

FinderMenu 1.0, page 1.
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Using FinderMenu 1.0

UserLand Software, Inc.

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Comments, questions and suggestions are welcome!

Introduction

The FinderMenu package adds a single item to the Finder's menu bar: the Scripts menu.

When you pull down that menu, you see several hierarchic sub-menus, each containing a selection of useful new commands that operate within the Finder environment. Behind each of these commands is a script, implemented in the UserTalk scripting language. The Scripts menu was designed using Frontier's outline-based menu editor.

These commands are designed for anyone with experience using the Macintosh Finder. You must have a copy of Frontier on your system to use it, but you do not need to know how to write Frontier scripts. You can use these commands exactly as if they were part of the Macintosh Finder.

If you are a Frontier script writer, you can edit this menu to add your own commands, extend or customize the commands we've included. You can reorganize the menu to fit your style of work.

The simple addition of FinderMenu, combined with the scripting power of Frontier, opens up new possibilities for Finder-customizing utilities like nothing ever has. For script writers this is a dream come true because now our scripts can run on the center stage of the Macintosh system — in the Finder's menu bar. For Macintosh users, it means that a lot of new commands are now available in the Finder, and more are on the way!

This document is written primarily for non-script writers. A more technical document explaining script writing for the Finder can be found in the Extras folder that's part of the FinderMenu distribution package.

About Version 1.0

Our main reason for distributing the FinderMenu package is that it allows Frontier script writers to add commands to the Finder's menu bar. There's absolutely no doubt that this capability is very important and useful.

However, in the final stages of testing this package, a number of questions came up concerning how the scripts in the FinderMenu package process the Finder's selection.

An important fact: our scripts have no way of knowing what window is frontmost in the Finder. Therefore, commands like Close Parent Folders, Find In File and Find Locked Files depend on the user selecting a file in the folder they want to look in, or selecting the folder itself. This can be confusing, but we felt it was better to provide the functionality even if it couldn't be absolutely perfect.

The ultimate answer will come from Apple Computer in the form of a new Finder that's more open to being customized by Frontier script writers. Based on what was said and demonstrated at the May Worldwide Developer's Conference, we believe that Apple is working on just such a Finder.

Another caveat: the Launch Everything command is very powerful. Before trying it, read the docs, and do some thinking and setting up. If you try the command on a random folder, you probably won't like the results. An example: if there's more than one TeachText file in the folder, TeachText will tell you that it can only open one file at a time. If there are many such files, you'll re-learn this fact (that you probably already knew!) once for each file.

It's very important that you provide feedback on these commands. We've established support forums on CompuServe and AppleLink just for this purpose. Please let us hear your thoughts on the FinderMenu package. Also, we will upload enhancements to the scripts, and new scripts that live in the Finder's menu bar. Please check in at our on-line services for these updates. And if you have any scripts to share with others, please do.

Thanks!

**UserLand Software
June 14, 1992**

Requirements

System Requirements

Frontier 1.0. Macintosh System 7 or greater.

Prerequisites

Minimal experience using Frontier, significant experience using the Finder.

Distribution

This package is electronically distributed free of charge thru several on-line services, including the UserLand Forum on CompuServe.

You may upload an unmodified copy of this package to any on-line service, server, bulletin-board or email system, but you may not distribute it on physical media without the written permission of UserLand Software.

