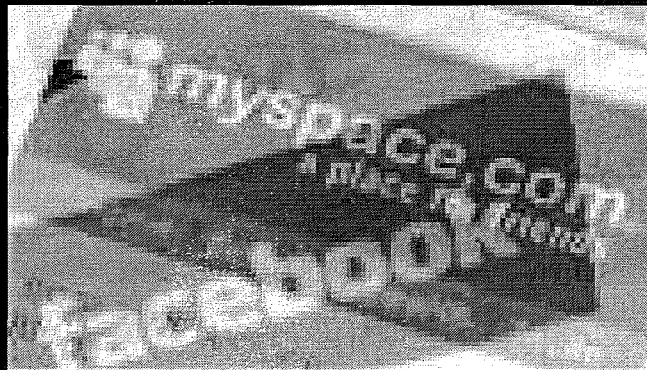
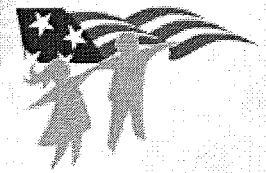


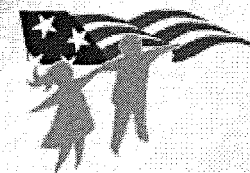
# Obtaining and Using Evidence from Social Networking Sites



## Facebook, MySpace, LinkedIn, and More

### Exemption 6

Lead Computer Forensic Specialist  
High Technology Investigative Unit



# **AGENDA**

**Introduction to Social Networking Sites**

**Overview of Key Social Networking Sites**

**How to Collect Forensic Evidence**

# AGENDA



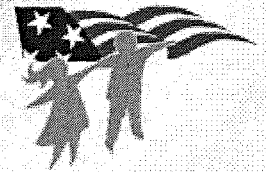
**Introduction to Social Networking**

**Overview of Key Social Networking Sites**

**Practical Issues**



Introduction to Social Networking



# THE RISE OF ONLINE

## SOCIAL NETWORKS

**1997**                      **SixDegrees.com**

**2003**                      **Friendster, LinkedIn**

**2004**                      **MySpace**

**2005**                      **Facebook**

**2008**                      **Twitter**



Introduction to Social Networking

# POPULAR SOCIAL NETWORKS

*Worldwide:* Facebook

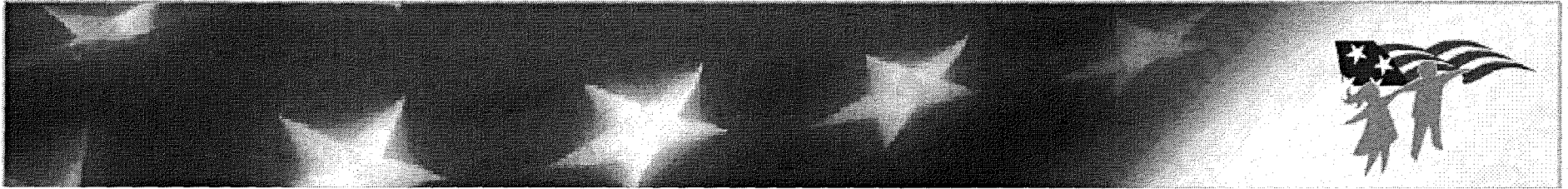
*U.S. and Canada:* MySpace, LinkedIn, Twitter

