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	Test Results for Disk Imaging Tools: EnCase 3.20
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# NIJ

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Director

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#### Introduction

The Computer Forensics Tool Testing (CFTT) project is the joint effort of the National Institute of Justice, the National Institute of Standards and Technology (NIST), the U. S. Department of Defense, the Technical Support Working Group, and other related agencies. The objective of the CFTT project 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.

The 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 use of well-recognized methodologies for conformance and quality testing serves as the foundation of our approach for testing computer forensics tools. Plus, in an effort to further develop the specifications and test methods, we encourage the entire forensics community to visit the CFTT Web site (*http://www.cftt.nist.gov*), where drafts are accessible for both commentary and review.

This document reports the results from testing EnCase 3.20, a commonly used disk imaging tool, against *Disk Imaging Tool Specification, Version 3.1.6*, developed by CFTT staff and available at *http://www.cftt.nist.gov/DI-spec-3-1-6.doc*. This specification identifies the top-level disk imaging tool requirements as—

- The tool shall make a bit-stream duplicate or an image of an original disk or partition.
- The tool shall not alter the original disk.
- The tool shall log I/O errors.
- The tool's documentation shall be correct.

Note: The test methodology is for software tools that copy or image hard disk drives. It does not cover analog media or digital media such as cell phones or personal digital assistants (PDAs).

# Test Results for Disk Imaging Tools: EnCase 3.20

Tool Tested:	EnCase 3.20
<b>Operating Systems:</b>	Windows 2000 (5.00.2195), Windows 98, and Windows 98 DOS (Version
	4.10.2222)
Supplier:	Guidance Software
Address:	572 East Green Street, Suite 300
	Pasadena, CA 91101
Phone:	626–229–9191
Web:	http://www.guidancesoftware.com

## 1. Results Summary by Requirements

The tool shall make a bit-stream duplicate or an image of an original disk or partition. EnCase, with one exception, correctly and completely copied all disk sectors to an image file in the test cases that were run. EnCase, with two other exceptions, correctly and completely restored all disk sectors to a destination drive in the test cases that were run. The three exceptions are the following:

- 1. If the basic input/output system (BIOS) interface is chosen to access integrated drive electronics (IDE) hard drives on an older computer using a legacy BIOS that underreports the number of cylinders on the drive, then there may be a small area of sectors at the end of the drive that is not accessed. The sectors in this area are usually not used by commercial software. If direct access using the advance technology attachment (ATA) interface is chosen instead, EnCase accesses every sector of the hard drive.
- 2. For certain partition types (FAT32 and NTFS), a logical restore of a partition is not an exact duplicate of the original. The vendor documentation states that a logical restore cannot be verified as an exact copy of the source and is not recommended when seeking to create a bit-stream duplicate of the source. For FAT32 partitions, two file system control values (not part of any data file) are adjusted during restoration of an image to a destination. This adjustment is confined to about 8 bytes of sector 1 and the first sector of the FAT table (and FAT table backup copy) of the partition. For NTFS partitions, other changes were made to about 35 sectors of the partition. In no case was there any effect on sectors used in data files. All sectors of the image file accurately reflect the original sectors. These changes to a restored partition (logical volume) may be a consequence of the Windows shutdown process.
- 3. In the Windows 2000 environment, a hard drive may appear to have fewer sectors than are actually available on the drive. This has two consequences. First, an attempt to restore an entire drive to a drive of an identical size from Windows 2000 does not restore all sectors imaged from the source to the destination. Second, if restoring to a drive larger than the source and the *wipe excess sectors* option is selected, then not all the excess sectors are wiped. Restoring in a Windows 98 environment did not exhibit this anomaly.

#### The tool shall not alter the original disk.

For all the test cases that were run, EnCase never altered the original hard drive.

#### The tool shall be able to verify the integrity of a disk image file.

For all of the test cases that were run, EnCase always identified image files that had been modified.

#### The tool shall log I/O errors.

For all of the test cases that were run, EnCase always logged I/O errors.

#### The tool's documentation shall be correct.

The tool documentation available was the *EnCase Reference Manual*, *Version 3.0*, *Revision 3.18*. In some cases, the software behavior was not documented or was ambiguous.

## 2. Anomalies

This section describes three anomalies found during the testing of EnCase 3.20 against the disk imaging requirements in *Disk Imaging Tool Specification, Version 3.1.6*. The behavior observed in these anomalies should not be interpreted as necessarily representing unacceptable behavior for an imaging tool. Some of the anomalies may only need more detailed documentation by the tool vendor. However, the tool user must be aware of these behaviors since they may affect the quality and completeness of a forensic investigation.

The following anomalies were found:

- 1. **BIOS anomaly.** For IDE hard drives on computers with a legacy BIOS, if the legacy BIOS underreports the number of cylinders on the drive and the BIOS is used to access the drive, then there may be a small area of sectors at the end of the drive that is not accessed. The sectors in this area are usually not used by commercial software.
- 2. Logical restore anomaly. For certain partition types (FAT32 and NTFS), a logical restore of a partition is not an exact duplicate of the original. The vendor documentation states that a logical restore cannot be verified as an exact copy of the source and is not recommended when seeking to create a bit-stream duplicate of the source. For FAT32 partitions, two file system control values (not part of any data file) are adjusted as a side effect of restoring an image to a destination. This adjustment is confined to about 8 bytes of sector 1 and the first sector of the FAT table (and FAT table backup copy) of the partition. For NTFS partitions, other changes were made to about 35 sectors of the partition. In no case was there any effect on sectors used in data files. All sectors of the image file accurately reflected the original sectors. These changes to a restored partition (logical volume) may be a consequence of the Windows shutdown process.
- 3. **Restore size anomaly.** In the Windows 2000 environment, a hard drive may appear to have fewer sectors than are actually available on the drive. This has two consequences. First, an attempt to restore an entire drive to a drive of an identical size from Windows 2000 does not restore all sectors imaged from the source to the destination. Second, if restoring to a drive larger than the source and the *wipe excess sectors* option is selected, then not all the excess sectors are wiped. Restoring in a Windows 98 environment did not exhibit this anomaly. This is documented on the EnCase Web site but not in the manual (Version 3.0, Revision 3.18) distributed with EnCase 3.20.

The scope of each anomaly is indicated in Table 2-1. An anomaly can manifest in either an image file, a restored copy, or both. A restored copy means a copy of the original drive produced by the EnCase restore operation.

Anomaly	Scope	
BIOS	Image and restored copy.	
Logical restore	Restored copy. By examining the image file, it was verified that the anomaly is only in the restored copy.	
Restore size	Restored copy only.	

### 2.1 Sectors Missed in Legacy BIOS Access

A legacy BIOS is defined to be a BIOS that does not implement the extensions to interrupt 13h BIOS services described in the standard *ANSI INCITS 347-2001 BIOS Enhanced Disk Drive Services*. This standard was developed by T13, a Technical Committee for the InterNational Committee on Information Technology Standards (INCITS), under *Project 1386D, BIOS Enhanced Disk Drive Services*. INCITS is accredited by and operates under rules approved by the American National Standards Institute (ANSI). Further information is available at *http://www.t13.org*.

An extended BIOS (referred to as XBIOS) is defined as a BIOS that implements the extensions to interrupt 13h BIOS services described in *Project 1386D*, *BIOS Enhanced Disk Drive Services*.

EnCase does not access (i.e., read or write) all usable sectors on a hard drive if the legacy BIOS underreports the size of the hard drive and EnCase uses BIOS access rather than direct access by the ATA interface. If this anomaly occurs while EnCase 3.20 is reading a source drive, then the EnCase image file will be missing a small number of sectors from the end of the hard drive. If this anomaly occurs during *zero backfilling* of the destination drive, then the backfilling is not done for a small number of sectors at the end of the hard drive. When the anomaly occurs during the restore of an image, then part of the image at the end of the destination hard drive might not be restored. These sectors at the end of a hard drive are not normally used on a system with a legacy BIOS for any purpose by Microsoft operating systems or by typical application programs. These sectors are accessible from a Microsoft operating system by special tools and could be used by other operating systems such as Linux or FreeBSD UNIX.

A physical hard drive may have a different physical geometry from the logical geometry presented by the BIOS. This is because the legacy BIOS interface can only present a hard drive with less than 1,024 cylinders. If a hard drive is being accessed by the BIOS and the physical drive contains more than 1,024 cylinders, then the BIOS presents an adjusted (logical) drive geometry with fewer than 1,024 cylinders by increasing the heads per cylinder value and decreasing the number of cylinders reported. In a DOS environment, a drive is usually accessed through the BIOS, but software can directly access the physical drive if the necessary device driver is available. For example, the Quantum Sirocco model 1700A has the direct physical and BIOS access parameters presented in Table 2-2.

Access	Cylinders	Heads	Sectors per Head	Sectors per Cylinder	Total Sectors
Direct	3,309	16	63	1,008	3,335,472
BIOS	826	64	63	4,032	3,330,432

Table 2-2. Example of Direct ATA versus BIOS Hard Drive Geometry

Note that 5,040 more sectors (3,335,472 minus 3,330,432) can be accessed through direct ATA than are reported by the legacy BIOS.

Test cases: DI-003, DI-048, DI-063, DI-064, DI-069, and DI-070.

## 2.2 Logical Restore Anomaly

For certain partition types (FAT32 and NTFS), a logical restore of a partition is not an exact duplicate of the original. The vendor documentation states that a logical restore cannot be verified as an exact copy of the source and is not recommended when seeking to create a bit-stream duplicate of the source. For FAT32 partitions, two file system control values (not part of any data file) are adjusted as a side effect of restoring an image to a destination. This adjustment is confined to about 8 bytes of sector 1 and the first sector of the FAT table (and FAT table backup copy) of the partition. For NTFS partitions, other changes were made to about 35 sectors of the partition. In no case was there any effect on sectors used in data files. All sectors of the image file accurately reflect the original sectors. These changes to a restored partition (logical volume) may be a consequence of the Windows shutdown process.

Test cases: DI-072, DI-089, DI-101, DI-108, DI-118, DI-130, and DI-147.

#### 2.2.1 Logical restore anomaly mitigation

The **logical restore anomaly** appears to stem from the normal Windows 2000 shutdown process. A similar anomaly is discussed in a white paper on the vendor Web site, *Validation Testing of the EnCase Restore Process in Windows*.<sup>1</sup> During discussions with the vendor (and in the white paper), the suggestion was made to shut down the system by turning off the power without going through the normal shutdown procedure. Since powering off the entire system could compromise the integrity of other files on the system, NIST modified this procedure to power off only the destination drive and then follow the normal Windows 2000 shutdown procedure. The result of the modified procedure was to eliminate the anomaly from the restored copy while maintaining the integrity of the remainder of the file system. The modified procedure was used for test cases DI-084 and DI-145.

#### 2.2.2 Sector change in FAT32 operation

In FAT32 restore operations, two changes to the destination were observed. The changes were adjustments to the **FSInfo** sector and the FAT table. The **FSInfo** sector (sector 1 of the

 $<sup>^{1} {\</sup>it http://www.guidancesoftware.com/whitepapers/restorevalidation.shtm}$ 

destination) differs by one byte beginning at offset 488 of sector 1 of the source. This **FSInfo** sector contains control information for the FAT32 file system.<sup>2</sup>

Table 2-3 is extracted from page 21 of *Microsoft Extensible Firmware Initiative FAT32 File System Specification FAT: General Overview of On-Disk Format* (see footnote 2).

Name	Offset	Size	Description
	(byte)	(bytes)	
FSI_Free_Count	488	4	Contains the last known free cluster count on the volume. If the value is 0xFFFFFFF, then the free count is unknown and must be computed. Any other value can be used, but is not necessarily correct. It should be range checked at least to make sure it is <= volume cluster count.
FSI_Nxt_Free	492	4	This is a hint for the FAT driver. It indicates the cluster number at which the driver should start looking for free clusters. Because a FAT32 FAT is large, it can be rather time consuming if there are a lot of allocated clusters at the start of the FAT and the driver starts looking for a free cluster starting at cluster 2. Typically this value is set to the last cluster number that the driver allocated. If the value is 0xFFFFFFF, then there is no hint and the driver should start looking at cluster 2. Any other value can be used, but should be checked first to make sure it is a valid cluster number for the volume.

 Table 2-3. FAT32 FSInfo Sector Control Fields Modified by EnCase

For some of the FAT32 partition restore test cases in the first sector of both the primary copy and backup copy, the FAT table has a single byte change. The changes in the restored copy for test case DI-089 are presented in the following log file extracted from the **seccmp** program:

<sup>&</sup>lt;sup>2</sup> This sector is documented in *Microsoft Extensible Firmware Initiative FAT32 File System Specification FAT: General Overview of On-Disk Format.* This document can be found on the Microsoft Web site: *http://www.microsoft.com/hwdev/download/hardware/FATGEN103.doc.* 

Sector 64 is the **FSInfo** sector; sector 95 is the first sector of the primary FAT table; Sector 9,611 is the first sector of the backup FAT table.

#### 2.2.3 Sector change in NTFS logical restore operation

The execution of test case DI-084 using the modified shutdown procedure described in section 2.2.1 is presented in section 8, "Test Result Summaries." No sectors differ in the comparison between the source and the destination. Test case DI-084 was executed a second time using a normal Windows 2000 shutdown procedure. There were a number of differences between the original and the restored logical drive, as noted in the following extract from the partition compare log file:

```
Source base sector 10,249,533 Destination base sector 63
Sectors compared: 1,236,942
Sectors match: 1,236,906
Sectors differ: 36
Bytes differ: 2,548
Diffs range: 618,470-618,471; 618,480-618,498; 618,502-618,506;
618,510-618,517; 1,236,940-1,236,941
```

### 2.3 Restore Size Anomaly

A restore operation to an entire drive requires a destination drive larger than the source. In other words, an attempt to restore an entire drive to a drive of an identical size does not restore all sectors imaged from the source to the destination. Figure 2-1 is a screen capture for case DI-064, indicating that the destination drive is too small. The actual destination was identical in size to the source drive. This is documented on the EnCase Web site but not in the manual distributed with version 3.20. This anomaly was observed only in the Windows 2000 environment, not in the Windows 98 environment.



Drive is	Drive is too small				
?	You must select a drive that is at least 1.6GB (3334464 sectors). Are you sure you want to truncate the restore by 4032 sectors?				

Test cases: DI-093, DI-098, DI-099, DI-122, DI-127, DI-128, DI-153, DI-161, and DI-164.

The **restore size anomaly** also effects filling of excess sectors. If restoring to a drive larger than the source with the *wipe excess sectors* option selected, then not all the excess sectors are wiped. This anomaly was observed only in the Windows 2000 environment, not in the Windows 98 environment.

Test cases: DI-045 and DI-060.

### 3. Test Case Selection

Not all of the 168 test cases specified in *Disk Imaging Tool Specification, Version 3.1.6* apply to EnCase. Some test cases were modified so EnCase features that would not be tested otherwise could be included.

The primary criterion for selecting a test case is that there must be a tool feature covered by the objective of the test case as defined by the test case summary from *Disk Imaging Tool Specification, Version 3.1.6.* For example, test case DI-063 calls for the following setup: Image a BIOS-IDE source disk to a BIOS-IDE destination disk where the source disk is smaller than the destination. Since every parameter specified in the setup can be applied to EnCase, test case DI-063 is used. However, test case DI-113—imaging a Linux (i.e., ext2 or ext3) partition—is not used because EnCase does not allow selection of a Linux partition for the copy operation.

#### 3.1 Inapplicable Test Cases

Test cases that met the following criteria were designated as not applying to EnCase testing:

- Some test cases assume a feature not supported by EnCase. These include copy operation, removable destination media, NTFS partitions (in DOS), and advanced SCSI programming interface (ASPI).
- Logical acquisition and restore of Linux EXT2 partitions were not tested.
- Some test cases are going to be deleted from the test specification and are not ever used to test any disk imaging tools. For example, cases involving deleted file recovery are being deleted from the specification because deleted file recovery tools will be tested separately.
- Some test cases require support software or other tools that are not available. For example, some test cases specify I/O error simulation beyond the scope of the current tools, such as destination write error or image read error in a Windows environment.
- Some of the corrupt image cases are redundant for EnCase.

Case	Reason Not Applied
DI-001	Copy operation.
DI-002	Copy operation.
DI-003	Copy operation.
DI-004	Copy operation.
DI-005	Copy operation.
DI-006	Copy operation, destination write.
DI-007	Copy operation.
DI-008	Copy operation.
DI-009	Copy operation.

Case	Reason Not Applied
DI-010	Copy operation.
DI-011	Copy operation.
DI-012	Copy operation.
DI-013	Copy operation, deleted case, Linux partition.
DI-014	Copy operation.
DI-015	Copy operation, destination write.
DI-016	Copy operation.
DI-017	Copy operation.
DI-018	Copy operation.
DI-019	Copy operation.
DI-020	Copy operation.
DI-021	Copy operation, destination write.
DI-022	Copy operation.
DI-023	Copy operation.
DI-024	Copy operation.
DI-025	Copy operation.
DI-026	Copy operation, deleted case.
DI-027	Copy operation.
DI-028	Copy operation, destination write.
DI-029	Copy operation.
DI-029	Linux partition.
DI-030	Copy operation.
DI-031	Copy operation.
DI-032	Copy operation.
DI-033	Copy operation.
DI-034	Copy operation, destination write.
DI-035	Copy operation.
DI-036	Copy operation.
DI-037	Copy operation, Linux partition.
DI-038	Copy operation.
DI-039	Copy operation, deleted case.
DI-040	Copy operation.
DI-041	Copy operation, destination write.
DI-042	Copy operation.
DI-043	Copy operation, Linux partition.
DI-044	Copy operation.
DI-045	Copy operation.
DI-046	Copy operation.
DI-047	Copy operation.
DI-048 DI-049	Copy operation. Copy operation.
DI-049 DI-050	
DI-050	Copy operation, ASPI. Copy operation, ASPI.
DI-052	Copy operation, ASPI.
DI-052	Copy operation, ASPI.
DI-054	Copy operation, ASPI.
DI-055	Copy operation, ASPI.
DI-056	Copy operation.
DI-057	Copy operation.
DI-058	Copy operation.
DI-059	Copy operation.
DI-060	Copy operation.
DI-061	Copy operation.
DI-065	Destination write.
DI-066	Image read.
DI-068	Redundant corrupt image.
K	

Case	Reason Not Applied
DI-073	Removable media.
DI-074	Removable media, Linux partition.
DI-075	Deleted case.
DI-076	Deleted case.
DI-077	Removable media, deleted case.
DI-078	Removable media, deleted case, Linux partition.
DI-079	Linux partition.
DI-080	Destination write.
DI-081	Image read.
DI-084	NTFS.
DI-085	Removable media, image read, Linux partition.
DI-086	Removable media.
DI-087	Removable media.
DI-088	Removable media, Linux partition.
DI-090	Removable media.
DI-094	Destination write.
DI-095	Image read.
DI-096	Beyond scope of error simulator.
DI-097	Redundant corrupt image.
DI-102	Removable media.
DI-103	Removable media.
DI-103	Linux partition.
DI-104	Deleted case, Linux partition.
DI-105	Deleted case.
DI-106	Removable media, deleted case.
DI-107	Removable media, deleted case.
DI-109	Destination write.
DI-110	Image read.
DI-111	Linux partition.
DI-112	NTFS.
DI-113	Linux partition.
DI-114	Removable media, image read.
DI-115	Removable media.
DI-116	Removable media.
DI-117	Removable media, Linux partition.
DI-119	Removable media.
DI-123	Destination write.
DI-124	Image read.
DI-125	Beyond scope of error simulator.
DI-126	Redundant corrupt image.
DI-131	Removable media.
DI-132	Removable media, Linux partition.
DI-133	Deleted case.
DI-134	Deleted case.
DI-135	Removable media, deleted case.
DI-136	Removable media, deleted case, Linux partition.
DI-138	Destination write.
DI-139	Image read.
DI-143	Removable media, image read.
DI-144	Removable media.
DI-145	Removable media.
DI-146	Removable media.
DI-148	Removable media.
DI-151	Redundant corrupt image.
DI-154	ASPI.
DI-155	ASPI.

Case	Reason Not Applied
DI-156	ASPI.
DI-157	ASPI.
DI-158	ASPI.
DI-159	Redundant corrupt image.
DI-162	Redundant corrupt image.
DI-165	Copy operation, deleted case.
DI-166	Copy operation, deleted case.
DI-167	Deleted case.
DI-168	Deleted case.

#### 3.2 Modified Test Cases

Several test cases were modified to increase the coverage of EnCase testing. The test cases in *Disk Imaging Tool Specification, Version 3.1.6* do not provide for the following:

- Acquisition of an image through an interface other than IDE or SCSI (e.g., FastBloc acquisition of an IDE drive via a SCSI interface in Windows).
- Filling of excess sectors after an image restore.
- Using direct ATA access to acquire an image and then restoring with a Windows interface.
- Cylinder alignment of a restored copy.

To address these issues, the following changes were made to selected test cases:

- Test cases DI-060, DI-084, and DI-112 were modified for inclusion with the source interface changed from **XBIOS-IDE** to **FastBloc** and the destination interface to Windows 2000.
- Test Case DI-145 was modified for inclusion with the operation changed from **image-rm** to **image**, the source interface changed to **XBIOS-SCSI**, and the destination interface changed to Windows 2000.
- Test Case DI-154 was modified for inclusion with excess sector fill turned on, the source interface changed to **XBIOS-SCSI**, and the destination interface changed to Windows 98.
- Test case DI-101 was modified to specify **Fill excess sectors** on the destination.
- Test cases DI-003, DI-019, DI-044, and DI-048 were modified for inclusion with the operation changed from **copy** to **image** and the destination interface to Windows 98.
- Test case DI-045 was modified for inclusion with the operation changed from **copy** to **image** and the destination interface to Windows 2000.
- Test cases DI-089, DI-150, DI-152, and DI-153 were modified to specify Windows 2000 for the destination interface.
- Test case DI-149 was modified to specify Windows 98 for the destination interface.
- In general, except as noted, a destination interface of **BIOS-IDE** was changed to Windows 98 and any **XBIOS** destination interface was changed to Windows 2000.

There were 50 test cases run (listed with modifications from the original version in *Disk Imaging Tool Specification, Version 3.1.6*). All test cases with the **Obj** parameter value of all are physical image and restores. All test cases with the **Obj** parameter value equal to a partition type (e.g., FAT16, etc.) are logical image and restores. The entries in the **Err** column indicate the type of

error introduced as follows: src rd (source read), dst wt (destination write), img rd (image read), img wt (image weight), and corrupt (the image file has been changed).

Case	Src	Dst	Rel size	Err	Obj
DI-003	BIOS-IDE	Windows 98	Src < dst (n,a)	None	All
DI-019	XBIOS-IDE	Windows 98	Src < dst (f,n)	None	All
DI-044	DIRECT-IDE	Windows 98	Src < dst (n,n)	None	All
DI-045	DIRECT-IDE	Windows 2000	Src < dst (f,n)	None	All
DI-048	DIRECT-IDE	Windows 98	Src = dst	None	All
DI-060	FastBloc	Windows 2000	Src < dst (f,n)	None	All
DI-062	BIOS-IDE	Windows 98	Src < dst (n,n)	Corrupt	All
DI-063	BIOS-IDE	Windows 98	Src < dst (n,n)	None	All
DI-064	BIOS-IDE	Windows 98	Src = dst	Src rd	All
DI-067	BIOS-IDE	Windows 98	Src = dst	Img wt	All
DI-069	BIOS-IDE	Windows 98	Src = dst	None	All
DI-070	BIOS-IDE	Windows 98	Src > dst	None	All
DI-071	BIOS-IDE	Windows 98	Src < dst (n,n)	Corrupt	FAT16
DI-072	BIOS-IDE	Windows 98	Src < dst (n,n)	None	FAT32
DI-082	BIOS-IDE	Windows 98	Src = dst	Img wt	FAT16
DI-083	BIOS-IDE	Windows 98	Src = dst	Corrupt	FAT32
DI-084	FastBloc	Windows 2000	Src = dst	None	NTFS
DI-089	BIOS-IDE	Windows 2000	Src > dst	None	FAT32
DI-091	XBIOS-IDE	Windows 2000	Src < dst (n,n)	Corrupt	All
DI-092	XBIOS-IDE	Windows 2000	Src < dst (n,n)	None	All
DI-093	XBIOS-IDE	Windows 2000	Src = dst	Src rd	All
DI-098	XBIOS-IDE	Windows 2000	Src = dst	None	All
DI-099	XBIOS-IDE	Windows 2000	Src > dst	None	All
DI-100	XBIOS-IDE	Windows 2000	Src < dst (n,n)	Corrupt	FAT16
DI-101	XBIOS-IDE	Windows 2000	Src < dst (n,n)	None	FAT32
DI-108	XBIOS-IDE	Windows 2000	Src = dst	Src rd	FAT32
DI-112	FastBloc	Windows 2000	Src = dst	Corrupt	NTFS
DI-118	XBIOS-IDE	Windows 2000	Src > dst	None	FAT32
DI-120	XBIOS-SCSI	Windows 2000	Src < dst (n,n)	Corrupt	All
DI-121	XBIOS-SCSI	Windows 2000	Src < dst (n,n)	None	All
DI-122	XBIOS-SCSI	Windows 2000	Src = dst	Src rd	All
DI-127	XBIOS-SCSI	Windows 2000	Src = dst	None	All
DI-128	XBIOS-SCSI	Windows 2000	Src > dst	None	All
DI-129	XBIOS-SCSI	Windows 2000	Src < dst (n,n)	Corrupt	FAT16
DI-130	XBIOS-SCSI	Windows 2000	Src < dst (n,n)	None	FAT32
DI-137	XBIOS-SCSI	Windows 2000	Src = dst	Src rd	FAT16
DI-140	XBIOS-SCSI	Windows 2000	Src = dst	Img wt	FAT16
DI-141	XBIOS-SCSI	Windows 2000	Src = dst	Corrupt	FAT32
DI-142	XBIOS-SCSI	Windows 2000	Src = dst	None	FAT16
DI-145	XBIOS-SCSI	Windows 2000	Src = dst	None	FAT32
DI-147	XBIOS-SCSI	Windows 2000	Src > dst	None	FAT32
DI-149	DIRECT-IDE	Windows 98	Src < dst (n,n)	Corrupt	All
DI-150	DIRECT-IDE	Windows 2000	Src < dst (n,n)	None	All
DI-152	DIRECT-IDE	Windows 2000	Src = dst	None	All
DI-153	DIRECT-IDE	Windows 2000	Src > dst	None	All
DI-154	XBIOS-SCSI	Windows 98	Src < dst (n,f)	None	All
DI-160	XBIOS-IDE	Windows 2000	Src < dst (n,n)	None	All
DI-161	XBIOS-IDE	Windows 2000	Src > dst	None	All
DI-163	XBIOS-SCSI	Windows 2000	Src < dst (n,n)	None	All
DI-164	XBIOS-SCSI	Windows 2000	Src > dst	None	All

## 4. Test Results by Assertion

This section presents the results of EnCase 3.20 testing with results grouped by assertion. The assertions are taken from the *Disk Imaging Tool Specification, Version 3.1.6.* 

#### 4.1 Mandatory Assertions

#### AM-1. If a source is accessed by the tool, then the source will not be altered.

After each source disk is created, a SHA-1 hash value is calculated and saved. Each time the tool is run, another SHA-1 hash value is calculated after the run and compared to the saved value. For all test cases that were run, the hash codes matched (i.e., the source was not altered).

The column labeled **Case** is the test case ID. **Before SHA-1** is the first four and last four digits (in hexadecimal) of the SHA computed on the source disk before running any test cases. **After SHA-1** is the first four and last four digits (in hexadecimal) of the SHA computed on the source disk after executing EnCase for the given test case. The **SHA Values Match?** column indicates whether the full hash values match.

Case	Before SHA-1	After SHA-1	SHA Values Match?
DI-003	D0FC 428F	D0FC 428F	OK
DI-019	83A0 2A54	83A0 2A54	ОК
DI-044	D0FC 428F	D0FC 428F	OK
DI-045	8034 B235	8034 B235	ОК
DI-048	D0FC 428F	D0FC 428F	ОК
DI-060	8034 B235	8034 B235	ОК
DI-062	3E7E C05A	3E7E C05A	ОК
DI-063	D0FC 428F	D0FC 428F	ОК
DI-064	D0FC 428F	D0FC 428F	ОК
DI-067	D0FC 428F	D0FC 428F	ОК
DI-069	D0FC 428F	D0FC 428F	ОК
DI-070	D0FC 428F	D0FC 428F	ОК
DI-071	D0FC 428F	D0FC 428F	ОК
DI-072	3E7E C05A	3E7E C05A	ОК
DI-082	D0FC 428F	D0FC 428F	ОК
DI-083	3E7E C05A	3E7E C05A	ОК
DI-084	8034 B235	8034 B235	ОК
DI-089	B54E 2015	B54E 2015	ОК
DI-091	3DE5 FD14	3DE5 FD14	ОК
DI-092	83A0 2A54	83A0 2A54	ОК
DI-093	83A0 2A54	83A0 2A54	ОК
DI-098	83A0 2A54	83A0 2A54	ОК
DI-099	83A0 2A54	83A0 2A54	ОК
DI-100	83A0 2A54	83A0 2A54	ОК
DI-101	3DE5 FD14	3DE5 FD14	ОК
DI-108	3DE5 FD14	3DE5 FD14	ОК
DI-112	8034 B235	8034 B235	ОК
DI-118	3DE5 FD14	3DE5 FD14	OK
DI-120	0F9D 7AB0	0F9D 7AB0	ОК
DI-121	25BF 9CBF	25BF 9CBF	OK
DI-122	25BF 9CBF	25BF 9CBF	OK
DI-127	25BF 9CBF	25BF 9CBF	ОК
DI-128	25BF 9CBF	25BF 9CBF	OK

DI-129	0F9D 7AB0	0F9D 7AB0	OK
DI-130	25BF 9CBF	25BF 9CBF	OK
DI-137	0F9D 7AB0	0F9D 7AB0	OK
DI-140	0F9D 7AB0	0F9D 7AB0	OK
DI-141	25BF 9CBF	25BF 9CBF	OK
DI-142	0F9D 7AB0	0F9D 7AB0	OK
DI-145	25BF 9CBF	25BF 9CBF	OK
DI-147	25BF 9CBF	25BF 9CBF	OK
DI-149	3E7E C05A	3E7E C05A	OK
DI-150	83A0 2A54	83A0 2A54	OK
DI-152	83A0 2A54	83A0 2A54	OK
DI-153	83A0 2A54	83A0 2A54	OK
DI-154	0F9D 7AB0	0F9D 7AB0	OK
DI-160	FA03 20B9	FA03 20B9	OK
DI-161	FA03 20B9	FA03 20B9	OK
DI-163	25BF 9CBF	25BF 9CBF	OK
DI-164	6001 5C9A	6001 5C9A	OK

# AM-2. If there are no errors reading from a source or errors writing to a destination, then a bit-stream duplicate of the source will be created on the destination.

The column labeled **Case** is the test case ID. The type of object copied—disk or partition—is indicated in the **Obj** column. The column labeled **Src** is the number of sectors on the source to be copied. The column labeled **Dst** is the number of sectors on the destination. The number of sectors compared is listed in the **Compared** column. **Not Matched** indicates the number of sectors that were expected to compare equal but were different. The table is sorted first by type of object copied and then by case.

The **BIOS anomaly** is apparent (by values of 1,008; 5,040; and 4,032 in the **Not Matched** column). The **logical restore anomaly** is apparent as a value of 1 or 3 in the **Not Matched** column for the FAT32 test cases. The other non-zero **Not Matched** values (except for test case DI-084 discussed below) indicate the **Restore anomaly**.

Note that an initial examination of the results from test case DI-084 seems to imply an anomaly because the last two sectors of the partition did not match. This is not the case, because two more sectors are allocated to the physical NTFS partition than are actually used by the formatted NTFS file system. This can be verified by examining the number of sectors allocated to the NTFS file system. A value of 1,236,940 is reported as the number of allocated sectors, although the physical partition is actually two sectors larger. However, the partition compare program always compares the entire physical partition and for test case DI-084 compares two sectors too many. Those last two sectors of the physical partition are not germane to the test case because they are not used by the NTFS file system and are not imaged by EnCase during a logical acquire. However, those sectors are imaged by EnCase when performing a physical acquire of the entire disk.

Case	Obj	Src	Dst	Compared	Not Matched
DI-019	all	40188960	78177792	40188960	0
DI-044	all	3335472	12672450	3335472	0
DI-045	all	40188960	58633344	40188960	0
DI-048	all	3335472	3335472	3335472	5040
DI-060	all	40188960	58633344	40188960	0
DI-063	all	3335472	12672450	3335472	1008

Case	Obj	Src	Dst	Compared	Not Matched
DI-069	all	3335472	3335472	3335472	5040
DI-070	all	3335472	3173184	3173184	4032
DI-072	FAT32	1229697	1334529	1229697	1
DI-084	NTFS	1236942	1236942	1236942	2
DI-089	FAT32	1236942	1140552	1140552	3
DI-092	all	40188960	78177792	40188960	0
DI-098	all	40188960	40188960	40188960	10395
DI-099	all	40188960	39102336	39102336	126
DI-101	FAT32	1236942	1333332	1236942	3
DI-118	FAT32	1236942	1140552	1140552	3
DI-121	all	17938985	35885448	17938985	0
DI-127	all	17938985	17938985	17938985	10445
DI-128	all	17938985	17921835	17921835	9360
DI-130	FAT32	6152832	6361677	6152832	1
DI-142	FAT16	1236942	1236942	1236942	0
DI-145	FAT32	6152832	6152832	6152832	0
DI-147	FAT32	6152832	5943987	5943987	1
DI-150	all	40188960	58633344	40188960	0
DI-152	all	40188960	40188960	40188960	10395
DI-153	all	40188960	39102336	39102336	126
DI-154	all	17938985	35843670	17938985	1
DI-160	all	58633344	71687370	58633344	0
DI-161	all	58633344	35916548	35916548	11273
DI-163	all	17938985	39102336	17938985	0
DI-164	all	71687370	58633344	58633344	12159

# AM-3. If there are errors reading from a source or writing to a destination, then a qualified bit-stream duplicate of the source will be created on the destination. The identified areas are replaced by values specified by the tool's documentation.

The column labeled **Case** is the test case ID. The type of object copied is indicated in the **Obj** column. The type of error introduced is indicated in the **Err** column. **Not Matched** indicates the number of sectors that were expected to compare equal but were different. The **Range** column contains a list of sector ranges indicating contiguous blocks of sectors that do not match the expected results.

The **BIOS anomaly** is indicated in case DI-064. The **logical restore anomaly** is apparent as range values of 1, 32, and 9,548 in the **Range** column entry for case DI-108.

Case	Obj	Err	Not Matched	Range
DI-064	all	src rd	5041	40494, 3330432-3335471
DI-093	all	src rd	10446	1357-1407, 40178565-40188959
DI-108	FAT32	src rd	60	1, 32, 9548, 80711-80767
DI-122	all	src rd	10502	5938247-5938303, 17928540-17938984
DI-137	FAT16	src rd	7	145401-145407

# AM-4. If there are errors reading from the source or writing to the destination, then the error types and locations are logged.

The column labeled **Case** is the test case ID. The type of operation performed is indicated by the **Op** column. The type of error introduced is indicated in the **Err** column. The message from the

EnCase log file is in the **Message** column. The reported location (if any) is in the **Location** column.

Test cases DI-096 and DI-125 specify errors writing to an image file. Both cases produced a message indicating that the error occurred and that the image file could not be created.

Case	Op	Err	Message	Location
DI-064	image	src rd	blocks reported read errors	40448-40511
DI-093	image	src rd	blocks reported read errors	1344-1407
DI-108	image	src rd	blocks reported read errors	80704-80767
DI-122	image	src rd	blocks reported read errors	5938240-5938303
DI-137	image	src rd	blocks reported read errors	145344-145407

# AM-5. If the source or destination is an IDE or SCSI drive and an image or bit-stream duplicate is created, then the interface used is presumed to be well defined.<sup>3</sup>

See all test cases.

AM-6. If the expected result of any test defined in this specification is achieved and the documentation was followed without change in achieving this result, then the documentation is presumed correct.

Some behavior of the tool was not well documented or was ambiguous.

# AM-7. If a bit-stream duplicate of a source is created on a larger destination, then the contents of areas on the destination that are not part of the duplicate are set to values as specified in the tool documentation.

The column labeled **Case** is the test case ID. The type of object copied is indicated in the **Obj** column. The **Do BF** column indicates that the EnCase backfill setting was selected. A value of *Yes* indicates that backfilling should be performed. The **Excess** column indicates the number of excess sectors on the destination. The number of excess sectors backfilled with user specified value is indicated in the **BF** column. The number of excess destination sectors that were not changed by EnCase is indicated in the **Not BF** column.

The **restore size anomaly** is apparent for test cases DI-045 and DI-060 by some sectors not being backfilled.

Case	Obj	Do BF	Excess	BF	Not BF
DI-019	all	yes	37988832	37988832	0
DI-044	all	no	9336978	0	9336978
DI-045	all	yes	18444384	18444384	12159
DI-060	all	yes	18444384	18444384	12159
DI-063	all	no	9336978	0	9336978
DI-072	FAT32	no	104832	0	104832
DI-092	all	no	37988832	0	37988832
DI-101	FAT32	yes	96390	96390	0
DI-121	all	no	17946463	0	17946463

<sup>&</sup>lt;sup>3</sup> The actual assertion from the specification refers to a specific requirement. The essence of the referenced requirement is for the interface to be well defined.

Case	Obj	Do BF	Excess	BF	Not BF
DI-130	FAT32	no	208845	0	208845
DI-150	all	no	18444384	0	18444384
DI-154	all	yes	17904685	17904685	0
DI-160	all	no	13054026	0	13054026
DI-163	all	no	21163351	0	21163351

# AM-8. If a bit-stream duplicate of a source is created on a smaller destination, then the duplicate is qualified by omitted portions of the bit-stream, and the tool will notify the user that the source is larger than the destination.

