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*The Senator Patrick Leahy  
Center for Digital Investigation*

## iPhone Artifacts

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## Introduction

iPhone's are some of the most popular mobile devices today. In 2013 approximately 121 million smartphones were sold in America, with the iPhone accounting for about 45 percent of these sales (Hughes). This report outlines our project in which we compare two of the more current versions of the iPhone, the iPhone 3GS and the iPhone 4, in order to see where applications store their files.

## Background

Quite a lot of work has been done with iPhones in the forensics community due to their popularity. A previous project done at the LCDI set out to find out about what data can be extracted from an iPhone 3G with a logical acquisition, what passwords can be found and what accounts they are associated with, where deleted application data is stored, what kind of information is available when an iPhone is jailbroken, and will forensic tools work on a phone with a passcode lock.

The blog associated with this project can be found at:

<http://computerforensicsblog.champlain.edu/2012/06/08/iphone-forensics/>

Other research in the digital forensics community includes a SANS Institute report on the Forensic Analysis on iOS Devices. The report outlined the operating system and file system used on iPhones and various acquisition and analysis methods.

The paper associated with this project can be found at:

<http://www.sans.org/reading-room/whitepapers/forensics/forensic-analysis-ios-devices-34092>

## Purpose and Scope

The purpose of this project is to find the locations of where various artifacts are stored on the devices and how they differ from device to device. As a result we will have a comprehensive list of locations that law enforcement or the LCDI can use in cases or projects involving iPhones.

## Research Questions

- 1) Where are application artifacts stored on the iPhone 3GS?
- 2) Where are application artifacts stored on the iPhone 4?
- 3) How are deleted artifacts represented in the file system?
- 4) Are files stored in the same location on the iPhone 3GS and the iPhone 4?

## Terminology

Application: Applications are programs that run on mobile platforms like smartphones and tablets. They can be considered the equal as a computer program, just on a different platform.

Artifact: An artifact is a by-product produced during software development. These can be about the development process, or describe the software designs and functions among other possibilities.

Cellebrite: Cellebrite is one of the most frequently used forensics tool used to extract data from mobile devices, much like XRY. However unlike XRY, Cellebrite gives the user the option to go through the system files file

by file in order to obtain file paths that may not be available otherwise. On the downside, Cellebrite does not show information that has been deleted.

iPhone: A series of smartphones designed by Apple. The series runs from the first generation to the newest seventh generation iPhone 5C and iPhone 5S.

iOS: The mobile operating system developed by Apple for use on their mobile products.

XRY: A mobile imaging software by Micro Systemation that allows physical extractions of multiple mobile devices. When an XRY image is opened, the data is broken up into various groups such as Installed Applications, Passwords, Accounts and History with columns that are divided into more detailed information. XRY Physical also allows users to view deleted information.

## Methodology and Methods

The method in which we generated data and analyzed data with each of the three phones was the same. First we factory reset the phones. On the iPhone this is called “Erase All Content and Settings”. The iPhones then prompted us to go through basic setting such as turning location services on and selecting a passcode. Next we downloaded and installed WhatsApp, Viber, Facebook, Facebook Messenger, Twitter, Google+, Skype, Yahoo Messenger, Dropbox, Touch, KIK, KakaoTalk, ICQ, Opera Mini, YouTube, Any.DO, Snapchat, Line, MySMS, Keepsafe, Yahoo Mail, Chrome, LinkedIn, QQ, and ooVoo on both the iPhone 3GS and iPhone 4. We installed Evernote on the iPhone 4 only because of compatibility issues with the iPhone 3GS. We chose these applications because the Cellebrite UFED Physical Pro, our main tool for analysis, claims to support the acquisition of data from these applications.

Once the phones were set up and all the applications were installed, we began generating data. The first half of generating data involved the default applications on the phone. We added and deleted contacts, used maps to navigate to a location, add and deleted reminders, notes, and calendar events, took photos, set up a Gmail account with the default mail application, and viewed webpages, added bookmarks, and wiped history in Safari. The second half of generating data involved the applications we installed on the device. Since there was a total 25 applications installed, we chose to generate data on the more popular applications that didn't require an active number to use. This is due to the fact that we don't have active SIM cards for the phones and therefore do not have a working phone number. After all of the applications finished installing, we set of accounts for each of the to work off of. Generating data for these applications included liking pages, posting comments, sending and receiving messages, downloading attachments, taking pictures, moving emails, viewing webpages, adding bookmarks, and wiping internet history.

The next step was to image the phone for analysis. A physical acquisition was run on both phones with both the Cellebrite UFED Physical Pro and the XRY. These acquisitions created a report of the data extracted from the phones which was used to see what data the two types of software were able to acquire. This report only gave us the data itself, but not the file path of where it is located on the device. We then took this data and attempted to find it manually in file system. The purpose of this is so we can have exact locations of where data is stored for the various applications.

See Appendix A for the generated data sets for the iPhone 3GS and the iPhone 4.

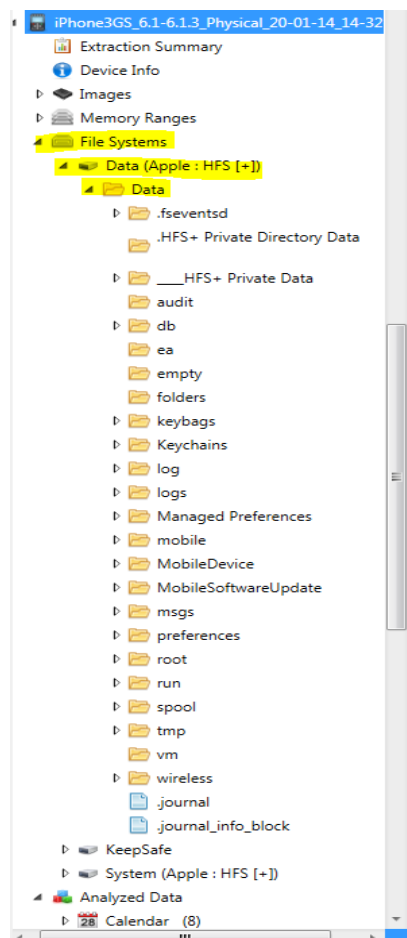
**Table 1: Equipment Used**

Item	Version
XRY	6.7
UFED Physical Analyzer	3.9.2.4
iPhone 3GS	iOS 6.1.3
iPhone 4	iOS 7.0
iPhone 5	iOS 7.0.3
Research-2	Intel Core i7-3770K CPU @ 3.50GHz 16GB RAM Windows 7 Enterprise 64-bit

## Analysis

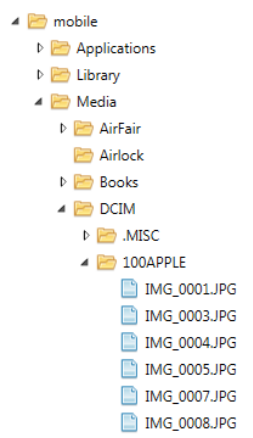
Finding the file paths took a lot of searching in the file systems that Cellebrite is able to show you. The “data” folder is where almost all the data paths are so that is where most of our time was spent (Figure 1).

**Figure 1**



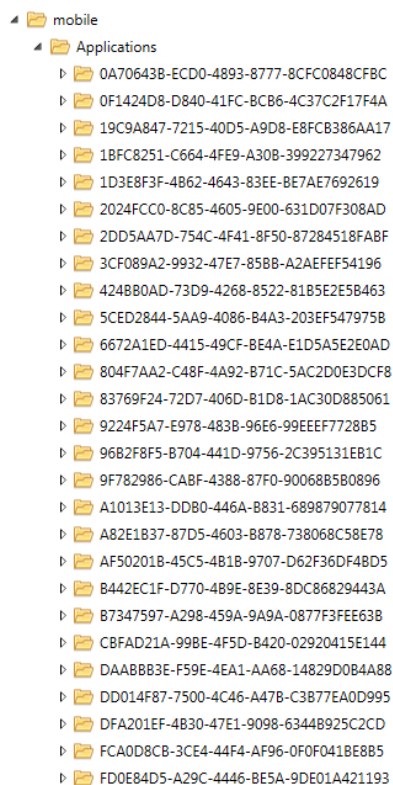
Finding the pictures, that were not deleted, was a pretty straight forward task. We went to the “mobile” folder, went to the “media” folder and then opened the camera folder which we knew was named “DCIM” from previous experience of looking at phone file systems (Figure 2).

