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Introduction

The File Investigator Engine is the core program that identifies a file by its content rather than filename extension. You might assume that it has to be slow if it opens every file, but it is almost as fast as any other program that just reads the disk directory. MS Windows and most applications only look at a file's extension when identifying or loading it. If the file has the wrong extension or the application just doesn't recognize the extension, then you are out of luck. Unless you have an application that uses the File Investigator Engine.

This engine also extracts valuable information out of many different types of files. Information like: image resolutions, sound file sampling rates, document titles, and much more. It then adds general information about that particular file type/format.

The MS Windows version of this engine is a Dynamic Link Library (DLL). A MS Windows like Properties dialog user interface (UI) is bundled with the engine. Future upgrade versions of the engine will include other UIs. Watch for MS Windows File Find and Explorer like UIs. Upgrades will also include more file type patterns to recognize more file formats.

A File Investigator Text Preview DLL is also included with the engine. When you select the Preview tab in the Properties UI, this DLL will display the text that is imbedded in ANY file. Additional preview DLLs will be available soon. These DLLs are similar to the plug-in programs provided for Internet browsers, and will also work with the future File Find and Explorer UIs. They process a file in the background, while you are viewing the different tabs in the Properties UI. The file data, image, etc. is gradually displayed in a scrollable window, as the file is being processed.

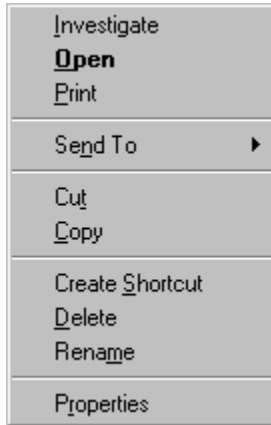
There are many uses for this kind of software. One is to identify a file that a friend or colleague gave you that Windows doesn't recognize. The Properties dialog can help you correct a wrong file extension (on the Details tab) or tell you where to find software to view, edit and/or convert the file (on the Background tab).

A second use is to quickly look at a file's details when searching for a specific file, without having to wait for an edit program to open and load each file. The Details tab displays this information.

How to use File Investigator

The File Investigator Properties program runs on MS Windows 95 & NT 4.0.

Context menu: Right click on any file or folder. File Investigator will appear on the local menu.



Desktop: Drag and drop any file onto the File Investigator icon on your desktop.



File
Investigator
(Drag & Drop)

DOS prompt: Run FIPROP [path]filename

File Investigator Programs

A MS Windows like Properties dialog user interface (UI) program and a text file viewer Dynamic Link Library (DLL) are bundled with the File Investigator engine. This File Investigator Properties program is intended to help people easily identify all of the file types that they encounter. Which should eliminate hours wasted trying to find files or finding a way to read a mysterious file that is required before they can go on with their work. Future upgrade versions of the engine will include additional UIs. Watch for MS Windows File Find and Explorer like UIs. Upgrades will also include more file type patterns to recognize more file formats.

The File Investigator Text Preview DLL is intended to help people find text embedded in a file. This can help to identify a file's format type when the engine doesn't recognize it yet. It can also help to see the content of a document without waiting for a word processor to start up then open the file.

File Investigator Properties for Windows

This program was designed to exercise the File Investigator Engine on a single file, and provide a familiar user interface (UI). The UI is similar to the Properties Dialog that MS Windows 95/NT 4.x provides.

It provides four tabs:

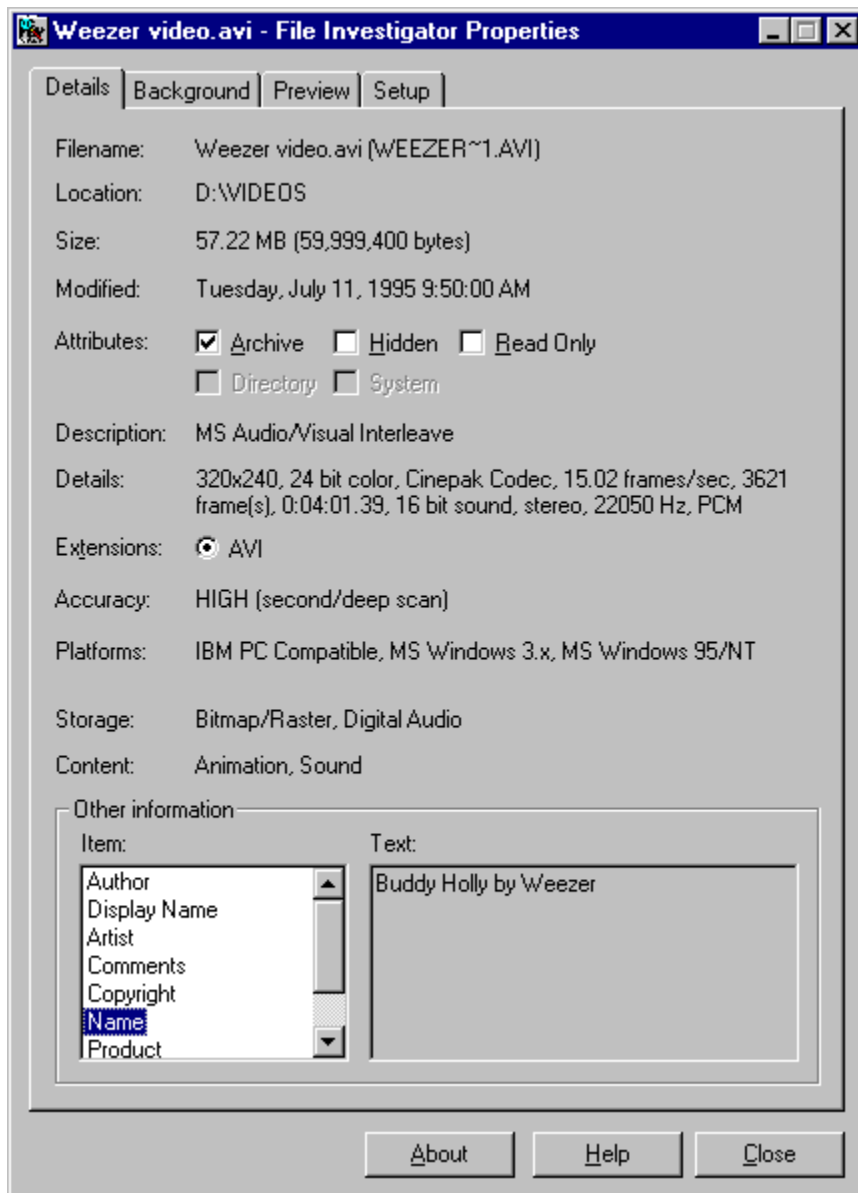
Details

Background

Preview

Setup

Details Tab



This tab displays all of the changeable attributes of the file and the information that the File Investigator Engine was able to extract from the file.

<u>Filename</u>	Displays the long (Windows) filename, as well as the DOS filename in parenthesis if it is different.
<u>Location</u>	Displays the Path/Directory/Folder that the file is in.
<u>Size</u>	Displays the size of the file in Kilo Bytes and bytes in parenthesis.
<u>Modified</u>	Displays the date that the file was last updated/written to.
<u>Attributes</u>	Displays the Archive, Hidden, Read Only, Directory and System attributes.
<u>Description</u>	Displays the name of the file's format/type.
<u>Details</u>	Displays the number values that were extracted from the file along with their respective units.
<u>Extensions</u>	Displays the file extensions that File Investigator recommends to use with that file format.

<u>Accuracy</u>	Displays a rating of how accurate File Investigator was at identifying that file.
<u>Platforms</u>	Displays a list of computer and operating systems that the file format is known to work on.
<u>Storage</u>	Displays a list of the methods used to store data in that file format.
<u>Content</u>	Displays a list of the types of data that are usually stored in a file of that file format.
<u>Other information</u>	Displays a list of text strings that File Investigator found in the file.

Attributes

Archive	Indicates whether the file needs to be backed up. Can be toggled on/off.
Hidden	Indicates whether to hide the file from most software. Can be toggled on/off.
Read Only	Indicates whether to protect the file from being modified or deleted. Can be toggled on/off.
Directory	Indicates whether the file is really a folder/directory.
System	Indicates whether the file belongs to the operating system.

Extensions

Displays the file extensions that File Investigator recommends to use with that file format.

A file extension is an abbreviated word added to the end of a file's name to identify its format or type on IBM PC Compatible operating systems (MS DOS, MS Windows, OS/2, etc.). Most software requires a file to have the correct extension before it can be opened. Files often lose their correct extension when they are copied over the Internet, from one operating system to another (ex: Mac to PC), or over modems. When you select an extension that the file is not using, then the file is immediately renamed to use the new extension.