The column labeled **Case** is the test case ID. The column labeled **Op** indicates the type of operation selected. The type of object copied is indicated in the **Obj** column. The message from a pop-up message box is in the **Message** column.

Case	Op	Obj	Message
DI-070	image	all	Drive is too small
DI-089	image	FAT32	Drive is too small
DI-099	image	all	Drive is too small
DI-118	image	FAT32	Drive is too small
DI-128	image	all	Drive is too small
DI-147	image	FAT32	Drive is too small
DI-153	image	all	Drive is too small
DI-161	image	all	Drive is too small
DI-164	image	all	Drive is too small

Figure 4-1 is a screen capture for case DI-118, where the destination is too small for the source.

Figure 4-1. Pop-up Message for DI-118



## 4.2 Optional Assertions

# AO-1. If a hash of one or more blocks (i.e., less than the entire disk) from the source is computed before duplication and is compared to a hash of the same blocks from the destination, the hashes will compare equal.

The column labeled **Case** is the test case ID. The type of operation is indicated in the **Op** column. The type of object copied is indicated in the **Obj** column. The type of error introduced is indicated in the **Err** column. The message from the log file is in the **Message** column.

The expected result for the corrupt (Err) entries is *could not be verified*.

Case	Obj	Err	Message
DI-003	all	none	Completely Verified, 0 Errors.
DI-019	all	none	Completely Verified, 0 Errors.
DI-044	all	none	Completely Verified, 0 Errors.

Case	Obj	Err	Message
DI-045	all	none	Completely Verified, 0 Errors.
DI-048	all	none	Completely Verified, 0 Errors.
DI-060	all	none	Completely Verified, 0 Errors.
DI-062	all	corrupt	integrity could not be verified:930752-930815
DI-063	all	none	Completely Verified, 0 Errors.
DI-064	all	src rd	Completely Verified, 0 Errors.
DI-067	all	img wt	Process terminated
DI-069	all	none	Completely Verified, 0 Errors.
DI-070	all	none	Completely Verified, 0 Errors.
DI-071	FAT16	corrupt	integrity could not be verified:16064-16127
DI-072	FAT32	none	Completely Verified, 0 Errors.
DI-082	FAT16	img wt	Process terminated
DI-083	FAT32	corrupt	integrity could not be verified:929920-929983
DI-084	NTFS	none	Completely Verified, 0 Errors.
DI-089	FAT32	none	Completely Verified, 0 Errors.
DI-091	all	corrupt	integrity could not be verified:32758528-
DI UJI	a11	corrupt	32758591
DI-092	all	none	Completely Verified, 0 Errors.
DI-093	all	src rd	Completely Verified, 0 Errors.
DI-098	all	none	Completely Verified, 0 Errors.
DI-099	all	none	Completely Verified, 0 Errors.
DI-100	FAT16	corrupt	integrity could not be verified:16064-16127
DI-101	FAT32	none	Completely Verified, 0 Errors.
DI-108	FAT32	src rd	Completely Verified, 0 Errors.
DI-112	NTFS	corrupt	integrity could not be verified:1536-1599
DI-118	FAT32	none	Completely Verified, 0 Errors.
DI-120	all	corrupt	integrity could not be verified:4097088- 4097151
DI-121	all	none	Completely Verified, 0 Errors.
DI-122	all	src rd	Completely Verified, O Errors.
DI-127	all	none	Completely Verified, 0 Errors.
DI-128	all	none	Completely Verified, 0 Errors.
DI-129	FAT16	corrupt	integrity could not be verified:16448-16511
DI-130	FAT32	none	Completely Verified, 0 Errors.
DI-137	FAT16	src rd	Completely Verified, 0 Errors.
DI-140	FAT16	img wt	Process terminated
DI-141	FAT32	corrupt	integrity could not be verified:4096512- 4096575
DI-142	FAT16	none	Completely Verified, 0 Errors.
DI-145	FAT32	corrupt	integrity could not be verified:4096512- 4096575
DI-147	FAT32	none	Completely Verified, 0 Errors.
DI-149	all	corrupt	integrity could not be verified:930432-930495
DI-150	all	none	Completely Verified, 0 Errors.
DI-152	all	none	Completely Verified, 0 Errors.
DI-153	all	none	Completely Verified, 0 Errors.
DI-154	all	corrupt	integrity could not be verified:4097088- 4097151
DI-160	all	none	Completely Verified, 0 Errors.
	all	none	Completely Verified. 0 Errors
DI-161 DI-163	all all	none none	Completely Verified, 0 Errors. Completely Verified, 0 Errors.

For the 12 corrupt image file test cases, EnCase generates a message indicating that the image file has been corrupted somewhere within a range of sectors. The following table indicates the actual logical block address (LBA) location corrupted (**Corrupt Sector LBA**) and the range indicated by EnCase (**EnCase Range**). The column labeled **In Range** indicates whether EnCase correctly identified the location of the corrupted sector.

Case	Corrupt Sector LBA	EnCase Range	In Range
DI-062	930762	930752-930815	yes
DI-071	16065	16064-16127	yes
DI-083	929952	929920-929983	yes
DI-091	32758551	32758528-32758591	yes
DI-100	16065	16064-16127	yes
DI-112	1575	1536-1599	yes
DI-120	4097142	4097088-4097151	yes
DI-129	16486	16448-16511	yes
DI-141	4096575	4096512-4096575	yes
DI-145	4096575	4096512-4096575	yes
DI-149	930447	930432-930495	yes

# AO-2. If more than one partition exists on the source disk, the tool will produce a duplicate of any user-selected source partition on the destination.

FAT 16 partitions were copied correctly. FAT32 partitions were not always restored exactly. Using the normal system shutdown procedure, two fields—sector 1 of the partition and one entry in the FAT tables, both primary and backup—were modified. The fields contain file system control information. No data file content was affected by the change. For details, see section 2.2.2 "Sector change in FAT32 operation" Two test cases using an NTFS partition were acquired through the FastBloc device. For both NTFS and FAT32 partitions, the acquisition produced an accurate image file; however, an accurate restored copy could be produced only when the modified shutdown procedure described in section 2.2.1 was followed.

Results for the partition test cases are listed in the mandatory assertions section—FAT16 test cases: DI-071, DI-082, DI-100, DI-129, DI-137, DI-140, and DI-142; FAT32 test cases: DI-072, DI-083, DI-089, DI-101, DI-108, DI-118, DI-130, DI-141, DI-145, and DI-147; and NTFS test cases DI-084 and DI-112.

# AO-3. If a partition exists on the source, the tool will display or log a message indicating that the partition exists and display or log one or more items of information from the following list: drive indicator, device type, device address or mount point, size, space used, and free space.

No anomalies were observed.

# AO-4. If the tool logs the tool version, it will be the version referred to in the implementation's documentation.

No anomalies were observed.

AO-5. If the subject disk identification is available and the tool is capable of logging the subject disk identification, then the subject disk identification will be logged.

No anomalies were observed.

AO-6. If the tool logs the source partition table in human-readable form and the information from the source partition table can be ascertained independently from the tool, then the source partition table information will accurately match the content of the independent partition table information.

No anomalies were observed.

AO-7. If the tool logs errors and any error occurs, then the type and location of the error will be logged.

See AM-4.

AO-8. If the tool logs tool actions and the tool's documentation states what actions are logged, then the actions logged will accurately match those documented in the tool's documentation.

No anomalies were observed.

AO-9. If the tool logs start and finish run times, then the logged start and finish run times will accurately match those recorded by the tester according to screen input images, test input scripts, or tester notes.

No anomalies were observed.

AO-10. If the tool logs tool settings and the tool's documentation states what settings are logged, then the logged settings will accurately match those set by the tester or documented in the tool's documentation.

No anomalies were observed.

AO-11. If the tool logs user comments, then the logged user comments will accurately match those entered by the tester as captured in screen input images, test input scripts, or tester notes.

No anomalies were observed.

# AO-12. If the tool creates image files, then it will create an image file of a source on a magnetic medium that can be removed from the platform on which it was created.

Magnetic tape removable media do not apply. Small (less than 250MB) media, such as floppy disks or zip disks, were not considered useful for imaging hard drives and were therefore not tested.

AO-13. If the tool creates an image file from a source on a removable magnetic medium, then a duplicate of the source created from the removable magnetic medium will result in a duplicate on the destination, and the destination will compare equal to the source.

Magnetic tape removable media do not apply. Small (less than 250MB) media, such as floppy disks or zip disks, were not considered useful for imaging hard drives and were therefore not tested.

# AO-14. If an image file is created, and there are no errors reading from a source or errors writing to a destination, then a bit-stream duplicate created from the image file will compare equal to the source.

The results for image files are included in the results for the mandatory assertions and optional assertion AO-1.

## 5. Testing Environment

The tests were run in the NIST CFTT lab. This section describes the hardware (i.e., test computers and hard drives) available for testing. Not all components were used in testing. The following host computers were available for executing test cases: Beta1, Beta3, Beta4, Beta6, Beta7, Delta1, Paladin, HecRamsey, McCloud, McMillin, AndWife, Cadfael, Rumpole, Wimsey, and JudgeDee. More than 35 hard drives (16 different models, 6 different brands) were used for the tests (Table 5-1). The tests were run with the hard drives arranged in one of several possible configurations (Table 5-4) as required by the test parameters.

#### 5.1 Extended BIOS Host Computers

Four host computers (Cadfael, Rumpole, Wimsey, and JudgeDee) have the following hardware components in common:

#### **Table 5-1. Extended BIOS Host Computer Hardware Components**

```
ASUS CUSL2 Motherboard
BIOS: Award Medallion v6.0
Intel Pentium III (Coppermine) 933Mhz
512,672k Memory
Adaptec 29160N SCSI Adapter card
Plextor CR-RW PX-W124TS Rev: 1.06
Iomega 2GB Jaz drive Rev: E.17
LS-120 Super floppy
Two slots for removable IDE hard disk drives
Two slots for removable SCSI hard disk drive
```

Rumpole also had a 30GB OnStream SC30 tape drive (not used in the test procedures). JudgeDee had a third slot for a removable IDE hard disk drive.

Paladin, HecRamsey, McCloud, McMillin, and AndWife had the following hardware components in common:

 Table 5-2. Alternate Extended BIOS Host Computer Hardware Components

```
Intel D845WNL Motherboard
BIOS: HV84510A.86A.0022.P05
Intel Pentium IV 2.0Ghz
512,672k Memory
Adaptec 29160 SCSI Adapter card
Tekram DC-390U3W SCSI Adapter card
Plextor CR-RW PX-W124TS Rev: 1.06
LG 52X CD-ROM
Floppy drive
Three slots for removable IDE hard disk drives
Two slots for removable SCSI hard disk drive
```

## 5.2 Legacy BIOS Host Computers

Beta1, Beta3, Beta4, Beta6 and Beta7 are Nexar 166MHz computers with 256MB RAM; two hard disk drive bays, both of which take hard drives mounted in removable carriages; a CD-ROM drive; a 1.44MB floppy drive; and a 17" color monitor. The motherboard is a HCL Hewlett-Packard Integrated ISA/PCI P54C with an Award v4.51PG BIOS. Beta7 also has an Adaptec 29160N SCSI Adapter card with an Iomega 2GB Jaz drive Rev: E.17 attached.

#### 5.3 Fast SHA-1 for Nexar Tests

Delta1 is a Dell Computer Corporation system with 256MB RAM, one hard disk drive bay, one installed 15.37GB hard disk, a CD–ROM drive, a 1.44MB floppy drive, a 250MB zip drive, and a 17" color monitor. The BIOS is PhoenixBios 4.0 Release 6.0.

Delta1 is used to compute SHA-1 values for tests run on Nexar systems as needed. Delta1 (888Mhz) computes SHA-1 values much faster than the Nexar (166Mhz) systems.

#### 5.4 Hard Disk Drives

The hard disk drives that were used were selected from the drives listed in Table 5-3. These hard drives were mounted in removable storage modules. Any combination of two IDE hard drives and two SCSI hard drives can be installed in Cadfael, Rumpole, Wimsey, and JudgeDee as required for a test. The legacy BIOS computers can have only two IDE drives mounted at a time.

The IDE disks used in the legacy BIOS computers have jumpers set manually to drive 0 for source drives and drive 1 for destination drives, and the media drive is set to either 0 or 1, depending on the available drive slot available after either the source or destination drive is installed. The IDE disks used in Cadfael, Rumpole, Wimsey, and JudgeDee have jumpers set for cable select.

The SCSI ID for the SCSI disk is set to either 0 or 1 as required by the test case. Except as noted, a source disk is set to ID 0, and a destination disk is set to ID 1.

Label	Model	Interface	Usable Sectors	GB
11	FUJITSU MAN3184MC	SCSI	35,885,447	18.37
12	FUJITSU MAN3184MC	SCSI	35,885,447	18.37
1F	QUANTUM ATLAS10K3 18 SCA	SCSI	35,916,547	18.38
60	WDCWD64AA	IDE	12,594,960	6.44
61	WDCWD64AA	IDE	12,594,960	6.44
64	WDCWD64AA	IDE	12,594,960	6.44
70	IC35L040AVER07-0	IDE	80,418,240	41.17
75	IC35L040AVER07-0	IDE	80,418,240	41.17
7B	MAXTOR 6L040J2	IDE	78,177,792	40.02
7C	MAXTOR 6L040J2	IDE	78,177,792	40.02
91	WDC WD300BB-00CAA0	IDE	58,633,344	30.02
92	WDC WD300BB-00CAA0	IDE	58,633,344	30.02
93	WDC WD300BB-00CAA0	IDE	58,633,344	30.02
94	WDC WD300BB-00CAA0	IDE	58,633,344	30.02
9F	WDC WD200BB-32CFC0	IDE	39,102,336	20.02
A1	Quantum Sirocco 1700A	IDE	3,335,472	1.70
A4	Quantum Sirocco 1700A	IDE	3,335,472	1.70
A5	WDC WD200BB-00AUA1	IDE	39,102,336	20.02
Аб	WDC WD200BB-00AUA1	IDE	39,102,336	20.02
A8	WDC WD200BB-00AUA1	IDE	39,102,336	20.02
В9	WDC AC21600H	IDE	3,173,184	1.62
CC	SEAGATE ST336705LC	SCSI	71,687,370	36.70
D3	Fujitsu MPE3064AT	IDE	12,672,450	6.48
D7	Quantum Sirocco 1700A	IDE	3,335,472	1.70
DA	Fujitsu MPE3064AT	IDE	12,672,450	6.48
DB	Fujitsu MPE3064AT	IDE	12,672,450	6.48
E1	QUANTUM ATLAS10K2-TY092J	SCSI	17,938,985	9.18
E2	QUANTUM ATLAS10K2-TY092J	SCSI	17,938,985	9.18
E3	QUANTUM ATLAS10K2-TY092J	SCSI	17,938,985	9.18
E4	QUANTUM ATLAS10K2-TY092J	SCSI	17,938,985	9.18
Еб	SEAGATE ST318404LC	SCSI	35,843,670	18.35
EB	SEAGATE ST39204LC	SCSI	17,921,835	9.17
F1	Quantum Sirocco1700A	IDE	3,335,472	1.70
F5	IBM-DTLA-307020	IDE	40,188,960	20.57
Fб	IBM-DTLA-307020	IDE	40,188,960	20.57
F7	IBM-DTLA-307020	IDE	40,188,960	20.57
F8	IBM-DTLA-307020	IDE	40,188,960	20.57

Table 5-3. Hard Drives Available for Use in Testing

### 5.5 Test Configurations

The host computer and hard drive setup were determined by the test case parameters. Two or three disk drives were required for each test case. Except for corrupt image tests, source, destination, and media disks were required for all test cases. The corrupt image test cases did not require a destination drive. The source disk provided something to copy. The destination disk provided a place to put the copy. The media disk provided a place to put the image file for test cases that require the creation of an image file. The media disk also was used to provide the runtime Windows environment for running EnCase. One of two DOS boot floppies was selected and then used to create the run-time environment for the test case; the floppy contained control scripts and log files. A CD-ROM contained the support software and utility software. The support software provided for setup of test data, measurement of test results, and control of the test process.

The type of BIOS required for the test case determined the selection of the host computer. If an extended BIOS was required then either Paladin, HecRamsey, McCloud, McMillin, AndWife Cadfael, Rumpole, Wimsey, or JudgeDee was selected. If a legacy BIOS was required, then one of the Nexar computers was selected.

The factors determining the source disk selection were the source disk interface and type of source partition to use. A disk was selected with the matching interface and a partition of the type required for the test case. The factors for the selection of the destination drive were the destination interface and the relative size parameters. A drive was selected with the specified interface and, for whole disk copies, size relative to the source. For partition copies, the actual size of the destination drive did not matter because it was the size of the partition on the destination that was relevant. After the source and destination drives were selected, the media disk was selected for one of the two available drive slots.

The 12 system hard drive configurations used for the tests are presented in Table 5-4. The **Source** column indicates where the source drive was mounted. Only the primary IDE channel was used. The drive was usually positioned as drive 0. SCSI source drives were set to SCSI ID 0. The **Destination** column indicates the positioning of the destination drive. The **Media** column indicates the positioning of the media drive. The **Step** column indicates the phase of the test to which the configuration applies.

The media disk was swapped with either the source or destination disk as required for the step of the test case execution. If an image file was to be created, then only the source and media disk were installed. If the image was to be restored to the destination, then the source drive was replaced by the media drive. If the source was to be compared with the destination, then the media drive was not installed.

ID	Step	Source	Destination	Media
1	Wipe		IDE primary 1	IDE primary 0
2	Wipe		SCSI ID 1	IDE primary 0
3	Acquire	IDE primary 0		IDE primary 1
4	Acquire	SCSI ID 0		IDE primary 0
5	Restore		IDE primary 1	IDE primary 0
б	Restore		SCSI ID 1	IDE primary 0
7	Compare	IDE primary 0	IDE primary 1	
8	Compare	IDE primary 0	SCSI ID 1	
9	Compare	SCSI ID 0	IDE primary 1	
10	Compare	SCSI ID 0	SCSI ID 1	
11	Hash	IDE primary 0		
12	Hash	SCSI ID 0		

Table	5-4.	System	Configurations
Iunic	· ···	System	Comparations

#### 5.6 Support Software

FS-TST Release 1.0 was developed to support the testing of disk imaging tools. FS-TST Release 1.0 can be obtained from *http://www.cftt.nist.gov*. The support software serves five main functions: initialization of a disk to a known value (DISKWIPE); comparison of a source with a destination (DISKCMP, PARTCMP, ADJCMP, and SECCMP); detection of changes to a disk (DISKHASH and SECHASH); corruption of an image file (CORRUPT); and simulation of a faulty disk (BADDISK and BADX13). All programs except for BADDISK and BADX13 were written in ANSI C and compiled with the Borland C++ compiler version 4.5. BADDISK and BADX13 were written in assembler language and compiled with Borland Turbo Assembler version 5.0.

For these test cases, version 3.2 of BADDISK and BADX13 was used, not the version 3.1 included in FS-TST Release 1.0. In addition to this software, one of two Windows 98 DOS boot floppies was used to create the run-time environment for the test case. The first floppy was used to create an environment to execute support software; the other boot floppy was created according to EnCase documentation and was used to provide the environment for source acquisition.

#### 5.7 Basic Structure of Test Cases

A test case has five parts: setup, execution of the tool to acquire an image, execution of the tool to add the image to the case file, execution of the tool to restore the image to a destination drive, and measurement of the results. The setup for the test case was done in the DOS environment and involved the following steps:

- 1. Initialize a source disk to a known value.
- 2. Hash the source disk and save the hash value.
- 3. Initialize a destination disk to a known value.
- 4. If the test requires a partition on the destination, then create and format a partition on the destination disk.
- 5. If the test uses an image file, then partition and format a media disk. Also load either Windows 98 or Windows 2000 to the media disk and then install EnCase.

Note that steps 1, 2, and 5 are performed once and then used for several test cases.

Executing the support software required for each test tool being tested was done in the DOS environment. Except for NTFS partition acquisitions, all acquisitions were done in a DOS environment. All restore operations and NTFS acquisitions were done in a Windows environment. The steps in this execution phase were:

- 6. If the test requires a disk I/O error, then set up disk error simulation.
- 7. Use the tool to create an image file of the source on the media disk. This step was usually done in DOS; however, a few cases used FastBloc to acquire an image in the Windows 2000 environment. Note that where practical, the same image file was used for several test cases.
- 8. If the test requires a corrupted image file, then corrupt the image file.
- 9. Shutdown DOS and boot to Windows from the media disk.

- 10. Create a case file (i.e., for an investigation by the investigator) and use the **add evidence** function to add the image file to the case.
- 11. Use the disk imaging tool to create the destination disk by restoring an image file of the source to the destination. For corrupt image test cases, this step is omitted.

Measurement of the test results has three steps:

- 12. Compute a hash of the source disk and compare the computed hash value with the saved hash value. If the hashes are the same, then the tool has not altered the source disk.
- 13. If a destination is created, then compare the source to the destination to determine what sectors match and the disposition of any excess destination sectors.
- 14. Examine the tool log file for any expected messages. For example, in an I/O error test, there should be a message documenting the I/O error.

## 6. Test Results Summary 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 results summary.

Heading	Description
First Line	Test case ID, Name and version of software tested.
Case	Test case summary from Disk Imaging Tool Specification,
Summary:	Version 3.1.6.
Tester	Name or initials of person executing test procedure.
Name:	
Test Date	Time and date that test was started.
PC:	Name of computer where tool under test was executed.
Disks:	Description of the hard disks used in the test as the
	source, destination, and media. The BIOS assigned drive number is in hexadecimal.
Source disk	Documentation of the creation of the source disk including
setup:	the disk label, the computer used for setup, person
	creating the source, time and date, partitions and
	operating systems installed, diskwipe command, and SHA-1
	hash after the hard drive is configured.
Destination	Documentation of the creation of the destination disk
Setup:	including the diskwipe command. Note that for corrupt image
	test cases, a destination is not required.
Error	Support software commands executed to set up either an I/O
Setup:	error or to corrupt an image file.
Execute:	Documentation of each command executed during the test.
Log files &	Name and location of the log files in the test file
loc:	archive.
Log File	Selected entries from three of the test case log files:
Highlights:	• EnCase Report file.
	• Comparison of source and destination and for partition
	cases, the source and destination partition tables.
	• SHA-1 hash of the source drive after the test.
Expected	Expected results listed in Disk Imaging Tool Specification,
Results:	Version 3.1.6.

Heading	Description
Actual	List of any anomalies observed.
Results:	
Analysis:	Whether or not the expected results were achieved.

## 7. Interpretation of Test Results

There are six main questions of interest when examining the results of a test case:

- Is the source disk unchanged?
- Has the correct number of sectors been accurately copied?
- Has the tool alerted the user to a destination smaller than the source?
- Has the tool handled excess destination sectors correctly as specified?
- Has the tool detected changes to an image file?
- Has the tool alerted the user to any I/O errors?

#### 7.1 Source Disk

The integrity of the source disk is checked by comparing the hash of the source disk computed before any tests are run with the hash computed after the tool is used. If the two hash values are not the same, then there has been a change to the source disk by the tool. The reference hash is recorded in the **Source disk setup** box and the hash computed after the tool is run is recorded in the **Log file highlights** box.

#### 7.2 Number of Sectors Copied

The number of sectors that should be copied is the minimum of the number of source sectors and the number of destination sectors. This value can be found on the *sectors compared* line of the **Log File Highlights** box. If the next line of the **Log File Highlights** box, *sectors differ*, is not zero, then the tool did not correctly copy all the sectors that should have been copied. The *LBAs* of the first few sectors not copied correctly are listed on the *diffs range* line.

The number of sectors in the source and destination can be determined as follows: If the tool operated on an entire disk, then the size of the source and destination can be found in the **Disks** box. If the tool operated on a single partition, then the partition sizes are presented in the *partition tables* in the **Log File Highlights** box. The partitions used in the test are identified in the **/select** option parameters to the **PARTCMP** program execution presented in the **Execute** box. The **/select** option is followed by two parameters: the partition numbers of the source and destination partitions.

#### 7.3 Small Destination Detection

The tool should issue a message indicating that the destination is smaller than the source for any test case defined for a smaller destination. The message appears in a pop-up box on screen (see Figure 4-1 for an example) and is not logged to the EnCase report.

### 7.4 Excess Sectors

For disk operations, the tool should either backfill (set to user specified value) excess sectors or leave the contents as is. The tool action can be verified by the entries labeled *Zero fill*, *Other fill* and *Dst byte fill*, giving the count of sectors in each category. The number of excess sectors is indicated in the **Log File Highlights** box by the line with the text ". . . Source (. . .) has [number of excess sectors] fewer sectors . . . ."

#### 7.5 Changes to an Image File

The **Error Setup** box presents the command used to change the image file and the absolute LBA of the corrupted sector. If the tool detects that the image file has been changed, the **Log File Highlights** box has a message indicating, "The integrity of the following sector groups could not be verified: . . . ."

The following table presents, for each corrupted image file test case, the original text in the image file (**Original**); the change, highlighted in bold (**Changed to**); the absolute LBA of the change (**Absolute LBA**); and for partition operations, the relative LBA of the corrupted sector (**Relative LBA**). For partition operations, EnCase reports the error location as an offset (relative LBA) from the beginning of the partition. The relative LBA is computed by subtracting the starting offset of the partition from the absolute LBA. For all cases except DI-112, the offset was 63. For test case DI-112, the offset was computed from the partition table of hard drive E4 (see test case DI-084). The offset is 63 + 8,193,150 + 2,056,320.

Case	Original	Changed to	Absolute LBA	Relative LBA
DI-062	923/006/01	92 <b>Z</b> /006/01	930,762	No offset
DI-071	16/000/01	16/ <b>9</b> 00/01	16,128	16,065
DI-083	00922/010/10	00920/ <b>8</b> 10/10	930,015	929,952
DI-091	32498/009/01	32498/0 <b>9</b> 9/01	32,758,551	No offset
DI-100	16/000/01	16/0 <b>7</b> 0/01	16,128	16,065
DI-112	10169/012/01	10169/ <b>8</b> 12/01	10,251,108	1,575
DI-120	255/009/01	255/00 <b>Q</b> /01	4,097,142	No offset
DI-129	1/007/44	1/0 <b>7</b> 7/44	16,549	16,486
DI-141	255/001/01	255/ <b>z</b> 01/01	4,096,638	4,096,575
DI-145	255/001/01	255/ <b>z</b> 01/01	4,096,638	4,096,575
DI-149	923/001/01	923/00 <b>A</b> /01	930,447	No offset

### 7.6 I/O Errors

The **Error Setup** box presents the command used to setup an I/O error. If the tool detects the I/O error, the **Log File Highlights** box has a message indicating the type and location of the error.

# 8. Test Results Summaries

Case DI-003 for 1	EnCage 3	20			
Case Summary:		BIOS-IDE source	diek		
case summary.		DS-IDE destinat:			
				the destination	
		nder adjustment			
Tester Name:	JRL	inder dagabenen	ib outlide on		
Test Date:	-	10 09:14:33 20	02		
PC:	Beta3				
Disks:		DOS Drive 80 P	nysical Label Al		
			81 Physical Lab		
			80 Physical Lab		
	Al is a	Quantum Sirooco	o1700A with 3335	5472 sectors	
	DA is a	Fujitsu MPE3064	4AT with 1267245	50 sectors	
			4AT with 1267245		
				l boot floppy with	run scripts
			ROM + Baddisk 3.	.2 + Badx13 3.2	
Source disk		KT2 & DOS Fat16			
setup:	Disk: Al				
	Host: Ju	-			
	Operator				
	OS: Wind				
	-	Typical	16 2001		
	Date: 'fu	ae Oct 16 11:24	·IO ZUUI		
	and · 7·	ממ חדפעשדהה העי	F A1 JudgoDoo 00	) $\lambda 1 / arg / now 1 cm$	
		magic /cmd=X:\r		) Al /src /new_log	
		erating System			
				) /before /new_log	
	01110	(00 (010101101110111		, , 201010 , 110109	
	Disk has	sh = D0FC573FF	774F6897BE520153	C9BF770E998428F	
Destination				/noask /dst /new_1	log /comment JRL
Setup:		tion table def			
Error Setup:	none				
Execute:	Z:\ss\DISKWIPE.EXE DI-003 Beta3 81 DA /noask /dst /new_log /comment JRL				
	Z:\ss\DISKHASH.EXE DI-003 Beta3 80 /comment A1(JRL) /new_log /after				
Log files loc:	test-archive/encase/encase-3.20/DI-003				
Log File	Image fi	le acquired fro	om DOS		
Highlights:		environment Wir			
	EnCase report for case DI-003 is in DI-003.txt				
	Evidence	e Number "Al-All	l" Alias "Al-A	A11 "	
				at 11/10/02 09:45:4	L6AM.
	The comp	outer system clo	ock read: 11/10/	02 09:45:46AM.	
	Desidence		DOG 7 10 waine		
	Evidence	acquired under	r DOS 7.10 using	yversion 3.20.	
	File Int	ogrity.			
		File Integrity:			
		Completely Verified, 0 Errors. Verification Hash: 4385E645B15A9B9456C54CB4AE9640C8			
	VCIIIICO	Verification Hash: 4385E645B15A9B9456C54CB4AE9640C8			
	Drive Geometry:				
	Total Si	-	(3,334,464 secto	ors)	
	Cylinder		(-,,	,	
	Heads:	64			
	Sectors:	63			
	Partitic	ons:	-		
	Code	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	06	BIGDOS	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB

Case DI-003 for H	EnCase 3.20			
	EnCase Report Case: DI-003 Page			
	= = = Measurement Logs = = = = Cylinder adjustment/alignment Summary			
	Boot tracks 4 252 diffs 1			
	Partitions 6 2241540 diffs 3			
	Unallocated 5 1093680 diffs 1008			
	Total src sectors 3335472			
	Partition excess 0 zero 0 non-zero 0			
	Disk excess 9336978 zero 0 non-zero 9336978			
	Total dst sectors 12672450			
	Hash computed for this case (DI-003)			
	Hash after test: D0FC573FF774F6897BE520153C9BF770E998428F			
Expected	Source disk is unchanged			
Results:	src compares qualified equal to dst			
Actual Results:	BIOS anomaly			
Analysis:	Expected results not achieved			

Case DI-019 for 1	EnCase 3.20
Case Summary:	Copy an XBIOS-IDE source disk
	to an XBIOS-IDE destination disk
	where the source disk is smaller than the destination
	and sector fill is turned on
Tester Name:	JRL
Test Date:	Sun Nov 10 02:46:22 2002
PC:	McCloud
Disks:	Source: DOS Drive 80 Physical Label F5
	Destination: DOS Drive 81 Physical Label 7B
	Image media: DOS Drive 80 Physical Label 91
	F5 is an IBM-DTLA-307020 with 40188960 sectors
	7B is a MAXTOR 6L040J2 with 78177792 sectors
	91 is a WDC WD300BB-00CAA0 with 58633344 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16
setup:	Disk: F5
	Host: Cadfael
	Operator: JRL
	OS: WindowsMe/Linux
	Date: Sat Aug 11 11:13:43 2001
	DISKWIPE.EXE F5 SRC Cadfael 80 F5 /src
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt
	Load Operating System to Source disk
	DISKHASH.EXE F5_SRC Cadfael 80 /before
	DISKINSI. EKE F5_SKC CALLACT OF /DETOTE
	Disk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54
Destination	Z:\ss\DISKWIPE.EXE DI-019 McCloud 81 7B /noask /dst /new_log /comment
Setup:	JRL
	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-019 McCloud 81 7B /noask /dst /new_log /comment
	JRL
	Z:\ss\DISKCMP.EXE DI-019 Cadfael 80 F5 81 7B /new_log /comment JRL
	Z:\ss\DISKHASH.EXE DI-019 Cadfael 80 /comment F5(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-019
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
	EnCase report for case DI-019 is in 019.txt
	Evidence Number "F5-all" Alias "F5-all"
	File "D:\F5.e01" was acquired by JRL at $11/10/02$ 03:17:42AM.
	The computer system clock read: 11/10/02 03:17:42AM.
	The compared system clock read. 11/10/02 03.17.12AM.
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: 849BAEFDE9407109B9D22FBB479FE00D

Case DI-019 for H	InCase 3.20				
	Drive Geometry:				
	Total S:	Total Size 19.2GB (40,188,960 sectors)			
	Cylinders: 16,383				
	Heads: 16				
	Sectors	63			
	Partitio				
	Code	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1237005	604.0MB
	83	Linux EXT2	9430155	6152895	2.9GB
	82	Linux Swap	39760875	417690	204.0MB
	83	Linux EXT2	2249100	208845	102.0MB
	06	BIGDOS	2457945	144585	70.6MB
	16	HiddenFAT16	6699105	192780	94.1MB
Expected	= = = = Sectors Diffs ra Source ( (7817779 Zero fii Src Byta Other fi Other fi Other no Hash aft Source of	Measurement Logs Compared 4018896 Differ 0 ange (40188960) has 37 92) L1: 3798 a fill (F5): a fill (F5): a fill (7B): L11: o fill: mputed for this of cer test: 83A0002 disk is unchanged	2988832 fewer sec 8832 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ctors than destina 241C92C3B5A0F42A5-	
Results:		pares qualified e	qual to dst		
Actual Results:	No anomalies				
Analysis:	Expected	l results achieve	a		

Case DI-044 for H	inCase 3.20	
Case Summary:	Copy a direct access IDE source disk	
	to a direct access IDE destination disk	
	where the source disk is smaller than the destination	
Tester Name:	JRL	
Test Date:	Fri Jun 07 11:24:30 2002	
PC:	Beta7	
Disks:	Source: DOS Drive 80 Physical Label A1	
	Destination: DOS Drive 81 Physical Label DB	
	Image media: DOS Drive 80 Physical Label D3	
	Al is a Quantum Siroocol700A with 3335472 sectors	
	DB is a Fujitsu MPE3064AT with 12672450 sectors	
	D3 is a Fujitsu MPE3064AT with 12672450 sectors	
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts	
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2	
Source disk	Linux EXT2 & DOS Fat16	
setup:	Disk: Al	
	Host: JudgeDee	
	Operator: JRL	
	OS: Windows/Me	
	Options: Typical	
	Date: Tue Oct 16 11:24:16 2001	
	<pre>cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log X:\pm\pqmagic /cmd=X:\pm\nex-src.txt Load Operating System to Source disk cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log</pre>	
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F	

Case DI-044 for 1	EnCase 3.2	20			
Destination	Z:\ss\DISKWIPE.EXE DI-044 Beta7 81 DB /noask /dst /new_log /comment JRL				
Setup:	No partition table defined				
Error Setup:	none				
Execute:				B /noask /dst /new_	
	Z:\ss\DISKCMP.EXE DI-044 Beta7 80 A1 81 DB /new_log /comment JRL				
	Z:\ss\DISKHASH.EXE DI-044 Beta7 80 /comment A1(JRL) /new_log /after				
Log files loc:		chive/encase/en		944	
Log File	-	ile acquired fro			
Highlights:		environment Win			
		report for case			
	Evidence	e Number "Al-ATA	A-1" Alias "	AT-ATA-T"	
	File "D	·\ \ \ 1 01 " w	ag agguired by	JRL at 06/03/02 01	• 57 • 2 5 DM
				3/02 01:57:25PM.	• 57• 25 - 11.
	ine com	Jucci Bybeckii Ci	och icaa: 00,0	5,02 01 5, 25111.	
	Evidence	e acquired under	r DOS 7.10 usi	ng version 3.20.	
		-		-	
	File Int	cegrity:			
	-	ely Verified, 0			
	Verifica	ation Hash:	4A8A3498BFD450	)9ED7EA01B88119DE95	
		eometry:		1 (07) (2 225 480	
	Total			1.6GB (3,335,472	sectors)
	Cylind Heads:			3,309 16	
	Sector			63	
	Sector	5.		03	
	Partitio	ons:			
	Code	Туре	Start Sector	r Total Sectors	Size
	06	BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	06	BIGDOS	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB
	EnCase H	-			
	Case: a	l-ata Page			
		Monguromont To	aa		
		Measurement Log Compared 33354	-		
		Differ 0	,		
	Diffs ra				
			336978 fewer s	ectors than destina	tion (12672450)
	Zero fil		0		. ,
		e fill (A1):	0		
		e fill (DB): 93	336978		
	Other fi		0		
	Other no fill: 0				
	Hash computed for this case (DI-044)				
There are a d	Hash after test: D0FC573FF774F6897BE520153C9BF770E998428F Source disk is unchanged				
Expected		5			
Results: Actual Results:	No anoma	pares qualified	equal to ust		
			ved		
Analysis: Expected results achieved					

Case DI-045 for H	EnCase 3.20		
Case Summary:	Copy a direct access IDE source disk		
	to a direct access IDE destination disk		
	where the source disk is smaller than the destination		
	and sector fill is turned on		
Tester Name:	JRL		
Test Date:	Thu Nov 07 11:11:10 2002		
PC:	AndWife		
Disks:	Source: DOS Drive 80 Physical Label F6		

