

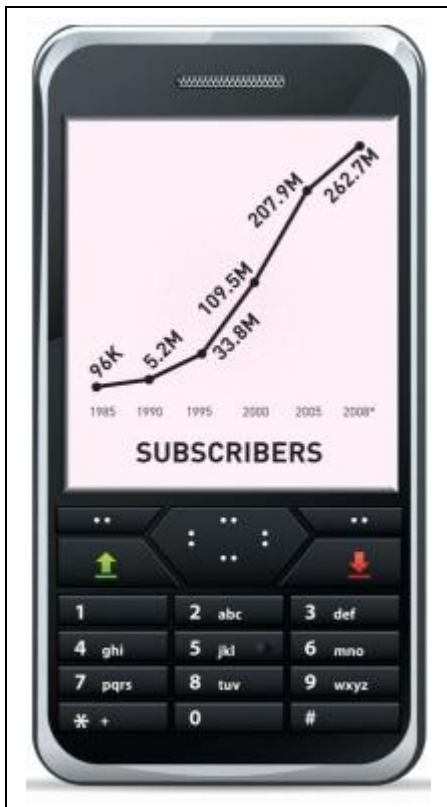
**Digital Forensics: How Producing Text Messages and  
Facebook Can Assist with OFPs, Restraining Orders,  
and Discovery in Divorce Cases**

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### A. Mobile Phone Market Penetration and Growth in U.S.



#### Skyrocketing Subscribers <sup>1</sup>

- Today, there are more than 292.8 million wireless subscribers— 93% of the total U.S. population. Only 37% used mobile phones back in 2000.
- 24.5% of U.S. households are “wireless-only” according to the CTIA.
- Smartphone shipments overtook PCs in Q4 2010 on a worldwide basis.
- Engadget Mobile reports a study from mocoNews.net predicting 100% mobile phone penetration in the U.S. by year 2013. <sup>2</sup>

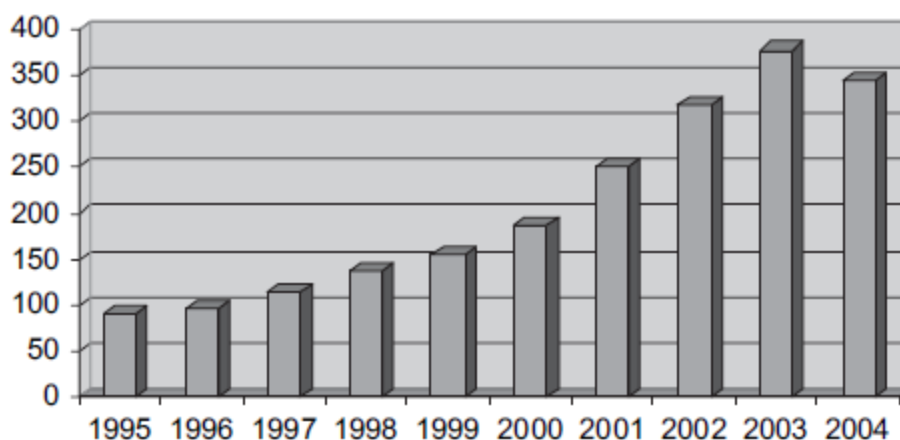
## **B. Text Message Usage in U.S.**

1. Text is the New Talk: More than 384 billion text messages were reported by carriers this year [2008] between Jan. 1 – June 30, versus 295 billion voice calls. That is 22 billion more text messages than for all of 2007. Text messaging is doubling every year. <sup>3</sup>
2. 173.2 billion text messages were sent monthly in 2010.
3. 1.81 trillion text messages were sent on an annualized basis in 2010.
4. Text messaging is doubling every year.
5. Three studies label text messaging “addictive” behavior citing users’ need to remain connected. The new terminology for this phenomenon is “*reachability*”.

## **C. Mobile Phone Prevalence and Use in Civil Cases**

Digital systems are found in a number of casual consumer tools, including cellular telephones. Their prevalence in society is matched by a growing presence as evidence in civil court cases.