Accuracy

Displays a rating of how accurate File Investigator was at identifying that file. 100% certainty is impossible, because text files and headerless binary files can mimic any file format.

High	The file was identified from the pattern database, then scanned deeper to confirm the result. (99% certainty)
Medium	The file was scanned once and identified from the pattern database. (75% certainty)
Low	Only the file extension was matched. (25% certainty)
None	The file was not identified.

Platforms

Lists the computers/operating systems that this file is associated with.

Amiga	Commodore 32 bit computer system that uses GEM Desktop for a graphical user interface.
Atari	Atari 8 bit computer system (models: 400, 800, xxxx XL) with a command line user interface or a 32 bit computer system (models: xxx ST) that uses GEM Desktop for a graphical user interface.
IBM OS/2	International Business Machines Operating System. The 32 bit successor to IBM PC DOS. Originated by a joint venture with Microsoft.
IBM PC Compatible	A computer that is designed to work with the same software as the original IBM PC computer.
Macintosh	Apple 32 bit computer system with a graphical user interface.
MS Windows 3.x	Microsoft 16 bit graphical user interface, designed to run on top of a MS/PC DOS operating system. Runs on IBM PC Compatibles. Versions 1.x and 2.x are too old to be supported.
MS Windows 95/NT	The 32 bit (95 is 16/32 bit) successor to MS Windows 3.x. Windows 95 still runs over a version of MS DOS that it includes. Windows NT is an operating system that includes the 3.x (NT v3.xx) or 95 (NT v4.xx) graphical user interface.
MS/PC DOS	Microsoft/Personal Computer Disk Operating System. The successor to the CP/M operating system. Command line based system similar to UNIX operating systems.
Sun OS	An operating system designed to run on UNIX computer systems. Uses a Command line and/or Motif graphical user interface.
UNIX	A type of command line operating system that is available from many different companies to run on specific types of computers. They are not necessarily compatible with each other.
Unknown	Either the file was not identified or it is unknown where the file format comes from.

Storage

Lists the method(s) used to store the data in the file format.

Archive	One or more files stored, and possibly compressed, in a single new file.
Binary	Data is stored in patterns of ones and zeros, unrecognizable to text editors or viewers.
BitMap/Raster	An image stored as colored dots.
Digital Audio	A sound stored as numbers sampled from an analog wave form in very small time increments.
Music Notes	A musical segment stored as numbers or commands that represent

	standard musical notation.
Text	Data is stored using common letters and numbers to represent words and/or values.
Translated	Data is converted to a different format for a different computer system, language or for transporting the file.
Unknown	Either the file was not identified or details about its format are not totally known to the File Investigator Engine.
Vector	An image stored as commands for drawing colored lines and geometric shapes.

Content

Lists the type(s) of data that are normally stored in a file of that format/type.

Animation	Series of images meant to be displayed as a movie.
Database	Organized list of data.
Database Hybrid	Database that contains more types of data than just letters and numbers.
Document	Text file that includes formatting information.
Font	Instructions for displaying and/or printing letters in a specific style.
Game Data	Saved game or game demo file.
Graphic Image	Picture.
Graphic Metafile	Picture that includes text.
Hypertext	Text file that contains links to jump around in the file easily.
Hypermedia	Multimedia file that contains links to jump around in the file easily.
Icon	Small picture meant to represent a specific type of file or a program option.
Library of Functions	Collection of compiled program parts meant to be used by a separate program.
Macro	Series of commands/mouse movements/keyboard keys collected to automate an often performed task.
Program Data	Data required for a specific program to function properly.
Program Executable	Program that can be executed/run.
Raw Printer Data	Print job that was saved to a file, rather than sent directly to a printer.
ROM/RAM Image	Program or data segment that was captured from a ROM chip or a computer's RAM. Often saved to a file to flash to other EPROM (Erasable Programmable Read Only Memory) or EEPROM (Electronic EPROM) chips.
Shortcut/Link	File that points to a different area on a computer disk, and performs a specific action.
Sound	Set of commands or digital samples that can be used to produce sound from a computer.
Sound Metafile	Sound file that includes other type of information, like text, images, etc..
Source Code	Text file that contains commands that perform a specific task, when compiled and linked or interpreted.
Spreadsheet	Matrix of cells that hold text or number values.
Template	File that guides a program in creating and formatting a specific type of document.
Text	File that contains letters and numbers with enough formatting to indicate where lines end, tabs are placed and pages end.
Text Hybrid	Text file that contains more types of data than just letters and numbers.
Unknown	The content of the file is unknown, because it is an archive, directory/folder or could not be identified.
Virtual Environment	Instructions for constructing a moving image that mimics a real world setting.
Virus	File that has been infected with a virus.