Support

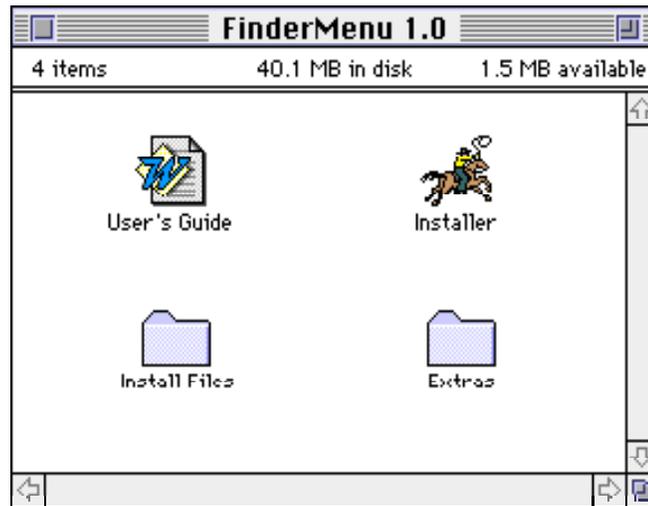
Support for this package is provided by UserLand Software thru its CompuServe and AppleLink on-line services.

CompuServe: enter GO USERLAND at any ! prompt.

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Questions, comments and suggestions are welcome!

Installing FinderMenu



There are four icons in the FinderMenu folder: this User's Guide, a Frontier desktop script named Installer, a folder of files used by the Installer script and a folder of extra information and scripts for more technical users.

To install FinderMenu using the Installer script:

1. Launch Frontier 1.0 or greater.
2. Double-click on the Installer script. The script confirms each step of the installation process. If you want to completely install the package, click on OK for each of the dialogs that's presented. The script installs things in several places:

System Folder

- FinderMenu INIT is copied into the Extensions sub-folder.
- FinderMenu App is copied into the Startup Items sub-folder.
- FinderMenu Prefs is copied into the Preferences sub-folder.

Frontier Folder

- Creates the Dialogs folder, and copies two files into that folder.

Frontier.root

- Installs a shared menu for the Finder, and a table of scripts at `system.verbs.apps.FinderMenu`.
- Installs three new verbs: `file.reconcileFolder`, `dialog.loadFromFile` and `dialog.runFromFile`.

3. When the installation is complete, a dialog box will offer you the opportunity to restart your system. This is necessary for the FinderMenu INIT to start running.

Menus & Commands

The Menus

The Scripts menu has several hierarchical menus attached to it: Backup, Utilities, Aliases, Apps, Folders and Frontier. The commands in these menus are fully described in the next section.

Single Keystrokes

Two commands in the Scripts menu have been assigned single keystrokes so you can run them without pulling down the Scripts menu. They are cmd-B to backup a folder, and cmd-M to edit the Finder's menu bar. You can use Frontier's menu editor to change or add keystroke assignments of other commands in these menus.

For details, see p 19-20 and 122-126 in the Frontier 1.0 User's Guide.

The Finder's Selection

Most of the commands operate on the Finder's selection. For example, to back up a folder, you select the folder in the Finder by clicking on it, and then choose the Backup Folder command from the Backup sub-menu.

If there are two folders you want to back up, select both of them and choose the Backup Folder command. To select more than one file or folder, hold down the shift key in the Finder and click on its icon. Most commands can be made to operate on more than one Finder icon in this way.

Seeing Changes in the Finder

It may take two or three seconds for the Finder's desktop or windows to reflect the result of the commands you choose. Sometimes it may be necessary to close and reopen a window to cause the Finder to refresh its display.

The Next Section

Details on each of the commands in the Scripts menu are provided in the next section.

Commands in the Scripts Menu

Read Me...

Opens a Frontier text window containing important notes and information about the FinderMenu package. As its name implies, it fills the role of “readme” files that often ship with applications and system utilities.

Menu Editor

Choose the Menu Editor command to edit the Scripts menu, or add other menus to the Finder’s menu bar. To make it extra easy to select this command it has a single-keystroke equivalent: cmd-M.

Refer to the Frontier User’s Guide (p 19-20 and 122-126) for information on editing menu bars with Frontier’s menu editor.

The Backup Sub-Menu

Set Backup Folder...

The Backup sub-menu makes it easy to set up and manage backups of multiple projects, and because it's integrated into the Finder it's always easy to get to.

The key concept behind this sub-menu is your backup folder, the place where all your backups will be stored by the Backup Folder command.

