



# ARC File Organization Guidelines

Revised 2015-06-18

## Summary

Save your files within a folder called **Projects**. Arrange your project files in a clean, organized, and logical fashion. Make it easy for your fellow team members to find and understand your work.

## Standard Folders

The root directory of an ARC workstation typically contains the following notable folders:

- 🔒 Applications
- 🔒 Library
- 📁 Projects
- 📁 Proposals
- 🔒 System
- 🔒 Users:
  - 👤 AccountName:
    - 📁 Public:
      - 📁 Drop Box
      - 📁 Desktop
      - 📁 Downloads

## Project Organization

The Projects folder is the central location in which your work files reside. Inside, create subfolders for each of your active projects. Name each of these project folders with a pre-assigned numeric code and descriptive title.

*Refer to your project manager, office manager, or the ARC Time Sheets web application<sup>1</sup> for a list of active project numbers.*

<b>Enter a Project Number:</b>	<input type="text"/>
21319.1330 : LCPS: Special Planning Tasks 21319.1320 : LCPS: GIS Assistance 21319.1310 : LCPS: FMP Annual Update 21318.1530 : Santa Fe County FCA Web Application Maintenance 21318.1520 : Santa Fe County FCA Parks and Open Space	

<sup>1</sup> <https://www.arcoffice.com>

Examples of individual project folder names:

- 21416.0000 UNM-G Campus FMP Update
- 21506.0000 NMSU Carlsbad Early Childhood Center
- 98000.4000 Research and Development

The Proposals folder contains material for work bids and marketing resources. Each subfolder within Proposals should contain the solicited entity's name and the four-digit year of the submission.

*Proposals don't have a unique identifier code. But they could be considered to be part of "98000.100 - Administrative - Marketing."*

Examples of individual proposal folder names:

- Colfax County CP 2014
- Taos Pueblo Planning 2012
- Roswell PS FMP 2015

## Project Subfolders

Store project documents inside their designated project directory. Ideally, a project folder should be a self-contained root entity with no external dependancies. It may be helpful to group files by category, such as all image files grouped within "Graphics" and all Excel workbooks in "Spreadsheets." Some examples of project subfolders appear below:

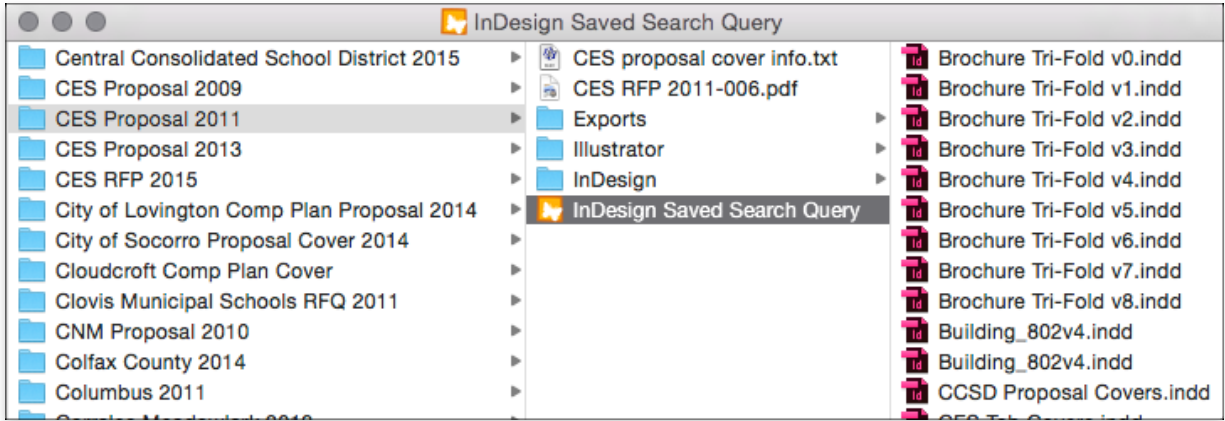
- Projects:
  - 21416.0000 UNM-G Campus FMP Update:
    - Graphics
    - InDesign
    - RFP
    - Notes
    - PDFs
    - Reference
    - Correspondence
    - Spreadsheets

You can also use a Spotlight search query<sup>2</sup> as a non-hierarchal meta-folder. This approach lets you view disparate documents in a convenient, consolidated location.

