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Introduction

FolderMatch is a Windows 95/98/NT utility that allows you to compare and synchronize two folders. This certainly doesn't sound very exciting, does it? Well it is! Everybody, including you, has a need for a folder comparison utility.

What is the most common task that you use Explorer or another file management utility for? Isn't it true that over 90% of the time you are copying files from one directory to another? FolderMatch eases this tedious task. The contents of both folders are shown side-by-side. Files are compared for differences in size, date and time, contents, version stamp, or Cyclical Redundancy Checking (CRC) value. Differences are shown with colorful icons. The two folders can then be synchronized with a simple button click. What could be easier than this?

Who can benefit from FolderMatch?

Anyone who performs repetitious tasks with folders and files can benefit from FolderMatch. For certain groups of people this can be an indispensable tool.

With users working at home, on the road or in the office, it's hard to keep all of the PCs current with the latest files and data. Documents, databases, spreadsheets, sales and contact information all can get changed several times a day. How is the work coordinated on all of the various PCs, making sure that all systems contain the most recent versions of all of the files? FolderMatch is a tool that solves this problem.

Are you a computer professional: a Programmer, Tester, Trainer, Network Admin, or Support Technician? If so, this utility is a MUST. No more painful inspections for missing files when setting up directories or applying file updates. Creating and comparing test/development folders, applying new program updates/patches, these become more carefully controlled processes by greatly decreasing the risk of human error.

FolderMatch feature list

Comparison features

- Compares files or folders between floppy drives, hard drives, CD-ROM drives, zip drives, and network drives (UNC paths supported)
- Offers choice of four comparison types: Size and Date/Time, Contents, CRC, and Version Stamp
- Compares only files that match Include and Exclude filter pattern lists which you define (wildcards supported)
- Include/Exlude System and Hidden Files
- Ignore FAT/NTFS time differences (up to 2 seconds, and Daylight Savings Time)
- Specify the number of bytes (chunk size) to be read and compared during a Content or CRC comparison.
- Categorizes compared files as Newer, Older, Same, Orphan, and Same Date/Time but Contents Differ
- Select which categories of files to show/hide in the comparison results window

Synchonization features

- Automatic synchronization of the folders with just one mouse click.
- Offers choice of three preset Auto-Synchronization methods, or a user-defined custom method

- Supports Copy, Move, and Send to the Recycle Bin operations for manual synchronization
- Logs synchronization history
- Allows for the creation of new sub-folders
- · Rename files and folders
- Synchronize the dates/times of two files

Additional features

- Print the results of the folder comparison in any number of layouts
- Open and Edit any file from within FolderMatch
- User-configurable sounds associated with certain events
- Conforms with Win95/98/NT standards: long filenames, right-mouse-button pop-up menus, drag and drop of files and sub-folders between folders, 32-bit ActiveX DLLs and OCXs. etc...
- Amazingly reasonable registration price (less than half of what our main competitor charges)
- · Ridiculously simple to use

We have needed a utility like this for the last ten years. This is why we created it! We hope that it becomes as indispensable to you as it has become to us.

The staff at DARTCY Productions

How to Compare Two Folders

Step 1: <u>Select the desired folders.</u>

Step 2: <u>Set the Comparison Options.</u>

Step 3: Execute the comparison from the Toolbar or File menu.

Step 4: <u>View the comparison results.</u>

See Also:

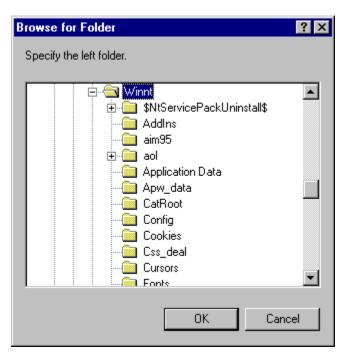
The Toolbar

Selecting Folders

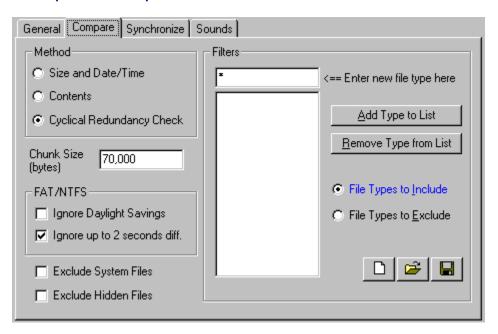
To specify folders to be used in the comparison, click on the folder icon which appears to the right of the drop-down list. Or you can type in the path to the folder. You may also specify a folder by selecting it from the drop-down list. FolderMatch keeps track of the last ten folders that you have compared and lists them in this drop-down list.



If you click on the folder icon, you will see a Browse For Folder dialog box. Select the desired folder from the dialog and click the OK button.



Comparison Options



Comparison Methods

Chunk Size

FAT/NTFS Adjustments

Include/Exclude Filters

The last two options determine whether System or Hidden files will be excluded from the comparison. If you are interested but not familiar with System and Hidden attributes, please refer to your Windows documentation.

Understanding the Comparison Results

A file compared with FolderMatch will be classified in one of five ways: it will be classified as Newer, Older, Identical, Orphan, or Same Date/Time but Contents Differ.

Newer File

A newer file is a file which appears in both folders being compared and has a more recent time stamp than its counterpart in the other folder. The graphic shown below is used to designate a Newer file.



Older File

An older file is a file which appears in both folders being compared and has an older time stamp than its counterpart in the other folder. The graphic shown below is used to designate an Older file.

-

Identical File

An identical file is a file which appears in both folders being compared and has the same size and time stamp as its counterpart in the other folder. The graphic shown below is used to designate an Identical file.



Orphan File

An orphan file is a file which appears in only one of the two folders being compared. The graphic shown below is used to designate an Orphan file.



Same Date/Time but Contents Differ File

This is a file which appears in both folders being compared, each having the same time stamp as the other, yet the contents of the two files differ. The graphic shown below is used to designate a Same Date/Time but Contents Differ File.



Sub-Folders

If the Show Sub-Folders menu option is selected, all of a folder's sub-folders will also be shown. The folder's parent folder, designated by two dots, will likewise be displayed. For example, in the graphic below, the folder "\AddIns" is a sub-folder and the folder "\.." represents the folder's parent.