A search of “cell or cellular w/3 telephone or phone” within reported United States District Court opinions over a ten-year period shows dramatic growth in the number of cases in which these devices were considered to be relevant to legal proceedings. This is detailed in Figure 1. <sup>5</sup>



**FIGURE 1 Analysis of U.S. District case opinions for involvement of cell phones 1995 through 2004.**

These cases represent both criminal and civil matters with cellular telephone references for conversations, possession, use, and stored data. A sequential examination of the first one hundred such cases from May 1, 2004, to May 1, 2005, found that approximately two thirds were related to civil actions. A similar search of federal appellate decisions found 219 cases over the same time period with similar references; of these, only one addressed a challenge to the admissibility of the cell phone evidence.<sup>4</sup>

#### **D. Examples of Mobile Phone Forensics in Family Law**

1. An investigator with the Office of Public Defender in Minnesota reports mobile phone evidence being produced today in about 60% of domestic abuse cases.
2. Paul Talbert, a matrimonial attorney and partner at Chemtob Moss Forman and Talbert, LLP, in New York City, represented a client whose husband waited until she was showering to check her text messages for proof of infidelity. He discovered that she was having an affair with a co-worker after handing the device to a private investigator waiting outside his home.

The private eye downloaded her text messages, getting the proof the woman's husband needed for court. "They then saw all the text messages that the two had been exchanging which clearly revealed an affair," Talbert said. "The client was mortified that the affair was discovered. The husband immediately filed for divorce, and the wife wanted to quickly resolve the settlement."<sup>5</sup>

3. The good news is that raunchy texts alone are not considered proof of adultery. But bawdy missives can come back to haunt you, even if your split is no-fault. "In most states, the conduct of the parties during marriage is

determinative of property division in a divorce," says Gabriel Cheong, a Boston divorce lawyer. Usually, this applies to finances and property, but the judge could take salacious texts into account when deciding who gets what.

That may seem unfair, because the flirting violated only the spirit of your marital accord, not the letter. And, granted, emotional cheating isn't nearly as transgressive as the physical sort. But it's still cheating all the same—you fostered a sense of intimacy with another woman, knowing that your wife would be aghast if she ever found out.<sup>6</sup>

## **E. Mobile Phone Forensics**

Forensic evidence from mobile phones is frequently relevant in connection with OFPs, HROs and marital dissolution cases and can help attorneys successfully work with their clients.

### **1. Old Approach – Service Provider Business Records**

- a. Until recently an attorney's only option to obtain mobile phone evidence was to request business records from cell phone service providers using the Electronic Communications Privacy Act.<sup>7</sup> A letter of preservation was required followed by an administrative subpoena.
- b. Information available using this technique is basic subscriber billing data and Call Detail Records (CDR). They are produced every time a user makes a call or sends a text message. The CDRs are produced in the switch where the call or message originates. CDRs are then gathered in a centralized database. Each CDR includes the following:<sup>8</sup>
  - i. Date/time of call origination and termination
  - ii. Called and calling party
  - iii. Duration of call
  - iv. Type of call (inbound, outbound)
  - v. Originating and terminating tower (base station)
- c. Key mobile phone evidence is, however, omitted from Call Detail Records including:
  - i. Phone address book
  - ii. Photos (not e-mailed)
  - iii. Videos
  - iv. Audio clips
  - v. Ring tones
  - vi. Deleted phone objects

- d. Text messages are available as business records from a few service providers, if requested. But time periods to preserve them are extremely short and unworkable from a practical point of view:
  - i. Sprint            12 days
  - ii. Nextel           7 days
  - iii. Verizon        3 to 5 days
  - iv. AT&T            No preservation available
- e. Disadvantages to the business records approach include:
  - i. Exposing trial strategy to opposing counsel.
  - ii. Weeks, even months, of red tape involved to get records.
  - iii. Business records are often confusing and difficult to interpret.
  - iv. Service providers do not readily provide help for answers and assistance.