Figure 2



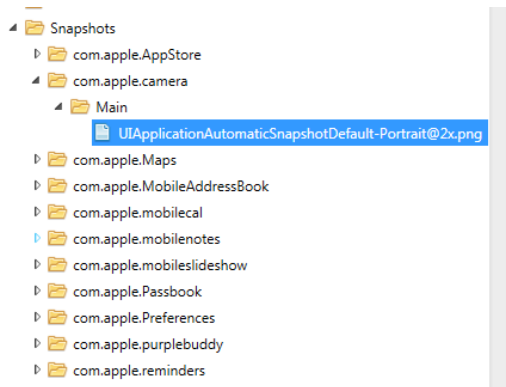
The next task was to find all of the application data to see if we can find where Cellebrite is pulling the data from. This was also found in the “mobile” folder in the “Applications” sub folder (Figure 3). This folder had all the application data but each application was in a randomly named folder which called for a lot of sorting to see which folder was linked to what application. Looking through these folders allowed us to find the logs that held the information that Cellebrite was pulling. This also allowed us to find application snapshots that gave us some idea of what the user was doing with the application.

Figure 3



We were also able to find snapshots of default applications like the Apple Store and the Camera in this file path: /Data/mobile/Library/Caches/Snapshots (Figure 4). While snapshots are hit or miss on if they give you useful information, they are really valuable.

Figure 4



An example of this is the snapshot we found in the camera folder which showed the picture of the headphones after it was taken (Figure 5). This picture was deleted so there is no other way to see this photo was even taken in the first place.

Figure 5




















Unlike the Cellebrite, the XRY did not have the file system view option. Instead, we had to rely on the data which was extracted and analyzed by the XRY. This would not have been a problem if the file path section existed for each information piece. Unfortunately this was not the case, and due to a lack of the file path column in some cases, there were only a few things that could be found.



Of the things that were found were the installed applications, which were found under the Installed Applications tab (Figure 6). The paths were under the column titled File Paths which then included the full location.

### Figure 6

▼ DEVICE		2/6/2014 5:37:06 PM UTC (Device)	sqlite3-shm	2/12/2014 9:12:41 PM UTC (Device)	SQLite Shared Memory	2/6/2014 5:37:06 PM...	Data/Keychains	ocspcache.sqlite3-shm	3
GENERAL INFORMATION		2/6/2014 5:37:06 PM UTC (Device)	sqlite3-wal	2/12/2014 9:11:09 PM UTC (Device)	SQLite Write-Ahead Log	2/6/2014 5:37:06 PM...	Data/Keychains	ocspcache.sqlite3-wal	3
NETWORK INFORMATION		2/12/2014 9:19:57 PM UTC (Device)	.db	2/12/2014 9:19:57 PM UTC (Device)	SQLite	2/12/2014 9:19:57 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/Caches/com.apple.mobilesafari/SafeBrowsing	SafeBrowsing.db	2
EVENT LOG		2/12/2014 9:20:03 PM UTC (Device)	.db	2/12/2014 9:28:41 PM UTC (Device)	SQLite	2/12/2014 9:20:03 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/WebKit/LocalStorage	StorageTracker.db	1
APP USAGE		2/12/2014 9:28:41 PM UTC (Device)	.localstorage	2/12/2014 9:28:41 PM UTC (Device)	SQLite	2/12/2014 9:28:41 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/WebKit/LocalStorage	http_www.moes.com_0_lcalstorage	1
INSTALLED APPS		2/12/2014 9:21:24 PM UTC (Device)	.localstorage	2/12/2014 9:21:43 PM UTC (Device)	SQLite	2/12/2014 9:21:24 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/WebKit/LocalStorage	http_www.nascar.com_0_lcalstorage	1
KEYBOARD CACHE		2/12/2014 9:20:03 PM UTC (Device)	.localstorage	2/12/2014 9:27:33 PM UTC (Device)	SQLite	2/12/2014 9:20:03 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/WebKit/LocalStorage	https_www.google.com_0_lcalstorage	1
ACCOUNTS		2/12/2014 9:20:03 PM UTC (Device)	.localstorage	2/12/2014 9:27:33 PM UTC (Device)	SQLite	2/12/2014 9:20:03 PM...	Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/WebKit/LocalStorage	https_www.google.com_0_lcalstorage	1
CONTACTS		1/28/2014 2:14:10 PM UTC (Device)	sqlite	2/7/2014 7:53:44 PM UTC (Device)	SQLite	1/28/2014 2:14:10 PM...	Data/mobile/Applications/88218F05-61AD-4294-A36C-C8688BD89BD2/Library/Caches/_store_08CCB4F4-0A87-4965-AA6E-...	Store.sqlite	9
► CALENDAR		2/7/2014 5:08:20 PM UTC (Device)	sqlite-shm	2/12/2014 9:23:16 PM UTC (Device)	SQLite Shared Memory	2/7/2014 5:08:20 PM...	Data/mobile/Applications/88218F05-61AD-4294-A36C-C8688BD89BD2/Library/Caches/_store_08CCB4F4-0A87-4965-AA6E-...	Store.sqlite-shm	3
► LOCATIONS		2/7/2014 5:08:20 PM UTC (Device)	sqlite-wal	2/7/2014 7:56:28 PM UTC (Device)	SQLite Write-Ahead Log	2/7/2014 5:08:20 PM...	Data/mobile/Applications/88218F05-61AD-4294-A36C-C8688BD89BD2/Library/Caches/_store_08CCB4F4-0A87-4965-AA6E-...	Store.sqlite-wal	3
► WEB		2/7/2014 5:08:20 PM UTC (Device)	sqlite-wal	2/7/2014 7:56:28 PM UTC (Device)	SQLite Write-Ahead Log	2/7/2014 5:08:20 PM...	Data/mobile/Applications/88218F05-61AD-4294-A36C-C8688BD89BD2/Library/Caches/_store_08CCB4F4-0A87-4965-AA6E-...	Store.sqlite-wal	3
▼ FILES		1/28/2014 2:14:10 PM UTC (Device)	sqlite	1/28/2014 2:14:10 PM UTC (Device)	SQLite	1/28/2014 2:14:10 PM...	Data/mobile/Applications/88218F05-61AD-4294-A36C-C8688BD89BD2/Facebook app	EmptyDB.sqlite	9
PICTURES		2/5/2014 1:21:38 AM UTC (Device)	.db	2/5/2014 1:21:38 AM UTC (Device)	SQLite	2/5/2014 1:21:38 AM...	Data/mobile/Applications/8A361DF0-A811-4ACB-8ACB-775F977C978/Twitter app/ TwitterPlatformResources.bundle	twitter.db	8
AUDIO		9/11/2012 7:08:48 PM UTC (Device)	.db	9/11/2012 7:08:48 PM UTC (Device)	SQLite	9/11/2012 7:08:48 PM...	Data/mobile/Applications/8DA7DFAC-DEE4-457B-9907-819784F7CA89/5467_326_9129_5435_3627_3635_5445_5445_Y_...	yahoo.db	5
VIDEOS		9/11/2012 7:08:48 PM UTC (Device)	.db	9/11/2012 7:08:48 PM UTC (Device)	SQLite	9/11/2012 7:08:48 PM...	Data/mobile/Applications/8DA7DFAC-DEE4-457B-9907-819784F7CA89/5467_326_9129_5435_3627_3635_5445_5445_Y_...	yahoo_images.db	1
DOCUMENTS		1/21/2014 5:06:56 PM UTC (Device)	sqlite	1/21/2014 5:06:56 PM UTC (Device)	SQLite	1/21/2014 5:06:56 PM...	Data/mobile/Applications/6650A471-7AF8-4861-81B9-E92B45CE9AE3/KaikaoTalk app	Message.sqlite	9
ARCHIVES		1/21/2014 5:06:52 PM UTC (Device)	sqlite	1/21/2014 5:06:52 PM UTC (Device)	SQLite	1/21/2014 5:06:52 PM...	Data/mobile/Applications/6650A471-7AF8-4861-81B9-E92B45CE9AE3/KaikaoTalk app	search_log.sqlite	1
DATABASES		1/27/2014 1:33:08 AM UTC (Device)	sqlite3	1/27/2014 1:33:08 AM UTC (Device)	SQLite	1/27/2014 1:33:08 AM...	Data/mobile/Applications/5B67E260-2748-4A5D-95DF-704E960C25BA/Evernote app	client.sqlite3	3
UNRECOGNIZED		1/16/2014 10:05:50 PM UTC (Device)	sqlite	1/16/2014 10:05:50 PM UTC (Device)	SQLite	1/16/2014 10:05:50 PM...	Data/mobile/Applications/27193684-FE59-4D13-AA6A-850D29FF9532/LinkedIn app	linkedin.sqlite	6
► XRY SYSTEM		2/7/2014 6:07:46 PM UTC (Device)	sqlite	2/7/2014 6:07:47 PM UTC (Device)	SQLite	2/7/2014 6:07:46 PM...	Data/mobile/Applications/50DF2867-49E1-4085-B364-B0B66779F94D/Library/ Application Support/ooVoo	ooVoo2.sqlite	2
		2/7/2014 6:07:47 PM UTC (Device)	sqlite-shm	2/12/2014 9:37:09 PM UTC (Device)	SQLite Shared Memory	2/7/2014 6:07:47 PM...	Data/mobile/Applications/50DF2867-49E1-4085-B364-B0B66779F94D/Library/ Application Support/ooVoo	ooVoo2.sqlite-shm	3
		2/7/2014 6:07:47 PM UTC (Device)	sqlite-wal	2/12/2014 9:37:52 PM UTC (Device)	SQLite Write-Ahead Log	2/7/2014 6:07:47 PM...	Data/mobile/Applications/50DF2867-49E1-4085-B364-B0B66779F94D/Library/ Application Support/ooVoo	ooVoo2.sqlite-wal	1
		1/28/2014 3:41:14 PM UTC (Device)	sqlitedb	1/28/2014 3:41:15 PM UTC (Device)	SQLite	1/28/2014 3:41:14 PM...	Data/mobile/Library/AddressBook	AddressBook.sqlitedb	2
		1/28/2014 3:41:15 PM UTC (Device)	sqlitedb-shm	2/18/2014 6:00:18 PM UTC (Device)	SQLite Shared	1/28/2014	Data/mobile/Library/AddressBook	AddressBook.sqlitedb-shm	2

