

# FILE SIGNATURES TABLE

4/8/2009

This table of file signatures (aka "magic numbers") is a work-in-progress. I have found little information on this in a single place, with the exception of the table in *Forensic Computing: A Practitioner's Guide* by T. Sammes & B. Jenkinson (Springer, 2000). Other useful and reasonably current sources are C.E. Codere's [File Format](#) site or the [magic file commonly available with Linux systems](#). This table is still growing and contributions are welcome! Comments and queries can be sent to Gary Kessler at [kumquat@sover.net](mailto:kumquat@sover.net).

This list is not exhaustive. Interpret the table as the magic number generally indicating the file type rather than the file type always having the given magic number. If you want to know what a particular file extension refers to, check out some of these sites:

- [File Extension Seeker: Metasearch engine for file extensions](#)
- [FILExt: The File Extension Source](#)
- [fileinfo.net](#)
- [Wotsit.org](#), The Programmer's File and Data Format Resource
- [Dot What!?](#), The net's #1 file extension website

You might also want to check out Tim Coakley's [Filesig.co.uk](#) site, with Filesig Manager (and Simple Carver). Take a look also at Marco Pontello's [TriD - File Identifier](#), a utility designed to identify file types from their binary signatures.

Details on graphics file formats can be found at [The Graphics File Formats Page](#).

| Hex Signature           | ASCII Signature                  |
|-------------------------|----------------------------------|
| File Extension          | File Description                 |
| TGA                     | Truevision Targa Graphic file    |
| <b>Trailer:</b>         |                                  |
| 54 52 55 45 56 49 53 49 | TRUEVISI                         |
| 4F 4E 2D 58 46 49 4C 45 | ON-XFILE                         |
| 2E 00                   | ..                               |
| 00                      | .                                |
| PIC                     | IBM Storyboard bitmap file       |
| PIF                     | Windows Program Information File |
| YTR                     | IRIS OCR data file               |
| [11 byte offset]        |                                  |
| 00 00 00 00 00 00 00 00 | [11 byte offset]                 |
| 00                      | .....                            |
| 00 00 00 00 00 00 00 00 | .....                            |
| 00                      | .....                            |
| 00 00 00 00 00 00 00 00 | .....                            |
| 00                      |                                  |
| PDB                     | Palmpilot Database/Document File |

|                                |                 |                                                                                                                                                                                                                 |
|--------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 00 00 00 nn 66 74 79           | ....ftyp        |                                                                                                                                                                                                                 |
| 70                             | 3gp             |                                                                                                                                                                                                                 |
| 33 67 70                       |                 | 3GG, 3G2 3rd Generation Partnership Project 3GPP (nn=0x14) and 3GPP2 (nn=0x20) multimedia files                                                                                                                 |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 00 18 66 74 79           | ....ftyp        |                                                                                                                                                                                                                 |
| 70                             | 3gp5            |                                                                                                                                                                                                                 |
| 33 67 70 35                    |                 | MP4 MPEG-4 video files                                                                                                                                                                                          |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 01 00                    | ....            | ICO Windows icon file                                                                                                                                                                                           |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 01 Bx                    | ....            | MPEG, MPG MPEG video file                                                                                                                                                                                       |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 02 00                    | .....           | CUR Windows cursor file                                                                                                                                                                                         |
|                                |                 | WB2 QuattroPro for Windows Spreadsheet file                                                                                                                                                                     |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 02 00 06 04 06           | .....           |                                                                                                                                                                                                                 |
| 00                             | .....           |                                                                                                                                                                                                                 |
| 08 00 00 00 00 00              | .....           | WK1 Lotus 1-2-3 spreadsheet (v1) file                                                                                                                                                                           |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 1A 00 00 10 04           | .....           |                                                                                                                                                                                                                 |
| 00                             | ..              |                                                                                                                                                                                                                 |
| 00 00 00 00                    |                 | WK3 Lotus 1-2-3 spreadsheet (v3) file                                                                                                                                                                           |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 1A 00 02 10 04           | .....           |                                                                                                                                                                                                                 |
| 00                             | ..              |                                                                                                                                                                                                                 |
| 00 00 00 00                    |                 | WK4 Lotus 1-2-3 spreadsheet (v4) file                                                                                                                                                                           |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 49 49 58 50 52 <i>or</i> | ..IIXPR         |                                                                                                                                                                                                                 |
| 00 00 4D 4D 58 50 52           | ..MMXPR         |                                                                                                                                                                                                                 |
|                                | QXD             | Quark Express document (Intel & Motorola, respectively)                                                                                                                                                         |
|                                |                 | <b>NOTE:</b> It appears that the byte following the 0x52 ("R") is the language indicator; 0x33 ("3") seems to indicate English and 0x61 ("a") reportedly indicates Korean.                                      |
|                                |                 |                                                                                                                                                                                                                 |
| 00 00 FE FF                    | ..pÿ            |                                                                                                                                                                                                                 |
|                                | n/a             | Byte-order mark for 32-bit Unicode Transformation Format/4-octet Universal Character Set (UTF-32/UCS-4), big-endian files.<br>(See the <a href="http://www.unicode.org/home/home.html">Unicode Home Page</a> .) |
|                                |                 |                                                                                                                                                                                                                 |
| [7 byte offset]                | [7 byte offset] |                                                                                                                                                                                                                 |
| 00 00 FF FF FF FF              | ..ÿÿÿÿ          |                                                                                                                                                                                                                 |
|                                | HLP             | Windows Help file                                                                                                                                                                                               |
|                                |                 |                                                                                                                                                                                                                 |
| 00 01 00 00 4D 53 49           |                 |                                                                                                                                                                                                                 |

|                      |                   |                                                                                                                      |
|----------------------|-------------------|----------------------------------------------------------------------------------------------------------------------|
| 53                   |                   |                                                                                                                      |
| 41 4D 20 44 61 74 61 | ....MSIS          |                                                                                                                      |
| 62                   | AM Datab          |                                                                                                                      |
| 61 73 65             | ase               |                                                                                                                      |
|                      | MNY               | Microsoft Money file                                                                                                 |
| 00 01 00 00 53 74 61 |                   |                                                                                                                      |
| 6E                   | ....Stan          |                                                                                                                      |
| 64 61 72 64 20 4A 65 | dard Jet          |                                                                                                                      |
| 74                   | DB                |                                                                                                                      |
| 20 44 42             |                   |                                                                                                                      |
|                      | MDB               | Microsoft Access file                                                                                                |
| 00 01 00 08 00 01 00 |                   |                                                                                                                      |
| 01                   | .....             |                                                                                                                      |
| 01                   | .                 |                                                                                                                      |
|                      | IMG               | Ventura Publisher/GEM VDI Image Format Bitmap file                                                                   |
| 00 01 01             | ...               |                                                                                                                      |
|                      | FLT               | OpenFlight 3D file                                                                                                   |
| 00 01 42 41          | ..BA              |                                                                                                                      |
|                      | ABA               | Palm Address Book Archive file                                                                                       |
| 00 01 42 44          | ..BD              |                                                                                                                      |
|                      | DBA               | Palm DateBook Archive file                                                                                           |
| 00 06 15 61 00 00 00 |                   |                                                                                                                      |
| 02                   | ...a....          |                                                                                                                      |
| 00 00 04 D2 00 00 10 | ...Ġ....          |                                                                                                                      |
| 00                   |                   |                                                                                                                      |
|                      | DB                | Netscape Navigator (v4) database file                                                                                |
| 00 11 AF             | ..-               |                                                                                                                      |
|                      | FLI               | FLIC Animation file                                                                                                  |
| 00 1E 84 90 00 00 00 |                   |                                                                                                                      |
| 00                   | .....             |                                                                                                                      |
|                      | SNM               | Netscape Communicator (v4) mail folder                                                                               |
| 00 5C 41 B1 FF       | .\A±ÿ             |                                                                                                                      |
|                      | ENC               | Mujahideen Secrets 2 encrypted file                                                                                  |
| [512 byte offset]    | [512 byte offset] |                                                                                                                      |
| 00 6E 1E F0          | .n.Ď              |                                                                                                                      |
|                      | PPT               | PowerPoint presentation subheader (MS Office)                                                                        |
| 01 00 00 00          | ....              |                                                                                                                      |
|                      | EMF               | Extended (Enhanced) Windows Metafile Format, printer spool file<br>(0x18-17 & 0xC4-36 is Win2K/NT; 0x5C0-1 is WinXP) |
| 01 00 00 00 01       | .....             |                                                                                                                      |
|                      | PIC               | Unknown type picture file                                                                                            |