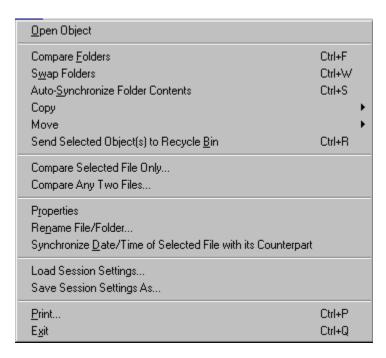
Session Settings

Session Settings include all of the settings currently in effect in FolderMatch: i.e. the list of folders compared, the comparison method, the comparison options, the include/exclude filters, the synchronization method, the dimensions of the application window, the comparison result types to be shown, the sound settings, and all other general program options.

Session Settings can be saved and loaded from the File menu. There are several obvious reasons to capture session settings. If more than one person will be using FolderMatch, each person can have their own custom configuration. My wife and I both use FolderMatch she works on graphics and web related files while I work on computer programming files, help files, and business records. We each have our own settings. My settings have the folders that I compare the most and the filters I like to apply to these folders, etc... Hers is set up to accomodate her needs. If we each had to manually reconfigure FolderMatch everytime we used it, it would be very tedious and time-consuming. This way, I can leave the toilet seat up if I want and she can squeeze the toothpaste tube in the middle if she wants without us bothering each other (metaphorically speaking).

Settings are also useful if even one person is using FolderMatch. I have several saved settings which I use depending on whether I am comparing programming folders, help file folders, business record folders, etc... The primary reason for this is because each of these comparisons involve different sets of folders and require different filters, and perhaps different comparison methods.

File Menu



All file menu options that appear in the <u>Toolbar</u> are covered in that portion of the Help file.

Open Object

Attempts to Open/Run an object selected from one of the compare result windows using its associated application. File type associations are defined in Windows. See Windows Help for assistance with changing associations.

Copy

Offers two copy options: 1) Copy Selected Objects to Other Folder, and 2) Copy Selected Objects to Any Folder.

Usually files are copied to the other folder under comparison. Under some rare circumstances though you might wish to copy the files to some other folder.

Move

Offers two move options: 1) **Move Selected Objects to Other Folder**, and 2) **Move Selected Objects to Any Folder**.

Usually files are moved to the other folder under comparison. Under some rare circumstances though you might wish to move the files to some other folder.

These second copy and move options were added at the request of one of our users. He compared two folders and noticed some orphans in one of the folders. He did not want to copy the orphans to the other folder so that they would exist in both. Neither did he want to lose them by deleting them. He wanted to remove them by moving them to a different folder.

Compare Selected File Only

Used to compare a selected file to its counterpart in the other folder. See <u>Comparing Two</u> <u>Files</u> for more details.

Compare Any Two Files

Used to compare any two files in any two folders. See <u>Comparing Two Files</u> for more details. These two options are basically the same. The only difference is that the Compare Selected File Only option preloads the file names into the dialog box for you.

Properties

Shows the standard Windows Property page for the selected file or folder.

Rename File/Folder

If this is not self-explanatory, see $\underline{\text{Manual Synchronization Options}}$ for an explanation of this feature.

Synchronize File Date/Time of Selected File with its Counterpart

If this is not self-explanatory, see <u>Manual Synchronization Options</u> for an explanation of this feature.

Load Session Settings

See <u>Session Settings</u>

Save Session Settings

See <u>Session Settings</u>

Options

General Options

Comparison Options

Synchronization Options

Sound Options

The Toolbar

Compare



Executes the comparison of the two selected folders, using the specified options.

Swap



This feature is for the sake of those who have previous experience with other directory/folder comparison utilities. In the earlier incarnations of these programs the left window always designated the "Source" and the right window the "Target". All copy/move operations were performed from Source to Target. If one desired to copy/move in the other direction. i.e. from Target to Source, then the directories would need to be swapped. Those people who still think in the left to right mode can switch the right and left folders using this button.

This is absolutely not necessary to do though because FolderMatch supports bi-directional copy/move operations.

Sync



Automatically synchronizes the contents of the two folders being compared using the specified method. See <u>How To Synchronize Two Folders</u> for a discussion of the various methods.

Copy



Copies files which have been selected from one of the comparison result panes to the other folder.

Move



Moves files which have been selected from one of the comparison result panes to the other folder.

Recycle



Moves files which have been selected from one of the comparison result panes into the Recycle Bin.

Options



Set comparison options, synchronization options, sounds, and other general program options. See $\underline{\text{Options}}$

Print



See: Printing

Exit



Exits the FolderMatch application

Help



Takes you to this help file where all of your questions about FolderMatch and life are answered.

Printing

There are three ways to print out the comparison results: 1) Click on the Toolbar button; 2) Select the File menu's "Print..." option; or 3) Use the Ctrl-P keyboard shortcut.

There must be comparison results shown in the results windows in order to print. Before the results are printed, the Print options dialog will allow you to select what you would like printed and how you would like it presented.



FolderMatch uses the default printer. If you wish to use a different printer, change your default printer in Windows' Control Panel/Printers settings.

Print What?

Select which comparison results window you want printed. Options include **The Left window only**, and the **Right window only**. If you wish to print both windows, you have two options: print each window on its own page, or print both windows on the same page, shown side-by-side.

Orientation

Portrait and **Landscape** options specify whether you want the page printed vertically or horizontally. If this explanation is not clear, click on each of these options and look at the image. This will show you graphically what the difference is.

Consider using Landscape mode when

- 1) You have very long sub-folder or file names which would be truncated in Portrait mode
- 2) You are printing the results of both folders side-by-side.

Consider using Portrait mode when

1) There are many objects in the folders you are printing. This will lessen the number of pages needed.

Header

Specify whether you want **Page Numbers**, or the current **Date/Time** included in the printout heading.

FolderMatch v2.50 Order Form

All orders are subject to the FolderMatch License Agreement.

Ordering by check: To order by check send this order form and a check to DARTCY productions, P.O. Box 714, Carmel, NY 10512. To print this order form, click on Print Topic in the File pull-down menu. Payment must be in US dollars drawn on a US bank, or you can send international postal money orders in US dollars.

Credit card ordering: For information on ordering by MasterCard, Visa, American Express, or Discover by phone, FAX, email, or postal mail, go to the FolderMatch web site: http://www.foldermatch.com/register.htm

Site licenses: A site license for FolderMatch entitles an organization to receive one registration key and the right to duplicate the FolderMatch files for the specified number of copies.

FolderMatch Single Copy	copies at \$25 each	=			
FolderMatch Site License					
2 to 9 computers:	computers at \$20 e	ach =			
10 to 24 computers:	computers at \$17 e				
25 to 49 computers:	computers at \$14 e	ach =			
50 to 99 computers:	computers at \$10 e	ach =			
100 to 199 computers:	computers at \$7 e	ach =			
New York residents add 7.25% sale	es tax Total payment	+			
Name: Company:		Date:			
Address:					
City, State, Zip:					
Country: Day Phone:	Eve:				
Electronic Mail address: How did you hear about FolderMatch?					
Comments:					

Shareware Agreement

See the section titled License Agreement for the full license agreement.