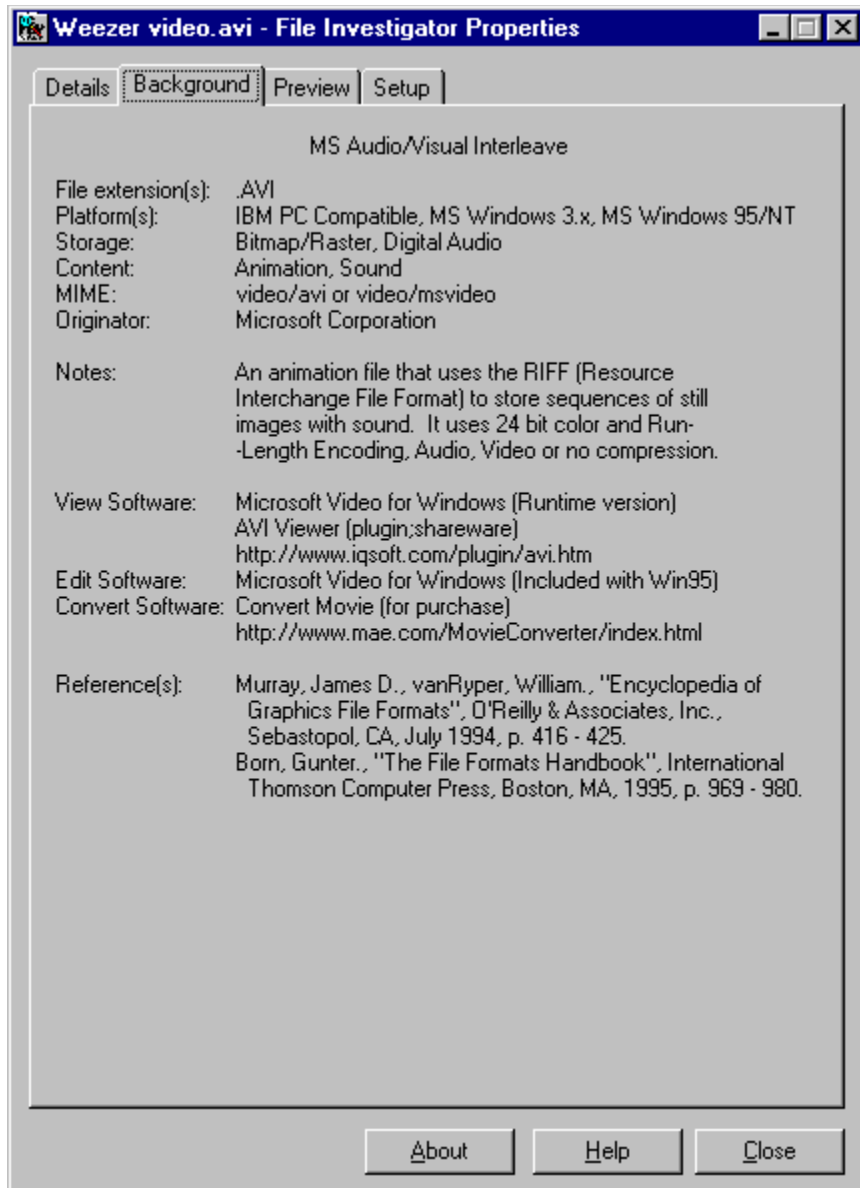
Other Information

Displays a list of text strings that File Investigator found in the file. On the left, there is a scrollable list of string titles. When a title is highlighted, the text string is displayed on the right.

Common titles:

- Artist
- Author
- Comments
- Company
- Compiler
- Compressor
- Copyright
- Date Created
- Description
- Display Name
- File Name
- File Version
- Instrument
- Internal Name
- Keywords
- Lyric
- Mac Creator
- Mac Type ID
- Miscellaneous
- Name
- Product
- Product Version
- Program Name
- Software
- Source
- Subject
- Text
- Title

Background Tab



This tab displays all of the information that the File Investigator Engine has on the file format/type.

