



CHECK IN WITHOUT CHECKING IN

January 25, 2012
Anaheim, California
Sponsored by Stroz Friedberg
Moderator:
Kris Ashman
Panelists:
Jason Smolanoff
Camilla Eng





E-Discovery

You are have just received the first set of interrogatories and requests for production in a complex case, and, after speaking with your client, it is apparent that the production will include a large number of e-mails and other electronically stored documents, including the records of certain in-house counsel and others with whom they have communicated regularly.







Potential Pitfalls

- With every demand for electronically stored information (ESI) comes an exponentially increasing volume of data to be reviewed for both relevance and privilege.
- With the increasing volume comes an increasing likelihood that privileged information will be inadvertently disclosed to the other side, and that means, in some jurisdictions, the privilege will be waived.







Inadvertent Waiver

■ Even in those jurisdictions that do not follow the strict liability approach to privilege waiver, your actions in managing the production and remedying the error will factor into the court's decision about whether you (or, more accurately, your client) has waived the privilege, and what the scope of that waiver will be.







Do Hansel and Gretel need an attorney?

How your digital breadcrumbs can lead a hacker to you







Presentation Overview

- What are digital breadcrumbs?
- Online Reconnaissance Techniques
- Exploitation Methodologies Phishing













"Digital Breadcrumb" Sources































Overt Indicators







Social Engineering





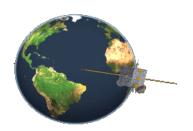


Covert Indicators

METADATA

"data providing information about one or more aspects of the data"













Online Reconnaissance

Online Reconnaissance

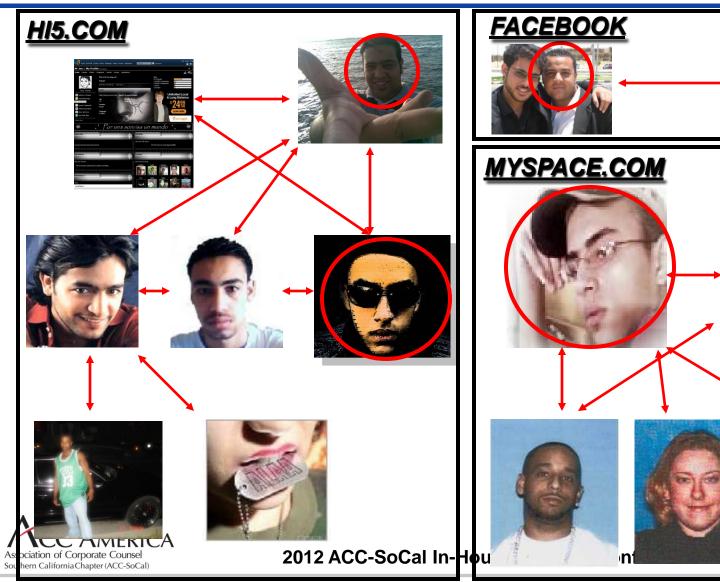
- To discover and gather relevant information about a particular person, organization, or online entity
- Legitimate activity
- Criminal activity







