

## Forensic Analysis of Mobile Phone Blackberry Operating System Based

Al Amin, Sunda Ariana, Yesi Novaria Kunang

Master of Information Technology Program  
Bina Darma University  
e-mail : alamin.amin64@yahoo.co.id

### **Abstract**

*Mobile phone is a media that nowadays develops significantly in the world and especially in Indonesia where this device has information inside. Mobile Phone is one of media that can be used in proving a crime. One of ways to get that information is by doing mobile phone forensic. Research was done to analyze mobile phone forensic Blackberry system operation based by using some steps or process. They are: identification, store or collection, analysis, and documentation or presentation so evidence data is the result. It is descriptive research where by analysis, it could describe information or data that is gotten from blackberry system operation based mobile phone by using forensic software such as mobileedit lite, deft 7 linux, and accessdata FTK imager. Results obtained from this research is digital data like SMS, call history, history of fuel, music, video and others, in addition to the operating system based mobile phones blackberry forensic can be performed on other mobile phones.*

**Keywords :** Mobile phone, Forensic, Blackberry System Operation

## 1 INTRODUCTION

The development of information technology is growing very advanced, it can be felt by the more easily and quickly get the information needed. The rapid advancement of information technology has an impact on the comfort and safety for users, such as crime. To solve crimes that utilize information technology advances Indonesian government make laws ITE, this law regulates the use of information technology and sanctions for those who violate them, with the ITE law media or electronic devices may be used as evidence for crimes in state court.

In 2010, DFAT ( digital forensic analyst team ) to investigate evidence of a cell phone is 118 214 types of crime evidence. Blackberry is a handheld device that is currently very much its reach 13.85 million users in Indonesia ( Pitoyo , 2013).

From the above background can be identified issues include:

1. Operating system based mobile phones blackberry is one of the digital evidence used for proof of a criminal act.
2. Operating system based mobile phones blackberry use a different method of data storage as compared to other smartphones.

elemen data	mobiledir lin			deft / linux			accessdata FTK imager		
	blackberry versi 5	blackberry versi 6	blackberry versi 7	blackberry versi 5	blackberry versi 6	blackberry versi 7	blackberry versi 5	blackberry versi 6	blackberry versi 7
SMS	3 SMS Terbaca	205 SMS terbaca	6 SMS terbaca	-	-	-	-	-	-
Penggalan	253 Penggalan	161 Penggalan	179 Penggalan	-	-	-	-	-	-
Kontak	220 Kontak	129 Kontak	192 Kontak	-	21 Kontak	104 Kontak	-	-	108 Kontak
Telepon	Terbaca	Terbaca	Terbaca	-	Terbaca	Terbaca	-	-	Terbaca
Email	1 Email Terbaca	-	-	-	-	-	-	-	-
Catatan	11 Catatan Terbaca	-	-	-	-	-	-	-	-
Catatan Suara	3 Catatan Suara	-	-	-	1 Terbagus	3 Catatan Suara	3 terbagus	1 Terbagus	3 Catatan Suara
Suara	Terbaca	-	-	-	Terbaca	Terbaca	8 terbagus	Terbaca	Terbaca
Penggalan	250 BBM	-	7 BBM	250 BBM	14 BBM	-	384 BBM	14 BBM	13 BBM
BBM	Terbaca	-	Terbaca	Terbaca	Terbaca	-	Terbaca	Terbaca	Terbaca
MMS	3 MMS Terbaca	-	-	-	-	-	-	-	-
Video	-	-	-	30 Video Terbaca	19 Video Terbaca	30 Video Terbaca	31 Video Terbaca	21 Video Terbaca	70 Video Terbaca
Musik	205 Musik Terbaca	-	-	205 Musik Terbaca	165 Musik Terbaca	319 Musik Terbaca	206 Musik Terbaca	193 Musik Terbaca	429 Musik Terbaca
Gambar	147 Gambar Terbaca	59 Gambar Terbaca	51 Gambar Terbaca	217 Gambar terbaca	471 Gambar Terbaca	296 Gambar Terbaca	584 Gambar terbaca	671 Gambar Terbaca	524 Gambar Terbaca

Figure 1: Forensic results-based mobile phone operating system blackberry

3. The difficulty of obtaining data on a mobile phone-based operating system forencrypted blackberry.

The formulation of the problem in this research is

1. Is forensic software can perform forensics on the operating system based mobile phones blackberry ?
2. What forensic results based mobile phone operating system blackberry ?

The purpose of the research-based forensic analysis of mobile phone operating system this blackberry.

1. Determine if the software can perform forensic forensic-based mobile phone operating system blackberry.
2. knowing what forensic results obtained on the operating system based mobile phones blackberry.

The benefit of this study is to prove that the operating system based mobile phones blackberry diforensik can use forensic software and be able to know the results obtained forensics on mobile phones based on the BlackBerry operating system software forensics.

The title of this research is the analysis of forensic -based mobile phone operating system blackberry. In order for this study do not deviate from what was discussed by the researcher, the researcher limited the problem only on the use of software deft linux, MOBILedit Forensic and AccessData FTK imager can perform forensics on mobile phone based on the blackberry operating system blackberry operating system version 5, 6 and 7 contained in the internal memory.

## 2 RESEARCH METHODOLOGY

### 2.1 Object Research

The object of research in the forensic analysis of mobile phone-based operating system is a blackberry device operating system based mobile phones blackberry, blackberry operating

system used is version 5, version 6 and version 7. Model-based mobile phone operating system that is used to study the blackberry is a blackberry curve 8520, blackberry torch 9800, blackberry 9900 bold.