*Europe:* MySpace, Twitter, Hi5, V Kontakte

*Latin America:* Hi5, Orkut, Tagged

*Asia:* QQ, Friendster, Xiaonei, Orkut, Mixi, Hi5

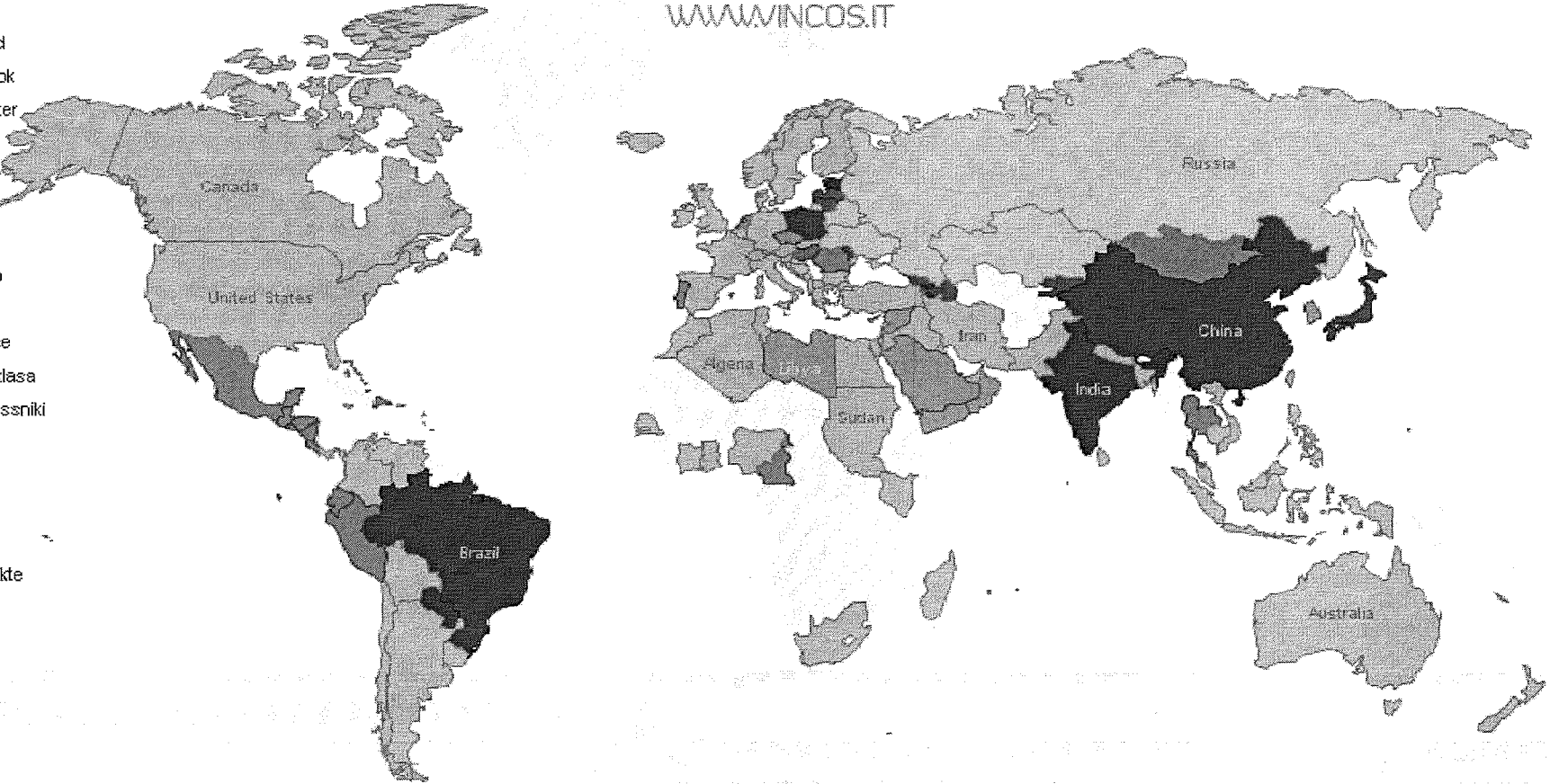
*Middle East and Africa:* Maktoob, Hi5



# WORLD MAP OF SOCIAL NETWORKS

WWW.VINCOS.IT

- Cyworld
- Facebook
- Friendster
- Hi5
- Hyves
- Iwiw
- Lidé
- Maktoob
- Mixi
- MySpace
- Nasza-klasa
- Odnoklassniki
- One
- Orkut
- QQ
- Skyrock
- V Kontakte
- Wretch
- Zing



Created on Many Eyes (<http://many-eyes.com>) © IBM

Image courtesy Vincenzo Cosenza ([www.vincos.it](http://www.vincos.it)), data based on Alexa and Google Trends



Introduction to Social Networking



# POPULARITY IN THE USA

## Most-visited websites in the U.S. (August 2009)

1. Google
2. Yahoo
3. Facebook
4. YouTube
5. MySpace
- ...
13. Twitter
- ...
27. LinkedIn

Source: Alexa.com – August 12, 2009 list of Top 100 websites in United States.