Social Networking Data Mining









Maltego

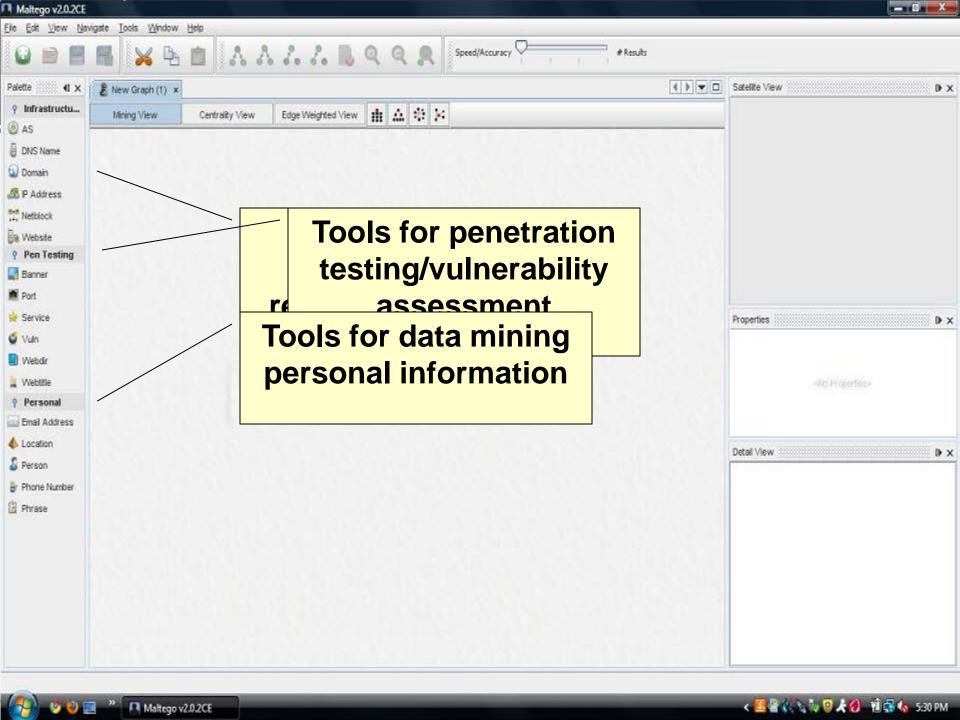


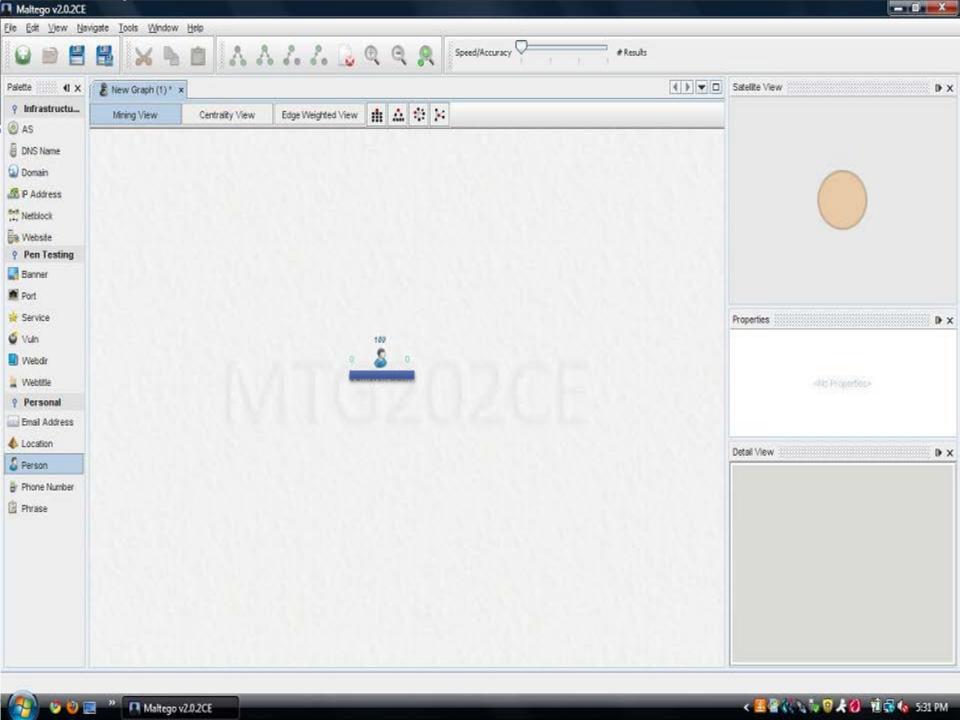


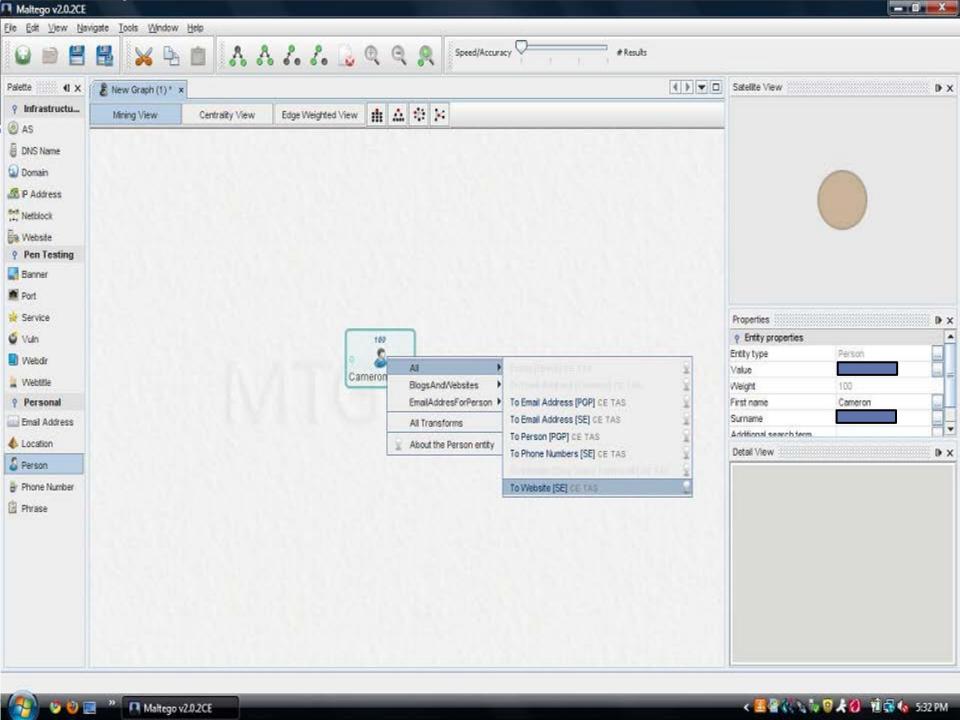
- Maltego is an open source intelligence and forensics application.
 - It allows for the mining and gathering of information as well as the representation of this information in a meaningful way.
 - Allows you to identify key relationships between information and identify previously unknown relationships between them

