### Introduction

FileSync is a simple file management utility that compares the <u>time-stamps</u> of the files on two paths and displays a list highlighting the differences.

For more sophisticated applications, options are available for comparing file sizes and also binary (byte by byte) comparisons.

Once the comparison has been performed the list can be filtered and the files <u>tagged</u>. The files are then synchronised by copying the tagged files from each path to the other to ensure that the most up-to-date copy of the files exists in both paths.

#### What's new

#### New in this release:

#### Enhancements:

- Binary compare
- File size compare
- Ignore older than ...
- View differences
- Delete files with Delete key
- Space bar tagging

#### Fixes:

- Incorrect 0KB output in report printing fixed
- Target file is no longer destroyed when an error occurs during synchronisation
- Crash when handling invalid Timestamps fixed
- · No longer reports an error about root directory creation
- File Attributes now correctly copied

#### New in version 1.42:

- Problem with creating new folders on UNC targets under Windows 95 fixed.
- Splash screen removed for registered users.

#### New in version 1.4:

- Synchronisation engine redesigned to work with IE4 desktop integration.
- Now runs under <u>NT 3.51</u> (with some limited functionality)
- Multi-threading re-introduced and enhanced to improve interface response.
- Source, target and type combo boxes now support Cut, Copy, Paste and undo.
- Free disk space displayed for Source and Target paths.

#### New in version 1.31:

- File type exclusions
- You can now specify files to exclude from the <u>comparison</u>. See <u>File Types</u>.
- Filter setting is optionally persistent. See Options, General.
- Problem with filenames starting with "." (a period) fixed.

#### Registration

FileSync is a shareware program and is provided at no charge to the user for evaluation. Feel free to share unlicensed copies with your friends, but please do not give it away altered or as part of another system. The essence of shareware software is to provide personal computer users with quality software without high prices, and yet to provide incentive for programmers to continue to develop new products.

If you find this program useful and find that you continue to use it after a reasonable trial period, you must make a registration payment (see below). This registration fee will license one copy for use on any one computer at any one time. All users will receive a registration key when they register, and free technical support for an unlimited period.

Commercial users must register and pay for their copies within 30 days of first use or their license is withdrawn. Site License arrangements may be made by contacting the author.

Anyone distributing this product for any kind of remuneration must first contact the <u>author</u> for authorization.

You must treat this software just like a book. For example, this software may be used by any number of people and may be freely moved from one computer location to another, as long as there is no possibility of it being used at more than one location at a time. Just as a book cannot be read by two people at the same time.

You are encouraged to pass a copy of this software along to your friends for evaluation, but you must include all files in the original distribution. Please encourage them to register their copy if they find that they make use of it.

Registration is available via **Compuserve's** Software Registration Forum (GO SWREG), registration ID 13975, at a charge of US\$15, or on-line via the either the **RegNow** or **ShareIt**! registration service's secure web servers, at a charge US\$15.

Benefits of registration include a clear conscience, product life-time <u>upgrades</u> and priority email <u>support</u>

# **Upgrades**

Upgrades will be available for free download from the FileSync Web Site at <a href="http://easyweb.easynet.co.uk/~coates">http://easyweb.easynet.co.uk/~coates</a>. All registered users will be notified by email as and when new versions are available.

# FileSync Help

Introduction

Step by Step

Registration

Support

# **About FileSync**

FileSync is a simple file management utility that compares the <u>time-stamps</u> of the files on two paths and displays a list highlighting the differences.

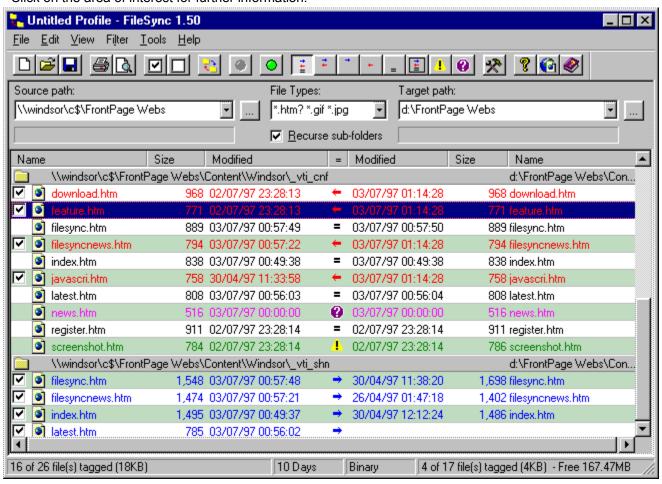
For more sophisticated applications, options are available for comparing file sizes and also binary (byte by byte) comparisons.

