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REPORT

Test Results for Forensic Media Preparation Tool: Disk Jockey PRO Forensic Edition (version 1.20)

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John H. Laub

Director, National Institute of Justice

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Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the National Institute of Justice (NIJ), the research and development organization of the U.S. Department of Justice (DOJ), and the National Institute of Standards and Technology's (NIST's) Office of Law Enforcement Standards and Information Technology Laboratory (ITL). CFTT is supported by other organizations, including the Federal Bureau of Investigation (FBI), the U.S. Department of Defense Cyber Crime Center (DC3), U.S. Internal Revenue Service Criminal Investigation Division Electronic Crimes Program (IRS–CID), and the U.S. Department of Homeland Security's (DHS) Bureau of Immigration and Customs Enforcement (ICE), U.S. Customs and Border Protection, and U.S. Secret Service (USSS). The objective of the CFTT program is to provide measurable assurance to practitioners, researchers, and other 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 forensic tools is based on well–recognized methodologies for conformance and quality testing. The specifications and test methods are posted on the CFTT Web site (http://www.cftt.nist.gov/) for review and comment by the computer forensics community.

This document reports the results from testing Disk Jockey PRO Forensic Edition (Version 1.20), against the *Forensic Media Preparation Tool Test Assertions and Test Plan Version 1.0*, available at the CFTT Web site (http://www.cftt.nist.gov/fmp-atp-pc-01.pdf).

Test results for other devices and software packages using the CFTT tool methodology can be found on NIJ's computer forensics tool testing Web page, http://www.ojp.usdoj.gov/nij/topics/technology/electronic-crime/cftt.htm.

How to Read This Report

This report is divided into four key sections. The first section is a summary of the results from the test runs. This section is sufficient for most readers to assess the suitability of the tool for the intended use. The remaining sections of the report describe how the tests were conducted and provide documentation of test case run details that support the report summary. Section 2 gives a justification for the selection of test cases from the set of possible cases that are defined in the test plan for forensic media preparation tools. The test cases are selected, in general, based on features offered by the tool. Section 3 lists hardware and software used to run the test cases with and provides links to additional information about the items used. Section 4 contains a description of each test case. The

description of each test run lists all test assertions used in the test case, the expected result and the actual result.

Test Results for Forensic Media Preparation Tool

Tool Tested: Disk Jockey Pro Forensic Edition

Version: 1.20 Run Environments: Custom

Supplier: Diskology

P.O. Box 733

Lincoln, CA 95648

Tel: 916 645–3196 phone

270 596–0522 fax

Email: sales@diskology.com

WWW: http://www.diskology.com/

1. Results Summary

In all the test cases run against Disk Jockey Forensic, all visible sectors were successfully overwritten. For the test cases that used drives containing an HPA or DCO, the tool behaved as designed by the vendor as follows:

- In the two single pass mode tests (FMP-03-DCO-2 & FMP-03-DCO-HPA-2), the HPA and DCO remained intact; hidden sectors were not overwritten.
- In DoD x7 pass mode, HPA hidden sectors were removed and overwritten (FMP–03–HPA–2).

The vendor clarified the tool behavior with the following statement:

DATA ERASE DoD—This mode erases the data of the attached HDD by writing seven—passes per the standard established by the Department of Defense. NOTE: This mode will also remove (reset) any HPA or DCO settings before proceeding to erase/wipe the disk, therefore every usable sector of the disk, including any sectors formerly within an HPA or DCO area will also be erased/wiped.

DATA ERASE 00x1—This mode completes a one—pass erase on the disk by writing 00h bytes in all sectors of the connected HDD. NOTE: This mode will not remove either an HPA or DCO area from the disk; nor will it erase/wipe any sectors in those areas.

2. Test Case Selection

Disk Jockey Pro Forensic was tested for its ability to overwrite sectors. The prime function of the device is a hard drive duplication system for cloning a master drive to one or two target drives. The device optionally supports a secondary function to wipe one target drive. This test report covers only the results of testing the wipe function.