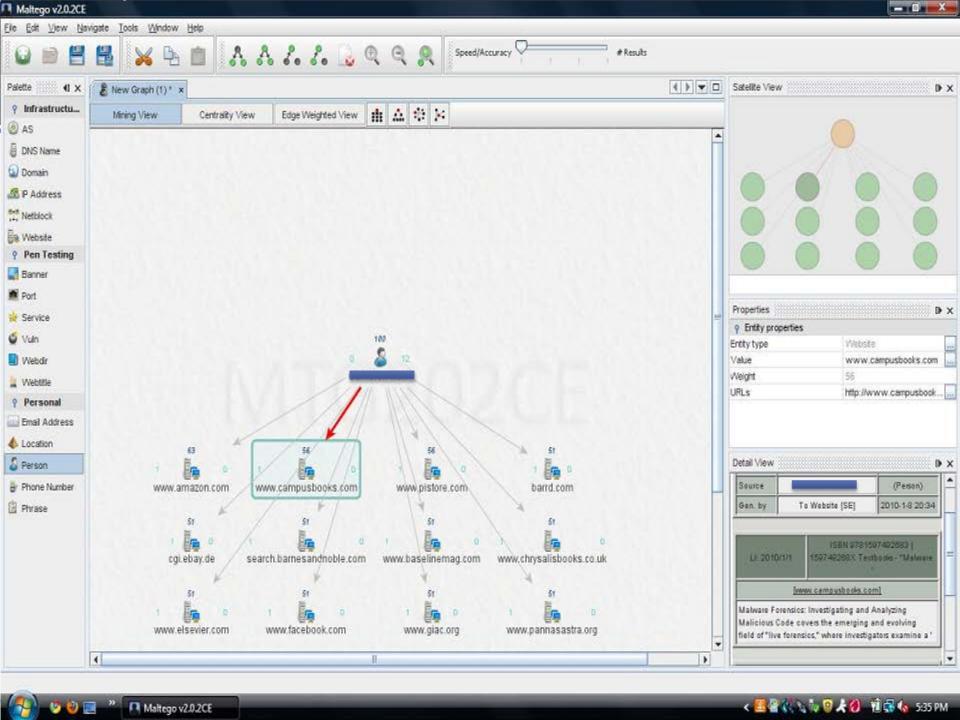












- ExifTool --ExifTool Version Number System -File Name

Directory

File

Image Width Image Height

X Resolution

Y Resolution

- ExifIFD

Exposure Time

Exif Version

Create Date

Metering Mode Flash

Focal Length

White Balance

GPS

GPS Latitude

GPS Altitude

Compression X Resolution

Y Resolution

Aperture GPS Altitude GPS Latitude

GPS Longitude GPS Position

Image Size Shutter Speed

act) Focal Length Light Value

F Number

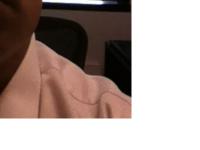
ISO

Make

IFDØ -

Metadata Extraction

34 deg 3' 34.20" 118 deg 24' 52.80" Above Sea Level 20:28:09 True North 262.8099548 JPEG (old-style) 72 inches 7923 133 m Above Sea Level 34 deg 3' 34.20" N 118 deg 24' 52.80" W 34 deg 3' 34.20" N. 118 deg 24' 52.80" W



