

Technical Requirements

In order to be considered equivalent, the computer forensic analysis software must be able to:

- recognize and analyze the following hard disk image formats:
 - Encase
 - SnapBack
 - Safeback 2.0 and under
 - Expert Witness
 - Linux DD
 - ICS
 - Ghost (forensic images only)
 - SMART
 - AccessData Logical Image (AD1)
 - MSVHD (MS Virtual Hard Disk)
 - DMG (Mac)

- identify and analyze the following file systems:
 - FAT 12, FAT 16, FAT 32
 - NTFS
 - Ext2FS
 - HFS, HFS+
 - Ext3FS
 - CDFS
 - Ext4FS
 - exFAT
 - ReiserFS 3
 - VxFS (Veritas File System)

- recognize and analyze the following whole disk encryption formats:
 - AFF (Advanced Forensic Format)
 - Utimaco Safeguard Easy
 - PGP
 - Utimaco SafeGuard Enterprise
 - Credant
 - Guardian Edge
 - SafeBoot
 - EFS
 - JFS
 - LVM
 - VMWare
 - LVM2
 - UFS1
 - UFS2

- identify and analyze the following CD and DVD file systems and formats:
 - Alcohol (*.mds)
 - IsoBuster CUE
 - PlexTools (*.pxi)
 - CloneCD (*.ccd)
 - Nero (*.nrg)
 - Roxio (*.cif)
 - ISO
 - Pinnacle (*.pdi)
 - Virtual CD (*.vc4)
 - CD-RW,
 - VCD
 - CD-ROM

- DVD+MRW
- DVCD
- DVD-RW
- DVD-VFR
- DVD+RW Dual Layer
- DVD-VR
- BD-R SRM-POW
- BD-R
- BD-R SRM
- BD-R DL
- HD DVD-R
- HD DVD-RW DL
- SVCD
- HD DVD
- HD DVD-RW
- DVD-RAM,
- CD-ROM XA
- CD-MRW,
- DVD+VR
- DVD+R
- DVD+R Dual Layer
- BD-RE
- DVD-VRW
- BD-ROM
- HD DVD-R DL
- BD-R RRM
- BDAV
- Virtual CD (*.vc4)
- HD DVD-RAM
- DVD+RW
- CD-R
- VD-R
- SACD
- DVD-R Dual Layer
- DVD-ROM
- BD-R SRM+POW
- DVD-VM
- BD-RE DL
- DVD+VRW

- provide an imager to acquire computer evidence in a timely manner.
- provide a utility which can access and copy protected registry files such as:
 - NTUser.dat for every user
 - Default
 - SAM
 - SECURITY
 - Software
 - System
 - Userdiff
- provide a utility which enables the investigators to retrieve sensitive data from the above mentioned registry files.
- provide a Password Recovery utility that can recover logon passwords using the SAM along with the System files and also recover passwords on the Microsoft Office suite or other similar suite's documents.
- provide a utility that can do a Distributed Network Attack on passwords.
- enable the investigator to create bookmarks and thumbnails to facilitate the investigation.
- import MD5 and SHA1 Hash sets from a KFF (Known File Filter) database in order to enable the investigator to eliminate all irrelevant files from the case.
- verify image integrity using the hash values.

- Traverse and Map containers as they are found after loading an evidence item image.
- index the entire evidence item.
- provide search capabilities using wildcards and preset regular expression searches.
- do data carving on the following file types:
 - AOL bag files
 - BMP files
 - EMF files
 - GIF files
 - HTML files
 - JPEG files
 - LNK files
 - OLE files (MS Office)
 - PDF files
 - PNG files
 - AIM Chat Logs
 - Facebook Status Updates
 - Facebook Chat
 - Facebook Email Artifact
 - Facebook Mail Snippets
 - Facebook Fragment
 - Gmail Email Message
 - Gmail Parsed Email
 - Google Talk Chats
 - Hotmail Email Artifact
 - Bebo Chat
 - Firefox Form History
 - Firefox Places
 - Firefox Session Store
 - Frostwire Props Files
 - GigaTribe Chat
 - IE8 Recovery URL
 - Limewire Props
 - Limewire/Frostwire Keyword Search
 - mIRC Chat Log
 - MySpace Chat
 - Twitter Status
 - Windows Messenger Plus w/chat logging
 - MSN/WLM Chat
 - Yahoo Diagnostic
 - Yahoo Webmail Chat
 - Yahoo Mail
 - Yahoo Group Chat Recvd
 - Yahoo Group Chat Sent
 - Yahoo Chat
 - Yahoo Chat UnAllocated
 - Yahoo Unencrypted Active
 - Ares P2P
 - Chrome History
 - Dropbox
 - eMule
 - Facebook
 - Flickr
 - Google Docs
 - Google Drive
 - Google Plus
 - Google Plus Chat
 - Hotmail
 - ICQ 7M Chat History
 - Internet Explorer 10