Case DI-045 for	EnCase 3.2	:0			
			81 Physical Lab	el 91	
	Image media: DOS Drive 80 Physical Label 75				
			20 with 40188960		
			CAA0 with 586333		
			-0 with 80418240	boot floppy with	run scripts
			ROM + Baddisk 3.		run scripts
Source disk		2000 with NTFS			
setup:	Disk: F6				
	Host: Wi	-			
	Operator				
		lows 2000 t Jul 21 15:53	12 2001		
	Date: Da	10 0 0 1 21 13 • 33 ·	12 2001		
	DISKWIPE	.EXE F6_SRC Wir	msey 80 F6 /src	/new_log /noask /d	comment Windows
	2000/NT source				
		magic /cmd=X:\r			
	-	erating System f .EXE LX-27 Mors			
	Dibidiibi		Je ou , Derore		
				B0845CA2CF6B235	
Destination		SKWIPE.EXE DI-0	)45 AndWife 81 9	01 /noask /dst /new	v_log /comment
Setup:	JRL No porti	tion table	inod		
Error Setup:	No parti none	tion table def	тпеа		
Error Setup: Execute:		SKWIPE.EXE DI-0	)45 AndWife 81 9	1 /noask /dst /new	v log /comment.
	JRL			,	, ,
				5 81 91 /new_log /d	
				comment F6(JRL) /r	new_log /after
Log files loc:			case-3.20/DI-045	)	
Log File Highlights:	-	le acquired fro environment Wir			
in gint gines .			DI-045 is in 04	5.txt	
	Evidence	Number "F6-all	l" Alias "F6-a	11"	
		) = = = = = = = =			
			cquired by JRL a ock read: 11/07/	t 11/07/02 11:36:4	16AM.
	THE COMP	uter system cit	JCK TEAU: 11/0//	02 11.30.40AM.	
	Evidence	acquired under	DOS 7.10 using	version 3.20.	
	File Int	•	<b>D</b>		
		ly Verified, 0		D72F60BD9B3A55D2A	
	VCIIIICO		556621112751115111	57210000090511550211	
	Drive Ge				
	Total Si	ze 19.2GB	(40,188,960 sec	tors)	
	Cylinder Heads:				
	Sectors:				
	Deccorb	05			
	Partitic	ns:			
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	6152895	2.9GB
	07	NTFS	10249470	1237005	604.0MB
	17	Hidden IFS	13542795	1638630	800.1MB
	1B	HiddenFAT32	38941560	1237005	604.0MB
	EnCase R	eport			
	Case: DI	-045 Page			
		Ma.a			
		Measurement Log Compared 401889			
		Differ 0	/00		
	Diffs ra				
			18444384 fewer s	sectors than destir	nation
	(5863334	4)			
	(5005554	÷ /			

Case DI-045 for H	InCase 3.20
	Zero fill: 18432225
	Src Byte fill (F6): 0
	Dst Byte fill (91): 12159
	Other fill: 0
	Other no fill: 0
	Hash computed for this case (DI-045)
	Hash after test: 8034683D5D55BA51409AC7B5CB0845CA2CF6B235
Expected	Source disk is unchanged
Results:	src compares qualified equal to dst
Actual Results:	Restore anomaly
Analysis:	Expected results not achieved

Case DI-048 for 1	EnCase 3.20
Case Summary:	Copy a direct access IDE source disk
_	to a direct access IDE destination disk
	where the source disk is the same size as the destination
Tester Name:	JRL
Test Date:	Fri Jun 07 11:15:21 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label A1
	Destination: DOS Drive 81 Physical Label A4
	Image media: DOS Drive 80 Physical Label D3
	Al is a Quantum Sirooco1700A with 3335472 sectors
	A4 is a Quantum Siroocol700A with 3335472 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
	Host: JudgeDee
	Operator: JRL
	OS: Windows/Me Options: Typical
	Date: Tue Oct 16 11:24:16 2001
	Date. The Oct 10 11.24.10 2001
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new log
	X:\pm\pqmagic /cmd=X:\pm\nex-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F
Destination	Z:\ss\DISKWIPE.EXE DI-048 Beta3 81 A4 /noask /dst /new_log /comment JRL
Setup:	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-048 Beta3 81 A4 /noask /dst /new_log /comment JRL
	Z:\ss\DISKCMP.EXE DI-048 Beta7 80 A1 81 A4 /new_log /comment JRL
Log files loc:	test-archive/encase/encase-3.20/DI-048
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
	EnCase report for case DI-048 is in Al-ATA.txt
	Evidence Number "Al-ATA-1" Alias "Al-ATA-1"
	File "D:\A1-ata.e01" was acquired by JRL at 06/03/02 01:57:25PM.
	The computer system clock read: 06/03/02 01:57:25PM.
	Fridered aggined under DOG 7 10 using version 2 20
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: 4A8A3498BFD4509ED7EA01B88119DE95
	Drive Geometry:
	Total Size 1.6GB (3,335,472 sectors)
	Cylinders: 3,309
	Heads: 16
	Sectors: 63
	Partitions:

Case DI-048 for EnCase 3.20					
	Code	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	06	BIGDOS	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB
Expected Results:	EnCase Report Case: al-ata Page = = = Measurement Logs = = = = Sectors Compared 3335472 Sectors Differ 5040 Diffs range 3330432-3335471 This case uses the hash computed from case DI-044 Hash after test: D0FC573FF774F6897BE520153C9BF770E998428F Source disk is unchanged src compares equal to dst				
Actual Results:	BIOS Anomaly				
Analysis:	Expected results not achieved				

Case DI-060 for	
Case Summary:	Copy an XBIOS-SCSI source disk
	to an XBIOS-IDE destination disk
	where the source disk is smaller than the destination
	and sector fill is turned on
Tester Name:	JRL
Test Date:	Mon Nov 04 13:08:08 2002
PC:	AndWife
Disks:	Source: DOS Drive 80 Physical Label F6
	Destination: DOS Drive 81 Physical Label 92
	Image media: DOS Drive 80 Physical Label 75
	F6 is an IBM-DTLA-307020 with 40188960 sectors
	92 is a WDC WD300BB-00CAA0 with 58633344 sectors
	75 is a IC35L040AVER07-0 with 80418240 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Windows 2000 with NTFS & Fat32
setup:	Disk: F6
<u>-</u>	Host: Wimsey
	Operator: JRL
	OS: Windows 2000
	Date: Sat Jul 21 15:53:12 2001
	Date. Sat but 21 13.33.12 2001
	DIGWITE EVE DE OPE Minere OP EE (not loss los (note) la finitation
	DISKWIPE.EXE F6_SRC Wimsey 80 F6 /src /new_log /noask /comment Windows
	2000/NT source
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt
	Load Operating System to Source disk
	DISKHASH.EXE LX-27 Morse 80 /before
	Disk hash = 8034683D5D55BA51409AC7B5CB0845CA2CF6B235
Destination	Z:\ss\DISKWIPE.EXE DI-060 AndWife 81 92 /noask /dst /new_log /comment
Setup:	JRL
	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-060 AndWife 81 92 /noask /dst /new_log /comment
	JRL
	Z:\ss\DISKCMP.EXE DI-060 AndWife 80 F6 81 92 /new_log /comment JRL
	Z:\ss\DISKHASH.EXE DI-060 AndWife 80 /comment F6(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-060
Log File	Image file acquired from FastBloc
Highlights:	Restore environment Windows 2000
	EnCase report for case DI-060 is in 060.txt
	Evidence Number "F6" Alias "F6"
	File "D:\F6.E01" was acquired by JRL at $11/04/02$ 11:37:42AM.

Case DI-060 for EnCase 3.20						
	The computer system clock read: 11/04/02 11:38:00AM.					
	Evidence acquired u		) using version 3.20	0. Hardware		
	Write-Blocker Enabled.					
	File Integrity:	0				
	Completely Verified Verification Hash:					
	Verification Hash	5500ZAAD/SAESI	EAD / ZF OUBD9B3A33DZA			
	Drive Geometry:					
	Total Size 19.	2GB (40,188,960 s	sectors)			
			,			
	Partitions:					
	Code Type	Start Sector	Total Sectors	Size		
	OB FAT32	0	6152895	2.9GB		
	07 NTFS	10249470	1237005	604.0MB		
	17 Hidden IFS	13542795	1638630	800.1MB		
	1B HiddenFAT32	38941560	1237005	604.0MB		
	EnCase Report					
	Case: DI-060 Page					
	case: Di 000 rage					
	= = = = Measurement	Logs = = = = =				
	Sectors Compared 40					
	Sectors Differ 0					
	Diffs range					
	Source (40188960) h	as 18444384 fewer	sectors than dest	ination		
	(58633344)					
	Zero fill:	18432225				
	Src Byte fill (F6): Dst Byte fill (92):	U 10150				
	Other no fill:	Other fill: 0 Other no fill: 0				
	Hash computed for t					
	Hash after test: 80			235		
Expected	Source disk is unch		ACTOLOUTICASCE ODS			
Results:	src compares qualified equal to dst					
Actual Results:	Restore anomaly					
Analysis:	Expected results no	t achieved				

Case DI-062 for H	InCase 3.20		
Case Summary:	Create an image from a BIOS-IDE source disk		
_	to a BIOS-IDE destination disk		
	where the source disk is smaller than the destination		
	Introduce an error on the image.		
Tester Name:	JRL		
Test Date:	Fri Aug 30 08:49:52 2002		
PC:	Beta3		
Disks:	Source: DOS Drive 80 Physical Label F1		
	Destination: DOS Drive 81 Physical Label none		
	Image media: DOS Drive 80 Physical Label D3		
	F1 is a Quantum Sirooco1700A with 3335472 sectors		
	D3 is a Fujitsu MPE3064AT with 12672450 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Linux EXT2 & Fat32		
setup:	Disk: Fl		
	Host: JudgeDee		
	Operator: JRL		
	OS: Windows/Me		
	Options: Typical		
	Date: Fri Nov 16 10:42:33 2001		
	cmd: Z:\ss\DISKWIPE.EXE F1 JudgeDee 80 F1 /src /new_log X:\pm\pqmagic /cmd=X:\pm\f32-src.txt Load Operating System to Source disk cmd: Z:\ss\DISKHASH.EXE F1 JudgeDee 80 /before /new_log		

Case DI-062 for 1	EnCase 3.20					
	Disk hash = 3E7E5E0	AB0FA333BE39D267	F0DB8E340386DC05A			
Destination	No destination setup required					
Setup:						
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-062 Beta3 D:\F1.E01 476381896 5A					
	Comment: CHange 923/006/01 to 92Z/006/01 at LBA 930762??					
Execute:	Z:\ss\DISKHASH.EXE D	I-062 Beta7 80 /	comment F1(JRL) /new	_log /after		
Log files loc:	test-archive/encase/	encase-3.20/DI-0	062			
Log File	Image file acquired :	from DOS				
Highlights:	Restore environment					
	EnCase report for ca		062.txt			
	Evidence Number "F1"	Alias "F1"				
				0.7.14		
	File "D:\F1.e01" was The computer system of			UAM.		
	The computer system (	clock read: 08/3	0/02 09·10·20AM.			
	Evidence acquired un	der DOS 7 10 usi	ng version 3 20			
		DOD /.IV UDI				
	The integrity of the	following secto	or groups could not b	e		
	verified:930752-9308		5 1			
	Drive Geometry:					
		B (3,334,464 sec	ctors)			
	Cylinders: 827					
	Heads: 64					
	Sectors: 63					
	Partitions:					
	Code Type	Start Sector	Total Sectors	Size		
	0B FAT32	0	1229760	600.5MB		
	83 Linux EXT2	2721600	64512	31.5MB		
	82 Linux Swap	2923200	411264	200.8MB		
	83 Linux EXT2	1431360	205632	100.4MB		
	0B FAT32	1636992	145152	70.9MB		
	16 HiddenFAT16	2193408	185472	90.6MB		
			1			
	EnCase Report					
	Case: di-062cas	Page				
		-				
	= = = = Measurement	5				
		No compare log found for DI-062				
		Hash computed for this case (DI-062)				
Expected	Source disk is uncha	Hash after test: 3E7E5E0AB0FA333BE39D267F0DB8E340386DC05A				
Results:	image verification e	5				
NCDUILD.						
Actual Regulte.	BIOS anomoly					
Actual Results: Analysis:	BIOS anomoly Expected results not	achieved				

Case DI-063 for 1	EnCase 3.20
Case Summary:	Create an image from a BIOS-IDE source disk
	to a BIOS-IDE destination disk
	where the source disk is smaller than the destination
Tester Name:	JRL
Test Date:	Sat May 25 17:28:49 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label A1
	Destination: DOS Drive 81 Physical Label DB
	Image media: DOS Drive 80 Physical Label D3
	A1 is a Quantum Sirooco1700A with 3335472 sectors
	DB is a Fujitsu MPE3064AT with 12672450 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
	Host: JudgeDee
	Operator: JRL

Case DI-063 for EnCase 3.20							
Cube 21 000 101 1	OS: Windows/Me						
	Options: Typical						
	Date: Tue Oct 16 11:24:16 2001						
	cmd: Z:\ss\DISKWIPE.	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log					
	X:\pm\pqmagic /cmd=X						
	Load Operating Syste	m to Source disk	5				
	cmd: Z:\ss\DISKHASH.	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log					
		-					
	Disk hash = D0FC573	FF774F6897BE5201	53C9BF770E998428F				
Destination	Z:\ss\DISKWIPE.EXE D	I-063 Beta3 81 I	DB /noask /dst /new_lo	og /comment JRL			
Setup:	No partition table d	efined					
Error Setup:	none						
Execute:	Z:\ss\DISKWIPE.EXE D	I-063 Beta3 81 I	DB /noask /dst /new_lo	og /comment JRL			
			. 81 DB /new_log /com	ment JRL			
Log files loc:	test-archive/encase/		)63				
Log File	Image file acquired :						
Highlights:	Restore environment						
	EnCase report for ca		al-069.txt				
	Evidence Number "1"	Alias "1"					
			at 05/24/02 08:42:30	5AM.			
	The computer system of	clock read: 05/2	4/02 08:42:36AM.				
	<b>-</b> · · · · ·						
	Evidence acquired une	aer DOS 7.10 usi	ng version 3.20.				
	File Integrity:						
	Completely Verified,	0 Frrors					
	Verification Hash:		B9456C54CB4AE9640C8				
		1000201021010					
	Drive Geometry:						
	Total Size 1.6G	B (3,334,464 sec	ctors)				
	Cylinders: 827						
	Heads: 64						
	Sectors: 63						
	Partitions:	1					
	Code Type	Start Sector	Total Sectors	Size			
	06 BIGDOS	0	1229760	600.5MB			
	83 Linux EXT2	2721600	64512	31.5MB			
	82 Linux Swap	2923200	411264	200.8MB			
	83 Linux EXT2	1431360	205632	100.4MB			
	06 BIGDOS	1636992	145152	70.9MB			
	16 HiddenFAT16	2193408	185472	90.6MB			
	EnCase Report						
	Case: Al Page						
	= = = = Measurement 3						
	Sectors Compared 333	5472					
	Sectors Differ 1008 Diffs range 3334464-3	2225471					
			ectors than destinati	ion (12672450)			
	Zero fill:	0	COLORD CHAIL GESCHINGE	1011 (120/2730)			
	Src Byte fill (A1):	0					
	Dst Byte fill (DB):	-					
	Other fill:	0					
	Other no fill:	0					
	This case uses the ha	Ũ	m case DI-069				
		-	520153C9BF770E998428E	7			
Expected	Source disk is uncha						
Results:	src compares qualifie						
Actual Results:	BIOS Anomaly						
Analysis:	Expected results not	achieved					
· · · · · · · · · · · · · · · · · · ·							

Case DI-064 for 1	EnCase 3.20
Case Summary:	Create an image from a BIOS-IDE source disk
	to a BIOS-IDE destination disk
	where the source disk is the same size as the destination
	Introduce a read error from the source.
Tester Name:	JRL
Test Date:	Thu Sep 05 14:58:08 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label Al
	Destination: DOS Drive 81 Physical Label A4
	Image media: DOS Drive 80 Physical Label D3
	A1 is a Quantum Sirooco1700A with 3335472 sectors
	A4 is a Quantum Sirooco1700A with 3335472 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
becup.	Host: JudgeDee
	Operator: JRL
	OS: Windows/Me
	Options: Typical
	Date: Tue Oct 16 11:24:16 2001
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\nex-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log
Destination	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F
Setup:	Z:\ss\DISKWIPE.EXE DI-064 Beta3 81 A4 /noask /dst /new_log /comment JRL No partition table defined
Error Setup:	$Z:\ssbaddisk 80 10 2 33 2 10 > a:\err-064.txt$
FILOT Secup.	Z:\ss\baddisk 80 10 2 33 10 10 >> a:\err-064.txt
	return code 00010 on command 00002 from disk 00080
	at address 00010/00002/00033
	return code 00010 on command 00010 from disk 00080
	at address 00010/00002/00033
Execute:	Z:\ss\DISKWIPE.EXE DI-064 Beta3 81 A4 /noask /dst /new_log /comment JRL
	Z:\ss\DISKCMP.EXE DI-064 Beta3 80 A1 81 A4 /new_log /comment JRL
	Z:\ss\DISKHASH.EXE DI-064 JudgeDee 80 /comment A1(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-064
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
	EnCase report for case DI-064 is in 064.txt
	Evidence Number "A1-all" Alias "A1-all"
	File "D:\A1-err.e01" was acquired by JRL at 09/05/02 03:26:20PM.
	The computer system clock read: 09/05/02 03:26:20PM.
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: 050B6F5A205D3EEB678B7FE562684F99
	The following sector blocks reported read errors during acquisition:
	40448-40511
	Drive Geometry:
	Total Size 1.6GB (3,334,464 sectors)
	Cylinders: 827
	Heads: 64
	Sectors: 63
1	

Case DI-064 for H	EnCase 3	.20			
	Partit				
	Code		Start Sector	Total Sectors	Size
	06	Type BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
					200.8MB
	82	Linux Swap	2923200	411264	
	83	Linux EXT2	1431360	205632	100.4MB 70.9MB
	06	BIGDOS	1636992	145152	
	16	HiddenFAT16	2193408	185472	90.6MB
Expected	Case: 1 = = = = Sector Sector Diffs Hash c Hash a Source	omputed for t fter test: DOD disk is unch	35472 3330432-3335471 his case (DI-064 FC573FF774F6897B anged	E520153C9BF770E99842	28F
Results:	src compares qualified equal to dst error message logged				
Actual Results:	BIOS A		a		
Analysis:	Expected results not achieved				
marysts.	DAPECL	Cu repurca IIU	c actived		

Case DI-067 for	EnCase 3.20
Case Summary:	Create an image from a BIOS-IDE source disk
-	to a BIOS-IDE destination disk
	where the source disk is the same size as the destination
	Introduce a write error writing to the image.
Tester Name:	JRL
Test Date:	Tue Sep 10 17:55:42 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label A1
	Destination: DOS Drive 81 Physical Label A4
	Image media: DOS Drive 80 Physical Label DB
	Al is a Quantum Sirooco1700A with 3335472 sectors
	A4 is a Quantum Sirooco1700A with 3335472 sectors
	DB is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
Decap	Host: JudgeDee
	Operator: JRL
	OS: Windows/Me
	Options: Typical
	Date: Tue Oct 16 11:24:16 2001
	Date. The Oct 16 11.24.16 2001
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log
	X:\pm\pgmagic /cmd=X:\pm\nex-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F
Destination	No destination setup required
Setup:	
Error Setup:	Z:\ss\baddisk 81 5 5 5 3 10 > a:\err-067.txt
	return code 00010 on command 00003 from disk 00081
	at address 00005/00005/00003
Execute:	Z:\ss\DISKHASH.EXE DI-067 Beta3 80 /comment A1(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-067
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
-	EnCase report for case DI-067 is in NOLOG.txt
	Message displayed during DOS acquire:
	Error in <file name=""> cannot write to this file</file>

Case DI-067 for EnCase 3.20			
	= = = Measurement Logs = = = =		
	No compare log found for DI-067		
	Hash computed for this case (DI-067)		
	Hash after test: D0FC573FF774F6897BE520153C9BF770E998428F		
Expected	Source disk is unchanged		
Results:	error message logged		
Actual Results:	No anomalies		
Analysis:	Expected results achieved		

Case DI-069 for H	InCase 3.20
Case Summary:	Create an image from a BIOS-IDE source disk
	to a BIOS-IDE destination disk
	where the source disk is the same size as the destination
Tester Name:	JRL
Test Date:	Sat May 25 10:46:53 2002
PC:	Beta7
Disks:	Source: DOS Drive 80 Physical Label A1
	Destination: DOS Drive 81 Physical Label D7
	Image media: DOS Drive 80 Physical Label D3
	Al is a Quantum Siroocol700A with 3335472 sectors
	D7 is a Quantum Sirooco1700A with 3335472 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
~	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
	Host: JudgeDee
	Operator: JRL OS: Windows/Me
	Options: Typical
	Date: Tue Oct 16 11:24:16 2001
	Date. The Oct 10 11-24-10 2001
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\nex-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F
Destination	Z:\ss\DISKWIPE.EXE DI-069 Beta7 81 D7 /noask /dst /new_log /comment JRL
Setup:	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-069 Beta7 81 D7 /noask /dst /new_log /comment JRL Z:\ss\DISKCMP.EXE DI-069 Beta7 80 A1 81 D7 /new_log /comment JRL Z:\ss\DISKHASH.EXE DI-069 Beta7 80 /comment A1(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-069
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
	EnCase report for case DI-069 is in al-069.txt
	Evidence Number "1" Alias "1"
	File "D:\A1.e01" was acquired by jrl at 05/24/02 08:42:36AM. The computer system clock read: 05/24/02 08:42:36AM.
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: 4385E645B15A9B9456C54CB4AE9640C8
	Drive Geometry:
	Total Size 1.6GB (3,334,464 sectors)
	Cylinders: 827
	Heads: 64
	Sectors: 63

Case DI-069 for H	EnCase 3	.20			
	Partit	ions:			
	Code	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	06	BIGDOS	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB
Expected	Case: A = = = = = = Sector: Diffs = Hash co Hash a: Source	= Measurement L s Compared 3335 s Differ 5040 range 3330432-3 omputed for thi <u>fter test: DOFC</u> disk is unchan	472 335471 s case (DI-069) 573FF774F6897BE ged	:520153C9BF770E9984:	28F
Results:	src compares equal to dst				
Actual Results:	BIOS Anomaly				
Analysis:	Expect	ed results not	achieved		

Case DI-070 for 1	EnCase 3.20
Case Summary:	Create an image from a BIOS-IDE source disk
-	to a BIOS-IDE destination disk
	where the source disk is larger than the destination
Tester Name:	JRL
Test Date:	Sat May 25 10:44:19 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label A1
	Destination: DOS Drive 81 Physical Label B9
	Image media: DOS Drive 80 Physical Label D3
	A1 is a Quantum Sirooco1700A with 3335472 sectors
	B9 is a WDC AC21600H with 3173184 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & DOS Fat16
setup:	Disk: Al
	Host: JudgeDee
	Operator: JRL
	OS: Windows/Me
	Options: Typical
	Date: Tue Oct 16 11:24:16 2001
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\nex-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F
Destination	Z:\ss\DISKWIPE.EXE DI-070 Beta3 81 B9 /noask /dst /new_log /comment JRL
Setup:	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-070 Beta3 81 B9 /noask /dst /new_log /comment JRL
	Z:\ss\DISKCMP.EXE DI-070 Beta7 80 A1 81 B9 /new_log /comment JRL
Log files loc:	test-archive/encase/encase-3.20/DI-070
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 98
5 5 6 6	EnCase report for case DI-070 is in al-069.txt
	Evidence Number "1" Alias "1"
	File "D:\A1.e01" was acquired by jrl at $05/24/02$ 08:42:36AM.
	The computer system clock read: 05/24/02 08:42:36AM.
	Evidence acquired under DOS 7.10 using version 3.20.

Case DI-070 for H	InCase 3	.20			
	Comple Verifi Drive Total Cylind Heads:	Geometry: Size 1.6GB ers: 827		39456C54CB4AE9640C8	
	Partit	ions:			
	Code		Start Sector	Total Sectors	Size
	06	BIGDOS	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	06	BIGDOS	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB
Expected Results:	Case: . = = = : Sector Sector Diffs Source This c Hash a: Source	= Measurement L s Compared 3173 s Differ 4032 range 3169152-3 (3335472) has ase uses the ha fter test: DOFC disk is unchan	184 173183 162288 more sec sh computed fro 573FF774F6897BE ged	tors than destinatior m case DI-069 520153C9BF770E998428F src is truncated on	?
		tion is logged			
Actual Results:	BIOS Anomaly				
Analysis:	Expect	ed results not	achieved		

Case DI-071 for EnCase 3.20				
Case Summary:	Create an image from a BIOS-IDE source disk			
	to a BIOS-IDE destination disk			
	and the source contains a FAT16 partition			
	where the source disk is smaller than the destination			
	Introduce an error on the image.			
Tester Name:	JRL			
Test Date:	Thu Aug 29 15:32:46 2002			
PC:	Beta3			
Disks:	Source: DOS Drive 80 Physical Label A1			
	Destination: DOS Drive 81 Physical Label none			
	Image media: DOS Drive 80 Physical Label D3			
	Al is a Quantum Siroocol700A with 3335472 sectors			
	D3 is a Fujitsu MPE3064AT with 12672450 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Linux EXT2 & DOS Fat16			
setup:	Disk: Al			
	Host: JudgeDee			
	Operator: JRL			
	OS: Windows/Me			
	Options: Typical			
	Date: Tue Oct 16 11:24:16 2001			
	cmd: Z:\ss\DISKWIPE.EXE A1 JudgeDee 80 A1 /src /new_log X:\pm\pqmagic /cmd=X:\pm\nex-src.txt			
	Load Operating System to Source disk cmd: Z:\ss\DISKHASH.EXE Al JudgeDee 80 /before /new_log			

Case DI-071 for H	EnCase 3.20			
		573FF774F6897BE5	20153C9BF770E998428F	
Destination	No destination setup required			
Setup:				
Error Setup:	cmd: z:\ss\CORRUPT.EXE DI-071 Beta3 D:\al-f16c.e01 8021043 39			
			00/01 at LBA 16,128	
Execute:			0 /comment A1(JRL) /	new_log /after
Log files loc:	test-archive/encas		01-071	
Log File	Image file acquire			
Highlights:	Restore environmer		im 071 tot	
	EnCase report for Evidence Number "a			
	Evidence Number a	AT ATTAS AT		
	File "D:\A4-f16c.e	e01" was acquire	d by JRL at 08/29/02	01:34:57PM.
	The computer syste	em clock read: 0	8/29/02 01:34:57PM.	
	Evidence acquired	under DOS 7.10	using version 3.20.	
	The interview of t	be fellering ge	ston mound could not	t be
	verified:16064-161	-	ctor groups could not	
	Drive Geometry:			
	Total Size 60	)0.4MB (1,229,69	7 sectors)	
			,	
	Volume "a4" Parame			
	File System:	FAT16	Drive Type:	Fixed
	Sectors Per Cluster:	32	Bytes Per Sector:	512
	Total Sectors:	1,229,697	Total Capacity:	629,424,128
	IOCAL SECCOLS.	1,229,097	iotai capacity:	bytes (600.3MB)
	Total Clusters:	38,417	Unallocated:	625,491,968
				bytes (596.5MB)
	Free Clusters:	38,177	Allocated:	3,932,160 bytes
				(3.8MB)
	Volume Name:		Volume Offset:	0
	OEM Version:	MSWIN4.1	Volume Serial	3BCC-0C05
			#:	
	Heads:	64	Sectors Per	63
	Unugod Costors:	62	Track:	
	Unused Sectors: Sectors Per	63 151	Number of FATs: Boot Sectors:	2
	FAT:		DOOL DECLOID.	_ <b>⊥</b>
		L	I	
	EnCase Report			
	Case: di-071c Pag	je		
	= = = = Measuremer	nt Loas = = = =		
	No compare log for	-		
	Hash computed for		71)	
	-	•	7BE520153C9BF770E998	428F
Expected	Source disk is und			
Results:	image verification	n error		
Actual Results:	No anomalies			
Analysis:	Expected results a	achieved		

Case DI-072 for H	Case DI-072 for EnCase 3.20		
Case Summary:	Create an image from a BIOS-IDE source disk		
	to a BIOS-IDE destination disk		
	and the source contains a FAT32 partition		
	where the source disk is smaller than the destination		
Tester Name:	JRL		
Test Date:	Tue Jun 11 17:11:53 2002		
PC:	Beta7		
Disks:	Source: DOS Drive 80 Physical Label F1		
	Destination: DOS Drive 81 Physical Label A4		
	Image media: DOS Drive 80 Physical Label D3		

Case DI-072 for 1	
	F1 is a Quantum Sirooco1700A with 3335472 sectors
	A4 is a Quantum Sirooco1700A with 3335472 sectors
	D3 is a Fujitsu MPE3064AT with 12672450 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
1	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Linux EXT2 & Fat32
setup:	Disk: F1
secup	Host: JudgeDee
	-
	Operator: JRL
	OS: Windows/Me
	Options: Typical
	Date: Fri Nov 16 10:42:33 2001
	and gives browning and a today and the last
	cmd: Z:\ss\DISKWIPE.EXE F1 JudgeDee 80 F1 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\f32-src.txt
	Load Operating System to Source disk
	cmd: Z:\ss\DISKHASH.EXE F1 JudgeDee 80 /before /new_log
Destination	Disk hash = 3E7E5E0AB0FA333BE39D267F0DB8E340386DC05A
Destination	Z:\ss\DISKWIPE.EXE DI-072 Beta7 81 A4 /noask /dst /new_log /comment JRL
Setup:	See CMPPTLOG.TXT for partition table
Error Setup:	
Execute:	Z:\ss\DISKWIPE.EXE DI-072 Beta7 81 A4 /noask /dst /new_log /comment JRL
	Z:\ss\PARTCMP.EXE DI-072 Beta7 80 F1 81 A4 /new_log /comment JRL
	/select 1 1
	Z:\ss\DISKHASH.EXE DI-072 Beta7 80 /comment F1(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-072
Log File	Source disk Drive 0x80, BIOS: Legacy
Highlights:	Interrupt 13 bios 0825/063/63 (max cyl/hd values)
	Interrupt 13 ext 00826/064/63 (number of cyl/hd)
	3330432 total number of sectors reported via interrupt 13 from the BIOS
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P 000000063 001229697 0000/001/01 0304/063/63 Boot 0B Fat32
	2 X 001431360 001290240 0355/000/01 0674/063/63 05 extended
	3 S 00000063 000205569 0355/001/01 0405/063/63 83 Linux
	4 x 000205632 000145152 0406/000/01 0441/063/63 05 extended
	5 S 000000063 000145089 0406/001/01 0441/063/63 OB Fat32
	6 x 000762048 000185472 0544/000/01 0589/063/63 05 extended
	7 S 00000063 000185409 0544/001/01 0589/063/63 16 other
	8 S 00000000 00000000 0000/00/00 0000/00/00
	9 P 002721600 000064512 0675/000/01 0690/063/63 83 Linux
	10 P 002923200 000411264 0725/000/01 0826/063/63 82 Linux swap
	Destination disk Drive 0x81, BIOS: Legacy
	Interrupt 13 bios 0825/063/63 (max cyl/hd values)
	Interrupt 13 ext 00826/064/63 (number of cyl/hd)
	3330432 total number of sectors reported via interrupt 13 from the BIOS
1	N Start LBA Length Start C/H/S End C/H/S boot Partition type
1	1 P 000000063 001334529 0000/001/01 0330/063/63 0B Fat32
	2 P 00000000 00000000 0000/000/00 0000/00 00
1	3 P 000000000 00000000 0000/000/00 0000/00/
1	4 P 000000000 00000000 0000/000/00 0000/00/
	Image file acquired from DOS
	Restore environment Windows 98
	EnCase report for case DI-072 is in F1-F32.txt
	Evidence Number "1" Alias "1"
	File "E:\F1-f32.e01" was acquired by JRL at 06/11/02 05:07:34PM.
	The computer system clock read: 06/11/02 05:07:34PM.
	Evidence acquired under DOS 7.10 using version 3.20.
	Litachee acquired under Dob 7.10 abrily verbron 5.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: B3003D35A64A32963FFB8FB2EEA26581
	Drive Geometry:
	Total Size 600.4MB (1,229,697 sectors)
1	

Case DI-072 for E	nCase 3.20					
	Volume "1" Parameters					
	File System:	FAT32	Drive Type:	Fixed		
	Sectors Per	1	Bytes Per	512		
	Cluster:		Sector:			
	Total Sectors:	1,229,697	Total Capacity:	619,901,440 bytes (591.2MB)		
	Total Clusters:	1,210,745	Unallocated:	97,435,136 bytes (92.9MB)		
	Free Clusters:	190,303	Allocated:	522,466,304 bytes (498.3MB)		
	Volume Name:		Volume Offset:	0		
	OEM Version:	MSWIN4.1	Volume Serial #:	0000-0000		
	Heads:	64	Sectors Per Track:	63		
	Unused Sectors:	63	Number of FATs:	2		
	Sectors Per FAT:	9,460	Boot Sectors:	32		
	<pre>EnCase Report Case: F1-F32 Page = = = Measurement Logs = = = = Sectors Compared 1229697 Sectors Differ 1 Diffs range: 1 Source (1229697) has 104832 fewer sectors than destination (1334529 Zero fill: 0 Src Byte fill (F1): 0 Dst Byte fill (F1): 0 Dst Byte fill (A4): 104832 Other fill: 0 Hash computed for this case (DI-072)</pre>					
Expected	Source disk is und	changed	39D267F0DB8E340386D0	50 JA		
Results:	src compares qualified equal to dst					
Actual Results:	Logical restore anomaly					
Analysis:	Expected results 1	not achieved				

Case DI-082 for H	InCase 3.20				
Case Summary:	Create an image from a BIOS-IDE source disk				
	to a BIOS-IDE destination disk				
	and the source contains a FAT16 partition				
	where the source disk is the same size as the destination				
	Introduce a write error writing to the image.				
Tester Name:	JRL				
Test Date:	Tue Sep 10 17:00:38 2002				
PC:	Beta3				
Disks:	Source: DOS Drive 80 Physical Label A1				
	Destination: DOS Drive 81 Physical Label A4				
	Image media: DOS Drive 80 Physical Label DB				
	Al is a Quantum Siroocol700A with 3335472 sectors				
	A4 is a Quantum Sirooco1700A with 3335472 sectors				
	DB is a Fujitsu MPE3064AT with 12672450 sectors				
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts				
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2				
Source disk	Linux EXT2 & DOS Fat16				
setup:	Disk: Al				
	Host: JudgeDee				
	Operator: JRL				
	OS: Windows/Me				
	Options: Typical				
	Date: Tue Oct 16 11:24:16 2001				
	cmd: Z:\ss\DISKWIPE.EXE Al JudgeDee 80 Al /src /new_log				
	X:\pm\pqmagic /cmd=X:\pm\nex-src.txt				
	Load Operating System to Source disk				

Case DI-082 for H	Case DI-082 for EnCase 3.20			
	cmd: Z:\ss\DISKHASH.EXE A1 JudgeDee 80 /before /new_log			
	Disk hash = D0FC573FF774F6897BE520153C9BF770E998428F			
Destination	No destination setup required			
Setup:				
Error Setup:	Z:\ss\baddisk 81 2 2 8 3 10 > a:\err-082.txt return code 00010 on command 00003 from disk 00081 at address 00002/00002/00008			
Execute:				
Log files loc:	test-archive/encase/encase-3.20/DI-082			
Log File	Image file acquired from DOS			
Highlights:	Restore environment Windows 98			
	EnCase report for case DI-082 is in NOLOG.txt			
	Message displayed during DOS acquire:			
	Error in <file name=""> cannot write to this file</file>			
	= = = Measurement Logs = = = =			
	No compare log found for DI-082			
	This case uses the hash computed from case DI-067			
	Hash after test: D0FC573FF774F6897BE520153C9BF770E998428F			
Expected	Source disk is unchanged			
Results:	error message logged			
Actual Results:	No anomalies			
Analysis:	Expected results achieved			

Case DI-083 for H	EnCase 3.20				
Case Summary:	Create an image from a BIOS-IDE source disk				
-	to a BIOS-IDE destination disk				
	and the source contains a FAT32 partition				
	where the source disk is the same size as the destination				
	Introduce an error on the image.				
Tester Name:	JRL				
Test Date:	Thu Aug 29 14:33:11 2002				
PC:	Beta3				
Disks:	Source: DOS Drive 80 Physical Label F1				
	Destination: DOS Drive 81 Physical Label none				
	Image media: DOS Drive 80 Physical Label D3				
	F1 is a Quantum Sirooco1700A with 3335472 sectors				
	D3 is a Fujitsu MPE3064AT with 12672450 sectors				
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts				
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2				
Source disk	Linux EXT2 & Fat32				
setup:	Disk: F1				
	Host: JudgeDee				
	Operator: JRL				
	OS: Windows/Me				
	Options: Typical				
	Date: Fri Nov 16 10:42:33 2001				
	cmd: Z:\ss\DISKWIPE.EXE F1 JudgeDee 80 F1 /src /new_log				
	X:\pm\pqmagic /cmd=X:\pm\f32-src.txt				
	Load Operating System to Source disk				
	cmd: Z:\ss\DISKHASH.EXE F1 JudgeDee 80 /before /new_log				
	Disk hash = 3E7E5E0AB0FA333BE39D267F0DB8E340386DC05A				
Destination	No destination setup required				
Setup:					
Error Setup:	cmd: z:\ss\CORRUPT.EXE DI-083 Beta3 D:\f1-f32c.e01 475977010 38				
	Comment: change 00922/010/10 to 00920/810/10 (930015)				
Execute:	Z:\ss\DISKHASH.EXE DI-083 JudgeDee 80 /comment F1(JRL) /new_log /after				
Log files loc:	test-archive/encase/encase-3.20/DI-083				
Log File	Image file acquired from DOS				
Highlights:	Restore environment Windows 98				
	EnCase report for case DI-083 is in 083.txt				
	Evidence Number "F1-F32" Alias "F1-F32"				
	File "D:\F1-f32c.e01" was acquired by JRL at 08/29/02 02:35:54PM.				
	The computer system clock read: 08/29/02 02:35:54PM.				
	Evidence acquired under DOS 7.10 using version 3.20.				
	The integrity of the following sector groups could not be				