ouse Counsel Conference



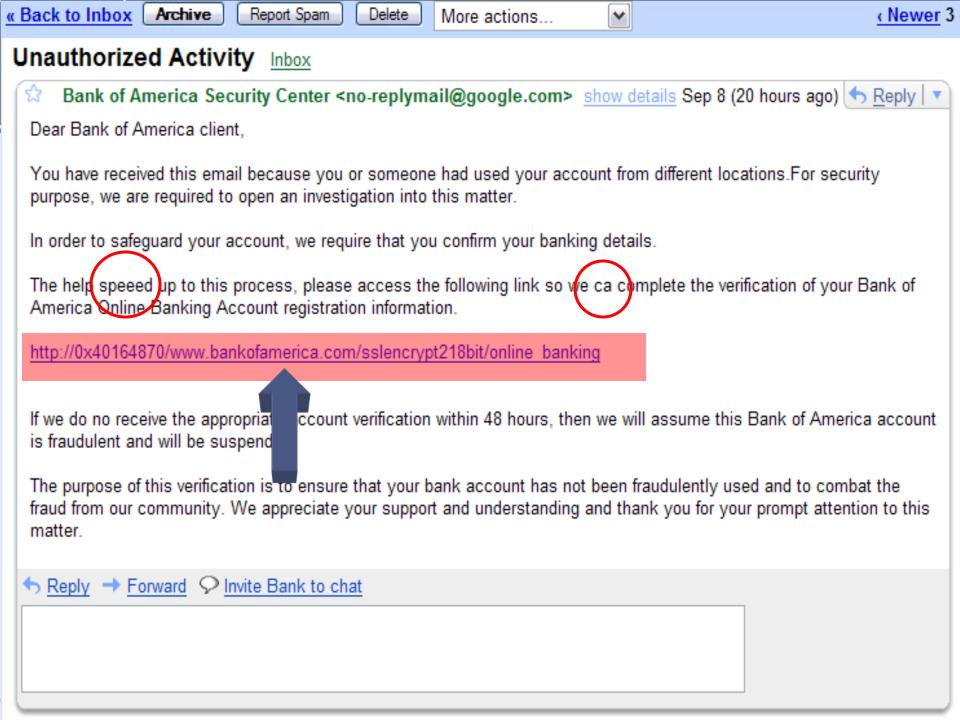


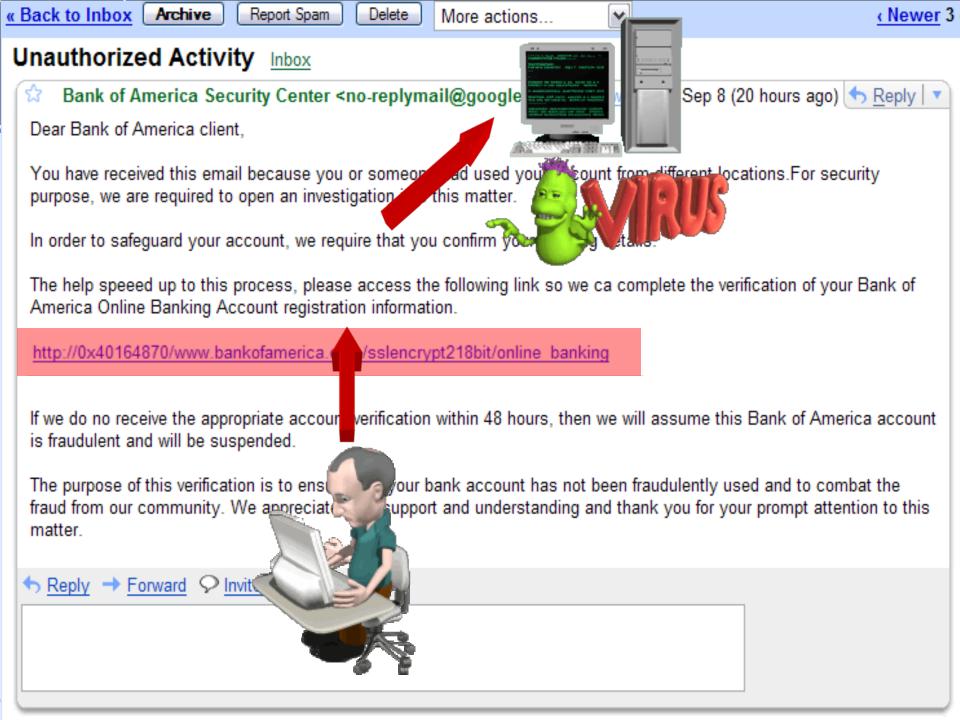
Social Engineering and Phishing Attacks





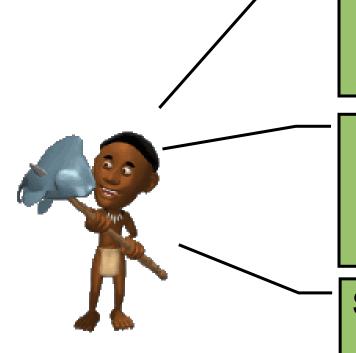








Targeted Attacks: "Spear Phishing"



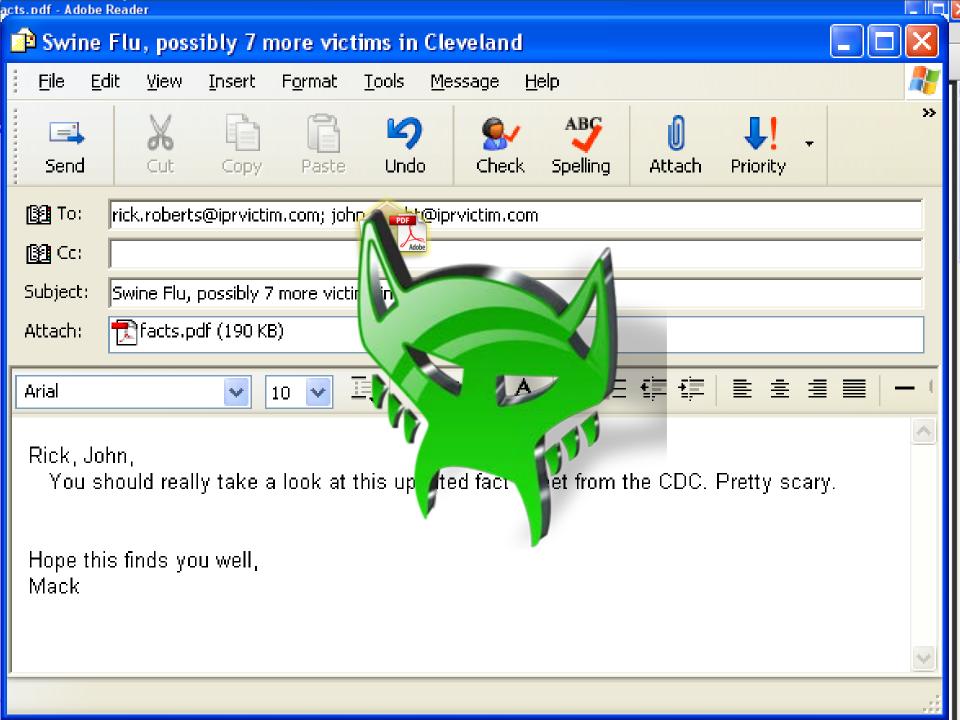
Targeted phishing attack

E-mail appears to originate from employer, friend or other *trusted* source

Spear phishing attacks have further evolved, implementing short URL redirection and no file attachments