Evaluation and Registration

This is not free software. You are hereby licensed to use this software for evaluation purposes without charge for a period of 30 days. If you use this software after the 30-day evaluation period, a registration fee of \$25 is required. Payments must be in US dollars drawn on a US bank, and should be sent to DARTCY productions, P.O. Box 714, Carmel, NY 10512. Credit card ordering and quantity discounts are available as described in the section Ordering Information/Order Form. When payment is received you will be sent a registration key.

Distribution

Provided that you verify that you are distributing the Shareware Version (select About from the FolderMatch Help menu to check) you are hereby licensed to make as many copies of the Shareware version of this software and documentation as you wish, give exact copies of the original Shareware version to anyone, and distribute the Shareware version of the software and documentation in its unmodified form via electronic means. There is no charge for any of the above.

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License Agreement

FolderMatch Copyright © 1999 by DARTCY productions

You should carefully read the following terms and conditions before using this software. Unless you have a different license agreement signed by DARTCY productions your use of this software indicates your acceptance of this license agreement and warranty.

For information on distributing the shareware evaluation version of FolderMatch see the section titled <u>Shareware License</u>.

Registered Version

One registered copy of FolderMatch may either be used by a single person who uses the software personally on one or more computers, or installed on a single workstation used non-simultaneously by multiple people, but not both.

You may access the registered version of FolderMatch through a network, provided that you have obtained individual licenses for the software covering all workstations that will access the software through the network. For instance, if 10 different workstations will access FolderMatch on the network, each workstation must have its own FolderMatch license, regardless of whether they use FolderMatch at different times or concurrently.

Governing Law

The laws of the State of New York shall govern this agreement.

Disclaimer of Warranty

THIS SOFTWARE AND THE ACCOMPANYING FILES ARE SOLD "AS IS" AND WITHOUT WARRANTIES AS TO PERFORMANCE OF MERCHANTABILITY OR ANY OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED. Because of the various hardware and software environments into which FolderMatch may be put, NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS OFFERED.

Good data processing procedure dictates that any program be thoroughly tested with non-critical data before relying on it. The user must assume the entire risk of using the program. ANY LIABILITY OF THE SELLER WILL BE LIMITED EXCLUSIVELY TO PRODUCT REPLACEMENT OR REFUND OF PURCHASE PRICE.

Troubleshooting

In the highly unlikely event that you have a problem with FolderMatch, please contact us. At the end of this troubleshooting section you will find a list of ways to contact us.

Reproducibility is very important when troubleshooting bugs. We can't fix problems that we can't reproduce. Please make note of all the steps that you executed before the problem occurred.

After the problem occurs restart Windows and then the program. Attempt to reproduce the problem using the steps that you've written down. Does the error occur again? Or is this a one-time occurrence? If it is a one-time deal, then no need to contact us. Sometimes Windows gets out of whack and causes strange things to happen.

If the problem is reproducible, how does the problem manifest itself? Does the program lock up your computer? Does it produce erroneous results? Does it generate an error message? If an error message is generated, please write down the exact wording!

Are you having similar problems with other programs? If so, then FolderMatch may not be the culprit.

If after considering all of the above information, it still appears that there is a bug in FolderMatch then please contact us at:

Mail

DARTCY Productions PO BOX 714 Carmel, NY, 10512 USA

E-mail

DARTCYpro@aol.com

Please mention which version of Windows, and FolderMatch that you have. Please describe the symptoms, as well as the steps required to reproduce the problem.

Some Known Issues:

1) Printing does not look good.

The Courier New and Wingdings fonts are required by the program to format the print properly. If you do not have either of these fonts, Windows substitutes another font that it thinks is most like the missing font type. These two fonts are installed with Windows so the only reason why you would not have them is if you uninstalled them, or they were destroyed somehow. The solution is to reinstall these fonts.

Help On Life

Help files are great! Whenever you need a bit of information or assistance, it is only a click away. Do you wish that life came with a help file? Whenever you were stuck,...click...you could get some help? Ahhh that would be great you say.

Well, we at DARTCY productions believe that there is such a help file. We have personally tested it and its Author for over 30 years collectively. To date, we have not found any bugs except those that are user generated. Because we have found it to be a very reliable source of help, we want to share it with you. If you come across an awesome "Freeware" program you just have to share it with others!

We all come across situations that generate the questions: How do I deal with this? What is going on here anyway? What is the purpose of my life? This help file for life deals with those questions & more! More importantly, you will have a new dimension added to your life by having your relationship with your Creator restored! There is nothing more exciting than cultivating that relationship! It is not old time religiosity; it is more like ...adventures with God!

The Help file of which we speak is the Bible. The Bible has 66 different books, written by at least 39 different authors over a period of 1500 years. Yet it all fits together and makes sense about God. Different people for over 2000 years have found that God speaks to them through the pages of the Bible. (That is amazing!) What is also amazing, is that when we compare our modern version of the Bible to the ancient scrolls archaeologists dig up, they say the same thing! Imagine that! Just think of the game telephone you know... you start at the front of a line and whisper a secret, it is then passed down to the end and when the last person speaks it out it barely resembles what it originally was! That alone proves it took divine intervention to keep the message straight!

We encourage you to check it out. What have you got to lose? Millions of others throughout the ages have drawn strength, wisdom, and guidance from its pages. Could millions of people be wrong? Maybe, but maybe not. If you wanted to lose weight and there was a diet that millions of people had used to successfully lose weight would you not at least consider it? Of course you would! That is the only reasonable thing to do. So accept the collective wisdom, and experience of millions of others. At least give it a chance before you dismiss it. We recommend starting in the New Testament with the <u>book of John</u>. If you do not have a Bible and cannot afford one, contact us. We would be extremely happy to provide you with one.

Enjoy the journey! It has been over ten years since I cracked open the pages of my Bible. Life has been a non-stop series of dramatic miracles since that day!

God has said that He will reveal himself to those that diligently seek him. If you begin this journey with an open mind, a humble teachable spirit, and a willingness to see the truth no matter how it may challenge you - rest assured that God will take note of you and share his truths with you.

Here are some web links for you to find out more...

How Could This Happen?

Some Good News

True Life Stories

The Sub-Folder Issue

Every few weeks someone will write us and ask a variation of the question "Does your utility compare and synchronize sub-folders?".