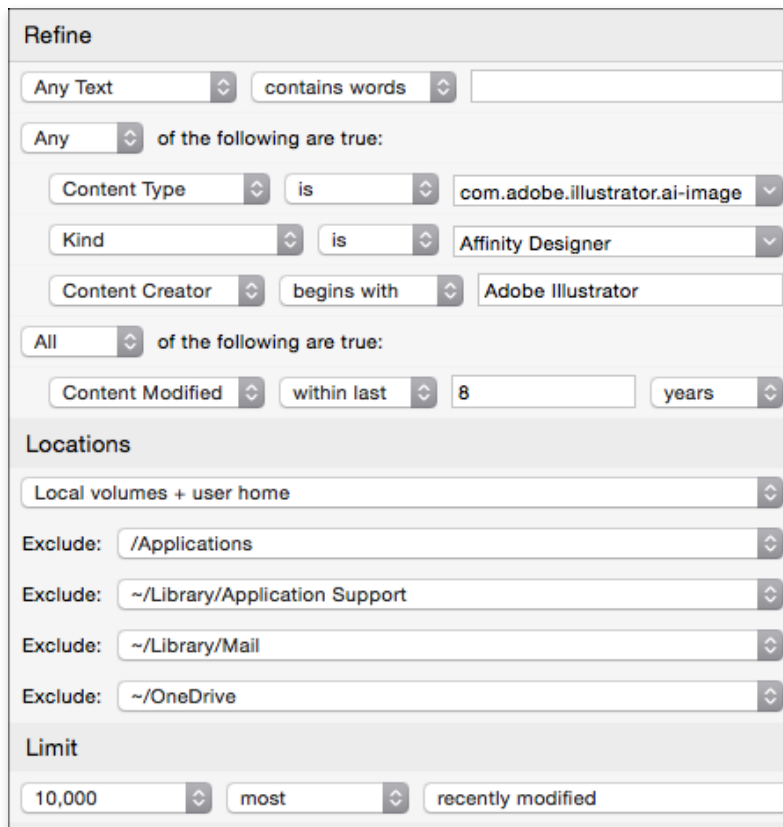
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<sup>2</sup> [https://en.wikipedia.org/wiki/Spotlight\\_\(software\)](https://en.wikipedia.org/wiki/Spotlight_(software))

In the example below, “InDesign Saved Search Query” is a virtual folder that contains recently-modified report files scattered across various locations:

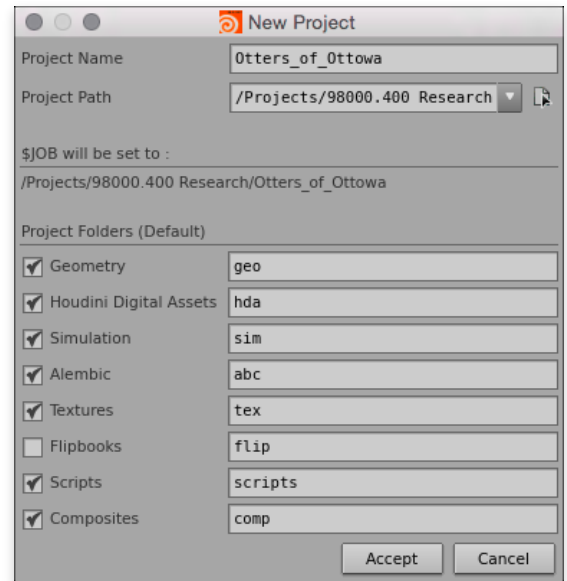


A Spotlight search query displays its results instantly and remains “live,” revealing new content as conditions change. Spotlight searches can have elaborate criteria that govern their contents:



Applications like Apple Xcode<sup>3</sup> and Side Effects Houdini<sup>4</sup> can generate a new project hierarchy with various subfolders automatically. Another approach is to clone an existing folder template populated with common subfolders and empty support files.

