



# Computer Forensics: More Places to Look – Social Networking & Cell Phone Evidence

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# Introduction

- Wikipedia lists more than 175 social network sites
- Risks
  - Productivity Issues
  - Harassment Issues
  - “Image” Issues
  - Disclosure of proprietary or confidential information
  - Safety issues



BKD Forensics Institute

Search

**News Feed**

Top News • Most Recent



Attach:



### Custom Privacy

Make this visible to \_\_\_\_\_

These people: Friends Only

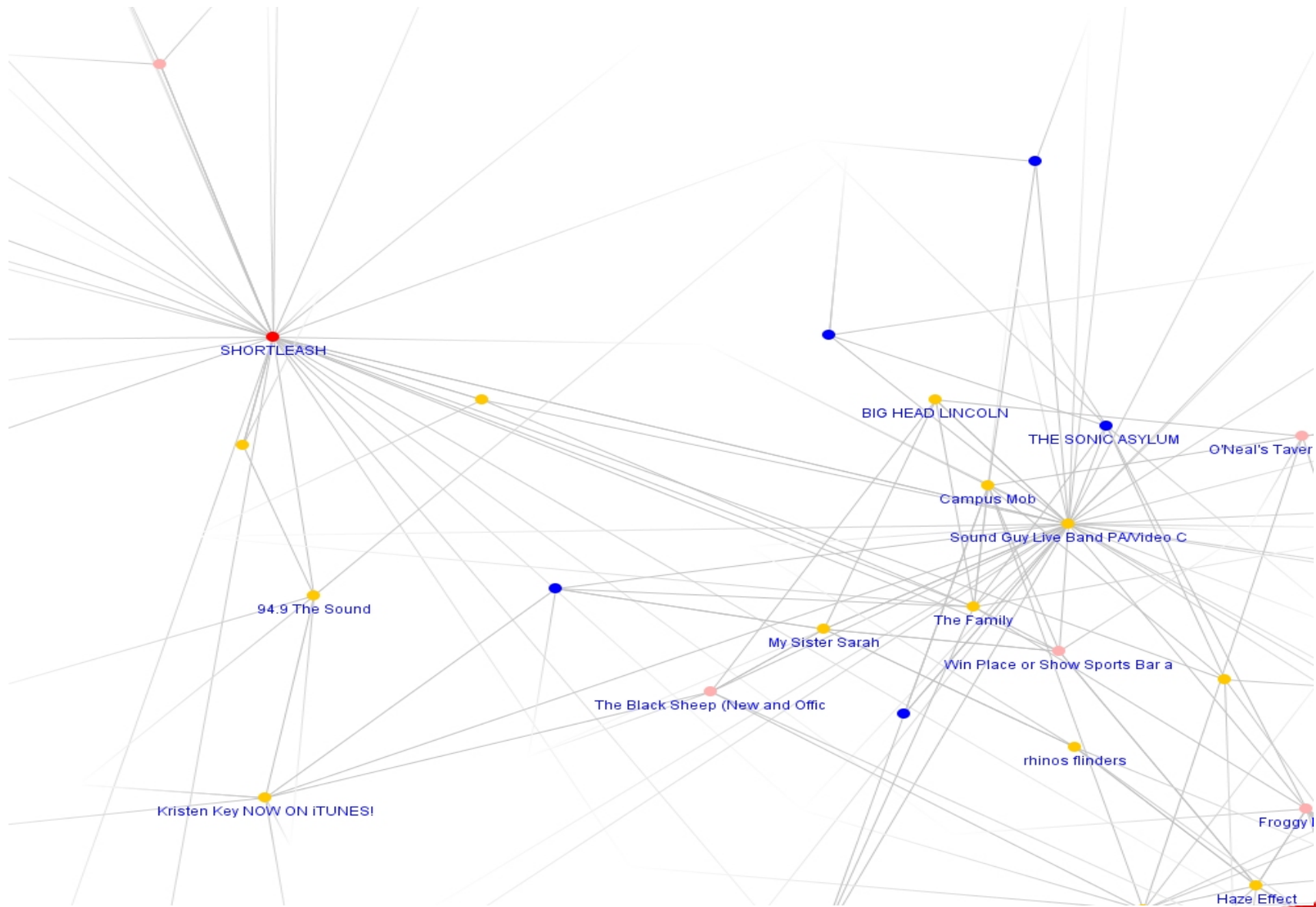
Hide this from \_\_\_\_\_

These people: My Boss

Make this my default setting

# Social Network Mapping

- Loco Citato ([www.lococitato.com](http://www.lococitato.com)) has created several tools to visually map, search & record social networks
- Can export Network to a CSV file
- MySpace Visualizer & YouTube Visualizer available, Facebook Visualizer available to law enforcement