Before doing any backups, determine which disk is going to contain the backup folder. It can be on your local computer, or on a network server volume. Think about how much space you want to have for backing up and how fast you want it to be. Create a new folder on that disk, call it Backups, for example, but you can name it anything you like.

Then select the Set Backup Folder... command. A standard file dialog appears. Navigate to the folder you just created and put the cursor on it. Click on the Folder button. Now you're ready to use the Backup Folder command.

Note: Any time you want to change your backup folder, use the Set Backup Folder... command to reconfigure Frontier. Only one backup folder is used at any time. Selecting a new folder will cause all future backups to go to that folder.

Backup Folder...

In the Finder, select a folder or set of folders that you want to backup, then choose the Backup Folder... command.

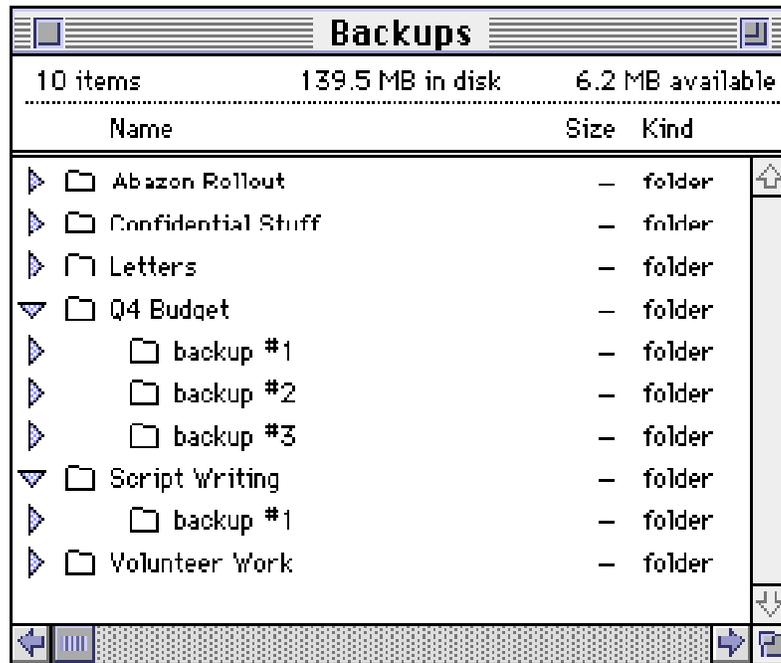
A new folder is created as a sub-folder in the backup folder, with the same name as the folder you're backing up. Inside that folder, a sub-folder is created named backup #1. All the files in the selected folder are copied into the backup #1 folder.

The second time you back up the folder, the new folder will be called backup #2, and so on. The serial number assigned is always one-greater than the highest serial number already present in the backup folder.

To make it extra easy to select this command it has a single-keystroke equivalent: cmd-B.

This command can only be used to backup folder or disk icons. It can't be used to backup single files.

Here's a picture that shows what a typical backup folder will look like after doing a few backups:



Open Backup Folder

To open the top-level of the backup folder, click on the Finder desktop to eliminate any selection and choose the Open Backup Folder command.

If you want to view a specific backup folder, select the original folder in the Finder, and choose the command. Only the backup sub-folder corresponding to the original folder is opened.

Make Space...

Sooner or later the disk that holds your backup folder will run out of space. This command makes space on your backup disk by removing all but the most recent backups from each sub-folder.

Before running this command, it might be a good idea to copy your entire backup folder to removable media and save it offline. At UserLand Software we use Syquest cartridges for this kind of backup. Tape drives and optical disks are great for offline backups too.

The Utilities Sub-Menu

Launch Everything...

The Launch Everything... command launches all files and documents contained within a folder and all nested sub-folders. A confirmation dialog appears before the script launches anything.