Case DI-083 for E	nCase 3.20							
	verified:929920-929983							
	Drive Geometry:							
	Total Size 600.4MB (1,229,697 sectors)							
	Volume "F1-F32" Pa	arameters						
	File System:	FAT32	Drive Type:	Fixed				
	Sectors Per	1	Bytes Per	512				
	Cluster:		Sector:					
	Total Sectors:	1,229,697	Total Capacity:	619,901,440				
		, ,		bytes (591.2MB)				
	Total Clusters:	1,210,745	Unallocated:	97,435,136				
	focur crubterb	1,210,,15	onarrocacca	bytes (92.9MB)				
	Free Clusters:	190,303	Allocated:	522,466,304				
				bytes (498.3MB)				
	Volume Name:		Volume Offset:	0				
	OEM Version:	MSWIN4.1	Volume Serial	0000-0000				
	Olin Version.	110/0101111	#:					
	Heads:	64	Sectors Per	63				
	neuus	01	Track:	0.5				
	Unused Sectors:	63	Number of FATs:	2				
	Sectors Per	9,460	Boot Sectors:	32				
	FAT:	5,100	Door Dectorb	52				
	FAI•							
	EnCase Report							
	Case: f1-f32 Pag	1e						
	5455. II ION 145							
	= = = = Measuremer	nt Loas = = = =						
	No compare log fou							
	Hash computed for this case (DI-083)							
	1	,		C05A				
Expected	Hash after test: 3E7E5E0AB0FA333BE39D267F0DB8E340386DC05A Source disk is unchanged							
Results:	image verification	5						
Actual Results:	No anomalies							
Analysis:	Expected results achieved							
Intaryoro.	Transferred reputto 6							

Case DI-084 for H	InCase 3.20			
Case Summary:	Create an image from a BIOS-IDE source disk			
	to a BIOS-IDE destination disk			
	and the source contains a NTFS partition			
	where the source disk is the same size as the destination			
Tester Name:	JRL			
Test Date:	Mon Nov 11 22:59:33 2002			
PC:	McCloud			
Disks:	Source: DOS Drive 80 Physical Label F6			
	Destination: DOS Drive 81 Physical Label 64			
	Image media: DOS Drive 80 Physical Label 75			
	F6 is an IBM-DTLA-307020 with 40188960 sectors			
	64 is a WDCWD64AA with 12594960 sectors			
	75 is a IC35L040AVER07-0 with 80418240 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Windows 2000 with NTFS & Fat32			
setup:	Disk: F6			
	Host: Wimsey			
	Operator: JRL			
	OS: Windows 2000			
	Date: Sat Jul 21 15:53:12 2001			
	DISKWIPE.EXE F6_SRC Wimsey 80 F6 /src /new_log /noask /comment Windows			
	2000/NT source			
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt			
	Load Operating System to Source disk			
	DISKHASH.EXE LX-27 Morse 80 /before			
	Disk hash = 8034683D5D55BA51409AC7B5CB0845CA2CF6B235			

estination	EnCase 3.20 Z:\ss\DISKWIPE.EXI	E DI-084 McCloud 81	64 /noask /dst. /	new log /comment			
etup:	JRL See CMPPTLOG.TXT for partition table						
rror Setup:	none						
xecute:		Z:\ss\DISKWIPE.EXE DI-084 McCloud 81 64 /noask /dst /new_log /comment					
	JRL Z:\ss\PARTCMP.EXE DI-084 Rumpole 80 F6 81 64 /new_log /comment JRL /select 5 1 Z:\ss\DISKHASH.EXE DI-084 Wimsey 80 /comment F6(JRL) /new_log /after						
g files loc:		se/encase-3.20/DI-0		/ 101 _ 103 / 41001			
og File	Source disk Drive	0x80, BIOS: Extens	ions Present				
ghlights:		s 1023/254/63 (max					
	-	16383/016/63 (num	1				
		mber of sectors rep	orted via interru	pt 13 from the			
	BIOS N Start LBA Lei	ngth Start C/H/S	SEND C/H/S boot	Partition type			
		6152832 0000/001/01					
		1985415 0510/000/01		0F extended			
		0000000 0000/000/00		00 empty entry			
		1237005 0638/000/01					
		1236942 0638/001/0		07 NTFS			
		1638567 0843/001/01 1237005 1023/000/01		17 other 05 extended			
		1237005 10237000701		1B other			
		0000000 0000/000/00		00 empty entry			
		0000000 0000/000/00		00 empty entry			
	12 P 00000000 000	0000000 0000/000/00	0000/000/00	00 empty entry			
		Drive 0x81, BIOS: E					
	-	s 0783/254/63 (max	-				
	-	13328/015/63 (num mber of sectors rep		nt 12 from the			
	BIOS	MDEL OF SECLOIS LEF	Joiled Via Inceriu				
	N Start LBA Ler	ngth Start C/H/S	S End C/H/S boot	Partition type			
	1 P 00000063 00	1236942 0000/001/01	L 0076/254/63	07 NTFS			
		0000000 0000/000/00		00 empty entry			
	3 P 00000000 000	0000000 0000/000/00 0000000 0000/00	0000/000/00	00 empty entry			
	Image file acquire		0000/000/00	00 empty entry			
	Restore environmen						
	EnCase report for case DI-084 is in 084.txt						
	Evidence Number "F6-NT" Alias "F6-NT"						
		File "D:\F6-NT.E01" was acquired by JRL at 11/11/02 11:21:00PM. The computer system clock read: 11/11/02 11:21:33PM.					
	The computer system clock read: 11/11/02 11:21:33PM.						
	Evidence acquired under Windows 2000 using version 3.20.						
	Evidence acquired under windows 2000 using version 3.20.						
	File Integrity:						
	Completely Verified, 0 Errors.						
	Acquisition Hash:2E0E8B17165DB4BC9FE1FADDD3F10E3FVerification Hash:2E0E8B17165DB4BC9FE1FADDD3F10E3F						
	Verification Hash: 2E0E8B17165DB4BC9FE1FADDD3F10E3F						
	Drive Geometry:						
	Total Size 604.0MB (1,236,940 sectors)						
		rameters					
	Volume "F6-NT" Par File System:	NTFS	Drive Type:	Fixed			
	Sectors Per	2	Bytes Per	512			
	Cluster:	2	Sector:	212			
	Total Sectors:	1,236,940	Total Capacity:	633,313,280			
		-,,- 10	contractory.	bytes (604.0MB)			
	Total Clusters:	618,470	Unallocated:	628,548,608			
				bytes (599.4MB)			
	Free Clusters:	613,817	Allocated:	4,764,672 bytes			
	11	1	1	(4.5MB)			
	Volume Name:		Volume Offset:	0			

Case DI-084 for EnCase 3.20				
	EnCase Report Case: DI-084 Page			
	= = = = Measurement Logs = = = =			
	Sectors Compared 1236942			
	Sectors Differ 2 Diffs range: 1236940-1236941 Hash computed for this case (DI-084)			
	Hash after test: 8034683D5D55BA51409AC7B5CB0845CA2CF6B235			
Expected	Source disk is unchanged			
Results:	src compares equal to dst			
Actual Results:	No anomalies			
Analysis:	Expected results achieved			

Case DI-089 for	EnCase 3.20			
Case Summary:	Create an image from a BIOS-IDE source disk			
1	to a BIOS-IDE destination disk			
	and the source contains a FAT32 partition			
	where the source disk is larger than the destination			
Tester Name:	JRL			
Test Date:	Tue Oct 22 08:08:25 2002			
PC:	Beta3			
Disks:	Source: DOS Drive 80 Physical Label 60			
DISKS	Destination: DOS Drive 81 Physical Label 61			
	Image media: DOS Drive 80 Physical Label DB			
	60 is a WDCWD64AA with 12594960 sectors			
	61 is a WDCWD64AA with 12594960 sectors			
	DB is a Fujitsu MPE3064AT with 12672450 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Linux EXT2 & Fat32			
setup:	Disk: 60			
secupi	Host: JudgeDee			
	Operator: JRL			
	OS: No_os			
	Options: none			
	Date: Fri Oct 18 10:53:57 2002			
	cmd: Z:\ss\DISKWIPE.EXE 60 JudgeDee 80 60 /src /new_log			
	X:\pm\pgmagic /cmd=X:\pm\f32-src.txt			
	Load Operating System to Source disk			
	cmd: z:\ss\DISKHASH.EXE 60 JudgeDee 80 /before /new_log			
	Disk hash = B54E43E5B3422D7519ABEA166841DD3FC6CC2015			
Destination	Z:\ss\DISKWIPE.EXE DI-089 Beta3 81 61 /noask /dst /new_log /comment JRL			
Setup:	See CMPPTLOG.TXT for partition table			
Error Setup:	none			
Execute:	Z:\ss\DISKWIPE.EXE DI-089 Beta3 81 61 /noask /dst /new_log /comment JRL			
	Z:\ss\PARTCMP.EXE DI-089 Beta3 80 60 81 61 /new_log /comment JRL			
	/select 1 1			
	Z:\ss\DISKHASH.EXE DI-089 Beta3 80 /comment 60(JRL) /new_log /after			
Log files loc:	test-archive/encase/encase-3.20/DI-089			
Log File	Source disk Drive 0x80, BIOS: Legacy			
Highlights:	Interrupt 13 bios 0782/254/63 (max cyl/hd values)			
	Interrupt 13 ext 00783/255/63 (number of cyl/hd)			
	12578895 total number of sectors reported via interrupt 13 from the			
	BIOS			
	N Start LBA Length Start C/H/S End C/H/S boot Partition type			
	1 P 000000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32			
	2 X 001429785 010554705 0089/000/01 0745/254/63 05 extended			
	3 S 000000063 000208782 0089/001/01 0101/254/63 83 Linux			
	4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended			
	5 S 000000063 000144522 0102/001/01 0110/254/63 0B Fat32			
	6 x 000771120 000192780 0137/000/01 0148/254/63 05 extended			
	7 S 000000063 000192717 0137/001/01 0148/254/63       16 other         8 S 00000000 00000000 0000/000/00 0000/000/00       00 empty entry			
	8 S 00000000 00000000 0000/000/00 0000/00/0			
	9 P 011984490 000064260 0746/000/01 0749/254/63         83 Linux           10 P 012177270 000417690 0758/000/01 0783/254/63         82 Linux swap			
	Destination disk Drive 0x81, BIOS: Legacy			
	Interrupt 13 bios 0782/254/63 (max cyl/hd values)			
	Interrupt 13 ext 00783/255/63 (number of cyl/hd)			
	incertage is end of 0,20,20,00 (number of cyt/na)			

Case DI-089 for H	EnCase 3.20						
5466 51-005 LOL 1		mber of sectors rea	ported via interru	ot 13 from the			
	BIOS	WEL OF DECLOTD IE	ported via interiu	20 13 110m CHC			
		ngth Start C/H/	S End C/H/S boot	Partition type			
	1 P 000000063 001140552 0000/001/01 0070/254/63 OB Fat32						
	2 P 000000000 00000000 0000/000/00 0000/000/00 00						
	3 P 00000000 00000000 0000/000/00 0000/00/0						
	4 P 00000000 00000000 0000/000/00 0000/00/0						
	Image file acquired from DOS						
	Restore environment Windows 2000						
	Encase report for case DI-089 is in DI-089.txt						
	Encase report for case DI-089 is in DI-089.txt Evidence Number "60-F32" Alias "60-F32"						
	EVIDENCE NUMBEL "OU-FSZ" AILAS "OU-FSZ"						
	File "D:\60-F32.E01" was acquired by JRL at 10/22/02 08:43:18AM.						
	-	em clock read: 10/2	-	00.12.10141			
	The compacer system		22/02 000 13010AM				
	Evidence acquired	under DOS 7.10 us:	ing version 3 20				
	lividence dequired						
	File Integrity:						
	Completely Verifie	ed. 0 Errors					
			AEA4BB72A062A366D41	8			
	, STILLOGCION MADII	DISCOIDERDE					
	Drive Geometry:						
	-	04.0MB (1,236,942 s	sectors)				
	10001 0120 00						
		axamatara					
	Volume "60-F32" Pa		Designed There a t	nii			
	File System:	FAT32	Drive Type:	Fixed			
	Sectors Per	1	Bytes Per	512			
	Cluster:	1 000 040	Sector:				
	Total Sectors:	1,236,942	Total Capacity:	623,553,536 bytes (594.7MB)			
	Total Clusters:	1,217,878	Unallocated:	623,550,464 bytes (594.7MB)			
	Free Clusters:	1,217,872	Allocated:	3,072 bytes (3.0KB)			
	Volume Name:		Volume Offset:	0			
	OEM Version:	MSWIN4.1	Volume Serial	0000-0000			
			#:				
	Heads:	255	Sectors Per	63			
			Track:				
	Unused Sectors:	63	Number of FATs:	2			
	Sectors Per	9,516	Boot Sectors:	32			
	FAT:						
	EnCase Report						
	Case: DI-89 Pag	ge					
	= = = = Measuremen	nt Logs = = = = =					
	Sectors Compared	1140552					
	Sectors Differ 3						
	Diffs range: 1, 32, 9548						
	Source (1236942) has 96390 more sectors than destination (1140552)						
	Hash computed for this case (DI-089)						
	Hash after test: 1	B54E43E5B3422D7519	ABEA166841DD3FC6CC	2015			
Expected	Source disk is unchanged						
Results:	src compares qual:	src compares qualified equal to dst, src is truncated on dst					
	truncation is logged						
Actual Results:	Logical restore anomaly						
Analysis:	Expected results 1						

Case DI-091 for EnCase 3.20				
Case Summary:	Create an image from an XBIOS-IDE source disk to an XBIOS-IDE destination disk where the source disk is smaller than the destination Introduce an error on the image.			
Tester Name:	JRL			
Test Date:	Fri Aug 30 05:46:08 2002			
PC:	HecRamsey			

Case DI-091 for	EnCase 3	.20				
Disks:	1		Physical Label	A5		
	Destination: DOS Drive 81 Physical Label none					
	Image media: DOS Drive 80 Physical Label 7C					
	A5 is a WDC WD200BB-00AUA1 with 39102336 sectors					
	7C is a MAXTOR 6L040J2 with 78177792 sectors					
			-	nd boot floppy with	n run scripts	
			D-ROM + Baddisk	3.2 + Badx13 3.2		
Source disk	Fat32	-				
setup:	Disk: A5 Host: JudgeDee					
		or: JRL				
	OS: No					
		Options: none Date: Mon Apr 15 14:35:04 2002				
			-	80 A5 /src /new_log	a	
			\pm\f32-src.txt			
		loaded, FAT32 g		00 /bafana /mar la		
	cma: z	·\ss\DISKHASH.	EXE AS JudgeDee	80 /before /new_log	3	
	Disk h	ash = 3DE5C01E	35BB337EA3E6CF9B	C25EB844F5D00FD14		
Destination		tination setup		01012011102001211		
Setup:		<u>P</u>	<b>_</b>			
Error Setup:				sey D:\A5.e09 78544		
		2		8/099/01 at LBA 32		
Execute:				80 /comment A5(JRL	) /new_log /after	
Log files loc:			encase-3.20/DI-0	91		
Log File Nichlichte:		file acquired f e environment W				
Highlights:			se DI-091 is in	091 tyt		
		ce Number "A5"		UJI.CAC		
	File "I	F:\A5.E01" was	acquired by JRL	at 08/30/02 05:51	:57AM.	
	The co	mputer system o	clock read: 08/3	0/02 05:51:57AM.		
	The state of the second					
	Eviden	ce acquired und	ter DOS 7.10 usi	ng version 3.20.		
	The in	tearity of the	following secto	r groups could not	he	
		ed:32758528-32		I GIOUPS COULD HOL		
		Geometry:				
	Total a		GB (39,102,336 s	ectors)		
	Cylind		3			
	Heads:					
	Sectors	s: 63				
	Partit	ions:				
	Code	Туре	Start Sector	Total Sectors	Size	
	0B	FAT32	0	1237005	604.0MB	
	83	Linux EXT2	38491740	64260	31.4MB	
	82	Linux Swap	38684520	417690	204.0MB	
	83	Linux EXT2	1429785	208845	102.0MB	
	0B	FAT32	1638630	144585	70.6MB	
	16	HiddenFAT16	2200905	192780	94.1MB	
	EnCase	Report				
		DI-091 Page				
		-				
		= Measurement I	-			
	No compare log found for DI-091					
	Hash computed for this case (DI-091)					
Furnantad		Hash after test: 3DE5C01B5BB337EA3E6CF9BC25EB844F5D00FD14				
Expected Results:	Source disk is unchanged image verification error					
Actual Results:	No anomalies					
Analysis:		ed results achi	leved			

Case DI-092 for	EnCase 3.20					
Case Summary:	Create an image from	n an XBIOS-IDE so	ource disk			
	to an XBIOS-IDE dest					
	where the source dis	sk is smaller tha	an the destination			
Tester Name:	JRL	2002				
Test Date: PC:	Fri May 24 16:36:04	2002				
PC: Disks:	Cadfael Source: DOS Drive 80	Dhugigal Tabal	TR F			
DISKS·	Destination: DOS Drive at	-				
	Image media: DOS Dri	-				
	F5 is an IBM-DTLA-30					
	7B is a MAXTOR 6L040	)J2 with 7817779	2 sectors			
	70 is a IC35L040AVER07-0 with 80418240 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts					
		-		n run scripts		
~ 1' 1	FS-TST Release 1.0 C					
Source disk setup:	Dual boot Linux/Wind Disk: F5	lows Me with EXT.	2 & Fatib			
secup.	Host: Cadfael					
	Operator: JRL					
	OS: WindowsMe/Linux					
	Date: Sat Aug 11 11:	13:43 2001				
	DISKWIPE.EXE F5_SRC					
	X:\pm\pqmagic /cmd=X					
	Load Operating Syste DISKHASH.EXE F5_SRC					
	PIONINON.EVE LO"OKC	Cauraer ou / Del (				
	Disk hash = 83A0002	2816BBF089F8BE330	C41C92C3B5A0F42A54			
Destination	Z:\ss\DISKWIPE.EXE D			ew_log /comment		
Setup:	JRL			_ •		
	No partition table of	defined				
Error Setup:	none					
Execute:	Z:\ss\DISKWIPE.EXE D	)I-092 Cadfael 83	l 7B /noask /dst /ne	ew_log /comment		
	JRL			(		
Log files loc:	Z:\ss\DISKCMP.EXE DI			/comment JRL		
Log Files 10C. Log File	test-archive/encase/encase-3.20/DI-092 Image file acquired from DOS					
Highlights:						
ing gint i gine b	Restore environment Windows 2000 EnCase report for case DI-092 is in F5.txt					
	Evidence Number "F5" Alias "F5"					
	File "D:\F5.E01" was acquired by JRL at 05/24/02 05:11:33PM.					
	The computer system clock read: 05/24/02 05:11:33PM.					
	Evidence acquired under DOS 7 10 using version 3 20					
	Evidence acquired under DOS 7.10 using version 3.20. Acquisition Notes:					
	none.					
	File Integrity:	o –				
	Completely Verified, 0 Errors.					
	Verification Hash: 849BAEFDE9407109B9D22FBB479FE00D					
	Drive Geometry:	Drive Comptry:				
	Drive Geometry: Total Size 19 2GB (40 188 960 sectors)					
	Total Size 19.2GB (40,188,960 sectors) Cylinders: 16,383					
	Cylinders: 16,383					
	Heads: 16	Sectors: 63				
	Sectors: 63					
	Sectors: 63 Partitions:	Start Coston	Total Soctors	Sizo		
	Sectors: 63 Partitions: Code Type	Start Sector	Total Sectors	Size		
	Sectors: 63 Partitions: Code Type 06 BIGDOS	0	1237005	604.0MB		
	Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2	0 9430155	1237005 6152895	604.0MB 2.9GB		
	Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap	0 9430155 39760875	1237005 6152895 417690	604.0MB 2.9GB 204.0MB		
	Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap 83 Linux EXT2	0 9430155 39760875 2249100	1237005 6152895 417690 208845	604.0MB 2.9GB 204.0MB 102.0MB		
	Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap	0 9430155 39760875	1237005 6152895 417690	604.0MB 2.9GB 204.0MB		

Case DI-092 for H	InCase 3.20			
	EnCase Report			
	Case: F5 Page			
	= = = Measurement Logs = = = =			
	Sectors Compared 40188960			
	Sectors Differ 0			
	Diffs range			
	Source (40188960) has 37988832 fewer sectors than destination			
	(78177792)			
	Zero fill: 0			
	Src Byte fill (F5): 0			
	Dst Byte fill (7B): 37988832			
	Other fill: 0			
	Other no fill: 0			
	This case uses the hash computed from case DI-098			
	Hash after test: 83A0002816BBF089F8BE33C41C92C3B5A0F42A54			
Expected	Source disk is unchanged			
Results:	src compares qualified equal to dst			
Actual Results:	No anomalies			
Analysis:	Expected results achieved			

Case DI-093 for				
Case Summary:	Create an image from an XBIOS-IDE source disk			
	to an XBIOS-IDE destination disk			
	where the source disk is the same size as the destination			
	Introduce a read error from the source.			
Tester Name:	JRL			
Test Date:	Fri Oct 18 08:51:10 2002			
PC:	HecRamsey			
Disks:	Source: DOS Drive 80 Physical Label F5			
	Destination: DOS Drive 81 Physical Label F8			
	Image media: DOS Drive 80 Physical Label 7C			
	F5 is an IBM-DTLA-307020 with 40188960 sectors			
	F8 is an IBM-DTLA-307020 with 40188960 sectors			
	7C is a MAXTOR 6L040J2 with 78177792 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16			
setup:	Disk: F5			
	Host: Cadfael			
	Operator: JRL			
	OS: WindowsMe/Linux			
	Date: Sat Aug 11 11:13:43 2001			
	DISKWIPE.EXE F5_SRC Cadfael 80 F5 /src			
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt			
	Load Operating System to Source disk			
	DISKHASH.EXE F5_SRC Cadfael 80 /before			
	Disk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54			
Destination	Z:\ss\DISKWIPE.EXE DI-093 HecRamsey 81 F8 /noask /dst /new_log /comment			
Setup:	JRL			
	No partition table defined			
Error Setup:	Z:\ss\badx13 81 42 10 1357 > a:\err-093.txt			
	Return error code 10 for X13 command 42 from drive 81 at LBA sector			
	1,357			
Execute:	Z:\ss\DISKWIPE.EXE DI-093 HecRamsey 81 F8 /noask /dst /new_log /comment			
	JRL			
	Z:\ss\DISKCMP.EXE DI-093 HecRamsey 80 F5 81 F8 /new_log /comment JRL			
	Z:\ss\DISKHASH.EXE DI-093 Wimsey 80 /comment F5(JRL) /new_log /after			
Log files loc:	test-archive/encase/encase-3.20/DI-093			
Log File	Image file acquired from DOS			
Highlights:	Restore environment Windows 2000			
	EnCase report for case DI-093 is in 093.txt			
	Evidence Number "F5-rd-err" Alias "F5-rd-err"			
	File "D:\F5-ERR.E01" was acquired by JRL at $10/18/02$ 09:18:14AM.			
	The computer system clock read: 10/18/02 09:18:14AM.			
	Evidence acquired under DOS 7.10 using version 3.20.			
	File Integrity:			

Case DI-093 for EnCase 3.20						
Completely Verified, 0 Errors.						
	Verification Hash: D527DD605E991E5767A4C1AC93E3B72F					
	The following sector	blocks reported	read errors during a	cquisition:		
	1344-1407	1344-1407				
	Drive Geometry: Total Size 19.2GB (40,188,960 sectors) Cylinders: 16,383					
	Heads: 16					
	Sectors: 63					
	Sectors: 05					
	Partitions:					
	Code Type	Start Sector	Total Sectors	Size		
	06 BIGDOS	0	1237005	604.0MB		
	83 Linux EXT2	9430155	6152895	2.9GB		
	82 Linux Swap	39760875	417690	204.0MB		
	83 Linux EXT2	2249100	208845	102.0MB		
	06 BIGDOS	2457945	144585	70.6MB		
	16 HiddenFAT16	6699105	192780	94.1MB		
		•	•			
	EnCase Report					
	Case: DI-093 Page					
	= = = = Measurement I					
	Sectors Compared 4018	8960				
	Sectors Differ 10446		0050			
	Diffs range 1357-1407 Hash computed for the					
	Hash computed for the Hash after test: 83AC	, ,		1		
Expected	Source disk is unchar		ESSCHLUSZUSESAUF 42A54	L		
Results:	src compares qualifie	-				
RESUILS.	error message logged	a equal to ust				
Actual Results:	error message logged Restore anomaly					
Analysis:	Expected results not	achieved				
THRETADID.	INFOCICA TOPATOR HOL	actifered				

Case DI-098 for 1	EnCase 3.20
Case Summary:	Create an image from an XBIOS-IDE source disk
	to an XBIOS-IDE destination disk
	where the source disk is the same size as the destination
Tester Name:	JRL
Test Date:	Fri May 24 15:33:02 2002
PC:	Rumpole
Disks:	Source: DOS Drive 80 Physical Label F5
	Destination: DOS Drive 81 Physical Label F7
	Image media: DOS Drive 80 Physical Label 70
	F5 is an IBM-DTLA-307020 with 40188960 sectors
	F7 is an IBM-DTLA-307020 with 40188960 sectors
	70 is a IC35L040AVER07-0 with 80418240 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16
setup:	Disk: F5
	Host: Cadfael
	Operator: JRL
	OS: WindowsMe/Linux
	Date: Sat Aug 11 11:13:43 2001
	DISKWIPE.EXE F5_SRC Cadfael 80 F5 /src
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt
	Load Operating System to Source disk
	DISKHASH.EXE F5_SRC Cadfael 80 /before
	Disk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54
Destination	Z:\ss\DISKWIPE.EXE DI-098 Rumpole 81 F7 /noask /dst /new_log /comment
Setup:	JRL

Case DI-098 for 1	EnCase 3	.20			
		tition table de	efined		
Error Setup:	none				
Execute:	Z:\ss\DISKWIPE.EXE DI-098 Rumpole 81 F7 /noask /dst /new_log /comment JRL Z:\ss\DISKCMP.EXE DI-098 Rumpole 80 F5 81 F7 /new_log /comment JRL Z:\ss\DISKHASH.EXE DI-098 Rumpole 80 /comment F5(JRL) /new_log /after				
Log files loc:					1 3
Log File Highlights:	<pre>test-archive/encase/encase-3.20/DI-098 Image file acquired from DOS Restore environment Windows 2000 EnCase report for case DI-098 is in F5.txt Evidence Number "F5" Alias "F5" File "D:\F5.E01" was acquired by JRL at 05/24/02 05:11:33PM. The computer system clock read: 05/24/02 05:11:33PM. Evidence acquired under DOS 7.10 using version 3.20. Acquisition Notes: none. File Integrity: Completely Verified, 0 Errors. Verification Hash: 849BAEFDE9407109B9D22FBB479FE00D Drive Geometry: Total Size 19.2GB (40,188,960 sectors) Cylinders: 16,383 Heads: 16 Sectors: 63</pre>				
	Partit				
	-	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1237005	604.0MB
	83	Linux EXT2	9430155	6152895	2.9GB
	82	Linux Swap	39760875	417690	204.0MB
	83	Linux EXT2	2249100	208845	102.0MB
	06	BIGDOS	2457945	144585	70.6MB
	16	HiddenFAT16	6699105	192780	94.1MB
	EnCase Report Case: F5 Page = = = Measurement Logs = = = Sectors Compared 40188960 Sectors Differ 10395				
	Diffs : Hash c	range 40178565- omputed for th:	is case (DI-098)		
				E33C41C92C3B5A0F42A5	4
Expected		disk is unchar			
Results:	src compares equal to dst				
	Restore anomaly				
Actual Results: Analysis:	Restore				

Case DI-099 for E	InCase 3.20
Case Summary:	Create an image from an XBIOS-IDE source disk
	to an XBIOS-IDE destination disk
	where the source disk is larger than the destination
Tester Name:	JRL
Test Date:	Fri May 24 16:32:36 2002
PC:	Wimsey
Disks:	Source: DOS Drive 80 Physical Label F5
	Destination: DOS Drive 81 Physical Label A6
	Image media: DOS Drive 80 Physical Label 70
	F5 is an IBM-DTLA-307020 with 40188960 sectors
	A6 is a WDC WD200BB-00AUA1 with 39102336 sectors
	70 is a IC35L040AVER07-0 with 80418240 sectors

Case DI-099 for	EnCase 3	.20				
				nd boot floppy with 3.2 + Badx13 3.2	n run scripts	
Source disk			ows Me with EXT2			
setup:	Disk: H	F5				
_	Host: (	Cadfael				
	Operato	or: JRL				
	OS: Wir	ndowsMe/Linux				
	Date: S	Sat Aug 11 11:	13:43 2001			
			Cadfael 80 F5 /s			
	1.00		:\pm\fat-src.txt			
			m to Source disk			
	DISKHAS	SH.EXE F5_SRC (	Cadfael 80 /befo	re		
	Disk ha	ash = 83A0002	81688F089F88E33C	41C92C3B5A0F42A54		
Destination				A6 /noask /dst /new	v log /comment	
Setup:	JRL		i opp wimber of			
T	-	tition table d	efined			
Error Setup:	none					
Execute:		DISKWIPE.EXE D	I-099 Wimsey 81	A6 /noask /dst /new	w log /comment	
	JRL			, , ,	,	
		DISKCMP.EXE DI	-099 Rumpole 80	F5 81 A6 /new_log ,	comment JRL	
Log files loc:			encase-3.20/DI-0			
Log File		file acquired :				
Highlights:	Restore	e environment N	Windows 2000			
			se DI-099 is in	F5.txt		
	Evidenc	ce Number "F5"	Alias "F5"			
				at 05/24/02 05:11	33PM.	
	The cor	mputer system o	clock read: 05/2	4/02 05:11:33PM.		
	Erridon	as samited up	dom DOG 7 10 ugi	ng worgion 2 20		
		ition Notes:	der DOS 7.10 usi	ng version 3.20.		
	none.	ILION NOLES.				
	none.					
	File In	ntegrity:				
		tely Verified,	0 Errors.			
				109B9D22FBB479FE00D		
	Drive (	Geometry:				
	Total S		GB (40,188,960 s	ectors)		
	Cylinders: 16,383					
	-	Heads: 16				
	Heads:					
	-					
	Heads:					
	Heads: Sectors	s: 63				
	Heads: Sectors Partit	s: 63 ions:				
	Heads: Sectors Partit: Code	s: 63 ions: Type	Start Sector	Total Sectors	Size	
	Heads: Sectors Partit: Code 06	s: 63 ions: Type BIGDOS	0	1237005	604.0MB	
	Heads: Sectors Partit: Code 06 83	s: 63 ions: Type BIGDOS Linux EXT2	0 9430155	1237005 6152895	604.0MB 2.9GB	
	Heads: Sectors Partit Code 06 83 82	s: 63 Type BIGDOS Linux EXT2 Linux Swap	0 9430155 39760875	1237005 6152895 417690	604.0MB 2.9GB 204.0MB	
	Partit Code 06 83 82 83	s: 63 Type BIGDOS Linux EXT2 Linux Swap Linux EXT2	0 9430155 39760875 2249100	1237005 6152895 417690 208845	604.0MB 2.9GB 204.0MB 102.0MB	
	Partit: Code 06 83 82 83 06	s: 63 Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS	0 9430155 39760875 2249100 2457945	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Partit Code 06 83 82 83	s: 63 Type BIGDOS Linux EXT2 Linux Swap Linux EXT2	0 9430155 39760875 2249100	1237005 6152895 417690 208845	604.0MB 2.9GB 204.0MB 102.0MB	
	Partit: Code 06 83 82 83 06	s: 63 Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS	0 9430155 39760875 2249100 2457945	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16	s: 63 Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16	0 9430155 39760875 2249100 2457945	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report	0 9430155 39760875 2249100 2457945	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report	0 9430155 39760875 2249100 2457945	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Partit: Code 06 83 82 83 06 16 EnCase Case: H	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report	0 9430155 39760875 2249100 2457945 6699105	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Partit: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: F = = = =	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page	0 9430155 39760875 2249100 2457945 6699105	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: I = = = = Sectors Sectors	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126	0 9430155 39760875 2249100 2457945 6699105	1237005 6152895 417690 208845 144585	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Diffs 1	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335	1237005 6152895 417690 208845 144585 192780	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Diffs n Source	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210 (40188960) has	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s	1237005 6152895 417690 208845 144585 192780 ectors than destina	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Diffs n Source This ca	s: 63 ions: Type BIGDOS Linux EXT2 Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210 (40188960) has ase uses the ha	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro	1237005 6152895 417690 208845 144585 192780 ectors than destina m case DI-098	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB	
	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Diffs n Source This ca Hash af	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 391022100 (40188960) has ase uses the ha fter test: 83A0	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro 0002816BBF089F8B	1237005 6152895 417690 208845 144585 192780 ectors than destina	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB	
Expected	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Sectors Source This ca Hash af	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Differ 126 range 39102210- (40188960) has ase uses the ha fter test: 83A( disk is unchas)	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro 0002816BBF089F8B nged	1237005 6152895 417690 208845 144585 192780 ectors than destina m case DI-098 E33C41C92C3B5A0F42a	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB ation (39102336)	
Expected Results:	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Sectors Sectors Sectors Source This ca Hash af	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210- (40188960) has ase uses the has fter test: 83A( disk is unchas mpares qualified ter test: 83A( disk is unchas)	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro 0002816BBF089F8B nged ed equal to dst,	1237005 6152895 417690 208845 144585 192780 ectors than destina m case DI-098	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB ation (39102336)	
Results:	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H = = = = Sectors Sectors Diffs n Source This ca Hash af Source src con truncat	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210 (40188960) has ase uses the he fter test: 83A( disk is unchar mpares qualifi- tion is logged	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro 0002816BBF089F8B nged ed equal to dst,	1237005 6152895 417690 208845 144585 192780 ectors than destina m case DI-098 E33C41C92C3B5A0F42a	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB ation (39102336)	
-	Heads: Sectors Partit: Code 06 83 82 83 06 16 EnCase Case: H EnCase Case: H Sectors Sectors Diffs n Source This ca Hash at Source src con truncat	s: 63 ions: Type BIGDOS Linux EXT2 Linux Swap Linux EXT2 BIGDOS HiddenFAT16 Report F5 Page = Measurement 1 s Compared 3910 s Differ 126 range 39102210- (40188960) has ase uses the has fter test: 83A( disk is unchas mpares qualified ter test: 83A( disk is unchas)	0 9430155 39760875 2249100 2457945 6699105 Logs = = = = 02336 -39102335 s 1086624 more s ash computed fro 0002816BBF089F8B nged ed equal to dst,	1237005 6152895 417690 208845 144585 192780 ectors than destina m case DI-098 E33C41C92C3B5A0F42a	604.0MB 2.9GB 204.0MB 102.0MB 70.6MB 94.1MB ation (39102336)	