## 2. New Approach – Direct Mobile Phone Extraction and Analysis

- a. A new genre of cell phone forensic extraction tools bypasses service providers, their red tape and delays, and enables an entirely fresh and effective approach to evidence collection.
- b. Robert Morgester, a California deputy attorney general said cell phone extraction devices became available in the past couple of years and have quickly become vital tools in obtaining evidence. “The reason why the cell phone is important is that you are carrying around a **personal diary** of who you talk to and often what you talked about,” Morgester said in reference not to conversations but rather to texting, adding: “Youth today communicate through MySpace and texting.”<sup>9</sup>

## 3. Information Available as Potential Evidence

Over the years mobile phones have converged with other personal handheld consumer devices such as digital cameras, personal digital assistants, media players, and GPS units. This device convergence has greatly augmented the richness of evidence available from today’s smart phone.

# Convergence of Mobile Consumer Electronics



The discoverable information available as evidence on these devices includes the following items all of which can have value in family law cases: <sup>10</sup>

- a. Subscriber and equipment identifiers
- b. Date and time stamps, language, and other settings
- c. Phonebook information
- d. Appointment and calendar information
- e. Text messages (SMS)
- f. Dialed, incoming, and missed call logs
- g. Electronic mail
- h. Photos
- i. Audio and video recordings
- j. Multi-media messages (MMS)
- k. Instant messaging and web browsing activities
- l. Electronic documents
- m. Location information (geotags)

#### 4. Benefits of Direct Mobile Phone Extraction and Analysis

The mobile phone must be physically present for forensic examination, but the following advantage accrue from this process:

- a. Quick. Mobile phone data can be extracted and examined locally with forensics reports available in a day or two.
- b. Not Public. No administrative subpoenas are necessary thus maintaining confidentiality and privacy.
- c. Field-based. A new genre of portable forensic tools enables extraction at an attorney's or investigator's office, at the court house, or other remote location.
- d. Clarity. Clear and understandable forensic reports are available. New timelines and maps designed for attorneys and investigators to visualize case evidence are increasingly being produced.
- e. Helpful. Forensic examiners can provide consulting assistance whenever and wherever needed and can serve as expert witnesses to get evidence admitted.
- f. Robust. Mobile phone evidence can be obtained from over 3,000 models including the latest smart phones. Service plan cancelation is no obstacle. Often text messages or images can be extracted from a phone that the owner thinks he or she has erased. So-called "deleted" data is often available, but only when new data has not yet been written over the mobile phone's memory. Phones that remain unused or lightly used since deletion are better candidates for extraction of "deleted" data.

#### **F. How Attorneys Can Impact Admissibility of Mobile Phone Evidence**

1. Mobile phones are everywhere today and people's lives are in their phones. Evidence residing in those phones is likely relevant, even pivotal, to representing clients in family law matters whether it's a divorce case, or an OFP. It behooves each family attorney with potential evidence residing in a mobile phone to find and analyze that evidence early – before that phone is:
  - a. Lost, damaged, or its service discontinued ("pay as you go" plans).
  - b. Wiped automatically over the network by its service provider.
  - c. Accidentally or intentionally erased of its texts, images, and videos.
  - d. Used actively, day in and day out, which silently recycles deleted texts, images, and videos to accommodate "new" information.



## **G. Social Media 2011**

Social media is on the rise in family law cases. Consider the following facts. Nearly 60% of adults who use the Internet in the U.S. have social media profiles. Its use is growing three times faster than overall Internet usage. Facebook has over 500 million subscribers worldwide, while MySpace has 250 million. Roughly half of Facebook's users are active on the social networking site every day. Facebook blew by Google in March of 2010 as the most-visited web site in the world. Lastly, compared to the populations of the world's nations, Facebook would be the third in line after China and India, if its subscribers were citizens.

## **H. Facebook's Role in Marital Dissolution in the U.S.**

Facebook is the main reason behind every fifth divorce in the US, according to the findings of a new survey conducted by American Academy of Matrimonial Lawyers.<sup>11</sup>

An overwhelming 81% of the nation's top divorce attorneys say they have seen an increase in the number of cases using social networking evidence during the past five years.

The undisputed leader in social media, Facebook is also the undisputed leader in providing evidence for divorce filings. According to the AAML survey 66 percent of the respondents state that the primary evidence for divorce filings are based on Facebook, with MySpace following at 15 percent and Twitter at 5 percent.