Once the comparison has been performed the list can be filtered and the files <u>tagged</u>. The files are then synchronized by copying the tagged files from each path to the other thus ensuring that the most up-to-date copy of the files exists in both paths.

# Frequently Asked Questions

#### **Main Window**

This is the FileSync main window display which shows the comparison file list. Click on the area of interest for further information.



### **Status Bar**

The status bar shows file statistics for the source and target paths displayed in the comparison list. The number of files tagged from the number of files in the list is shown as well as the total file size that would be copied during <a href="mailto:synchronization">synchronization</a>.

## **Time-Stamps**

The time-stamps used by FileSync are the last modified dates and times which are maintained by the operating system for each file stored on disk.

Fat file systems, as used by Windows 95, can only store time-stamps to the nearest 2 seconds and this can cause problems when comparing with files stored on an NTFS file system as used by Windows NT4, which maintains time-stamps to an accuracy of milli-seconds.

To handle this problem use the <u>Ignore 2 second time differences</u> file system option

# **Tagging Files**

Files can be tagged or untagged by clicking the checkbox on the left-hand side of the comparison list or by use of the space bar when the list entry is highlighted.

You can also tag/untag an entire folder by clicking on the folder header.

Note that tagging is different from selecting.

### **Folder Header**



The folder header is displayed for each folder that is included in the comparison list.

Clicking on any part of it will <u>tag/untag</u> all the files within that folder.

A double-click on the header will open an explorer window on the specific folder as long as it exists.

## **Path Comboboxes**

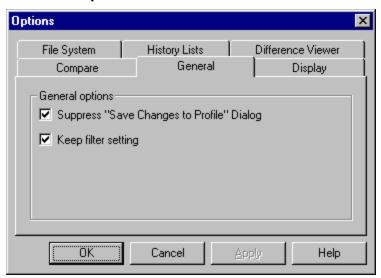
Enter the paths that you are interested in comparing into these two combo boxes. There are three ways to do this:

- 1. Type a pathname directly into the control.
- 2. Select a path you have used before from the drop-down history list.
- 3. Use the browse button to select a path from all the available resources on your machine or network.

#### **Notes**

FileSync supports both drive letter mappings of the form x:\FolderName where x is a mapped drive letter, and <u>UNC</u> names of the form \\ComputerName\ResourceName\FolderName.

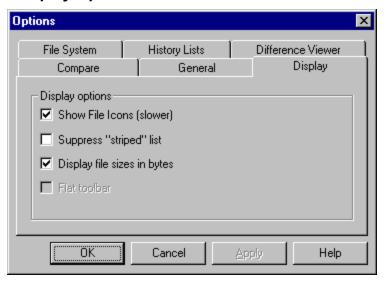
# **General Options**



# Suppress "SaveChanges to Profile" Dialog

This option, when set, stops the dialog appearing that asks for confirmation when either a new profile is opened or the Program is exited.

## **Display Options**



#### **Show File Icons**

Displays the associated file icon on the left-hand side of the comparison list. Note that this introduces a performance overhead.

#### Suppress "striped" list

Switches off the alternating green and white striping in the comparison list. (Cosmetic)

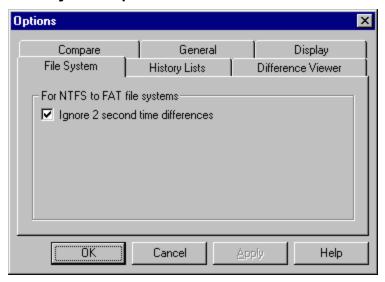
#### Display file sizes in bytes

Displays the file sizes in bytes instead of Kilobytes and Megabytes.