Other applications like Adobe InDesign can assist with organization by consolidating all referenced links and support files into a new subfolder with a File > Package command.



## File Names

Name your files with concise, descriptive titles that denote their content. Use capitalization and punctuation where appropriate. Use a readable and consistent naming convention for each file and avoid producing a jumble of indecipherable characters.<sup>5</sup>

### Examples of Good Titles

- “Title Case Format with Whitespace v1.ext”
- “CamelCaseFormatv2.ext”
- “snake\_case\_format\_v3.ext”
- “spinal-case-format-v4.ext”
- “all lower case 2016 v5.ext”
- “Final Report March 1999 v2.doc”

### Examples of Poor Titles

- “SCREAMINGCASEFORMATV1.EXT”
- “Document1.doc.docx.ext”
- “UNTITLED1\_repport+final 3/99 (2) rev10 PDD.ext”

### File Extensions

Most applications automatically append a suffix to a file’s name, indicating the type of data it contains. Primitive computing platforms<sup>6</sup> rely exclusively on fragile file extensions to determine file type, but modern systems employ smarter, more reliable methods.<sup>7</sup>

<sup>3</sup> [Application Development Tools - https://developer.apple.com/xcode/](https://developer.apple.com/xcode/)

<sup>4</sup> [3D Graphics Software - https://en.wikipedia.org/wiki/Houdini\\_\(software\)](https://en.wikipedia.org/wiki/Houdini_(software))

<sup>5</sup> [Purdue Data Management - http://guides.lib.purdue.edu/content.php?pid=440001&sid=4901667](http://guides.lib.purdue.edu/content.php?pid=440001&sid=4901667)

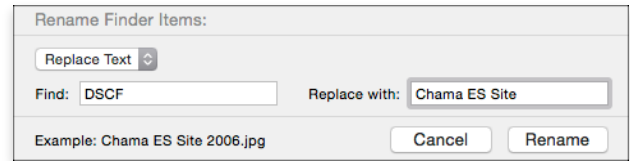
<sup>6</sup> [DOS Short File Name - https://en.wikipedia.org/wiki/8.3\\_filename](https://en.wikipedia.org/wiki/8.3_filename)

<sup>7</sup> [Intelligent Data Type Classification - https://en.wikipedia.org/wiki/Uniform\\_Type\\_Identifier](https://en.wikipedia.org/wiki/Uniform_Type_Identifier)

## Unique File Names

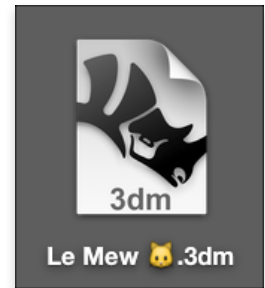
Use unique file names in each folder. Most operating systems forbid name collisions,<sup>8</sup> in which two different files in the same directory share the same name. If such a conflict arises, the computer will either forcibly rename the offending files, or simply overwrite one of them. In either case, you could lose data.

Digital cameras tend to produce images with forgettable names like “DSCF2032.jpg.” Take advantage of your computer’s automation features to assign meaningful file names to a batch of files at once.