The short answer

Not yet. The next major version will.

The long answer

FolderMatch was originally patterned after two earlier programs: DirMatch and WMatch. Neither of these programs compared sub-folders, therefore FolderMatch did not either. These program were so hugely popular that we felt that we could not go wrong by emulating them. Over time we have come to recognize that this feature is essential in order for FolderMatch to be fully useful to all users, and their needs. We have begun looking into the issue and have done some preliminary work on it.

The architecture that this version of FolderMatch was built upon was not created to support sub-folders. Therefore many, if not most, underlying areas of the code need to be modified or rewritten. This is a huge undertaking! We expect to be done with this some time in the early part of the year 2000.

There have been many bug fixes, enhancements, and new features since the previous version of FolderMatch. We did not want to hold all of these until the year 2000. That is why this version has been released without the new sub-folder feature.

If you cannot wait until the next version of FolderMatch, may we recommend one of our competitors products? A company called Araxis develops a utility called <u>PMdiff</u> which does handle sub-folders. This is an excellent utility which we highly recommend. We gain nothing by refering this product to you. As a matter-of-fact, we probably lose a customer. But we firmly believe the adage "It is better to give than to receive".

Easiest way to compare sub-folders in this version of FolderMatch

In an attempt to make the comparing of sub-folders an easier process, we have added a feature which allows you to compare two sub-folders just by dbl-clicking on one of them. A popup menu will appear which will present you the choice of either 1) changing this side's path to the sub-folder selected, or 2) comparing this sub-folder. Hope that this helps a little until the real thing is completed!

Acknowledgements

I would like to express my most heartfelt appreciation to the following people, to whom I am deeply indebted

<u>Daniel Santos</u>, the author of the <u>PickDir.dll</u> which is used to show the <u>BrowseForFolders</u> dialog.

The folks at Acky.net for the Crcdll32.dll which is used to create 32-bit CRC values for data chunks.

My friends and fellow programmers who provided many suggestions:

Bob Wexler Richard Jordan Dave Sarbello

My family who supported their absentee dad/husband while he was working two jobs:

My children Josh, and Heather
My lovely wife Darcy (Who created all of the incredible graphics in the program!)

Universe Creator and Sustainer:

<u>lesus</u>

For by him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things were created by him and for him. (Colossians 1:16)

All of the registered users of FolderMatch:

We've been developing shareware for the last five years. One thing we have noticed is that there are some good people out there. There is no reason for anyone to register FolderMatch. We do not disable any functionality in the unregistered version. The only reason they register is because they are persons of integrity who wish to do the right thing. We at DARTCY productions appreciate all of you. People like you make the world a better place to live in. Our thanks and prayers go out to you.

lesus

We are all jars of clay - made from common, inexpensive materials and fragile. We come in different sizes and shapes, but more importantly, we come empty inside - longing to be filled. We try desperately to make the jar appear full by adding things to the outside. Things like clothing, makeup, hair transplants, weight and aerobic training, cosmetic surgery, tanning and nutrition (and more recently, piercing and tattooing). We place our jars in various locations to try and make them appear better, better by association. Locations like cars, houses, boats, motorcycles and planes. (I'm not at all condemning any of these (except maybe tattooing and piercing - ouch, yuck) - I just want to make the point that people get lost in the fact that these areas of life may or may not make us feel better about who we are, but they do not contribute to expunging the emptiness inside - and if anything - may perpetuate it). The end result is a body filled with disease and pain and surrounded by stuff that is worthless.

So how and with what do we try and fill our jars? Some people try family and friends only to find that the happiness derived from these experiences is fleeting and unsatisfying. Now don't get me wrong, I love my family and my friends, but these relationships don't fill my jar with everlasting satisfaction. Just go visit any retirement home and see how the average person there is so lonely and longing for their family and loved ones to come visit and spend time with them.

A growing number of people try to mask the emptiness with things like alcohol, cigarettes, drugs, sex and pornography only to find themselves in a horrendous web of addiction with seemingly no way out. I think of all the people who appeared to have everything going for them, only to discover (often too late) the absolute emptiness behind the glittering facade. The list is staggering! Jack London (my favorite author, by the way!), Ernest Hemingway, Marilyn Monroe, Jimi Hendrix, Janis Joplin, Jim Morrison, Elvis Presley, John Bonham, Kurt Cobain, Dennis Wilson, John Matusak, Mickey Mantle, Freddie Prinze, John Belushi, River Phoenix, Chris Farley, Margaux Hemingway, Christina Onassis, Amschel Rothschild, and on and on (if you can think of any more - please let me know). Think of the money, the friends, the fame and the "stuff" these people had! Did it fill their jars with everlasting satisfaction? I would say not.

Most people, at some point in their lives, try a form of religion or two - only to find it is also empty and hollow. This is because religion, by the purest definition of the word (system of belief and worship) is hollow and empty. Each person trying a form of religion is seeking to find God and, sadly, the majority do not find Him. Most, unfortunately, get caught in a myopic web of lies that blind their eyes to the purest form of existence - personally knowing the heart, mind and soul of God. I hear a very common question in my quest to develop my relationship with God - how do you know "your" religion is the right one? Well, this is actually easier than it sounds because all of the religions of the world can be distilled down to two foundational facts. One believes in a progression to God by a "to do" list (or working ones way to God or an understanding of God) whereas the other concept believes that there is a free gift from God that we accept by faith - all we have to do is accept the free gift from God and we then enter into a relationship with Him.

The quintessence of a "to do" list-type class of religion can be exemplified by looking at Buddhism. A beginning Buddhist starts with the "Four Noble Truths." These are 1) suffering exists, 2) suffering arises from attachment to desires, 3) suffering ceases when attachment to desires ceases and 4) freedom from suffering is possible by practicing the Eightfold Path. Okay, let's look at the Eightfold Path and see how easy it is to obtain freedom from suffering. The Eightfold Path contains three qualities and their subset of "to do" items. Quality one is Wisdom (panna) and it requires 1) right view and 2) right thought. Quality two is Morality (sila) and it requires 3) right speech, 4) right action and 5) right livelihood. Finely, quality three is Meditation (samadhi) and it requires 6) right effort, 7) right mindfulness and 8) right

contemplation. That's it, just to hopefully gain freedom from suffering you only have to work on those few things! And these eight lead elsewhere. So here's the deal - a person gets going in Buddhism and doesn't feel like their jar is filling with everlasting fulfillment, and they are then told that it takes many years to begin to feel fulfillment only to jump back into the endless cycle of unfulfillment. By the way, the "right" in the Eightfold Path descriptors is variable - so there is no solid foundation to build on.