## THE BASICS

**Most social-networking sites allow users to:**

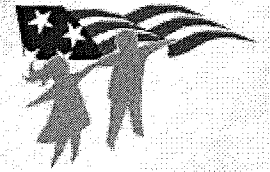
- **Create personal profiles**
- **Write status updates or blog entries**
- **Post photographs, videos, and audio clips**
- **Send and receive private messages**
- **Link to the pages of others (i.e., “friends”)**

**How can LE obtain data from these sites?**

- **Some info may be public**
- **Use ECPA to get info from providers**
- **Undercover operations?**



Introduction to Social Networking



## UTILITY IN CRIMINAL CASES

**Evidence from social-networking sites can**

- **Reveal personal communications**
- **Establish motives and personal relationships**
- **Provide location information**
- **Prove and disprove alibis**
- **Establish crime or criminal enterprise**

**Also: instrumentalities or fruits of crime.**

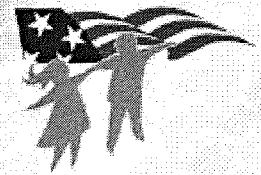


# **AGENDA**

**Introduction to Social Networking**

**Overview of Key Social Networking Sites**

**How to Collect Forensic Evidence**



## Overview of Key Social Networking Sites

# FACEBOOK

**Founded in 2004, primarily catering to students**

**Now over 250m active members worldwide**

**Over 10b photos in Oct 2008; adds over 1b monthly**

**Applications run on Facebook platform**

**True names encouraged but not guaranteed**

**Privacy model is highly granular; present different information to different groups or individual users**

**Messaging includes mail, real-time chat, “wall”**

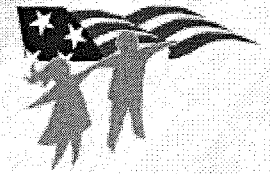
**Now used in private background checks**

**Keoface – virus/worm vector**



# Overview of Key Social Networking Sites

## FACEBOOK



Demi Moore | Facebook - Microsoft Internet Explorer provided by Criminal Division

http://www.facebook.com/demimoore

File Edit View Favorites Tools Help

Convert Select

Demi Moore | Facebook

Page Tools

**Sign Up** Demi Moore is on Facebook

Sign up for Facebook to connect with Demi Moore.

**Demi Moore**

Wall Info Photos YouTube Box Notes

**Demi Moore** Just Fans

**Demi Moore** is checking out the "Spread" trailer

**Apple - Movie Trailers - Spread**

Source: www.apple.com

SPREAD is a fresh, funny, and racy look at the trials and tribulations of sleeping your way to a life of privilege in Los Angeles. Comic and karmic, the film is an "emo-sality tale" about a gorgeous guy who gives women what they want in order to love exactly as he likes. ...

June 25 at 1:28pm

Ying, Jasmyri, Richard and 1,927 others like this.

View all 437 comments

**Demi Moore** Pls help get the word out 1 in 8 Americans is at risk of hunger. Join a community that cares. Go to [www.facebook.com/kelloggcares](http://www.facebook.com/kelloggcares) and become a FAN to help end US hunger. Watch the video below that we created with all of YOU! Let me know how you like it ...

**Fighting to End Hunger**

The following video, produced by Catalyst in partnership with Kellogg and directed by Demi Moore, features user-generated content submitted by people moved to end hunger following requests that @aplusk (Ashmon Kutcher) and @trankutcher (Demi Moore) posted on their respective Twitter feeds and Facebook Pages. Kellogg is a proud supporter of Feeding America. Please click on the yellow Kellogg logo above and help support this incredible cause by donating to Feeding America. Together, we can make a difference.

June 25 at 1:28pm

**Information**

Location: Los Angeles, CA

Birthday: November 11

**Fans**

6 of 1,115,626 fans See All

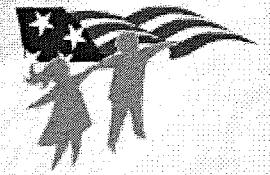
Kate Theo Julius

Despa namik Enes

Internet | Protected Mode: Off 100%

# Overview of Key Social Networking Sites

## FACEBOOK

A black and white photograph of a group of people at a social gathering. In the foreground, a woman is smiling. In the background, a man is visible. A semi-transparent Facebook tagging interface is overlaid on the right side of the image.

Type any name or tag:

or choose a person:

- Caroline Pryce
- Chrissy Mingay
- James Norman
- Katy Bareham
- Tim Gunton

---

- Aaron Cheang
- Ad Majora Natus Sum
- Adam Macer
- Alex Higham
- Alex Tarlino

Tag Cancel

# Overview of Key Social Networking Sites

## FACEBOOK



who on Facebook can find you through search. Your Friends will always be

### Search Visibility

#### Who Can Find You on Facebook?

Everyone on Facebook

#### Friends

Friends of Friends  
My friends and their friends can see this.

Only Friends  
Only friends can see this.