|                                                 |                            |     |                                                                  |
|-------------------------------------------------|----------------------------|-----|------------------------------------------------------------------|
| 01 10                                           | ..                         | TR1 | Novell LANalyzer capture file                                    |
| 01 DA 01 01 00 03                               | .Ú....                     | RGB | Silicon Graphics RGB Bitmap                                      |
| 01 FF 02 04 03 02                               | .ÿ....                     | DRW | Micrografx vector graphic file                                   |
| 02 64 73 73                                     | .dss                       | DSS | Digital Speech Standard (Olympus, Grundig, & Phillips)           |
| 03                                              | .                          | DAT | MapInfo Native Data Format                                       |
|                                                 |                            | DB3 | dBASE III file                                                   |
| 03 00 00 00                                     | ....                       | QPH | Quicken price history file                                       |
| 03 00 00 00 41 50 50<br>52                      | ....APPR                   | ADX | Approach index file                                              |
| 04                                              | .                          | DB4 | dBASE IV data file                                               |
| 07                                              | .                          | DRW | A common signature and file extension for many drawing programs. |
| 07 64 74 32 64 64 74<br>64                      | .dt2ddtd                   | DTD | DesignTools 2D Design file                                       |
| 08                                              | .                          | DB  | dBASE IV or dBFast configuration file                            |
| [512 byte offset]<br>09 08 10 00 00 06 05<br>00 | [512 byte offset]<br>..... | XLS | Excel spreadsheet subheader (MS Office)                          |
| 0A nn 01 01                                     | ....                       | PCX | ZSOFT Paintbrush file<br>(where <i>nn</i> = 0x02, 0x03, or 0x05) |
| 0C ED                                           | .ı                         | MP  | Monochrome Picture TIFF bitmap file (unconfirmed)                |
| 0D 44 4F 43                                     | .DOC                       | DOC | DeskMate Document file                                           |
| 0E 57 4B 53                                     | .WKS                       |     |                                                                  |

|                                                                                                    |                                        |                                                                                                      |
|----------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------|
|                                                                                                    | WKS                                    | DeskMate Worksheet                                                                                   |
| [512 byte offset]<br>0F 00 E8 03                                                                   | [512 byte offset]<br>..è.              |                                                                                                      |
|                                                                                                    | PPT                                    | PowerPoint presentation subheader (MS Office)                                                        |
| 11 00 00 00 53 43 43<br>41                                                                         | ....SCCA                               |                                                                                                      |
|                                                                                                    | PF                                     | Windows prefetch file                                                                                |
| 1A 00 00                                                                                           | ...                                    |                                                                                                      |
|                                                                                                    | NTF                                    | Lotus Notes database template                                                                        |
| 1A 00 00 04 00 00                                                                                  | .....                                  |                                                                                                      |
|                                                                                                    | NSF                                    | Lotus Notes database                                                                                 |
| 1A 0x                                                                                              | ..                                     |                                                                                                      |
|                                                                                                    | ARC                                    | LH archive file, old version<br>(where x = 0x2, 0x3, 0x4, 0x8 or 0x9<br>for types 1-5, respectively) |
| 1A 0B                                                                                              | ..                                     |                                                                                                      |
|                                                                                                    | PAK                                    | Compressed archive file<br>(often associated with Quake Engine games)                                |
| 1A 35 01 00                                                                                        | .5..                                   |                                                                                                      |
|                                                                                                    | ETH                                    | GN Nettest WinPharoah capture file                                                                   |
| 1A 52 54 53 20 43 4F<br>4D<br>50 52 45 53 53 45 44<br>20<br>49 4D 41 47 45 20 56<br>31<br>2E 30 1A | .RTS COM<br>PRESSED<br>IMAGE V1<br>.0. |                                                                                                      |
|                                                                                                    | DAT                                    | Runtime Software disk image                                                                          |
| 1D 7D                                                                                              | .}                                     |                                                                                                      |
|                                                                                                    | WS                                     | WordStar Version 5.0/6.0 document                                                                    |
| 1F 8B 08                                                                                           | ...                                    |                                                                                                      |
|                                                                                                    | GZ                                     | GZIP archive file                                                                                    |
| 1F 9D 90                                                                                           | ...                                    |                                                                                                      |
|                                                                                                    | TAR.Z                                  | Compressed tape archive file                                                                         |
| 21 12                                                                                              | !.                                     |                                                                                                      |
|                                                                                                    | AIN                                    | AIN Compressed Archive                                                                               |
| 21 3C 61 72 63 68 3E<br>0A                                                                         | !<arch>.                               |                                                                                                      |
|                                                                                                    | LIB                                    | Unix archiver (ar) files and Microsoft Program Library<br>Common Object File Format (COFF)           |

|                                                                                                                                                    |                                                         |                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21 42 44 4E                                                                                                                                        | !BDN                                                    | PST Microsoft Outlook Personal Folder file                                                                                                                                                        |
| 23 20                                                                                                                                              | #                                                       | MSI Cerius2 file                                                                                                                                                                                  |
| 23 20 4D 69 63 72 6F<br>73<br>6F 66 74 20 44 65 76<br>65<br>6C 6F 70 65 72 20 53<br>74<br>75 64 69 6F                                              | # Micros<br>oft Deve<br>loper St<br>udio                | DSP Microsoft Developer Studio project file                                                                                                                                                       |
| 23 21 41 4D 52                                                                                                                                     | #!AMR                                                   | AMR Adaptive Multi-Rate ACELP (Algebraic Code Excited Linear Prediction)<br>Codec, commonly audio format with GSM cell phones                                                                     |
| 24 46 4C 32 40 28 23<br>29<br>20 53 50 53 53 20 44<br>41<br>54 41 20 46 49 4C 45                                                                   | \$FL2@(#)<br>SPSS DA<br>TA FILE                         | SAV SPSS Data file                                                                                                                                                                                |
| 25 21 50 53 2D 41 64<br>6F<br>62 65 2D 33 2E 30 20<br>45<br>50 53 46 2D 33 20 30                                                                   | %!PS-Ado<br>be-3.0 E<br>PSF-3.0                         | EPS Adobe encapsulated PostScript file<br>(If this signature is not at the immediate<br>beginning of the file, it will occur early<br>in the file, commonly at byte offset 30)                    |
| 25 50 44 46                                                                                                                                        | %PDF                                                    | PDF, FDF Adobe Portable Document Format and Forms Document file<br><b>Trailers:</b><br>0A 25 25 45 4F 46 0A (.%%EOF.)<br>0D 0A 25 25 45 4F 46 0D 0A (..%%EOF..)<br>0D 25 25 45 4F 46 0D (.%%EOF.) |
| 28 54 68 69 73 20 66<br>69<br>6C 65 20 6D 75 73 74<br>20<br>62 65 20 63 6F 6E 76<br>65<br>72 74 65 64 20 77 69<br>74<br>68 20 42 69 6E 48 65<br>78 | (This fi<br>le must<br>be conve<br>rted wit<br>h BinHex |                                                                                                                                                                                                   |

20

HQX Macintosh BinHex 4 Compressed Archive

2A 2A 2A 20 20 49 6E

73

74 61 6C 6C 61 74 69

6F

6E 20 53 74 61 72 74

65

64 20

\*\*\* Ins  
tallatio  
n Starte  
d

LOG Symantec Wise Installer log file

[2 byte offset]

2D 6C 68

[2 byte offset]

-lh

LHA, LZH Compressed archive file

2E 52 45 43

.REC

IVR RealPlayer video file (V11 and later)

2E 52 4D 46

.RMF

RM RealMedia streaming media file

2E 72 61 FD 00

.ra..