# Methods to Capture Webpages & Blog Postings, etc.

# Screen Capture

- When material you want to capture is on screen, hit “**Prnt Scrn**” (Print Screen) button
- Paste screenshot into “**Paint**”
- Save captured information as an image (JPG, BMP)



# Print to PDF

- Print webpage to “PDF”
- Use Adobe Acrobat drivers or “CutePDF”  
<http://www.cutepdf.com/>
- Captures date & time site was captured

# Pages with Animation

- Can use a tool like Camtasia to capture everything
- <http://www.techsmith.com/camtasia.asp>

# What Social Network Activity Can be Recovered From Computers?

# Internet History

- Visits to social networking sites can be captured in Internet history files
- Information can include number of visits to a particular page
- Date & time of last visit

# Example Xanga URL's

- <http://profile.xanga.com/ProfileWizard.aspx?new=true#>
- <http://www.xanga.com/private/sitewizard.aspx?new=true>
- <http://profile.xanga.com/edit/invite.aspx?new=true&r=http%3a%2f%2fwww.xanga.com%2fprivate%2feditorx.aspx%3fsample%3d1>
- <http://www.xanga.com/private/yourhome.aspx>

# Entire Pages

- Since social networking sites are webpages, they are cached like any other page
- Visits to social networking sites will generate cached pages that are recoverable

# Comments & Requests, etc. in Email

- If a page is private, you may not be able to see posts & status updates on page
- But you can recover comments & friend requests, etc. from email



Search Mail

Search the Web

Show search options  
Create a filter

Compose Mail

Inbox

Buzz

Starred ★

Sent Mail

Drafts

Apple

Band

Prometric

11 more ▾

Contacts

Tasks

Chat

Search, add, or invite

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Discounted Prices - www.discoveramerica.com - Discover America® Daily Getaways. See Travel Offers. Buy Now!

About these ads <sup>UP</sup>

Archive

Report spam

Delete

Move to ▾

Labels ▾

More actions ▾

Refresh

1 - 50 of 4021 Older

Select: All, None, Read, Unread, Starred, Unstarred

- ☐ ★ Eric, me (2) > Tomorrow - signing - Coach, Garrick says it will take place in the gym. John On Mon, May 3, 2010 at 11:16 AM, Eric ..
- ☐ ★ Amazon Marketplace > John R. Mallery, will you rate your transaction on April 11, 2010 at Amazon.com? - Amazon.com John R. Mallery, will :
- ☐ ★ Mark Nichols > **Band** Youth Symphony - There is still time to sign up for auditions! The auditions take place the week of May 10-15 a
- ☐ ★ Facebook > Steve Russell tagged a photo of you on Facebook - Steve tagged a photo of you in Pamyla Hosley's album "Early Histc
- ☐ ★ me, Micky (2) > Duke - Cute! On Fri, Apr 30, 2010 at 3:27 PM, John Mallery <john.mallery@gmail.com> wrote: Here is ...
- ☐ ★ WeightWatchers.com > Finding the Healthiest Fiesta - To ensure Weight Watchers emails make it to your inbox, add weightwatchers@info.wei
- ☐ ★ Facebook > Guy Mace wants to be friends on Facebook. - facebook Hi John, Guy Mace wants to be friends with you on Facebook.
- ☐ ★ Facebook > Richard Turnbow sent you a message on Facebook... - facebook Richard sent you a message. Richard Turnbow Richa
- ☐ ★ Ida Levine > BVWBB Scrip Reminder - Just a quick note to remind all Band and Guard Familes that orders for Scrip are due on Mor
- ☐ ★ iTunes Store > Your receipt #179008335458 - Billed To: john.mallery@gmail.com Paula Mallery 14770 Hadley St. Overland Park, KS E
- ☐ ★ Chase Fraud Alert > URGENT Chase Confirmation - Card Request - If you are having trouble viewing this message, please click here. E-mai
- ☐ ★ Facebook > Garrick Mallery suggested you become a fan of Dominican Lacrosse- Home of the Penguins... - Garrick became a fan |