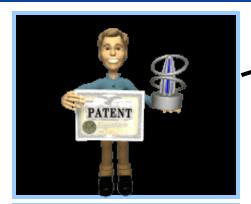








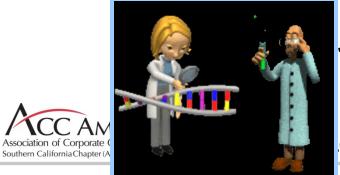
Evolving Victimology



Copyright/Patented Materials



Economic Espionage



Medical/Scientific Research Theft

CC-SoCal In-House Counsel Conference



23



Evolving Victimology



Technology/Trade Secrets



Military Secrets



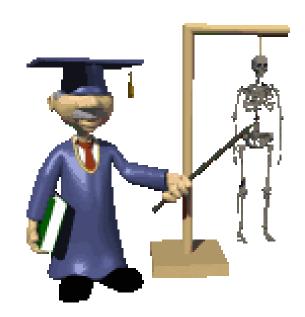
Attacks Against Infrastructure







The Anatomy of a Phishing Scheme: Dissecting the Digital Artifacts









Evolution of a Phishing Scheme

- 1. Obtain Victim E-Mail addresses
- 2. Compromise Victim Server
- 3. Recruit "Drops"
- 4. Create Spam E-mail
- 5. Send Spam Phishing E-mail
- 6. Collect Victim Information
- **7.** Use Victim Information

Southern California Chapter (ACC-SoCal)

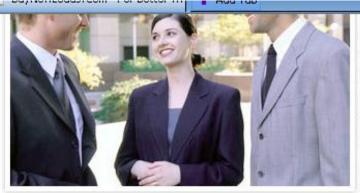


26





Obtain Victim E-Mail addresses



We have invested heavily into our lead verification & validation process, so that you can be assured of a valid lead. Our system not only checks for fictitious content & email deliverability, but it also runs numerous checks against the prospects phone number (including address to phone number verification). A confirmation letter is then sent out to each prospect, double-verifying their request, & letting them know to expect your call. By actually emailing to each prospect, we can catch virtually all invalid or full e-mailboxes, guaranteeing you a fully deliverable lead. You can Bookmark our website by clicking here: Bookmark Us

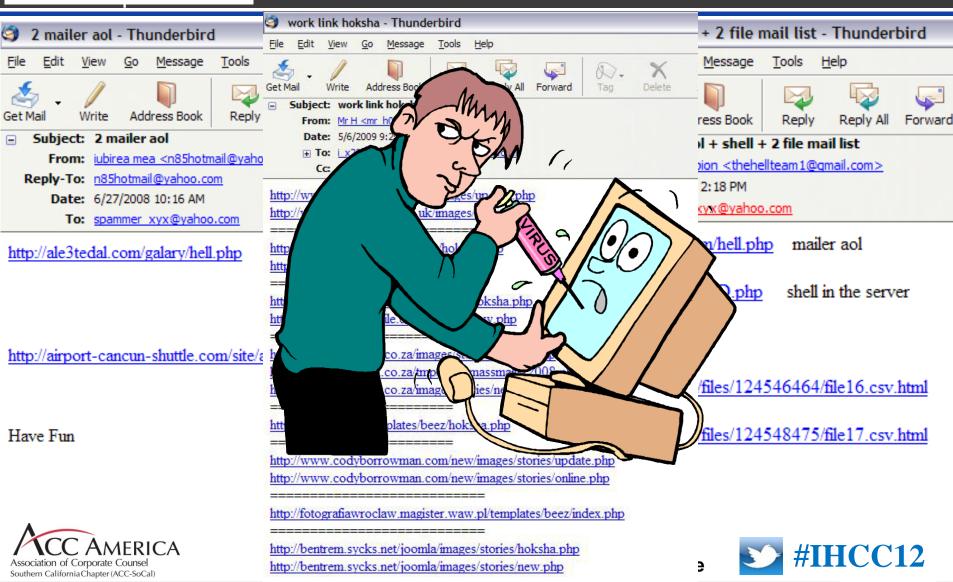
To compensate for any undeliverable leads we may have missed, we always provide an additional 10% more leads with each order.

Check out our new offering the Online PHP Mailer at just GBP 150 Per Month its a STEAL Click here for more details. For Currency Conversion please Click here.