#### Networks

- All of My Networks
- Some of My Networks...
- None of My Networks

Okay

Cancel

er your search result is available outside of Facebook.

### Photos Tagged of You

#### Who Can See This?

#### Friends

Friends of Friends  
My friends and their friends can see this.

Only Friends  
Only friends can see this.

Some Friends  
Choose specific friends who can see this.

Only Me  
Only you and selected networks can see this.

#### Networks

None of My Networks

#### Except These People

Type the name of a friend or friend list...

Okay

Cancel



Overview of Key Social Networking Sites



# GETTING INFO FROM FACEBOOK

**Data is organized by user ID or group ID**

**Standard data productions (per LE guide):**

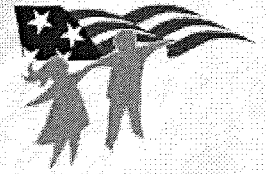
**Neoprint, Photoprint, User Contact Info, Contact Info, IP Logs**                      **Group**

**HOWEVER, Facebook has other data available.**

**Often cooperative with emergency requests.**

# Overview of Key Social Networking Sites

## **MYS**PACE



**Founded 2003, now owned by Fox Interactive Media**  
**2006: Most popular SN; passed by Facebook in 2008**  
**Currently tens of millions of active users monthly**  
**True names less encouraged than Facebook**  
**Messaging through messages, chat, friend updates**  
**Application platform rolled out early 2008**  
**Young user base, history of child safety concerns**  
**Privacy is currently less granular than Facebook**

# Overview of Key Social Networking Sites

## MYSFACE



Top Model Michelle (Michelle Fairplay) | MySpace - Microsoft Internet Explorer provided by Criminal Division

http://www.myspace.com/glamazon1

File Edit View Favorites Tools Help

Convert Select

Top Model Michelle (Michelle Fairplay) | MySpace

Home Browse People Find Friends Local Music Video Games More Log In Sign Up

### Top Model Michelle

My new Favorite band!!! Millionaires! Go check them out...amazing! Mood: amorous at 8:18 PM Jul 24 view more

View More: [Photos](#) [Videos](#) [Blog](#) [Playlists](#)

Michelle Fairplay  
23 / F / male  
Virginia, US  
Last login: 8/1/2009

[Send Message](#)  
[Add to Friends](#)  
[Add Comment](#)

#### My Videos

Slide: On

00:00 03:16

Just Got Paid Lets Get Laid  
MILLIONAIRES. (call us...

#### Interests

General

#### Status and Mood

Michelle Fairplay My new Favorite band!!! Millionaires! Go check them out...amazing!  
Mood: amorous at 8:18 PM Jul 24

Michelle Fairplay I've lost a 1/2 inch off my hips!  
Mood: exhausted at 9:02 PM Jul 19

Michelle Fairplay is eating Special K and working out..  
Mood: knighted at 10:41 PM Jul 16

Michelle Fairplay is getting ready to sign a contract that could change my life!!! Hello Shanghai China!  
Mood: accomplished at 12:06 PM Jul 5

Michelle Fairplay maybe packing her bags soon...giggle..  
Mood: accomplished at 11:24 PM Jul 7

[View More](#)

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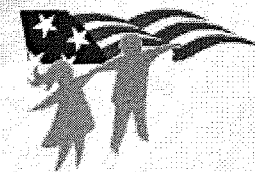
# Overview of Key Social Networking Sites




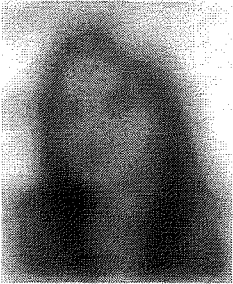
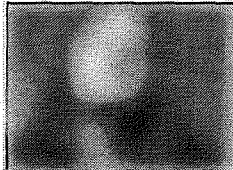
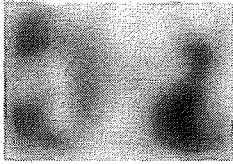
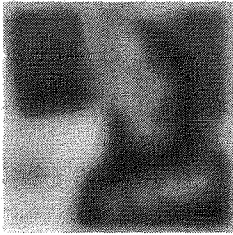

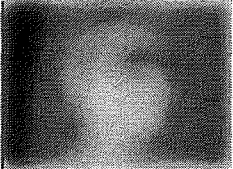
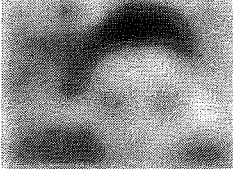