RA RealMedia streaming media file

2E 73 6E 64

.snd

AU Sun Microsystems audio file format

30

0

CAT Microsoft security catalog file

30 00 00 00 4C 66 4C

65

0...LfLe

EVT Windows Event Viewer file

30 26 B2 75 8E 66 CF

11

A6 D9 00 AA 00 62 CE

6C

0&²u.fİ.  
|Û.ª.bÎlASF, WMA, WMV Microsoft Windows Media Audio/Video File  
(Advanced Streaming Format)

30 31 4F 52 44 4E 41

4E

43 45 20 53 55 52 56

45

59 20 20 20 20 20 20

20

01ORDNAN  
CE SURVE  
Y

NTF National Transfer Format Map File

30 37 30 37 30 nn

07070.

n/a

Archive created with the cpio utility (where *nn*  
values 0x37 ("7"), 0x31 ("1"), and 0x32 ("2") refer to the  
standard ASCII format, new ASCII (aka SVR4) format, and CRC

format, respectively. (The [swpackage\(8\)](#) page has additional information.) (Thanks to F. Webber for this....)

|                  |    |                |                                                      |  |
|------------------|----|----------------|------------------------------------------------------|--|
| 31               | BE | or             | 1¾                                                   |  |
| 32               | BE |                | 2¾                                                   |  |
|                  |    | WRI            | Microsoft Write file                                 |  |
| 34               | CD | B2 A1          | 4Í² i                                                |  |
|                  |    | n/a            | Extended tcpdump (libpcap) capture file (Linux/Unix) |  |
| 37               | 7A | BC AF 27 1C    | 7Z¼' .                                               |  |
|                  |    | 7Z             | 7-Zip compressed file                                |  |
| 38               | 42 | 50 53          | 8BPS                                                 |  |
|                  |    | PSD            | Photoshop image file                                 |  |
| 3C               |    |                | <                                                    |  |
|                  |    | ASX            | Advanced Stream redirector file                      |  |
|                  |    | XDR            | BizTalk XML-Data Reduced Schema file                 |  |
| 3C               | 21 | 64 6F 63 74 79 | <!doctype                                            |  |
| 70               |    |                |                                                      |  |
|                  |    | DCI            | AOL HTML mail file                                   |  |
| 3C               | 3F | 78 6D 6C 20 76 | <?xml ve                                             |  |
| 65               |    |                | rsion=                                               |  |
| 72               | 73 | 69 6F 6E 3D    |                                                      |  |
|                  |    | MANIFEST       | Windows Visual Stylesheet XML file                   |  |
| 3C               | 3F | 78 6D 6C 20 76 | <?xml ve                                             |  |
| 65               |    |                | rsion="1                                             |  |
| 72               | 73 | 69 6F 6E 3D 22 | .0"?>                                                |  |
| 31               |    |                |                                                      |  |
| 2E               | 30 | 22 3F 3E       |                                                      |  |
|                  |    | XUL            | XML User Interface Language file                     |  |
| 3C               | 3F | 78 6D 6C 20 76 |                                                      |  |
| 65               |    |                |                                                      |  |
| 72               | 73 | 69 6F 6E 3D 22 |                                                      |  |
| 31               |    |                |                                                      |  |
| 2E               | 30 | 22 3F 3E 0D 0A | <?xml ve                                             |  |
| 3C               |    |                | rsion="1                                             |  |
| 4D               | 4D | 43 5F 43 6F 6E | .0"?>..<                                             |  |
| 73               |    |                | MMC_Cons                                             |  |
| 6F               | 6C | 65 46 69 6C 65 | oleFile                                              |  |
| 20               |    |                | ConsoleV                                             |  |
| 43               | 6F | 6E 73 6F 6C 65 | ersion="                                             |  |
| 56               |    |                |                                                      |  |
| 65               | 72 | 73 69 6F 6E 3D |                                                      |  |
| 22               |    |                |                                                      |  |
|                  |    | MSC            | Microsoft Management Console Snap-in Control file    |  |
| [24 byte offset] |    |                |                                                      |  |
| 3E               | 00 | 03 00 FE FF 09 | [24 byte offset]                                     |  |

|                      |          |                                                                               |  |
|----------------------|----------|-------------------------------------------------------------------------------|--|
| 00                   |          | >...pÿ..                                                                      |  |
| 06                   |          | .                                                                             |  |
|                      | WB3      | Quatro Pro for Windows 7.0 Notebook file                                      |  |
| 3F 5F 03 00          |          | ?_..                                                                          |  |
|                      | GID      | Windows Help index file                                                       |  |
|                      | HLP      | Windows Help file                                                             |  |
| [32 byte offset]     |          | [32 byte offset]                                                              |  |
| 40 40 40 20 00 00 40 |          | @@@ ..@@                                                                      |  |
| 40                   |          | @@                                                                            |  |
| 40 40                | ENL      | EndNote Library File                                                          |  |
| 41 43 53 44          | ACSD     |                                                                               |  |
|                      | n/a      | Miscellaneous AOL parameter and information files                             |  |
| 41 4D 59 4F          | AMY0     |                                                                               |  |
|                      | SYW      | Harvard Graphics symbol graphic                                               |  |
| 41 4F 4C 20 46 65 65 | AOL Feed |                                                                               |  |
| 64                   | bag      |                                                                               |  |
| 62 61 67             | BAG      | AOL and AIM buddy list file                                                   |  |
| 41 4F 4C 44 42       | AOLDB    |                                                                               |  |
|                      | ABY, IDX | AOL database files: address book (ABY) and user configuration data (MAIN.IDX) |  |
| 41 4F 4C 49 44 58    | AOLIDX   |                                                                               |  |
|                      | IND      | AOL client preferences/settings file (MAIN.IND)                               |  |
| 41 4F 4C 49 4E 44 45 | AOLINDEX |                                                                               |  |
| 58                   | ABI      | AOL address book index file                                                   |  |
| 41 56 47 36 5F 49 6E |          |                                                                               |  |
| 74                   | AVG6_Int |                                                                               |  |
| 65 67 72 69 74 79 5F | egrity_D |                                                                               |  |
| 44                   | atabase  |                                                                               |  |
| 61 74 61 62 61 73 65 | DAT      | AVG6 Integrity database file                                                  |  |
| 41 4F 4C 56 4D 31 30 | AOLVM100 |                                                                               |  |
| 30                   | n/a      | AOL personal file cabinet (PFC) file                                          |  |
| 41 72 43 01          | ArC.     |                                                                               |  |
|                      | ARC      | FreeArc compressed file                                                       |  |
| 42 45 47 49 4E 3A 56 | BEGIN:VC |                                                                               |  |
| 43                   | ARD..    |                                                                               |  |
| 41 52 44 0D 0A       | VCF      | vCard file                                                                    |  |

|    |    |    |    |    |    |    |                         |                                                                                        |
|----|----|----|----|----|----|----|-------------------------|----------------------------------------------------------------------------------------|
| 42 | 4C | 49 | 32 | 32 | 33 | 51 | BLI223Q                 |                                                                                        |
|    |    |    |    |    |    |    | BIN                     | Thomson Speedtouch series WLAN router firmware                                         |
| 42 | 4D |    |    |    |    |    | BM                      |                                                                                        |
|    |    |    |    |    |    |    | BMP, DIB                | Windows (or device-independent) bitmap image                                           |
| 42 | 4F | 4F | 4B | 4D | 4F | 42 | BOOKMOBI                |                                                                                        |
| 49 |    |    |    |    |    |    | PRC                     | Palmpilot resource file                                                                |
| 42 | 5A | 68 |    |    |    |    | BZh                     |                                                                                        |
|    |    |    |    |    |    |    | BZ2, TAR.BZ2, TBZ2, TB2 | <a href="#">bzip2</a> compressed archive                                               |
| 43 | 42 | 46 | 49 | 4C | 45 |    | CBFILE                  |                                                                                        |
|    |    |    |    |    |    |    | CBD                     | WordPerfect dictionary file (unconfirmed)                                              |
| 43 | 44 | 30 | 30 | 31 |    |    | CD001                   |                                                                                        |
|    |    |    |    |    |    |    | ISO                     | ISO-9660 CD Disc Image<br>(This signature usually occurs at byte 8001, 8801, or 9001.) |
| 43 | 4F | 4D | 2B |    |    |    | COM+                    |                                                                                        |
|    |    |    |    |    |    |    | CLB                     | COM+ Catalog file                                                                      |
| 43 | 52 | 45 | 47 |    |    |    | CREG                    |                                                                                        |
|    |    |    |    |    |    |    | DAT                     | Windows 9x registry hive                                                               |
| 43 | 52 | 55 | 53 | 48 | 20 | 76 | CRUSH v                 |                                                                                        |
|    |    |    |    |    |    |    | CRU                     | Crush compressed archive                                                               |
| 43 | 57 | 53 |    |    |    |    | CWS                     |                                                                                        |
|    |    |    |    |    |    |    | SWF                     | Shockwave Flash file (v5+)                                                             |
| 43 | 61 | 74 | 61 | 6C | 6F | 67 | Catalog                 |                                                                                        |
| 20 |    |    |    |    |    |    | 3.00.                   |                                                                                        |
| 33 | 2E | 30 | 30 | 00 |    |    | CTF                     | WhereIsIt Catalog file                                                                 |
| 43 | 6C | 69 | 65 | 6E | 74 | 20 |                         |                                                                                        |
| 55 |    |    |    |    |    |    |                         |                                                                                        |
| 72 | 6C | 43 | 61 | 63 | 68 | 65 | Client U                |                                                                                        |
| 20 |    |    |    |    |    |    | rlCache                 |                                                                                        |
| 4D | 4D | 46 | 20 | 56 | 65 | 72 | MMF Ver                 |                                                                                        |
| 20 |    |    |    |    |    |    |                         |                                                                                        |
|    |    |    |    |    |    |    | DAT                     | IE History DAT file                                                                    |
| 44 | 42 | 46 | 48 |    |    |    | DBFH                    |                                                                                        |
|    |    |    |    |    |    |    | DB                      | Palm Zire photo database                                                               |
| 44 | 4D | 53 | 21 |    |    |    | DMS!                    |                                                                                        |
|    |    |    |    |    |    |    | DMS                     | Amiga DiskMasher compressed archive                                                    |
| 44 | 4F | 53 |    |    |    |    | DOS                     |                                                                                        |
|    |    |    |    |    |    |    | ADF                     | Amiga disk file                                                                        |