Marlene Eskind Moses, president of the AAML, explains the importance of social networking sites to divorce lawyers: "If you publicly post any contradictions to previously made statements and promises, an estranged spouse will certainly be one of the first people to notice and make use that evidence. As everyone continues to share more and more aspects of their lives on social networking sites, they leave themselves open to much greater examinations of both their public and private lives in these sensitive situations."

## **I. Social Media's Unique Communication Paradigm**

Why is social media unique among other established forms of communication causing it to have powerful ramifications in legal discovery in family law matters?<sup>12</sup>

1. Social media's speed and breadth amplify communication velocity. What other means does someone have to announce their change in relationship status to hundreds or even thousands of people in seconds?
2. Social media is not a secure form of communication. Privacy controls are constantly changing and often misunderstood by many users. Risk of impersonation by fake profiles often plays out on Facebook and MySpace to the defamation of users and non-users of social media.
3. Social media content is rapid communication that is not reviewed, not proofread, and often grossly inaccurate.

4. Social media can often be characterized as short and snappy communication lacking in context and precise meaning leaving interpretation to the reader.
5. Social media lacks control over content creation and distribution. Its technical infrastructure is out of the control of its users and organizations giving rise to evidence preservation and collection issues.
6. Social media tacitly encourages candor as a key social behavior which often yields startlingly relevant and often incriminating or impeaching evidence in family law cases.

## **J. Examples of Social Media in Family Law**

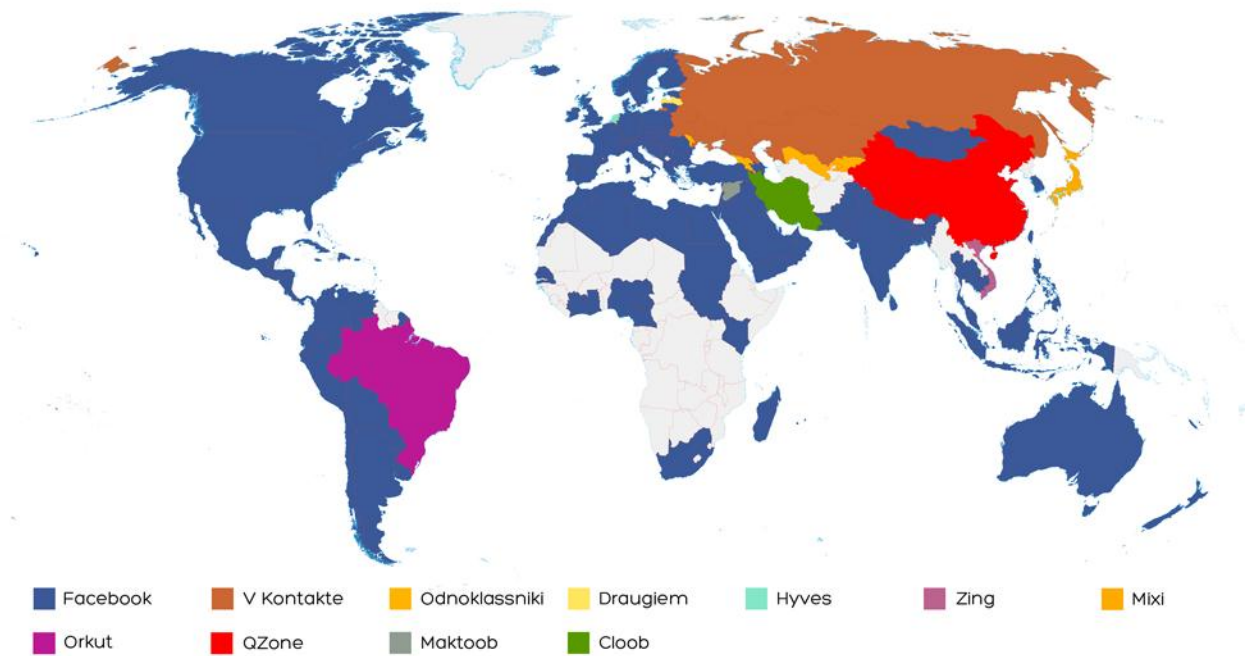
1. Child Custody. The ex-wife had claimed to be engaged, and therefore more capable of providing a stable home environment for the children. But thanks to a friend of the ex-husband who remained “Facebook friends” with the estranged wife, the former husband received some very helpful information – a posting on Facebook that the wife had broken up with the fiancé (who was allegedly abusive), and that she was seeking friends of hers to fix her up with “a rich friend.”<sup>13</sup>
2. Alimony Payment. In a dispute the ex-husband initially claimed in a deposition to have no real job prospects after getting laid off. However, the enterprising attorney for his ex-wife found Twitter messages in which the husband had tweeted about a new job offer (sites such as LinkedIn can also be useful in disputes over support payments, for their evidence of earning capacity or job prospects).<sup>13</sup>
3. Child Support. A man in the middle of a divorce cried poor when it came to child support. Researching his Facebook profile showed photos of him in a Ferrari, on a cruise, and also contained statements by him referring to selling a piece of real estate that he owned.<sup>13</sup>
4. All too often, Facebook becomes, alternatively, the new confessional or an avenue for retaliation after an estranged spouse posts something about the ex. Tampa attorney Chris Ragano, who estimates that over half of his new cases involve social media evidence, compares such Facebook postings to “gasoline on the fire. One side posts something nasty and the other can’t help but retaliate, and we’re off to the races. It’s World War III.”<sup>13</sup>