However with the iPhone 3gs, XRY provided a large amount of file paths in the database section, which was filled with various files, most in the format of .db and .sqlite (Figure 8). Some of these were cache files from the installed applications, with file paths that lead to where they were located. However because of the fact that the applications are identified by their generated ID, it is necessary for the technician to go through the application ID's to figure out which app the file is associated with.



Figure 7

▼ PHYSICAL	Importance	Created	Type	Modified	File Format	Accessed	Path	File Name	File Size
SUMMARY		1/6/2014 6:04:49 PM UTC (Device)	.sqlite3	1/6/2014 6:04:49 PM UTC (Device)	SQLite	1/6/2014 6:04:49 PM...	Data/Keychains	TrustStore.sqlite3	16.00 KB
CASE DATA		1/6/2014 6:06:13 PM UTC (Device)	.sqlite3	1/27/2014 5:37:10 PM UTC (Device)	SQLite	1/6/2014 6:06:13 PM...	Data/Keychains	caissuercache.sqlite3	16.00 KB
▼ DEVICE		1/6/2014 6:00:07 PM UTC (Device)	.db	1/27/2014 5:38:27 PM UTC (Device)	SQLite	1/6/2014 6:00:07 PM...	Data/Keychains	keychain-2.db	192.00 KB
GENERAL INFORMATION		1/6/2014 6:08:54 PM UTC (Device)	.sqlite3	1/20/2014 5:37:38 PM UTC (Device)	SQLite	1/6/2014 6:08:54 PM...	Data/Keychains	ocspcache.sqlite3	84.00 KB
NETWORK INFORMATION		1/14/2014 4:58:10 PM UTC (Device)	.sqlite	1/14/2014 4:58:11 PM UTC (Device)	SQLite	1/14/2014 4:58:10 PM...	Data/mobile/Applications/1D3E8F3...	ChatStorage.sqlite	160.00 KB
EVENT LOG		1/14/2014 4:58:21 PM UTC (Device)	.sqlite	1/14/2014 4:59:45 PM UTC (Device)	SQLite	1/14/2014 4:58:21 PM...	Data/mobile/Applications/1D3E8F3...	Contacts.sqlite	88.00 KB
APP USAGE		1/14/2014 4:58:13 PM UTC (Device)	.db	1/14/2014 4:58:13 PM UTC (Device)	SQLite	1/14/2014 4:58:13 PM...	Data/mobile/Applications/1D3E8F3...	Cache.db	4.00 KB
INSTALLED APPS		1/14/2014 4:58:13 PM UTC (Device)	.db-shm	1/14/2014 5:14:46 PM UTC (Device)	SQLite Shared Memory	1/14/2014 4:58:13 PM...	Data/mobile/Applications/1D3E8F3...	Cache.db-shm	32.00 KB
KEYBOARD CACHE		1/14/2014 4:58:13 PM UTC (Device)	.db-wal	1/14/2014 4:59:36 PM UTC (Device)	SQLite Write-Ahead Log	1/14/2014 4:58:13 PM...	Data/mobile/Applications/1D3E8F3...	Cache.db-wal	338.00 KB
ACCOUNTS		1/14/2014 5:04:24 PM UTC (Device)	.data	1/14/2014 5:04:39 PM UTC (Device)	SQLite	1/14/2014 5:04:24 PM...	Data/mobile/Applications/804F7AA2...	Contacts.data	176.00 KB
CONTACTS		1/14/2014 5:04:24 PM UTC (Device)	.data	1/14/2014 5:04:24 PM UTC (Device)	SQLite	1/14/2014 5:04:24 PM...	Data/mobile/Applications/804F7AA2...	Index.data	20.00 KB
► CALENDAR		1/14/2014 5:00:55 PM UTC (Device)	.db	1/14/2014 5:00:56 PM UTC (Device)	SQLite	1/14/2014 5:00:55 PM...	Data/mobile/Applications/804F7AA2...	Cache.db	4.00 KB
► MESSAGES		1/14/2014 5:00:56 PM UTC (Device)	.db-shm	1/14/2014 5:14:46 PM UTC (Device)	SQLite Shared Memory	1/14/2014 5:00:56 PM...	Data/mobile/Applications/804F7AA2...	Cache.db-shm	32.00 KB
► LOCATIONS		1/14/2014 5:00:56 PM UTC (Device)	.db-wal	1/14/2014 5:04:33 PM UTC (Device)	SQLite Write-Ahead Log	1/14/2014 5:00:56 PM...	Data/mobile/Applications/804F7AA2...	Cache.db-wal	474.80 KB
► WEB		1/14/2014 5:00:58 PM UTC (Device)	.db	1/14/2014 5:00:58 PM UTC (Device)	SQLite	1/14/2014 5:00:58 PM...	Data/mobile/Applications/804F7AA2...	cache.db	12.00 KB
▼ FILES		1/14/2014 5:00:56 PM UTC (Device)	.sql	1/14/2014 5:00:56 PM UTC (Device)	SQLite	1/14/2014 5:00:56 PM...	Data/mobile/Applications/804F7AA2...	googleanalytics-v2.sql	44.00 KB
PICTURES		1/14/2014 5:00:56 PM UTC (Device)	.sql	1/14/2014 5:00:56 PM UTC (Device)	SQLite	1/14/2014 5:00:56 PM...	Data/mobile/Applications/804F7AA2...	googleanalytics-v3.sql	24.00 KB
AUDIO		12/5/2013 10:26:58 PM UTC (Device)	.sqlite	12/5/2013 10:26:58 PM UTC (Device)	SQLite	12/5/2013 10:26:58 PM...	Data/mobile/Applications/0A70643B...	EmptyDB.sqlite	8.72 MB
VIDEOS		12/5/2013 10:26:58 PM UTC (Device)	.sqlite	1/20/2014 4:30:41 PM UTC (Device)	SQLite	12/5/2013 10:26:58 PM...	Data/mobile/Applications/0A70643B...	Store.sqlite	8.87 MB
DOCUMENTS		1/14/2014 5:10:14 PM UTC (Device)	.db	1/14/2014 5:10:14 PM UTC (Device)	SQLite	1/14/2014 5:10:14 PM...	Data/mobile/Applications/0A70643B...	Cache.db	4.00 KB
ARCHIVES		1/14/2014 5:10:14 PM UTC (Device)	.db-shm	1/20/2014 5:36:22 PM UTC (Device)	SQLite Shared Memory	1/14/2014 5:10:14 PM...	Data/mobile/Applications/0A70643B...	Cache.db-shm	32.00 KB
DATABASES		1/14/2014 5:10:14 PM UTC (Device)	.db-wal	1/20/2014 5:35:42 PM UTC (Device)	SQLite Write-Ahead Log	1/14/2014 5:10:14 PM...	Data/mobile/Applications/0A70643B...	Cache.db-wal	3.69 MB
UNRECOGNIZED		1/14/2014 5:14:30 PM UTC (Device)	.db	1/20/2014 5:36:27 PM UTC (Device)	SQLite	1/14/2014 5:14:30 PM...	Data/mobile/Applications/0A70643B...	fbsyncstore.db	80.00 KB
▼ XRY SYSTEM									
DEVICE OVERVIEW									
LOG									

The accounts that were found on XRY had a large difference, and although both did not give us the specific location, compared to the iPhone 3gs, the iPhone 4 stored much less information (Figure 8, Figure 9).