For example, if you are a C programmer you might want to have the following applications all running while you're working on a project: Think C, Think Reference, AppMaker, Resorcerer, DocServer and UserLand Frontier. You could create a folder containing aliases to all these programs. When it's time to start programming, put your cursor on the folder and select Launch Everything... from the Utils menu.

A FinderMenu user reports: "I've already put templates for my daily reports into a Launch Everything folder. It opens three Excel files with co op advertising, sales reports, and sales charts. And it opens a Microsoft Word window with a template for writing a report. It's truly cool. This is better than aliasing in the Apple Menu Items folder, which can get very full. This is like resume files across applications, which is very useful."

Reconcile Folders...

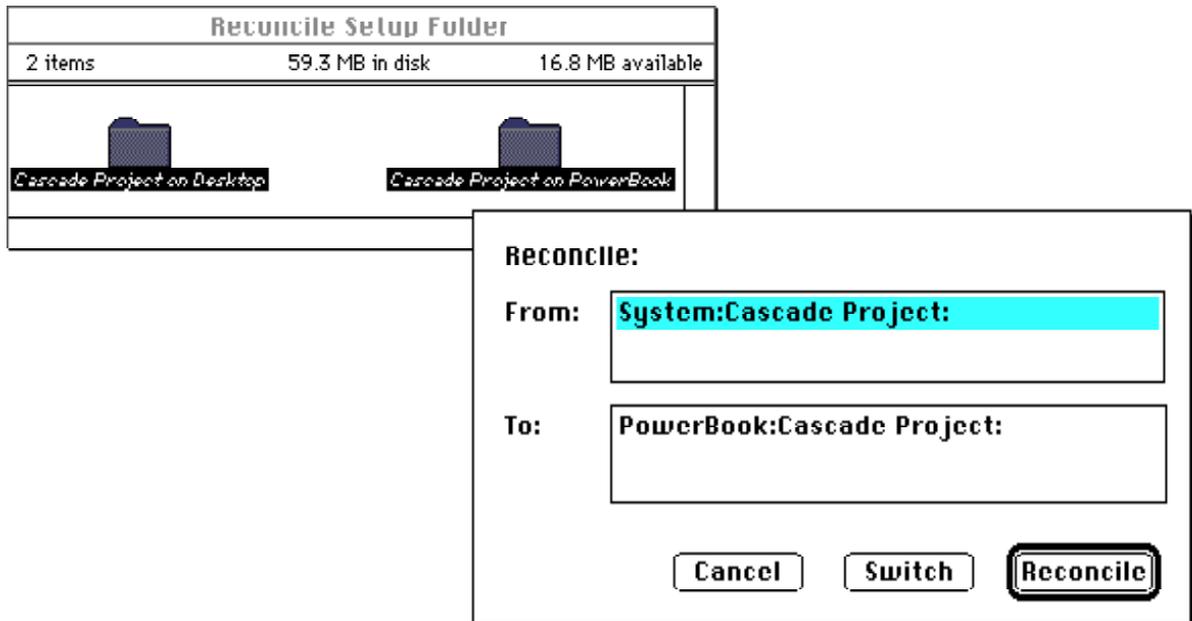
Here's a very useful command for PowerBook users or for people with more than one Macintosh.

Suppose you're about to go on a trip and want to work on the "Cascade Project" while you're traveling. If you're like most PowerBook users, you have a copy of the folder on both machines. But the copy on your PowerBook is out of date. How do you reconcile the differences between the newer version of the folder on your desktop machine, and the older version on the PowerBook? That's what the Reconcile Folders... command does.

Before choosing the command, do a little setting up first:

1. Connect your PowerBook to the desktop machine using the AppleShare software that comes with System 7. Mount the PowerBook's hard disk using the Chooser.
2. Create a new folder on your desktop hard disk called "Reconcile Setup Folder."
3. Select a folder on your PowerBook hard disk and create an alias to it. This folder should be one of the two folders you want to reconcile. Copy the alias into the Reconcile Setup Folder.
4. Select a folder on your desktop hard disk, create an alias to it, and copy the alias to the Reconcile Setup Folder. This folder should be the one that you want to reconcile with the one in step 3. Now you're ready to go!