|                                   |                                                                                                                                                                                         |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 45 4E 54 52 59 56 43              |                                                                                                                                                                                         |
| 44                                | ENTRYVCD                                                                                                                                                                                |
| 02 00 00 01 02 00 18              | .....X                                                                                                                                                                                  |
| 58                                |                                                                                                                                                                                         |
|                                   | VCD VideoVCD (GNU VCDImager) file                                                                                                                                                       |
| 45 52 46 53 53 41 56              |                                                                                                                                                                                         |
| 45                                | ERFSSAVE                                                                                                                                                                                |
| 44 41 54 41 46 49 4C              | DATAFILE                                                                                                                                                                                |
| 45                                |                                                                                                                                                                                         |
|                                   | DAT Kroll EasyRecovery Saved Recovery State file                                                                                                                                        |
| 45 56 46                          | EVF                                                                                                                                                                                     |
| Enn (where <i>nn</i> are numbers) | EnCase evidence file                                                                                                                                                                    |
| 46 41 58 43 4F 56 45              | FAXCOVER                                                                                                                                                                                |
| 52                                | -VER                                                                                                                                                                                    |
| 2D 56 45 52                       |                                                                                                                                                                                         |
|                                   | CPE Microsoft Fax Cover Sheet                                                                                                                                                           |
| 46 45 44 46                       | FEDF                                                                                                                                                                                    |
|                                   | SBV (Unknown file type)                                                                                                                                                                 |
| 46 4C 56                          | FLV                                                                                                                                                                                     |
|                                   | SWF Flash video file                                                                                                                                                                    |
| 46 4F 52 4D 00                    | FORM.                                                                                                                                                                                   |
|                                   | AIFF Audio Interchange File                                                                                                                                                             |
| 46 57 53                          | FWS                                                                                                                                                                                     |
|                                   | SWF Shockwave Flash file                                                                                                                                                                |
| 46 72 6F 6D 20 20 20 <b>or</b>    | FHom                                                                                                                                                                                    |
| 46 72 6F 6D 20 3F 3F              | FHom ???                                                                                                                                                                                |
| 3F <b>or</b>                      |                                                                                                                                                                                         |
| 46 72 6F 6D 3A 20                 | FHom:                                                                                                                                                                                   |
|                                   | EML A common file extension for e-mail files. Signatures shown here are for Netscape, Eudora, and a generic signature, respectively. EML is also used by Outlook Express and QuickMail. |
| 47 46 31 50 41 54 43              | GF1PATCH                                                                                                                                                                                |
| 48                                |                                                                                                                                                                                         |
|                                   | PAT Advanced Gravis Ultrasound patch file                                                                                                                                               |
| 47 49 46 38 37 61 <b>or</b>       | GIF87a                                                                                                                                                                                  |
| 47 49 46 38 39 61                 | GIF89a                                                                                                                                                                                  |
|                                   | GIF Graphics interchange format file                                                                                                                                                    |
|                                   | <b>Trailer:</b> 00 3B (. ;)                                                                                                                                                             |
| 47 50 41 54                       | GPAT                                                                                                                                                                                    |
|                                   | PAT GIMP (GNU Image Manipulation Program) pattern file                                                                                                                                  |

|                                                                                                       |                                         |                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 47 58 32                                                                                              | GX2                                     |                                                                                                                                                                                         |
|                                                                                                       | GX2                                     | Show Partner graphics file (not confirmed)                                                                                                                                              |
| 48 48 47 42 31                                                                                        | HHGB1                                   |                                                                                                                                                                                         |
|                                                                                                       | SH3                                     | Harvard Graphics presentation file                                                                                                                                                      |
| 49 20 49                                                                                              | I I                                     |                                                                                                                                                                                         |
|                                                                                                       | TIF, TIFF                               | Tagged Image File Format file                                                                                                                                                           |
| 49 44 33                                                                                              | ID3                                     |                                                                                                                                                                                         |
|                                                                                                       | MP3                                     | MPEG-1 Audio Layer 3 (MP3) audio file                                                                                                                                                   |
| 49 49 2A 00                                                                                           | II * .                                  |                                                                                                                                                                                         |
|                                                                                                       | TIF, TIFF                               | Tagged Image File Format file (little endian, i.e., LSB first in the byte; Intel)                                                                                                       |
| 49 53 63 28                                                                                           | ISc(                                    |                                                                                                                                                                                         |
|                                                                                                       | CAB                                     | Install Shield v5.x or 6.x compressed file                                                                                                                                              |
| 49 54 53 46                                                                                           | ITSF                                    |                                                                                                                                                                                         |
|                                                                                                       | CHM                                     | Microsoft HTML Help Compiled Help File                                                                                                                                                  |
| 49 6E 6E 6F 20 53 65<br>74<br>75 70 20 55 6E 69 6E<br>73<br>74 61 6C 6C 20 4C 6F<br>67<br>20 28 62 29 | Inno Set<br>up Unins<br>tall Log<br>(b) |                                                                                                                                                                                         |
|                                                                                                       | DAT                                     | Inno Setup Uninstall Log file                                                                                                                                                           |
| 4A 41 52 43 53 00                                                                                     | JARCS.                                  |                                                                                                                                                                                         |
|                                                                                                       | JAR                                     | JARCS compressed archive                                                                                                                                                                |
| 4A 47 03 0E 00 00 00 00 <i>or</i>                                                                     | JG . . . . .                            |                                                                                                                                                                                         |
| 4A 47 04 0E 00 00 00 00                                                                               | JG . . . . .                            |                                                                                                                                                                                         |
|                                                                                                       | ART                                     | AOL ART file                                                                                                                                                                            |
| 4C 00 00 00 01 14 02<br>00                                                                            | L . . . . .                             |                                                                                                                                                                                         |
|                                                                                                       | LNK                                     | Windows shortcut file                                                                                                                                                                   |
| 4C 01                                                                                                 | L .                                     |                                                                                                                                                                                         |
|                                                                                                       | OBJ                                     | Microsoft <a href="http://www.garykessler.net/library/file_sigs.html">Common Object File Format (COFF)</a> relocatable object code file for an Intel 386 or later/compatible processors |
| 4C 4E 02 00                                                                                           | LN . .                                  |                                                                                                                                                                                         |
|                                                                                                       | HLP                                     | Windows Help file                                                                                                                                                                       |
| 4D 49 4C 45 53                                                                                        | MILES                                   |                                                                                                                                                                                         |
|                                                                                                       | MLS                                     | Milestones v1.0 project management and scheduling software (Also see "MV2C" and "MV214" signatures)                                                                                     |
| 4D 4C 53 57                                                                                           | MLSW                                    |                                                                                                                                                                                         |