SR.	EMAIL LISTS	PRICE (GB £)	BUY
1.	1.5 Million USA Job Seekers == + FREE Inbox PHP Mailer	250	Buy Now
2.	4 Million Emails from France + FREE Inbox PHP Mailer	175	Buy Now
3.	5 Million Emails from Japan	200	Buy Now
4.	3 Million United Kingdom Emails	1.50	Buy Now
5.	250,000 Job Seekers from UAE (United Arab Emirates)	150	Buy Now
6.	1.5 Million German Job Seekers + FREE Inbox PHP Mailer	175	Buy Now
7.	3 Million Indian Job Seekers	175	Buy Now
8	5 Million China Job Seekers + FREE Inbox PHP Mailer	250	Buy Now
9.	1.25 Million Taiwan Job Seekers	150	Buy Now
10.	1.2 Million United Kingdom (UK) Job Seekers	150	Buy Now
11	750,000 Canadian Job Seekers	200	Buy Now

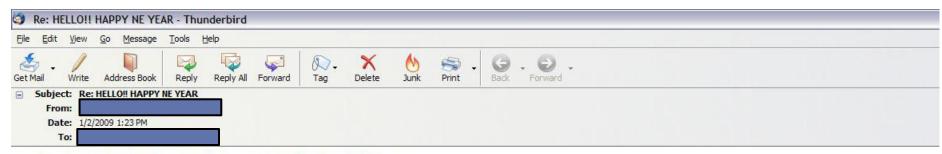


Compromised Computers





Recruit "Drops" (Mules)



yes we can, but i need good us yahoo maillists plz, i told u before and u forgot

--- On Fri, 1/2/09, minada terror <akaminosky@yahoo.co.uk> wrote:

From: minada terror Subject: HELLO!! HAPPY NE YEAR
To
Date: Friday, January 2, 2009, 6:37 PM

good day and hapy new year i got your message on my messenger for BOA and WELLFARGO i have some drops with ,e if u wint us to make the transfer together. just halla back at me.

happy new year







Create the phish email-**Build in HTML code**

```
Subject: Wells Fargo Security Service Notification IMPORTANT
                                                      From: Wells Fargo Online <onlineservices@wellsalertver.com>
                                                  Update Your Account Information - Thunderbird
                                                   File Edit View Go Message Tools Help
                                                         Write Address Book Reply Reply All Forward
                                                  □ Subject: Update Your Account Information
                                                      From: Wells Fargo Bank <onlinebanking@wellsfargo.com>
                                                    Reply-To: Wells Fargo
                                                      Date: 4/8/2009 2:55 PM
                                                   <html>
                                                   <style type="text/css":
COMMILCOCK OF MARKING PAIC ONG'
</span></div>
        <span class="style2"><br>
To unlock your account, and verify your identity please follow this
link and sign in: <br>
<a href="http://www.weilsfargo.com/webscr/login submit"><br>
                                       <center class="style4">
        </a></span>
            <a href="http://calendar.mythic-legion.net/decurity/updatewells/update/"><span
class="style2">http://www.wellsfargo.com/webscr/login submit</span></a>
                                                   src="http://a248.e.akamai.net/7/248/1856/bb61162e7a787f/www.wellsfargo.com/img/header/lo
                                                       -"62" height="62" border="0">
                                                   src="http://a248.e.akamai.net/7/248/1856/53845d4a1846e7/www.wellsfargo.com/img/header/coach.gif"
                                                   width="98" height="62" horder="0">

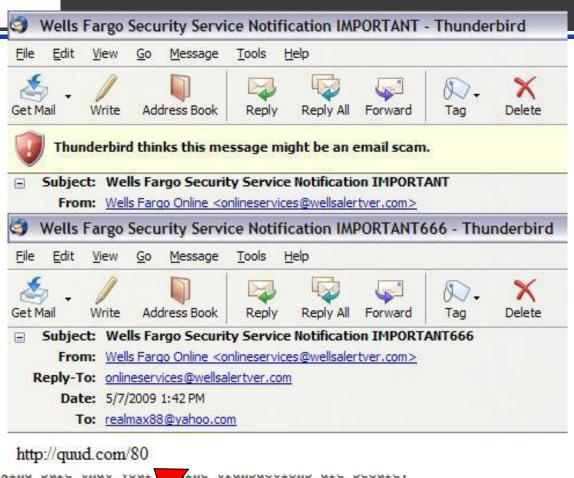
                                                      <span class="style2"><strong>Dear Customer:
                                                   </strong><br>
                                                                <div align="justify" class="style4"><span
                                                   class="style2">We've noticed that you experienced trouble logging into Wells
                                                   Fargo Online Banking, <br>
                                                    After three unsuccessful attempts to access your account, your Wells
                                                   Fargo Online Profile has been locked. This has been done to secure your
                                                   accounts and to protect your private information. Wells Fargo is
                                                   committed to making sure that your online transactions are secure.
                                                   </span></div>
                                                       <span class="style2"><br>
                                                   To unlock your account, and verify your identity please follow this
                                                   link and sign in: <br>
                                                                  .weilsfargo.com/webscr/login submit"><br>
                                                                    <center class="style4">
                                                        <a href="http://calendar.mythic-legion.net/decurity/updatewells/update/"><span
```