## MYSPACE

The screenshot shows a Myspace profile for 'barbara amr'. The page is heavily decorated with a pattern of stars, hearts, and lightning bolts. At the top, there are navigation tabs for 'home', 'music', 'video', 'my8', and 'barbara amr'. The profile name 'barbara amr' is displayed in a stylized font. Below the name, there is a large graphic that reads 'IT'S CUTE HOW JEALOUZ YOU HATERZ ARE OF WHAT WE HAVE!' with the URL 'HotFreeLayouts.com' underneath. To the left of this graphic, there are buttons for 'message friendz', 'CHAT join', and 'forward favorites HATERZ rate'. Below these buttons is a 'music' section with a 'Pop Out Player' showing a list of songs: 'Clara Ft Justin Love Sex An...', 'Lady Gaga - Love...', 'STARSTRUCK by stefish', 'I'm Not Your Bo... by #Cheray's Mus...', 'Cyclone by hannah mads', 'Can't Believe L... by T Pain', and 'Lollipop by Framing Hanley'. On the right side, there is a section titled 'CALCULATOR SOUNDS' with a small image of a person. The overall layout is cluttered and visually busy.

# Overview of Key Social Networking Sites



## MYSFACE

<p>Izzybelle</p>  <p>Isabelle Wonders</p>	<p>Just Amy Sometimes</p> 	<p>Acceber</p>  <p>Online Now!</p>	<p>&amp;L^O^V^I^A^N^ G^L^A^Y%</p> 	<p>Laura</p> 
<p>mz.trice</p>  <p>trice trice</p>	<p>Jenn</p> 	<p>Zee</p> 	<p>SEXY POOH</p> 	<p>jennifer</p>  <p>babygirl nieves</p>

# Overview of Key Social Networking Sites

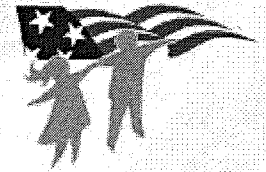


## SECOND LIFE





## Overview of Key Social Networking Sites



# GETTING INFO FROM

# MYSPACE

**Many profiles have public content.**

**Data is organized by FriendID – see LE guide.**

**MySpace requires a search warrant for private messages/bulletins less than 181 days old**

- **Also considers friend lists to be stored content**

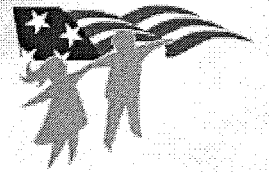
**Data retention times**

**User info and stored files – indefinitely**

**IP logs, info for deleted accounts – 1 year**

# Overview of Key Social Networking Sites

## TWITTER



**Market leader in “micro-blogging”**

**Began in mid-2006 as “status message” service**

**Ubiquity and ease of updating, but limited space**

**Breaking news, real-time updates: USAir, Iran**

**Most multimedia handled by 3d party links**

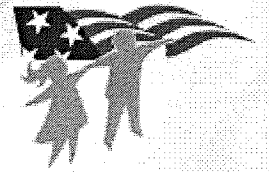
**Simplified privacy model: updates public or private**

**Direct messages are private; sender can delete**

**Short URLs used to serve malicious links and code**

# Overview of Key Social Networking Sites

## TWITTER



Brook Busey (diabloccody) on Twitter - Microsoft Internet Explorer provided by Criminal Division

http://twitter.com/diabloccody

File Edit View Favorites Tools Help

Convert Select

Brook Busey (diabloccody) on Twitter

Page Tools



**diabloccody**

**Verified Account**

Name Brook Busey  
Bio Blame it on the a-a-a-a-alcohol.

130 following 90,507 followers

Tweets 1,595

Favorites

Following



View All...

RSS feed of diabloccody's tweets

El Pollo Normal #unpopularstores  
1 minute ago from web

Halved Foods #unpopularstores  
7 minutes ago from web

RT @serafinowicz I love the Transformer who changes into a hotel lobby - Recepticon  
11 minutes ago from web

@kellyoxford @louisvirtel I think kids should be taught the True Alphabet: R,S,T,N,L and E.  
32 minutes ago from web in reply to kellyoxford

I endorse this sentiment heartily. RT @rainnwilson fart noise  
about 1 hour ago from web

Potatoes, Tabasco and Dos Equis for my hangover.  
about 4 hours ago from web

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## Overview of Key Social Networking Sites



