



Secure View v4.1.9

Test Results for Mobile Device Acquisition Tool

July 14, 2016



**Homeland
Security**

Science and Technology

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<http://www.dhs.gov/science-and-technology/cyber-security-divi>.

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Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the Department of Homeland Security (DHS), the National Institute of Justice (NIJ), and the National Institute of Standards and Technology Special Program Office (SPO) and Information Technology Laboratory (ITL). CFTT is supported by other organizations, including the Federal Bureau of Investigation, the U.S. Department of Defense Cyber Crime Center, U.S. Internal Revenue Service Criminal Investigation Division Electronic Crimes Program, and the U.S. Department of Homeland Security's Bureau of Immigration and Customs Enforcement, U.S. Customs and Border Protection and U.S. Secret Service. The objective of the CFTT program is to provide measurable assurance to practitioners, researchers, and other applicable users that the tools used in computer forensics investigations provide accurate results. Accomplishing this requires the development of specifications and test methods for computer forensics tools and subsequent testing of specific tools against those specifications.

Test results provide the information necessary for developers to improve tools, users to make informed choices, and the legal community and others to understand the tools' capabilities. The CFTT approach to testing computer forensics tools is based on well-recognized methodologies for conformance and quality testing. Interested parties in the computer forensics community can review and comment on the specifications and test methods posted on the CFTT Web site (<http://www.cftt.nist.gov/>).

This document reports the results from testing Secure View v4.1.9 across supported Android and iOS mobile devices.

Test results from other tools can be found on the DHS S&T-sponsored digital forensics web page, <http://www.dhs.gov/science-and-technology/nist-cftt-reports>.

How to Read This Report

This report is divided into four sections. Section 1 identifies and provides a summary of any significant anomalies observed in the test runs. This section is sufficient for most readers to assess the suitability of the tool for the intended use. Section 2 identifies the mobile devices used for testing. Section 3 lists testing environment, the internal memory data objects used to populate the mobile devices. Section 4 provides an overview of the test case results reported by the tool. The full test data is available at http://www.cftt.nist.gov/mobile_devices.htm.

Test Results for Mobile Device Acquisition Tool

Tool Tested: Secure View
Software Version: 4.1.9

Supplier: Susteen, Inc.

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Irvine, CA 92612

Tel: (949) 341-0007
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1 Results Summary

Susteen's Secure View version 4.1.9 provides the ability to perform logical and physical data extractions for supported mobile devices. Secure View acquires Contacts, Call History, Text Messages, MMS, Calendar Application Data, Deleted Data and other accessible data, while providing a graphical interface making it user friendly.

The tool was tested for its ability to acquire active data from the internal memory of supported mobile devices and associated media (i.e., smart phones, feature phones). Except for the following anomalies, the tool acquired all supported data objects completely and accurately for all mobile devices tested.

Connectivity:

- Connectivity was not established. (Devices: *LG G4, Nokia Lumia 735, Ellipsis 8*)
- When connectivity is disrupted during acquisition – an informative message is not provided. (Devices: *Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E, Galaxy Tab S2, iOS*)

Equipment / Subscriber related data:

- Subscriber and equipment related data (i.e., IMEI/IMSI, MSISDN) was not reported. (Devices: *iOS*)
- Equipment related data (i.e., IMEI) was not reported. (Device: *LG Extravert*)

Personal Information Management (PIM) data:

- The middle name field for contacts was not reported. (Devices: *Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E, Galaxy Tab S2, Blackberry Q10, Blackberry Z30, HTC Win 8x, Samsung Rugby III*)
- Contacts and associated metadata (i.e., graphics, email, URLs, Addresses) were not reported. (Devices: *iOS*)
- Address book contacts containing an associated graphic are not reported or viewable. (Devices: *LG Extravert*)
- Non-Latin characters are not presented in their native format. (Device: *Samsung Rugby III*)

- Memos are not acquired. (Devices: *Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab-E, Galaxy Tab S2, iOS*)
- SMS and MMS messages and associated data (i.e., audio, graphics, video) are not reported. (Devices: *Galaxy Tab E, Galaxy Tab S2*)
- Group message recipients for outgoing SMS messages are partially reported. Only the last contact entry is included. (Devices: *Galaxy S6, Galaxy S6 Edge Plus*)