|                            |                                           |                                                                                                                                |
|----------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                            | MLS                                       | Skype localization data file                                                                                                   |
| 4D 4D 00 2A                | MM.*                                      |                                                                                                                                |
|                            | TIF, TIFF                                 | Tagged Image File Format file (big endian, i.e., LSB last in the byte; Motorola)                                               |
| 4D 4D 00 2B                | MM.+                                      |                                                                                                                                |
|                            | TIF, TIFF                                 | BigTIFF files; Tagged Image File Format files >4 GB                                                                            |
| 4D 4D 4D 44 00 00          | MMMD..                                    |                                                                                                                                |
|                            | MMF                                       | Yamaha Corp. Synthetic music Mobile Application Format (SMAF)<br>for multimedia files that can be played on hand-held devices. |
| 4D 53 43 46                | MSCF                                      |                                                                                                                                |
|                            | CAB                                       | Microsoft cabinet file                                                                                                         |
|                            | PPZ                                       | Powerpoint Packaged Presentation                                                                                               |
|                            | SNP                                       | Microsoft Access Snapshot Viewer file                                                                                          |
| 4D 53 46 54 02 00 01<br>00 | MSFT....                                  |                                                                                                                                |
|                            | TLB                                       | OLE, SPSS, or Visual C++ type library file                                                                                     |
| 4D 53 5F 56 4F 49 43<br>45 | MS_VOICE                                  |                                                                                                                                |
|                            | CDR, DVF                                  | Sony Compressed Voice File                                                                                                     |
|                            | MSV                                       | Sony Memory Stick Compressed Voice file                                                                                        |
| 4D 54 68 64                | MThd                                      |                                                                                                                                |
|                            | MID, MIDI                                 | Musical Instrument Digital Interface (MIDI) sound file                                                                         |
| 4D 56                      | MV                                        |                                                                                                                                |
|                            | DSN                                       | CD Stomper Pro label file                                                                                                      |
| 4D 56 32 43                | MV2C                                      |                                                                                                                                |
|                            | MLS                                       | Milestones v2.1a project management and scheduling software<br>(Also see "MILES" and "MV214" signatures)                       |
| 4D 56 32 31 34             | MV214                                     |                                                                                                                                |
|                            | MLS                                       | Milestones v2.1b project management and scheduling software<br>(Also see "MILES" and "MV2C" signatures)                        |
| 4D 5A                      | MZ                                        |                                                                                                                                |
|                            | COM, DLL, DRV, EXE, PIF,<br>QTS, QTX, SYS | Windows/DOS executable file                                                                                                    |
|                            | ACM                                       | MS audio compression manager driver                                                                                            |
|                            | AX                                        | Library cache file                                                                                                             |
|                            | CPL                                       | Control panel application                                                                                                      |
|                            | FON                                       | Font file                                                                                                                      |
|                            | OCX                                       | ActiveX or OLE Custom Control                                                                                                  |
|                            | OLB                                       | OLE object library                                                                                                             |
|                            | SCR                                       | Screen saver                                                                                                                   |
|                            | VBX                                       | VisualBASIC application                                                                                                        |
|                            | VXD, 386                                  | Windows virtual device drivers                                                                                                 |

```

4D 5A 90 00 03 00 00      MZ.....
00
    API Acrobat plug-in
    AX DirectShow filter
    FLT Audition graphic filter file (Adobe)

4D 5A 90 00 03 00 00      MZ.....
00      ....ÿÿ
04 00 00 00 FF FF
    ZAP ZoneAlam data file

4D 69 63 72 6F 73 6F
66
74 20 56 69 73 75 61      Microsof
6C      t Visual
20 53 74 75 64 69 6F      Studio
20      Solution
53 6F 6C 75 74 69 6F      File
6E
20 46 69 6C 65
    SLN Visual Studio .NET Solution file

[84 byte offset]
4D 69 63 72 6F 73 6F
66      [84 byte offset]
74 20 57 69 6E 64 6F      Microsof
77      t Window
73 20 4D 65 64 69 61      s Media
20      Player -
50 6C 61 79 65 72 20      -
2D
2D 20
    WPL Windows Media Player playlist

4E 41 56 54 52 41 46      NAVTRAFF
46      IC
49 43
    DAT TomTom traffic data file

4E 45 53 4D 1A 01      NESM. .
    NSF NES Sound file

4E 49 54 46 30      NITF0
    NTF National Imagery Transmission Format (NITF) file

4E 61 6D 65 3A 20      Name :
    COD Agent newsreader character map file

4F 50 4C 44 61 74 61      OPLDatab
62      aseFile
61 73 65 46 69 6C 65
    DBF Psion Series 3 Database file

```

|                      |                                                                        |
|----------------------|------------------------------------------------------------------------|
| 4F 67 67 53 00 02 00 | 0ggS . . . .                                                           |
| 00                   | . . . . .                                                              |
| 00 00 00 00 00 00    |                                                                        |
| OGA, OGG, OGV, OGX   | Ogg Vorbis Codec compressed Multimedia file                            |
| 4F 7B                | 0{                                                                     |
| DW4                  | Visio/DisplayWrite 4 text file (unconfirmed)                           |
| 50 00 00 00 20 00 00 | P . . . . .                                                            |
| 00                   |                                                                        |
| IDX                  | Quicken QuickFinder Information File                                   |
| 50 35 0A             | P5 .                                                                   |
| PGM                  | Portable Graymap Graphic                                               |
| 50 41 43 4B          | PACK                                                                   |
| PAK                  | Quake archive file                                                     |
| 50 45 53 54          | PEST                                                                   |
| DAT                  | PestPatrol data/scan strings                                           |
| 50 49 43 54 00 08    | PICT . .                                                               |
| IMG                  | ADEX Corp. ChromaGraph Graphics Card Bitmap Graphic file               |
| 50 4B 03 04          | PK . .                                                                 |
| ZIP                  | PKZIP archive file ( <a href="#">Ref. 1</a>   <a href="#">Ref. 2</a> ) |
|                      | <b>Trailer:</b> <i>filename 50 4B 17 characters 00 00 00</i>           |
|                      | <b>Trailer:</b> <i>(filename PK 17 characters . . .)</i>               |
| DOCX, PPTX, XLSX     | Microsoft Office Open XML Format Document                              |
| JAR                  | Java archive; compressed file package for classes and data             |
| SXC, SXD, SXI, SXW   | OpenOffice spreadsheet, drawing, presentation, and text files          |
| WMZ                  | Windows Media compressed skin file                                     |
| XPI                  | Mozilla Browser Archive                                                |
| XPT                  | eXact Packager Models                                                  |
| 50 4B 03 04 14 00 06 | PK . . . . .                                                           |
| 00                   |                                                                        |
| DOCX, PPTX, XLSX     | Office 2007 documents                                                  |
| 50 4B 03 04 14 00 08 | PK . . . . .                                                           |
| 00                   | . .                                                                    |
| 08 00                |                                                                        |
| JAR                  | Java archive                                                           |
| [30 byte offset]     | [30 byte offset]                                                       |
| 50 4B 4C 49 54 45    | PKLITE                                                                 |
| ZIP                  | PKLITE compressed ZIP archive (see also PKZIP)                         |
| [526 byte offset]    | [526 byte offset]                                                      |
| 50 4B 53 70 58       | PKSFX                                                                  |
| ZIP                  | PKSFX self-extracting executable compressed file (see also PKZIP)      |
| 50 4D 43 43          | PMCC                                                                   |

## GRP Windows Program Manager group file

50 4E 43 49 55 4E 44  
4F PNCIUNDO

DAT Norton Disk Doctor undo file

[92 byte offset]  
51 45 4C 20 QEL

QEL Quicken data file

51 46 49 FB QFI.

IMG QEMU Qcow Disk Image

51 57 20 56 65 72 2E  
20 QW Ver.