The tested device has two ports for attaching hard drives. The ports are labeled Source Disk and Destination Disk respectively. Drives attached to the Destination Disk port can be overwritten by selecting either a quick single pass that writes 00h to the disk or a DoD seven pass option. It should be noted that in addition the Source port is write protected, thus rendering the disk protected from the wipe command.

The test cases selected were limited to only those test cases defined by *Forensic Media Preparation Tool Test Assertions and Test Plan Version 1.0* and applicable to features supported by this tool.

Since Disk Jockey Pro Forensic does not support a secure erase mode those tests were omitted. All selected test cases were *WRITE* tests (cases FMP–01 and FMP–03).

Three hidden sector test cases (FMP–03) were included among the cases selected. They were included to measure the tool behavior in conjunction with hidden sectors.

The following cases were used in testing:

- FMP-01-ATA28
- FMP-01-ATA48
- FMP-01-SATA28
- FMP-01-SATA48
- FMP-03-DCO-HPA-2
- FMP-03-DCO-2
- FMP-03-HPA-2

The following source interfaces were tested: ATA28, ATA48, SATA28, SATA48.

The table below shows the user parameter set for each test run, i.e., destination drive type, number of passes, and fill value. Refer to the tool documentation for additional information about these parameters. The following table documents the settings for each test case:

Test Case	Destination Disk Type	Pass	Fill
FMP-01-ATA28	Desktop	1	00h
FMP-01-ATA48	Desktop	7	00h
FMP-01-SATA28	Desktop	1	00h

Test Case	Destination Disk Type	Pass	Fill
FMP-01-SATA48	Desktop	7	00h
FMP-03-DCO-HPA-2	Laptop	1	00h
FMP-03-DCO-2	Laptop	1	00h
FMP-03-HPA-2	Desktop	7	00h

3. Test Materials

3.1 Support Software

Several programs were used in the setup and analysis of the test drives. These include **hdat2** (download from: http://www.hdat2.com/download.html), **dsumm** (download from: http://www.cftt.nist.gov/) and **diskwipe** from **FS-TST Release 2.0** (download from: http://www.cftt.nist.gov/diskimaging/fs-tst20.zip).

The **hdat2** program is used to create, remove and document hidden areas on a drive.

The **diskwipe** program initializes a hard drive with known content.

The **dsumm** program analyzes the content of a hard drive and produces a summary of disk contents in terms of counts for each byte value present on the drive. For example, if a drive can contain 10GB (19531250 sectors of 512 bytes per sector) and the drive is wiped with zero bytes, then **dsumm** reports 10,000,000,000 zero bytes. The program also prints the first sector found with printable ASCII content.

3.2 Test Drive Creation

The following steps are used to setup a test drive:

- 1. The drive is initially filled with known content by the **diskwipe** program from FS–TST. The **diskwipe** program writes the sector address to each sector in both C/H/S and LBA format. The remainder of the sector bytes is set to a constant fill value unique for each drive. The fill value is noted in the **diskwipe** tool log file.
- 2. The **dsumm** program analyzes the drive contents. This documents the content of the drive. Each sector has unique content after the setup.
- 3. If the drive is intended for hidden area tests (FMP–03), an HPA, a DCO or both are created.
- 4. The drive size after creation of a hidden area is recorded.

3.3 Test Drive Analysis

The following steps are used to analyze a test drive after it has been wiped by the tool under test:

- 1. The size of the drive is recorded. This determines if the tool changes the size of a hidden area.
- 2. Any hidden areas still present on the drive are removed.
- 3. The **dsumm** program is run to determine the final content of the drive.

3.4 Test Drives

The following hard drives listed in the following table were used in testing. The column labeled **Test Case** identifies the test case. The column labeled **Sectors** is the size of the drive with no DCO or HPA. The column labeled **Model** is the model of the drive as returned by the ATA IDENTIFY DEVICE command. The column labeled **Serial** # is the serial number as returned by the ATA IDENTIFY DEVICE command.