## **K. Social Networking Sites for Family Lawyers**

1. General social media sites popular in the U.S. like Facebook, MySpace, Twitter, YouTube, LinkedIn, Plaxo, and Second Life.
2. Dating sites like Match.com, e-Harmony, PlentyOfFish, chemistry.com, PerfectMatch.com, and Spark.com.
3. Photograph sharing sites like Flickr, Photobucket, Picasa, and Shutterfly.

4. Location based services sites like foursquare, Gowalla, Brightkite, Yelp, and Facebook Places.
5. Massively multiplayer online role-playing game (MMORPG) sites like RIFT, World of Warcraft, Lord of the Rings Online, and EverQuest II.
6. International sites like Orkut, Skyrock, Ning, Badoo, Tuenti, Xing, Renren, Kaixin001, Cyworld, and Sonico.

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## L. Social Media Discovery

### 7. Informal Discovery

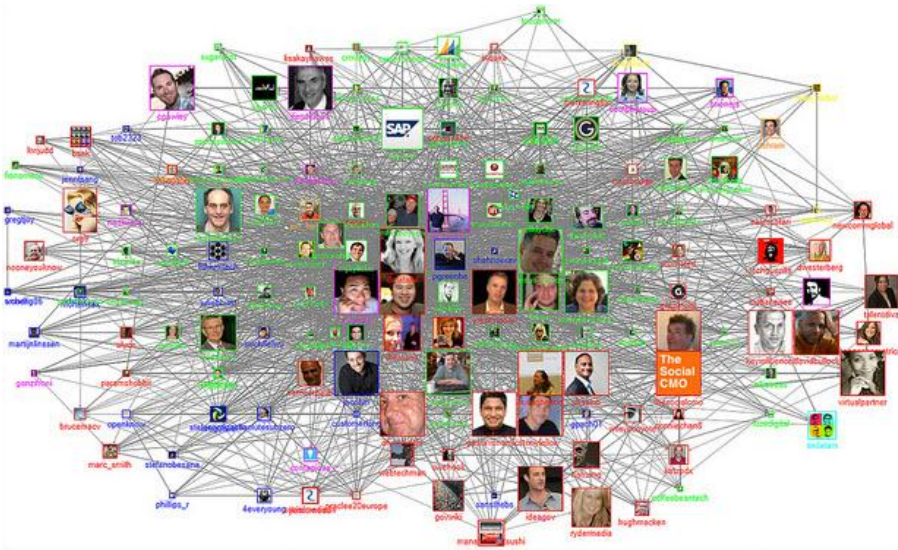
Informal discovery of social networking sites applies before an action is filed in state court and formal discovery commences. Attorneys, paralegals, investigators, and even spousal clients may collect online evidence taken from social media. They may use primitive attempts to print screens from Internet browsers displaying a social media site. But a paralegal manually searching profiles and using PRNT SCRN may not be enough to capture the needed evidence. A lot of blank paper and useless data may result with no impact. Why?