Select both aliases in the Reconcile Setup Folder, then select the Reconcile Folders... command from the Utils menu. A dialog box appears, like the one below:



The command can only guess which of the two folders is being copied from (the “source folder”) and which is being copied to (the “destination folder”). That’s why the Switch button is there. If the order is reversed, just click on the Switch button and the source folder becomes the destination folder and vice versa.

If you’re satisfied that this is what you want to do, click on the Reconcile button.

This is what the command does for you:

1. It scans the source folder copying files that don’t exist in the destination folder, or have a more recent modification date than the same file in the destination folder.
2. It scans the destination folder looking for files that exist there that don’t exist in the source folder. It doesn’t delete these files, instead it moves them to a folder it creates called Extra Files. It pays to look in this folder before you delete it. Maybe you did some work on the PowerBook since your last trip? Better safe than sorry!

When you return from your trip, select the same two aliases, but this time make sure that the source and destination are reversed.

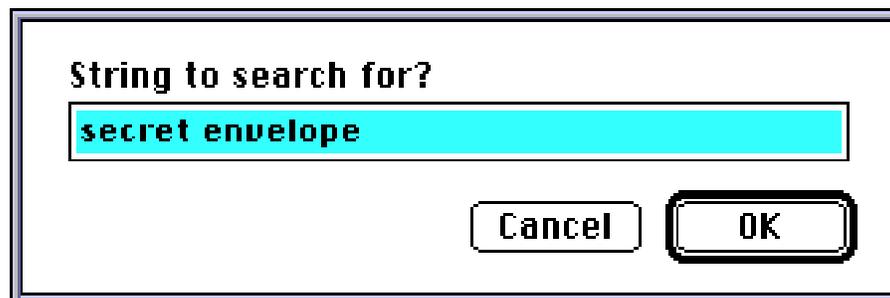
For script writers we’ve included a new Frontier verb that reconciles two folders: `file.reconcileFolder`. You can use this verb in custom scripts.

Find In File...

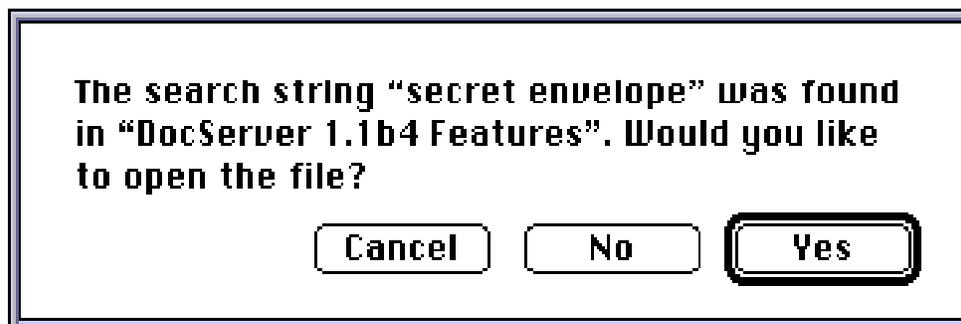
The System 7 Finder has a Find command, but it only looks at the external characteristics of files — when they were created, whether they have a certain character in their name, their version numbers, etc.

The Find In File... command looks inside files for text contained within the file.