Test Case	Sectors	Model	Serial #
FMP-01-ATA28	80043264	Maxtor 6Y040L0	Y2SM68LE
FMP-01-ATA48	488397168	WDC WD2500JB-00GVC0	WD-WCAL78188039
FMP-01-SATA28	234441648	WDC WD1200JD-00GBB0	WD-WMAES2049679
FMP-01-SATA48	312581808	ST3160815AS	9RX7Y1DP
FMP-03-DCO-HPA-2	156301488	Hitachi HTS541680J9AT00	SB0241HGGAWN9E
FMP-03-DCO-2	234441648	Hitachi HTS542512K9SA00	080914BB6200WBKPDL2G
FMP-03-HPA-2	312581808	WDC WD1600JB-00GVC0	WD-WMAL94865344

For FMP-03 test cases the layout of visible and hidden sectors is as follows. The column labeled **Test Case** identifies the test case. The column labeled **Size** is the number of visible sectors presented to the device for the test case. The column labeled **Hidden** is the size in sectors of the hidden area.

Test Case	Size	Total	Hidden (DCO+HPA)
FMP-03-DCO-HPA-2	131301488	156301488	25000000 (10000000+15000000)
FMP-03-DCO-2	224441648	234441648	10000000
FMP-03-HPA-2	297581808	312581808	15000000

4. Test Results

The main item of interest for interpreting the test results is determining the conformance of the tool under test with the test assertions. Conformance with each assertion tested by a given test case is evaluated by examining the **Log Highlights** box of the test report summary.

4.1 Test Results Report Key

A summary of the actual test results is presented in this report. The following table presents a description of each section of the test report summary.

Heading	Description		
First Line:	Test case ID, name, and version of tool tested.		
Case Summary:	Test case summary from Forensic Media Preparation Tool Test		
	Assertions and Test Plan Version 1.0.		
Assertions:	The test assertions applicable to the test case, selected from		
	Forensic Media Preparation Tool Test Assertions and Test Plan		
	Version 1.0.		
Tester Name:	Name or initials of person executing test procedure.		
Analysis Host:	Host used to setup test drive and analyze final drive state.		
Test Host:	Host computer executing the test.		
Test Date:	Time and date that test was started.		
Test Drive:	Drive erased by the tool under test.		
Source Setup:	Report of the native drive size, the size of any hidden areas, the		
	apparent size of the drive (as reported by an ATA IDENTIFY		
	DEVICE command) and an analysis of initial drive contents.		
Tool Settings:	Report of tool parameters set for each test run.		
Log Highlights:	Report of the state of the drive after executing the tool under test,		
	including the apparent drive size, size of hidden area and analysis		
	of drive contents. The ASCII content of the first non–binary–zero		
	sector is reported.		
Results:	Expected and actual results for each assertion tested.		
Analysis:	Whether or not the expected results were achieved.		

4.2 Test Details

4.2.1 FMP-01-ATA28

Test Case FMP-	Test Case FMP-01-ATA28 Disk Jockey Pro Forensic Version 1.20		
Case Summary:	FMP-01. Overwrite visible sectors using WRITE commands.		
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified benign data.		
Tester Name:	csr		
Analysis host:	frank		
Test host:	none		
Test date:	Fri Oct 16 09:47:27 2009		
Test drive:	57-IDE		
Source Setup:	Initial setup size: 80043264 from total of 80043264 (with 0 hidden) IDE disk: Model (Maxtor 6Y040L0) serial # (Y2SM68LE)		