<u>File extension(s)</u>	File extensions commonly used for that file format.
<u>Platform(s)</u>	A list of computer and operating systems that the file format is known to work on.
<u>Storage</u>	A list of the methods used to store data in that file format.
<u>Content</u>	A list of the types of data that are usually stored in a file of that file format.
<u>MIME</u>	One or more Internet identification text strings commonly used with that file format.
Originator	The name of the company and/or individual who created the format.
Notes	Sometimes an originating date is also displayed, in parenthesis. Description of the type(s) of information that the format is capable of storing. Occasionally includes other background information.
View Software	List of programs that you can use to view this type of file. "(Shareware)" indicates that the program is free, and "(Purchase)" means that the software must be paid for. A URL (Internet web site) is provided for most

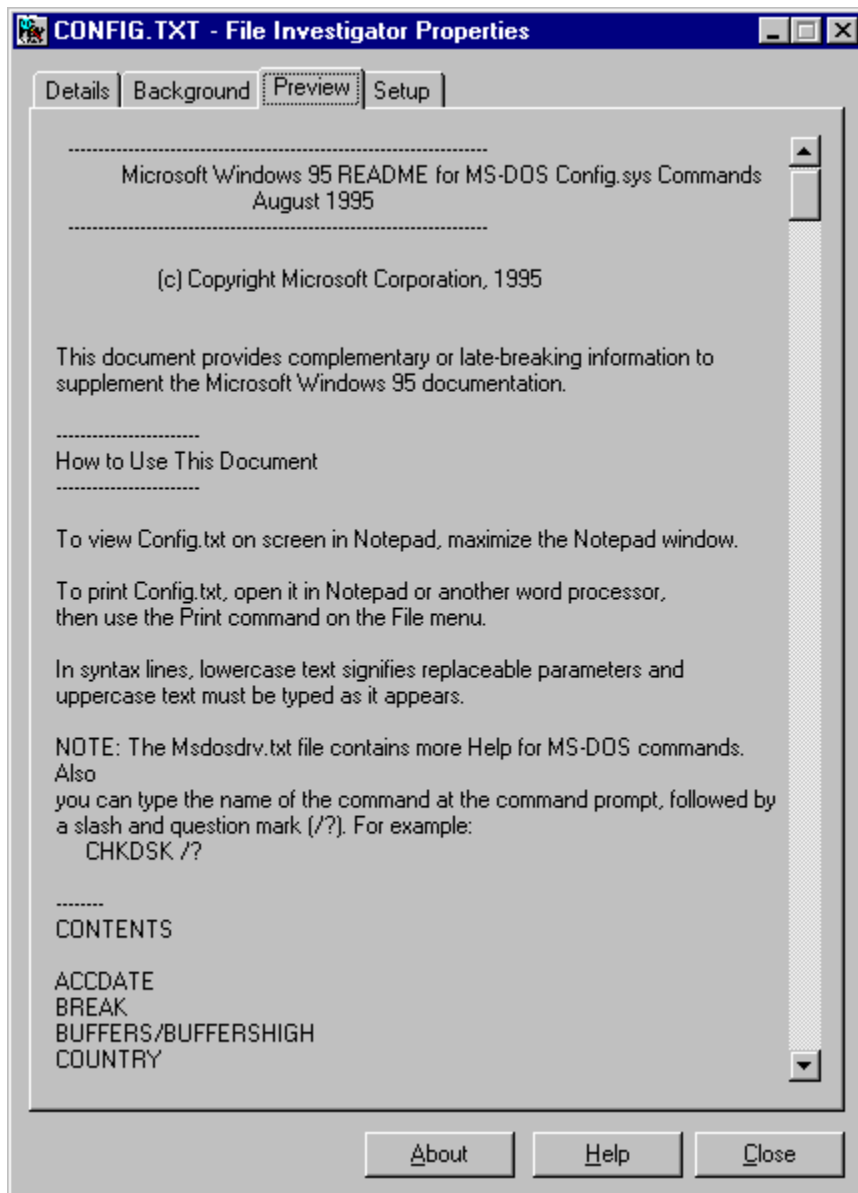
	software.
Edit Software	List of programs that you can use to edit or open this type of file. "(Shareware)" indicates that the program is free, and "(Purchase)" means that the software must be paid for. A URL (Internet web site) is provided for most software.
Convert Software	List of programs that you can use to convert this type of file to a different file format. "(Shareware)" indicates that the program is free, and "(Purchase)" means that the software must be paid for. A URL (Internet web site) is provided for most software.
Reference(s)	A list of books and documents that were used in researching the format or file type. They should be helpful to a programmer who needs to write software that uses the format.