- Safari
 - Shareaza
 - SkyDrive
 - Skype, Skype 3
 - Torrent
 - Twitter
 - World of Warcraft
- provide existing filters and give the opportunity to the investigator to create his own filters.
 - decrypt EFS (Encrypted File System) files on the fly (extemporaneously).
 - deconstruct and analyse e-mail database files such as *.dbx, *.pst, *.edb, *.ost, etc.
 - provide a visualization tool to graphically analyze both file and email data by constructing timelines, relationships among parties etc.
 - recover deleted files on the following file systems:
 - FAT 12, FAT 16, FAT 32, exFAT
 - NTFS from version 3.1 to version 6.0
 - Ext2
 - recognize the following file types:

Document File Types:

- | | |
|--|-----------------------------------|
| ○ 7-Bit Text | HTML - Cyrillic (KOI8-R) |
| ○ Acrobat Portable Document Format (PDF) | HTML - Japanese EUC |
| ○ Ami Pro Document | HTML - Japanese ShiftJIS |
| ○ Ami Pro Snapshot | HTML - Korean Hangul |
| ○ Ami Professional | HTMLAG |
| ○ AreHangeul | HTMLWCA |
| ○ CEO Word | Hypertext Document |
| ○ CEO Write | IBM DCA/RFT |
| ○ CHTML (Compact HTML) | IBM FFT |
| ○ Cyrillic (Ansi 1251) | IBM Writing Assistant |
| ○ Cyrillic (KOI8-R) | IchiTaro 3 |
| ○ DEC DX 3.0 and lower | IchiTaro 4 |
| ○ DEC DX 3.1 | IchiTaro 8 |
| ○ DisplayWrite 4 | Interchange File Format Text File |
| ○ DisplayWrite 5 | Interleaf |
| ○ Enable Word Processor 3.x | Interleaf (Japanese) |
| ○ Enable Word Processor 4.x | JustWrite 1 |
| ○ Excel 2000 Save As... HTML | JustWrite 2 |
| ○ FTDF | Legacy |
| ○ Hana | Legacy Clip |
| ○ HDML (Handheld Device Markup Language) | Lotus Manuscript 1 |
| ○ HTML - Central European | Lotus Manuscript 2 |
| ○ HTML - Chinese Big5 | Lotus screen snapshot |
| ○ HTML - Chinese EUC | MacWrite II |
| ○ HTML - Chinese GB | Mass 11 |
| ○ HTML - CSS | Mass 11 (Vax) |
| ○ Matsu 4 | MIFF 5 |
| ○ Matsu 5 | MIFF 5 (Japanese) |
| ○ Microsoft Windows Write | MIFF 5.5 |
| ○ Microsoft Word 1 Document | MIFF 6 |
| ○ Microsoft Word 2 Document | MIFF 6 Japanese |
| ○ Microsoft Word 2000 Document | MS Works/Win 3 (Windows) |
| ○ Microsoft Word 3 Document (Mac) | MS Works/Win 4 |
| ○ Microsoft Word 4 Document (DOS) | MultiMate 3.6 |
| ○ Microsoft Word 4 Document (Mac) | MultiMate 4 |
| ○ Microsoft Word 5 Document (DOS) | MultiMate Advantage II |
| ○ Microsoft Word 5 Document (Japanese) | MultiMate Note |
| ○ Microsoft Word 5 Document (Mac) | Navy DIF |
| ○ Microsoft Word 6 Document | OfficeWriter |
| ○ Microsoft Word 6 Document (DOS) | P1 |
| ○ Microsoft Word 6 Document (Mac) | PC File 5.0 - Letter |
| ○ Microsoft Word 7 Document | Perfect Works 1 |