Test Case FMP-0	01-ATA28 Disk Jockey Pro Forensic Version 1.20			
	Sector 0 is first sector with printable text			
	====== Start text =======			
	00000/000/01 000000000000wwwwwwwwwwwwwww			
	<i>wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww</i>			
	им			
	им			
	мимимимимимимимимимимимимимимимимимими			
	им			
	им			
	им			
	МИМИМИМИМИМИМИМИМИМИМИМИМИМИМИМИМИМИМИ			
	======= End text Sector 0 ========			
	9 <new line=""> characters inserted for readability</new>			
	Totals for all sectors			
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>			
	80043264 00 80043264 20 () 160086528 2F (/)			
	579129549 30 (0) 180771021 31 (1) 141043689 32 (2) 141042889 33 (3) 138514684 34 (4) 138479164 35 (5)			
	141042889 33 (3) 138514684 34 (4) 138479164 35 (5)			
	123343870 36 (6) 113259050 37 (7) 103108778 38 (8)			
	102259114 39 (9) 38901026304 57 (W)			
	Totals for non-ASCII sectors			
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>			
	40000151160 huber 00043064 restaur 14 distinct values seen			
	40982151168 bytes, 80043264 sectors, 14 distinct values seen			
	80043264 sectors have printable text			
Tool	rounds: x1			
Settings:	rounds. XI			
rod Peccilida:	Size after tool runs: 80043264 from total of 80043264 (with 0 hidden)			
Highlights:	,			
підпітідпсь.	Analysis of tool result			
	Totals for all sectors			
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>			
	40982151168 00			
	Totals for non-ASCII sectors			
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>			
	40982151168 00			
	40982151168 bytes, 80043264 sectors, 1 distinct values seen			
	No sectors have printable text			
	No sectors have printable text			
Results:	Assertion & Expected Result Actual Result			
	FMP-CA-01 Visible sectors overwritten as expected			
Analysis:	Expected results achieved			
	Infected Tenuten delitered			

4.2.2 FMP-01-ATA48

Test Case FMP-	01-ATA48 Disk Jockey Pro Forensic Version	1.20		
Case Summary:	FMP-01. Overwrite visible sectors using WRITE commands.			
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified			
	benign data.			
Tester Name:	csr			
Analysis	frank			
host:				
Test host:	none			
Test date:	Fri Oct 16 14:35:42 2009			
Test drive:	29-IDE			
Source Setup:	Initial setup size: 488397168 from tota IDE disk: Model (WDC WD2500JB-00GVC0) s			
	Sector 0 is first sector with printable	e text		
	00000/000/01 000000000000)))))))))))))))	<pre>))))))))))))))))))))))))))))))))))))</pre>		
	488397168 sectors have printable text			
Tool Settings:	rounds: DoD x7			
Log Highlights:	Size after tool runs: 488397168 from total of 488397168 (with 0 hidden) Analysis of tool result Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 250059350016 F6 Totals for non-ASCII sectors summary format: <count> <hex value=""> <(actual character if printable)> 250059350016 F6 250059350016 bytes, 488397168 sectors, 1 distinct values seen No sectors have printable text</hex></count></hex></count>			
_				
Results:	Assertion & Expected Result	Actual Result		
	FMP-CA-01 Visible sectors overwritten	as expected		
Analysis:	Expected results achieved			

4.2.3 FMP-01-SATA28

Test Case FMP-01-SATA28 Disk Jockey Pro Forensic Version 1.20				
Case Summary:	FMP-01. Overwrite visible sectors using	WRITE commands.		
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified			
	benign data.			
Tester Name:	csr			
Analysis host:	frank			
Test host:	none			
Test date:	Thu Oct 22 14:39:43 2009			
Test drive:	1C-SATA			
Source Setup:	Initial setup size: 234441648 from total IDE disk: Model (WDC WD1200JD-00GBB0) se			
	Sector 0 is first sector with printable ====================================	=====		
	Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 234441648 00</hex></count>			
Tool Settings:	rounds: x1			
Log Highlights:	Size after tool runs: 234441648 from total of 234441648 (with 0 hidden) Analysis of tool result Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 120034123776 00 Totals for non-ASCII sectors summary format: <count> <hex value=""> <(actual character if printable)> 120034123776 00 120034123776 bytes, 234441648 sectors, 1 distinct values seen No sectors have printable text</hex></count></hex></count>			
Results:	Assertion & Expected Result	Actual Result		
	FMP-CA-01 Visible sectors overwritten	as expected	1	
Analysis:	Expected results achieved			