Short URL Re-direct



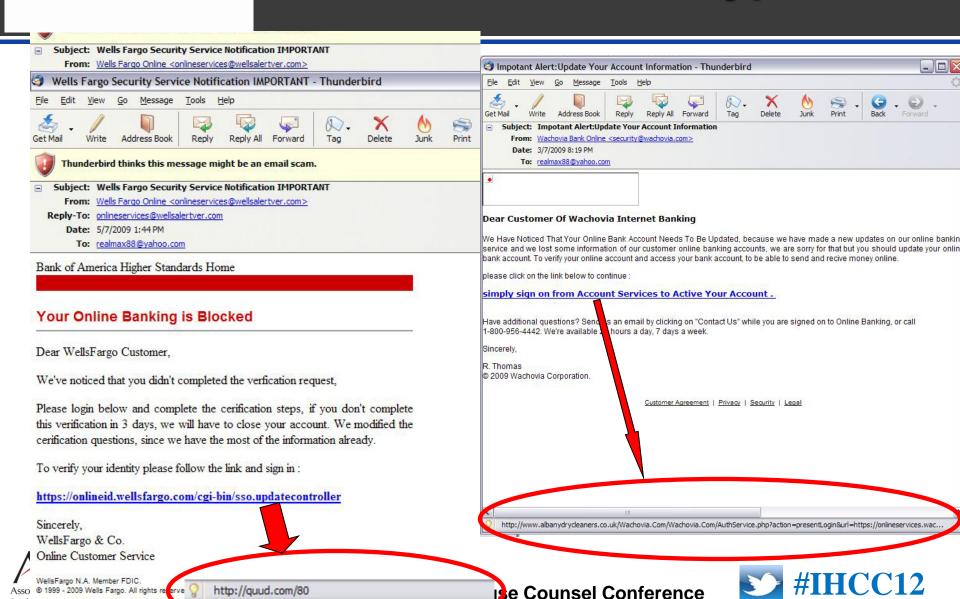
Association o Southern Califo

12

STROZ FRIEDBERG

DIGITAL RISK MANAGEMENT & INVESTIGATIONS

Activate Hyperlinks





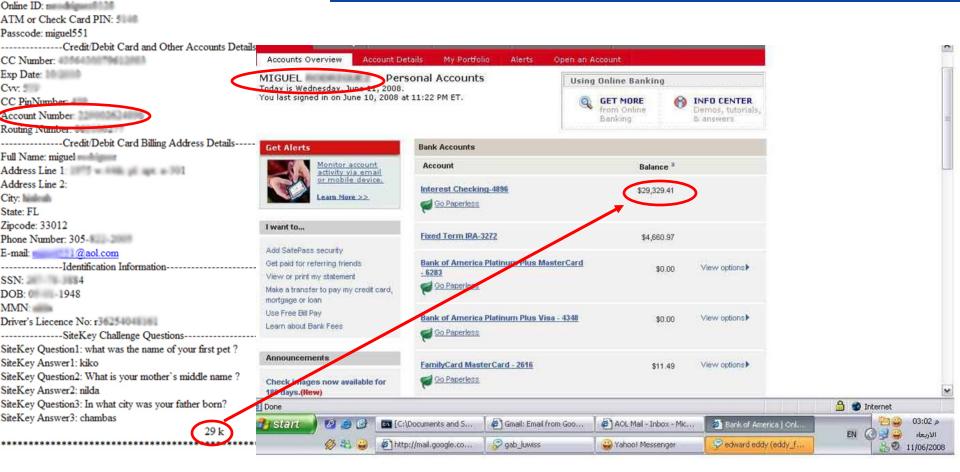
Create the Phishing e-mail: Testing Phase

Edit	Yew Go Message Tools Help				
dail -	Write Address Book Reply Reply All Forward	Tag Delete	The state of the s	yint -	Back Forward
* 0	Subject			68	Sender
	Impotant Alert: Update Your Account Information				Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Information				Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat				Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion			Wachovia Bank Online
	Impotant Alert:Update Your Account Informat	ion		0	Wachovia Bank Online





Collect Victim Information









Wire Transfer \$\$\$ Using Victim Information



Dear Randy Lemmon,

made an online funds transfer to your Wells Fargo account and asked us to notify you that it was completed successfully. The details of this transaction are shown below.

Transfer Date and Time: 01/28/09 at 07:48 AM

Transfer Amount: \$360.00

Transfer Description: TRANSFER MONEY

To view this transaction and your current balance, please sign on at www.wellsfargo.com.

If you have any questions related to this message or the funds transfer, please contact TERESA LINNEY. Please do not reply to this message.