Application Data:

- Application related data (i.e., txt, pdf files) was not acquired. (Devices: *iOS*)

Stand-alone Files:

- Stand-alone audio/music files are not reported. (Devices: *iOS*)
- Stand-alone pictures and ringtones were not reported. (Devices: *Samsung Rugby III, LG Extravert*)

Social media Data:

- Social media (Facebook, Twitter, LinkedIn, Instagram) related data is not acquired. (Devices: *Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E, Galaxy Tab S2*)
- Social media (Facebook, Twitter, Instagram) related data is not acquired. (Devices: *iOS*)
- Partial social media related data for LinkedIn (i.e., messages) is acquired but not reported. The messages have to be extracted from messenger.sqlite. (Devices: *iOS*)

Internet Related Data:

- Browser history, bookmarks and email related data are not acquired. (Devices: *Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab-E, Galaxy Tab S2*)

GPS Related Data:

- GPS related – waypoints, routes, longitude and latitude coordinates are not acquired. (Devices: *Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E, Galaxy Tab S2, iOS*)

NOTES:

- Memos are not reported but can be extracted from the filesystem data file notepad.sqlite for the Motorola Droid Turbo 2.
- Partial social media related data (i.e., LinkedIn personal messages) are not reported but can be extracted from the filesystem data in messenger.sqlite for all iOS devices.

For more test result details see section 4.

2 Mobile Devices

The following table lists the mobile devices used for testing Secure View v4.1.9.

| Make | Model | OS | Firmware | Network |
|-------------------|--------------|---------------------|----------------------|---------|
| Apple iPhone | 6 | iOS 9.2.1 (13C75) | 4.52.00 | CDMA |
| Apple iPhone | 6S | iOS 9.2.1 (13C75) | 1.23.00 | CDMA |
| Apple iPhone | 6S Plus | iOS 9.2.1 (13C75) | 1.23.00 | CDMA |
| Apple iPad | Mini | iOS 9.2.1 (13B143) | 4.32.00 | CDMA |
| Apple iPad | Pro | iOS 9.2.1 (13C75) | 4.52.00 | CDMA |
| Motorola Droid | Turbo2 | Android 5.1.1 | LCK23.130-23 | CDMA |
| Samsung Galaxy | S6 | Android 5.1.1 | LMY47.G920VVRU4BOK7 | CDMA |
| Samsung Galaxy | S6 Edge Plus | Android 5.1.1 | LMY47X.G928VVRU2AOJ2 | CDMA |
| LG | G4 | Android 5.1.1 | LMY47D | CDMA |
| Ellipsis | 8 | Android 4.4.2 | QZ3_PE3X | CDMA |
| Samsung Galaxy | Tab E | Android 5.1.1 | LMY47X.T567VVRU1AOH1 | CDMA |
| Samsung Galaxy | Tab S2 | Android 5.1.1 | LMY47X.T817BVRU2AOJ2 | CDMA |
| Blackberry Q10 | SQN100-2 | 10 OS - 10.2.1.2122 | 672849 | CDMA |
| Blackberry Z30 | STA100-3 | 10 OS - 10.3.2.858 | 85718 | CDMA |
| HTC Win 8x | HTC PM23300 | Win 8.0 | 3030.0.34101.502 | GSM |
| Samsung Rugby III | SGH-A997 | A997UCM G1 | REV0.2 | GSM |
| LG Extravert | Extravert | VN28010A | REV1.0 | CDMA |

Table 1: Mobile Devices

3 Testing Environment

The tests were run in the NIST CFTT lab. This section describes the selected test execution environment, and the data objects populated onto the internal memory of mobile devices.

3.1 Execution Environment

Secure View version 4.1.9 was installed on Windows 7 v6.1.7601.