Figure 8: iPhone 3gs

▼ PHYSICAL	Importance	Application	Password	Name	Name	Email Address	Account Name	SSL	Phone
SUMMARY		Apple Keychain (Service)					GetAppIdentifierPrefix		
CASE DATA		Apple Keychain (Service)					Chrome		
▼ DEVICE		Apple Keychain (Service)					bundleSeedID		
GENERAL INFORMATION		Apple Keychain (Service)					bundleSeedID		
NETWORK INFORMATION		Apple Keychain (Service)					Y29tLnRlbnNlbnQubXNmc2RrLmtleWN...		
EVENT LOG		Apple Keychain (Service)					TXlQYXNzV29yZFN0YXRl		
APP USAGE		Apple Keychain (Service)					UGFzc1dvcnRTZXQ=		
INSTALLED APPS		Apple Keychain (Service)					YXV0b0xvY2lTY3JlZW4=		
KEYBOARD CACHE		Apple Keychain (Service)					Zmlyc3Rvc2VQYXNz		
ACCOUNTS		Apple Keychain (Service)					testingforensics@gmail.com		
CONTACTS		Apple Keychain (Service)					KAOKeychainCryptedDeviceIDKey		
► CALENDAR		Apple Keychain (Service)					kEntitlementCacheKey		
► MESSAGES		Apple Keychain (Service)					registrationV1		
► LOCATIONS		Apple Keychain (Service)							
► WEB		Apple Keychain (Account)	ncEJ28sV5OE7MH...				Encryption.PublicKey		
► FILES		Apple Keychain (Account)	XqO92PJAM+eCpNnqSIFv...				Encryption.Signature		
► XRY SYSTEM		Apple Keychain (Account)	/ziTpAdTpBu5...				Encryption.Cookie		
		Apple Keychain (Account)	MYavAapiCE8=				Encryption.Salt		
		Apple Keychain (Account)	1124139008				Encryption.ExpirePublicKey1		
		Apple Keychain (Account)	7910339				Encryption.ExpirePublicKey2		
		Apple Keychain (Account)	88cb7b7f27af265e2f913e3cf5...				Cookies.Client		
		Apple Keychain (Account)	1898135603				TrafficRouting.Version		
		Apple Keychain (Account)	champlain				testingforensics@gmail.com		

Figure 9: iPhone 4

▼ PHYSICAL	Importance	Application	Phone	Line ID	Name	
SUMMARY		Line				
CASE DATA		Viber	+12078319486			
▼ DEVICE						
GENERAL INFORMATION						
NETWORK INFORMATION						
EVENT LOG						
APP USAGE						
INSTALLED APPS						
KEYBOARD CACHE						
ACCOUNTS						
CONTACTS						

However, XRY did enable us to see some data that had been deleted even if the file paths were not provided. With the programs simple interface, a column labeled Deleted is visible with a Yes or a No that allows the user to see whether the data is available on the phone or not (Figure 10).

Figure 10

▼ PHYSICAL	Importance	Name	Deleted
SUMMARY		Harry Potter	
CASE DATA		Billy Bob	Yes
▶ DEVICE		◆ ◆	Yes
CONTACTS			Yes
▶ CALENDAR		Rotten Tomatoes	
MESSAGES		Jon Smith	

## Results

The file paths that were found were not many, in both programs. Due to the restrictions mentioned above in the analysis, Cellebrite turned out to be a much more user friendly tool in this specific project. Neither program gave the option to go straight from the analyzed data to the file path from its' right click dropdown, and none of the data that needed to be found pointed towards where the data might be placed in the file systems. However on both programs what *was* found were the paths that led to where applications from the app store were:

[/Data/Data/mobile/Applications](#)

This held true in both the iPhone 3g and the iPhone 4. Every application that was installed was under the Applications folder by the application ID which could have been identified either by going into each folder and looking at the subgroups or simply by going into the installed applications analyzed data and finding the application ID's for each there. Curiously, even the applications that had the same version installed had completely separate application ID's on the phones which leads us to believe that the application ID's were randomly generated letters and numbers.

Account information was found scattered throughout /Data/Data, but no passwords were found using Cellebrite, although the usernames to the accounts were found. The bits and pieces that could be found were located under:

[/Data/Data/mobile/Library/Accounts/Accounts3.sqlite](#)

The password field in the analyzed data was also left blank. This was also true in the XRY for iPhone 3gs, although there were 2 or 3 passwords listed. However all the passwords that were listed fell under the name of apple keychain, and this was not listed under the accounts formed in the data set. For the iPhone 4, the account information was drastically decreased, with only two applications showing up: LINE and Viber. Even with the two, there were no usernames or passwords listed and no hint as to where the original location may be.

Appendix A shows the breakdown of where data was found for the generated data.

## Conclusion

While looking for the file paths for the activity logged on the phones, we found that the application along with the rest of the data (pictures, contacts, etc.) was stored in the same place on both the iPhone 3S and the iPhone 4S. Application data is stored separately in randomly named folders using Cellebrite. The names are a random set of numbers and letters. To find out what app is in the folder you have to go into each one; depending on the app there will be a folder with the app resources that has the name of the app on it (Ex: Twitter.app). When looking for the file path for the app data you have to see if there is a readable cached log file, we found that some apps had all of the log data that was able to be confirmed while some apps didn't seem to have a readable log. One thing that we found to be interesting was the snapshots that were stored in the app folders. Most apps will have one snapshot logged in the respective app folder which is hit or miss on whether it will be useful or not. For example, there might be a snapshot of the interface of Twitter that shows the last tweet the user had sent. But on the other spectrum you might just get a snapshot of a blank screen or with the case for the Snapchat app, you could just get a snapshot of a black screen before a picture was taken. We feel that snapshots are a great thing to look for to get an idea of what the user was doing on the apps but isn't something to be relied on. Deleted data was not present at all using Cellebrite, which meant that had we not known the specific data that had been generated in the first place, it would be as if the action had never been done.

In the XRY images, the same randomly named folders held all of the applications that were installed onto both the iPhones. Due to the lack of a system data folder, there was no way in which we could retrieve any sort of detailed file path, though it was useful in order to find deleted data that was not possible to find on Cellebrite. Going through the analyzed data it allowed us to go through the data more efficiently but with no way to tell where the specific files containing the information were located, it ended up being useless for our main objective. The deleted data using the XRY were specifically marked as deleted, though the file paths for this was also unavailable.

## Further Work

In order to expand on what we have found during this project, it is possible for us to include the newest generations: the iPhone 5, 5S and 5C. These newer phones tend to have newer versions of iOS which could mean different artifact locations. There is also the possibility to work with different tools such as Oxygen, in order to see if other tools allow us to find missing data that the counterparts cannot extract. Additionally, there are always going to be new application being made, so there will always be a need to research in this area.

## Appendix A

### iPhone 3GS Data Set

Time	User Action	Comments
1/6/14 12:24	Erase all contents and settings	Unsuccessful because it was rooted
12:43	Restore via iTunes	
13:05	Inserted SIM card	Needed for reset to be successful
13:06	Connected to champlainlab	
13:06	Enable location services	
13:10/ 13:19	Requested to reset <a href="mailto:lcdi@champlain.edu">lcdi@champlain.edu</a> password	
13:24	Agreed to Terms and Conditions	
13:27	Selected "Don't Use iCloud"	
13:28	Selected "Don't Send" diagnostics	
13:28	iPhone setup complete	
1/7/14 11:34	Added contact "Harry"	Contacts
11:46	Added contact "Billy"	Contacts
11:48	Deleted contact "Billy"	Contacts
11:50	Used maps to navigate to "1 Church St, Burlington, VT"	Maps
11:51	Started navigation	Maps
11:53	Added reminder "Dentist" and "Get tomatoes"	Reminders
11:54	Deleted reminder "Dentist"	Reminders
11:57	Added note "Go to the store" and "Eat veggies"	Notes
11:58	Deleted note "Eat veggies"	Notes
12:02	Added "Appointment" to calendar	Calendar
12:03	Added "Appointment2" to calendar	Calendar
12:04	Deleted "Appointment" from calendar	Calendar
12:17	Installed WhatsApp	
12:20	Installed Viber	
12:21	Installed Facebook	

Time	User Action	Comments
12:22	Installed Facebook Messenger	
12:23	Installed Twitter	
12:25	Installed Google+	
12:27	Installed Skype	
12:27	Installed Yahoo Mail and Yahoo Messenger	
12:46	Installed Dropbox	Old version
12:48	Installed Touch	
12:49	Installed Kik	
12:49	Installed Evernote	Unsuccessful > Need IOS 7
12:52	Installed KakaoTalk	
12:54	Installed ICQ	
12:54	Installed Opera Mini	
12:59	Installed Any.DO	
13:00	Installed YouTube	
13:01	Installed Snapchat	
13:02	Installed Line	
13:03	Installed MySMS	
13:06	Installed Keepsafe	
13:07	Installed Chrome	
13:08	Installed LinkedIn	
13:09	Installed QQ	
13:09	Installed ooVoo	
1/14/14 11:52	Powered on phone	
12:00	Setup WhatsApp	
12:05	Setup Viber	
12:10	Setup Facebook	
12:19	Setup Messenger	
12:26	Updated Snapchat, YouTube, mysms Messenger, and ooVoo	
12:41	Setup Twitter	
12:45	Setup Google+	
13:02	Setup Skype	
13:23	Setup Yahoo Mail	

Time	User Action	Comments
13:29	Powered off phone	
1/16/14 11:28	Powered on phone	
11:35	Setup Y! Messenger	
11:37	Setup Dropbox	
11:39	Setup Touch	
11:48	Setup Kik	
11:52	Setup KakaoTalk	
11:55	Setup ICQ	
11:56	Opened Opera Mini	
11:57	Setup Any.DO	
11:59	Opened YouTube	
12:01	Setup Keepsafe	
12:03	Setup Snapchat	
12:05	Setup Line	
12:07	Setup mySMS	
12:08	Signed in to Chrome	
12:18	Setup LinkedIn	
12:25	Setup ooVoo	
12:38	Liked Cheese Nips Page	Facebook
12:39	Posted "Who likes forensics?"	Facebook
12:40	Took photo of coffee	Camera
12:41	Took photo of phone	Camera
12:42	Deleted photo of phone	Photos
12:43	Took photo of Cheese Nips and made profile picture	Facebook
12:50	Accepted friend request	Facebook
12:51	Received message "Hi Jon"	Facebook Messenger
12:52	Replied "Hi Jane"	Facebook Messenger
12:53	Received message "How are you?"	Facebook Messenger
12:54	Replied "A little crazy"	Facebook Messenger
12:55	Deleted "How are you?" and "A little crazy"	Facebook Messenger
12:57	Powered off Phone	
1/20/14 11:15	Powered on Phone	



Time	User Action	Comments
11:21	Tweeted "Another day in paradise"	Twitter
11:22	Tweeted "Don't delete me"	Twitter
11:23	Deleted "Don't delete me" tweet	Twitter
11:34	Uploaded picture of coffee with caption	Google+
11:35	+1 the picture	Google+
11:36	Posted comment "Looks good"	Google+
11:37	Changed tagline to "I like forensics"	Google+
12:31	Created folder "Top Secret"	Dropbox
12:35	Opened email "Attachments"	Yahoo Mail
12:36	Downloaded attachment "TestDoc.docx" from email	Yahoo Mail
12:37	Opened "TestDoc.docx" and saved it	Dropbox
12:40	Replied to "Attachments" email	Yahoo Mail
12:42	Deleted 4 Facebook emails	Yahoo Mail
12:52	Set up Gmail	Mail
12:52	Opened "Attachments" email	Mail
12:54	Moved 3 Gmail Team emails to trash	Mail
12:55	Deleted 3 Gmail Team emails from the trash	Mail
12:56	Moved 3 Twitter emails to trash	Mail
12:57	Sent "Test" email	Mail
12:58	Took picture of mouse and keyboard	Camera
13:08	Uploaded picture of mouse and keyboard	Dropbox
13:10	Deleted photo of keyboard	Dropbox
13:19	Added task "Eat pineapple"	Any.DO
13:20	Swiped 3 default tasks to complete	Any.DO
13:24	Shook to remove 4 completed tasks	Any.DO
13:25	Viewed "Team Snapchat"	Snapchat
13:26	Sent picture of Monster with a caption	Snapchat
13:27	Viewed picture of arrows	Snapchat
13:30	Imported photo of keyboard and mouse	Keepsafe

Time	User Action	Comments
13:30	Deleted photo of keyboard	Keepsafe
13:31	Went to Google.com	Chrome
13:32	Googled "martin luther king day"	Chrome
13:32	Selected Wikipedia link	Chrome
13:32	Added Wikipedia link to bookmarks	Chrome
13:33	Cleared browsing history	Chrome
13:34	Went to Google.com	Chrome
13:34	Googled "penguin"	Chrome
13:35	Selected picture of penguin and saved it	Chrome
13:35	Added "penguin" search results to bookmarks	Chrome
13:36	Deleted "penguin" bookmark	Chrome
13:43	Went to Google.com	Safari
13:44	Googled "monkey bread"	Safari
13:45	Selected Pillsbury link	Safari
13:45	Added Pillsbury link to bookmarks	Safari
	**Cleared browser history?	
13:50	Selected picture of monkey bread and saved it	Safari
13:51	Added Wikipedia link to bookmarks	Safari
13:51	Deleted Wikipedia link from bookmarks	Safari
13:54	Liked Champlain College Computer and Digital Forensics	LinkedIn
13:57	Wrote update "Just testing the waters"	LinkedIn
13:58	Took photo of computer and made it the profile picture	LinkedIn

### iPhone 4 Data Set

Time	User Action	Comments
2/6/14 12:37	Connected to wireless	
2/7/14 10:21	Turned on phone	
10:26	Installed WhatsApp	

Time	User Action	Comments
10:26	Installed Viber	
10:27	Installed Facebook	
10:27	Installed Facebook Messenger	
10:28	Installed Twitter	
10:28	Installed Google Plus	
10:29	Installed Skype	
10:30	Installed Yahoo Messenger	
10:30	Installed Yahoo Mail	
10:31	Installed Dropbox	
10:52	Installed Touch	
10:53	Installed KIK	
10:54	Installed KakaoTalk	
10:55	Installed Evernote	
10:57	Installed ICQ	
11:00	Installed Opera Mini	
11:02	Installed YouTube	
11:02	Installed Any.DO	
11:03	Installed Snapchat	
11:03	Installed Line	
11:04	Installed MySMS	
11:04	Installed Keepsafe	
11:05	Installed Chrome	
11:05	Installed LinkedIn	
11:07	Installed QQ	
11:08	Installed ooVoo	
11:24	Added contact "Hill Billy"	Contacts
11:26	Added contact "Jose Martinez"	Contacts
11:26	Deleted contact "Jose Martinez"	Contacts
11:38	Used maps to navigate to "1 Church St, Burlington, VT"	Maps
11:39	Started navigation	Maps
11:40	Added reminder "Buy sundress" and "Waterproof boots"	Reminders
11:41	Deleted reminder "Waterproof boots"	Reminders

Time	User Action	Comments
11:43	Added notes "Eat enchiladas" and "Watch Olympics"	Notes
11:44	Deleted note "Eat enchiladas"	Notes
11:45	Added "Valentines Day" to calendar	Calendar
11:47	Added "Breakfast" to calendar	Calendar
11:47	Deleted "Breakfast" from calendar	Calendar
11:54	Setup WhatsApp	
11:56	Setup Viber	
11:57	Setup Facebook	
11:58	Setup Facebook Messenger	
11:59	Setup Twitter	
12:02	Setup Google Plus	
12:04	Setup Skype	
12:05	Setup Yahoo Messenger	
12:06	Setup Yahoo Mail	
12:07	Setup Dropbox	
12:08	Setup Touch	
12:09	Setup KIK	
12:10	Setup KakaoTalk	
12:12	Setup Evernote	
12:13	Setup ICQ	
12:14	Setup Opera Mini	
12:15	Opened YouTube	Application does not require setup
12:17	Setup Any.DO	Automatically synced data from iPhone 3GS
12:18	Setup Snapchat	
12:50	Setup Line	
12:52	Setup MySMS	
12:53	Setup Keepsafe	
12:52	Setup Chrome	
12:58	Setup LinkedIn	
13:07	Opened QQ	Unable to set up > not in English
13:08	Setup QQ	
13:09	Setup ooVoo	
14:47	Took photo of Red Sox mug	Camera

Time	User Action	Comments
14:47	Took photo of headphones	Camera
14:49	Deleted photo of headphones	Photos
14:51	Liked Boston Red Sox page	Facebook
14:53	Posted "It's a great day for skiing"	Facebook
14:55	Took/uploaded picture of Red Sox logo	Facebook
14:58	Received message "Afternoon!"	Facebook Messenger
14:59	Replied "What do you want for dinner?"	Facebook Messenger
15:00	Received message "Chicken"	Facebook Messenger
15:01	Replied "Lemon?"	Facebook Messenger
15:01	Deleted "Chicken" and "Lemon?"	Facebook Messenger
15:04	Tweeted "Working hard today"	Twitter
15:04	Tweeted "Who likes lemon chicken?"	Twitter
15:05	Deleted "Who like lemon chicken?" tweet	Twitter
15:15	Uploaded picture of Red Sox logo with caption	Google+
15:17	+1 the picture	Google+
15:19	Posted comment "Can't wait for the season"	Google+
15:27	Create folder "New stuff"	Dropbox
15:28	Opened attachment	Yahoo Mail
15:29	Opened/saved TestDoc.docx	Dropbox
15:33	Uploaded photos from camera	Dropbox
15:34	Deleted photo of mug	Dropbox
2/12/14 14:40	Turned on phone	
14:54	Replied to "Attachments" email	Yahoo Mail
14:58	Deleted 14 Facebook email	Yahoo Mail
15:05	Setup Gmail	Mail
15:09	Opened "Attachments" email	Mail
15:10	Replied to "Attachments" email	Mail
15:14	Move 24 Facebook emails to trash	Mail
15:15	Deleted 24 Facebook emails	Mail
15:31	Moved 2 Twitter emails to trash	Mail

Time	User Action	Comments
15:39	Added task "Play music"	Any.DO
15:40	Swiped 5 old tasks to complete	Any.DO
15:40	Shook to remove 6 old tasks	Any.DO
15:48	Sent picture of yellow cup	Snapchat
15:50	Sent picture of Energy logo with caption	Snapchat
15:51	Viewed picture of charger with caption	Snapchat
15:59	Imported photo of Red Sox logo and mug	Keepsafe
16:00	Deleted photo of Red Sox mug	Keepsafe
16:11	Chrome updated	
16:12	Went to Google.com	Chrome
16:12	Googled "valentines day"	Chrome
16:13	Selected Wikipedia link	Chrome
16:13	Saved Valentine's photo	Chrome
16:14	Added Wikipedia photo to bookmarks	Chrome
16:17	Cleared browser history	Chrome
16:17	Deleted Wikipedia photo bookmark	Chrome
16:18	Googled "texas" from address bar	Chrome
16:18	Selected Texas.gov website	Chrome
16:19	Added Texas website to bookmarks	Chrome
16:19	Went to Google.com	Safari
16:20	Googled "nascar"	Safari
16:21	Selected nascar.com website	Safari
16:22	Added NASCAR site to bookmarks	Safari
16:23	Saved image of car	Safari
16:24	Cleared history	Settings
16:25	Deleted NASCAR site from bookmarks	Safari
16:27	Googled "moes" from address bar	Safari
16:28	Selected moes.com website	Safari
16:29	Added Moe's site to bookmarks	Safari
16:31	Liked Champlain College Alumni	LinkedIn
16:32	Commented of post "Running more tests today"	LinkedIn

Time	User Action	Comments
16:32	Wrote update "This is fun"	LinkedIn
16:34	Created note "First note"	Evernote
16:34	Saved "Make Evernote Your Own" page	Evernote
16:38	Took photo of computer tower	Evernote
16:38	Took photo of CD	Evernote
16:39	Deleted photo of computer tower	Evernote
16:39	Deleted Welcome note	Evernote
16:40	Set reminder "Go home"	Evernote
16:40	Set reminder "Watch ted"	Evernote
16:41	Deleted reminder "Watch ted"	Evernote
16:43	Created list "Monkies" and "Tiger"	Evernote
16:44	Created list "Almonds" and "Pie"	Evernote
16:44	Deleted list "Almonds" and "Pie"	Evernote



## Appendix B

### iPhone 3GS Results

Time	User Action	Comments	File Paths
1/6/14 12:24	Erase all contents and settings	Unsuccessful because it was rooted	
12:43	Restore via iTunes		/Data/MobileSoftwareUpdate/restore.log
13:05	Inserted SIM card	Needed for reset to be successful	
13:06	Connected to champlainlab		/Data/preferences/SystemConfiguration/com.apple.wifi.plist
13:06	Enable location services		
13:10/ 13:19	Requested to reset <a href="mailto:lcdi@champlain.edu">lcdi@champlain.edu</a> password		
13:24	Agreed to Terms and Conditions		
13:27	Selected "Don't Use iCloud"		
13:28	Selected "Don't Send" diagnostics		
13:28	iPhone setup complete		
1/7/14 11:34	Added contact "Harry"	Contacts	/Data/mobile/Library/AddressBook/AddressBook.sqlitedb
11:46	Added contact "Billy"	Contacts	
11:48	Deleted contact "Billy"	Contacts	

Time	User Action	Comments	File Paths
11:50	Used maps to navigate to "1 Church St, Burlington, VT"	Maps	
11:51	Started navigation	Maps	
11:53	Added reminder "Dentist" and "Get tomatoes"	Reminders	
11:54	Deleted reminder "Dentist"	Reminders	
11:57	Added note "Go to the store" and "Eat veggies"	Notes	
11:58	Deleted note "Eat veggies"	Notes	
12:02	Added "Appointment" to calendar	Calendar	
12:03	Added "Appointment 2" to calendar	Calendar	
12:04	Deleted "Appointment" from calendar	Calendar	
12:17	Installed WhatsApp		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:20	Installed Viber		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:21	Installed Facebook		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0

Time	User Action	Comments	File Paths
12:22	Installed Facebook Messenger		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:23	Installed Twitter		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:25	Installed Google+		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:27	Installed Skype		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:27	Installed Yahoo Mail and Yahoo Messenger		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:46	Installed Dropbox	Old version	File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:48	Installed Touch		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:49	Installed Kik		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:49	Installed Evernote	Unsuccessful > Need IOS 7	File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:52	Installed KakaoTalk		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:54	Installed ICQ		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:54	Installed Opera Mini		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
12:59	Installed Any.DO		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:00	Installed YouTube		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:01	Installed Snapchat		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0

Time	User Action	Comments	File Paths
13:02	Installed Line		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:03	Installed MySMS		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:06	Installed Keepsafe		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:07	Installed Chrome		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:08	Installed LinkedIn		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:09	Installed QQ		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
13:09	Installed ooVoo		File Systems/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
1/14/14 11:52	Powered on phone		
12:00	Setup WhatsApp		
12:05	Setup Viber		
12:10	Setup Facebook		
12:19	Setup Messenger		
12:26	Updated Snapchat, YouTube, mysms Messenger, and ooVoo		
12:41	Setup Twitter		
12:45	Setup Google+		
13:02	Setup Skype		
13:23	Setup Yahoo Mail		
13:29	Powered off phone		System/BrightonMaps10B329.N88OS/System/Library/SystemConfiguration/Logger.bundle/Logger

Time	User Action	Comments	File Paths
1/16/14 11:28	Powered on phone		System/BrightonMaps10B329.N88OS/System/Library/SystemConfiguration/Logger.bundle/Logger
11:35	Setup Y! Messenger		
11:37	Setup Dropbox		
11:39	Setup Touch		
11:48	Setup Kik		
11:52	Setup KakaoTalk		
11:55	Setup ICQ		
11:56	Opened Opera Mini		
11:57	Setup Any.DO		
11:59	Opened YouTube		
12:01	Setup KeepSafe		
12:03	Setup Snapchat		
12:05	Setup Line		
12:07	Setup mySMS		
12:08	Signed in to Chrome		
12:18	Setup LinkedIn		
12:25	Setup ooVoo		
12:38	Liked Cheese Nips Page	Facebook	
12:39	Posted "Who likes forensics?"	Facebook	
12:40	Took photo of coffee	Camera	/Data/media/DCIM/100APPLE/IMG_0008.JPG
12:41	Took photo of phone	Camera	

Time	User Action	Comments	File Paths
12:42	Deleted photo of phone	Photos	
12:43	Took photo of Cheese Nips and made profile picture	Facebook	Photo of Cheese Nips: /Data/media/DCIM/100APPLE/IMG_0003.JPG
12:50	Accepted friend request	Facebook	
12:51	Received message "Hi Jon"	Facebook Messenger	
12:52	Replied "Hi Jane"	Facebook Messenger	
12:53	Received message "How are you?"	Facebook Messenger	
12:54	Replied "A little crazy"	Facebook Messenger	
12:55	Deleted "How are you?" and "A little crazy"	Facebook Messenger	
12:57	Powered off Phone		
1/20/14 11:15	Powered on Phone		
11:21	Tweeted "Another day in paradise"	Twitter	
11:22	Tweeted "Don't delete me"	Twitter	
11:23	Deleted "Don't delete me" tweet	Twitter	
11:34	Uploaded picture of coffee with caption	Google+	Photo of coffee: /Data/mobile/Media/DCIM/100APPLE/IMG_0001.JPG
11:35	+1 the picture	Google+	

Time	User Action	Comments	File Paths
11:36	Posted comment "Looks good"	Google+	
11:37	Changed tagline to "I like forensics"	Google+	
12:31	Created folder "Top Secret"	Dropbox	
12:35	Opened email "Attachments"	Yahoo Mail	
12:36	Downloaded attachment "TestDoc.docx" from email	Yahoo Mail	
12:37	Opened "TestDoc.docx" and saved it	Dropbox	/Data/mobile/Applications/DAABBB3E-F59E-4EA1-AA68-14829D0B4A88/Documents/Dropbox.sqlite
12:40	Replied to "Attachments" email	Yahoo Mail	
12:42	Deleted 4 Facebook emails	Yahoo Mail	
12:52	Set up Gmail in mail app		
12:52	Opened "Attachments" email	Mail	
12:54	Moved 3 Gmail Team emails to trash	Mail	
12:55	Deleted 3 Gmail Team emails from the trash	Mail	
12:56	Moved 3 Twitter emails to trash	Mail	
12:57	Sent "Test" email	Mail	



Time	User Action	Comments	File Paths
12:58	Took picture of mouse and keyboard	Camera	Mouse: /Data/mobile/Media/DCIM/100APPLE/IMG_0004.JPG Keyboard: /Data/mobile/Media/DCIM/100APPLE/IMG_0005.JPG
13:08	Uploaded picture of mouse and keyboard	Dropbox	
13:10	Deleted photo of keyboard	Dropbox	
13:19	Added task "Eat pineapple"	Any.DO	
13:20	Swiped 3 default tasks to complete	Any.DO	
13:24	Shook to remove 4 completed tasks	Any.DO	
13:25	Viewed "Team Snapchat"	Snapchat	
13:26	Sent picture of Monster with a caption	Snapchat	
13:27	Viewed picture of arrows	Snapchat	
13:30	Imported photo of keyboard and mouse	Keepsafe	Mouse: /KeepSafe/Safe Roll/IMG_0004.JPG
13:30	Deleted photo of keyboard	Keepsafe	
13:31	Went to Google.com	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:32	Googled "martin luther king day"	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History

Time	User Action	Comments	File Paths
13:32	Selected Wikipedia link	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:32	Added Wikipedia link to bookmarks	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:33	Cleared browsing history	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:34	Went to Google.com	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:34	Googled "penguin"	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:35	Selected picture of penguin and saved it	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History  Found pictures of penguins in the cache: /Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Caches/Google/Chrome/Default/Cache/
13:35	Added "penguin" search results to bookmarks	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:36	Deleted "penguin" bookmark	Chrome	/Data/mobile/Applications/83769F24-72D7-406D-B1D8-1AC30D885061/Library/Application Support/Google/Chrome/Default/History
13:43	Went to Google.com	Safari	
13:44	Googled "monkey bread"	Safari	
13:45	Selected Pillsbury link	Safari	
13:45	Added Pillsbury link to bookmarks	Safari	
13:50	Selected picture of monkey bread and saved it	Safari	Picture: /Data/mobile/Media/DCIM/100APPLE/IMG_0008.JPG

Time	User Action	Comments	File Paths
13:51	Added Wikipedia link to bookmarks	Safari	
13:51	Deleted Wikipedia link from bookmarks	Safari	
13:54	Liked Champlain College Computer and Digital Forensics	LinkedIn	
13:57	Wrote update "Just testing the waters"	LinkedIn	
13:58	Took photo of computer and made it the profile picture	LinkedIn	/Data/mobile/Applications/6672A1ED-4415-49CF-BE4A-E1D5A5E2E0AD/Library/Caches/ImageCache/4dcfdc2d1e429d3b5c544cdc55c391c3

### iPhone 4 Results

Time	User Action	Comments	File Paths
2/6/14 12:37	Connected to wireless		Snapshot:/Data/mobile/Library/Caches/Snapshots/com.apple.Preferences/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
2/7/14 10:21	Turned on phone		/Data/mobile/Library/AggregateDictionary/ADDDataStore.sqlitedb
10:26	Installed Whats App		File Systems/Data (Apple : HFS [+])/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:26	Installed Viber		File Systems/Data (Apple : HFS [+])/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:27	Installed Facebook		File Systems/Data (Apple : HFS [+])/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:27	Installed Facebook Messenger		File Systems/Data (Apple : HFS [+])/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:28	Installed Twitter		File Systems/Data (Apple : HFS [+])/Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0

Time	User Action	Comments	File Paths
10:28	Installed Google Plus		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:29	Installed Skype		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:30	Installed Yahoo Messenger		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:30	Installed Yahoo Mail		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:31	Installed Dropbox		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:52	Installed Touch		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:53	Installed KIK		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:54	Installed KakaoTalk		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:55	Installed Evernote		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
10:57	Installed ICQ		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:00	Installed Opera Mini		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:02	Installed YouTube		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:02	Installed Any.DO		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:03	Installed Snapchat		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0

Time	User Action	Comments	File Paths
11:03	Installed Line		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:04	Installed MySMS		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:04	Installed Keepsafe		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:05	Installed Chrome		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:05	Installed LinkedIn		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:07	Installed QQ		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:08	Installed ooVoo		File Systems/Data (Apple : HFS [+])//Data/mobile/Library/Logs/MobileInstallation/mobile_installation.log.0
11:24	Added contact "Hill Billy"	Contacts	Contact log:/Data/mobile/Library/AddressBook/AddressBook.sqlitedb  Snapshot of the contact: /Data/mobile/Library/Caches/Snapshots/com.apple.Maps/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
11:26	Added contact "Jose Martinez"	Contacts	
11:26	Deleted contact "Jose Martinez"	Contacts	
11:38	Used maps to navigate to "1 Church St, Burlington, VT"	Maps	/Data/mobile/Library/Maps  Snapshot of the map: /Data/mobile/Library/Caches/Snapshots/com.apple.Maps/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
11:39	Started navigation	Maps	/Data/mobile/Library/Maps

Time	User Action	Comments	File Paths
11:40	Added reminder "Buy sundress" and "Waterproof boots"	Reminders	Snapshot: /Data/mobile/Library/Caches/Snapshots/com.apple.reminders/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
11:41	Deleted reminder "Waterproof boots"	Reminders	
11:43	Added notes "Eat enchiladas" and "Watch Olympics"	Notes	/Data/mobile/Library/Notes/notes.sqlite Snapshot: /Data/mobile/Library/Caches/Snapshots/com.apple.Maps/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
11:44	Deleted note "Eat enchiladas"	Notes	
11:45	Added "Valentines Day" to calendar	Calendar	/Data/mobile/Library/Calendar/Calendar.sqlitedb
11:47	Added "Breakfast" to calendar	Calendar	/Data/mobile/Library/Calendar/Calendar.sqlitedb
11:47	Deleted "Breakfast" from calendar	Calendar	/Data/mobile/Library/Calendar/Calendar.sqlitedb
11:54	Setup WhatsApp		
11:56	Setup Viber		
11:57	Setup Facebook		
11:58	Setup Facebook Messenger		
11:59	Setup Twitter		
12:02	Setup Google Plus		
12:04	Setup Skype		
12:05	Setup Yahoo Messenger		

Time	User Action	Comments	File Paths
12:06	Setup Yahoo Mail		
12:07	Setup Dropbox		
12:08	Setup Touch		
12:09	Setup KIK		
12:10	Setup KakaoTalk		
12:12	Setup Evernote		
12:13	Setup ICQ		
12:14	Setup Opera Mini		
12:15	Opened YouTube	Application does not require setup	
12:17	Setup Any.DO	Automaticall y synced data from iPhone 3GS	
12:18	Setup Snapchat		
12:50	Setup Line		
12:52	Setup MySMS		
12:53	Setup Keepsafe		
12:52	Setup Chrome		
12:58	Setup LinkedIn		
13:07	Opened QQ	Unable to set up > not in English	
13:08	Setup QQ		
13:09	Setup ooVoo		



Time	User Action	Comments	File Paths
14:47	Took photo of Red Sox mug	Camera	File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0001.JPG  Snapshot: /Data/mobile/Library/Caches/Snapshots/com.apple.mobileslideshow/ Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
14:47	Took photo of headphones	Camera	Snapshot of the picture being taken: /Data/mobile/Library/Caches/Snapshots/com.apple.Maps/Main/UIAppl icationAutomaticSnapshotDefault-Portrait@2x.png
14:49	Deleted photo of headphones	Photos	
14:51	Liked Boston Red Sox page	Facebook	
14:53	Posted "It's a great day for skiing"	Facebook	
14:55	Took/uploaded picture of Red Sox logo	Facebook	Snapshot: /Data/mobile/Applications/88218F05-61AD-4294-A36C-C6868BDB98D2/Library/Caches/Snapshots/com.facebook.Faceb ook/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  Picture Location: File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0003.JPG
14:58	Received message "Afternoon!"	Facebook Messenger	Snapshot: /Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/Snapshots/com.facebook.Messenger/M ain/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  /Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/_store_2ED0272D-E03D-43BB-B7AD-5C1A5900E94D/orca2.db
14:59	Replied "What do you want for dinner?"	Facebook Messenger	Snapshot: /Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/Snapshots/com.facebook.Messenger/M ain/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  /Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/_store_2ED0272D-E03D-43BB-B7AD-5C1A5900E94D/orca2.db
15:00	Received message "Chicken"	Facebook Messenger	/Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/_store_2ED0272D-E03D-43BB-B7AD-5C1A5900E94D/orca2.db