First select a folder or group of folders you want to search in. Then choose the Find In File... command from the Utils menu. A dialog appears:



Click on OK to continue, Cancel to return to the Finder. The command then searches all the files in the folders you selected. If it finds a file containing the search string, it presents another dialog:

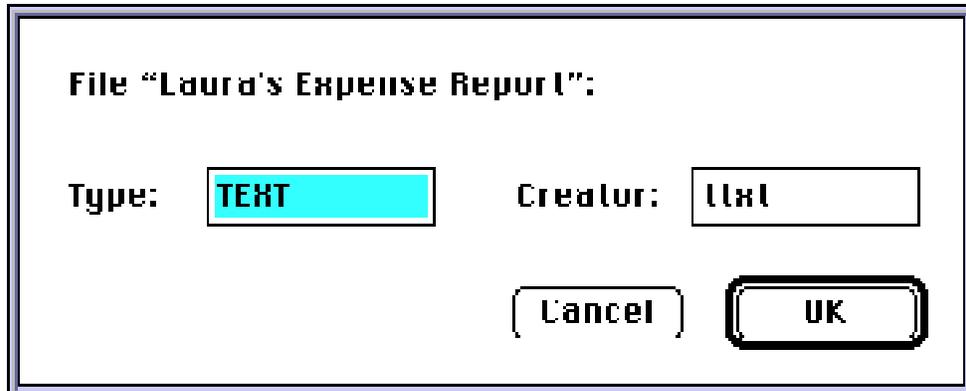


If you click on Yes, the file is opened and the search is completed. If you click on No, the search continues. If you click on Cancel, the script completes.

Set File Type & Creator...

The Set File Type & Creator... command presents a dialog box that allows you to change the type and creator of any file you select in the Finder.

Here's what the dialog box looks like:



You may want to change the type of a file so that the application that created it will treat it differently. For example if you change the type of a TeachText file to ttro, when the file is opened it's treated as read-only by the TeachText application.

You can change the creator of a file if you want a different application to launch when you double-click on it. For example, if you change the creator of a Studio/8 picture file from ST/8 to MDPL, MacDraw will launch and open the file when you double-click on it.

Changing file types and creators is seen as a "programmerish" thing by many people, but it's remarkable how many times one has to know about and possibly change this information in the course of using a Macintosh.

Find Locked Files...

Have you ever tried to trash a folder only to have the Finder report that there's a locked file somewhere deep within the folder hierarchy? Use the Find Locked Files... command to find and unlock deeply buried locked files.

Select the folder you're concerned about, and choose the Find Locked Files... command. When it finds a locked file, the command displays a dialog asking if you want to unlock a specific file:



Click on Yes to unlock it, No to not unlock it, or Cancel to halt the search.

Close Parent Folders

If you have a lot of nested folders on your hard disk, this command can clean up extra windows after you zoomed thru your hard disk looking for a specific document or application.

Here's how to use this command: after you're finished zooming, select an icon in the folder you want to keep visible. Then choose the Close Parent Folders command to close all the folders that contain it.

If you use this command a lot, you may want to assign a single keystroke to it using Frontier's menu bar editor.

Note: the script behind this command has no way of knowing if a window is open before it sends a command to the Finder to close it. Therefore, you may see some windows opening then closing, if you've already closed some of them.

Find File Creator

Select a document file then choose the Find File Creator command to open the folder containing the application that created it. The application's icon is highlighted.

The Aliases Sub-Menu

New Alias in Folder...

Creates aliases of all the selected icons. The aliases are placed in a folder you select from a standard Macintosh file dialog.

Apple Menu Items

Creates aliases of all the selected icons in the Apple Menu Items sub-folder in your System Folder.

Files in this folder appear in the Apple menu which is always available regardless of which application is frontmost.

Control Panels

Creates aliases of all the selected icons in the Control Panels sub-folder in your System Folder.

Startup Items

Creates aliases of all the selected icons in the Startup Items sub-folder in your System Folder.

Files in this folder are automatically launched when the system starts up. It's a great place to put an alias of the Frontier application!

Extensions

Creates aliases of all the selected icons in the Extensions sub-folder in your System Folder.

Desktop

Creates aliases of all the selected icons on the Finder's desktop.

Tech note: the alias is created in the Desktop Folder on the system disk.

Find Original of Alias

The "original" of an alias is the file it points to. This command opens the folder that contains the alias of each selected alias files, and highlights its original file.

The Apps Sub-Menu

Add App to Menu...