Case Summary:       Create an image from an XEIOS-IDE source disk to an XEIOS-IDE destination disk and the source contains a PATIG partition where the source disk is smaller than the destination Introduce an error on the image.         TestE Name:       FRI Aug 30 04:0147 2002         PC:       MecRamey         Disks:       Source: DOS Drive 80 Physical Label none Destination: DOS Drive 81 Physical Label none Disk: P5 Host: Cadfael Operator: JAE OG: WindowNeW Me With RXT2 & PatI6 Disk: P5 Host: Cadfael Operator: JAE OG: WindowNeW/Linux Date: St. Aug 11 1:13:43 2001 DISKNTPE.EXE P5_DEC Cadfael 80 P5 /arc XiveNpemagic /cod/XiveNf4-rero.txt Load Operating System to Source disk DISKNAB.EXE P5_SEC Cadfael 80 P5 /arc XiveNpemagic /cod/XiveNf4-rero.txt Load Operating System to Source disk DISKNAB.EXE P5_DEC Cadfael 80 P5 /arc XiveNpemagic /cod/XiveNf4-rero.txt Load Operating System to Source disk DISKNAB.EXE P5_DEC Cadfael 80 P5 /arc XiveNpemagic /cod/XiveNf4-rero.txt Load Operator: JAE Operator: Source disk Distore P5 /arc XiveNpemagic /cod/XiveNf4-rero.txt Load Operator: Source disk Distore XiveNpemagic /cod/XiveNf4-rero.txt Load Operator: Source disk Distore XiveNpemagic /cod/XiveNf4-rero.txt Load Operatory: Total Cadeci P1-100 JudgeDes 80 /consent P5(JRL) /new_log /after Log File Ioo: Lest-erroniver/encaes/mecae-3.20/DI-100 Excore environment Windows 2000 RCase report for cas	Case DI-100 for H	InCase 3.20				
to an X100-TDE declination disk and the source contains a FATLE partition Mere the source disk is smaller than the destination Introduce an error on the image. Test Pate: Pitel Pate Source TOS Prive 80 Physical Label FS Destination: DOS Drive 80 Physical Label 70 FS is an IBM DTL-A07020 with A018860 sectors 7 is a MAXDOR 6104012 with 7817792 sectors 7 C FSOM with PartitionMagic Pro 6.0 and Doot floppy with run scripts 75-TST Release 1.0 CD-RCM+ Reddisk 3.2 + Redx13 3.2 Source disk setup: Disk: 5 Source disk setup: Disk: 75 Host: Codfael Operation System to Source disk bisk: 75 Host: Codfael Operating System to Source disk DISKNEW.EXE F5_SCC Cadfael 80 FS /arc X:Vpm/papagic /cmd-X:Vpm/fat-erc.txt Load Operating System to Source disk DISKNEW.EXE F5_SCC Cadfael 80 FS /arc X:Vpm/papagic /cmd-X:Vpm/fat-erc.txt Load Operating System to Source disk DISKNEW.EXE F5_SCC Cadfael 80 /Defore Disk hash = \$3000028168MPS09F8833C4C1292C85A50P42A54 Destination Setup: Commant: change 16/000/01 to 16/070/01 at LAA 16128 Execute: Z:VsS/CORRUPT.EXE DI-100 HecKansey D:Vf5-f16c.e01 8023219 37 Commant: change 16/000/01 to 16/070/01 at LAA 16128 Execute: Z:VsS/CORRUPT.EXE DI-100 HecKansey D:Vf5-f16c.e01 8023219 37 Commant: change 16/000/01 to 16/070/01 at LAA 16128 Execute: Disk hash = \$3000028168MPS09F8833C4C1292C85A50P42A54 Destination Setup Feylice Disk Disk Correspond for coase DI-100 lis in 100.txt FVidence Number TF5-F16' Alias TF5-F16' File file loc' F0Croe report for coase DI-100 lis in 100.txt Twidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be wrified:115064-1517 Drive Geometry: Total Size 604.0MM (1,236,942 sectors) Volume *F5-F16' Parameters File System: FAT16 Drive Type: Fixed Sectors Per 32 Sectors Per 32 Sectors Per 32 Sectors Per 63 Number of FAT12 2 Notae (53.106).9MB Free Clusters: 4,462 Allocated: F00,016,504 Free (134.1MB) Volume Sectors: 1 3876-451D Number of FAT12 2 Sectors Per 151 Nource Sectors: 1 1 Sectors Per 151 Nource Sectors: 1 1			rom an XBIOS-IDE s	ource disk		
where the source disk is smaller than the destination Introduce an error on the image.           Test Date:         Pri Net           Test Date:         Pri Aug 30 04:01:47 2002           PC:         Heckansey           Disks:         Destination: DOS Drive 80 Physical Label P5 Destination: DOS Drive 80 Physical Label 70 P5 is an IBM-DTLA:307020 with 40188960 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts P5-TST Release 1.0 CD-ROM + Baddisk 3.2 + Dadk13 3.2           Source disk setup:         Dual Doot Linux/Window Me with EXT2 & FallS           Disk P5 fael Disk:         Sectors P5 is an IBM-DTLA:307020 with 40188960 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts P5-TST Release 1.0 CD-ROM + Baddisk 3.2 + Dadk13 3.2           Source disk setup:         Dial Doot Linux/Window Me with EXT2 & FallS           Disk P5 fael Disk P5 fael Disk Mash = 83A0002816MBP089P8BR33C41C92C385A0P42A54           Destination Setup:         Comment: charge 16/000/01 to 16/0707/01 at LBA 16128           Execute:         2:%as/DISKMBSH.EXE D1-100 HacRamsey D1/15-F16c.e01 8023219 37 Comment: charge 16/000/01 to 16/0707/01 at LBA 16128           Dig Files loc:         test-park/mashes/cmase3.3 a/2010-100 Execute:         test-park/mashes/cmase3.3 a/2010-100 Execute:         test-park/mashes/cmase3.3 a/2010-100 Execute:           Dig File         File System to case 1-10 is in 100.txt Evidence Rubber *5-F16'         His mage file acquired from D0S Execute:         P2/16'///////////////////////////////////	1	-				
Introduce an error on the image.           Test Date:         Fri Aug 30 04:01:47 2002           PC:         Heckansey           Disks:         Source: DOS Drive 80 Physical Label none           Image media: DOS Drive 80 Physical Label none         Image media: DOS Drive 80 Physical Label none           Disks:         Destination: DOS Drive 80 Physical Label none           CB: Add None Ad						
Test Date:       Pri       Aug 30 04:01:47 2002         PC:       HecRammacy         Disks:       Source: DOS Drive 80 Physical Label F5         Disks:       Destination: DOS Drive 80 Physical Label 70         F5 is an IBM-DTLA-307020 with 40188960 sectors         7C is an MAXTOR 610402 with 7117792 sectors         CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts         F3-TST Kelassa 1.0 CD-ROM + Haddisk 3.2 + Badx13 3.2         Source disk         Dual boot Linux/Windows Me with EXT2 4 Fat16         Disk: F5         Host: Cadfael         Operating System to Source disk         DISKMIPE.EXE F5_SRC Cadfael 80 F5 /src         X:\pmpMagadic /omdak: hymfa trac.rx.t         Load Operating System to Source disk         DISKMIPE.EXE F5_SRC Cadfael 80 /bsfore         Disk hash = 83A0002916BEP089F8E32C41C92C385A0F42A54         No destination setup required         Setup:         Comment: charge 16/000/01 to 16/070/01 at LBA 16128         Execute:       z:\ss\CORRUPT.EXE D1-100 HecRamsey D:\f5-f16c.e01 8023219 37         Comment: charge 16/000/01 to 16/070/01 at LBA 16128         Execute:       z:\ss\CORRUPT.EXE D1-100 Judgebes 80 /conment F5(JRL) /new_log /after         Log file alog:       test-archiva/encase/encase3.20/071-100         Log file alog:				an the destination		
Test Date:       Pri Aug 30 04:01:47 2002         PC:       Heckmaey         Disks:       Source: DS Drive 80 Physical Label none         Image media: DOS Drive 80 Physical Label none       Destination: DOS Drive 80 Physical Label none         Test name       Destination: DOS Drive 80 Physical Label none         Test name       Destination: DOS Drive 80 Physical Label None         CD-RoW with PartitionMagic Dro 6.0 and boot floppy with run scripts         FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badd13 3.2         Dual boot Linux/Windows Me with EXT2 & Fat16         Disk: P5         Host: Cadfael       Operator: JRL         OS: WindowsMc/Linux       Date: Sat Aug 11 11:13:43 2001         DISKHERE EXE FS_SRC Cadfael 80 75 /src         X:\pmpgmagic / cmd-X: ymp fat-snc.txt         Dod perating System to Source disk         DISKHASH.EXE FS_DRC Cadfael 80 75 /src         X:\pmpgmagic / cmd-X: pm required         Setup:       cmd: z'sqs\CORMUPTEXE DI-100 HecRamsey Di'{55-F16C.e01 80232219 37         Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       Z'sss/USKMASH.EXE DI -100 JungDee 80 / comment FS/JRL /new_log /after         Log files loc:       Lest-archive/encase/encase_3.20/DI-100         Encase report for case DI-100 JungDee 80 / comment FS/JRL /new_log /s3M.       The computer system clock reaci 08/30/02 04:07:53A			c on the image.			
PC:         Heckamäey           Disks:         Source: DOS Drive 80 Physical Label F5           Destination: DOS Drive 80 Physical Label T7C           P5 is an IBM-DTLA-307020 with 40188960 sectors           TC is a MAXTOR 610402 with 717792 sectors           CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts           F5-TS Release 1.0 CD-ROM + Baddis 3.2 + Badx13 3.2           Source disk           public Disk: F5           Host: Cadfael           Operator: JRL           O3: WindowsMe/Linux           Disk: F5           Host: Sat Aug 11 11:12:43 2001           DISKMIPE.EXE F5_SRC Cadfael 80 F5 /arc           X:\u00ettinthic Sat Aug 11 11:12:43 2001           Disks.F5           Destination           Setup:           odstination setup required           Error Setup:           cmd: z:\u00ettinthe setup required           Error Setup:           cmd: z:\u00ettinthe from D00           Error Setup:           cmd: z:\u00ettinformate from D00           Error Setup						
Disks: Source: DS Drive 80 Physical Label P5 Destination: DOS Drive 80 Physical Label 7C P5 is an IRM-DTLA.307020 with 40188960 sectors 7C is a MATOR 5L040J2 with 7817792 sectors CD-ROM with ParticionMagic Pro 6.0 and boot floppy with run scripts PS-TST Release 1.0 CD-RCM + Baddick 3.2 + Badx13 3.2 Dual boot Linux/Windows Me with EXT2 & Fatl6 Disk: P5 Host: Cadfael Operator: JRL OS: WindowsMe/Linux Date: Sat Aug 11 11:13:43 2001 DISKMTEP.BKT P5_SKC Cadfael 80 F5 /src X:\pm/ppmglc /md/sX:\pm/fat_src.txt Load Operating System to Source disk DISKMASH.EXE P5_SKC Cadfael 80 /before Disk hash = 83A002816BBF08978BB73C11C92C3B5A0F42854 Destination Setup: mod estination setup required Excoute: Z:\ss\COKRUFT.EXE DT-100 HecRamsey D:\f5-f16C.e01 B023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128 Excoute: Z:\ss\COKRUFT.EXE DT-100 HecRamsey D:\f5-f16C.e01 B023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128 Excoute: Z:\ss\COKRUFT.EXE DT-100 HecRamsey D:\f5-f16C.e01 B023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128 Excoute: Z:\ss\COKRUFT.EXE DT-100 HecRamsey D:\f5-f16C.e01 B023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128 Excoute: Z:\ss\DISKMASH.EXE DT-100 Join 1100.txt Evidence Number "F5-F16" Alias "F5-F16" File *F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Goometry: Total Size 604.0MB (1,236,942 sectors) Yolume "F5-F16" Parameters File System: PAT16 Sector: Siz Cluster: Siz Sector: Siz Cluster: Siz Sector: File System: Siz Number of FAT51 Bi Heads: 255 Sectors Per 63 Track: Unue Offset: 0 OKN Version: MSNIN4.1 Wolume Offset: 0 OKN Version: MSNIN4.1 Holume off FAT51 H: Heads: 255 Sectors Per 63 Number of FAT51 2 Sectors Per 151 Boot Sectors: 1 Number of FAT51 2 Sectors Per 151 Boot Sectors: 1 Heads: Size Sectors Per						
Destination: DOS Drive 81 Physical Label none           Image media: DOS Drive 80 Physical Label 7C           F5 is an IBM-DTLA-307020 with 40188960 sectors           7C is a NAXDR 5104022 with 78177922 sectors           CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts           FS-TST Release 1.0 CD-ROM + Raddis 3.2 + Badxl3 3.2           Source disk           setup:           Dual boot Linux/Windows Me with EXT2 4 Fat16           Disk: F5           Host: Cadfael           Operator: JRL           OS: WindowsMe/Linux           Datt: Cadfael           Operator: JRL           DSKNIPE.EXE F5_SRC Cadfael 80 F5 /src           X:\pm\pmagic /mdx:\pm\fdt-src.txt           Load Operating System to Source disk           DISKHASH.EXE F5_SRC Cadfael 80 7/before           Disk hash = 83A0028616BBF0899EB32C41C92C3B5A0F42854           Destination           Strop:           Comment: Change 16/000/01 to 16/070/01 at LBA 16128           Error Setup:           Comment: Change 16/000/01 to 16/070/01 at LBA 16128           Error Setup:           Comment: Change 16/000/01 to 16/070/01 at LBA 16128           Highlights:           Rescore environment Windows 2000           Encase report for case DI-100 is in 100.txt           Fi	-					
Image media: DOS Drive 80 Physical Label 7C         F5 is an INM-DTL-307020 with A0188960 sectors         7C is a MAXTOR 6L040J2 with 7817792 sectors         CD-ROW with PartitionMagic Pro 6.0. and boot floppy with run scripts         FS-TST Release 1.0 CD-ROM + Raddisk 3.2 + Badx13 3.2         Dual boot Linux/Windows Me with BX72 & Fat16         Disk: F5         Host: Cadfael         Operator: IRL         OS: WindowsMe/Linux         Datk: P5         Disk/MSLEXE F5_SRC Cadfael 80 F5 /src         X: YupyOpmagic /cnd=X:yup/Hat=src.txt         Load Operator: IRL         Odd Operator: SRC Cadfael 80 /bfore         Disk/MSLEXE F5_SRC Cadfael 80 /bfore         Disk/MSLEXE F5_SRC Cadfael 80 /bfore         Disk/MSLEXE F5_SRC Cadfael 80 /bfore         Disk hash = 83A002816BBP089F8BE33C41292C3B5A0F42A54         Destination         Setup:         Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       2:Nsk/ORRUPT.EXE DI-100 Heckansey D:\f5-f16c.e01 B023219 37         Comment: change 16/000 10 10 6/070/01 at LBA 16128         Execute:       2:Nsk/ORRUPT.EXE DI-100 Judgebee 80 /comment P5/JRL) /new_log /after         Log File       Image file acquired from DOS         Restore environment Windows 2000       Restore environmet Windows 2000         Rest	Disks:					
F5 is an IBM-PTLA-307020 with 40188960 sectors         7C is a MAXTOR SLOADIZ with 7817792 sectors         CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts         FS-TST Release 1.0 CD-ROM the Baddik 3.2 + Badxls 3.2         Source disk setup:         Dial boot Linux/Windows Me with EXT2 & Fat16         Disk: F5         Host: Cadfael         Operator: JRL         Operator: System to Source disk         DISKMIPF.EXE F5_SRC Cadfael 80 F5 /src         X:\pm\pmagic /md-x:\pm\fat_errc.txt         Load Operating System to Source disk         DISKMISE.EXE F5_SRC Cadfael 80 /before         Disk hash = 83A0002816BBP089F8BB33C41C92C3B5A0F42A54         Destination         Recute:         Z:\phylopHDEMPT.EXE DI-100 HecRameey D:\f5-f16c.e01 8023219 37         Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:         Z:upk/DISKMSH.EXE DI-100 UndgeDee 80 /comment F5(JRL) /new_log /after         Log File       Image file acquired from DOS         Highlights:       Restore environment Windows 2000         Restore environment Windows 2000         Restore environment Windows 2000         Restore onputer system clock read: 08/30/02 04:07:53AM.         The computer system clock read: 08/30/02 04:07:53AM.         Evidence acquired under DS 7.10 using version			-			
7C is a MAXTOR 6L04012 with 7817792 sectors         CD-ROW with PartitionMagic Pro 6.0 and boct floppy with run scripts PS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badk13 3.2         Source disk setup:       Dual boot Linux/Windows Me with EXT2 & Fat16         Diak: PS       Host: Cadfael Operator: RL         OS: WindowsMe/Linux Date: Sat Aug 11 11:13:43 2001         DISKMIPE.EXE FS_SRC Cadfael 80 F5 /src X:\ppmypagis(ond=X:\pmyfict=rsc.txt Load Operating System to Source disk DISKMASH.EXE FS_SRC Cadfael 80 /bfore         Disk hash = 83A0022816BBF089F3ER33C192C3B5A0F42A54         Destination         Setup:         cmd: z:\ss\CORRUPT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       Z:\ss\CORRUPT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/10 to 16/070/10 at LBA 16128         Log File       Hestore environment Windows 2000         Log File       Image file acquired from DOS         Highlights:       Resource scytter Case DI-100 is in 100.txt Evidence Number "F5-F16" Alias "F5-F16"         File *F:\F5-F16C.801* was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM.         Evidence Number "F5-F16" Parameters         File System:       F116         Volume "F5-F16" Parameters         File System:       F116         Volume "F5-F16" Parameters         File System:		-	-			
CD-ROM with PartitionMagic Pro 6,0 and boot floppy with run scripts         FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badk13 3.2         Source disk getup:       Dual boot Linux/Windows Me with EXT2 & Fat16 Disk: P5 Host: Caffael Operator: JRL OS: WindowsMe/Linux Date: Sat Aug 11 11:13:43 2001         DISKNIPE.EXE F5_SRC Cadfael 80 F5 /src X:\pmlpgmagic /mdx:\pm\fat-zrc.txt Load Operating System to Source disk DISKNASH.EXE F5_SRC Cadfael 80 /before         Destination Setup:       No destination setup required         Error Setup:       cmd: z:\ss\CORNUT.EXE DI-100 HecRamsey D:\f5-fifc.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       z:\ss\DISKNAFLEXE DI-100 HecRamsey D:\f5-fifc.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       z:\ss\DISKNAFLEXE DI-100 HecRamsey D:\f5-fifc.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:       z:\ss\DISKNAFLEXE DI-100 JudgeDee BO /comment F5(JRL) /new_log /after         Log Files loc:       test-archive/encase/encase-3.20/DI-100         Enge file acquired from DOS       Restore environment Windows 2000 BnCase report for case DI-100 1s in 100.txt Evidence Number "F5-F16" Alias "F5-F16"         File "F5:F56".E0C.RD1" was acquired by JRL at 08/30/02 04:07:53AM.       Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0ME (1,236,942 sectors)         Volume "F5-F16" Parameters       File System: Sectors Per 32       Sectori:						
Source disk setup: Diak p5 Hoat: Caffael Operator: JRL OS: WindowSMe/Linux Date: Sat Aug 11 11:13:43 2001 DISKWIPE.EXE F5_SRC Cadfael 80 F5 /src X:\pm\pgmagic /cmd-X:\pm\fat.erc.txt Load Operating System to Source disk DiskMaSH EXE F5_SRC Cadfael 80 /before Disk hash = 83A0002816BBF089P3BE33C41C92C3B5A0F42A54 Destination Setup: Error Setup: Comment: change 16/000/10 to 16/070/01 at LBA 16128 Execute: Log Files loc: Log File acquired from DOS Highlights: Restore environment Windows 2000 EnCase report for case DI-100 is in 100.txt Evidence Number "F5-F16" Alias "F5-F16" File "F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0MB (1,236.942 sectors) Volume "F5-F16" Parameters File System: FAT16 Sectors Per 32 Bytes Per 512 Total Size 604.0MB (1,236.942 sectors) Volume "F5-F16" 83,643 Unallocated: 73,105,012 Drive (Cluster: 1,236,942 Total Clusters: 1,236,942 Total Clusters: 1,236,942 Total Clusters: 1,236,942 File Sectors Per 32 Bytes Per 512 Sector: 603,0MB) Total Clusters: 4,462 Allocated: 73,105,408 Dytes (603,0MB) Total Clusters: 4,462 Nolume Offset: 0 OBM Version: MSWIN4.1 Heads: 255 Sectors Per 63 Heads: 255 Sectors Per 63 Unused Sectors: 1 Number of FATS: 2 Sectors Per 151 Bot Sectors: 1 Number of FATS: 2 Sectors Per 151 Bot Sectors: 1 Number of FATS: 2 Sectors Per 151 Bot Sectors: 1 Dist Bot Sectors: 1 Dist B					th run scripts	
Setup:     Disk: P5       Host: Cadfael Operator: JRL OS: WindowSMe/Linux Date: Sat Aug 11 11:13:43 2001       DISKWIPE,EXE F5_SRC Cadfael 80 F5 /src X:/pm/pmagic /omdx:/pm/fat-src.txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /before       Disk hash = 83A0002816BBF099F8BB33C41C92C3B5A0F42A54       Destination Setup:       Comment: change 16/00/01 to 16/070/01 at LBA 16128       Error Setup:       Comment: change 16/00/01 to 16/070/01 at LBA 16128       Execute:       2:\ss\DISKHASH.EXE DI-100 Heckamsey D:\f5-f16c.e01 8023219 37       Comment: change 16/00/01 to 16/070/01 at LBA 16128       Execute:       2:\ss\DISKHASH.EXE DI-100 UseGebe 80 /comment F5(JRL) /new_log /after       Log File       Tag File acquired from DOS       Restore environment Windows 2000       Encase report for case DI-100 is in 100.txt       Evidence Number "F5-F16" Alias "F5-F16"       File "F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM.       The computer system clock read: 08/30/02 04:07:53AM.       Evidence acquired under DOS 7.10 using version 3.20.       The integrity of the following sector groups could not be verified:16064-16127       Drive Geometry:       Total Size       Sectors:       10tal Sectors:       10tal Clusters:       10tal Clusters:       10tal Clusters:       10tal Clusters:       10tal Clusters:   <		FS-TST Release 1.0	) CD-ROM + Baddisk	3.2 + Badx13 3.2		
Host: Caffael Operator: /RL OS: WindowsMe/Linux Date: Sat Aug 11 11:13:43 2001 DISKWIPE.EXE F5_SRC Caffael 80 F5 /src X:/pm/spmagic /md-X:/pm/fat-src.txt Load Operating System to Source disk DISKMASH.EXE F5_SRC Caffael 80 /before Disk hash = 83A0002816BBP089F3BE33C41C92C3B5A0F42A54 Destination No destination setup required Setup: Error Setup: Comment: change 16/00/01 to 16/070/01 at LBA 16128 Execute: Log files loc: Log Files loc: Log File acquired from DOS Highlights: Restore environment Windows 2000 EnCase report for case DI-100 is in 100.txt Evidence Number F5-F16* Alias "F5-F16* File "F:VF5-F16C.B01* was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Drive Geometry: Total Size 604.0MB (1,236,942 sectors) Volume "F5-F16* Parameters File System: FAT16 Sectors Per 32 Bytes Per 512 Total Sectors: 1,236,942 Total Clusters: 4,462 Allocated: 53,126,912 Uptes (603,8MB) Total Clusters: 4,462 Allocated: 53,126,912 Uptes (603,8MB) Free Clusters: 4,462 Allocated: 53,126,912 Uptes (603,8MB) Volume Name: Volume Sectors: 1 Heads: 255 Sectors Per 63 Humber of FATS: 2 Sectors Per 151 Boot Sectors: 1 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1 Sectors: 1 Sectors: 1 Sectors: 1 Disk MSIN4.1 H: Heads: 255 Sectors Per 63 Humber of FATS: 2 Sectors Per 151 Boot Sectors: 1 Sectors: 1 Secto			indows Me with EXI	72 & Fat16		
Operator: JRL       OS: WindowsMe/Linux         Date: Sat Aug 11 11:13:43 2001         DISKNIPE.EXE F5_SRC Cadiael 80 F5 /arc         X:\pm\pgmagic /cmd=X:\pm\fat=src.txt         Load Operating System to Source disk         DISKNAR.EXE F5_SRC Cadiael 80 /before         Disk hash = 63A0002016BBP0897BBE33C41092C3B5A0F42A54         Destination         Setup:         Error Setup:         Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:         Z:\ss\DISKNE.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37         Comment: change 16/000/01 to 16/070/01 at LBA 16128         Execute:         Z:\ss\DISKNE.EXE DI-100 JudgeDee 80 /comment F5(JRL) /new_log /after         Log Files loc:         Legs File         Restore environment Windows 2000         EndSase report for case DI-100 is in 100.txt         Evidence Rumber 'F5-F16'         File *F:\F5-F16C.E01* was acquired by JRL at 08/30/02 04:07:53AM.         The computer system clock read: 08/30/02 04:07:53AM.         Evidence acquired under DOS 7.10 using version 3.20.         The integrity of the following sector groups could not be         verified:16064-16127         Drive Geometry:         Total Size       604.0MB (1,236,942 sectors)         Volume "F5-F16' Parameters      <	setup:					
os: WindowsMe/Linux Date: Sat Aug 11 11:13:43 2001         DISKWIPE.EXE F5_SRC Cadfael 80 F5 /src X:\pm\pgmagic /cmd=X:\pm\fat-src.txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /before         Disk hash = 83A0002816BBP089F8BE33C41C92C3B5A0F42A54         Destination Setup:         No destination setup required         Setup:         Comment: change 16/000/10 to 16/07/01 at LBA<16128						
Date: Sat Aug 11 11:13:43 2001DISKWIPE,EXE F5_SRC Cadfael 80 F5 /src X:\pm\pgmagic /cmd-X:\pm\fat-src txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /beforeDisk hash = 63A0002816BBF089F9BE33C41C92C385A0F42A54Destination Setup:Disk hash = 63A0002816BBF089F9BE33C41C92C385A0F42A54Destination Setup:Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\CORRUPT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128Log files loc:Lest-archive/encase/encase-3.20/DI-100Log files loc:Highlights:Bighlights:File "F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Total Close reprVolume "F5-F16" ParametersFile System:FAT16 Sectors)Volume "F5-F16" ParametersFile System:FAT16 SectorsDrive Type:Fixed SectorsVolume "F5-F16" ParametersFile System:FAT16 SectorsDrive Type:Si12 SectorsTotal Clusters:1,236,942 SectorsTotal Clusters:1,236,942 SectorsTotal Clusters:1,236,942 SectorsTotal Clusters:4,462 SectorsNume Serial SectorsBPT6-451D H: Heads:Volume Name:Volume Offset: SectorsOEM Version:MSWIN4.1 H: N		±				
DISKWIPE.EXEFS_SRC Cadfael 80 F5 /src X:\pm\pmagic /cmd-X:\pm\fat-src.txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /beforeDisk hash = 83A0002816BBF089F9BE33C41C92C3B5A0F42A54Destination Setup:Pertor Setup:Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\se\CDRNUFT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Log filesLog filesIcos environment: Windows 2000 Enclase report for case D1-100 is in 100.txt Evidence RNumber "F5-F16" Alias "F5-F16"File "F:\F5-F16C.E01" was acquired by RL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under D05 7.10 using version 3.20.The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0MB (1,236,942 sectors)Volume "F5-F16" ParametersFile System:File System:F11 System:F11 System:F11 Columnes: Oclume 32 (0.20,942)Total Clusters:1,236,942Total Clusters:1,236,942Total Clusters:000Volume Name:Volume Offset: 0000000000000000000000 <tr< td=""><td></td><td></td><td></td><td></td><td></td></tr<>						
X:\pm\ppmagic /md+X: pm\fat-src.txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /beforeDisk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54Destination Setup:Error Setup:Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\CORRUF.EXE DI-100 JudgeDee 80 /comment F5[JRL) /new_log /afterLog Files loc:test-archive/encase/encase-3.20/DI-100Indge file acquired from DOSRestore environment Windows 2000Restore environment Windows 2000Restore environment Windows 2000Restore environment Windows 2000Restore acquired from DOSRestore acquired from DOS 7.10 using version 3.20.The integrity of the following sector groups could not be verified:16064-16127Drive Geometry: Total Size 604.0MB (1,236,942 sectors)Volume "F5-F16" ParametersVolume "F5-F16" ParametersVolume "F5-F16" allocated: Sectors Per Cluster:Jost Allocated: Volume SizeTotal Clusters: Volume 1,236,942Total Clusters: Heads: Volume SizeVolume Name: Volume Volume SizeVolume SizeFree Clusters: Heads: UsizeVolume SizeClusters: Heads: Heads:Z55Sectors Per Sectors Per Heads: Heads: Heads: Heads:Z55Sectors Per Sectors Per Sectors Per Sectors PerSectors Per Clusters:Heads: Heads: Clusters:Z55Sectors Per Sectors PerSectors Per Sectors PerSec		Sace Sac Rug II I				
X:\pm\ppmagic /md+X: pm\fat-src.txt Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /beforeDisk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54Destination Setup:Error Setup:Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\CORRUF.EXE DI-100 JudgeDee 80 /comment F5[JRL) /new_log /afterLog Files loc:test-archive/encase/encase-3.20/DI-100Indge file acquired from DOSRestore environment Windows 2000Restore environment Windows 2000Restore environment Windows 2000Restore environment Windows 2000Restore acquired from DOSRestore acquired from DOS 7.10 using version 3.20.The integrity of the following sector groups could not be verified:16064-16127Drive Geometry: Total Size 604.0MB (1,236,942 sectors)Volume "F5-F16" ParametersVolume "F5-F16" ParametersVolume "F5-F16" allocated: Sectors Per Cluster:Jost Allocated: Volume SizeTotal Clusters: Volume 1,236,942Total Clusters: Heads: Volume SizeVolume Name: Volume Volume SizeVolume SizeFree Clusters: Heads: UsizeVolume SizeClusters: Heads: Heads:Z55Sectors Per Sectors Per Heads: Heads: Heads: Heads:Z55Sectors Per Sectors Per Sectors Per Sectors PerSectors Per Clusters:Heads: Heads: Clusters:Z55Sectors Per Sectors PerSectors Per Sectors PerSec		DISKWIPE.EXE F5_SF	RC Cadfael 80 F5 /	src		
DISKHASH.EXE F5_SRC Cadfael 80 /beforeDisk hash = 83A0002816BEP089F8BE33C41C92C3B5A0F42A54DestinationNo destination setup requiredEtup:Error Setup:comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\DISKHASH.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\DISKHASH.EXE DI-100 JudgeDee 80 /comment F5(JRL) /new_log /afterLog files loc:test-archive/encase/encase-3.20/DI-100Log fileImage file acquired from DOSRestore environment Windows 2000Encase report for case DI-100 is in 100.txtEvidence Number "F5-F16" Alias "F5-F16"File "F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM.The computer system clock read: 08/30/02 04:07:53AM.Evidence acquired under DOS 7.10 using version 3.20.The integrity of the following sector groups could not be verified:16064-1612Drive Geometry: Total Size 604.0MB (1,236,942 sectors)Volume "F5-F16" ParametersFile System: FAT16Drive Type:File System: 1,236,942Total Clusters:1,236,942Total Clusters:1,236,942Total Clusters:1,236,942Total Clusters:1,236,942Pree Clusters:4,462Allocated:bytes (63.2MB)Total Clusters:06M Version:MSWIN4.1Wolume Offset: 005M Version:MSWIN4.1<		X:\pm\pqmagic /cmd	l=X:\pm\fat-src.tx	t		
Disk hash = 83A002816BBF089F8BE33C41C92C3B5A0F42A54Destination Setup:No destination setup requiredError Setup:cmd: z:\ss\CORRUPT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128Execute:Z:\ss\DISKHASH.EXE DI-100 Judgebe 80 /comment F5(JRL) /new_log /afterLog files loc:test-archive/encase/encase-3.20/DI-100Log fileImage file acquired from DOS Restore environment Windows 2000 EnCase report for case DI-100 is in 100.txt Evidence Number "F5-F16" Alias "F5-F16"File "F:\F5-F16C.E01" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM.Evidence acquired under DOS 7.10 using version 3.20.The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0MB (1,236,942 sectors)Volume "F5-F16" ParametersFile System:FAT16File System:FAT16Volume "F5-F16" accors:1,236,942Total Capacity: Sectors PerCluster:32Dist Sectors:1,236,942Total Clusters:38,643Unallocated:560,021,504 bytes (63.8MB) Total Clusters:Volume Name:Volume Offset: 0 OEN Version:Volume Name:Volume Offset: 0 Cometry:Oom Version:MSWIN4.1Heads:255Sectors Per63 Track: Coluster:Unused Sectors:63Number of PATs:2 Sectors PerSectors Per151Bot Sectors:1						
Destination No destination setup required Setup: Croment: change 16/000/01 to 16/070/01 at LBA 16128 Execute: Z:\ss\USKASH.EXE DI-100 Judgebee 80 /comment F5(JRL) /new_log /after Log files loc: test-archive/encase/encase-3.20/DI-100 Log File Image file acquired from DOS Restore environment Windows 2000 EnCase report for case DI-100 is in 100.txt Evidence Number "F5-F16" Alias "F5-F16" File "F:\F5-F16C.EO1" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0MB (1,236,942 sectors) Volume "F5-F16" Parameters File System: FAT16 Drive Type: Fixed Sectors Per 32 Bytes Per 512 Cluster: Clusters: 1,236,942 Total Capacity: 633,126,912 Total Sectors: 1,236,942 Total Capacity: 633,126,912 Dytes (693.7MB) Total Clusters: 38,643 Unallocated: 73,105,408 bytes (693.7MB) Free Clusters: 4,462 Allocated: 73,105,408 bytes (534.1MB) Volume Name: Volume Offset: 0 OEM Version: MSWIN4.1 Volume Serial 3B76-451D Heads: 255 Sectors Per 63 Exectors Fer 151 Boot Sectors: 1 Durack Sectors: 2 Drive Sectors Per 63 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1 Cotal Sectors: 63 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1 Drive Sectors: 1 Drive Sectors: 1 Sectors Per 151 Boot Sectors: 1 Drive Sectors: 1 Drive Sectors: 1 Sectors Per 151 Boot Sectors: 1 Drive Sectors: 1 Drive Sectors: 1 Sectors Per 151 Boot Sectors: 1 Drive Sectors: 1 Sectors Per 151 Sectors: 1 Sectors Per 151 Sectors: 1 Drive		DISKHASH.EXE F5_SF	RC Cadfael 80 /bef	ore		
Destination No destination setup required Setup: Error Setup: comd: z:\ss\CORRUPT.EXE DI-100 HecRamsey D:\f5-f16c.e01 8023219 37 Comment: change 16/000/01 to 16/070/01 at LBA 16128 Execute: Z:\ss\USKHASH.EXE DI-100 Judgebee 80 /comment P5(JRL) /new_log /after Log File Image file acquired from DOS Restore environment Windows 2000 EnCase report for case DI-100 is in 100.txt Evidence Number "P5-F16" Alias "P5-F16" File "F:\F5-F16C.EO1" was acquired by JRL at 08/30/02 04:07:53AM. The computer system clock read: 08/30/02 04:07:53AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:16064-16127 Drive Geometry: Total Size 604.0MB (1,236,942 sectors) Volume "F5-F16" Parameters File System: FAT16 Drive Type: Fixed Sectors Per 32 Bytes Per 512 Cluster: Total Sectors: 1,236,942 Total Capacity: 633,126,912 Total Clusters: 38,643 Unallocated: 73,105,408 bytes (697.NB) Free Clusters: 4,462 Allocated: 73,105,408 bytes (534.1MB) Volume Name: Volume Offset: 0 OEM Version: MSWIN4.1 Volume Serial 3B76-451D Heads: 255 Sectors Per 63 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1 Custers: 63 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1 Cotal Sectors: 63 Number of FATS: 2 Sectors Per 151 Boot Sectors: 1		$D_{i}$ al beach - 02300				
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Case DI-100 for EnCase 3.20

	EnCase Report Case: di-100 Page
	= = $=$ Measurement Logs $=$ $=$ $=$
	No compare log found for DI-100
	Hash computed for this case (DI-100)
	Hash after test: 83A0002816BBF089F8BE33C41C92C3B5A0F42A54
Expected	Source disk is unchanged
Results:	image verification error
Actual Results:	No anomalies
Analysis:	Expected results achieved

Case DI-101 for 1	EnCase 3.20				
Case Summary:	Create an image from an XBIOS-IDE source disk				
	to an XBIOS-IDE destination disk				
	and the source contains a FAT32 partition				
	where the source disk is smaller than the destination				
Tester Name:	JRL				
Test Date:	Fri Sep 13 20:30:23 2002				
PC:	HecRamsey				
Disks:	Source: DOS Drive 80 Physical Label A5				
	Destination: DOS Drive 81 Physical Label A8				
	Image media: DOS Drive 80 Physical Label 7C				
	A5 is a WDC WD200BB-00AUA1 with 39102336 sectors				
	A8 is a WDC WD200BB-00AUA1 with 39102336 sectors				
	7C is a MAXTOR 6L040J2 with 78177792 sectors				
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2				
Source disk	Fat32 only				
setup:	Disk: A5				
Secup.	Host: JudgeDee				
	Operator: JRL				
	OS: NOOS				
	Options: none				
	Date: Mon Apr 15 14:35:04 2002				
	cmd: Z:\ss\DISKWIPE.EXE A5 JudgeDee 80 A5 /src /new_log				
	X:\pm\pqmagic /cmd=X:\pm\f32-src.txt				
	No OS loaded, FAT32 partition only				
	cmd: Z:\ss\DISKHASH.EXE A5 JudgeDee 80 /before /new_log				
	Disk hash = 3DE5C01B5BB337EA3E6CF9BC25EB844F5D00FD14				
Destination	Z:\ss\DISKWIPE.EXE DI-101 HecRamsey 81 A8 /noask /dst /new_log /comment				
Setup:	JRL				
Decar	See CMPPTLOG.TXT for partition table				
Error Setup:	none				
Execute:	Z:\ss\DISKWIPE.EXE DI-101 HecRamsey 81 A8 /noask /dst /new_log /comment				
	JRL				
	Z:\ss\PARTCMP.EXE DI-101 HecRamsey 80 A5 81 A8 /new_log /comment JRL				
	/select 1 1				
Log files loc:	test-archive/encase/encase-3.20/DI-101				
Log File	Source disk Drive 0x80, BIOS: Extensions Present				
Highlights:	Interrupt 13 bios 1022/254/63 (max cyl/hd values)				
	Interrupt 13 ext 16383/016/63 (number of cyl/hd) 39102336 total number of sectors reported via interrupt 13 from the				
	BIOS				
	N Start LBA Length Start C/H/S End C/H/S boot Partition type				
	1 P 000000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32				
	2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 000000063 000208782 0089/001/01 0101/254/63 83 Linux				
	4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended				
	5 S 000000063 000144522 0102/001/01 0110/254/63 0B Fat32				
	6 x 000771120 000192780 0137/000/01 0148/254/63 05 extended				
	7 S 000000063 000192717 0137/001/01 0148/254/63 16 other				
	8 S 00000000 00000000 0000/000 0000/00 00 empty entry				
	9 P 038491740 000064260 1023/000/01 1023/254/63 83 Linux				
	10 P 038684520 000417690 1023/000/01 1023/254/63 82 Linux swap				
	Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values)				
	Interrupt 13 blos 1022/254/63 (max cyl/nd values) Interrupt 13 ext 16383/016/63 (number of cyl/hd)				
	THE TIME TO EVE TOOODATOAD ANALOUT OF CATANA				

Case DI-101 for H	mCase 3 20						
		ber of sectors re	eported via interru	pt 13 from the			
	39102336 total number of sectors reported via interrupt 13 from the BIOS						
		N Start LBA Length Start C/H/S End C/H/S boot Partition type					
	1 P 000000063 001333332 0000/001/01 0082/254/63 0B Fat32						
	2 P 000000000 00000000 0000/000/00 0000/000/00 00						
	3 P 000000000 000000000 0000/000/00 0000/000/00 00						
	4 P 000000000 00000000 0000/000/00 0000/000/00 00						
	Image file acquired from DOS						
	Restore environment Windows 2000						
	EnCase report for case DI-101 is in 101.txt						
	Evidence Number "A5-f32" Alias "A5-f32"						
		File "D:\A5-F32.E01" was acquired by JRL at $09/12/02$ 11:54:37PM.					
		-	/12/02 11:54:37PM.	11:54:3/PM.			
	The computer syste	en ciock ieau. 09,	12/02 11·54·5/PM.				
	Evidence acquired	under DOS 7.10 us	sing version 3.20.				
	File Integrity:						
	Completely Verifie	ed, O Errors.					
	Verification Hash	DD35EAC272F1	26808184A1B012A49B	L2			
	Drive Geometry:						
	Total Size 60	04.0MB (1,236,942	sectors)				
	Volume "A5-f32" Pa	aramotora					
		FAT32	Drive Type:	Fixed			
	File System: Sectors Per	1		512			
	Cluster:		Bytes Per Sector:	512			
	Total Sectors:	1,236,942	Total Capacity:	623,553,536			
	iotai beecoib.	1,230,912	iotai capacity.	bytes (594.7MB)			
	Total Clusters:	1,217,878	Unallocated:	623,550,464			
		1,21,70,0	onarrooacea	bytes (594.7MB)			
	Free Clusters:	1,217,872	Allocated:	3,072 bytes			
		, , -		(3.0KB)			
	Volume Name:		Volume Offset:	0			
	OEM Version:	MSWIN4.1	Volume Serial	0000-0000			
			#:				
	Heads:	255	Sectors Per	63			
			Track:				
	Unused Sectors:	63	Number of FATs:	2			
	Sectors Per	9,516	Boot Sectors:	32			
	FAT:						
	De Care D						
	EnCase Report						
	Case: DI-101 Pag	Je					
	= = = = Measuremen	t Logg =					
	Sectors Compared	-					
	Sectors Differ 3	1230712					
	Diffs range: 1, 3	32, 9548					
	5 .	•	ectors than destina	tion (1333332)			
	Zero fill: 0			,			
	Src Byte fill (A5)	): 0					
	Dst Byte fill (A8)	): 0					
	Other fill: 963	390					
	Other no fill: 0						
	This case uses the	-					
			E6CF9BC25EB844F5D00	FD14			
Expected	Source disk is und	-					
Results:	src compares qual:	-	t				
Actual Results:	Logical restore an	-					
Analysis:	Expected results i	not achieved					