#### Flat toolbar

Due to potential problems with some versions of the operating system Comctrl32.dll, this option is disabled for the time being. (Cosmetic)

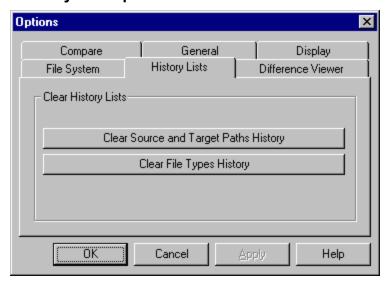
# **File System Options**



# Ignore 2 second time differences

This option forces the program to treat <u>time-stamps</u> that are within 2 seconds as the same and therefore do not require synchronization. This is to handle the way time-stamps are stored under different file systems.

# **History List Options**



# **Clear Source and Target Paths History**

Press this button to clear the history stored for the drop-down list on the <u>source and target path</u> <u>comboboxes</u> .

## **Clear FileTypes History**

Press this button to clear the history stored for the drop-down list on the File Types combobox.

### Step by Step

#### Step 1.

Enter the <u>Source</u> and <u>Target</u> paths that you want to compare. See <u>Path Comboboxes</u>.

#### Step 2.

Set the <u>File Types</u> to be compared. Separate multiple file types with a space. "\*.exe \*.dll \*.vxd"

### Step 3.

Set the Recurse sub-folders check-box as required.

#### Step 4.

From the menu select **File Compare**, the comparison will begin. The <u>compare</u> can be stopped with the **File Stop** option.

### Step 5.

Untag any files that you wish to exclude from synchronization .

# Step 6.

From the menu select File Synchronize, the Confirm Synchronize dialog will be displayed.

#### Step 7.

Select the directions for copying and set the overwrite and new folder options; Press OK.

# **Profiles**

Profiles are files that FileSync can use to load and save your current <u>path</u> and <u>file types</u> settings.

The following options on the **File** menu are used with profiles:

New Profile
Open

Save

Save As

# **New Profile**



This option clears the comparison list and creates a new profile.

# **Open Profile**



This option opens an existing profile which has been stored on disk. When the profile is loaded the <u>Source and Target paths</u>, the <u>File Types</u> and the <u>Recurse sub-folders</u> options are set to the saved values.

# **Save Profile**



This option saves the <u>Source and Target paths</u>, the <u>File Types</u> and the <u>Recurse sub-folders</u> options into the currently open profile.

# **Save Profile As**

This option saves the <u>Source and Target paths</u>, the <u>File Types</u> and the <u>Recurse sub-folders</u> options into a new profile. A file save dialog box will prompt for a name for this profile.

# **Filtering**



You can apply nine different filtering options to the comparison list:

- All files
- Files requiring synchronization
- Files to copy from source to target
- Files to copy from target to source
- Files with matching time-stamps
- Files that exist on both paths
- Files that exist on one path only
- Files with the same time-stamps but different sizes
- Files with the same time-stamps and sizes but with <u>binary differences</u>

# Target path

The target is the path displayed on the right-hand side of the <u>comparison list</u>.

# **Comparison list**

The comparison list displays the files from the <u>source</u> and <u>target</u> paths.

# Stop



The File Stop option will terminate the currently running file comparison.

## Toolbar

Click on a button for further information.



# Select all

The Select all option will <u>select</u> all files that are currently displayed in the <u>comparison list</u>.

# Tag All



# **Untag All**



Untags all files in the comparison list.

# Source path

The source is the path displayed on the left-hand side of the comparison list.

# **Synchronize**



When file synchronize is selected the  $\underline{\text{tagged}}$  files on both paths are copied in the direction specified in the  $\underline{\text{compare list}}$ .

The time taken for the compare depends on two main factors. The number of files that match the <u>file</u> <u>types</u> criteria and the speed of the connections to the source and target paths. Paths on local hard drives will obviously be fastest whereas paths being accessed over a dial-up networking connection will be slowest.

# **Print**



This option will print the current contents of the <u>comparison list</u> to a selected printer.

# **Print Preview**



This option displays each page as it will look when printed.

### File Types



Enter the criteria for files that will be included in the comparison. You can specify any file specification you like such as \*.\* or \*.exe. If you want to include more than one type of file enter multiple file specifications separated with a space. e.g. \*.bmp \*.wmf \*.gif \*.jpg

### **Excluding Files**

Files can be excluded from the comparison by specifying a file type with a '-' (minus sign) as a prefix.

#### For example:

The file specification \*.b\* -\*.bak would include all files whose extensions started with b except for files with a bak extension.

The file specification \*.\* -a\*.\* -\*.Z\* would include all files except for those with a name beginning with a or with an extension beginning with z.