## **2.2 Time**

The study took place from October 2013 to February 2014

## **2.3 Equipment Used**

In forensic analysis of research-based mobile phone operating system blackberry, research used to support the following equipment:

1. Hardware, hardware used in this study as a data cable, mobile phone-based devices blackberry operating system, and computer or laptop.
2. Software, the software used in this study as MOBILedit lite, Deft 7 linux, and Access-Data FTK imager.

## **2.4 Method of Analysis**

Forensic methods conducted by researchers to ignore or take references from Aaron Philip, David Cowen, and Cris Davis in the book that they make with the title "Hacking Exposed Computer Forensics Second Edition " (2010) as follows:

1. Identification
2. Storage or Collection
3. Analysis
4. Documentation or Presentation

## **2.5 Data Used**

In forensic analysis of research-based mobile phone operating system blackberry, obtained the expected results for the data required such as SMS, Contact Phone, MMS, BBM History, Pictures, Music, and Video.

# **3 RESULT AND DISCUSSION**

## **3.1 Identification Based Mobile Phones Blackberry Operating System**

At this stage is to identify terhadap operating system based mobile phones blackberry, this study uses three (3) operating system based mobile phone blackberry, mobile phone-based information third blackberry operating system used in this study can be seen in Table 1. three information-based mobile phone operating system blackberry below.

Table 1: Three Information-Based Mobile Phones Blackberry Operating System

No	Information	Specification
1	IMEI PIN Model Hardware Revision Software Revision Network	3.528E+14 2A10DF7F Blackberry 8520 Curve 5.2.0.96 5.0.0.900 GSM
2	IMEI PIN Model Hardware Revision Software Revision Network	3.562E+14 28A2C024 Blackberry 9800 Torch 6.6.0.241 6.0.0.666 GSM
3	IMEI PIN Model Hardware Revision Software Revision Network	3.597E+14 2A4BB496 Blackberry 9900 Bold 5.1.0.393 7.1.0.523 GSM

### 3.2 Storage Or Collection-Based Mobile Phones Blackberry Operating System

After identification of the operating system based mobile phones blackberry, the next stage of storage or collection of electronic evidence is often called the acquisition. Acquisition stage is the stage in which to get the data or information contained in the electronic evidence using forensic software so resulting in digital evidence, digital evidence which is used to analyze electronic evidence. Acquisition phase based mobile phone operating system blackberry performed in this study by using forensic software that MOBILedit lite, deft 7 linux, and AccessData FTK imager.

### 3.3 Analysis Based Mobile Phones Blackberry Operating System

At this stage the researchers conducted an analysis of the operating system based mobile phones which blackberry has done earlier stages of acquisition. Phase of the acquisition of the above resulted in some data that can be detected by forensic software.

### 3.4 Documentation or presentation based mobile phone operating system blackberry

At this stage, make a report of the results of forensic-based mobile phone operating system blackberry.

### 3.5 Process-Based Forensic Mobile Phones Blackberry Operating System

Forensic process is a means used to obtain the information stored on electronic data or electronic evidence one of them is a cell phone or mobile phone consists of the identification, storage, or known by the acquisition, analysis, and documentation or the following report (Philipp, Cowen, and Davis , 2010: 15). in this study forensic process-based mobile phone operating system blackberry has been done and described in the previous section.

### 3.6 Results-Based Forensic Mobile Phones Blackberry Operating System Using MOBILedit Lite, Deft Linux, and AccessData FTK Imager

The results obtained from forensic software MOBILedit lite, deft linux, and AccessData FTK imager-based mobile phone operating system blackberry obtained SMS, MMS, phone contacts, call history, history of fuel, music, videos, and images. Show in Figure 1.

## 4 CONCLUSION

From the research conducted on forensic analysis based mobile phone operating system blackberry can be concluded as follows

1. Forensic software such as MOBILedit lite, deft 7 AccessData FTK imager linux and can perform forensics on the operating system based mobile phones blackberry either version 5, version 6 and version 7
2. MOBILedit lite is used for forensic analysis of mobile phone-based operating system blackberry generates digital data such as SMS, phone contacts, call history, notes, voice notes, music, pictures, history BBM, e-mail, MMS
3. Deft 7 AccessData FTK imager linux and used for forensic analysis of mobile phone operating system blackberry berbasisi generates digital data such as fuel history, music, pictures, videos, voice notes
4. Deft 7 AccessData FTK imager linux and can read the files that have been deleted on the operating system based mobile phones blackberry, this can be seen in the picture erased video 5:45, 5:49 picture deleted pictures, images saved voice notes 5.63 and erased, and drawing 5.81 images are stored and erased on a mobile phone-based version of the BlackBerry operating system 7

The advice presented in this study are as follows:

1. To dig deeper into dealing with forensic-based mobile phone operating system blackberry using the proper equipment, such as the improvement of the files that were deleted.
2. Necessary human resources to explore forensic expert based mobile phone operating system on the BlackBerry because the data structure-based mobile phone operating system blackberry different from each other, it is disesuaika with external storage media used in an operating system based mobile phones blackberry.
3. To facilitate the investigation of the electronic evidence should be created backups or image.

4. Forensic mobile phones can be made to other mobile phone models and different operating systems.

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