MIME

A Multipurpose Internet Mail Extension (text string) that is used in Internet email messages and HTML web pages to identify a specific type of file as an attachment or embedded object. Also known as a Multimedia Internet Message Extension.

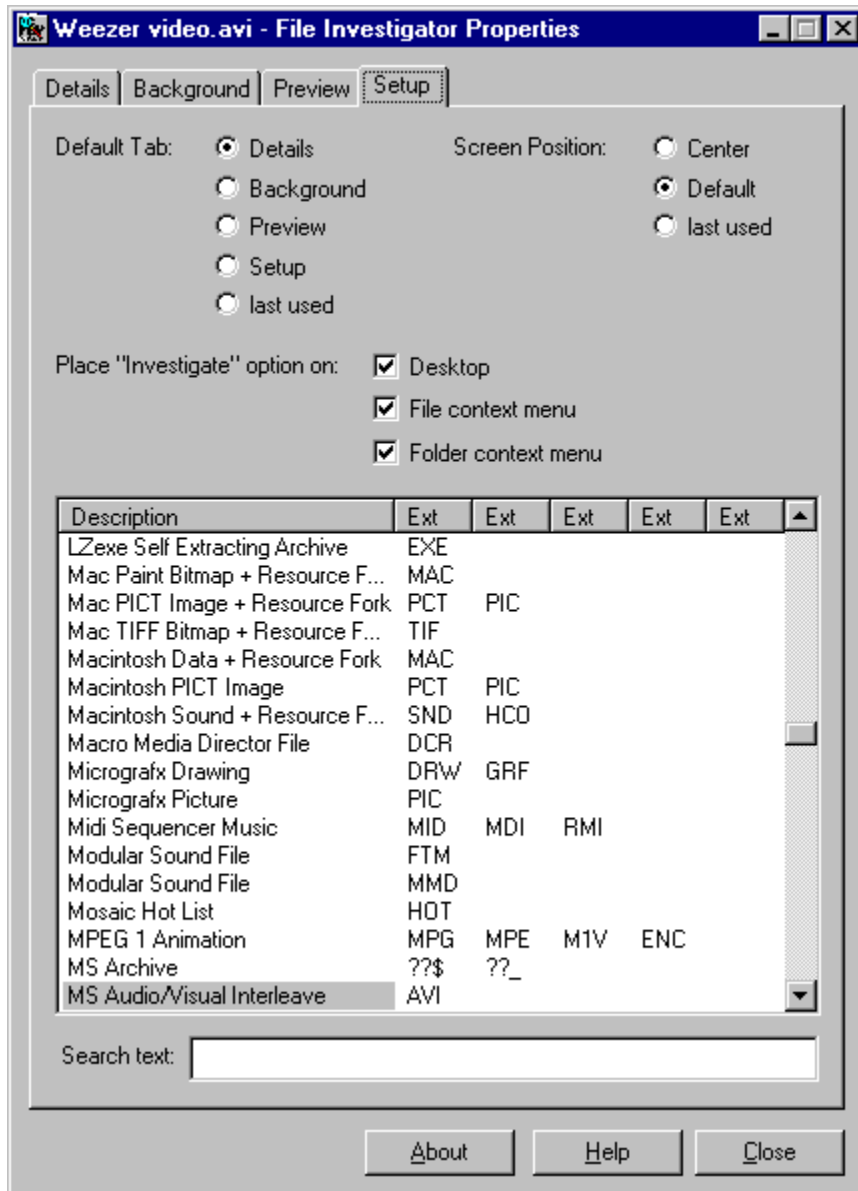
The MIME structure <type/subtype>*[attribute1=value1;attribute2=value2;...] describes what type of data and what subtype or format it is stored in. The attributes and values act as optional parameters describing how to handle the file. Often type and subtype names begin with 'x-' to indicate that they are not yet a part of the MIME standard.