### Recurse sub-folders

▼ Recurse sub-folders

■ Recurse sub-fo

The recurse sub-folders option controls whether files in sub-folders of the selected paths will be included in the comparison. For instance, if the paths are set to the root directory of a drive then, with this option set, all files that match the specified <u>file types</u> will be displayed in the <u>comparison list</u>.

### **Hints and Tips**

You can make a complete copy of a folder tree including whatever files you specify by setting either source or target to a non-existent folder. When you run the compare FileSync will show all the files in the list as needing to be copied. On the synchronize operation make sure confirm new folders option is off and FileSync will copy all the files and create all the necessary new folders in one step.

For best performance over slow networks and dial-up connections make sure that the "Display File Icons" option is off. FileSync doesn't store the icons as part of the list and therefore needs to re-read them from the disk each time an icon is displayed.

Create shortcuts to your FileSync profiles and put them in a separate folder on the desktop. A double click on any shortcut will launch FileSync and load the required profile.

### **Version Information**

Version	Released	Details
1.50	July 1997	See_What's new
1.42	May 1997	Problem with creating new folders on UNC targets under Windows 95 fixed.
		Splash screen removed for registered users
1.4	April 1997	Synchronisation engine redesigned to work with IE4 desktop integration.
		Now runs under NT 3.51 (with some limited functionality)
		Multi-threading re-introduced and enhanced to improve interface response.
		Source, target and type combo boxes now support Cut, Copy, Paste and undo.
		Free disk space displayed for Source and Target paths.
1.31	February 1997	Problem with filenames starting with "." (a period) fixed.
		Filter setting is now optionally persistent.
		File type exclusions now supported.
		Focus set to file list after a compare.
1.3	December 1996	First registerable release version.
1.2	October 1996	A series of betas to exorcise the bugs
1.1	March 1996	Sub-folder recursion added
1.0	December 1995	First release

### **Future Enhancements and Features**

Development of this product is on-going and there is always a list of new enhancements and features to be provided at some point. Feedback and suggestions for the product are always welcome.

# Support

Support is available by email from the <u>author</u> at **coates@easynet.co.uk**. Priority will be given to registered users but all users will receive support.

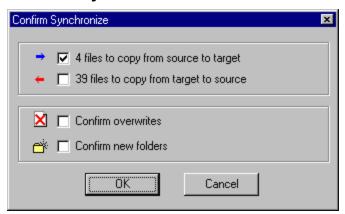
### **File Compare**



When file compare is selected the specified files on both paths are compared and a list is displayed which shows whether files have equal <u>timestamps</u> or not and if so which direction they need to be copied to <u>synchronize</u> the two paths.

The time taken for the compare depends on two main factors. The number of files that match the <u>file</u> <u>types</u> criteria and the speed of the connections to the <u>source and target paths</u>. Paths on local hard drives will obviously be fastest whereas paths being accessed over a dial-up networking connection will be slowest.

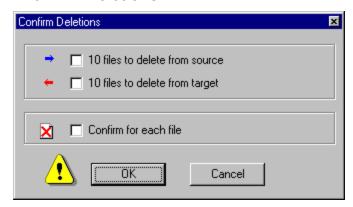
### **Confirm Synchronize**



This dialog allows you to specify in which direction you would like to copy files and also provides options to confirm when files will be overwritten and new folders will be created.

Only files that are <u>tagged</u> will be copied and, by default, copied files will overwrite those on the destination and new folders created when required.

### **Confirm Deletions**



This dialog allows you specify whether  $\underline{\text{selected}}$  files are deleted from the  $\underline{\text{source}}$ ,  $\underline{\text{target}}$  or both paths.

## **Options**



From Tools options a dialog is displayed which provides access to the settings that are used each time FileSync is run. This means that these settings are not saved in the profiles but in the <u>Windows</u> registry and therefore do not change when another <u>profile</u> is loaded.

The options are divided into six groups as follows:

General

**Display** 

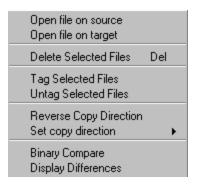
File System

**History Lists** 

Difference viewer

**Compare** 

### **Context menu**



The context menu is displayed by right-clicking on the <u>comparison list</u> and the options available only operate on <u>selected</u> files.