ABD, QSD Quicken data file

52 41 5A 41 54 44 42  
31 RAZATDB1

DAT Shareaza (Windows P2P client) thumbnail

52 45 47 45 44 49 54 REGEDIT  
REG, SUD Windows NT Registry and Registry Undo files

52 45 56 4E 55 4D 3A  
2C REVNUM: ,

ADF Antenna data file

52 49 46 46 RIFF

ANI Windows animated cursor

DAT Video CD MPEG or MPEG1 movie file

DS4 Micrografx Designer v4 graphic file

52 49 46 46 XX XX XX  
XX RIFF....  
41 56 49 20 4C 49 53 AVI LIST  
54

AVI Resource Interchange File Format -- [Windows Audio Video Interleave file](#)

52 49 46 46 XX XX XX  
XX RIFF....  
43 44 44 41 66 6D 74 CDDAfmt  
20

CDA Resource Interchange File Format -- Compact Disc Digital Audio (CD-DA) file

52 49 46 46 XX XX XX  
XX RIFF....  
51 4C 43 4D 66 6D 74 QLCMfmt  
20

QCP  
Resource Interchange File Format -- Qualcomm PureVoice

|                      |                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|
| 52 49 46 46 xx xx xx |                                                                                                                       |
| xx                   | RIFF....                                                                                                              |
| 52 4D 49 44 64 61 74 | RMIDdata                                                                                                              |
| 61                   |                                                                                                                       |
|                      | RMI Resource Interchange File Format -- <a href="#">Windows Musical Instrument Digital Interface file</a>             |
| 52 49 46 46 xx xx xx |                                                                                                                       |
| xx                   | RIFF....                                                                                                              |
| 57 41 56 45 66 6D 74 | WAVEfmt                                                                                                               |
| 20                   |                                                                                                                       |
|                      | WAV Resource Interchange File Format -- <a href="#">Audio for Windows file</a>                                        |
| 52 54 53 53          | RTSS                                                                                                                  |
|                      | CAP Windows NT Netmon capture file                                                                                    |
| 52 61 72 21 1A 07 00 | Rar!...                                                                                                               |
|                      | RAR WinRAR compressed archive file                                                                                    |
| 53 43 48 6C          | SCH1                                                                                                                  |
|                      | AST Need for Speed: Underground Audio file                                                                            |
| 53 43 4D 49          | SCMI                                                                                                                  |
|                      | IMG Img Software Set Bitmap                                                                                           |
| 53 48 4F 57          | SHOW                                                                                                                  |
|                      | SHW Harvard Graphics DOS Ver. 2/x Presentation file                                                                   |
| 53 49 45 54 52 4F 4E |                                                                                                                       |
| 49                   | SIETRONI                                                                                                              |
| 43 53 20 58 52 44 20 | CS XRD S                                                                                                              |
| 53                   | CAN                                                                                                                   |
| 43 41 4E             |                                                                                                                       |
|                      | CPI Sietronics CPI XRD document                                                                                       |
| 53 49 54 21 00       | SIT!.                                                                                                                 |
|                      | SIT StuffIt compressed archive                                                                                        |
| 53 4D 41 52 54 44 52 |                                                                                                                       |
| 57                   | SMARTDRW                                                                                                              |
|                      | SDR SmartDraw Drawing file                                                                                            |
| 53 51 4C 4F 43 4F 4E |                                                                                                                       |
| 56                   | SQLCONV                                                                                                               |
| 48 44 00 00 31 2E 30 | HD..1.0.                                                                                                              |
| 00                   |                                                                                                                       |
|                      | CNV DB2 conversion file                                                                                               |
| 53 6D 62 6C          | Smb1                                                                                                                  |
|                      | SYM (Unconfirmed file type. Likely type is Harvard Graphics Version 2.x graphic symbol or Windows SDK graphic symbol) |

|                      |                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------|
| 53 74 75 66 66 49 74 |                                                                                            |
| 20                   | StuffIt                                                                                    |
| 28 63 29 31 39 39 37 | (c)1997-                                                                                   |
| 2D                   |                                                                                            |
|                      | SIT StuffIt compressed archive                                                             |
| 54 68 69 73 20 69 73 | This is                                                                                    |
| 20                   |                                                                                            |
|                      | INFO UNIX GNU Info Reader File                                                             |
| 55 43 45 58          | UCEX                                                                                       |
|                      | UCE Unicode extensions                                                                     |
| 55 46 41 C6 D2 C1    | UFAÆÒÁ                                                                                     |
|                      | UFA UFA compressed archive                                                                 |
| 55 46 4F 4F 72 62 69 | UF00rbit                                                                                   |
| 74                   |                                                                                            |
|                      | DAT UFO Capture v2 map file                                                                |
| 56 43 50 43 48 30    | VCPCH0                                                                                     |
|                      | PCH Visual C PreCompiled header file                                                       |
| 56 45 52 53 49 4F 4E | VERSION                                                                                    |
| 20                   |                                                                                            |
|                      | CTL Visual Basic User-defined Control file                                                 |
| 57 4D 4D 50          | WMMP                                                                                       |
|                      | DAT Walkman MP3 container file                                                             |
| 57 53 32 30 30 30    | WS2000                                                                                     |
|                      | WS2 WordStar for Windows Ver. 2 document                                                   |
| [29,152 byte offset] | [29,152 byte offset]                                                                       |
| 57 69 6E 5A 69 70    | WinZip                                                                                     |
|                      | ZIP WinZip compressed archive                                                              |
| 58 43 50 00          | XCP.                                                                                       |
|                      | CAP Cinco NetXRay, Network General Sniffer, and<br>Network Associates Sniffer capture file |
| 58 50 43 4F 4D 0A 54 | XPCOM.Ty                                                                                   |
| 79                   | peLib                                                                                      |
| 70 65 4C 69 62       |                                                                                            |
|                      | XPT XPCOM type libraries for the XPIDL compiler                                            |
| 58 54                | XT..                                                                                       |
|                      | BDR MS Publisher border                                                                    |
| 5A 4F 4F 20          | ZOO                                                                                        |
|                      | ZOO ZOO compressed archive                                                                 |
| 5B 47 65 6E 65 72 61 |                                                                                            |
| 6C                   |                                                                                            |

|                                                                                                       |                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5D 0D 0A 44 69 73 70<br>6C<br>61 79 20 4E 61 6D 65<br>3D<br>3C 44 69 73 70 6C 61<br>79<br>4E 61 6D 65 | [General<br>]..Display Name=<br><Display<br>Name                                                                                                                                                                                                                             |
|                                                                                                       | ECF MS Exchange 2007 extended configuration file                                                                                                                                                                                                                             |
| 5B 4D 53 56 43                                                                                        | [MSVC<br>VCW Microsoft Visual C++ Workbench Information File                                                                                                                                                                                                                 |
| 5B 50 68 6F 6E 65 5D                                                                                  | [Phone]<br>DUN Dial-up networking file (unconfirmed)                                                                                                                                                                                                                         |
| 5B 56 45 52 5D 0D 0A<br>09 <i>or</i><br>5B 76 65 72 5D 0D 0A<br>09 <i>or</i>                          | [VER]...<br>[ver]...                                                                                                                                                                                                                                                         |
|                                                                                                       | SAM AMU Pro document                                                                                                                                                                                                                                                         |
| [2 byte offset]<br>5B 56 65 72 73 69 6F<br>6E                                                         | [2 byte offset]<br>[Version                                                                                                                                                                                                                                                  |
|                                                                                                       | CIF (Unknown file type)                                                                                                                                                                                                                                                      |
| 5B 57 69 6E 64 6F 77<br>73<br>20 4C 61 74 69 6E 20                                                    | [Windows<br>Latin<br>CPX Microsoft Code Page Translation file                                                                                                                                                                                                                |
| 5B 66 6C 74 73 69 6D<br>2E<br>30 5D                                                                   | [fltsim.<br>0]                                                                                                                                                                                                                                                               |
|                                                                                                       | CFG Flight Simulator Aircraft Configuration file                                                                                                                                                                                                                             |
| 5F 43 41 53 45 5F                                                                                     | _CASE_<br>CAS, CBK EnCase case file (and backup)                                                                                                                                                                                                                             |
| 60 EA                                                                                                 | `ê<br>ARJ Compressed archive file                                                                                                                                                                                                                                            |
| 62 65 67 69 6E                                                                                        | begin<br>n/a UUencoded files start with a string:<br>begin <i>mode path</i><br>where <i>mode</i> is the set of permissions as used in<br>Linux/Unix and <i>path</i> is the name given to the decoded<br>file. (See this <a href="#">uuencode</a> page for more information.) |
| 63 75 73 68 00 00 00<br>02<br>00 00 00                                                                | cush....<br>...                                                                                                                                                                                                                                                              |
|                                                                                                       | CSH Photoshop Custom Shape                                                                                                                                                                                                                                                   |

```

64 00 00 00          d...
                    P10 Intel PROset/Wireless Profile

64 73 77 66 69 6C 65  dswfile
                    DSW Microsoft Visual Studio workspace file

66 4C 61 43 00 00 00  fLaC..."
22
                    FLAC Free Lossless Audio Codec file

6C 33 33 6C          1331
                    DBB Skype user data file (profile and contacts)

[4 byte offset]      [4 byte offset]
6D 6F 6F 76          moov
                    MOV QuickTime movie file