4.2.4 FMP-01-SATA48

Test Case FMP-0	01-SATA48 Disk Jockey Pro Forensic Version 1.20
Case Summary:	FMP-01. Overwrite visible sectors using WRITE commands.
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified
	benign data.
Tester Name:	csr
Analysis	frank
host:	
Test host:	none
Test date:	Mon Oct 19 12:33:47 2009
Test drive:	43-SATA
Source Setup:	<pre>Initial setup size: 312581808 from total of 312581808 (with 0 hidden) IDE disk: Model (ST3160815AS) serial # (9RX7Y1DP)</pre>
	Sector 0 is first sector with printable text
	======= Start text ========
	00000/000/01 00000000000000000000000000
	cccaaaccaaccaaacaacaaacaaaccaaaccaaac
	ccccccccccccccccccccccccccccccccccccccc
	000000000000000000000000000000000000000
	000000000000000000000000000000000000000
	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
	9 <new line=""> characters inserted for readability</new>
	9 Chew Times Characters Inserted for readability
	Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 312581808 00</hex></count>
Tool Settings:	rounds: DoD x7
Log Highlights:	Size after tool runs: 312581808 from total of 312581808 (with 0 hidden) Analysis of tool result Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 160041885696 F6 Totals for non-ASCII sectors summary format: <count> <hex value=""> <(actual character if printable)> 160041885696 F6 160041885696 bytes, 312581808 sectors, 1 distinct values seen No sectors have printable text</hex></count></hex></count>
Results:	Assertion & Expected Result Actual Result
	FMP-CA-01 Visible sectors overwritten as expected
Analysis:	Expected results achieved
11111171010.	Imposed results deficed

4.2.5 FMP-03-DCO-HPA-2

Test Case FMP	-03-DCO-HPA-2 Disk Jockey Pro Forensic Version 1.20
Case	FMP-03. Overwrite hidden sectors using WRITE commands.
Summary:	
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified
	benign data. FMP-AO-01 If there is a hidden area present and the tool supports
	overwriting sectors contained in a hidden area, then all sectors contained
	in the hidden area shall be overwritten with the specified benign data. FMP-AO-02 A hidden area may optionally be removed from the storage device.
Tester Name:	csr
Analysis	frank
host:	
Test host:	none
Test date:	Thu Oct 29 16:45:33 2009
Test drive:	14-LAP
Source	Size with DCO: 146301488 74.91 GB (10000000 sectors in DCO)
Setup:	Size with HPA: 131301488 67.23 GB (15000000 sectors in HPA)
	Initial setup size: 131301488 from total of 156301488 (with 25000000
	hidden)
	IDE disk: Model (Hitachi HTS541680J9AT00) serial # (SB0241HGGAWN9E)
	Sector 0 is first sector with printable text
	======= Start text =======
	00000/000/01 00000000000
	====== End text Sector 0 =======
	1 <new line=""> character inserted for readability</new>
	Totals for all sectors
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>
	146301488 00 71102523168 14 146301488 20 ()
	292602976 2F (/) 993890325 30 (0) 358021591 31 (1)
	285788447 32 (2) 254136647 33 (3) 248114389 34 (4)
	238370729 35 (5) 220867833 36 (6) 211263767 37 (7)
	211263764 38 (8) 196915244 39 (9)
	Totals for non-ASCII sectors
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>
	74906361856 bytes, 146301488 sectors, 14 distinct values seen
	146301488 sectors have printable text
Tool	rounds = x1
Settings:	
Log	Size after tool runs: 131301488 from total of 156301488 (with 25000000
Highlights:	hidden) Analysis of tool result
	Sector 131301488 is first sector with printable text
	08173/035/39 000131301488
	======= End text Sector 131301488 =======
	1 <new line=""> character inserted for readability</new>
	Totals for all sectors
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>
	67251361856 00 12150000000 14 25000000 20 ()
	50000000 2F (/) 144914896 30 (0) 71835647 31 (1)
	43889901 32 (2) 47061285 33 (3) 47968552 34 (4)
	43681897 35 (5) 33810839 36 (6) 30896747 37 (7)
	43759142 38 (8) 42181094 39 (9)
	Totals for non-ASCII sectors
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>
	67226361856 00