- a. Social networking sites are constantly changing. Preservation must occur at the time of the investigation, not the day before a deposition or trial. The incriminating evidence may be long gone by that time.
- b. A complete capture of all text, photos, video, animations and other dynamic content is a real challenge. PRNT SCRN is no match for it. Specialized capture software in the hands of a professional trained to use it is the preferred method.

- c. Often a repeated, scheduled archiving of the social networking site profile is called for to record changes in the opposing party's information. This technique can, for example, archive the profile twice a day for months and capture hard-to-find fleeting evidence. Specialized capture software exists for this purpose.
- d. It is critical to capture online evidence so that it can be authenticated in court. Metadata describing the online evidence is routinely captured by professionals using software that records date, time, IP, URL, and hash codes that uniquely identify it in a case management environment.
- e. Finally, results of informal discovery must be presented for impact. The process of recording evidence, enhancing it with captions, sound, music, or images, and then sharing it with others will accomplish the legal objective. Creating a compelling video showing of what the investigator did during collection is often valuable, overlaying online evidence with the investigator's audio and video narrative.

Social Networking Analysis is another informal discovery technique used by forensic professionals to visually map, search, and record social networks. Social media visualization methods are used to learn how and why people interact. This advanced capability shows promise for helping family lawyers understand the factual social landscape in their clients' cases. SNA can assist divorce attorneys to:

- a. Determine which friends in the network know each other and depict this information in social graphs.
- b. Filter a social network based on criteria like gender or relationship status.
- c. Discover commonalities within the network like group membership or common interests.
- d. Reveal connections of friends who have the most photos taken together.
- e. SNA can be performed on Facebook, MySpace, Twitter, YouTube, and Flickr.



## 8. Formal Discovery

Social media evidence is electronically stored information (ESI), therefore discoverable according to FRCP 26(b)(1). Litigators should put a litigation hold in place with the third party service provider (social networking site) to preserve digital evidence and then get a court order to provide disclosure of opposing party's evidence on the site. For Facebook the following evidence can be obtained:

- a. User Neoprint
- b. User Photoprint
- c. User Contact Info
- d. Group Contact Info
- e. IP Logs
- f. 90 days of history including deleted information

If the evidence is not there or spoliation is suspected, a computer forensic analysis of the personal computer and its hard drives may be ordered by the court to find evidence of social networking site access and any content authored or viewed that remains.

Subpoenas of social networking sites are the last resort. Site lawyers don't generally like subpoenas and resist responding to them whenever possible. Facebook's general counsel has been quoted as saying, "We're itching for that fight. We don't want to have to deal with these requests." The Stored Communications Act has been ruled to be not applicable to non-government entities for civil discovery in both California and in the federal district of Eastern Virginia, even if a valid subpoena is used. Furthermore the SCA prohibits private data from being disclosed by the social networking site. Facebook only provides basic subscriber information in response to subpoenas and only takes them from federal courts or California courts. And Facebook, as of this writing, charges a mandatory, non-refundable processing fee of \$500 per user account. And if the attorney needs a notarized declaration from the custodian, another \$100 fee is assessed.

## 9. Discovery Ethics

Family law attorneys might be tempted to friend or have a third party friend the ex to get past social networking site privacy controls so as to get access to the opposing party's profile, wall, photos, etc. during informal discovery. But this faux friending practice is deception, even if someone other than the family lawyer, perhaps a private investigator or other third party, poses as a new friend. Attorneys cannot ethically be party to deception. Terms for this practice include pre-texting, or "opposition research."

In Oregon friending an opposing party represented by counsel to see their Facebook page is an ethical violation of Model Rule 4.2. The Philadelphia Bar Association became the first to issue an ethics advisory opinion to expressly outlaw the practice citing the equivalent of Model Rule 4.1. The New York City Bar Association agreed and offered its own opinion addressing this issue.

Generally, it is a far better practice to find a cooperative, friendly third party witness who is known to the opposing party and who already has access to access through a pre-existing friend relationship.

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