```

.MOV files have a complicated file signature. The string "moov" is the most common but I have also seen:

```

0x66-72-65-65    free
0x6D-64-61-74    mdat
0x77-69-64-65    wide

```

And the following have been reported to me:

```

0x70-6E-6F-74    pnot
0x73-6B-69-70    skip

```

Furthermore, if you look at byte position xxxxxxxx+4 (hex), you will find one (or more!) of these strings repeated; the string "free" **seems** to be the most common. (Thanks to D. Wright for getting me started on this!)

```

72 65 67 66          regf
                    DAT Windows registry hive file

72 74 73 70 3A 2F 2F  rtsp://
                    RAM RealMedia metafile

73 6C 68 21 or       slh!
73 6C 68 2E          slh.
                    DAT Allegro Generic Packfile Data file (0x21 = compressed,
                    0x2E = uncompressed)

73 72 63 64 6F 63 69  srcdocid
64
3A                    :
                    CAL CALS raster bitmap file

73 7A 65 7A          szex
                    PDB PowerBASIC Debugger Symbols file

[60 byte offset]      [60 byte offset]
74 42 4D 50 4B 6E 57  tBMPKnWr
72

```

|                                              |                            |                                                                                                                                      |
|----------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                                              | PRC                        | PathWay Map file, used with GPS devices                                                                                              |
| [257 byte offset]<br>75 73 74 61 72          | [257 byte offset]<br>ustar |                                                                                                                                      |
|                                              | TAR                        | Tape Archive file<br>( <a href="http://www.mkssoftware.com/docs/man4/tar.4.asp">http://www.mkssoftware.com/docs/man4/tar.4.asp</a> ) |
| 76 32 30 30 33 2E 31<br>30<br>0D 0A 30 0D 0A | v2003.10<br>..0..          |                                                                                                                                      |
|                                              | FLT                        | Qimage filter                                                                                                                        |
| 78                                           | x                          |                                                                                                                                      |
|                                              | DMG                        | Mac OS X Disk Copy Disk Image file                                                                                                   |
| 7A 62 65 78                                  | zbex                       |                                                                                                                                      |
|                                              | INFO                       | ZoomBrowser Image Index file (ZbThumbnal.info)                                                                                       |
| 7B 0D 0A 6F 20                               | {..o                       |                                                                                                                                      |
|                                              | LGC, LGD                   | Windows application log                                                                                                              |
| 7B 5C 72 74 66 31                            | {\rtf1                     |                                                                                                                                      |
|                                              | RTF                        | Rich text format word processing file<br><b>Trailer:</b> 5C 70 61 72 20 7D 7D (\par }}                                               |
| 7E 42 4B 00                                  | ~BK.                       |                                                                                                                                      |
|                                              | PSP                        | Corel Paint Shop Pro image file                                                                                                      |
| 7F 45 4C 46                                  | .ELF                       |                                                                                                                                      |
|                                              | n/a                        | <a href="#">Executable and Linking Format executable file (Linux/Unix)</a>                                                           |
| 80                                           | .                          |                                                                                                                                      |
|                                              | OBJ                        | Relocatable object code                                                                                                              |
| 80 00 00 20 03 12 04                         | .....                      |                                                                                                                                      |
|                                              | ADX                        | Dreamcast audio file                                                                                                                 |
| 81 CD AB                                     | .Í«                        |                                                                                                                                      |
|                                              | WPF                        | WordPerfect text file                                                                                                                |
| 89 50 4E 47 0D 0A 1A<br>0A                   | .PNG....                   |                                                                                                                                      |
|                                              | PNG                        | <a href="#">Portable Network Graphics file</a>                                                                                       |
| 8A 01 09 00 00 00 E1<br>08<br>00 00 99 19    | .....á.<br>....            |                                                                                                                                      |
|                                              | AW                         | MS Answer Wizard file                                                                                                                |
| 91 33 48 46                                  | '3HF                       |                                                                                                                                      |
|                                              | HAP                        | Hamarsoft HAP 3.x compressed archive                                                                                                 |
| 95 00 <i>or</i><br>95 01                     | ..<br>..                   |                                                                                                                                      |

|                      |                   |                                                      |
|----------------------|-------------------|------------------------------------------------------|
|                      | SKR               | PGP secret keyring file                              |
| 99 01                | ..                |                                                      |
|                      | PKR               | PGP public keyring file                              |
| 9C CB CB 8D 13 75 D2 |                   |                                                      |
| 11                   | .ËË...UÒ.         |                                                      |
| 91 58 00 C0 4F 79 56 | .X.À0yV           |                                                      |
| A4                   |                   |                                                      |
|                      | WAB               | Outlook address file                                 |
| [512 byte offset]    | [512 byte offset] |                                                      |
| A0 46 1D F0          | F.ö               |                                                      |
|                      | PPT               | PowerPoint presentation subheader (MS Office)        |
| A1 B2 C3 D4          | ï²ÃÔ              |                                                      |
|                      | n/a               | tcpdump (libpcap) capture file (Linux/Unix)          |
| A1 B2 CD 34          | ï²Í4              |                                                      |
|                      | n/a               | Extended tcpdump (libpcap) capture file (Linux/Unix) |
| A9 0D 00 00 00 00 00 | ©.....            |                                                      |
| 00                   |                   |                                                      |
|                      | DAT               | Access Data FTK evidence file                        |
| AC 9E BD 8F 00 00    | ¬.½...            |                                                      |
|                      | QDF               | Quicken data file                                    |
| B1 68 DE 3A          | ±hþ:              |                                                      |
|                      | DCX               | Graphics Multipage PCX bitmap file                   |
| B5 A2 B0 B3 B3 B0 A5 | μϕ°³³°¥μ          |                                                      |
| B5                   |                   |                                                      |
|                      | CAL               | (Unknown file type...)                               |
| BE 00 00 00 AB 00 00 | ¾...«...          |                                                      |
| 00                   | ....              |                                                      |
| 00 00 00 00 00       |                   |                                                      |
|                      | WRI               | MS Write file                                        |
| C3 AB CD AB          | Ã«Í«              |                                                      |
|                      | ACS               | MS Agent Character file                              |
| C5 D0 D3 C6          | ÂÐÓÆ              |                                                      |
|                      | EPS               | Adobe encapsulated PostScript file                   |
| CA FE BA BE          | Êp°¾              |                                                      |
|                      | CLASS             | Java bytecode file                                   |
| CD 20 AA AA 02 00 00 | Í aa....          |                                                      |
| 00                   |                   |                                                      |
|                      | n/a               | Norton Anti-Virus quarantined virus file             |
| CF 11 E0 A1 B1 1A E1 | İ.àï±.á.          |                                                      |