# Facebook Status Updates

- Facebook status updates are recoverable from Internet history

http://www.facebook.com	Facebook   David Roe's Photos - big carrots
http://www.facebook.com	Facebook
https://login.facebook.com	Login   Facebook
http://www.facebook.com	Facebook   Springfield Metropolitan Bar Association: SMBA Monthly Lunch: How to Win Your Case with Technology
http://www.facebook.com	Facebook   Springfield Metropolitan Bar Association: SMBA Monthly Lunch: How to Win Your Case with Technology
http://www.facebook.com	Facebook   Springfield Metropolitan Bar Association's Notes
http://www.google.com	url
http://www.facebook.com	Springfield Metropolitan Bar Association: SMBA events in November   Facebook
http://www.google.com	url
http://www.facebook.com	SMBA   Facebook
http://www.facebook.com	Facebook   Confirm Requests
http://www.facebook.com	Facebook   Confirm Requests
http://www.facebook.com	Facebook (3)
http://www.facebook.com	Facebook (3)
http://www.facebook.com	Facebook   John Mallery The problem with the gene pool is there is no life guard.
https://login.facebook.com	Login   Facebook
http://www.facebook.com	Facebook   Confirm Requests
http://www.facebook.com	
http://www.facebook.com	/n/?reqs.php&mid=21575e8G6b66c354G7e432aG2&n_m=john.mallery%40gmail.com

# Chat

- Many social networking sites offer chat options
- It is sometimes possible to recover chat sessions from unallocated clusters

# Recovered Facebook Chat

	E	F	G	H	I	J
	Date/Time (UTC)	Sender ID	Sender Name	Recipient ID	Recipient Name	Message Text
1	Aug 07, 2009 - 05:21:	15189962XX	Candy Cotton	46XX2031	Dirk Loomis	Please don't ell Ralph that I am asking these questions. Met through friends at work?
2						
3	Aug 07, 2009 - 05:22:	15189962XX	Candy Cotton	46XX2031	Dirk Loomis	That boy better be nice to Ralph or I will have to come up there
4	Aug 07, 2009 - 05:22:	46XX2031	Dirk Loomis	15189962XX	Candy Cotton	haha me too! we only got to hang out with him for the day but he was great. very funny
5	Aug 07, 2009 - 05:23:	15189962XX	Candy Cotton	46XX2031	Dirk Loomis	Ralph did say that he was funny as heck
6	Aug 07, 2009 - 05:24:	46XX2031	Dirk Loomis	15189962XX	Candy Cotton	he is! we are going to see them all again in a few weeks
7	Aug 07, 2009 - 05:24:	15189962XX	Candy Cotton	46XX2031	Dirk Loomis	good, have Ralph take some decent pictures of this guy. What are you going to be doing when you go?

# Identifying Owner of Facebook ID

- Create URL like this
  - <http://www.facebook.com/profile.php?id=XXXXXXXXXX>
  - Replace “X’s” with ID number
  - Must have valid Facebook account & be logged in
  - Will take you to user’s profile page
  - You may not see much but you will see name on account

# Subpoena

- What can be retrieved through a subpoena varies by provider
- Can be very limited
- Legal contacts for service providers can be found here <http://www.search.org/programs/hightech/isp/>

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[Amazon.com: John Mallery: Books](#) ☆

Hardening Network Security by **John Mallery**, Jason Zann, Patrick Kelly, ... Levi Whitcomb  
Bates: His descendants by **John Mallery** Bates (Unknown Binding ...

[www.amazon.com/s?ie=UTF8&rh...field-author...page=1](#) - Cached

[John Mallery \(jmalleryks\) on Twitter](#) ☆

Interested in cheese, computer forensics, orchids and music.

[twitter.com/jmalleryks](#) - Cached

# Cell Phone Forensics

- No standardization
- What can be recovered often depends on make, model & carrier
- Some cell phones make a backup copy of their data when phone is synced to a computer
- Data can often be recovered from here

# iPhones

- iPhone backups are created every time phone is synced
  - Windows – C:\Documents & Settings\USER\Application Data\Apple Computer\MobileSync\ Backup
  - Mac ~/Library/Application Support/MobileSync/Backup/ “hex folder name”



SQLite Database Browser - /Users/John/Desktop/iphone\_backup/19137084109/Library\_...

Database Structure | Browse Data | Execute SQL

Table: message

New Record | Delete Record

	address		date	text	flags
13	150	15133	1204931800	Thx. Nice here. 9 inches snow at home	
14	172		1205599023		
15	173	91370	1205781308	By the way - Syracuse beat Johns Hopkins 14-1	
16	174	91359	1205781308	By the way - Syracuse beat Johns Hopkins 14-1	
17	175	191370	1205781389	Wow thats awsome	
18	184		1206202703		
19	185	191370	1206662945	This is awesome	
20	186	191370	1206663024	No its not cid you see the game?	
21	187	191370	1206663068	I walked by. Don't worry about the game. I'll hav	
22	188	191370	1206663206	Ok its just all the new guys said " we would win	
23	189	91370	1206663260	Yeah, I understand, but you are doing the right t	
24	190	191370	1206663380	Yeah we talked and he got yelled at to	
25	191	91370	1206663482	There is no reason for you to be treated that wa	
26	192	191370	1207162635	I just had a chopped pork dinner at the Interstat	
27	193	91370	1207180711	Who won the varsity game?	
28	194	91359	1207180711	Who won the varsity game?	