Preview Tab



This tab uses a preview program to display the contents of the file. Currently, the File Investigator Text Previewer, a scrollable window that displays any text strings found in the file, is included. Future versions of File Investigator will have the ability to add more preview programs for image, sound, and animation files.

Setup Tab



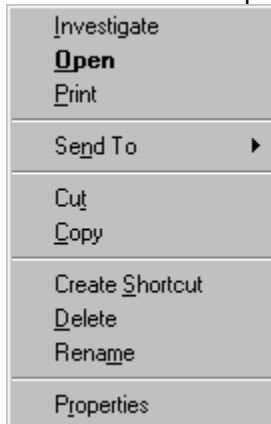
This tab provides configuration settings and displays a scrollable list of the file formats/types that the File Investigator Engine recognizes.

Settings

Default Tab	Details	The Details tab will be the first to appear. (default)
	Background	The Background tab will be the first to appear.
	Preview	The Preview tab will be the first to appear.
	Setup	The Setup tab will be the first to appear.
	last used	The last tab that you used will be the first to appear.
Screen Position	Center	The dialog box will appear in the center of the screen.
	Default	The dialog box will appear where Windows decides to place

	last used	it. The dialog box will appear in the same screen location that it was last used at.
Place “Investigate” option on	Desktop	A “File Investigator (Drag & Drop)” icon will be placed on the Windows desktop. When you drag a file from a Windows application and drop it on this icon, File Investigator will investigate it.
	File context menu	An “Investigate” option will appear on the context menu when you aim the mouse pointer at a file and click the right mouse button.
	Folder context menu	An “Investigate” option will appear on the context menu when you aim the mouse pointer at a folder/directory and click the right mouse button.

Context menu example:



File Formats List

Description	The name of the format.
Ext	Up to five of the most common extensions used for the format.

Note: If you double click the left mouse button on a format description, then you will be switched to the Background tab to view more information about that format.

Search text

Type in part of a format description name, and the list will jump to the closest match. If you add a period in front of the text, only the file extensions will be included in the search. The search text is not case sensitive.

Pattern Database Updates (Available starting with version 1.30)

When there are new file formats added to the File Investigator Engine or new preview programs available, you will be able to find the updates on the Internet web site [HTTP://members.home.net/robzirstein](http://members.home.net/robzirstein).

Upgrade File Investigator

You are free to use and distribute version 1.20 as long as you include all of the original files packaged in the original FI120.EXE archive. This version is for personal use only. Companies must upgrade it immediately. By upgrading, you will receive the latest MS Windows 95/NT version of File Investigator Properties and notifications of future releases.

To upgrade over the Internet, use the RobWare web site: [HTTP://members.home.net/robzirnstein](http://members.home.net/robzirnstein).

If you prefer to send a check by mail:

If possible, visit the RobWare web site for the latest versions and shipping options.

Make the check payable to **Rob Zirnstein**.

The prices are in **US dollars**.

Fill out the order form.

Mail to: RobWare

40 Massier Lane

Foothill Ranch, CA 92610-2300

USA

Site license: Entitles the company to receive one copy of the distribution package and duplicate it for the specified number of copies.

File Investigator Properties for Windows v1.30 ___ copies x \$10 = _____

File Investigator File Find for Windows v1.40 ___ copies x \$10 = _____

(Requires FI Properties to be installed)

(Available at a later date than the v1.30 release)

Be one of the first to search through files
by their details rather than just text!

Mail the 3½" floppy disk (optional) in US or Canada add \$5 _____
in other countries add \$10 _____

Total payment _____

Instructions for downloading the new version from the web site will be emailed to you, once your payment is received.

PLEASE PRINT CLEARLY

Date: ___/___/___

Name: _____

Company: _____

Address: _____

City, State, Zip: _____

Country: _____

E-Mail address: _____

How did you hear about File Investigator?

Comments:

Troubleshooting

Microsoft Office Shortcut bar

Problem : When you click on a button it runs File Investigator rather than the application that you were selecting.

Cause: The Shortcut Bar uses Links (.LNK files) to point to the right programs. It appears that rather than use the .LNK file association Open command in the Windows Registry, they use the first option on the local (right click) menu in error. This picks up File Investigator, because it appears as the first option in the menu.

Solution: Stop using the MS Shortcut Bar.

or

Run File investigator Properties.

Select the Setup tab.

Remove the check mark in front of "File context menu".

Note: Version 1.30 of File Investigator may include a work around.