3.2 Internal Memory Data Objects

Secure View v4.1.9 was measured by analyzing acquired data from the internal memory of pre-populated mobile devices. Table 2 defines the data objects and elements used for populating mobile devices provided the mobile device supports the data element.

| Data Objects | Data Elements |
|----------------------|--------------------------------|
| Address Book Entries | |
| | <i>Regular Length</i> |
| | <i>Maximum Length</i> |
| | <i>Special Character</i> |
| | <i>Blank Name</i> |
| | <i>Regular Length, email</i> |
| | <i>Regular Length, graphic</i> |
| | <i>Regular Length, Address</i> |
| | <i>Deleted Entry</i> |
| | <i>Non-Latin Entry</i> |
| | <i>Contact Groups</i> |
| PIM Data | |
| Datebook/Calendar | <i>Regular Length</i> |
| Memos | <i>Maximum Length</i> |
| | <i>Deleted Entry</i> |
| | <i>Special Character</i> |
| | <i>Blank Entry</i> |
| Call Logs | |
| | <i>Incoming</i> |
| | <i>Outgoing</i> |
| | <i>Missed</i> |
| | <i>Incoming – Deleted</i> |
| | <i>Outgoing – Deleted</i> |
| | <i>Missed - Deleted</i> |
| Text Messages | |
| | <i>Incoming SMS – Read</i> |
| | <i>Incoming SMS – Unread</i> |
| | <i>Outgoing SMS</i> |
| | <i>Incoming EMS – Read</i> |
| | <i>Incoming EMS – Unread</i> |
| | <i>Outgoing EMS</i> |

| Data Objects | Data Elements |
|-------------------------------|---------------------------------|
| | <i>Incoming SMS – Deleted</i> |
| | <i>Outgoing SMS – Deleted</i> |
| | <i>Incoming EMS – Deleted</i> |
| | <i>Outgoing EMS – Deleted</i> |
| | <i>Non-Latin SMS/EMS</i> |
| MMS Messages | |
| | <i>Incoming Audio</i> |
| | <i>Incoming Graphic</i> |
| | <i>Incoming Video</i> |
| | <i>Outgoing Audio</i> |
| | <i>Outgoing Graphic</i> |
| | <i>Outgoing Video</i> |
| Application Data | |
| | <i>Device Specific App Data</i> |
| Stand-alone data files | |
| | <i>Audio</i> |
| | <i>Graphic</i> |
| | <i>Video</i> |
| | <i>Audio – Deleted</i> |
| | <i>Graphic - Deleted</i> |
| | <i>Video - Deleted</i> |
| Internet Data | |
| | <i>Visited Sites</i> |
| | <i>Bookmarks</i> |
| | <i>E-mail</i> |
| Location Data | |
| | <i>GPS Coordinates</i> |
| | <i>Geo-tagged Data</i> |
| Social Media Data | |
| | <i>Facebook</i> |
| | <i>Twitter</i> |
| | <i>LinkedIn</i> |
| | <i>Instagram</i> |

Table 2: Internal Memory Data Objects

4 Test Results

This section provides the test cases results reported by the tool. Sections 4.1 – 4.3 identify the mobile device operating system type (e.g., Android, iOS) and the make and model of mobile devices used for testing Secure View v4.1.9.

The *Test Cases* column (internal memory acquisition) in sections 4.1 - 4.3 are comprised of two sub-columns that define a particular test category and individual sub-categories that are verified when acquiring the internal memory for supported mobile devices and UICCs within each test case. Each individual sub-category row results for each mobile device/UICC tested. The results are as follows:

As Expected: the mobile forensic application returned expected test results – the tool acquired and reported data from the mobile device/UICC successfully.

Partial: the mobile forensic application returned some of data from the mobile device/UICC.

Not As Expected: the mobile forensic application failed to return expected test results – the tool did not acquire or report supported data from the mobile device/UICC successfully.

NA: Not Applicable – the mobile forensic application is unable to perform the test or the tool does not provide support for the acquisition for a particular data element.

4.1 Android Mobile Devices

The internal memory contents for Android devices were acquired and analyzed with Secure View v4.1.9.

All test cases pertaining to the acquisition of supported Android devices were successful with the exception of the following.