- Microsoft Word 8 Document (Mac)
- Microsoft Word 97 Document
- Microsoft Word Document
- Microsoft Works (Windows)
- Microsoft Works 1
- Microsoft Works 2
- Microsoft Works 2 (Mac)
- MIFF
- MIFF 3
- MIFF 3 (Japanese)
- MiFF 4
- MIFF 4 (Japanese)
- Rainbow
- Rich Text Format
- Rich Text Format (Japanese)
- Samna
- Signature
- SmartWare II
- Sprint
- StarOffice Writer 5.2
- TotalWord
- Unicode Text Document
- vCard Electronic Business Card
- Volkswriter
- Wang
- WangIWP
- WML - Chinese Big 5
- WML - Chinese EUC
- WML - Chinese GB
- WML - CSS
- WML - Cyrillic 1251
- WML - Cyrillic KOI8
- WML - Japanese EUC
- WML - Japanese JIS
- WML - Japanese Shift JIS
- WML - Korean Hangul
- WML - Latin 2
- Word 2000 Save As... HTML
- WORDMARC
- WordPad
- WordPerfect 8 Mac (Enh)
- WordPerfect 9
- WordPerfect 9 (Enh)
- WordPerfect 9 Mac (Enh)
- WordPerfect 9 Mac
- WordPerfect Document
- Word Pro Document
- Word Pro 96 Document
- Word Pro 97 Document
- WordStar 4 and lower
- WordStar 5
- WordStar 5.5
- WordStar 6
- PFS: First Choice 2.0
- PFS: First Choice 3.0
- PFS: WRITE A
- PFS: WRITE B
- Pocket Word
- PowerPoint 2000 Save As... HTML
- Professional Write 1
- Professional Write 2
- Professional Write PLUS
- Professional Write PLUS Clip
- Q&A Write
- Q&A Write 3
- WordPerfect 4 Document
- WordPerfect 4.2
- WordPerfect 5
- WordPerfect 5 Asian
- WordPerfect 5 Mac
- WordPerfect 6.0
- WordPerfect 6.0 Asian
- WordPerfect 6.0 Asian (Enh)
- WordPerfect 6.0 (Enh)
- WordPerfect 6.0 Mac
- WordPerfect 6.0 Mac (Enh)
- WordPerfect 6.1
- WordPerfect 6.1 Asian
- WordPerfect 6.1 Asian (Enh)
- WordPerfect 6.1 (Enh)
- WordPerfect 6.1 Mac
- WordPerfect 6.1 Mac (Enh)
- WordPerfect 7
- WordPerfect 7 Asian
- WordPerfect 7 Asian (Enh)
- WordPerfect 7 (Enh)
- WordPerfect 7 Mac
- WordPerfect 7 Mac (Enh)
- WordPerfect 8
- WordPerfect 8 Asian
- WordPerfect 8 Asian (Enh)
- WordPerfect 8 (Enh)
- WordPerfect 8 Mac
- WordStar 7
- WordStar 2000
- WordStar for Windows
- WPF Encrypt
- WPF Unknown
- WPS Plus
- WWrite ChineseBig5
- WWrite ChineseGB
- WWrite Hangeul
- WWrite Shift-JIS
- XHTMLB
- XML
- XyWrite / Nota Bene

Spreadsheet File Types

- 1-2-3 1.A Document
- 1-2-3 2.0 Document
- 1-2-3 2.01 Document
- 1-2-3 3.0 Document
- 1-2-3 4.0 Document
- Generic WKS format
- Lotus 1-2-3 2 (FRM)
- Lotus 1-2-3 6
- Lotus 1-2-3 9
- Lotus 1-2-3 OS/2 2