|                            |                                   |                                                                                                                                           |
|----------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 00                         | DOC                               | Perfect Office document<br>[Note similarity to MS Office header, below]                                                                   |
| CF AD 12 FE                | İ . þ                             |                                                                                                                                           |
|                            | DBX                               | Outlook Express e-mail folder                                                                                                             |
| D0 CF 11 E0 A1 B1 1A<br>E1 | Ðİ . à ; ± . á                    |                                                                                                                                           |
|                            | DOC, DOT, PPS, PPT, XLA, XLS, WIZ | Microsoft Office applications (Word, Powerpoint, Excel, Wizard)<br>[See also Word, Powerpoint, and Excel "subheaders" at byte offset 512] |
|                            | AC_                               | CaseWare Working Papers compressed client file                                                                                            |
|                            | ADP                               | Access project file                                                                                                                       |
|                            | APR                               | Lotus/IBM Approach 97 file                                                                                                                |
|                            | DB                                | MSWorks database file                                                                                                                     |
|                            | MSC                               | Microsoft Common Console Document                                                                                                         |
|                            | MSI                               | Microsoft Installer package                                                                                                               |
|                            | MTW                               | Minitab data file                                                                                                                         |
|                            | OPT                               | Developer Studio File Workspace Options file                                                                                              |
|                            | PUB                               | MS Publisher file                                                                                                                         |
|                            | SOU                               | Visual Studio Solution User Options file                                                                                                  |
|                            | SPO                               | SPSS output file                                                                                                                          |
|                            | VSD                               | Visio file                                                                                                                                |
|                            | WPS                               | MSWorks text document                                                                                                                     |
| D2 0A 00 00                | Ò . . .                           |                                                                                                                                           |
|                            | FTR                               | GN Nettetst WinPharoah filter file                                                                                                        |
| D4 2A                      | Ô*                                |                                                                                                                                           |
|                            | ARL, AUT                          | AOL history (ARL) and typed URL (AUT) files                                                                                               |
| D4 C3 B2 A1                | ÔÃ² ;                             |                                                                                                                                           |
|                            | n/a                               | WinDump (winpcap) capture file (Windows)                                                                                                  |
| D7 CD C6 9A                | ×ÍÆ .                             |                                                                                                                                           |
|                            | WMF                               | Windows graphics metafile                                                                                                                 |
| DC DC                      | ÜÜ                                |                                                                                                                                           |
|                            | CPL                               | Corel color palette file                                                                                                                  |
| DC FE                      | Ûþ                                |                                                                                                                                           |
|                            | EFX                               | eFax file format                                                                                                                          |
| E3 10 00 01 00 00 00<br>00 | ã . . . . .                       |                                                                                                                                           |
|                            | INFO                              | Amiga Icon file                                                                                                                           |
| E3 82 85 96                | ã . . .                           |                                                                                                                                           |
|                            | PWL                               | Windows password file                                                                                                                     |
| E8 <i>or</i>               | è                                 |                                                                                                                                           |
| E9 <i>or</i>               | é                                 |                                                                                                                                           |
| EB                         | ë                                 |                                                                                                                                           |

|                                                                               |                                                                                                                                                                                    |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COM, SYS Windows executable file                                              |                                                                                                                                                                                    |
| EB 3C 90 2A                                                                   | ë<.*                                                                                                                                                                               |
|                                                                               | IMG GEM Raster file                                                                                                                                                                |
| [512 byte offset]<br>EC A5 C1 00                                              | [512 byte offset]<br>ì¥Á.                                                                                                                                                          |
|                                                                               | DOC Word document subheader (MS Office)                                                                                                                                            |
| ED AB EE DB                                                                   | ı"ıŮ                                                                                                                                                                               |
|                                                                               | RPM RedHat Package Manager file                                                                                                                                                    |
| EF BB BF                                                                      | ı»¿                                                                                                                                                                                |
|                                                                               | n/a Byte-order mark for 8-bit Unicode Transformation Format (UTF-8) files. (See the <a href="#">Unicode Home Page</a> .)                                                           |
| [512 byte offset]<br>FD FF FF FF 04                                           | [512 byte offset]<br>ýÿÿÿ.                                                                                                                                                         |
|                                                                               | SUO Visual Studio Solution User Options subheader (MS Office)                                                                                                                      |
| [512 byte offset]<br>FD FF FF FF nn 00 00<br>00                               | [512 byte offset]<br>ýÿÿÿ....                                                                                                                                                      |
|                                                                               | PPT PowerPoint presentation subheader (MS Office)<br>(where <i>nn</i> has been seen with values 0x0E, 0x1C, and 0x43)                                                              |
| [512 byte offset]<br>FD FF FF FF nn 02                                        | [512 byte offset]<br>ýÿÿÿ..                                                                                                                                                        |
|                                                                               | XLS Excel spreadsheet subheader (MS Office)<br>(where <i>nn</i> = 0x10, 0x22, 0x23, 0x28, or 0x29)                                                                                 |
| [512 byte offset]<br>FD FF FF FF 20 00 00<br>00                               | [512 byte offset]<br>ýÿÿÿ ...                                                                                                                                                      |
|                                                                               | OPT Developer Studio File Workspace Options subheader (MS Office)                                                                                                                  |
|                                                                               | XLS Excel spreadsheet subheader (MS Office)                                                                                                                                        |
| [512 byte offset]<br>FD FF FF FF xx xx xx<br>xx<br>xx xx xx xx 04 00 00<br>00 | [512 byte offset]<br>ýÿÿÿ....<br>.....                                                                                                                                             |
|                                                                               | DB Thumbs.db subheader (MS Office)                                                                                                                                                 |
| FE FF                                                                         | þÿ                                                                                                                                                                                 |
|                                                                               | n/a Byte-order mark for 16-bit Unicode Transformation Format/2-octet Universal Character Set (UTF-16/UCS-2), little-endian files.<br>(See the <a href="#">Unicode Home Page</a> .) |
| FF                                                                            | ÿ                                                                                                                                                                                  |
|                                                                               | SYS Windows executable (SYS) file                                                                                                                                                  |
| FF 00 02 00 04 04 05                                                          | ÿ.....T                                                                                                                                                                            |

|                      |                            |                                                                                                                                                                                |
|----------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 54                   | ..                         |                                                                                                                                                                                |
| 02 00                |                            | WKS Works for Windows spreadsheet file                                                                                                                                         |
| FF 46 4F 4E 54       | ÿFONT                      |                                                                                                                                                                                |
|                      | CPI                        | Windows international code page                                                                                                                                                |
| FF 4B 45 59 42 20 20 | ÿKEYB                      |                                                                                                                                                                                |
| 20                   |                            | SYS Keyboard driver file                                                                                                                                                       |
| FF 57 50 43          | ÿWPC                       |                                                                                                                                                                                |
|                      | WP, WPD, WPG, WP5          | WordPerfect text and graphics file                                                                                                                                             |
| FF D8 FF E0 xx xx 4A | ÿøÿà..JF                   |                                                                                                                                                                                |
| 46                   | IF.                        |                                                                                                                                                                                |
| 49 46 00             |                            | JFIF, JPE, JPEG, JPG <a href="#">JPEG/JFIF graphics file</a>                                                                                                                   |
|                      | <b>Trailer:</b> FF D9 (..) |                                                                                                                                                                                |
| FF D8 FF E1 xx xx 45 | ÿøÿá..Ex                   |                                                                                                                                                                                |
| 78                   | if.                        |                                                                                                                                                                                |
| 69 66 00             |                            | JPG Digital camera JPG using <a href="#">Exchangeable Image File Format (EXIF)</a>                                                                                             |
|                      | <b>Trailer:</b> FF D9 (..) |                                                                                                                                                                                |
|                      |                            | See " <a href="#">Using Extended File Information (EXIF) File Headers in Digital Evidence Analysis</a> " (P. Alvarez, <i>IJDE</i> , 2(3), Winter 2004)                         |
| FF Ex                | ÿ.                         |                                                                                                                                                                                |
| FF Fx                | ÿ.                         |                                                                                                                                                                                |
|                      | MPEG, MPG, MP3             | MPEG audio file frame <a href="#">synch pattern</a>                                                                                                                            |
| FF FE                | ÿp                         |                                                                                                                                                                                |
|                      | REG                        | Windows Registry file                                                                                                                                                          |
|                      | n/a                        | Byte-order mark for 16-bit Unicode Transformation Format/2-octet Universal Character Set (UTF-16/UCS-2), big-endian files.<br>(See the <a href="#">Unicode Home Page</a> .)    |
| FF FE 00 00          | ÿp..                       |                                                                                                                                                                                |
|                      | n/a                        | Byte-order mark for 32-bit Unicode Transformation Format/4-octet Universal Character Set (UTF-32/UCS-4), little-endian files.<br>(See the <a href="#">Unicode Home Page</a> .) |
| FF FE 23 00 6C 00 69 | ÿp#.l.i.                   |                                                                                                                                                                                |
| 00                   | n.e. .1.                   |                                                                                                                                                                                |
| 6E 00 65 00 20 00 31 |                            |                                                                                                                                                                                |
| 00                   |                            | MOF Windows MSinfo file                                                                                                                                                        |
| FF FF FF FF          | ÿÿÿÿ                       |                                                                                                                                                                                |
|                      | SYS                        | DOS system driver                                                                                                                                                              |

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