- Connectivity was not established for the LG G4 and the Ellipsis 8. All devices were recognized and drivers loaded successfully. *Note: The manufacturer doesn't provide ADB driver for the Ellipsis 8. Support for the Ellipsis 8 will be removed from the supported device list.*
- An informative message when connectivity is disrupted during the acquisition is not provided for the Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E and the Galaxy Tab S2.
- Contacts are partially reported - the middle name field is not included for the Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E and the Galaxy Tab S2.
- Memos are not acquired for the Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E and the Galaxy Tab S2.
- Call log data using the application Hangouts dialer is not reported for the Galaxy Tab E and the Galaxy Tab S2. *Note: Only rooted devices are supported.*
- SMS and MMS messages using the application FireChat are not reported for the Galaxy Tab E and the Galaxy Tab S2.
- All recipients included for outgoing group messages are not reported – only the last contact entry within the group is included for the Galaxy S6 and the Galaxy S6 Edge Plus.
- Internet related data (Bookmarks, History, Email), GPS (longitude / latitude coordinates), and social media data (Facebook, Twitter, LinkedIn, Instagram) are not acquired for the Motorola Droid Turbo 2, Galaxy S6, Galaxy S6 Edge Plus, Galaxy Tab E and the Galaxy Tab S2.

NOTES:

- Memos are not **reported** for the Motorola Droid Turbo 2. The messages can be extracted from filesystem data from notepad.sqlite.
- Outgoing group SMS messages report redundant textual portions of the message for each phone number included within the group for the Motorola Droid Turbo 2.
- When viewing MMS graphic file attachments, the size presented of the graphic file is over-sized and has to be exported for proper viewing.

See Table 3 below for more details.

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| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: Android | | | | | | |
|--|----------------------------|---------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | Moto Droid Turbo 2 | Galaxy S6 | Galaxy S6 Edge Plus | LG G4 | Ellipsis 8 | Galaxy Tab-E | Galaxy Tab S2 |
| Acquisition | Acquire All | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Disrupted | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| Reporting | Preview-Pane | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| | Generated Reports | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| Equipment/ User Data | IMEI | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| | MEID/ESN | NA | NA | NA | NA | NA | NA | NA |
| | MSISDN | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| PIM Data | Contacts | Partial | Partial | Partial | NA | NA | Partial | Partial |
| | Calendar | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| | Memos/Notes | Partial | Not As <i>Expected</i> | Not As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| Call Logs | Incoming | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | NA | NA |
| | Outgoing | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | NA | NA |
| | Missed | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | NA | NA |
| SMS Messages | Incoming | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | Outgoing | As <i>Expected</i> | Partial | Partial | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| MMS Messages | Graphic | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | Audio | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | Video | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | Not As <i>Expected</i> | Not As <i>Expected</i> |
| Stand-alone Files | Graphic | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| | Audio | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| | Video | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |
| Application Data | Documents (txt, pdf files) | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA | As <i>Expected</i> | As <i>Expected</i> |

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| Test Cases – Internal Memory Acquisition | | <i>Mobile Device Platform: Android</i> | | | | | | |
|---|----------------------------|--|------------------------|------------------------|-------|------------|------------------------|------------------------|
| | | Moto Droid Turbo 2 | Galaxy S6 | Galaxy S6 Edge Plus | LG G4 | Ellipsis 8 | Galaxy Tab-E | Galaxy Tab S2 |
| Social Media Data | Facebook | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | Twitter | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | LinkedIn | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | Instagram | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| Internet Data | Bookmarks | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | History | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | Email | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| GPS Data | Coordinates/Geo-tagged | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | NA | NA | <i>Not As Expected</i> | <i>Not As Expected</i> |
| Non-Latin Character | Reported in native format | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | NA | NA | <i>As Expected</i> | <i>As Expected</i> |
| Hashing | Case File/Individual Files | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | NA | NA | <i>As Expected</i> | <i>As Expected</i> |
| Case File Data Protection | Modify Case Data | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | NA | NA | <i>As Expected</i> | <i>As Expected</i> |

Table 3: Android Mobile Devices

4.2 iOS Mobile Devices

The internal memory contents for iOS devices were acquired and analyzed with Secure View v4.1.9.

All test cases pertaining to the acquisition of supported iOS devices were successful with the exception of the following across all iOS devices.