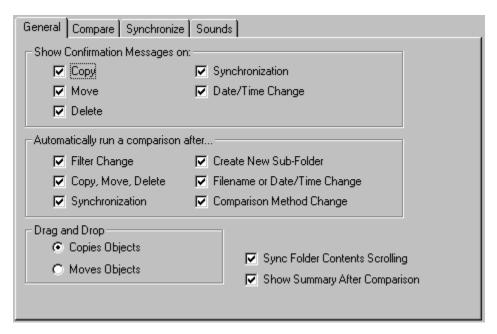
I found there to be a serious flaw with the concept of working oneself to God. What an unjust God He would be if we had to get to Him by a system. Think about this. Wouldn't He be incredibly unfair if we could only get to Him by a process? What about the person who died halfway through the process? God, by His very nature would have to say, "Depart from Me, for you didn't finish the list." No, that is absolutely opposite from everything He reveals about Himself. He is loving, powerful, kind, just, patient, mighty, holy and fair. That is why the Way to Him is so logical. Everyone can get to Him no matter where that person may be in their life. Old, young, broken, poor, rich, sick, unpopular, famous, etc ... Through a free gift - faith in His Son Christ Jesus. John 14:6 says, "Jesus saith unto him, I am the way, the truth, and the life: no man cometh unto the Father, but by me." We are also told in I John 5:11 & 12, "And the witness is this, that God has given us eternal life, and this life is in His Son. He who has the Son has the life; he who does not have the Son of God does not have the life."

It's a simple choice. You can go on looking for something with which to fill your empty jar of clay, or you can choose the only One who can satisfy the void. I made that step of faith and I have never been sorry. It hasn't been an easy journey, but I have had such wonderful satisfaction and joy in my life that I could never imagine not surrendering my life to the Master. Don't you want to live forever? Won't you choose Life this day?

If you would like to read the Bible for yourself, start in the book of John and you will see for yourself the ultimate love of our Savior.

The above writeup was used by permission of the author of the web site: http://socrates.berkeley.edu/~dta95/jesus/jesus.htm

General Options



Show Confirmation Messages On

Whenever you are copying, moving, or deleting files/folders you should take precautionary steps to ensure that nothing is inadvertantly destroyed which should not be. FolderMatch provides a built in safeguard. Unless you tell FolderMatch not to, you will be asked to confirm every Copy, Move, Delete, Auto Sync, and Date/Time change operation.

When copying, moving, and deleting you can do a last minute check be pressing the Details button on the Confirmation Dialog window. This will show you the files/folders which are about to be affected.



Automatically Run a Comparison After

Self-explanatory

Drag And Drop

The comparison result panes allow dragging and dropping of files and folders between them. This option specifies whether the objects are copied or moved on a drag and drop.

Sync Folder Contents Scrolling

Scroll both sides of the comparison results panes when one side is scrolled using the scroll bar. The files and sub-folders are aligned side by side and remain this way even when scrolling. You can bypass this behavior by using the Navigation buttons on your keyboard.

The Navigation buttons are the up and down arrows, as well as the Home, End, Page Up and Page Down buttons.

Show Summary After ComparisonSummarizes the comparison results and shows them on a pie chart.

See Also: Comparison Results Summary

How to Synchronize Two Folders

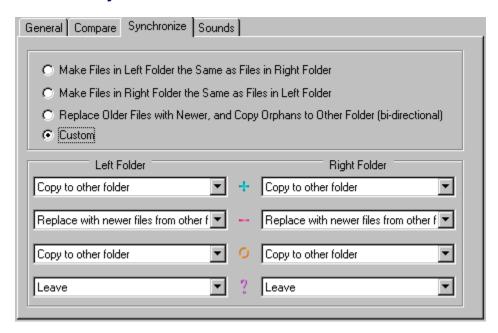
Synchronization of two folders can be done manually by the user or can be done automatically by FolderMatch. Manual synchronization is accomplished by using the standard **Copy**, **Move**, and **Send to the Recycle Bin** operations. Two utility functions, **Rename File/Folder**, and **Synchronize Date/Time of Selected File with its Counterpart**, are also provided to aid in manual synchronization. Automatic synchronization is accomplished by selecting one of three pre-defined synchronization schemes or using a scheme you design.

Manual Synchronization

FolderMatch supports the standard operations **Copy**, **Move**, and **Send to the Recycle Bin**. These can be used to manually make changes to the two folders. Simply select the files in the comparison result panes and select the desired operation from either the Toolbar, or the File menu. The comparison result panes also support Drag and Drop so you can drag files back and forth between the two panes.

Two other utilities are provided in the File menu to aid you in manual synchronization: **Rename File/Folder** and **Synchronize Date/Time of Selected File with its Counterpart**. If you have an identical file which exists on two folders but is named differently on each, a comparison will report that these files are orphans. You know that this is not so. Simply rename one of the files so that its name is identical to its counterpart in the other folder. The date/time utility is beneficial when two files which are identical in name and content are reported as being different because their date/time stamps differ. Select the file whose date/time you want changed to coincide with its counterpart, then select the Synchronize Date/Time option from the File menu.

Automatic Synchronization



Automatic synchronization differs from manual synchronization in that FolderMatch does the copying and/or deleting of files for you until the two folders are identical. There are three pre-defined shemes that can be used to synchronize folders: **Make Files in Left Folder Same as Files in Right Folder**, **Make Files in Right Folder Same as Files in Left**

Folder, and Replace Older Files with Newer and Copy Orphans to the Other Folder.

Make Files in Left Folder Same as Files in Right Folder The left folder will be made identical to the right folder. Any orphans in the left folder will be deleted. All files which differ in the left folder will be replaced with their counterparts from the right folder regardless of whether they are older or newer.

Make Files in Right Folder Same as Files in Left Folder The right folder will be made identical to the left folder. Any orphans in the right folder will be deleted. All files which differ in the right folder will be replaced with their counterparts from the left folder regardless of whether they are older or newer.

Replace Older Files with Newer and Copy Orphans to the Other Folder This is the default scheme which FolderMatch is configured to use. It is the "safest" to use. Orphans are not deleted; they are copied to the other folder so they now exist in both. Older files are replaced with their newer counterparts in the other folder. This is a bi-directional scheme. Older files in both folders are replaced, and orphan files in both folders are copied to the other folder. Files whose contents differ but have the same date/time stamp are left untouched. These are best handled manually after the two files are visually compared.