- 1-2-3 97 Document
- 1-2-3 Document
- 1-2-3 Japanese Document
- 1-2-3 Seal Document
- CEO Spreadsheet
- Enable SpreadSheet
- First Choice (Spreadsheet)
- Microsoft Excel 4 Workbook
- Microsoft Excel 4 Workbook (Mac)
- Microsoft Excel 4 Worksheet
- Microsoft Excel 4 Worksheet (Mac)
- Microsoft Excel 5 Worksheet (Mac)
- Microsoft Excel 7 Worksheet
- Microsoft Excel 97 Worksheet
- Microsoft Excel Worksheet
- Microsoft Multiplan 4.x
- Mosaic Twin
- MS Works Spreadsheet
- MS Works/Win 3 (SS)
- MS Works/Win 4 (SS)
- MS Works/Win Spreadsheet
- PFS Plan
- PlanPerfect File
- Lotus 1-2-3 OS/2 Chart
- Lotus Symphony 1.0 Document
- Mac Works 2 (SS)
- Microsoft Excel 2 Worksheet
- Microsoft Excel 2000 Worksheet
- Microsoft Excel 3 Workbook
- Microsoft Excel 3 Worksheet
- Quattro Pro 4
- Quattro Pro 7.0 Graph
- Quattro Pro 9 for Windows
- Quattro Pro Notebook
- Quattro Pro Notebook 1.0
- Quattro Pro Notebook 1.0J
- Quattro Pro Notebook 3.0 (DOS)
- Quattro Pro Notebook 4.0 (DOS)
- Quattro Pro Notebook 5.0
- Quattro Pro Notebook 5.5 (DOS)
- Quattro Pro Notebook 6.0
- Quattro Pro Notebook 7.0
- Quattro Pro Notebook 8.0
- Smart SpreadSheet
- SuperCalc 5
- VP Planner

Database File Types

- Access 2 File
- Access 2 System File
- Access 2000 File
- Access 2000 System File
- Access 7 File
- Access 7 System File
- ACT 1 File
- ACT 1.1 File
- ACT 2 File
- DBase IV/V File
- First Choice (Database)
- Framework III
- Mac Works 2 (DB)
- Microsoft Project98
- Microsoft Works (DB)
- MS Jet 2 Database
- MS Jet 3 Database
- MS Jet 4 Database
- MS Jet Database
- MS Money 1 File
- MS Money 2 File
- MS Money 2000 File
- MS Money 3 File
- MS Money 4 File
- MS Money 5 File
- MS Money 98 File
- MS Money File
- MS Works Database
- MS Works/Win 3 (DB)
- MS Works/Win 4 (DB)
- MS Works/Win Database
- Organizer 1.1 File
- Organizer 2 File
- Organizer 3 File
- Organizer 4 File
- ACT 3 File
- Approach 96 File
- Approach 97 File
- Ascend File
- CEO Database
- DataEase 4.x
- DataPerfect File
- DBase II File
- DBase III File
- Quicken 6 File
- Quicken 98 File
- Quicken 99 File
- Paradox 3
- Paradox 3.5
- Paradox 4
- Paradox Database File
- Paradox Script File
- Q&A Database
- Quickbooks 2 File
- Quickbooks 2000 File
- Quickbooks 3.1 File
- Quickbooks 5 File
- Quickbooks 6 File
- Quickbooks 99 File
- Quickbooks File
- Quicken 2000 File
- Quicken 2001 File
- Quicken 3 File
- Quicken 4 File
- Quicken File
- RBase 5000
- RBase File 1
- RBase File 3
- RBase V
- Reflex 2.0 Database