# GETTING INFO FROM TWITTER

### The good news

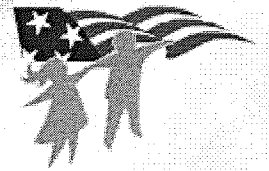
- Most Twitter content is public
- Private messages kept until user deletes them

### The bad news

- No contact phone number
- Only retain last login IP
- Will not preserve data without legal process
- Stated policy of producing data only in response to legal process (i.e., no 2702)
- No Law Enforcement Guide

## Overview of Key Social Networking Sites

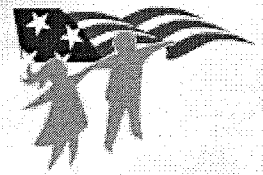
# LINKEDIN



- Business-focused with enforced limits to interaction**
- Profiles focused on education and work experience**
- Use for criminal communications appears limited**
- But can be used to identify experts**
- Can check background of defense experts**
- Privacy model similar to Facebook**
- Profile information is not checked for reliability**

# Overview of Key Social Networking Sites

## LINKEDIN



Barack Obama - LinkedIn - Microsoft Internet Explorer provided by Criminal Division


http://www.linkedin.com/in/barackobama?PHPSID=3acd0626a08c81af9fc560b340

File Edit View Favorites Tools Help

Convert Select

Barack Obama - LinkedIn

**Barack Obama**  
President of the United States of America  
Washington D.C. Metro Area



- Contact Barack Obama
- Add Barack Obama to your network

**Current**


- President at United States of America

**Past**

- US Senator at US Senate (IL-D)
- Senior Lecturer in Law at University of Chicago Law School
- State Senator at Illinois State Senate

**Education**

- Harvard University
- Columbia University in the City of New York
- Occidental College

**Connections**  500+ connections

**Industry** Government Administration

**Websites**

- White House website
- Join Barack's LinkedIn Group
- My RSS feed

Public profile powered by: **LinkedIn**

Create a public profile: [Sign In](#) or [Join Now](#)

**View Barack Obama's full profile:**

- See who you and Barack Obama know in common
- Get introduced to Barack Obama
- Contact Barack Obama directly

[View Full Profile](#)

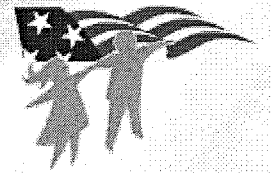
**Name Search:**

Search for people you know from over 40 million professionals already on LinkedIn.

Done

Internet | Protected Mode: Off 100%



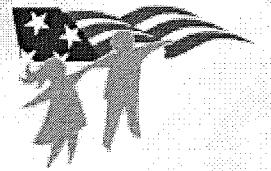


# **AGENDA**

**Introduction to Social Networking**

**Overview of Key Social Networking Sites**

**How to Collect Forensic Evidence**



# Legal Process

- ★ Following law enforcement guide aka legal compliance guide
- ★ **TIME** is critical → move on preservation orders
  - E.g. Woogie account on MySpace

**Item #9**

“Obtaining and Using Evidence From Social Networking  
Sites” PowerPoint Slides

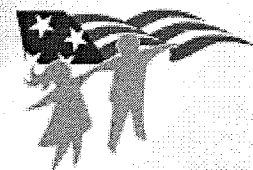
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Pursuant to FOIA Exemption 7(E)



Practical Issues

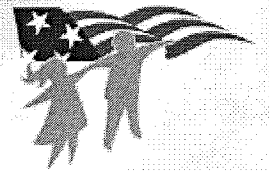
# SW ON COMPUTER SYSTEM



- **Computer Forensics will identify past communications**
- **Corroborate UC communications**
- **Identify additional leads (National Ops)**

Practical Issues

# WITNESSES & SOCIAL NETWORKS



**Many witnesses have social-networking pages**

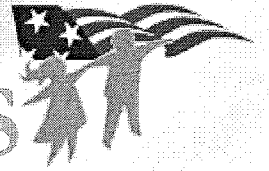
- Valuable source of info on defense witnesses
- Potential pitfalls for government witnesses

**Knowledge is power**

- Research all witnesses on social-networking sites
- Discovery obligations?

**Advise your witnesses:**

- Not to discuss cases on social-networking sites
- To think carefully about what they post



**Social networking and the courtroom  
can be a dangerous combination**

- Use caution in “friending” judges, defense counsel
- Warn jurors about social-networking sites

**Social networking + mobile devices =  
real-time updates on courtroom events**



**Item #9**

“Obtaining and Using Evidence From Social Networking  
Sites” PowerPoint Slides

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Pursuant to FOIA Exemption 6