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# Applications

The screenshot shows a forensic tool interface with a sidebar on the left and a main pane on the right. The sidebar has sections for 'Device Sources' (Mallery iPhone) and 'Application's Documents' (1801896788.db, friends.db). The main pane displays a table of applications with columns for Name, Purchase Date, and Vendor. The 'Facebook' application is selected, and its details are shown at the bottom of the main pane.

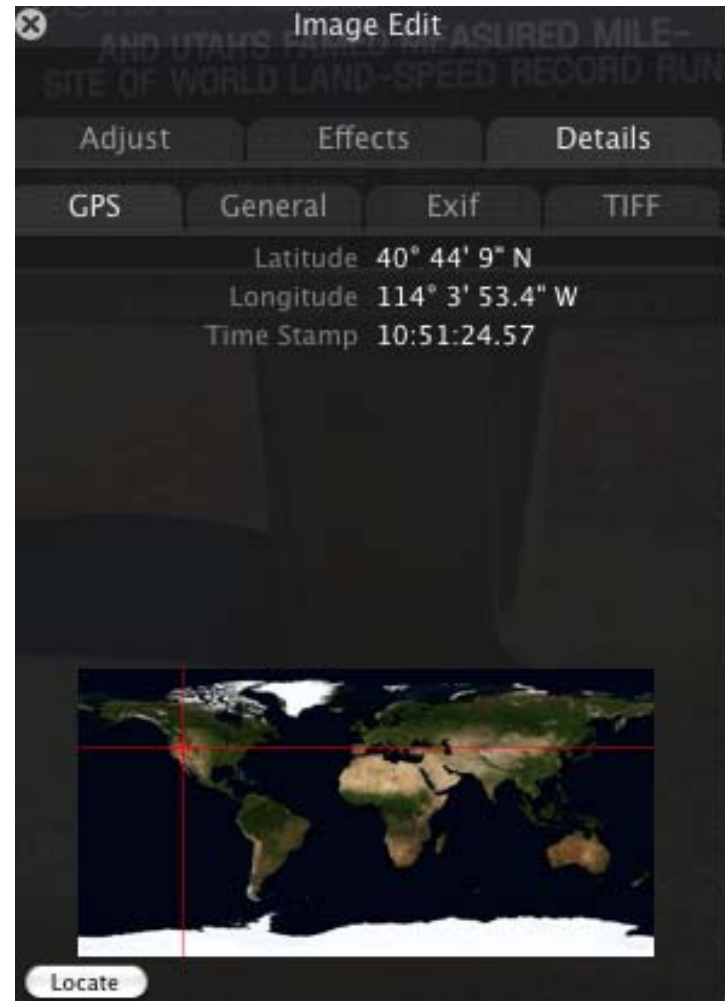
Name	Purchase Date	Vendor
23,000 GREAT QUOTES	May 25, 2010 6:48 PM CDT	Cramzy
Amazon Mobile	May 25, 2010 6:46 PM CDT	Amazon.com
Crash Bandicoot Nitro Kart 3D	August 3, 2008 6:32 PM CDT	Vivendi Games Mobile
Facebook	September 23, 2010 7:38 AM CDT	Facebook
Labyrinth Lite Edition	April 26, 2010 7:47 AM CDT	Codify AB
Mactracker	December 4, 2009 7:46 PM CST	Ian Page
Metal Quotes	September 5, 2009 6:48 PM CDT	Golden Eagle Coins
MobileMe iDisk	February 21, 2010 11:10 PM CST	Apple Inc.
Remote	November 26, 2009 9:08 AM CST	Apple Inc.
iBeer MegaPack (5 Beers! Sodas, Milk...)	May 25, 2010 6:45 PM CDT	Hottrix
iBird Explorer Midwest	February 7, 2010 4:43 PM CST	Mitch Waite Group
iXpenseIt (Expense + Income = Cash...)	May 25, 2010 6:47 PM CDT	FYI Mobileware, Inc.
myLite Flashlight	February 27, 2009 8:35 PM CST	doapp, inc

 <b>Facebook</b> Facebook © Facebook, Inc.	Apple ID: <b>john.mallery@gmail.com</b> Purchase Price: <b>Free</b> Release Date: <b>July 11, 2008 2:00:00 AM CDT</b>
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Tagged/Selected/Total: 0/1/13

# GPS



# Questions?

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