Case DI-108 for H	InCase 3.20
Case Summary:	Create an image from an XBIOS-IDE source disk
	to an XBIOS-IDE destination disk
	and the source contains a FAT32 partition

Case DI-108 for 1	EnCase 3.20
	where the source disk is the same size as the destination
Tester Name:	Introduce a read error from the source. JRL
Test Date:	Tue Sep 10 01:38:11 2002
PC:	HecRamsey
Disks:	Source: DOS Drive 80 Physical Label A5
	Destination: DOS Drive 81 Physical Label A8
	Image media: DOS Drive 80 Physical Label 7C
	A5 is a WDC WD200BB-00AUA1 with 39102336 sectors A8 is a WDC WD200BB-00AUA1 with 39102336 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Fat32 only Disk: A5
setup:	Host: JudgeDee
	Operator: JRL
	OS: NoOs
	Options: none
	Date: Mon Apr 15 14:35:04 2002
	cmd: Z:\ss\DISKWIPE.EXE A5 JudgeDee 80 A5 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\f32-src.txt
	No OS loaded, FAT32 partition only
	cmd: Z:\ss\DISKHASH.EXE A5 JudgeDee 80 /before /new_log
	Disk hash = 3DE5C01B5BB337EA3E6CF9BC25EB844F5D00FD14
Destination	Z:\ss\DISKWIPE.EXE DI-108 HecRamsey 81 A8 /noask /dst /new_log /comment
Setup:	JRL
	See CMPPTLOG.TXT for partition table
Error Setup:	Z:\ss\baddisk 80 5 7 9 2 10 >> A:\err-108.txt
	Z:\ss\baddisk 80 5 7 9 10 10 >> A:\err-108.txt return code 00010 on command 00002 from disk 00080
	at address 00005/00007/00009
	return code 00010 on command 00010 from disk 00080
	at address 00005/00007/00009
Execute:	Z:\ss\DISKWIPE.EXE DI-108 HecRamsey 81 A8 /noask /dst /new_log /comment JRL
	Z:\ss\PARTCMP.EXE DI-108 HecRamsey 80 A5 81 A8 /new_log /comment JRL
	/select 1 1
	Z:\ss\DISKHASH.EXE DI-108 Wimsey 80 /comment A5(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-108
Log File Highlights:	Source disk Drive 0x80, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values)
inginights.	Interrupt 13 ext 16383/016/63 (number of cyl/hd)
	39102336 total number of sectors reported via interrupt 13 from the
	BIOS
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32
	2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended
	3 S 000000063 000208782 0089/001/01 0101/254/63 83 Linux
	4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended
	5 S 000000063 000144522 0102/001/01 0110/254/63 OB Fat32
	6 x 000771120 000192780 0137/000/01 0148/254/63 05 extended 7 s 00000063 000192717 0137/001/01 0148/254/63 16 other
	8 S 00000000 00000000 0000/00/00 0000/00/00
	9 P 038491740 000064260 1023/000/01 1023/254/63 83 Linux
	10 P 038684520 000417690 1023/000/01 1023/254/63 82 Linux swap
	Destination disk Drive 0x81, BIOS: Extensions Present
	Interrupt 13 bios 1022/254/63 (max cyl/hd values) Interrupt 13 ext 16383/016/63 (number of cyl/hd)
	39102336 total number of sectors reported via interrupt 13 from the
	BIOS
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P 000000063 001236942 0000/001/01 0076/254/63 0B Fat32
	2 P 00000000 00000000 0000/00/00 0000/00/00
	4 P 00000000 00000000 0000/00/00 0000/00/00
	Image file acquired from DOS
	Restore environment Windows 2000
	EnCase report for case DI-108 is in 108.txt
	Evidence Number "A5-f16-err" Alias "A5-f16-err"

Case DI-108 for H	InCase 3.20					
			by JRL at 09/10/02 1/10/02 10:14:38PM.	10:14:38PM.		
	Evidence acquired	under DOS 7.10 u	sing version 3.20.			
		File Integrity: Completely Verified, 0 Errors. Verification Hash: 30A8AC0CAAC4D33317AB99ED3380E603				
	The following sect 80704-80767	or blocks report	ed read errors durin	ng acquisition:		
	Drive Geometry: Total Size 60	04.0MB (1,236,942	sectors)			
	Volume "A5-f16-ern	r" Darametera				
	File System:	FAT32	Drive Type:	Fixed		
	Sectors Per Cluster:	1	Bytes Per Sector:	512		
	Total Sectors:	1,236,942	Total Capacity:	623,553,536 bytes (594.7MB)		
	Total Clusters:	1,217,878	Unallocated:	623,550,464 bytes (594.7MB)		
	Free Clusters:	1,217,872	Allocated:	3,072 bytes (3.0KB)		
	Volume Name:		Volume Offset:	0		
	OEM Version:	MSWIN4.1	Volume Serial #:	0000-0000		
	Heads:	255	Sectors Per Track:	63		
	Unused Sectors:	63	Number of FATs:	2		
	Sectors Per FAT:	9,516	Boot Sectors:	32		
	EnCase Report					
	Case: DI-108 Pag	je				
	= = = = Measuremen Sectors Compared : Sectors Differ 60	-				
	Diffs range: 1, 3	32, 9548, 80711-8	0767			
	Hash computed for Hash after test: 3		8) E6CF9BC25EB844F5D00I	FD14		
Expected	Source disk is und	changed				
Results:	src compares quali	-	t			
Natural Demulter	error message logo					
Actual Results: Analysis:	Logical restore an Expected results n					
		uomicveu				

Case DI-112 for H	inCase 3.20
Case Summary:	Create an image from an XBIOS-IDE source disk to an XBIOS-IDE destination disk and the source contains a NTFS partition
	where the source disk is the same size as the destination Introduce an error on the image.
Tester Name:	JRL
Test Date:	Thu Sep 19 07:38:33 2002
PC:	AndWife
Disks:	Source: DOS Drive 80 Physical Label F6 Destination: DOS Drive 81 Physical Label A8 Image media: DOS Drive 80 Physical Label 75 F6 is an IBM-DTLA-307020 with 40188960 sectors A8 is a WDC WD200BB-00AUA1 with 39102336 sectors 75 is a IC35L040AVER07-0 with 80418240 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts

Case DI-112 for 1	EnCase 3.20				
			sk 3.2 + Badx13 3.2		
Source disk	Windows 2000 with	NTFS & Fat32			
setup:	Disk: F6				
	Host: Wimsey				
	Operator: JRL				
	OS: Windows 2000				
	Date: Sat Jul 21 3	15:53:12 2001			
	DISKWIPE.EXE F6_SI 2000/NT source	RC Wimsey 80 F6	/src /new_log /noask	/comment Windows	
	X:\pm\pqmagic /cmd	<u>a</u>			
	Load Operating Sys				
	DISKHASH.EXE LX-2	7 Morse 80 /befo	re		
	Digle bach = 90240				
Destination			C7B5CB0845CA2CF6B235	out log (commont	
Setup:	JRL	E DI-IIZ ANOMILE	81 A8 /noask /dst /	new_rog / comment	
secupi	No partition table	e defined			
Error Setup:	-		Wife D:\f6-ntfs.e01	489279 38	
lifer becap.			I-112 at 10169/012/0		
Execute:		E DI-112 AndWife	81 A8 /noask /dst /	new_log /comment	
	JRL	110 הדי	90 (commont EC(TDT)	more log /oft	
Tog files lest	· · · ·		80 /comment F6(JRL)	/new_log /alter	
Log files loc:	test-archive/enca				
Log File Highlights:	Image file acquire Restore environmen				
HIGHLIGHLS.	EnCase report for		in 112 tyt		
	Evidence Number "				
			- h TDI -+ 00/10/00	00.00.5334	
			d by JRL at 09/19/02 9/19/02 08:10:27AM.	08:09:53AM.	
	Evidence acquired	under Windows 2	000 using version 3.	20.	
	The intermitty of t	the fellowing ge	stow swows sould not		
		-	ctor groups could not	t be	
	verified:1536-1599 Drive Geometry:	9			
	Total Size 60	04 0MP (1 226 04)	0 gogtorg)		
	IOCAL SIZE O	04.000 (1,250,94	U BECCOIB)		
	Volume "F6-NTFS" 1	Parameters			
	File System:	NTFS	Drive Type:	Fixed	
	Sectors Per	2	Bytes Per	512	
	Cluster:		Sector:		
	Total Sectors:	1,236,940	Total Capacity:	633,313,280 bytes (604.0MB)	
	Total Clusters:	618,470	Unallocated:	628,548,608 bytes (599.4MB)	
	Free Clusters:	613,817	Allocated:	4,764,672 bytes (4.5MB)	
	Volume Name:		Volume Offset:	0	
	Vorume Humes		Vorume offbeet	ő	
	EnCase Report				
	Case: DI-112 Page				
	= = = = Measuremen	-			
	No compare log for				
	Hash computed for				
			409AC7B5CB0845CA2CF6	3235	
Expected					
Denville :	Source disk is unchanged image verification error				
Results:					
Actual Results:	No anomalies				

Case DI-118 for EnCase 3.20Case Summary:Create an image from an XBIOS-IDE source disk

	EnCase 3.20
	to an XBIOS-IDE destination disk
	and the source contains a FAT32 partition
	where the source disk is larger than the destination
Tester Name:	JRL
Test Date:	Thu Sep 12 23:46:21 2002
PC:	HecRamsey
Disks:	Source: DOS Drive 80 Physical Label A5
	Destination: DOS Drive 81 Physical Label A8
	Image media: DOS Drive 80 Physical Label 7C
	A5 is a WDC WD200BB-00AUA1 with 39102336 sectors A8 is a WDC WD200BB-00AUA1 with 39102336 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Fat32 only
setup:	Disk: A5
-	Host: JudgeDee
	Operator: JRL
	OS: NoOs
	Options: none
	Date: Mon Apr 15 14:35:04 2002
	cmd: Z:\ss\DISKWIPE.EXE A5 JudgeDee 80 A5 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\f32-src.txt
	No OS loaded, FAT32 partition only cmd: Z:\ss\DISKHASH.EXE A5 JudgeDee 80 /before /new_log
	CMA: 2:\SS\DISKHASH.EXE AS JUdgeDee 80 /Defore /new_log
	Disk hash = 3DE5C01B5BB337EA3E6CF9BC25EB844F5D00FD14
Destination	Z:\ss\DISKWIPE.EXE DI-118 HecRamsey 81 A8 /noask /dst /new_log /comment
Setup:	JRL
-	See CMPPTLOG.TXT for partition table
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-118 HecRamsey 81 A8 /noask /dst /new_log /comment
	JRL
	Z:\ss\PARTCMP.EXE DI-118 HecRamsey 80 A5 81 A8 /new_log /comment JRL
	/select 1 1
Ton film long	Z:\ss\DISKHASH.EXE DI-118 JudgeDee 80 /comment A5(JRL) /new_log /after
Log files loc: Log File	test-archive/encase/encase-3.20/DI-118 Source disk Drive 0x80, BIOS: Extensions Present
Highlights:	Interrupt 13 bios 1022/254/63 (max cyl/hd values)
ingini giico ·	Interrupt 13 ext 16383/016/63 (number of cyl/hd)
	39102336 total number of sectors reported via interrupt 13 from the
	BIOS
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/001/01         0110/254/63         0B         Fat32
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         00014522         0102/001/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         00012780         0137/000/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended           7         S         00000063         000192717         0137/001/01         0148/254/63         16         other
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         0B         Fat32           5         00000063         000144522         0102/000/01         0110/254/63         0B         Fat32           6         x         00071120         0014522         0102/000/01         0148/254/63         05         extended           7         S         00000063         000192717         0137/001/01         0148/254/63         16         other           8         S         00000000         0000/000/00         0000/000/00         00         empty         empty
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/000/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended           7         S         00000003         000192717         0137/001/01         0148/254/63         16         other           8         S         00000000         0000/000/00         0000/000/00         00         empty         empty           9         P         038491740         000064260         1023/000/01         10
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/001/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended           7         S         00000000         0000/000/00         0000/000/00         00         empty           9         P         038491740         000064260         1023/000/01         1023/254/63         83         Linux           10         P         038684520         000417690         1023/000/01         1023/254/63
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/001/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended           7         S         00000000         0000/000/00         0000/000         00         empty           9         P         038491740         000064260         1023/000/01         1023/254/63         83         Linux           10         P         038684520         000417690         1023/000/01         1023/254/63         <
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 0B Fat32 6 x 000771120 000192780 0137/000/01 0148/254/63 0B Fat32 6 x 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000000 000 empty entry 9 P 038491740 00064260 1023/000/01 1023/254/63 83 Linux 10 P 038684520 000417690 1023/000/01 1023/254/63 82 Linux swap Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values)
	N         Start LBA Length         Start C/H/S         End C/H/S         boot         Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot         0B         Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F         extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/001/01         0110/254/63         0B         Fat32           6         x         000771120         000192780         0137/000/01         0148/254/63         05         extended           7         S         00000000         0000/000/00         0000/000         00         empty           9         P         038491740         000064260         1023/000/01         1023/254/63         83         Linux           10         P         038684520         000417690         1023/000/01         1023/254/63         <
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 0B Fat32 6 x 000771120 000192780 0137/000/01 0148/254/63 05 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/000 000 empty entry 9 P 038491740 00064260 1023/000/01 1023/254/63 83 Linux 10 P 038684520 00417690 1023/000/01 1023/254/63 82 Linux swap Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values) Interrupt 13 ext 16383/016/63 (number of cyl/hd)
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended 5 S 00000063 00014522 0102/000/01 0110/254/63 05 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 000000063 000192717 0137/001/01 1048/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended 5 S 00000063 00014522 0102/001/01 0110/254/63 05 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 0F extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 05 extended 5 S 00000063 00014522 0102/001/01 0110/254/63 0B Fat32 6 x 000771120 000192780 0137/000/01 0148/254/63 05 extended 7 S 000000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 83 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 O5 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 O5 extended 7 S 00000063 00114252 0102/001/01 0148/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	N         Start LBA Length         Start C/H/S End C/H/S         boot Partition type           1         P         00000063         001236942         0000/001/01         0076/254/63         Boot 0B Fat32           2         X         001429785         037061955         0089/000/01         1023/254/63         0F extended           3         S         00000063         000208782         0089/001/01         0101/254/63         83         Linux           4         x         000208845         000144585         0102/000/01         0110/254/63         05         extended           5         S         00000063         000144522         0102/001/01         0110/254/63         05         extended           6         x         000771120         000192717         0137/000/01         0148/254/63         16         other           8         S         00000000         0000/000/00         0000/00         00         extended           7         S         00000000         0000/000/00         0000/00         00         extended           7         S         00000000         0000/000/00         0000/000         00         extended           7         S         000000000         0000/000/00
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 x 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 05 extended 5 S 00000063 000144585 0102/000/01 0110/254/63 OB Fat32 6 x 000771120 000192780 0137/000/01 0148/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000 00
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 B3 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 O5 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 B3 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 O5 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 I6 other 8 S 00000000 00000000 0000/000/00 0000/000/00 O0 empty entry 9 P 038491740 000064260 1023/000/01 1023/254/63 B3 Linux 10 P 038684520 000417690 1023/000/01 1023/254/63 B2 Linux swap Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values) Interrupt 13 ext 16383/016/63 (number of cyl/hd) 39102336 total number of sectors reported via interrupt 13 from the BIOS N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 001140552 0000/001/01 0070/254/63 06 Fat16 2 P 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 B3 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 O5 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00
	<pre>N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 OF extended 5 S 00000063 000144582 0102/000/01 0110/254/63 OB Fat32 6 x 000771120 000192780 0137/000/01 0148/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 16 other 8 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
	N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 001236942 0000/001/01 0076/254/63 Boot 0B Fat32 2 X 001429785 037061955 0089/000/01 1023/254/63 OF extended 3 S 00000063 000208782 0089/001/01 0101/254/63 B3 Linux 4 x 000208845 000144585 0102/000/01 0110/254/63 O5 extended 5 S 00000063 000144522 0102/001/01 0110/254/63 O5 extended 7 S 00000063 000192717 0137/001/01 0148/254/63 I6 other 8 S 00000000 00000000 0000/000/00 0000/000/00 O0 empty entry 9 P 038491740 000064260 1023/000/01 1023/254/63 B3 Linux 10 P 038684520 000417690 1023/000/01 1023/254/63 B2 Linux swap Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values) Interrupt 13 ext 16383/016/63 (number of cyl/hd) 39102336 total number of sectors reported via interrupt 13 from the BIOS N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 001140552 0000/001/01 0070/254/63 O6 Fat16 2 P 00000000 00000000 0000/000/00 0000/000/00 00

Case DI-118 for E	nCase 3.20			
	Evidence acquired	under DOS 7.10 us	sing version 3.20.	
	File Integrity: Completely Verifie	ed, 0 Errors. DD35EAC272F1	26808184A1B012A49B1	.2
	Volume "A5-f32" Pa	arameters		
	File System:	FAT32	Drive Type:	Fixed
	Sectors Per	1	Bytes Per	512
	Cluster:		Sector:	
	Total Sectors:	1,236,942	Total Capacity:	623,553,536 bytes (594.7MB)
	Total Clusters:	1,217,878	Unallocated:	623,550,464 bytes (594.7MB)
	Free Clusters:	1,217,872	Allocated:	3,072 bytes (3.0KB)
	Volume Name:		Volume Offset:	0
	OEM Version:	MSWIN4.1	Volume Serial #:	0000-0000
	Heads:	255	Sectors Per Track:	63
	Unused Sectors:	63	Number of FATs:	2
	Sectors Per FAT:	9,516	Boot Sectors:	32
	EnCase Report Case: DI-118 Pag = = = Measuremen Sectors Compared Sectors Differ 3	nt Logs = = = = 1140552		
	Hash computed for Hash after test:	has 96390 more sec this case (DI-118 BDE5C01B5BB337EA3B	ctors than destinat 3) S6CF9BC25EB844F5D00	. ,
Expected Results:	Source disk is und src compares quali truncation is logo	fied equal to dst	, src is truncated	on dst
Actual Results:	Logical restore ar			
Analysis:	Expected results r			
muationo.	Expected reputts I	iot actiteved		

Case DI-120 for H	EnCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
	to an XBIOS-SCSI destination disk
	where the source disk is smaller than the destination
	Introduce an error on the image.
Tester Name:	JRL
Test Date:	Wed Sep 04 01:09:51 2002
PC:	HecRamsey
Disks:	Source: DOS Drive 80 Physical Label E3
	Destination: DOS Drive 81 Physical Label none
	Image media: DOS Drive 80 Physical Label 7C
	E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16
setup:	Disk: E3
	Host: Cadfael
	Operator: JRL
	OS: Linux Red Hat 7.1/Windows Me
	Date: Sat Jul 21 16:17:29 2001
1	

Case DI-120 for	EnCase 3	.20				
	DISKWI	PE.EXE E3_SRC F	Rumpole 80 E3 /s	erc /new_log		
	X:\pm\;	pqmagic /cmd=X:	<pre>\pm\fat-src.txt</pre>	:		
	Load O	perating System	n to Source disk	2		
	DISKHAS	SH.EXE E3_SRC F	Rumpole 80 /befo	re		
	Disk ha	ash = 0F9DACDA	A6C63D197C048782	003D324108CEC7AB0		
Destination	No des	tination setup	required			
Setup:		-	-			
Error Setup:	Commen	t: Change 255/0	009/01 to 255/00	nsey C:\e3-all.e02 : NQ/01 at LBA 409371	42	
Execute:	Z:\ss\DISKHASH.EXE DI-120 Wimsey 80 /comment E3(JRL) /new_log /after					
Log files loc:			encase-3.20/DI-1	.20		
Log File	Image :	file acquired f	From DOS			
Highlights:		e environment V				
			se DI-120 is in			
	Eviden	Evidence Number "E3-all" Alias "E3-all"				
	Tile "		una namidual la		1.15.127M	
				JRL at 09/04/02 0 4/02 01:15:13AM.	1:15:13AM.	
	THE COL	uputer system t	100K 18au. 09/0	4/02 01:13:13AM.		
	Eviden	ce acquired und	ler DOS 7.10 usi	ng version 3.20.		
	_		c			
				r groups could not	be	
		ed:4097088-409	/151			
		Geometry:				
	TOTAL	Size 8.6GE	3 (17,938,985 se	ctors)		
	Partit	ions:				
	Code	Туре	Start Sector	Total Sectors	Size	
	06	BIGDOS	0	1237005	604.0MB	
	83	Linux EXT2	9430155	6152895	2.9GB	
	82	Linux Swap	17510850	417690	204.0MB	
	83	Linux EXT2	2249100	208845	102.0MB	
	06	BIGDOS	2457945	144585	70.6MB	
	16	HiddenFAT16	6699105	192780	94.1MB	
	EnCase	Report				
	Case: 1	DI-120 Page				
		= Measurement I	5			
	-	pare log found				
		-	is case (DI-120)			
i .	I Hach a	fter test: OF9I	DACDA6C63D197C04	8782003D324108CEC7	AB0	
Expected	Source	disk is unchar	nged			
Results:	Source image	disk is unchar verification er	nged			
-	Source image · No ano	disk is unchar verification er	nged rror			

Case DI-121 for H	inCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
	to an XBIOS-SCSI destination disk
	where the source disk is smaller than the destination
Tester Name:	JRL
Test Date:	Sun May 26 05:55:30 2002
PC:	Paladin
Disks:	Source: DOS Drive 80 Physical Label E4
	Destination: DOS Drive 81 Physical Label 11
	Image media: DOS Drive 80 Physical Label 7C
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	11 is a FUJITSU MAN3184MC with 35885447 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Windows 2000 with NTFS & Fat32
setup:	Disk: E4
	Host: JudgeDee

,	EnCase 3	.20			
	Operat	or: JRL			
		ndows 2000/NT			
	Date:	Sat Jul 21 16:	58:28 2001		
	D.T. GIVIT		- 1 - 00 - 14		
	DISKWI source		JudgeDee 80 E4 /	src /noask /comment	Windows 2000
			:\pm\nt-src.txt		
			m to Source disk	-	
				80 /comment E4 /new_	log /before
			-		
	Disk ha	ash = 25BF8AF	6B2D3E0BD1909C96	E368DB27F51C49CBF	
Destination		DISKWIPE.EXE D	I-121 Paladin 81	11 /noask /dst /new	v_log /comment
Setup:	JRL		<u> </u>		
	_	tition table d	efined		
Error Setup:	none		T 101 D-1-14- 01	11 (	. ] /
Execute:	Z:\ss\. JRL	DISKWIPE.EXE D	1-121 Paladin 81	11 /noask /dst /new	v_log /comment
	-	דם דצע משמאאנים	-121 Wimgey 80 F	4 81 11 /new_log /co	mment JRI.
				/comment E4(JRL) /ne	
Log files loc:			encase-3.20/DI-1		
Log File	Image	file acquired	from DOS		
Highlights:		e environment			
-		-	se DI-121 is in		
	Eviden	ce Number "1"	Alias "E4 imag	e"	
				at 05/25/02 04:43:1	LZPM.
	The co	mputer system	clock read: 05/2	5/02 04:43:12PM.	
	Eviden	ce acquired un	der DOS 7 10 usi	ng version 3.20.	
	LVIGCI	ee acquirea an	act 505 /.10 abt		
	File In	ntegrity:			
	Complet	tely Verified,	0 Errors.		
	Verific	cation Hash:	x x 4 0 II 0 4 x 2 x 4 4	2561170220066707004	
			AA49FZI04A3A4	22011/B33D900CF/884	
			AA49r2104A3A4.	25011/B33D906CF/884	
		Geometry:			
		Geometry:	B (17,938,985 se		
		Geometry:			
		Geometry:			
		Geometry:			
		Geometry: Size 8.6G			
	Total :	Geometry: Size 8.6G ions:			Size
	Total : Partit:	Geometry: Size 8.6G ions:	B (17,938,985 se	ctors)	Size 2.9GB
	Total : Partit: Code 0B 07	Geometry: Size 8.6G ions: Type FAT32 NTFS	B (17,938,985 se Start Sector	ctors) Total Sectors	
	Total : Partit: Code 0B 07 17	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Total : Partit: Code 0B 07	Geometry: Size 8.6G ions: Type FAT32 NTFS	B (17,938,985 se Start Sector 0 10249470	Ctors) Total Sectors 6152895 1237005	2.9GB 604.0MB
	Partit: Code 0B 07 17	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17 1B	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17 1B	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17 1B EnCase	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS HiddenFAT32 Report	B (17,938,985 se Start Sector 0 10249470 13542795	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Partit: Code 0B 07 17 1B EnCase Case: 1	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report	B (17,938,985 se Start Sector 0 10249470 13542795 16691535	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = :	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden IFS HiddenFAT32 Report E4 Page	B (17,938,985 se Start Sector 0 10249470 13542795 16691535 Logs = = = =	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector:	Geometry: Size 8.6G Type FAT32 NTFS Hidden IFS HiddenFAT32 Report E4 Page = Measurement s Compared 179 s Differ 0	B (17,938,985 se Start Sector 0 10249470 13542795 16691535 Logs = = = =	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Diffs :	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS HiddenFAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Sector: Source	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS HiddenFAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535</pre>	Total Sectors 6152895 1237005 1638630	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: D = = = : Sector: Sector: Source (35885)	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448)	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sectors Sectors Diffs : Source (35885 Zero f:	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill:	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Sector: Diffs : Source (35885: Zero f: Src By	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden IFS HiddenFAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4):	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 0</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = : Sector: Sector: Sector: Source (35885: Zero f. Src By Dst Byt	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (11):	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 0</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Source (35885; Zero f: Src By Dst By Other :	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (11):	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 0</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Source (35885: Zero f: Src By Other : Other in the sector: Sector: Src By Other : Other in the sector: Sector: Sector: Sector: Sector: Sector: Sector: Source (35885: Zero f: Sector: Secto	Geometry: Size 8.6G Type FAT32 NTFS Hidden IFS Hidden IFS HiddenFAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (E4): te fill (11):	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 0 17946463 0</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Source (35885: Zero f: Src By Dst By Other : Hash co	Geometry: Size 8.6G Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (E4): fill: no fill: omputed for th	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 17946463 fewer 0 17946463 0 17946463 fewer 0 17946463 fewer 17</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
Expected	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector: Sector: Sector: Source (35885: Zero f: Src By Dst By Other : Hash co Hash a:	Geometry: Size 8.6G Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (E4): fill: no fill: omputed for th	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 17946463 fewer 0 17946463 0 17946463 fewer 0 17946463 fewer 17 1</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
Expected Results:	Total : Partit: Code 0B 07 17 1B EnCase Case: D = = = : Sector: Sector: Source (35885: Zero f. Src By Dst By Other D Hash c: Hash c: Hash c: Source Source	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (E4): te fill (11): fill: no fill: omputed for th fter test: 25B disk is uncha mpares qualifi	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 17946463 fewer 0 17946463 0 17946463 fewer 0 17946463 fewer 17 1</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB
-	Total : Partit: Code 0B 07 17 1B EnCase Case: 1 = = = : Sector:	Geometry: Size 8.6G ions: Type FAT32 NTFS Hidden IFS Hidden FAT32 Report E4 Page = Measurement s Compared 179 s Differ 0 range (17938985) ha 448) ill: te fill (E4): te fill (E4): te fill (11): fill: no fill: omputed for th fter test: 25B disk is uncha mpares qualifi	<pre>B (17,938,985 set Start Sector 0 10249470 13542795 16691535 Logs = = = = 38985 s 17946463 fewer 0 17946463 0 0 17946463 0 0 is case (DI-121) F8AF6B2D3E0BD190 nged ed equal to dst</pre>	Total Sectors 6152895 1237005 1638630 1237005	2.9GB 604.0MB 800.1MB 604.0MB

Case DI-122 for 1	EnCase 3.20			
Case Summary:	Create an image from a	an XBIOS-SCSI s	ource disk	
-	to an XBIOS-SCSI destination disk			
	where the source disk			n
	Introduce a read error	r from the sour	ce.	
Tester Name:	JRL			
Test Date:	Sat Sep 07 21:19:12 20	002		
PC: Disks:	HecRamsey Source: DOS Drive 80 P	Dhursigal Tabal	E 4	
DISKS.	Destination: DOS Drive	-		
	Image media: DOS Drive	-		
	E4 is a OUANTUM ATLAS10K2-TY092J with 17938985 sectors			
	E2 is a QUANTUM ATLAS1			
	7C is a MAXTOR 6L040J2			
	CD-ROM with Partition			run scripts
Source disk	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2 Windows 2000 with NTFS & Fat32			
setup:	Disk: E4	5 & Fal32		
secup.	Host: JudgeDee			
	Operator: JRL			
	OS: Windows 2000/NT			
	Date: Sat Jul 21 16:58	3:28 2001		
		_		
	DISKWIPE.EXE E4_SRC Ju	udgeDee 80 E4 /	src /noask /comment )	Windows 2000
	source disk	hom ht are tot		
	X:\pm\pqmagic /cmd=X:\ Load Operating System	-		
	cmd: X:\ss\DISKHASH.EX			log /before
				,
	Disk hash = 25BF8AF6B	B2D3E0BD1909C96	E368DB27F51C49CBF	
Destination	Z:\ss\DISKWIPE.EXE DI-	-122 HecRamsey	81 E2 /noask /dst /ne	ew_log /comment
Setup:	JRL	c		
Provens Carbons	No partition table def		100 tot	
Error Setup:	Z:\ss\badx13 81 42 10 Return error code 10 f			I.BA sector
	Return error code 10 for X13 command 42 from drive 81 at LBA sector 5,938,247			
Execute:	Z:\ss\DISKWIPE.EXE DI-122 HecRamsey 81 E2 /noask /dst /new_log /comment			
	JRL			
	Z:\ss\DISKCMP.EXE DI-1			
	Z:\ss\DISKHASH.EXE DI-			ew_log /after
Log files loc:	test-archive/encase/en		22	
Log File Highlights:	Image file acquired from DOS Restore environment Windows 2000			
ingini giico ·	EnCase report for case		122.txt	
	Evidence Number "E4-err" Alias "E4-err"			
	File "D:\E4-ERR.E01" was acquired by JRL at 09/07/02 10:11:04PM.			
	The computer system cl	Lock read: 09/0	7/02 10:11:04PM.	
	Evidence acquired unde	er DOS 7 10 usi	ng version 3 20	
	ividence acquired unde	LI DOD 7.10 UDI	ing verbion 5.20.	
	File Integrity:			
	Completely Verified, 0 Errors.			
	Verification Hash:	438D79095C0E3E	ED7CC6600A47DBC879F	
	The fellowing coston k	alaging war autod	mand annound during a	
	The following sector b 5938240-5938303	JIOCKS TEPOTLEU	read errors during a	acquisicion.
	5556210 5556565			
	Drive Geometry:			
	Total Size 8.6GB	(17,938,985 se	ctors)	
	Partitions:			
	Code Type	Start Sector	Total Sectors	Size
	0B FAT32	0	6152895	2.9GB
	07 NTFS	10249470	1237005	604.0MB
	17 Hidden IFS	13542795	1638630	800.1MB
	1B HiddenFAT32	16691535	1237005	604.0MB

Case DI-122 for 1	EnCase 3.20		
	EnCase Report		
	Case: DI-122 Page		
	= = = Measurement Logs = = = =		
	Sectors Compared 17938985		
	Sectors Differ 10502		
	Diffs range 5938247-5938303, 17928540-17938984		
	Hash computed for this case (DI-122)		
	Hash after test: 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF		
Expected	Source disk is unchanged		
Results:	src compares qualified equal to dst		
	error message logged		
Actual Results:	Restore anomaly		
Analysis:	Expected results not achieved		

Case DI-127 for	EnCase 3.20		
Case Summary:	Create an image from an XBIOS-SCSI source disk		
-	to an XBIOS-SCSI destination disk		
	where the source disk is the same size as the destination		
Tester Name:	JRL		
Test Date:	Sat May 25 17:16:28 2002		
PC:	Wimsey		
Disks:	Source: DOS Drive 80 Physical Label E4		
	Destination: DOS Drive 81 Physical Label E1		
	Image media: DOS Drive 80 Physical Label 7C		
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	E1 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	7C is a MAXTOR 6L040J2 with 78177792 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Windows 2000 with NTFS & Fat32		
setup:	Disk: E4		
	Host: JudgeDee		
	Operator: JRL		
	OS: Windows 2000/NT		
	Date: Sat Jul 21 16:58:28 2001		
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000		
	source disk		
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt		
	Load Operating System to Source disk		
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before		
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF		
Destination	Z:\ss\DISKWIPE.EXE DI-127 Wimsey 81 E1 /noask /dst /new_log /comment		
Setup:	JRL		
Decar	No partition table defined		
Error Setup:	none		
Execute:	Z:\ss\DISKWIPE.EXE DI-127 Wimsey 81 E1 /noask /dst /new_log /comment		
	JRL		
	Z:\ss\DISKCMP.EXE DI-127 Wimsey 80 E4 81 E1 /new_log /comment JRL		
Log files loc:	test-archive/encase/encase-3.20/DI-127		
Log File	Image file acquired from DOS		
Highlights:	Restore environment Windows 2000		
	EnCase report for case DI-127 is in E4.txt		
	Evidence Number "1" Alias "E4 image"		
	File "D:\E4.E01" was acquired by JRL at 05/25/02 04:43:12PM.		
	The computer system clock read: 05/25/02 04:43:12PM.		
	Evidence acquired under DOS 7.10 using version 3.20.		
	File Integrity:		
	Completely Verified, 0 Errors.		
	Verification Hash: AA49F2184A3A4256117B33D906CF7884		
	Drive Comptry:		
	Drive Geometry:		
	Total Size 8.6GB (17,938,985 sectors)		

Case DI-127 for EnCase 3.20					
	Partitions:				
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	6152895	2.9GB
	07	NTFS	10249470	1237005	604.0MB
	17	Hidden IFS	13542795	1638630	800.1MB
	1B	HiddenFAT32	16691535	1237005	604.0MB
Expected	= = = = Sectors Sectors Diffs ra This cas Hash aft Source d	Page Measurement La Compared 1793 Differ 10445 nge 17928540-3 e uses the has er test: 25BF6 isk is unchan	8985 17938984 sh computed fro 8AF6B2D3E0BD190 ged	m case DI-121 9C96E368DB27F51C49CI	BF
Results:	src compares equal to dst				
Actual Results:	Restore anomaly				
Analysis:	Expected	results not a	achieved		

Case DI-128 for H	InCase 3.20		
Case Summary:	Create an image from an XBIOS-SCSI source disk		
_	to an XBIOS-SCSI destination disk		
	where the source disk is larger than the destination		
Tester Name:	JRL		
Test Date:	Sat Jun 01 09:41:58 2002		
PC:	Rumpole		
Disks:	Source: DOS Drive 80 Physical Label E4		
	Destination: DOS Drive 81 Physical Label EB		
	Image media: DOS Drive 80 Physical Label 7C		
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	EB is a SEAGATE ST39204LC with 17921835 sectors		
	7C is a MAXTOR 6L040J2 with 78177792 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Windows 2000 with NTFS & Fat32		
setup:	Disk: E4		
_	Host: JudgeDee		
	Operator: JRL		
	OS: Windows 2000/NT		
	Date: Sat Jul 21 16:58:28 2001		
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000		
	source disk		
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt		
	Load Operating System to Source disk		
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before		
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF		
Destination	Z:\ss\DISKWIPE.EXE DI-128 Rumpole 81 EB /noask /dst /new_log /comment		
Setup:	JRL		
	No partition table defined		
Error Setup:	none		
Execute:	Z:\ss\DISKWIPE.EXE DI-128 Rumpole 81 EB /noask /dst /new_log /comment		
	JRL		
	Z:\ss\DISKCMP.EXE DI-128 Wimsey 80 E4 81 EB /new_log /comment JRL		
Log files loc:	test-archive/encase/encase-3.20/DI-128		
Log File	Image file acquired from DOS		
Highlights:	Restore environment Windows 2000		
	EnCase report for case DI-128 is in E4.txt		
	Evidence Number "1" Alias "E4 image"		
	File "D:\E4.E01" was acquired by JRL at $05/25/02$ 04:43:12PM.		
	The computer system clock read: 05/25/02 04:43:12PM.		
	Evidence acquired under DOS 7.10 using version 3.20.		