Test Case FMP	-03-DCO-HPA-2 Disk Jockey Pro Forensic Ve	ersion 1.20
	80026361856 bytes, 156301488 sectors, 1 25000000 sectors have printable text	4 distinct values seen
Results:	Assertion & Expected Result	Actual Result
	FMP-CA-01 Visible sectors overwritten	as expected
	FMP-AO-01 Hidden sectors overwritten	DCO+HPA not overwritten
	FMP-AO-02 Hidden area final state is	in place
Analysis:	Expected results not achieved	

4.2.6 FMP-03-DCO-2

Test Case FMP	-03-DCO-2 Disk Jockey Pro Forensic Version 1.20		
Case	FMP-03. Overwrite hidden sectors using WRITE commands.		
Summary:			
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified benign data.		
	FMP-AO-01 If there is a hidden area present and the tool supports overwriting sectors contained in a hidden area, then all sectors contained in a hidden area.		
	in the hidden area shall be overwritten with the specified benign data.		
March and March	FMP-AO02 A hidden area may optionally be removed from the storage device.		
Tester Name: Analysis	csr frank		
host:	Irank		
Test host:	none		
Test date:	Thu Oct 29 09:01:53 2009		
Test drive:	1D-LAP		
Source	Size with DCO: 224441648 114.91 GB (10000000 sectors in DCO)		
Setup:	Initial setup size: 224441648 from total of 234441648 (with 10000000 hidden)		
	IDE disk: Model (Hitachi HTS542512K9SA00) serial # (080914BB6200WBKPDL2G)		
	Sector 0 is first sector with printable text		
	======= Start text ========= 00000/000/01 00000000000		
	======= End text Sector 0 ========		
	1 <new line=""> character inserted for readability</new>		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	Totals for all sectors		
	summary format: <count> <hex value=""> <(actual character if printable)></hex></count>		
	224441648 00 109078640928 1D 224441648 20 ()		
	448883296 2F (/) 1412016107 30 (0) 648943731 31 (1)		
	464424111 32 (2) 386665415 33 (3) 366881143 34 (4)		
	361115515 35 (5) 335339466 36 (6) 320942106 37 (7)		
	320928507 38 (8) 320460155 39 (9)		
	Totals for nonASCII sectors summary format: <count> <hex value=""> <(actual character if printable)></hex></count>		
	Summary format. County thex values ((actual character if printable)s		
	114914123776 bytes, 224441648 sectors, 14 distinct values seen 224441648 sectors have printable text		
Tool	rounds = x1		
Settings:	TOURIUS - AI		
Log	Size after tool runs: 224441648 from total of 234441648 (with 10000000		
Highlights:	hidden)		
J J	Analysis of tool result		
	Sector 224441648 is first sector with printable text		
	======= Start text =======		
	13970/215/54 000224441648		
	======== End text Sector 224441648 ========		
	1 <new line=""> character inserted for readability</new>		
	matala fara all mantana		
	Totals for all sectors		
	summary format: <count> <hex value=""> <(actual character if printable)> 114924123776 00</hex></count>		
	20000000 2F (/) 49069416 30 (0) 29395570 31 (1)		
	33193387 32 (2) 20376376 33 (3) 24834191 34 (4)		
	14959713 35 (5) 12311991 36 (6) 11824119 37 (7)		
	11837150 38 (8) 12198087 39 (9)		
	Totals for non-ASCII sectors		
	summary format: <count> <hex value=""> <(actual character if printable)> 114914123776 00</hex></count>		

	120034123776 bytes, 234441648 sectors, 10000000 sectors have printable text	14 distinct values see:	n
Results:	Assertion & Expected Result	Actual Result	
	FMP-CA-01 Visible sectors overwritten	as expected	
	FMP-AO-01 Hidden sectors overwritten	DCO not overwritten	
	FMP-AO-02 Hidden area final state is	in place	
	Expected results not achieved		