The Apps sub-menu contains a list of applications and documents that you want to launch frequently from the Finder.

To add something to the Apps menu, select its icon in the Finder and then choose the command. A dialog box confirms that you want to add this item to the Apps menu.

If its icon isn't at-hand, click on the desktop to get rid of any selection and choose the Add App to Menu... command. A standard file dialog box appears. Select the file you want to add to the menu and click on OK.

To be perfectly accurate, its name should be "Apps, Docs, Folders & Disks," because all those types of objects can be launched or opened from this menu. But Apps is a much more succinct and memorable name for this sub-menu.

The Folders Sub-Menu

System 7

System Folder

The commands in this menu open specific Finder folders related to the Macintosh system software.

This command opens a window displaying the contents of the System Folder.

Apple Menu Items

This command opens a window displaying the contents of the Apple Menu Items sub-folder in your System Folder.

Control Panels

This command opens a window displaying the contents of the Control Panels sub-folder in your System Folder.

Extensions

This command opens a window displaying the contents of the Extensions sub-folder in your System Folder.

Preferences

This command opens a window displaying the contents of the Preferences sub-folder in your System Folder.

Startup Items

This command opens a window displaying the contents of the Startup Items sub-folder in your System Folder.

Frontier

Frontier Folder

The commands in this menu open specific folders contained within your Frontier folder.

The Frontier Folder command opens the folder that Frontier was launched from.

Desktop Scripts

This command opens a window displaying the contents of the Desktop Scripts sub-folder in your Frontier Folder.

Desktop script files contain a script that can be double-clicked on in the Macintosh Finder. Hold down the cmd-key while double-clicking to edit the source code of a desktop script. Within Frontier, cmd-3 saves the frontmost script window as a separate file as a desktop script.

Dialogs

This command opens a window displaying the contents of the Dialogs sub-folder in your Frontier Folder.

The Dialogs folder is a new standard folder within the Frontier folder, created by the Installer script that installed the FinderMenu package. It contains files that are used in displaying and running dialog boxes.

Suites

This command opens a window displaying the contents of the Suites sub-folder in your Frontier Folder.

Suites are groups of Frontier commands organized into a single menu bar that are launched by selecting a command in Frontier's Suites menu.

UserLand Utilities

This command opens a window displaying the contents of the UserLand Utilities sub-folder in your Frontier Folder.

The sub-folders of the UserLand Utilities folder contain small applications and their support files, such as DocServer and BarChart.

These applications are designed to communicate with Frontier using System 7 Apple Events.

The Frontier Sub-Menu

Switch to Frontier

The Frontier menu includes commands that help script writers edit, extend and modify the Finder's menu bar. See the Tech Notes file in the Extras folder for more information on writing scripts that work in the Finder. If you're not a script writer, you can skim this section to get an idea of what script writing is like. You can certainly try the commands out, they can't do any harm.

The Switch to Frontier command simply brings Frontier to the foreground. If you do this a lot, you might want to assign a single keystroke to the command using the Menu Editor command.

If you hold down the shift key while selecting this command, two Frontier tables are automatically opened:

1. system.verbs.apps.Finder -- the scripts that connect to Apple Events recognized by the System 7 Finder;
2. system.verbs.apps.FinderMenu -- scripts that apply to the FinderMenu application.

Launch DocServer

DocServer is UserLand's on-line documentation tool for Frontier script writers. It provides information about each of the "verbs" that are part of the UserTalk language. This command launches DocServer if it's not already running,

If you hold down the shift key while selecting this command, DocServer automatically shows the first page of documentation describing the Apple Events handled by the System 7 Finder.

List Selected Files

The List Selected Files command switches into Frontier and creates a new outline window listing the full paths to all the icons you have selected in the Finder.

This command can be useful if you're writing a script and need the full path to a file or set of files.