- Quicken 5 File
- SQLite File

Smart DataBase

Graphic File Types

- Acrobat Portable Document Format (Mac)
- Adobe Illustrator
- Adobe Photoshop File
- Ami Professional Draw
- Animated Cursor
- Animatic Film File
- Animation
- AOL Art Files version 3.0
- Apple Quicktime File
- AutoCAD Drawing Exchange File
- AutoCAD Drawing Interchange (DXF-ASCII)
- AutoCAD Drawing Interchange (DXF-Binary)
- AutoCAD DWG 12
- AutoCAD DWG 13
- AutoCAD Native Drawing Format (DWG)
- AutoCAD Native Drawing Format 14 (DWG)
- Autodesk 3D Studio File
- Autodesk Animator File
- AutoShade (RND)
- Bentley Microstation DGN
- Bitmap File
- CALS Raster File Format
- Candy 4
- CAS Fax File
- CCITT Group 3
- Computer Graphic Metafile
- ComputerEyes Raw Data File
- GIF File
- Graphic File
- Hanako 1
- Hanako 2
- Harvard Graphics
- Harvard Graphics 2.x Chart
- Harvard Graphics 3.x Chart
- Harvard Graphics Presentation
- Hewlett Packard Graphics Language
- HP Gallery
- IBM Graphics Data Format (GDF)
- IBM Picture Interchange Format
- Icon
- IGES Drawing
- Intel Digital Video File
- JiNG File (JPEG Network Graphics)
- JPEG File Interchange Format
- JPEG/JFIF File
- Kodak Flash Pix (FPX)
- Kodak Photo CD
- Lotus PIC
- Lotus screen snapshot
- Macintosh Picture 1
- Macintosh Picture 2
- MAC-Paint File
- Micrografx Designer (DRW)
- Micrografx File
- Corel Draw 2
- Corel Draw 3
- Corel Draw 4
- Corel Draw 5
- Corel Draw 6
- Corel Draw 7
- Corel Draw 8
- Corel Draw 9
- Corel Draw Clipart
- Cursor
- Cyber Paint Sequence File
- DrawPerfect File
- Dual PowerPoint 95/97
- DXB
- Encapsulated PostScript (EPS)
- Enhanced Windows Metafile
- Excel 3 Chart
- Excel 4 Chart
- Excel 5 Chart
- Excel Chart
- Framemaker
- Freelance
- Freelance 96
- GEM Bitmap (IMG)
- GEM IMG File
- GEM Metafile
- MiNG File (Multiple-image Network Graphics)
- Multi-page PCX (DCX)
- NEOChrome Animation File
- OS/2 PM Metafile
- OS/2 Warp Bitmap
- Paintshop Pro (PSP)
- PCPAINT File
- PCX Paintbrush File
- PiNG File (Portable Network Graphics)
- Portable Bitmap (PBM)
- Portable Graymap (PGM)
- Portable Pixmap (PPM)
- PostScript
- PowerPoint 2000
- PowerPoint 3
- PowerPoint 3 (Mac)
- PowerPoint 4
- PowerPoint 4 (Mac)
- PowerPoint 7
- PowerPoint 97/98
- Progressive JPEG
- Sun Raster File
- Targa File
- TIFF File
- Video Clip
- Visio 2000
- Visio 4

- MIFFG
- Windows DIB
- Windows Icon
- Windows Metafile
- WordPerfect Graphic (WPG)
- WordPerfect Graphic File
- WordPerfect MAC SOFT Graphics
- Visio 5
- WP Presentations
- WP Presentations 7
- XBM - X-Windows Bitmap
- XPM - X-Windows Pixmap
- XWD - X-Windows Dump

Multimedia File Types

- AIFF
- ASF
- Audio Director
- AVI
- Flash
- AIFF
- ASF
- Audio Director
- AVI
- Flash
- WAV
- WM
- WMA
- WMV
- 8SVX

E-mail Message Programs

- AOL
- Earthlink
- Eudora
- Hotmail
- MSN E-mail
- Netscape
- Outlook
- Outlook Express
- Yahoo!

Instant Messaging Programs

Recover instant messaging chat logs and additional information such as buddy lists.