If none of these pre-defined schemes is suitable for your needs, you can design your own. Select the **Custom** synchronization method option. You can now specify how FolderMatch should treat each of the comparison result types (**Newer**, **Older**, **Orphan**, and **Different Contents**) it encounters in each folder. Up to four different actions can be chosen from for each result type (depending on the type): **Leave**, **Copy to Other Folder**, **Replace**, and **Delete**. Selecting certain of these options will automatically set an option in the other folder. For example; if you specify that the Newer Files in the left folder should be copied to the right folder, then the Older files option in the right folder will be automatically set to **Replace** with **Newer Files from other Folder**. Play with these options a little and you will see why this must be.

See also: Synchronization History

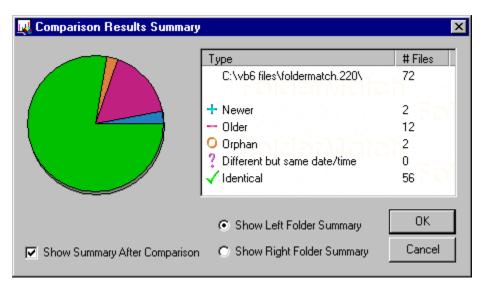
Before You Get Started

Basic Definitions

File Dates and Times

Good data processing procedure dictates that any program be thoroughly tested with non-critical data before relying on it.

Comparison Results Summary



This feature shows the comparison results at a glance. When determining whether a synchronization of two folders is required, it may not always be necessary to see all of the comparison details. Perhaps an overview of how many files are different will suffice. That is the purpose of this summary. Statistics are provided on each folder regarding how many files fall within each comparison result type. A pie chart is offered as a visual aid.

Basic Definitions

Byte

A single character of information

File

An organized unit of information inside your computer

Directory

A directory is, in general, an approach to organizing information, the most familiar example being a telephone directory.

In the computer world, a directory is a storage location inside your computer in which you keep related files together.

Folder

The Windows equivalent of a directory.

Path

A path is the route to a particular file on a computer. The Windows format for specifying a path is:

driveletter:\foldername\subfoldername\filename.suffix

File Dates and Times

Note: File dates and times are also commonly referred to as file dates. For the remainder of this discussion any mention of a file date will imply time also.

FolderMatch relies heavily on file dates when comparing two files. By comparing the dates of two files, FolderMatch knows which of the two is more recent.

A quick explanation about file dates. Files store three dates internally: the date they were created, the date they were last accessed, and the date they were last modified. Of these three, the one which is most important when comparing files is the last modified date. This date is changed whenever the file contents are changed and saved. This is the one which FolderMatch uses when it compares files.

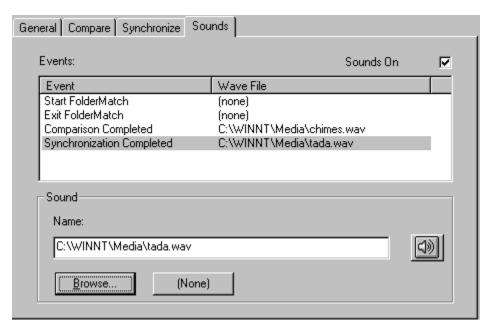
Warning

Because FolderMatch relies so heavily on the last modified date, it is essential that this date be correct. How can it be incorrect, you ask? If the internal clock on a PC is set incorrectly or is inoperative, any time a file is date stamped, the stamp will be incorrect. If this file's date is compared with another file's date, the results will be unreliable.

Do not use FolderMatch on computers with inoperative clocks!

For best results, make sure that the PC's clock is set to the correct time and is functioning properly on all computers which will be using FolderMatch.

Sound Options



Why are sounds needed in FolderMatch? Isn't this just an unnecessary "bell or whistle"?

Perhaps this indictment is true regarding two of the four events which FolderMatch can play a sound for. No compelling reason exists for a sound needing to be played when FolderMatch is started or exited. This is just for fun. Go nuts. Personalize FolderMatch with your own individualized sounds.

Sounds upon completion of a comparison or a synchronization are another matter however. Some comparisons or synchronizations can take a rather long time. FolderMatch may be minimized during this time to allow for the performance of other tasks. Or perhaps the user allows one of these operations to run unattended while he steps away from the computer. An audible cue as to the completion of these events is very handy in these instances.

How to turn all sounds off or on

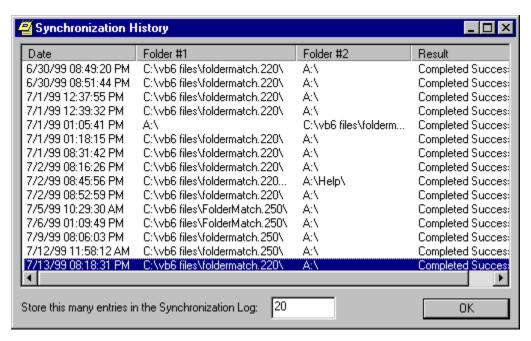
Select the **Sounds On** option to enable all of the sounds shown. Deselect this option to turn off all sounds.

How to associate a wave file with an event

Begin by selecting the event, then click on the **Browse** button and navigate to the location of the wave file. The sound can be sampled by pressing the button with speaker button on it.

How to specify that an event should have no wave file associated with it First select the event, then click on the **None** button.

Synchronization History



All automatic synchronizations are logged by FolderMatch. You specify how many you would like FolderMatch to keep track of. The date and time of the synchronization are recorded along with the names of the two folders. This is an easy and convenient way to track whether a synchronization is required. Merely check the date of the last successfully complete synchronization.

Select Menu

These options are used to select/deselect files from the comparison results pane which has the focus. When a file is selected in the pane it appears highlighted. To specify which pane has focus, click on the pane.

Select All

Selects all of the files in the pane which has the focus.

Deselect All

Deselects all of the files in the pane which has the focus.

Other



Select or Deselect files based on comparison result type and/or file name.

For example, if you wish to select all files that have been categorized as Newer or Orphan, select only these two types and leave the file name text area blank. If you then wish to deselect all Orphans which are executable files, select only the Orphan type, enter *.exe in the text area, and click on the Deselect button. You can enter as many file names as you wish. Merely separate them using commas. Wildcards are accepted in the file name patterns.

Uninstalling FolderMatch

Uninstall FolderMatch via the Control Panel, icon Add/Remove Programs. You need not edit the Registry; FolderMatch's entries are removed automatically. In the chosen installation directory some log files remains. Delete any remaining files and the directory.

FAT vs NTFS file time

FAT and NTFS file systems do not handle file times the same way.

FAT and NTFS are the two file systems used by the Windows operating system. A file system is used by an operating system to organize and keep track of files. Your operating system largely determines what file system is available to you; you rarely get a choice. Windows NT uses the NTFS file system and Windows 95/98 uses either the VFAT or FAT32 file system (depending on the date of purchase and other factors).

FAT (and its enhancements, VFAT and FAT32) maintain a file's last modified date to an accuracy of two seconds whereas NTFS is accurate to the nearest micromillisecond. FAT does not allow odd seconds in the date/time stamp of a file. When files are copied from an NTFS drive to a FAT drive, the times can change by up to 2 seconds, but the files remain the same

FAT file times are not adjusted for Daylight Savings Time (DST), whereas NTFS entries are. When NT automatically adjusts for DST, the date/time stamp of files on NTFS volumes appear to be shifted by one hour, even if the files were last changed prior to the DST adjustment. This adjusted time is then displayed in all operations which report local time (that is, NT Explorer, File Manager, directory listings, and so on). When files are copied from an NTFS drive to a FAT drive before the time change, the times can differ by an hour, but the files remain the same.

FolderMatch can be set up to ignore these two differences by selecting the two options: **Ignore Daylight Savings Ignore Up to 2 Seconds Diff.**

Tip:

When comparing critical data between FAT and NTFS volumes, the most accurate comparison method is one based on Contents or Cyclical Redundancy Checking (CRC) rather than date/time alone.

Additional Information:

To determine what file system is in use, do the following: Dbl-click on the My Computer icon on your desktop, locate the drive in question, right-click on it, and select the Properties menu option. Look for the words "File System".

Comparison Methods

FolderMatch provides four comparison methods: **Size and Date/Time**, **Contents**, **Cyclical Redundancy Checking** (CRC), and **Version Stamp**. The **Size and Date/Time** method should be sufficient for almost all of your comparison needs. This method works by comparing sizes and last modified dates of the files. If either differs, the files are marked as different. Very rarely will two files have identical sizes and date/time stamps yet be different. If you need a more thorough approach to comparing two files, you can choose another of the methods. The **Contents** method does a binary comparison of the file contents. The **CRC** method calculates and compares 32-bit CRC values for each of the files. The **Version Stamp** method compares the version stamp of two files.

What do you mean "FolderMatch provides four comparison methods"? I see only three options listed in the Options dialog.

The comparison method missing from Options is the **Version Stamp** method. It is available only when <u>comparing two files</u>. Comparing all of the files in two folders by their version stamps would not be very useful. The reason this is so is because very few files actually have version stamps.

A version stamp is the information included in a file that specifies the company name, application name, copyright, version number, and language edition of a program. One of the reasons it was introduced by Windows was to aid installation programs in determining which version of a file is the latest so that newer files are not overwritten with older files. The most common file types to contain version stamps are: Controls (*.ocx, *.vbx), Programs (*.exe), DLLs (*.dll), Drivers (*.drv), and Fonts (*.fon).

Why the two options, Contents and CRC?

At first glance it may not be obvious why both of these would be needed. Surely just one of these will suffice. Well, yes and no. There are several considerations when choosing which method to employ. One factor is performance. A binary comparison of the contents is generally more performant than a calculation and comparison of CRC values. Another factor is reliability of results. The **CRC** is one of the most used techniques for error detection in data communications. It is currently used by most network protocols. Both methods are excellent choices. For mission-critical data, it wouldn't be a bad idea to compare the files using both methods.

A note on Contents and CRC comparison results

The **Contents** or **CRC** methods are only able to determine if two files are different or if they are the same. They cannot determine which file is more recent than the other. This is useful but it does not help you decide which to keep and which to replace. For this reason, if the files are found to differ, FolderMatch will also perform a date/time comparison to assist you. If, on the otherhand, the files are found to be identical, no date/time comparison will be run.

Chunk Size

When comparing files using either the **Contents** or **CRC** method, FolderMatch deals with chunks of data. A chunk of data will be read from each of the files and compared for differences using the method you have specified. The files will continue to be compared chunk by chunk until the end of the files is encountered or until a difference is found. This option allows you to specify the number of bytes in each chunk. This value can be in the range of one byte to ten million bytes.

Why is this necessary? Why do I care what chunk size is read?

Two reasons: performance and reliability of results. Let's talk about the performance issue first.

Performance

To understand how performance is affected by the chunk size, we must first elaborate on what happens when two files are compared. First, a chunk of file one is read from a disk and transferred into memory; then, a chunk of file two is read from a disk and is transferred into memory as well. The two chunks are then compared in memory using the specified method. The speed that a chunk of data is read from disk will vary depending on the disk type (Hard, floppy, CD-ROM, Zip), and the speed of the disk drive. The chunk of data is then transferred into memory. The rate at which this will occur will depend on whether the disk is local to the PC which is running FolderMatch or whether it is external to the PC (laptop, other PC on network, etc...) If the disk is external, the speed of the connection will affect the rate of data transfer. The connection could be a parallel port cable, a phone line, an ISDN line, a T1 line, or some other connection medium. Once in memory, the chunk sizes are compared. The larger the chunk size, the longer it will take the two comparison methods to compare them. If the amount of memory required to compare the two chunks is larger than the amount of RAM currently available, then hard disk memory is used which will slow the comparison even more.

Here is where having the option to specify the chunk size is so invaluable. There is no one chunk size which will yield optimum performance in all of these scenarios.

The simple rule of thumb is that your chunk size must not choke any part of this process. A chunk size that is too large will slow down the comparison.

Let's examine several scenarios.

Scenario 1) The two folders are both on the same hard drive of the same PC that is running FolderMatch and the PC has 64 meg RAM on it.

This scenario allows us to use the maximum chunk size allowable: ten million bytes. The disk involved is a local hard disk which means that the read time and transfer to memory time will not suffer any bottlenecks. The comparisons will require at least 20 megabytes of free RAM for optimum performace (Two 10 meg chunks). Since the PC has 64 Meg RAM, there will be ample headroom for the two 10 meg chunks.

Scenario 2) The two folders are both on the same hard drive of the same PC that is running FolderMatch and the PC has 24 meg RAM on it.

The only difference between this scenario and the previous one is the amount of RAM on the PC. A chunk size of 10 meg could cause problems. The two chunks being compared would require 20 meg. This would leave only 4 meg for Windows, FolderMatch, and any other

programs you have running.

Scenario 3) One folder is on the hard drive that is running FolderMatch and the other folder is on a floppy diskette. The PC has 64 meg RAM on it.