Case DI-128 for H	InCase 3	.20			
	File Integrity:				
	Completely Verified, 0 Errors.				
	Verifi	Verification Hash: AA49F2184A3A4256117B33D906CF7884			
	Drive	Geometry:			
			(17,938,985 se	ctors)	
			(,	,	
	Partit	ions:			
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	6152895	2.9GB
			•		
	07	NTFS	10249470	1237005	604.0MB
	17	Hidden IFS	13542795	1638630	800.1MB
	1B	HiddenFAT32	16691535	1237005	604.0MB
	EnCase Report Case: E4 Page = = = Measurement Logs = = = = Sectors Compared 17921835 Sectors Differ 9360 Diffs range 17912475-17921834 Source (17938985) has 17150 more sectors than destination (17921835) This case uses the hash computed from case DI-121 Hash after test: 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF				
Expected		disk is unchan	5		_
Results:			d equal to dst,	src is truncated	on dst
		tion is logged			
Actual Results:	Restore anomaly				
Analysis:	Expected results not achieved				

Case DI-129 for	EnCago 3 20		
Case Summary:			
case summary.	Create an image from an XBIOS-SCSI source disk to an XBIOS-SCSI destination disk		
	and the source contains a FAT16 partition		
	where the source disk is smaller than the destination		
	Introduce an error on the image.		
Tester Name:	JRL		
	*		
Test Date:	Fri Aug 30 20:57:12 2002		
PC:	HecRamsey		
Disks:	Source: DOS Drive 80 Physical Label E3		
	Destination: DOS Drive 81 Physical Label none		
	Image media: DOS Drive 80 Physical Label 7C		
	E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	7C is a MAXTOR 6L040J2 with 78177792 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16		
setup:	Disk: E3		
	Host: Cadfael		
	Operator: JRL		
	OS: Linux Red Hat 7.1/Windows Me		
	Date: Sat Jul 21 16:17:29 2001		
	DISKWIPE.EXE E3_SRC Rumpole 80 E3 /src /new_log		
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt		
	Load Operating System to Source disk		
	DISKHASH.EXE E3_SRC Rumpole 80 /before		
	Disk hash = 0F9DACDA6C63D197C048782003D324108CEC7AB0		
Destination	No destination setup required		
Setup:			
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-129 HecRamsey C:\e3-f16c.e01 8237267 37		
	Comment: Change 1/007/44 to 1/077/44 at LBA 16549		
Execute:	Z:\ss\DISKHASH.EXE DI-129 Cadfael 80 /comment E3(JRL) /new_log /after		
Log files loc:	test-archive/encase/encase-3.20/DI-129		
Log File	Image file acquired from DOS		

Case DI-129 for 1	EnCase 3.20				
Highlights:	Restore environmen	nt Windows 2000			
	EnCase report for case DI-129 is in 129.txt				
	Evidence Number "E3-F16" Alias "E3-F16"				
	File "F:\E3-F16C.I	E01" was acquire	ed by JRL at 08/30/02	09:21:28PM.	
			08/30/02 09:21:28PM.		
	Evidence acquired	under DOS 7.10	using version 3.20.		
	The integrity of t verified:16448-169 Drive Geometry: Total Size 60	511	ector groups could not	t be	
		(1,230,7			
	Volume "E3-F16" P	arameters			
	File System:	FAT16	Drive Type:	Fixed	
	Sectors Per	32	Bytes Per	512	
	Cluster:		Sector:		
	Total Sectors:	1,236,942	Total Capacity:	633,126,912 bytes (603.8MB)	
	Total Clusters:	38,643	Unallocated:	85,213,184 bytes (81.3MB)	
	Free Clusters:	5,201	Allocated:	547,913,728 bytes (522.5MB)	
	Volume Name:		Volume Offset:	0	
	OEM Version:	MSWIN4.1	Volume Serial #:	3B65-7909	
	Heads:	255	Sectors Per Track:	63	
	Unused Sectors:	63	Number of FATs:	2	
	Sectors Per	151	Boot Sectors:	1	
	FAT:				
	EnCase Report				
	Case: DI-129 Page				
	= = = Measurement Logs = = = =				
	No compare log found for DI-129				
	Hash computed for this case (DI-129)				
	Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0				
Expected		ource disk is unchanged			
Results:	image verification error				
Actual Results:	No anomalies				
Analysis:	Expected results achieved				

Case DI-130 for H	InCase 3.20		
Case Summary:	Create an image from an XBIOS-SCSI source disk to an XBIOS-SCSI destination disk		
	and the source contains a FAT32 partition		
	where the source disk is smaller than the destination		
Tester Name:	JRL		
Test Date:	Tue Jun 11 08:11:19 2002		
PC:	Wimsey		
Disks:	Source: DOS Drive 80 Physical Label E4		
	Destination: DOS Drive 81 Physical Label 11		
	Image media: DOS Drive 80 Physical Label 7C		
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	11 is a FUJITSU MAN3184MC with 35885447 sectors		
	7C is a MAXTOR 6L040J2 with 78177792 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Windows 2000 with NTFS & Fat32		
setup:	Disk: E4		
	Host: JudgeDee		

Case DI-130 for EnCase 3.20					
	Operator: JRL				
	OS: Windows 2000/NT				
	Date: Sat Jul 21 16:58:28 2001				
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000 source disk				
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt				
	Load Operating System to Source disk				
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before				
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF				
Destination	Z:\ss\DISKWIPE.EXE DI-130 Wimsey 81 11 /noask /dst /new_log /comment				
Setup:	JRL See CMPPTLOG.TXT for partition table				
Error Setup:	none				
Execute:	Z:\ss\DISKWIPE.EXE DI-130 Wimsey 81 11 /noask /dst /new_log /comment JRL				
	Z:\ss\PARTCMP.EXE DI-130 Wimsey 80 E4 81 11 /new_log /comment JRL /select 1 1				
	Z:\ss\DISKHASH.EXE DI-130 Wimsey 80 /comment E4(JRL) /new_log /after				
Log files loc:	test-archive/encase/encase-3.20/DI-130				
Log File Highlights:	Source disk Drive 0x80, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values)				
ITAITTAILS.	Interrupt 13 ext 01023/255/63 (number of cyl/hd)				
	17938985 total number of sectors reported via interrupt 13 from the				
	BIOS				
	N Start LBA Length Start C/H/S End C/H/S boot Partition type				
	1 P 00000063 006152832 0000/001/01 0382/254/63 Boot 0B Fat32				
	2 X 008193150 009735390 0510/000/01 1023/254/63 0F extended 3 S 00000000 00000000 0000/000/00 0000/000/00 00				
	4 x 002056320 001237005 0638/000/01 0714/254/63 05 extended				
	5 S 000000063 001236942 0638/001/01 0714/254/63 07 NTFS				
	6 x 005349645 001638630 0843/000/01 0944/254/63 05 extended				
	7 S 000000063 001638567 0843/001/01 0944/254/63 17 other				
	8 x 008498385 001237005 1023/000/01 1023/254/63 05 extended				
	9 S 000000063 001236942 1023/001/01 1023/254/63 1B other				
	10 S 00000000 00000000 0000/00/00 0000/00         00 empty entry           11 P 00000000 00000000 0000/000/00 0000/00/0				
	11 P 00000000 00000000 0000/000/00 0000/00         00 empty entry           12 P 00000000 00000000 0000/000/00 0000/000/00         00 empty entry				
	Destination disk Drive 0x81, BIOS: Extensions Present				
	Interrupt 13 bios 1022/254/63 (max cyl/hd values)				
	Interrupt 13 ext 01023/255/63 (number of cyl/hd)				
	35885448 total number of sectors reported via interrupt 13 from the BIOS				
	N Start LBA Length Start C/H/S End C/H/S boot Partition type				
	1 P 00000063 006361677 0000/001/01 0395/254/63 OB Fat32				
	2 P 00000000 00000000 0000/00/00 0000/00/00				
	3 P 00000000 00000000 0000/000/00 0000/000         00 empty entry           4 P 00000000 00000000 0000/000/00 0000/000/00         00 empty entry				
	Image file acquired from DOS				
	Restore environment Windows 2000				
	EnCase report for case DI-130 is in E4-fat32.txt				
	Evidence Number "1" Alias "1"				
	File "D:\E4-FAT32.E01" was acquired by JRL at 06/11/02 04:50:21PM. The computer system clock read: 06/11/02 04:50:21PM.				
	Evidence acquired under DOS 7.10 using version 3.20.				
	File Integrity:				
	Completely Verified, 0 Errors. Verification Hash: 25B37B7DFDDFACB085841B6686FA642E				
	Drive Geometry: Total Size 2.9GB (6,152,832 sectors)				

Case DI-130 for H	Case DI-130 for EnCase 3.20				
	Volume "1" Parameters				
	File System:	FAT32	Drive Type:	Fixed	
	Sectors Per	4	Bytes Per	512	
	Cluster:		Sector:		
	Total Sectors:	6,152,832	Total Capacity:	3,137,974,272 bytes (2.9GB)	
	Total Clusters:	1,532,214	Unallocated:	1,684,680,704 bytes (1.6GB)	
	Free Clusters:	822,598	Allocated:	1,453,293,568 bytes (1.4GB)	
	Volume Name:		Volume Offset:	0	
	OEM Version:	MSWIN4.1	Volume Serial #:	0000-0000	
	Heads:	255	Sectors Per Track:	63	
	Unused Sectors:	63	Number of FATs:	2	
	Sectors Per FAT:	11,972	Boot Sectors:	32	
	Zero fill: 0 Src Byte fill (E4) Dst Byte fill (11 Other fill: 0 Other no fill: 0 Hash computed for Hash after test: 2	<pre>ht Logs = = = = 5152832 has 208845 fewer ; ): 0 ): 208845 this case (DI-13 25BF8AF6B2D3E0BD1</pre>	sectors than destina 0) 909C96E368DB27F51C4		
Expected Results:	Source disk is und src compares quali	5	t		
Actual Results:	Logical restore anomaly				
Analysis:	Expected results a	not achieved			

Case DI-137 for H	InCase 3.20		
Case Summary:	Create an image from an XBIOS-SCSI source disk to an XBIOS-SCSI destination disk and the source contains a FAT16 partition where the source disk is the same size as the destination Introduce a read error from the source.		
Tester Name:	JRL		
Test Date:	Tue Sep 10 09:11:52 2002		
PC:	Cadfael		
Disks:	Source: DOS Drive 80 Physical Label E3 Destination: DOS Drive 81 Physical Label E6 Image media: DOS Drive 80 Physical Label 70 E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors E6 is a SEAGATE ST318404LC with 35843670 sectors 70 is a IC35L040AVER07-0 with 80418240 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk setup:	Dual boot Linux/Windows Me with EXT2 & Fat16 Disk: E3 Host: Cadfael Operator: JRL OS: Linux Red Hat 7.1/Windows Me Date: Sat Jul 21 16:17:29 2001 DISKWIPE.EXE E3_SRC Rumpole 80 E3 /src /new_log X:\pm\pqmagic /cmd=X:\pm\fat-src.txt Load Operating System to Source disk DISKHASH.EXE E3_SRC Rumpole 80 /before		

Case DI-137 for 1	EnCase 3.20		
	Disk hash = 0F9DACDA6C63D197C048782003D324108CEC7AB0		
Destination	Z:\ss\DISKWIPE.EXE DI-137 Cadfael 81 E6 /noask /dst /new_log /comment		
Setup:	JRL		
Decession Carbons	See CMPPTLOG.TXT for partition table		
Error Setup:	Z:\ss\baddisk 81 9 13 61 2 10 >> A:\err-137.txt Z:\ss\baddisk 81 9 13 61 10 10 >> A:\err-137.txt		
	return code 00010 on command 00002 from disk 00081		
	at address 00009/00013/00061		
	return code 00010 on command 00010 from disk 00081 at address 00009/00013/00061		
Execute:	Z:\ss\DISKWIPE.EXE DI-137 Cadfael 81 E6 /noask /dst /new_log /comment		
	JRL		
	Z:\ss\PARTCMP.EXE DI-137 Cadfael 80 E3 81 E6 /new_log /comment JRL		
	/select 1 1 Z:\ss\DISKHASH.EXE DI-137 Cadfael 80 /comment E3(JRL) /new_log /after		
Log files loc:	test-archive/encase/encase-3.20/DI-137		
Log File	Source disk Drive 0x80, BIOS: Extensions Present		
Highlights:	Interrupt 13 bios 1022/254/63 (max cyl/hd values)		
	Interrupt 13 ext 01023/255/63 (number of cyl/hd) 17938985 total number of sectors reported via interrupt 13 from the		
	BIOS		
	N Start LBA Length Start C/H/S End C/H/S boot Partition type		
	1 P 000000063 001236942 0000/001/01 0076/254/63 Boot 06 Fat16 2 X 002249100 007181055 0140/000/01 0586/254/63 05 extended		
	3 S 00000063 000208782 0140/001/01 0152/254/63         05 extended		
	4 x 000208845 000144585 0153/000/01 0161/254/63 05 extended		
	5 S 000000063 000144522 0153/001/01 0161/254/63 06 Fat16		
	6 x 004450005 000192780 0417/000/01 0428/254/63       05 extended         7 s 000000063 000192717 0417/001/01 0428/254/63       16 other		
	8 S 00000000 00000000 0000/00/00 0000/00/00		
	9 P 009430155 006152895 0587/000/01 0969/254/63 83 Linux		
	10 P 017510850 000417690 1023/000/01 1023/254/63 82 Linux swap		
	Destination disk Drive 0x81, BIOS: Extensions Present Interrupt 13 bios 1022/254/63 (max cyl/hd values)		
	Interrupt 13 ext 01023/255/63 (number of cyl/hd)		
	35843670 total number of sectors reported via interrupt 13 from the		
	BIOS N Start LBA Length Start C/H/S End C/H/S boot Partition type		
	1 P 000000063 001236942 0000/001/01 0076/254/63 06 Fat16		
	2 P 00000000 00000000 0000/00/00 0000/00 00		
	3 P 00000000 00000000 0000/00 0000/000         00 empty entry           4 P 00000000 00000000 0000/000/00 0000/000/00         00 empty entry		
	Image file acquired from DOS		
	Restore environment Windows 2000		
	EnCase report for case DI-137 is in 137.txt		
	Evidence Number "E3-f16-err" Alias "E3-f16-err"		
	File "D:\E3-ERR.E01" was acquired by JRL at 09/10/02 10:56:57AM.		
	The computer system clock read: 09/10/02 10:56:57AM.		
	Evidence acquired under DOS 7.10 using version 3.20.		
	2.140.000 dogarrow matt 200 7.10 ubring verbroit 3.20.		
	File Integrity:		
	Completely Verified, 0 Errors. Verification Hash: AE05295683A3B960728A83C599652EAA		
	VETTICALION MADIN. REUJZJJUUJAJBJUU/ZORUJCJJJUJZEAA		
	The following sector blocks reported read errors during acquisition: 145344-145407		
	Drive Geometry:		
	Total Size 604.0MB (1,236,942 sectors)		
L			

Case DI-137 for H	EnCase 3.20			
Volume "E3-f16-err" Parameters				
	File System:	FAT16	Drive Type:	Fixed
	Sectors Per	32	Bytes Per	512
	Cluster:		Sector:	
	Total Sectors:	1,236,942	Total Capacity:	633,126,912
		20 642	Unallocated:	bytes (603.8MB)
	Total Clusters:	38,643	Unallocated:	85,213,184 bytes (81.3MB)
	Free Clusters:	5,201	Allocated:	547,913,728 bytes (522.5MB)
	Volume Name:		Volume Offset:	0
	OEM Version:	MSWIN4.1	Volume Serial #:	3B65-7909
	Heads:	255	Sectors Per Track:	63
	Unused Sectors:	63	Number of FATs:	2
	Sectors Per FAT:	151	Boot Sectors:	1
	EnCase Report Case: DI-137 Pag = = = Measuremen Sectors Compared 3 Sectors Differ 7 Diffs range: 1454 Hash computed for Hash after test: (	nt Logs = = = = 1236942 401-145407 this case (DI-13	7) 048782003D324108CEC	7480
Expected	Source disk is und	changed		
Results:	src compares quali	5	t	
	error message log			
Actual Results:	No anomalies			
Analysis:	Expected results a	achieved		

Case DI-140 for	EnCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
-	to an XBIOS-SCSI destination disk
	and the source contains a FAT16 partition
	where the source disk is the same size as the destination
	Introduce a write error writing to the image.
Tester Name:	JRL
Test Date:	Wed Sep 11 04:50:56 2002
PC:	HecRamsey
Disks:	Source: DOS Drive 80 Physical Label E3
	Destination: DOS Drive 81 Physical Label E2
	Image media: DOS Drive 80 Physical Label CC
	E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	E2 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	CC is a SEAGATE ST336705LC with 71687370 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16
setup:	Disk: E3
	Host: Cadfael
	Operator: JRL
	OS: Linux Red Hat 7.1/Windows Me
	Date: Sat Jul 21 16:17:29 2001
	DIGUNIDE EVE E2 (DG Dummele 00 E2 /ang /man log
	DISKWIPE.EXE E3_SRC Rumpole 80 E3 /src /new_log
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt
	Load Operating System to Source disk
	DISKHASH.EXE E3_SRC Rumpole 80 /before
	Disk hash = 0F9DACDA6C63D197C048782003D324108CEC7AB0
Destination	No destination setup required
Setup:	
Error Setup:	Z:\ss\baddisk 81 4 10 14 3 10 >> A:\err-140.txt
	return code 00010 on command 00003 from disk 00081

Case DI-140 for 1	EnCase 3.20
	at address 00004/00010/00014
Execute:	
Log files loc:	test-archive/encase/encase-3.20/DI-140
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 2000
	EnCase report for case DI-140 is in NOLOG.txt
	Message displayed during DOS acquire:
	Error in <file name=""> cannot write to this file</file>
	= = = Measurement Logs = = =
	No compare log found for DI-140
	This case uses the hash computed from case DI-142
	Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0
Expected	Source disk is unchanged
Results:	error message logged
Actual Results:	No anomalies
Analysis:	Expected results achieved

Case DI-141 for H	InCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
-	to an XBIOS-SCSI destination disk
	and the source contains a FAT32 partition
	where the source disk is the same size as the destination
	Introduce an error on the image.
Tester Name:	JRL
Test Date:	Fri Aug 30 23:31:27 2002
PC:	HecRamsey
Disks:	Source: DOS Drive 80 Physical Label E4
	Destination: DOS Drive 81 Physical Label none
	Image media: DOS Drive 80 Physical Label 7C
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Windows 2000 with NTFS & Fat32
setup:	Disk: E4
	Host: JudgeDee
	Operator: JRL
	OS: Windows 2000/NT
	Date: Sat Jul 21 16:58:28 2001
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000
	source disk
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt
	Load Operating System to Source disk
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF
Destination	No destination setup required
Setup:	
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-141 HecRamsey C:\e4-f32c.e02 656147 5A
Execute:	Comment: Change 255/001/01 to 255/Z01/01 at LBA 4096638?? Z:\ss\DISKHASH.EXE DI-141 Rumpole 80 /comment E4(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-141
Log File	Image file acquired from DOS Restore environment Windows 2000
Hihlights:	EnCase report for case DI-141 is in 141.txt
	Evidence Number "E4-f32" Alias "E4-f32"
	EVIDENCE NUMBER ET-152 ATTAS ET-152
	File "F:\E4-F32C.E01" was acquired by JRL at $08/30/02$ 10:07:07PM.
	The computer system clock read: 08/30/02 10:07:07PM.
	The computer system crock read. 60,50,62 10.07.071M.
	Evidence acquired under DOS 7.10 using version 3.20.
	The integrity of the following sector groups could not be verified:4096512-4096575
	Drive Geometry:
	Total Size 2.9GB (6,152,832 sectors)
1	

Case DI-141 for E	InCase 3.20			
	Volume "E4-f32" Pa	arameters		
	File System:	FAT32	Drive Type:	Fixed
	Sectors Per	4	Bytes Per	512
	Cluster:		Sector:	
	Total Sectors:	6,152,832	Total Capacity:	3,137,974,272 bytes (2.9GB)
	Total Clusters:	1,532,214	Unallocated:	1,684,680,704 bytes (1.6GB)
	Free Clusters:	822,598	Allocated:	1,453,293,568 bytes (1.4GB)
	Volume Name:		Volume Offset:	0
	OEM Version:	MSWIN4.1	Volume Serial #:	0000-0000
	Heads:	255	Sectors Per Track:	63
	Unused Sectors:	63	Number of FATs:	2
	Sectors Per FAT:	11,972	Boot Sectors:	32
	EnCase Report Case: DI-141 Pag			
	= = = = Measuremen	2		
	No compare log fou			
	Hash computed for this case (DI-141)			
			909C96E368DB27F51C4	9CBF
Expected	Source disk is und			
Results:	image verification	n error		
Actual Results:	No anomalies			
Analysis:	Expected results a	achieved		

Case DI-142 for	Endered 2 20		
Case Summary:	Create an image from an XBIOS-SCSI source disk		
	to an XBIOS-SCSI destination disk		
	and the source contains a FAT16 partition		
	where the source disk is the same size as the destination		
Tester Name:	JRL		
Test Date:	Thu Sep 12 20:51:48 2002		
PC:	HecRamsey		
Disks:	Source: DOS Drive 80 Physical Label E3		
	Destination: DOS Drive 81 Physical Label 12		
	Image media: DOS Drive 80 Physical Label 7C		
	E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors		
	12 is a FUJITSU MAN3184MC with 35885447 sectors		
	7C is a MAXTOR 6L040J2 with 78177792 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16		
setup:	Disk: E3		
_	Host: Cadfael		
	Operator: JRL		
	OS: Linux Red Hat 7.1/Windows Me		
	Date: Sat Jul 21 16:17:29 2001		
	DISKWIPE.EXE E3_SRC Rumpole 80 E3 /src /new_log		
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt		
	Load Operating System to Source disk		
	DISKHASH.EXE E3_SRC Rumpole 80 /before		
	Disk hash = 0F9DACDA6C63D197C048782003D324108CEC7AB0		
Destination	Z:\ss\DISKWIPE.EXE DI-142 HecRamsey 81 12 /noask /dst /new log /comment		
Setup:	JRI		
<u>-</u>	See CMPPTLOG.TXT for partition table		
Error Setup:	none		
Execute:	Z:\ss\DISKWIPE.EXE DI-142 HecRamsey 81 12 /noask /dst /new_log /comment		
	JRL		
	Z:\ss\PARTCMP.EXE DI-142 McCloud 80 E3 81 12 /new_log /comment JRL		
	/select 1 1		

Case DI-142 for H				
			/comment E3(JRL)	/new_log /after
Log files loc: Log File	test-archive/enca			
Highlights:		0x80, BIOS: Exten s 1022/254/63 (ma		
	-	01023/255/63 (nu	-	
	17938985 total num		ported via interru	pt 13 from the
	BIOS			5
	N Start LBA Lei	-	S End C/H/S boot	
		1236942 0000/001/0 7181055 0140/000/0	1 0076/254/63 Boot	06 Fat16 05 extended
		)208782 0140/001/0		83 Linux
		0144585 0153/000/0		05 extended
	5 S 00000063 00	0144522 0153/001/0	1 0161/254/63	06 Fat16
		0192780 0417/000/0		05 extended
		0192717 0417/001/0		16 other
		0000000 0000/000/0 6152895 0587/000/0		00 empty entry 83 Linux
		0417690 1023/000/0		82 Linux swap
			Extensions Present	-
	Interrupt 13 bios	s 1022/254/63 (ma	x cyl/hd values)	
	-	01023/255/63 (nu		
	35885448 total nur BIOS	mber of sectors re	ported via interru	pt 13 from the
	N Start LBA Ler	nath Start C/U/	S End C/H/S boot	Partition type
	1 P 00000063 003	1236942 0000/001/0	1 0076/254/63	06 Fat16
			0 0000/000/00	00 empty entry
	3 P 00000000 000	0000000 0000/000/0	0 0000/000/00	00 empty entry
		0000000 0000/000/0	0 0000/000/00	00 empty entry
	Image file acquire Restore environment			
		case DI-142 is in	142.txt	
	_	E3-f16" Alias "E		
	File "G:\E3-F16.E01" was acquired by JRL at 09/12/02 08:55:09PM.			
	The computer system clock read: 09/12/02 08:55:09PM.			
	Evidence acquired under DOS 7.10 using version 3.20.			
	Evidence acquired under Dob 7.10 using version 5.20.			
	File Integrity:			
	Completely Verified, 0 Errors. Verification Hash: 1E23617EBDE0C9375EDA8F7A60CA62D9			
	Verilication Hash	· IE2301/EBDEUC	293/SEDASF/AGUCAGZL	19
	Drive Geometry:			
	Total Size 60	04.0MB (1,236,942	sectors)	
	Volume "E3-f16" P	arameters		
	File System:	FAT16	Drive Type:	Fixed
	Sectors Per	32	Bytes Per	512
	Cluster:	1 026 040	Sector:	622 106 010
	Total Sectors:	1,236,942	Total Capacity:	633,126,912 bytes (603.8MB)
	Total Clusters:	38,643	Unallocated:	85,213,184
				bytes (81.3MB)
	Free Clusters:	5,201	Allocated:	547,913,728
				bytes (522.5MB)
	Volume Name:		Volume Offset:	0
	OEM Version:	MSWIN4.1	Volume Serial	3B65-7909
	Heads:	255	#: Sectors Per	63
	1100000.	233	Track:	
	Unused Sectors:	63	Number of FATs:	2
			Deet Genterer	1
	Sectors Per	151	Boot Sectors:	1
	Sectors Per FAT:	151	Boot Sectors:	1
		151	BOOT Sectors:	
		151	BOOL Sectors:	1
		151	Boot Sectors:	1
		151	Boot Sectors:	1

Case DI-142 for EnCase 3.20		
	EnCase Report	
	Case: di-142 Page	
	= = = Measurement Logs = = = =	
	Sectors Compared 1236942	
	Sectors Differ 0	
	Diffs range:	
	Hash computed for this case (DI-142)	
	Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0	
Expected	Source disk is unchanged	
Results:	src compares equal to dst	
Actual Results:	No anomalies	
Analysis:	Expected results achieved	

Case DI-145 for	EnCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
	to an XBIOS-SCSI destination disk
	and the source contains a FAT32 partition
	where the source disk is the same size as the destination
	Create the image on a removable medium.
	Introduce an error on the image.
Tester Name:	JRL
Test Date:	Fri Dec 06 11:55:12 2002
PC: Disks:	HecRamsey
DISKS.	Source: DOS Drive 80 Physical Label E4 Destination: DOS Drive 81 Physical Label EB
	Image media: DOS Drive 80 Physical Label 7C
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	EB is a SEAGATE ST39204LC with 17921835 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Windows 2000 with NTFS & Fat32
setup:	Disk: E4
	Host: JudgeDee
	Operator: JRL OS: Windows 2000/NT
	Date: Sat Jul 21 16:58:28 2001
	Date. Sat our 21 10.30.20 2001
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000
	source disk
	X:\pm\pqmaqic /cmd=X:\pm\nt-src.txt
	Load Operating System to Source disk
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF
Destination	Z:\ss\DISKWIPE.EXE DI-145 HecRamsey 81 EB /noask /dst /new_log /comment
Setup:	JRL
Decap	See CMPPTLOG.TXT for partition table
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-145 HecRamsey D:\e4-ft32.e02 656147 5A
	Comment: Change 255/001/01 to 255/Z01/01 at LBA 4096638
Execute:	Z:\ss\DISKWIPE.EXE DI-145 HecRamsey 81 EB /noask /dst /new_log /comment
	JRL
	Z:\ss\PARTCMP.EXE DI-145 JudgeDee 80 E4 81 EB /new_log /comment JRL
	/select 1 1 Z:\ss\DISKHASH.EXE DI-145 JudgeDee 80 /comment E4(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-145
Log File	Source disk Drive 0x80, BIOS: Extensions Present
Highlights:	Interrupt 13 bios 1022/254/63 (max cyl/hd values)
	Interrupt 13 ext 01023/255/63 (number of cyl/hd)
	17938985 total number of sectors reported via interrupt 13 from the
	BIOS
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P 000000063 006152832 0000/001/01 0382/254/63 Boot 0B Fat32
	2 X 008193150 009735390 0510/000/01 1023/254/63 0F extended
	3 S 00000000 00000000 0000/000/00 0000/00 00
	4 x 002056320 001237005 0638/000/01 0714/254/63 05 extended 5 s 000000063 001236942 0638/001/01 0714/254/63 07 NTFS
	6 x 005349645 001638630 0843/000/01 0944/254/63 05 extended
	7 S 00000063 001638567 0843/001/01 0944/254/63 17 other
	8 x 008498385 001237005 1023/000/01 1023/254/63 05 extended
1	9 S 00000063 001236942 1023/001/01 1023/254/63 1B other

a				
Case DI-145 for 1	1			
	10 S 00000000 000	0000000 0000/000/0	0 0000/000/00	00 empty entry
	11 P 00000000 000	000000 0000/000/0	0 0000/000/00	00 empty entry
	12 P 00000000 000			00 empty entry
1			Extensions Present	
	Interrupt 13 bios			
	Interrupt 13 ext	01023/255/63 (nu	mber of cyl/hd)	
	17921835 total nur	mber of sectors re	ported via interru	pt 13 from the
	BIOS			F
				<b>D</b>
	N Start LBA Ler	-		Partition type
		5152832 0000/001/0		0B Fat32
	2 P 00000000 000	000000 0000/000/0	0 0000/000/00	00 empty entry
		0/000/0000 0000/000/0		00 empty entry
		000000 0000/000/0	0 0000/000/00	00 empty entry
	Image file acquire	ed from DOS		
	Restore environmer	nt Windows 2000		
	EnCase report for		145 tvt	
	-			
	Evidence Number "I	E4-I32" Allas "E	4-I 32"	
1	File "D:\E4-FT32.E	201" was acquired	by JRL at 12/06/02	12:15:01PM.
1	The computer syste			
	THE COMPACET BYBE		55, 52 12 13 · 011 M.	
	Evidence acquired	under DOS 7.10 us	ing version 3.20.	
1	The integrity of t	the following sect	or groups could no	t be
	verified:4096512-4			
		2/202/2		
	Drive Geometry:			
	Total Size 2.	.9GB (6,152,832 se	ectors)	
	Volume "E4-f32" Pa	arameters		
	File System:	FAT32	Drive Type:	Fixed
	Sectors Per	4	Bytes Per	512
	Cluster:		Sector:	
	Total Sectors:	6,152,832	Total Capacity:	3,137,974,272
		-,,		bytes (2.9GB)
	Total Clusters:	1,532,214	Unallocated:	1,684,680,704
				bytes (1.6GB)
	Free Clusters:	822,598	Allocated:	1,453,293,568
		- ,		bytes (1.4GB)
1	Volume Name:		Volume Offset:	0
1	OEM Version:	MSWIN4.1	Volume Serial	0000-0000
			#:	
1	TT	255		62
1	Heads:	255	Sectors Per	63
	11		Track:	
	Unused Sectors:	63	Number of FATs:	2
	Sectors Per	11,972	Boot Sectors:	32
		, , , , , , , , , , , , , , , , , ,	DOOL DECLOID.	54
	FAT:			
	1			
	EnCase Report			
1	Case: DI-145 Pac	ae		
		-		
1	Maaguma			
1	= = = = Measuremer	-		
1	Sectors Compared	5152832		
	Sectors Differ 1			
1	Diffs range: 4096	5575		
	9			
	Hash computed for			0.000
			09C96E368DB27F51C4	9CBF
Expected	Source disk is und	changed		
Results:	image verification error			
Actual Results:	No anomalies			
LACIDAL RESILLES:	INO ADOMALIES			
Analysis:	Expected results a	achieved		

Case DI-147 for EnCase 3.20		
Case Summary:	Create an image from an XBIOS-SCSI source disk	
	to an XBIOS-SCSI destination disk	
	and the source contains a FAT32 partition	
	where the source disk is larger than the destination	
Tester Name:	JRL	

Case DI-147 for E	
Test Date:	Fri Jun 14 09:37:58 2002
PC:	Wimsey
Disks:	Source: DOS Drive 80 Physical Label E4 Destination: DOS Drive 81 Physical Label 11 Image media: DOS Drive 80 Physical Label 7C E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors 11 is a FUJITSU MAN3184MC with 35885447 sectors 7C is a MAXTOR 6L040J2 with 78177792 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
Source disk	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2 Windows 2000 with NTFS & Fat32
setup:	<pre>windows 2000 with NIPS &amp; Fats2 Disk: E4 Host: JudgeDee Operator: JRL OS: Windows 2000/NT Date: Sat Jul 21 16:58:28 2001 DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000 source disk X:\pm\pgmagic /cmd=X:\pm\nt-src.txt Load Operating System to Source disk cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF</pre>
Destination	Z:\ss\DISKWIPE.EXE DI-147 Wimsey 81 11 /noask /dst /new log /comment
Setup:	JRL See CMPPTLOG.TXT for partition table
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-147 Wimsey 81 11 /noask /dst /new_log /comment JRL Z:\ss\PARTCMP.EXE DI-147 Wimsey 80 E4 81 11 /new_log /comment JRL /select 1 1
Log files loc:	test-archive/encase/encase-3.20/DI-147
Log File	Source disk Drive 0x80, BIOS: Extensions Present
Highlights:	<pre>Interrupt 13 bios 1022/254/63 (max cyl/hd values) Interrupt 13 ext 01023/255/63 (number of cyl/hd) 17938985 total number of sectors reported via interrupt 13 from the BIOS N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 006152832 0000/001/01 0382/254/63 Boot 0B Fat32 2 X 008193150 009735390 0510/000/01 1023/254/63 OF extended 3 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>

Case DI-147 for H	InCase 3.20			
	Verification Hash	25B37B7DFDDF	ACB085841B6686FA642	2E
	Drive Geometry: Total Size 2.	.9GB (6,152,832 se	ectors)	
	Volume "1" Paramet			
	File System:	FAT32	Drive Type:	Fixed
	Sectors Per	4	Bytes Per	512
	Cluster:		Sector:	
	Total Sectors:	6,152,832	Total Capacity:	3,137,974,272
				bytes (2.9GB)
	Total Clusters:	1,532,214	Unallocated:	1,684,680,704
	Free Clusters:	000 500	Allocated:	bytes (1.6GB)
	Free Clusters:	822,598	Allocaled:	1,453,293,568
	Volume Name:		Volume Offset:	bytes (1.4GB) 0
	OEM Version:	MSWIN4.1	Volume Serial	0000-0000
	OEM Version.	MSWIN4.1	#:	0000-0000
	Heads:	255	Sectors Per Track:	63
	Unused Sectors:	63	Number of FATs:	2
	Sectors Per FAT:	11,972	Boot Sectors:	32
Expected Results:	This case uses the Hash after test: 2 Source disk is und	nt Logs = = = = 5943987 has 208845 more se e hash computed fr 25BF8AF6B2D3E0BD19 changed	ctors than destina om case DI-130 099C96E368DB27F51C4 ., src is truncated	9CBF
	truncation is logo			
Actual Results:	Logical restore an	4		
Analysis:	Expected results a	not achieved		

Case DI-149 for H	EnCase 3.20
Case Summary:	Create an image from a direct access IDE source disk to a direct access IDE destination disk where the source disk is smaller than the destination Introduce an error on the image.
Tester Name:	JRL
Test Date:	Tue Sep 03 12:45:58 2002
PC:	Beta3
Disks:	Source: DOS Drive 80 Physical Label F1 Destination: DOS Drive 81 Physical Label none Image media: DOS Drive 80 Physical Label D3 F1 is a Quantum Siroocol700A with 3335472 sectors D3 is a Fujitsu MPE3064AT with 12672450 sectors CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk setup:	Linux EXT2 & Fat32 Disk: F1 Host: JudgeDee Operator: JRL OS: Windows/Me Options: Typical Date: Fri Nov 16 10:42:33 2001 cmd: Z:\ss\DISKWIPE.EXE F1 JudgeDee 80 F1 /src /new_log X:\pm\pqmagic /cmd=X:\pm\f32-src.txt Load Operating System to Source disk

Case DI-149 for	EnCase 3	.20			
	cmd: Z	:\ss\DISKHASH.1	EXE F1 JudgeDee	80 /before /new_log	3
Destination	Disk hash = 3E7E5E0AB0FA333BE39D267F0DB8E340386DC05A No destination setup required				
Setup:	no descrimacioni secup required				
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-149 Beta3 D:\f1-ata.e01 476220610 41				
DITOT Decup:				A/01 at LBA 930447	
Execute:				0 /comment F1(JRL)	
Log files loc:	test-archive/encase/encase-3.20/DI-149				
Log File	Image file acquired from DOS				
Highlights:		e environment V			
			se DI-149 is in		
	Eviden	ce Number "Fl-A	All" Alias "F1	-All"	
	Filo "	\〒1>+> _01"	wag acquired by	JRL at 09/03/02 1	2 · / 9 · 5 2 DM
				3/02 12:48:53PM.	2.40.JJPM.
	1110 000	ipacer system e	100/1 10dd 07/0	5,02 22 10 55211.	
	Eviden	ce acquired und	ler DOS 7.10 usi	ng version 3.20.	
			c 11 · ·		1
			-	r groups could not	be
		ed:930432-93049 Geometry:	15		
	Total S	-	3 (3.335.472 sec	tors)	
	Total Size 1.6GB (3,335,472 sectors) Cylinders: 3,309				
	Heads: 16				
	Sectors	s: 63			
	Partit	ong			
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	1229760	600.5MB
	83	Linux EXT2	2721600	64512	31.5MB
	82	Linux Swap	2923200	411264	200.8MB
	83	Linux EXT2	1431360	205632	100.4MB
	0B	FAT32	1636992	145152	70.9MB
	16	HiddenFAT16	2193408	185472	90.6MB
			•	•	
	EnCase Report				
	Case: DI-149 Page				
	= = = Measurement Logs = = = =				
	= = = -	= = = Measurement Logs = = = = No compare log found for DI-149			
			5		
	No com	pare log found	for DI-149		
	No comp Hash co	pare log found omputed for the	for DI-149 is case (DI-149)	D267F0DB8E340386DC(	)5A
Expected	No comp Hash co Hash at	pare log found omputed for the	for DI-149 is case (DI-149) 5500AB0FA333BE39		05A
Expected Results:	No comp Hash co Hash at Source	pare log found omputed for the fter test: 3E7E	for DI-149 is case (DI-149) 55E0AB0FA333BE39 nged		)5A
-	No comp Hash co Hash at Source	pare log found omputed for the ter test: 3E7F disk is unchan verification es	for DI-149 is case (DI-149) 55E0AB0FA333BE39 nged		05A

Case DI-150 for H	InCase 3.20			
Case Summary:	Create an image from a direct access IDE source disk			
	to a direct access IDE destination disk			
	where the source disk is smaller than the destination			
Tester Name:	JRL			
Test Date:	Thu Jun 06 08:15:13 2002			
PC:	Cadfael			
Disks:	Source: DOS Drive 80 Physical Label F5			
	Destination: DOS Drive 81 Physical Label 93			
	Image media: DOS Drive 80 Physical Label 7C			
	F5 is an IBM-DTLA-307020 with 40188960 sectors			
	93 is a WDC WD300BB-00CAA0 with 58633344 sectors			
	7C is a MAXTOR 6L040J2 with 78177792 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16			
setup:	Disk: F5			
	Host: Cadfael			

