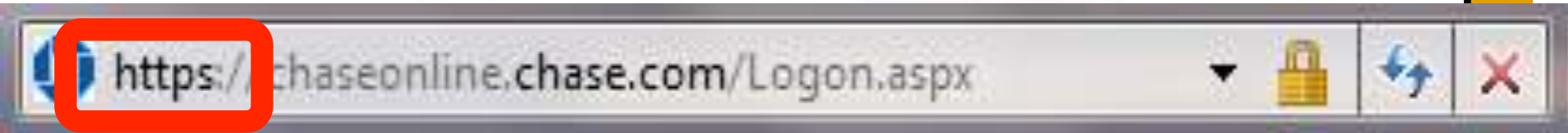
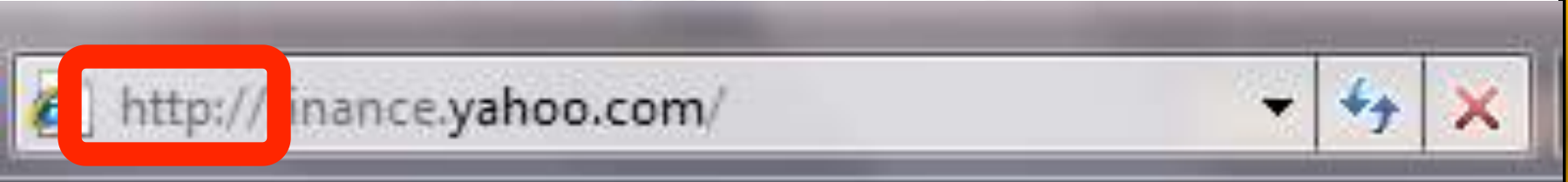
- ▶ **MAKING CHECKING EASIER TO UNDERSTAND**
We're making fees and other terms easier to understand.
- ▶ [ChaseMilitary.com](#)
Committed to going the extra mile for our servicemembers and their families.

SUPPORTING AMERICA'S MILITARY
We've hired over 3,000 veterans





Using Secure Web-Sites

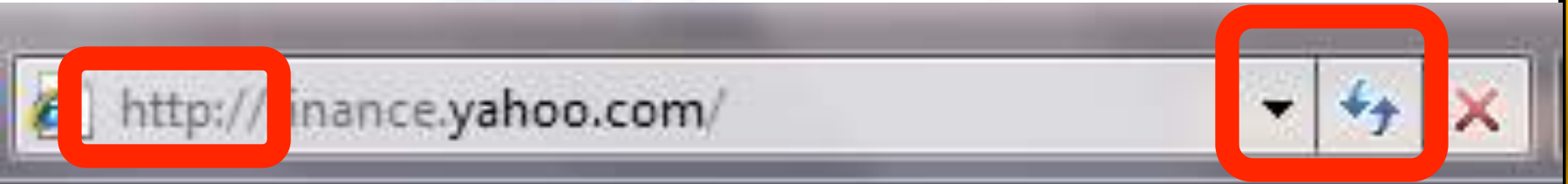


S = Secure





Using Secure Web-Sites



S = Secure

Lock = Secure





2017 Threats





2017 Threats

Emerging Trends & Changes

- **Increased Credit and Debit Card Theft via Insecure Websites**
- **Increased Phone/Email Scams (IRS, Health Insurance, Hurricane Relief, Equifax Breach Protection)**
- **Increased Craigslist Fraud**
- **Attempts to remote control your computer pretending to be Microsoft**
- **Uptick in attacks via Accommodation and Financial Services websites**
- **Increased Large Scale Breaches (Health Insurers, Colleges, Equifax)**





2017 Threats

Emerging Trends & Changes

Crimeware	Cyber-espionage	Denial of Service	Everything Else	Stolen Assets	Misc. Errors	Card Skimmers	Point of Sale	Privilege Misuse	Web Apps
			1%	<1%	1%	<1%	95%	1%	1%
	7%		17%	17%	27%			3%	30%
				3%			47%		50%
1%	<1%	<1%	2%	<1%	2%	9%		4%	82%
3%	3%		11%	19%	22%		7%	32%	3%
1%	3%		4%		25%		1%	11%	57%
3%	47%		3%				3%	24%	21%
4%	19%		25%	4%	15%			21%	13%
12%	16%		4%	9%	37%			13%	9%
1%	1%		4%		1%	3%	64%	2%	26%

Incident patterns by industry
minimum 25 incidents (only confirmed data breaches)

Accommodation (72), n=282

Educational (61), n=29

Entertainment (71), n=38

Finance (52), n=795

Healthcare (62), n=115

Information (51), n=194

Manufacturing (31-33), n=37

Professional (54), n=53

Public (92), n=193

Retail (44-45), n=182

Source: 2016 Verizon Threat Report

http://www.verizonenterprise.com/resources/reports/rp_DBIR_2016_Report_en_xq.pdf





2017 Threats

Protect Yourself

- Routine review of credit card and bank statements
- Annual review of credit report (<https://www.annualcreditreport.com/>)
- Monthly review of privacy settings on social media
- Never reveal credit card or Personally Identifiable Information (PII) or financial information over the phone
- Implement 2-Factor Authentication where possible.
- Keep your systems updated (OS, Antivirus, Firewalls)
- Backup your data and store a copy with a trusted relative or safe deposit box
- Dispose of computers and devices properly
- Use only secured wireless connections (preferably WPA2)





What MACE Is Doing to Help

Deputies are continuously receiving updated training and have a true passion for what they do.

Providing continuous education to all citizens and organizations in Macomb County free of charge. Over 70 presentations were given in 2013.

Actively pursuing and prosecuting Cyberbullying and other Cybercrime cases. Arrested over 45 subjects and served over 160 search warrants in 2013.

Have a close working relationship with the FBI and Macomb County Prosecutors Office.





Contact Information/Questions

Report an incident:

Macomb County Sheriff's Office

Macomb Area Computer Enforcement (MACE)

(586)416-1225

Additional questions/follow-up regarding this presentation:

Reserve Deputy Keith Thome

kthome@mcsdmace.com

Web site:

<http://www.macombsheriff.com>

Under the 'Law Enforcement - Special Units' tab.

Presentation Link:

