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Data Locations in the Nokia N900

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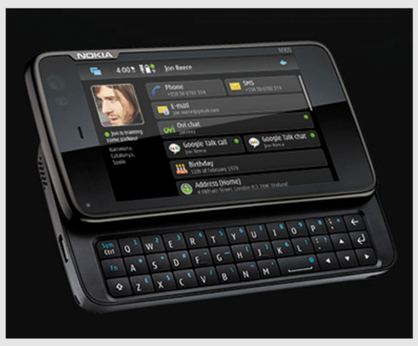
Abstract

The Nokia N900 is a very powerful smartphone and offers great utility to users. As smartphones contain a wealth of information about the user, including information about the user's contacts, communications, and activities, investigators must have at their disposal the best possible methods for extracting important data from smartphones. Unlike with other smartphones, knowledge of forensic acquisition from the N900 is extremely limited. Extractions of data from the N900 are categorized into limited triage extractions and full physical extractions. The imaging process of the phone has been explained as is necessary for a full investigation of the phone. The types of data as called for in a limited data extraction have been identified, and the locations of these files on the N900 were detailed. Also, a script was created which can be utilized for a limited data extraction from a Nokia N900.

Nokia N900



Very powerful smartphone
32 gigabytes onboard storage
Up to 16 gigabytes microSD storage
5 megapixel camera

Maemo

maemo.org

Linux based operating system
Designed for mobile devices
Built for web applications
Includes Unix functionality

Method

Used a Nokia N900 for a week as a personal phone
Used for calls, texts, contact management, calendar, web browsing, took pictures and videos
Logged as much activity as possible
Created physical image of operating system partition and examined for data

Results

Found locations of

Address Book	SMS / MMS	Web History, including typed URLs	Pictures
Call History	Calendar	Cookies	Videos

Most data was stored in SQLite database files

Excerpts of SMS and calendar entries from files on the phone, stored in SQLite database files

	remote_uid	channel	free_text
e>	+1937[redacted]		1st quarter is over.... I took a pitch for 6, and just got a pick 6.... 28-7
e>	+1937[redacted]		YES! Who is QB?
e>	+1937[redacted]		England. Just ran a kickoff for a TD lol
e>	+1937[redacted]		Punt return for a td.... 4 tds so far, 56-21. Halftime
e>	+1937[redacted]		Nice!
e>	+1603[redacted]		I guess the offense I drew u worket pretty well. Haltime my brothers are up 56 to 21.

DateStart	DateEnd	Summary	Location
1285358400	1285362000	Bowling	Union basement
1285414200	1285417800	Wake	
1285857000	1285860600	Go to lab for quiz stuff	Lab

Deliverables

Created a script to extract all important data

Typed URLs	SMS / MMS
Web browsing history	Contact list
Cookies	Calendar
Web sign-ons	Multimedia Files
Call history	E-mail artifacts

All files are copied to the microSD card

Explained in detail how to create a full image of the phone

- Image is created using onboard dd utility
- Phone is connected to host computer via USB, configured as network connection
- Image is passed over USB cable using SSH

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