Time	User Action	Comments	File Paths
15:01	Replied "Lemon?"	Facebook Messenger	/Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/_store_2ED0272D-E03D-43BB-B7AD-5C1A5900E94D/orca2.db
15:01	Deleted "Chicken" and "Lemon?"	Facebook Messenger	/Data/mobile/Applications/E1091300-6421-4C46-9CD5-406F074291C4/Library/Caches/_store_2ED0272D-E03D-43BB-B7AD-5C1A5900E94D/orca2.db
15:04	Tweeted "Working hard today"	Twitter	Snapshot: /Data/mobile/Applications/A84361DF-A811-4ACB-A7BC-775F9F77C978/Library/Caches/Snapshots/com.atebits.Tweetie2/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
15:04	Tweeted "Who likes lemon chicken?"	Twitter	/Data/mobile/Applications/A84361DF-A811-4ACB-A7BC-775F9F77C978/Library/Caches/databases/smoth_jon-413485193/106/twitter.db
15:05	Deleted "Who like lemon chicken?" tweet	Twitter	/Data/mobile/Applications/A84361DF-A811-4ACB-A7BC-775F9F77C978/Library/Caches/databases/smoth_jon-413485193/106/twitter.db
15:15	Uploaded picture of Red Sox logo with caption	Google+	/Data/mobile/Applications/399D3254-573B-4305-BFA0-3167598CF9AE/Documents/Model.sqlite
15:17	+1 the picture	Google+	/Data/mobile/Applications/399D3254-573B-4305-BFA0-3167598CF9AE/Documents/Model.sqlite
15:19	Posted comment "Can't wait for the season"	Google+	/Data/mobile/Applications/399D3254-573B-4305-BFA0-3167598CF9AE/Documents/Model.sqlite
15:27	Create folder "New stuff"	Dropbox	
15:28	Opened attachment	Yahoo Mail	/Data/mobile/Applications/EEFFE6AD-8D9D-4AC7-A277-FAF8D913AC61/Library/Caches/Attachments/0fa5f02154fc2eabcdf03d6adf76ebe0/TestDoc.docx
15:29	Opened/saved TestDoc.docx	Dropbox	/Data/mobile/Applications/EEFFE6AD-8D9D-4AC7-A277-FAF8D913AC61/Library/Caches/Attachments/0fa5f02154fc2eabcdf03d6adf76ebe0/TestDoc.docx
15:33	Uploaded photos from camera	Dropbox	Snapshot: /Data/mobile/Applications/617A2DFF-7FAE-41AB-B1D0-8DC47D711119/Library/Caches/Snapshots/com.getdropbox.Dropbox/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  /Data/mobile/Applications/617A2DFF-7FAE-41AB-B1D0-8DC47D711119/Documents/Dropbox.sqlite

Time	User Action	Comments	File Paths
15:34	Deleted photo of mug	Dropbox	
2/12/14 14:40	Turned on phone		
14:54	Replied to "Attachments" email	Yahoo Mail	/Data/mobile/Library/Mail
14:58	Deleted 14 Facebook email	Yahoo Mail	/Data/mobile/Library/Mail
15:05	Setup Gmail	Mail	/Data/mobile/Library/Mail
15:09	Opened "Attachments" email	Mail	/Data/mobile/Library/Mail
15:10	Replied to "Attachments" email	Mail	/Data/mobile/Library/Mail
15:14	Move 24 Facebook emails to trash	Mail	/Data/mobile/Library/Mail
15:15	Deleted 24 Facebook emails	Mail	/Data/mobile/Library/Mail
15:31	Moved 2 Twitter emails to trash	Mail	/Data/mobile/Library/Mail
15:39	Added task "Play music"	Any.DO	Snapshot: /Data/mobile/Applications/CD3ABB44-86FE-4E4D-9013-1109BD1CE399/Library/Caches/Snapshots/com.anydo.AnyDO/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png
15:40	Swiped 5 old tasks to complete	Any.DO	
15:40	Shook to remove 6 old tasks	Any.DO	
15:48	Sent picture of yellow cup	Snapchat	
15:50	Sent picture of Energy logo with caption	Snapchat	

Time	User Action	Comments	File Paths
15:51	Viewed picture of charger with caption	Snapchat	
15:59	Imported photo of Red Sox logo and mug	Keepsafe	
16:00	Deleted photo of Red Sox mug	Keepsafe	
16:11	Chrome updated		
16:12	Went to Google.com	Chrome	
16:12	Googled "valentines day"	Chrome	
16:13	Selected Wikipedia link	Chrome	
16:13	Saved Valentine's photo	Chrome	File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0005.JPG
16:14	Added Wikipedia photo to bookmarks	Chrome	/Data/mobile/Applications/5AB030D6-B676-453E-85AD-94B15E9F3E73/Library/Application Support/Google/Chrome/Default/Bookmarks
16:17	Cleared browser history	Chrome	
16:17	Deleted Wikipedia photo bookmark	Chrome	
16:18	Googled "texas" from address bar	Chrome	/Data/mobile/Applications/5AB030D6-B676-453E-85AD-94B15E9F3E73/Library/Application Support/Google/Chrome/Default/History
16:18	Selected Texas.gov website	Chrome	/Data/mobile/Applications/5AB030D6-B676-453E-85AD-94B15E9F3E73/Library/Application Support/Google/Chrome/Default/History
16:19	Added Texas website to bookmarks	Chrome	/Data/mobile/Applications/5AB030D6-B676-453E-85AD-94B15E9F3E73/Library/Application Support/Google/Chrome/Default/Bookmarks

Time	User Action	Comments	File Paths
16:19	Went to Google.com	Safari	/Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/Caches/com.apple.mobilesafari/Cache.db
16:20	Googled "nascar"	Safari	/Data/mobile/Library/Safari/SearchEngines.plist
16:21	Selected nascar.com website	Safari	/Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/Caches/com.apple.mobilesafari/Cache.db
16:22	Added NASCAR site to bookmarks	Safari	/Data/mobile/Library/Safari/Bookmarks.db
16:23	Saved image of car	Safari	File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0006.JPG
16:24	Cleared history	Settings	
16:25	Deleted NASCAR site from bookmarks	Safari	/Data/mobile/Library/Safari/Bookmarks.db
16:27	Googled "moes" from address bar	Safari	/Data/mobile/Library/Safari/SearchEngines.plist
16:28	Selected moes.com website	Safari	Snapshot: /Data/mobile/Applications/6D558511-A629-45F4-A7B0-D779EF193BD9/Library/Caches/Snapshots/com.apple.mobilesafari/Main/Default-Portrait@2x.png
16:29	Added Moe's site to bookmarks	Safari	/Data/mobile/Library/Safari/Bookmarks.db
16:31	Liked Champlain College Alumni	LinkedIn	/Data/mobile/Applications/271936B4-FE59-4D13-AA6A-850D29FF9532/Documents/LinkedIn.sqlite
16:32	Commented of post "Running more tests today"	LinkedIn	/Data/mobile/Applications/271936B4-FE59-4D13-AA6A-850D29FF9532/Documents/LinkedIn.sqlite
16:32	Wrote update "This is fun"	LinkedIn	/Data/mobile/Applications/271936B4-FE59-4D13-AA6A-850D29FF9532/Documents/LinkedIn.sqlite
16:34	Created note "First note"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.sqlite

Time	User Action	Comments	File Paths
16:34	Saved "Make Evernote Your Own" page	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:38	Took photo of computer tower	Evernote	File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0008.JPG
16:38	Took photo of CD	Evernote	Snapshot: /Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Library/Caches/Snapshots/com.evernote.iPhone.Evernote/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  File Systems/Data (Apple : HFS [+])//Data/mobile/Media/DCIM/100APPLE/IMG_0009.JPG
16:39	Deleted photo of computer tower	Evernote	
16:39	Deleted Welcome note	Evernote	
16:40	Set reminder "Go home"	Evernote	Snapshot: /Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Library/Caches/Snapshots/com.evernote.iPhone.Evernote/Main/UIApplicationAutomaticSnapshotDefault-Portrait@2x.png  /Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:40	Set reminder "Watch ted"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:41	Deleted reminder "Watch ted"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:43	Created list "Monkies" and "Tiger"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:44	Created list "Almonds" and "Pie"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite
16:44	Deleted list "Almonds" and "Pie"	Evernote	/Data/mobile/Applications/5B67E260-274B-4A5D-95DF-704E960C25BA/Documents/www.evernote.com/65007957/Evernote7.s qlite

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