4.2.7 FMP-03-HPA-2

Test Case FMI	P-03-HPA-2 Disk Jockey Pro Forensic Version 1.20
Case	FMP-03. Overwrite hidden sectors using WRITE commands.
Summary:	
Assertions:	FMP-CA-01 All visible sectors shall be overwritten with the specified benign data. FMP-AO-01 If there is a hidden area present and the tool supports overwriting sectors contained in a hidden area, then all sectors contained in the hidden area shall be overwritten with the specified benign data. FMP-AO-02 A hidden area may optionally be removed from the storage device.
Tester	csr
Name:	
Analysis host:	frank
Test host:	none
Test date:	Wed Oct 28 08:38:30 2009
Test drive:	53-IDE
Source Setup:	Size with HPA: 297581808 152.36 GB (15000000 sectors in HPA) Initial setup size: 297581808 from total of 312581808 (with 15000000 hidden) IDE disk: Model (WDC WD1600JB-00GVC0) serial # (WD-WMAL94865344) Sector 0 is first sector with printable text
	00000/000/01 000000000000SSSSSSSSSSSSSSS
Tool	rounds = DoD x7
Settings:	
Log Highlights:	Size after tool runs: 312581808 from total of 312581808 (with 0 hidden) Analysis of tool result Totals for all sectors summary format: <count> <hex value=""> <(actual character if printable)> 160041885696 F6 Totals for non-ASCII sectors summary format: <count> <hex value=""> <(actual character if printable)> 160041885696 F6 160041885696 bytes, 312581808 sectors, 1 distinct values seen No sectors have printable text</hex></count></hex></count>

Test Case FMP-03-HPA-2 Disk Jockey Pro Forensic Version 1.20		
Results:	Assertion & Expected Result	Actual Result
	FMP-CA-01 Visible sectors overwritten	as expected
	FMP-AO-01 Hidden sectors overwritten	as expected
	FMP-AO-02 Hidden area final state is	removed
Analysis:	Expected results achieved	

About the National Institute of Justice

A component of the Office of Justice Programs, NIJ is the research, development and evaluation agency of the U.S. Department of Justice. NIJ's mission is to advance scientific research, development and evaluation to enhance the administration of justice and public safety. NIJ's principal authorities are derived from the Omnibus Crime Control and Safe Streets Act of 1968, as amended (see 42 U.S.C. §§ 3721–3723).

The NIJ Director is appointed by the President and confirmed by the Senate. The Director establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the U.S. Department of Justice, and the needs of the field. The Institute actively solicits the views of criminal justice and other professionals and researchers to inform its search for the knowledge and tools to guide policy and practice.

Strategic Goals

NIJ has seven strategic goals grouped into three categories:

Creating relevant knowledge and tools

- 1. Partner with state and local practitioners and policymakers to identify social science research and technology needs.
- 2. Create scientific, relevant, and reliable knowledge—with a particular emphasis on terrorism, violent crime, drugs and crime, cost-effectiveness, and community-based efforts—to enhance the administration of justice and public safety.
- Develop affordable and effective tools and technologies to enhance the administration of justice and public safety.

Dissemination

- 4. Disseminate relevant knowledge and information to practitioners and policymakers in an understandable, timely and concise manner.
- 5. Act as an honest broker to identify the information, tools and technologies that respond to the needs of stakeholders.

Agency management

- 6. Practice fairness and openness in the research and development process.
- 7. Ensure professionalism, excellence, accountability, cost-effectiveness and integrity in the management and conduct of NIJ activities and programs.

Program Areas

In addressing these strategic challenges, the Institute is involved in the following program areas: crime control and prevention, including policing; drugs and crime; justice systems and offender behavior, including corrections; violence and victimization; communications and information technologies; critical incident response; investigative and forensic sciences, including DNA; less-than-lethal technologies; officer protection; education and training technologies; testing and standards; technology assistance to law enforcement and corrections agencies; field testing of promising programs; and international crime control.

In addition to sponsoring research and development and technology assistance, NIJ evaluates programs, policies, and technologies. NIJ communicates its research and evaluation findings through conferences and print and electronic media.

To find out more about the National Institute of Justice, please visit:

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