The following are supported instant messaging applications:

- AOL Instant Messenger
- Yahoo Messenger

Executable File Types

- Executable File
- Executable File (COM)
- JavaScript
- NT Executable File
- OS/2 Executable File
- Windows VxD Executable File

Other Known File Types

- 8 Bit Sample Voice
- Access File
- Access System File
- AccessData Recovery 5.0 Biographical Data
- AccessData Recovery 5.0 Biographical Dictionary
- AccessData Recovery 5.0 Dictionary
- AccessData Recovery 5.0 Hard Drive Dictionary
- AccessData Recovery 5.0 Password Data
- File System Slack
- Help File
- ICF
- Internet Cookie File
- Internet Explorer Link Files
- Journal Entry
- LZH Compress
- Microsoft Office Binder
- MIDI Sequence

- AccessData Recovery 5.0 Profile Data
- AccessData Recovery 5.0 Status Report
- ACT File
- Address Book Entry
- Appointment
- Approach
- Audio Clip
- Audio Director
- Audio Flash
- Contact Information
- Drive Free Space
- Email Folder
- Encapsulated PostScript File
- Envoy
- Envoy 7
- Escher
- File Slack
- WordPerfect Calculator
- WordPerfect Calendar
- WordPerfect Character Map
- WordPerfect Column Block
- WordPerfect Dictionary
- WordPerfect Dictionary – Rules
- WordPerfect Display Resource File
- WordPerfect Equation Resource
- WordPerfect External Spell Code Module
- WordPerfect External Spell Dictionary
- WordPerfect File Manager
- WordPerfect Graphic Driver
- WordPerfect Help File
- WordPerfect Hyph Lex Module
- WordPerfect Hyphenation Code Module
- WordPerfect Hyphenation Data Module
- WordPerfect InForms 1
- WordPerfect Install Options
- WordPerfect Keyboard Definition
- WordPerfect Macro Editor
- WordPerfect Macro File
- MPEG Version 1.0
- MPEG Version 2.0
- MPEG Version 2.5
- QuickFinder
- Sample Music
- Scheduler File
- Self-Extracting LZH
- Shortcut FileSticky Note
- Task
- UNIX Compress
- Wave Sound
- Win95 Screensaver Settings
- Windows Clipboard File
- Windows Swap File
- WordPerfect 4.2 (Vax)
- WordPerfect Application Resource Library
- WordPerfect Block File
- WordPerfect Macro Resource
- WordPerfect Mouse Driver
- WordPerfect Notebook
- WordPerfect Office
- WordPerfect Overlay File
- WordPerfect Printer
- WordPerfect Printer Q Codes
- WordPerfect Printer Resource File
- WordPerfect Program Editor
- WordPerfect Rectangular Block
- WordPerfect Rhymer Pronunciation
- WordPerfect Rhymer Word File
- WordPerfect Scheduler
- WordPerfect Setup File
- WordPerfect Shell
- WordPerfect Spell Code Module -- Rules
- WordPerfect Spell Code Module -- Word List
- WordPerfect Thesaurus
- WordPerfect Unix Setup File
- WordPerfect Vax Keyboard Definition
- WordPerfect Vax Setup

- expand the following compound files:
 - 7-ZIP
 - Active Directory
 - AOL Files
 - Blackberry IPD backup file
 - BZIP2
 - Chrome Bookmarks
 - Chrome SQLite
 - DBX
 - EMFSPOOL
 - EVTX
 - EXIF
 - GZIP
 - IIS log files
 - Internet Explorer Files
 - Log2t CSV
 - Lotus Notes (NSF)
 - MBOX
 - Microsoft Exchange
 - MS Office, OLE and OPC documents

- MSG
 - PDF
 - PKCS7 and S/MIME Files
 - PST
 - RAR
 - Windows Registry
 - RFC822 Internet Email
 - SQLite Databases
 - TAR
 - Windows Thumbnails
 - ZIP
- create a report in various formats such as HTML, PDF, RTF and XML, with links to evidence documents.
 - be able to interoperate with Summation, an e-Discovery software package, so that forensic level analysis offered by FTK can be performed on data within Summation.
 - be able to interoperate with MPE+ (Mobile Phone Examiner Plus), a software/hardware package to extract and analyze data from mobile devices, so that device image files and extractions created by MPE+ can seamlessly be used and integrated by FTK.
 - The supplier of this software package has to be able to provide unlimited training to our users on all forensic and e-discovery tools including but not limited to the following topics:
 - Basic and advanced operations of the software packages
 - Interoperations among computer and mobile device forensic tools and litigation support software