- An informative message when connectivity is disrupted during the acquisition is not provided for all iOS devices.
- Subscriber and equipment related information (i.e., MSISDN, IMEI) is not reported for all iOS devices.
- Contacts / Address book entries and associated metadata (i.e., graphics, email, URLs, address information) are not acquired for all iOS devices.
- Memos are not acquired for all iOS devices.
- Stand-alone audio files are not acquired for all iOS devices.
- Documents (txt, pdf files) are not acquired for all iOS devices.
- Email related data is not acquired for all iOS devices. *Note: Email related data is not supported. Server side email data will be included in future versions.*
- Social media related data – Facebook, Twitter, Instagram (e.g., profile information, status updates, pictures, video, and personal messages) is not reported for all iOS devices.
- Partial social media related data for LinkedIn (i.e., messages) is acquired but not reported. The messages have to be extracted from messenger.sqlite for all iOS devices.
- GPS related data (i.e., waypoints, longitude/latitude coordinates) is not reported for all iOS devices

NOTES:

- For each acquisition, the “Apple iTunes is required” textbox is displayed when iTunes is installed.
- Outgoing group SMS messages report redundant textual portions of the message for each phone number included within the group.
- When viewing MMS graphic file attachments, the size presented of the graphic file is over-sized and has to be exported for proper viewing.

See Table 4 below for more details.

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| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: iOS | | | | |
|--|----------------------------|-----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | iPhone 6 | iPhone 6S | iPhone 6S Plus | iPad Mini | iPad Pro |
| Acquisition | Acquire All | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Disrupted | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| Reporting | Preview-Pane | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Generated Reports | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| Equipment/ User Data | IMEI | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | MEID/ESN | NA | NA | NA | NA | NA |
| | MSISDN | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| PIM Data | Contacts | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | Calendar | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Memos/Notes | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| Call Logs | Incoming | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA |
| | Outgoing | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA |
| | Missed | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | NA | NA |
| SMS Messages | Incoming | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Outgoing | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| MMS Messages | Graphic | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Audio | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Video | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| Stand-alone Files | Graphic | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| | Audio | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |
| | Video | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> | As <i>Expected</i> |
| Application Data | Documents (txt, pdf files) | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> | Not As <i>Expected</i> |

| Secure View v4.1.9 | | | | | | |
|--|----------------------------|-----------------------------|------------------------|------------------------|------------------------|------------------------|
| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: iOS | | | | |
| | | iPhone 6 | iPhone 6S | iPhone 6S Plus | iPad Mini | iPad Pro |
| Social Media Data | Facebook | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | Twitter | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> |
| | LinkedIn | <i>Partial</i> | <i>Partial</i> | <i>Partial</i> | <i>Partial</i> | <i>Partial</i> |
| | Instagram | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> |
| Internet Data | Bookmarks | <i>As Expected</i> | <i>As Expected</i> | <i>Not As Expected</i> | <i>As Expected</i> | <i>As Expected</i> |
| | History | <i>As Expected</i> | <i>As Expected</i> | <i>Not As Expected</i> | <i>As Expected</i> | <i>As Expected</i> |
| | Email | <i>NA</i> | <i>NA</i> | <i>NA</i> | <i>NA</i> | <i>NA</i> |
| GPS Data | Coordinates/Geo-tagged | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> | <i>Not As Expected</i> |
| Non-Latin Character | Reported in native format | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> |
| Hashing | Case File/Individual Files | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> |
| Case File Data Protection | Modify Case Data | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> |

Table 4: iOS Mobile Devices

4.3 Blackberry / Windows / Feature Phones

The internal memory contents for the feature phone was acquired and analyzed with Secure View v4.1.9.

All test cases pertaining to the acquisition of supported mobile devices were successful with the exception of the following.

- Connectivity was not established for the Nokia Lumia 735. All devices were recognized and drivers loaded successfully.
- Equipment related information i.e., IMEI was not reported for the LG Extravert.
- The middle name field for Address book contacts was not reported for the Blackberry Q10, Blackberry Z30, HTC Win 8x and the Samsung Rugby III.
- Pictures associated with Address book contacts were not reported for the LG Extravert.
- Non-Latin characters are not presented in their native format for the Samsung Rugby III. Aurélien was reported as Auré?lien, 阿恶哈拉 was reported as ?? ??.
- Pictures and Ringtones were not acquired for the Samsung Rugby III and the LG Extravert.