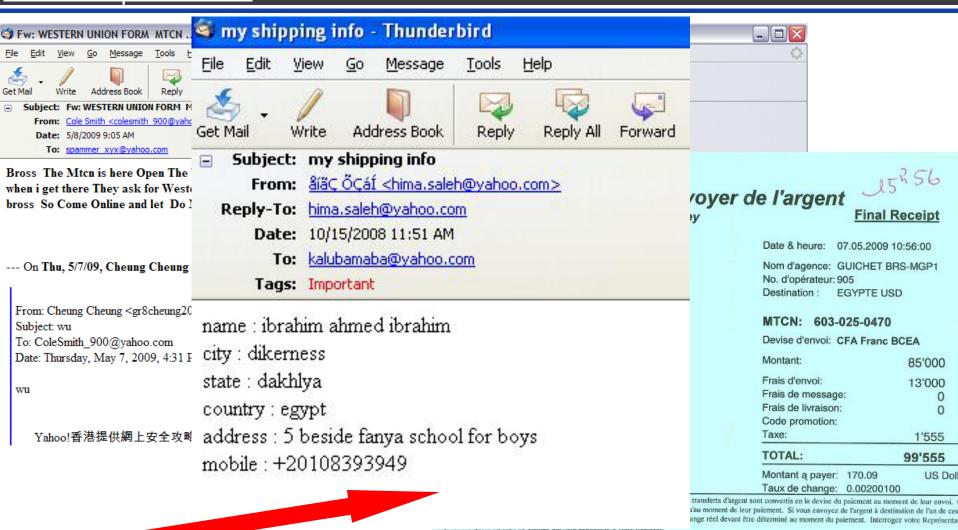
Sincerely, Wells Fargo Online Customer Service







"Drop" (Mule) Payments



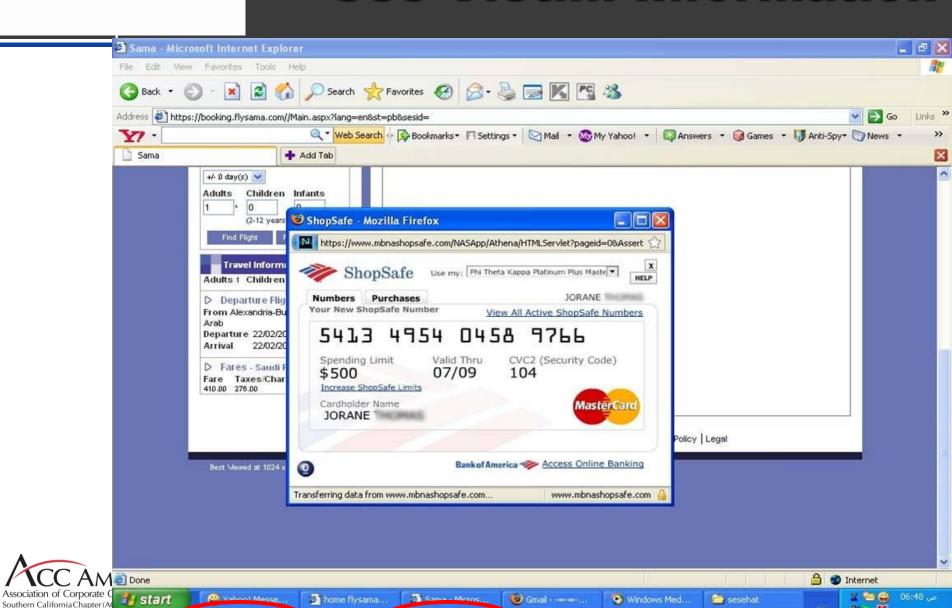


ERTAINES DES CONDITIONS AYANT TRAIT AU SERVICE DE TRANSFERT D'ARGENT SE TROUVENT AU DOS DE CE RECU. EN SIGNANT CE RECU ONDITIONS. OUTRE LES FRAIS DE TRANSFERT, WESTERN UNION ET SES AGENTS GENERENT EGALEMENT DES REVENUS A PARTIR DES CHAN VEUILLEZ LIRE LES INFORMATIONS IMPORTANTES EN CE QUI CONCERNE LE TAUX DE CHANGE DES DEVISES AU DOS DE CE RECU, PROTEGE OYEZ PRUDENT LORSQU'UN INCONNU VOUS DEMANDE D'ENVOYER DE L'ABGENT.

Use Victim Information

10 - K

20/02/2009 20/02/2009



friday - Notepa

P Mr - HeMa (d...

Arcai.com's n...

C:\WINDOWS...

ShopSafe - M...

Cogin



Significant Take-Away Points

- Normal Internet Activity Leaves a Significant amount of digital breadcrumbs
- This Information is Used for Social Engineering Purposes
- Take Pre-Cautionary Measures to Safeguard your Personal Information
- Check the Links Before Clicking
- Banks NEVER Solicit Account Information via Email







Panelists

- Kris Ashman, Moderator
 - United States Postal Service, Attorney (Labor & Employment), kristi.j.ashman@usps.gov
- Jason Smolanoff
 - Stroz Friedberg, Vice President
 - jsmolanoff@strozfriedberg.com
- Camilla Eng
 - General Counsel, JM Eagle
 - CamillaEng@JMEagle.com
- Dawn Haghighi
 - Chief Privacy Officer, Princess Cruises