### **Reverse Copy Direction**

This option allows you to reverse the copy direction of <u>selected</u> files. This means that you can force the program to copy the older file over the more recent. Files that have had their copy direction reversed are shown with a copy direction arrow that is a different colour to their text.

#### Note

This option should be used with care as the more recent copy of the file will be overwritten and lost.

### **Deleting Files**

This option allows you to delete <u>selected</u> files from either the source path, target path or both. Before the actual deletion takes place you are asked to confirm the operation by the <u>Confirm Deletions</u> dialog.

#### Note

Deleting files may cause loss of data so use this option with care! If the files being deleted are on a local disk drive they will be sent to the recycle bin.

# **Selecting files**

Selected files are different from  $\underline{tagged}$  files. Selected files are those that are highlighted in the  $\underline{comparison\ list}$ . The  $\underline{context\ menu}$  options operate on  $\underline{only}$  the selected files.

All the files in the list can be selected from the **Edit** menu **Select All** option.

### Disclaimer and other legal stuff

#### LIMITED WARRANTY AND REMEDIES

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YOU ACKNOWLEDGE THAT YOU HAVE READ THIS LICENSE, UNDERSTAND IT AND AGREE TO BE BOUND BY ITS TERMS AS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN US, SUPERSEDING ANY PROPOSAL OR PRIOR AGREEMENT, ORAL OR WRITTEN, AND ANY OTHER COMMUNICATIONS BETWEEN US RELATING TO THE SUBJECT MATTER OF THIS LICENSE.

## The author

You can contact the author, Tim Coates, via email at **coates@easynet.co.uk** or **coates@compuserve.com**.

### UNC

Universal Naming Convention. A standard naming convention used by  $\underline{\text{Windows }95}$  ,  $\underline{\text{Windows }NT}$  and other operating systems which takes the form:

 $\verb|\ComputerName| ResourceName| FolderName| \\$ 

# **Windows Operating Systems**

Windows 95 and Window NT are trademarks of the Microsoft Corporation and if I don't mention this, their lawyers might get cross with me.

# NT 3.51 Support

Window NT 3.51 is now supported but with limited functionality. The "browse for folders" buttons don't work.

### **Binary compare**

Files can be optionally compared on a binary basis. This means that the files are compared byte by byte until either there is a mismatch or the end of file is reached. Running a binary compare confirms that two files are absolutely identical regardless of their modification date and time.



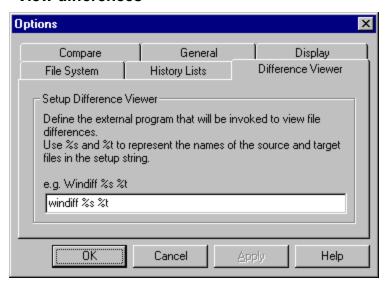
The difference information dialog shows the contents of the two files from the point where the first difference is found. Non-printable characters are displayed as their hexadecimal values in between square brackets.

### File size compare

For files that have matching timestamps, the file sizes can be optionally compared. There is a filter to display only files that have matching timestamps but different sizes.

The compare file sizes option is set in the  $\underline{\text{Tools, options, compare}}$  .

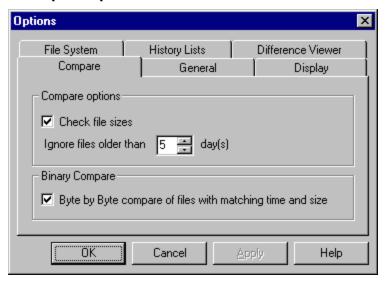
### View differences



There are several freeware and shareware difference viewers available as well as Microsoft's offering, Windiff.

This option page allows you to setup your preferred difference viewer which is invoked from the "Display Differences" option on the  $\underline{\text{file list context menu}}$ .

### **Compare options**



#### Check file sizes

This option controls whether file sizes are checked when a comparison is run. Only files with the same time-stamp are checked.

#### Ignore files older than...

This option excludes files from the compare that are older than the specified number of days. When set to 0 days no files are excluded.

If there is a number of days set a reminder is displayed in the status bar.

#### **Binary compare**

If this option is set, files with the same size and time-stamp will be compared on a byte by byte basis. Note that enabling this option may severely degrade the performance of the compare operation.

If you want to do a binary compare of individual files this option is available on the context menu.