NOTES:

- Acquisition Data Window – “⊗ Read Contacts Failed”. Although all contacts were acquired excluding middle name fields for the Blackberry Q10 and Blackberry Z30.

See Table 5 below for more details.

| Secure View v4.1.9 | | | | | | | |
|--|-------------------------|---|----------------|-------------|-----------------|-----------------|-----------------|
| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: Blackberry, Windows, Feature phones | | | | | |
| | | Blackberry Q10 | Blackberry Z30 | HTC Win 8x | Nokia Lumia 735 | Samsung Rugby 3 | LG Extravert |
| Acquisition | Acquire All - Bluetooth | As Expected | As Expected | As Expected | Not As Expected | As Expected | As Expected |
| | Disrupted | NA | NA | NA | NA | NA | NA |
| Reporting | Preview-Pane | As Expected | As Expected | As Expected | NA | As Expected | As Expected |
| | Generated Reports | As Expected | As Expected | As Expected | NA | As Expected | As Expected |
| Equipment/ User Data | IMEI/IMSI | NA | NA | NA | NA | NA | Not As Expected |
| | MEID/ESN | NA | NA | NA | NA | NA | NA |

Secure View v4.1.9

| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: Blackberry, Windows, Feature phones | | | | | |
|--|----------------------------|---|----------------|-----------|-----------------|-----------------|-----------------|
| | | Blackberry Q10 | Blackberry Z30 | HTCWin 8x | Nokia Lumia 735 | Samsung Rugby 3 | LG Extravert |
| Equipment/ User Data | MSISDN | NA | NA | NA | NA | NA | NA |
| PIM Data | Contacts | Partial | Partial | Partial | NA | Partial | Partial |
| | Calendar | NA | NA | NA | NA | NA | NA |
| | Memos/Notes | NA | NA | NA | NA | NA | NA |
| Call Logs | Incoming | NA | NA | NA | NA | NA | NA |
| | Outgoing | NA | NA | NA | NA | NA | NA |
| | Missed | NA | NA | NA | NA | NA | NA |
| SMS Messages | Incoming | NA | NA | NA | NA | NA | NA |
| | Outgoing | NA | NA | NA | NA | NA | NA |
| MMS Messages | Graphic | NA | NA | NA | NA | NA | NA |
| | Audio | NA | NA | NA | NA | NA | NA |
| | Video | NA | NA | NA | NA | NA | NA |
| Stand-alone Files | Graphic | NA | NA | NA | NA | Not As Expected | Not As Expected |
| | Audio | NA | NA | NA | NA | Not As Expected | Not As Expected |
| | Video | NA | NA | NA | NA | NA | NA |
| Application Data | Documents (txt, pdf files) | NA | NA | NA | NA | NA | NA |
| Social Media Data | Facebook | NA | NA | NA | NA | NA | NA |
| | Twitter | NA | NA | NA | NA | NA | NA |
| | LinkedIn | NA | NA | NA | NA | NA | NA |
| | Instagram | NA | NA | NA | NA | NA | NA |
| Internet Data | Bookmarks | NA | NA | NA | NA | NA | NA |
| | History | NA | NA | NA | NA | NA | NA |
| | Email | NA | NA | NA | NA | NA | NA |
| GPS Data | Coordinates/ Geo-tagged | NA | NA | NA | NA | NA | NA |

| Secure View v4.1.9 | | | | | | | |
|--|-----------------------------|---|--------------------|--------------------|-----------------|------------------------|--------------------|
| Test Cases – Internal Memory Acquisition | | Mobile Device Platform: Blackberry, Windows, Feature phones | | | | | |
| | | Blackberry Q10 | Blackberry Z30 | HTC Win 8x | Nokia Lumia 735 | Samsung Rugby 3 | LG Extravert |
| Non-Latin Character | Reported in native format | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>NA</i> | <i>Not As Expected</i> | <i>As Expected</i> |
| Hashing | Case File/ Individual Files | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>NA</i> | <i>As Expected</i> | <i>As Expected</i> |
| Case File Data Protection | Modify Case Data | <i>As Expected</i> | <i>As Expected</i> | <i>As Expected</i> | <i>NA</i> | <i>As Expected</i> | <i>As Expected</i> |

Table 5: Feature Phones