This scenario is identical to scenario number one except that one of the folders is now on a floppy disk. This small difference will have a huge impact on the performance. Reading a chunk of data from a floppy disk is much slower than reading a chunk of data from a hard drive. Attempting to read a too huge chunk of data from a floppy drive can be counterproductive. It has been our experience that better performance can be obtained by decreasing the chunk size to 100,000 or less bytes when a floppy drive is involved. Experiment with this on your own PC and locate the "sweet spot".

Scenario 4) One or both folders is on a network drive, over a LAN, which you are accessing via a T1 line. The connection speed is very good. Forget about the RAM issue for the sake of this scenario.

The performance over a network will of course be slower than a local hard drive. But since you are on a local area network, using a fast T1 line with a good connection speed, you could probably try a large chunk size here.

Scenario 5) You are at home on your PC, dialing into your work PC using a 56k modem and a phone line. Forget about the RAM issue for the sake of this scenario.

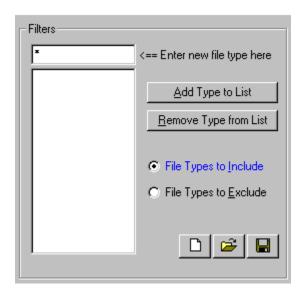
This is going to be very slow. You might even prefer to do a **Size and Date/Time** comparison for this one. If you must do a **Contents** or **CRC** comparison, try a very small chunk size - maybe 500 bytes for starters.

These scenarios are merely for illustrative purposes. The best way to learn the ideal chunk size for your configuration and task is to experiment.

Reliability of Results

The other reason someone might wish to adjust the chunk size is for reliability of results. No data comparison routine is foolproof. Even the mighty **CRC** does not claim 100% accuracy and correctness all the time. The smaller the chunk size, the better the accuracy. Set the chunk size to 1 byte for optimum accuracy. Warning: You might want to do this one overnight. It could take a while depending on how many bytes will be compared.

Include/Exclude Filters



These filters are used to limit which files are compared by FolderMatch. The **Include Filters** specify that only files matching this list of file patterns should be included in the comparison. The **Exclude Filters** specify that all files matching this list of file patterns should be not be included in the comparison. Each type of filter list can contain tens of thousands of file patterns. You will never need this many file patterns.

What is a file pattern?

A file pattern is a sequence of characters and/or wildcards which designate individual files or groups of files. If no wildcards are used, a file pattern can only specify one file - autoexec.bat, for example. Once wildcards are introduced into the pattern, a file pattern can represent more than one file. For example, the question mark wildcard character (?) can be used to represent any single character. A file pattern of "?all" would represent the words ball, tall, mall, etc... The asterisk wildcard character (*) can be used to represent zero or more characters. A file pattern of "*all" would represent all of the words that ?all did, plus others like all, stall, basketball, etc...

```
The following table shows the characters allowed in a file pattern and what they match:

? Any single character.

* Zero or more characters.

# Any single digit (0 - 9).
```

How does a file pattern benefit me?

Let's say that you have two folders with three types of files in them: text files, document files, and temporary files. For the sake of this particular comparison you are only interested in knowing whether your documents and text files are in sync. You do not want the other files compared and their results displayed to you. By adding the two file patterns "*.txt" and "*.doc" to the **Include Filter** list, only these files will be compared and displayed to you.

Depending on the files in the folders, it may make more sense to specify which files to exclude. For example, let's revisit our scenario above. Rather than adding the two file patterns "*.txt" and "*.doc" to the **Include Filter** list as we did above, you could add "*.tmp" to the **Exclude Filter** list. Now all files except these temporary files will be compared.

You can even specify both Include and Exclude Filters, if you desire!

How to add a new file pattern type

First specify whether this file pattern will be an **Include** pattern or **Exclude** pattern by selecting either the **File Types to Include** or **File Types to Exclude** option. Enter the file pattern type in the text area labelled **Enter new file type here**. Press the **Add Type to List** button. The new pattern type will be added to the list.

How to remove a file pattern type from the list

Select the type that you wish to remove and click on the **Remove Type From List** button.

How to save filter lists

If you compare various different folders, you might need more than one set of **Include/Exclude** filters. You might want one set of filters when comparing documents in folders and a different one when comparing your business records. It would be very inconvenient if you had to re-enter these filter lists each time you changed folders. FolderMatch allows you to save the **Include/Exclude** filter pairs. To save a filter list pair, click the button with the image of a diskette on it. Specify a name and a location for the filter lists.

How to load filter lists

Once a filter list has been saved it can be re-loaded whenever you desire to apply these filters to the next comparison. To load a saved filter list, click on the button with the image of a folder on it. Navigate to the location of the saved filter list and select it. The filter lists will be loaded in and applied to the next comparison executed.

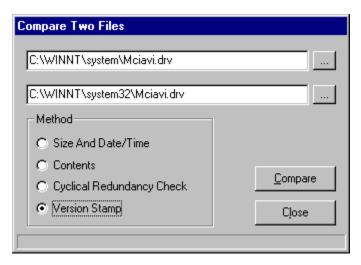
How to create a new filter list

Pressing on the button which has the image of a white piece of paper on it will remove all of the **Include** and **Exclude** filters from the lists. You will be given an opportunity to save the current lists before this is done. You can now add the new file patterns to the lists.

Note: In the case of conflicting filters, the **Exclude** filter will override the **Include** filter.

Here's an example of conflicting filters. Suppose one of the file patterns in the Include list was "*.doc". FolderMatch would see this and include all document files in the comparison. But what if one of the file patterns in the Exclude group was "*.d??"? FolderMatch would see this and would exclude all files with a three character extension beginning with the letter "d". Our document files would not be compared. FolderMatch does not warn of conflicting file patterns. You must check for this yourself.

Comparing Two Files



Sometimes you don't want or need to compare two folders. You just want to compare two files. This feature allows you this option. Specify the two files to be compared, the comparison method to use, and press the compare button. The files need not have the same name, nor do they need to be in the two folders being compared. Any two files in any two folders can be compared.

Uses

- When you wish to compare only two files
- When you wish to compare files with different names

Why would someone want to compare files with different names? Sometimes the same file is given different names by its creator, or by a program, or by the operating system. Understanding that an individual could save the same file to two locations and intentionally or unintentionally name the file differently each time is easy, but how can a program or operating system do this? The most common scenario is one involving long filenames. Not all programs and operating systems support long filenames. You may name a file "Nocturnal Creatures of the Amazon.doc" but the program or operating system could shorten it to "Noctur~1.doc". These two files would not be compared by FolderMatch during a folder comparison because the names are not identical. They would be reported as **Orphans**.