Case DI-150 for 1	EnCase 3.20			
Case DI-150 101	Operator: JRL			
	OS: WindowsMe/Linux			
	Date: Sat Aug 11 11:	13:43 2001		
	2000 200 mag 11 11	10 10 1001		
	DISKWIPE.EXE F5_SRC	Cadfael 80 F5 /sro	2	
	X:\pm\pgmagic /cmd=X			
	Load Operating Syste	-		
	DISKHASH.EXE F5_SRC	Cadfael 80 /before	2	
	Disk hash = 83A0002			
Destination	Z:\ss\DISKWIPE.EXE D	I-150 Cadfael 81 !	93 /noask /dst /new_	_log /comment
Setup:	JRL			
	No partition table d	efined		
Error Setup:	none			
Execute:	Z:\ss\DISKWIPE.EXE D	I-150 Cadfael 81 9	93 /noask /dst /new_	_log /comment
	JRL			
	Z:\ss\DISKCMP.EXE DI			omment JRL
Log files loc:	test-archive/encase/		0	
Log File	Image file acquired			
Highlights:	Restore environment		_	
	EnCase report for ca			
	Evidence Number "F5	A'l'A-l" Alias "F'	5 –A'I'A– I "	
		was accepted les-	TDT at 06/02/02 00.	E4.01DM
	File "D:\F5-ATA.E01" The computer system			54·UIPM.
	THE COMPULET SYSCEM	CIUCK IEdu. 00/03	UZ UZ·JH·UIPM.	
	Evidence acquired un	der DOS 7 10 usin	version 3 20	
	lividence dequired an			
	File Integrity:			
	Completely Verified,	0 Errors.		
	Verification Hash:		9B9D22FBB479FE00D	
	Drive Geometry:			
	Total Size 19.2			
	Cylinders: 16,383			
	Heads: 16			
	Sectors: 63			
	Partitions:			
		Chamb Coston	Watal Castowa	Ci - c
	Code Type	Start Sector	Total Sectors	Size
	06 BIGDOS	0	1237005	604.0MB
	83 Linux EXT2	9430155	6152895	2.9GB
	82 Linux Swap	39760875	417690	204.0MB
	83 Linux EXT2	2249100	208845	102.0MB
	06 BIGDOS	2457945	144585	70.6MB
	16 HiddenFAT16	6699105	192780	94.1MB
	EnCase Report			
	Case: F5-ata Page			
	= = = = Measurement Sectors Compared 401	5		
	-	88960		
	Sectors Differ 0 Diffs range			
	Source (40188960) ha	a 19444294 former	anatora than doating	tion
	(58633344)	S TOILIOU TEMEL	SCOLOIS LHAH UESLING	
	Zero fill:	0		
	Src Byte fill (F5):	0		
	Dst Byte fill (93):	-		
	Other fill:	0		
	Other no fill:	0		
	This case uses the h	8	case DI-153	
	Hash after test: 83A	-		1
Expected	Source disk is uncha			
Results:	src compares qualifi			
Actual Results:	No anomalies			

Case DI-150 for H	InCase 3.20
Analysis:	Expected results achieved

	EnCase 3.20						
Case Summary:		om a direct access	IDE source disk				
-		IDE destination d					
	where the source of	lisk is the same si	ze as the destinat:	ion			
Tester Name:	JRL						
Test Date:	Thu Jun 06 07:17:17 2002						
PC:	Rumpole	<u> </u>					
Disks:		80 Physical Label					
		rive 81 Physical I					
	-	Image media: DOS Drive 80 Physical Label 7C					
	F5 is an IBM-DTLA-307020 with 40188960 sectors F7 is an IBM-DTLA-307020 with 40188960 sectors						
	7C is a MAXTOR 6L040J2 with 78177792 sectors						
			and boot floppy with	n run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2						
Source disk		ndows Me with EXT2					
setup:	Disk: F5						
-	Host: Cadfael						
	Operator: JRL						
	OS: WindowsMe/Lin						
	Date: Sat Aug 11 1	1:13:43 2001					
		C Cadfael 80 F5 /s					
		=X:\pm\fat-src.txt stem to Source dis					
		C Cadfael 80 /befo					
	21010110111011110111101110	to callact 00 / Delt					
	Disk hash = 83A00	02816BBF089F8BE33C	41C92C3B5A0F42A54				
Destination			. F7 /noask /dst /ne	ew_log /comment			
Setup:	JRL						
	No partition table	e defined					
Error Setup:	none						
Execute:	Z:\ss\DISKWIPE.EXE DI-152 Rumpole 81 F7 /noask /dst /new_log /comment			ew_log /comment			
	JRL	DT 1E2 Codfool 90	RE 01 E7 (now log	acommont TDI			
Log files loc:		Z:\ss\DISKCMP.EXE DI-152 Cadfael 80 F5 81 F7 /new_log /comment JRL test-archive/encase/encase-3.20/DI-152					
Log File	Image file acquired from DOS						
Highlights:	Restore environment Windows 2000						
	EnCase report for case DI-152 is in F5-ATA.txt						
	Evidence Number "F5-ATA-1" Alias "F5-ATA-1"						
		File "D:\F5-ATA.E01" was acquired by JRL at 06/03/02 02:54:01PM.					
	The computer syste	m clock read: 06/0	3/02 02:54:01PM.	The computer system clock read: 06/03/02 02:54:01PM.			
	Fuidence acquired under DOS 7 10 using version 2 20						
	Evidence acquired under DOS 7.10 using version 3.20.						
	Evidence acquired	under DOS 7.10 usi	ng version 3.20.				
	_	under DOS 7.10 usi	ng version 3.20.				
	File Integrity: Completely Verifie		ng version 3.20.				
	File Integrity: Completely Verifie	d, 0 Errors.	ng version 3.20. 109B9D22FBB479FE00D				
	File Integrity:	d, 0 Errors.	-				
	File Integrity: Completely Verific Verification Hash Drive Geometry:	d, 0 Errors. 849BAEFDE9407	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16	d, 0 Errors. 849BAEFDE9407	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D	,			
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s	109B9D22FBB479FE00D				
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s 383 Start Sector	109B9D22FBB479FE00D ectors) Total Sectors	Size			
	File Integrity: Completely Verific Verification Hash Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63 Partitions: Code Type 06 BIGDOS	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s 383 	109B9D22FBB479FE00D ectors) Total Sectors 1237005	Size 604.0MB			
	File Integrity: Completely Verific Verification Hash: Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s 383 	109B9D22FBB479FE00D ectors) Total Sectors 1237005 6152895	Size 604.0MB 2.9GB			
	File Integrity: Completely Verific Verification Hash: Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap	d, 0 Errors. 849BAEFDE9407 .2GB (40,188,960 s 383 Start Sector 0 9430155 39760875	109B9D22FBB479FE00D ectors) Total Sectors 1237005 6152895 417690	Size 604.0MB 2.9GB 204.0MB			
	File Integrity: Completely Verific Verification Hash: Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap 83 Linux EXT2	d, 0 Errors. 849BAEFDE9407 2.2GB (40,188,960 s 383 Start Sector 0 9430155 39760875 2249100	Total Sectors 1237005 6152895 417690 208845	Size 604.0MB 2.9GB 204.0MB 102.0MB			
	File Integrity: Completely Verific Verification Hash: Drive Geometry: Total Size 19 Cylinders: 16 Heads: 16 Sectors: 63 Partitions: Code Type 06 BIGDOS 83 Linux EXT2 82 Linux Swap	d, 0 Errors. 849BAEFDE9407 2.2GB (40,188,960 s 383 Start Sector 0 9430155 39760875 2249100 2457945	109B9D22FBB479FE00D ectors) Total Sectors 1237005 6152895 417690	Size 604.0MB 2.9GB 204.0MB			

Case DI-152 for H	InCase 3.20			
	EnCase Report			
	Case: F5-ata Page			
	= = = Measurement Logs = = = = Sectors Compared 40188960			
	Sectors Differ 10395			
	Diffs range 40178565-40188959			
	This case uses the hash computed from case DI-153			
	Hash after test: 83A0002816BBF089F8BE33C41C92C3B5A0F42A54			
Expected	Source disk is unchanged			
Results:	src compares equal to dst			
Actual Results:	Restore anomaly			
Analysis:	Expected results not achieved			

Case DI-153 for	EnCase 3.20
Case Summary:	Create an image from a direct access IDE source disk
	to a direct access IDE destination disk
	where the source disk is larger than the destination
Tester Name:	JRL
Test Date:	Thu Jun 06 08:26:09 2002
PC:	Wimsey
Disks:	Source: DOS Drive 80 Physical Label F5
	Destination: DOS Drive 81 Physical Label A6
	Image media: DOS Drive 80 Physical Label 7C F5 is an IBM-DTLA-307020 with 40188960 sectors
	A6 is a WDC WD200BB-00AUA1 with 39102336 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16
setup:	Disk: F5
-	Host: Cadfael
	Operator: JRL
	OS: WindowsMe/Linux
	Date: Sat Aug 11 11:13:43 2001
	DISKWIPE.EXE F5_SRC Cadfael 80 F5 /src
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt
	Load Operating System to Source disk DISKHASH.EXE F5_SRC Cadfael 80 /before
	DISKNASH.EAE F5_SKC Caulael ou /Delole
	Disk hash = 83A0002816BBF089F8BE33C41C92C3B5A0F42A54
Destination	Z:\ss\DISKWIPE.EXE DI-153 Wimsey 81 A6 /noask /dst /new_log /comment
Setup:	JRL
-	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-153 Wimsey 81 A6 /noask /dst /new_log /comment
	JRL
	Z:\ss\DISKCMP.EXE DI-153 Wimsey 80 F5 81 A6 /new_log /comment JRL
	Z:\ss\DISKHASH.EXE DI-153 Wimsey 80 /comment F5(JRL) /new_log /after
Log files loc:	test-archive/encase/encase-3.20/DI-153
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 2000
	EnCase report for case DI-153 is in F5-ATA.txt Evidence Number "F5-ATA-1" Alias "F5-ATA-1"
	EVIDENCE NUMBER FJ-AIA-I ATIAS FJ-AIA-I
	File "D:\F5-ATA.E01" was acquired by JRL at 06/03/02 02:54:01PM.
	The computer system clock read: 06/03/02 02:54:01PM.
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: 849BAEFDE9407109B9D22FBB479FE00D
	During Geometry
	Drive Geometry:
	Total Size 19.2GB (40,188,960 sectors) Cylinders: 16,383
	Heads: 16
	Sectors: 63

Case DI-153 for 1	EnCase 3	.20			
	Partit	ions:			
	Code	Туре	Start Sector	Total Sectors	Size
	06	BIGDOS	0	1237005	604.0MB
	83	Linux EXT2	9430155	6152895	2.9GB
	82	Linux Swap	39760875	417690	204.0MB
	83	Linux EXT2	2249100	208845	102.0MB
	06	BIGDOS	2457945	144585	70.6MB
	16	HiddenFAT16	6699105	192780	94.1MB
Expected	Case: = = = = Sector: Diffs : Source Hash c Hash a	omputed for the	)2336 -39102335 s 1086624 more s is case (DI-153) )002816BBF089F8B	ectors than destina E33C41C92C3B5A0F422	. ,
Results:			5	src is truncated o	on dst.
		tion is logged			
Actual Results:	Restor	e anomaly			
Analysis:	Expect	ed results not	achieved		

Case DI-154 for	EnCase 3.20				
Case Summary:	Create an image from an ASPI SCSI source disk				
-	to an ASPI SCSI destination disk				
	where the source disk is smaller than the destination				
	Introduce an error on the image.				
Tester Name:	JRL				
Test Date:	Fri Dec 06 22:07:39 2002				
PC:	McCloud				
Disks:	Source: DOS Drive 80 Physical Label E3				
	Destination: DOS Drive 81 Physical Label E6				
	Image media: DOS Drive 80 Physical Label 91				
	E3 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors				
	E6 is a SEAGATE ST318404LC with 35843670 sectors				
	91 is a WDC WD300BB-00CAA0 with 58633344 sectors				
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts				
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2				
Source disk	Dual boot Linux/Windows Me with EXT2 & Fat16				
setup:	Disk: E3				
secupi	Host: Cadfael				
	Operator: JRL				
	OS: Linux Red Hat 7.1/Windows Me				
	Date: Sat Jul 21 16:17:29 2001				
	DISKWIPE.EXE E3_SRC Rumpole 80 E3 /src /new_log				
	X:\pm\pqmagic /cmd=X:\pm\fat-src.txt				
	Load Operating System to Source disk				
	DISKHASH.EXE E3_SRC Rumpole 80 /before				
	DISKINGHERE ES_SKC Kullpore of / Derore				
	Disk hash = 0F9DACDA6C63D197C048782003D324108CEC7AB0				
Destination	Z:\ss\DISKWIPE.EXE DI-154 McCloud 81 E6 /noask /dst /new_log /comment				
Setup:	JRL				
-	No partition table defined				
Error Setup:	cmd: Z:\ss\CORRUPT.EXE DI-154 McCloud D:\E3.e02 1044805 51				
<u>T</u>	Comment: Change 255/009/01 to 255/000/01 at LBA 4097142				
Execute:	Z:\ss\DISKWIPE.EXE DI-154 McCloud 81 E6 /noask /dst /new_log /comment				
	JRL				
	Z:\ss\DISKCMP.EXE DI-154 Wimsey 80 E3 81 E6 /new_log /comment JRL				
	Z:\ss\DISKHASH.EXE DI-154 Wimsey 80 /comment E3(JRL) /new_log /after				
Log files loc:	test-archive/encase/encase-3.20/DI-154				
Log File	Image file acquired from DOS				
TOA LITE	THATE THE ACTURED TON DOD				

Highlights:Restore environment Windows 98 Encase report for case br154 is in 154.txt Evidence Number "E3-all"File TD:VE3.e01" was acquired by JRL at 12/07/02 02:07:22AM. The computer system clock read: 12/07/02 02:07:22AM. Evidence acquired under DOS 7.10 using version 3.20.The integrity of the following sector groups could not be verified:4097088-4097151 Drive Geometry: Total Size 8.6GB (17,938,985 sectors)Partitions:Code Type5tart Sector Total Sectors 604.0MB 83 Linux Exr2 9430155 6152895 2.9GB 82 Linux Swap 17510850 417690 204.0MB 83 Linux Exr2 249100 208845 102.0MB 06 BIGDOS 2457945 144585 70.6MB 16 HiddenPATI6 6699105 192780 94.1MBEncase Report Case: DI-154 Page = = = Measurement Logs = = = s Sectors Differ 1 Diffs range 4097142 Source (17938985 has 17904685 fewer sectors than destination (35843670) Zero fill: 17904685 Src Byte fill (E6): 0 Other no fill: 0 Det tyte fill: 0 DE tyte fill (E6): 0 Other no fill: 0 Det tyte fill (E6): 0 Cother no fill: 0 Det fill: 0 DE tyte fill (E6): 0 Cother no fill: 0 DE tyte fill (E6): 0 Cother no fill: 0 DE Added Sector State Sector St	Case DI-154 for H	EnCase 3	.20				
<pre>Evidence Number "E3-all" Alias "E3-all" File "D:\E3.e01" was acquired by JRL at 12/07/02 02:07:22AM. The computer system clock read: 12/07/02 02:07:22AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:4097088-4097151 Drive Geometry: Total Size 8.6GB (17,938,985 sectors)  Partitions: Code Type Start Sector Total Sectors Size O6 BiGDOS 0 1237005 604.0MB 83 Linux EXT2 9430155 6152895 2.9GB 82 Linux Swap 17510850 417690 204.0MB 83 Linux EXT2 2249100 208845 102.0MB 06 BiGDOS 2457945 144585 70.6MB 16 HiddenFAT16 6699105 192780 94.1MB EnCase Report Case: DI-154 Page = = = Measurement Logs = = = Sectors Compared 17938985 Sectors Differ 1 Diffs range 4097142 Source (17938985) has 17904685 fewer sectors than destination (35843670) Zero fill: 17904685 Src Byte fill (E5): 0 Other no fill: 0 Other no fill: 0 Hash after test: 0F9ACDAC663D197C048782003D324108CEC7AB0 Expected Source disk is unchanged Results: No anomalies</pre>	Highlights:	Restor	Restore environment Windows 98				
<pre>File "D:\B3.e01" was acquired by JRL at 12/07/02 02:07:22AM. The computer system clock read: 12/07/02 02:07:22AM. Evidence acquired under DOS 7.10 using version 3.20. The integrity of the following sector groups could not be verified:4097088-4097151 Drive Geometry: Total Size 8.6GB (17,938,985 sectors) Partitions: Code Type Start Sector Total Sectors Size 06 BIGDOS 0 1237005 604.0MB 83 Linux EXT2 9430155 6152895 2.9GB 82 Linux EXT2 9430155 6152895 2.9GB 83 Linux EXT2 2249100 208845 102.0MB 06 BIGDOS 2457945 144585 70.6MB 16 BIGDOS 2457945 144585 70.6MB 16 BIGDOS 192780 94.1MB EnCase Report Case: DI-154 Page = = = Measurement Logs = = = Sectors Compared 17938985 Sectors Differ 1 Diffs range 4097142 Source (17938985) has 17904685 fewer sectors than destination (35843670) Zero fill: 17904685 fewer sectors than destination (35843670) Zero fill: 17904685 Src Byte fill (E5): 0 Other no fill: 0 Other no fill: 0 Hash after test: 0FPACDABAC63D197C048782003D324108CEC7AB0 Expected Results: No anomalles</pre>							
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verified 4097088-4097151           Drive Geometry:           Total Size           8.6GB (17,938,985 sectors)           Partitions:           Code         Type           Start Sector         Total Sectors           06         BIGDOS           03         Linux EXT2           9430155         6152895           83         Linux EXT2           9430100         208845           106         BIGDOS           2457945         144585           106         BIGDOS           1237005         0.60845           106         BIGDOS           1249100         208845           107.06MB           16         HiddenFAT16           6699105         192780           94.1MB   EnCase Report Case: DI-154 Page            = = = Measurement Logs = = = Sectors Compared 17938985 Sectors Differ 1 Diffs range 4097142 Source (17938985) has 17904685 fewer sectors than destination (35843670) Zero fill: 17904685 Src Byte fill (E3): 0 Det Byte fill (E3): 0 Det Byte fill (E3): 0 Det Byte fill (E3): 0 Other no fill: 0 Other no fill: 0 Hash computed for this case (DI-154) Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0 Expected Source disk is unchanged image verification error Actual Results: No anomalies		Eviden	ce acquired und	er DOS 7.10 usi	ng version 3.20.		
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Partitions:           Code         Type         Start Sector         Total Sectors         Size           06         BIGDOS         0         1237005         604.0MB           83         Linux EXT2         9430155         6152895         2.9GB           82         Linux EXT2         9430155         6152895         2.9GB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report           Case: DI-154         Page           = = =         Measurement Logs = = =           Sectors Compared 17938985         Sectors Differ 1           Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)           Zero fill:         17904685           Src Byte fill (E3):         0           Dat Byte fill (E3):         0           Dat Byte fill (E6):         0           Other no fill:         0           Other no fill:         0           Other no fill:         0           Hash computed for this case (DI-15			-	(17 020 005 70	at awa)		
Code         Type         Start Sector         Total Sectors         Size           06         BIGDOS         0         1237005         604.0MB           83         Linux EXT2         9430155         6152895         2.9GB           82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154         Page           = = =         Measurement Logs = = =         Sectors Compared 17938985         Sectors Differ 1           Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)         Zero fill:         17904685           Src Byte fill (E3):         0         Det Byte fill (E3):         0           Dat Byte fill (E5):         0         Other no fill:         0           Hash after test:         0F9DACDA6C63D197C048782003D324108CEC7AB0         Source disk is unchanged               Results:             imag		Total	Size 8.6GB	(1/,938,985 se	ctors)		
Code         Type         Start Sector         Total Sectors         Size           06         BIGDOS         0         1237005         604.0MB           83         Linux EXT2         9430155         6152895         2.9GB           82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154         Page           = = =         Measurement Logs = = =         Sectors Compared 17938985         Sectors Differ 1           Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)         Zero fill:         17904685           Src Byte fill (E3):         0         Det Byte fill (E3):         0           Dat Byte fill (E5):         0         Other no fill:         0           Hash after test:         0F9DACDA6C63D197C048782003D324108CEC7AB0         Source disk is unchanged               Results:             imag							
Code         Type         Start Sector         Total Sectors         Size           06         BIGDOS         0         1237005         604.0MB           83         Linux EXT2         9430155         6152895         2.9GB           82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154         Page           = = =         Measurement Logs = = =         Sectors Compared 17938985         Sectors Differ 1           Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)         Zero fill:         17904685           Src Byte fill (E3):         0         Det Byte fill (E3):         0           Dat Byte fill (E5):         0         Other no fill:         0           Hash after test:         0F9DACDA6C63D197C048782003D324108CEC7AB0         Source disk is unchanged               Results:             imag							
Code         Type         Start Sector         Total Sectors         Size           06         BIGDOS         0         1237005         604.0MB           83         Linux EXT2         9430155         6152895         2.9GB           82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154         Page           = = =         Measurement Logs = = =         Sectors Compared 17938985         Sectors Differ 1           Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)         Zero fill:         17904685           Src Byte fill (E3):         0         Det Byte fill (E3):         0           Dat Byte fill (E5):         0         Other no fill:         0           Hash after test:         0F9DACDA6C63D197C048782003D324108CEC7AB0         Source disk is unchanged               Results:             imag							
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83         Linux EXT2         9430155         6152895         2.9GB           82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           83         Linux EXT2         2249100         208845         102.0MB           84         HiddenFAT16         6699105         192780         94.1MB           85         EnCase Report         Case: DI-154         Page         =           85         Sectors Compared 17938985         Sectors Differ 1         Diffs range 4097142           Source (17938985) has 17904685 fewer sectors than destination         (35843670)         Zero fill:         17904685           Src Byte fill (E3):         0         Dst Byte fill (E3):         0         Other fill:           94         Det Byte fill (E6):         0         Other no fill:         0           95         Bource disk is unchanged         Source disk is unchanged         Expected         Source disk is unchanged           10         Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0         Source disk is unchanged         Image verification error							
82         Linux Swap         17510850         417690         204.0MB           83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6ME           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154           Case: DI-154         Page           =         =         Measurement Logs = = =           Sectors Compared 17938985         Sectors Compared 17938985           Sectors Differ 1         Diffs range 4097142           Source (17938985) has 17904685         fewer sectors than destination (35843670)           Zero fill:         17904685           Src Byte fill (E3):         0           Dst Byte fill (E6):         0           Other no fill:         0           Dther no fill:         0           Hash computed for this case (DI-154)           Hash after test: OF9DAcD6623D197C048782003D324108CEC7AB0           Source disk is unchanged           image verification error           Actual Results:				ů.			
83         Linux EXT2         2249100         208845         102.0MB           06         BIGDOS         2457945         144585         70.6MB           16         HiddenFAT16         6699105         192780         94.1MB           EnCase Report Case: DI-154         Page           =         =         =         Measurement Logs = = =         Sectors Compared 17938985           Sectors Differ 1         Diffs range 4097142         Source (17938985) has 17904685 fewer sectors than destination (35843670)         2ero fill:         17904685           Src Byte fill (E3):         0         Dst Byte fill (E3):         0           Dther no fill:         0         0         0           Hash computed for this case (DI-154)         Hash after test: 0F9DACDA6C63D197C048782003D324108CEC7AB0           Expected         Source disk is unchanged         Results:           image verification error         Actual Results:         No anomalies							
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ExpectedSource disk is unchangedResults:image verification errorActual Results:No anomalies							
Actual Results: No anomalies	Expected						
	Results:	image verification error					
	Actual Results:	No ano	No anomalies				
Analysis: Expected results achieved	Analysis:	Expect	ed results achi	eved			

Case DI-160 for H	Case DI-160 for EnCase 3.20		
Case Summary:	Create an image from an XBIOS-IDE source disk		
	to an XBIOS-SCSI destination disk		
	where the source disk is smaller than the destination		
Tester Name:	JRL		
Test Date:	Thu Jun 06 09:10:05 2002		
PC:	AndWife		
Disks:	Source: DOS Drive 80 Physical Label 94		
	Destination: DOS Drive 81 Physical Label CC		
	Image media: DOS Drive 80 Physical Label 75		
	94 is a WDC WD300BB-00CAA0 with 58633344 sectors		
	CC is a SEAGATE ST336705LC with 71687370 sectors		
	75 is a IC35L040AVER07-0 with 80418240 sectors		
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts		
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2		
Source disk	Linux EXT2 & Fat32		
setup:	Disk: 94		
	Host: McMillan		
	Operator: JRL		
	OS: Windows/Me		
	Options: Typical		

Case DI-160 for H	EnCase 3	.20			
		Tue Jun 04 01:5	59:45 2002		
	<pre>cmd: Z:\ss\DISKWIPE.EXE 94 McMillan 80 94 /src /new_log X:\pm\pqmagic /cmd=X:\pm\f32-src.txt Load Operating System to Source disk cmd: Z:\ss\DISKHASH.EXE 94 McMillan 80 /before /new_log</pre>				
	Disk h	Disk hash = FA03D9CA7ECD0D7CED83FBC05FD74465761020B9			
Destination		DISKWIPE.EXE DI	I-160 AndWife 81	L CC /noask /dst /ne	ew_log /comment
Setup:	-	tition table d	efined		
Error Setup:	none		- 160 - WY'6 - 01		
Execute:	JRL			CC /noask /dst /ne	_ •
Log files loc:			-160 McCloud 80 encase-3.20/DI-1	<u>94 81 CC /new_log</u> ,	/comment JRL
Log File		file acquired f		.00	
Highlights:		e environment V			
		e report for cas ace Number "94"	se DI-160 is in Alias "94"	94.txt	
				at 06/06/02 08:46: 06/02 08:46:27PM.	:27PM.
	Eviden	ce acquired und	der DOS 7.10 usi	ng version 3.20.	
	Comple	ntegrity: tely Verified, cation Hash:		8D8068D0369643E6B80	
	Drive Geometry: Total Size 28.0GB (58,633,344 sectors) Cylinders: 16,383 Heads: 16 Sectors: 63				
	Partit	ions:			
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	1237005	604.0MB
	83	Linux EXT2	58010715	64260	31.4MB
	82	Linux Swap	58203495	417690	204.0MB
	83 0B	Linux EXT2 FAT32	1429785	208845	102.0MB
	0B 16	HiddenFAT16	1638630 2200905	144585 192780	70.6MB 94.1MB
	<pre>EnCase Report Case: 94 Page = = = Measurement Logs = = = = Sectors Compared 58633344 Sectors Differ 0 Diffs range Source (58633344) has 13054026 fewer sectors than destination (71687370)</pre>				
	Zero fill: 0 Src Byte fill (94): 0 Dst Byte fill (CC): 13054026				
	Other		0		
		no fill: ase uses the ha	0 ash computed fro	m case DT-161	
		This case uses the hash computed from case DI-161 Hash after test: FA03D9CA7ECD0D7CED83FBC05FD74465761020B9			
Expected	Source	Source disk is unchanged			
Results:		src compares qualified equal to dst			
Actual Results:	No anomalies Expected results achieved				
Analysis:	Lxpect	ed resurts ach	revea		

Case DI-161 for 1	EnCage 3 20			
Case Summary:	Create an image from an XBIOS-IDE s	ourgo diak		
Case Summary.	to an XBIOS-SCSI destination disk	ource arsk		
	where the source disk is larger that	n the destination		
Tester Name:	JRL			
Test Date:				
PC:	Thu Jun 06 21:20:06 2002 McCloud			
Disks:	Source: DOS Drive 80 Physical Label	0.4		
DISKS	Destination: DOS Drive 80 Physical Laber			
	Image media: DOS Drive 80 Physical			
	94 is a WDC WD300BB-00CAA0 with 586			
	1F is a QUANTUM ATLAS10K3_18_SCA wi			
	75 is a IC35L040AVER07-0 with 80418			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk		I dir Solipos	
Source disk	Linux EXT2 & Fat32			
setup:	Disk: 94			
N T T T T	Host: McMillan			
	Operator: JRL			
	OS: Windows/Me			
	Options: Typical			
	Date: Tue Jun 04 01:59:45 2002			
	cmd: Z:\ss\DISKWIPE.EXE 94 McMillar	80 94 /src /new_log		
	X:\pm\pqmagic /cmd=X:\pm\f32-src.tz			
	Load Operating System to Source dis			
	cmd: Z:\ss\DISKHASH.EXE 94 McMillar	80 /before /new_log		
· · ·	Disk hash = FA03D9CA7ECD0D7CED83FE			
Destination	Z:\ss\DISKWIPE.EXE DI-161 McCloud 8	1 1F /noask /dst /new	_log /comment	
Setup:	JRL			
	No partition table defined			
Error Setup:	none		-	
Execute:	Z:\ss\DISKWIPE.EXE DI-161 McCloud 8	1 1F /noask /dst /new	_log /comment	
	JRL	04 01 18 (2000 ] (-	TDI	
	Z:\ss\DISKCMP.EXE DI-161 McCloud 80			
	Z:\ss\DISKHASH.EXE DI-161 McCloud 80 /comment 94(JRL) /new_log /after test-archive/encase/encase-3.20/DI-161			
Log files loc:		101		
Log File Highlights:	Image file acquired from DOS Restore environment Windows 2000			
Algillights.	EnCase report for case DI-161 is in 94.txt			
	Evidence Number "94" Alias "94"			
	Evidence Mulber 91 Arras 91			
	File "D:\94.E01" was acquired by JRL at $06/06/02$ $08:46:27$ PM.			
	The computer system clock read: 06/06/02 08:46:27PM.			
	Evidence acquired under DOS 7.10 us	ing version 3.20.		
	File Integrity:			
	Completely Verified, 0 Errors.			
	Verification Hash: 211FEC4CA994	L8D8068D0369643E6B80		
	Drive Geometry:			
	Total Size 28.0GB (58,633,344	sectors)		
	Cylinders: 16,383			
	Heads: 16			
	Sectors: 63			
	Partitions:			
	Code         Type         Start         Sector	Total Sectors	Size	
	0B FAT32 0	1237005	604.0MB	
	83 Linux EXT2 58010715	64260	31.4MB	
	82 Linux Swap 58203495	417690	204.0MB	
	83 Linux EXT2 1429785	208845	102.0MB	
	83         Linux EXT2         1429785           0B         FAT32         1638630	144585	70.6MB	
	16 HiddenFAT16 2200905	192780	94.1MB	
		172,00		

Case DI-161 for H	EnCase 3.20
	EnCase Report Case: 94 Page
	<pre>= = = Measurement Logs = = = = Sectors Compared 35916548 Sectors Differ 11273 Diffs range 35905275-35916547 Source (58633344) has 22716796 more sectors than destination (35916548) Hash computed for this case (DI-161) Hash after test: FA03D9CA7ECD0D7CED83FBC05FD74465761020B9</pre>
Expected Results:	Source disk is unchanged src compares qualified equal to dst, src is truncated on dst truncation is logged
Actual Results:	Restore anomaly
Analysis:	Expected results not achieved

Case DI-163 for 1	EnCase 3.20
Case Summary:	Create an image from an XBIOS-SCSI source disk
	to an XBIOS-IDE destination disk
	where the source disk is smaller than the destination
Tester Name:	JRL
Test Date:	Fri Jun 07 14:06:39 2002
PC:	AndWife
Disks:	Source: DOS Drive 80 Physical Label E4
	Destination: DOS Drive 81 Physical Label 9F Image media: DOS Drive 80 Physical Label 7C
	E4 is a QUANTUM ATLAS10K2-TY092J with 17938985 sectors
	9F is a WDC WD200BB-32CFC0 with 39102336 sectors
	7C is a MAXTOR 6L040J2 with 78177792 sectors
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2
Source disk	Windows 2000 with NTFS & Fat32
setup:	Disk: E4
	Host: JudgeDee
	Operator: JRL
	OS: Windows 2000/NT Date: Sat Jul 21 16:58:28 2001
	Date. Sat Jul 21 10.50.20 2001
	DISKWIPE.EXE E4_SRC JudgeDee 80 E4 /src /noask /comment Windows 2000
	source disk
	X:\pm\pqmagic /cmd=X:\pm\nt-src.txt
	Load Operating System to Source disk
	cmd: X:\ss\DISKHASH.EXE Hash Wimsey 80 /comment E4 /new_log /before
	Disk hash = 25BF8AF6B2D3E0BD1909C96E368DB27F51C49CBF
Destination Setup:	Z:\ss\DISKWIPE.EXE DI-163 AndWife 81 9F /noask /dst /new_log /comment JRL
secup.	No partition table defined
Error Setup:	none
Execute:	Z:\ss\DISKWIPE.EXE DI-163 AndWife 81 9F /noask /dst /new_log /comment
	JRL
	z:\ss\DISKCMP.EXE DI-163 Cadfael 81 E4 80 9F /new_log /comment JRL
Log files loc:	test-archive/encase/encase-3.20/DI-163
Log File	Image file acquired from DOS
Highlights:	Restore environment Windows 2000
	EnCase report for case DI-163 is in E4.txt
	Evidence Number "1" Alias "E4 image"
	$File    D \cdot E4 E01    was accurate by TDL at 0E/2E/02 04:42:12DM$
	File "D:\E4.E01" was acquired by JRL at 05/25/02 04:43:12PM. The computer system clock read: 05/25/02 04:43:12PM.
	The computer system clock read: 05/25/02 04:43:12PM.
	Evidence acquired under DOS 7.10 using version 3.20.
	File Integrity:
	Completely Verified, 0 Errors.
	Verification Hash: AA49F2184A3A4256117B33D906CF7884
	Drive Geometry:
	Total Size 8.6GB (17,938,985 sectors)

Case DI-163 for H	InCase 3	.20			
	Partit		1		
	Code	Туре	Start Sector	Total Sectors	Size
	0B	FAT32	0	6152895	2.9GB
	07	NTFS	10249470	1237005	604.0MB
	17	Hidden IFS	13542795	1638630	800.1MB
	1B	HiddenFAT32	16691535	1237005	604.0MB
Expected Results:	5				
Results: Actual Results:		src compares qualified equal to dst No anomalies			
			d		
Analysis:	Expect	ed results achi	evea		

Case DI-164 for	EnCase 3.20			
Case Summary:	Create an image from an XBIOS-SCSI source disk			
	to an XBIOS-IDE destination disk			
	where the source disk is larger than the destination			
Tester Name:	JRL			
Test Date:	Sun Jun 16 19:27:55 2002			
PC:	McMillan			
Disks:	Source: DOS Drive 80 Physical Label CC			
	Destination: DOS Drive 81 Physical Label 91			
	Image media: DOS Drive 80 Physical Label 75			
	CC is a SEAGATE ST336705LC with 71687370 sectors			
	91 is a WDC WD300BB-00CAA0 with 58633344 sectors			
	75 is a IC35L040AVER07-0 with 80418240 sectors			
	CD-ROM with PartitionMagic Pro 6.0 and boot floppy with run scripts			
	FS-TST Release 1.0 CD-ROM + Baddisk 3.2 + Badx13 3.2			
Source disk	Diskwipe only, no OS			
setup:	Disk: CC			
-	Host: McMillan			
	Operator: JRL			
	OS: NoOs			
	Options: none			
	Date: Tue Jun 11 18:07:29 2002			
	cmd: Z:\ss\DISKWIPE.EXE CC McMillan 80 CC /src /new_log			
	No partitions defined			
	No OS loaded			
	cmd: Z:\ss\DISKHASH.EXE CC McMillan 80 /before /new_log			
	Disk hash = 6001BF9E36538F36751C6FEC94E4CE6DCFC85C9A			
Destination	Z:\ss\DISKWIPE.EXE DI-164 McMillan 81 91 /noask /dst /new_log /comment			
Setup:	JRL			
	No partition table defined			
Error Setup:	none			
Execute:	Z:\ss\DISKWIPE.EXE DI-164 McMillan 81 91 /noask /dst /new_log /comment			
	JRL			
	Z:\ss\DISKCMP.EXE DI-164 HecRamsey 81 CC 80 91 /new_log /comment JRL			
	Z:\ss\DISKHASH.EXE DI-164 HecRamsey 80 /comment CC(JRL) /new_log /after			
Log files loc:	test-archive/encase/encase-3.20/DI-164			
Log File	Image file acquired from DOS			

Case DI-164 for H	InCase 3.20			
Highlights:	Restore environment Windows 2000			
	EnCase report for case DI-164 is in CC.txt			
	Evidence Number "CC-drive" Alias "CC-drive"			
	File "F:\CC.E01" was acquired by JRL at $06/15/02$ 11:39:43PM.			
	The computer system clock read: 06/15/02 11:39:43PM.			
	Evidence acquired under DOS 7.10 using version 3.20.			
	Acquisition Notes:			
	CC has no partition table.			
	-			
	File Integrity:			
	Completely Verified, 0 Errors.			
	Verification Hash: 8042F5444887D2B81BB9489D6F844467			
	Drive Geometry:			
	Total Size 34.2GB (71,687,370 sectors)			
	Unable to read the partition table.			
	-			
	EnCase Report			
	Case: CC Page			
	_			
	= = = = Measurement Logs = = = =			
	Sectors Compared 58633344			
	Sectors Differ 12159			
	Diffs range 58621185-58633343			
	Source (71687370) has 13054026 more sectors than destination (58633344)			
	Hash computed for this case (DI-164)			
	Hash after test: 6001BF9E36538F36751C6FEC94E4CE6DCFC85C9A			
Expected	Source disk is unchanged			
Results:	src compares qualified equal to dst, src is truncated on dst			
	truncation is logged			
Actual Results:	Restore anomaly			
Analysis:	Expected results not achieved			

# About the National Institute of Justice

NIJ is the research, development, and evaluation agency of the U.S. Department of Justice. The Institute provides objective, independent, evidence-based knowledge and tools 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.
- 3. 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.

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