Hello World

The remaining commands in the Frontier menu show you how to write scripts that work in the Finder's menu bar. You can browse thru the menu bar and see how all the commands are implemented. These demo scripts are just a starting point.

The Hello World command brings Frontier to the front and displays a dialog box that says hello. When you click on OK, the script brings the Finder to the front.

Here's the UserTalk script behind the Hello World command:

```
Frontier.bringToFront ()  
dialog.alert ("Hello world!")  
Finder.bringToFront ()
```

Beep 5 Times

When you select the Beep 5 Times command, the system "beep sound" is played five times. Use the Sound control panel to change the beep sound.

Here's the script:

```
local (i)  
for i = 1 to 5  
    speaker.beep ()
```

This script illustrates that scripts that run from the Finder's menu bar don't have to bring Frontier to the front.

Selected Files

The Selected Files command displays the full paths to each of the files you have selected in the Finder in a standard alert dialog box.

To try it out, select three or four icons in the Finder and choose the Selected Files command. Frontier comes to the front, and a dialog box for each of the icons you've selected appears

Here's the script:

```
on visit (path) «called once for each selected file
    dialog.alert (path) «show the full path in a dialog
    return (true) «keep looping over the files
Frontier.bringToFront ()
FinderMenu.visitPaths (@visit) «call visit once for each selected file
Finder.bringToFront ()
```

Hierarchic Menu

This sub-menu illustrates that you can build very deeply nested structures of hierarchic menus. We don't recommend that you go quite as deep as this structure.

For an interesting message, select the very last command in the chain.

Menu Sharing

Here's a brief background on the software technology that the FinderMenu package builds on. More detail is provided in the Tech Notes file in the Extras folder.

The FinderMenu package turns the Finder into a menu sharing-aware application.

Menu sharing allows one Macintosh application to send a set of menus to another application. There are two sides to a menu sharing connection: a server and a client. The menu sharing server, in this case Frontier, stores menus and allows script writers to edit them. The menu sharing client, in this case the Finder, displays the shared menus. When the user selects a command, the client application sends a message back to the server indicating which item was selected. Menu sharing builds on top of the System 7 Apple Event Manager, which handles the connections between the applications.

It's possible to extend the Finder to support menu sharing because the Macintosh operating system is modularly designed. The techniques used by the FinderMenu package are reliable because they have been carefully tested and because they build on established techniques pioneered by other Macintosh developers, notably Aladdin Systems and CE Software. Two software components are used to implement menu sharing for the Finder: the FinderMenu INIT and the FinderMenu App.

Other applications can easily support menu sharing. UserLand's Menu Sharing Toolkit is provided is free and without royalty; it comes with full Think C source code, documentation and a sample application. It can be downloaded from UserLand's forum on CompuServe, in Library 7, in MSHARE.SIT.

Futures

Finder menu sharing is a breakthrough for Frontier script writers because now we have an easy delivery vehicle for products designed for users who are not script writers. No doubt we will all learn a lot from developing with it in the coming months.

What do you think? Do you have any ideas for scripts that should be part of this package? Our favorites are Reconcile Folders, Launch Everything and the Backup sub-menu. Which are your favorites? What new commands would you like to see? You can be an active part of the R&D process, and help make the Macintosh a richer platform for all kinds of users. Your comments, suggestions, ideas and questions are welcome!

Credits

Steve Zellers of Berkeley Systems, Inc. wrote the FinderMenu INIT and the FinderMenu application. As Macintosh users, script writers and as the developers of Frontier, UserLand Software thanks Steve and Berkeley Systems for opening the door to us and the users of our product.

Important: support for this package is provided only by UserLand Software thru its CompuServe and AppleLink on-line services.

The menu that ships with this package was written by Dave Winer of UserLand Software with the help of: Chris Mahnken, David Buell, Dean Wette, Howard Oakley, John W. Baxter, Mayson Lancaster, Reede Stockton, Rich Parker and Tom Petaccia who provided their help, encouragement, scripts (!) and copious advice while this software was in development.