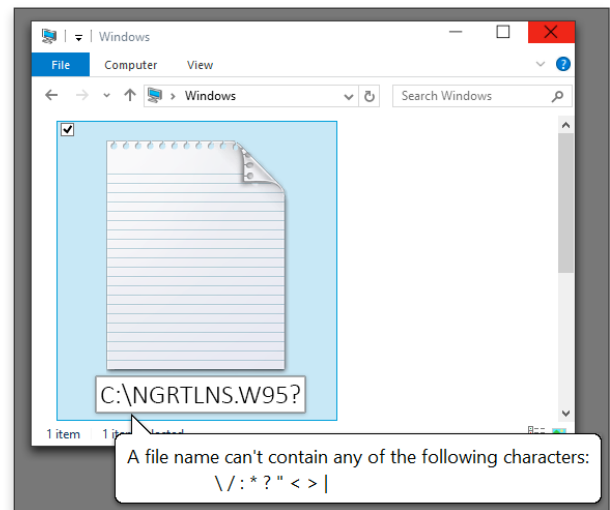
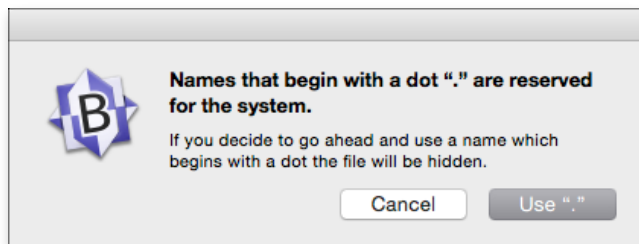
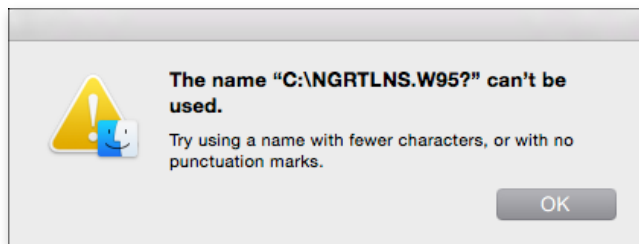


## ⊘ Forbidden Characters

OS X has few restrictions of the characters allowed in a file name. But avoid colons (“:”) and forward slashes (“/”), which the system reserves as path separator identifiers.<sup>9</sup> Microsoft Windows forbids many common characters including the asterisk (“\*”), question mark (“?”), quotation marks (“'”), angle brackets (“<”, “>”), and pipe (“|”). Word dividers like interpunct “.” and space “ ” are usually fine, but can be problematic when transferred externally.



The computer will complain if it encounters a name it deems unsuitable.



<sup>8</sup> [https://en.wikipedia.org/wiki/Name\\_collision](https://en.wikipedia.org/wiki/Name_collision)

<sup>9</sup> [https://en.wikipedia.org/wiki/Path\\_\(computing\)](https://en.wikipedia.org/wiki/Path_(computing))

# Versioning

Save iterations of your files. Before making major changes to a document, duplicate it and append a new version number to the end of its name.<sup>10</sup>

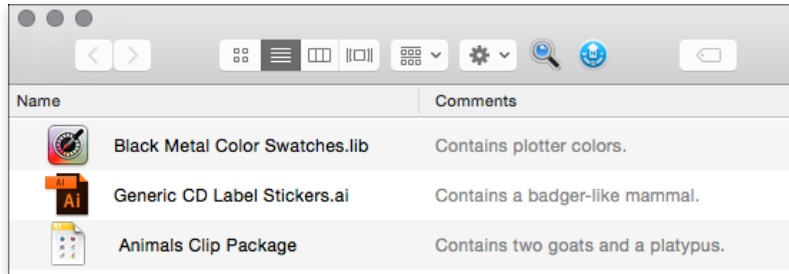
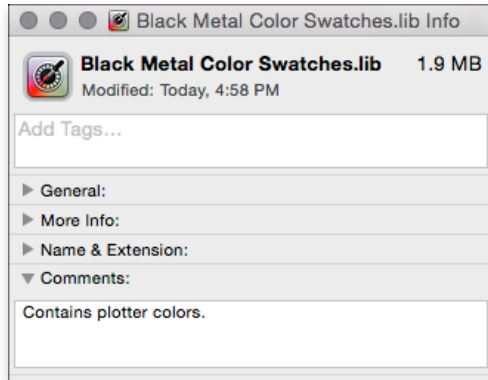
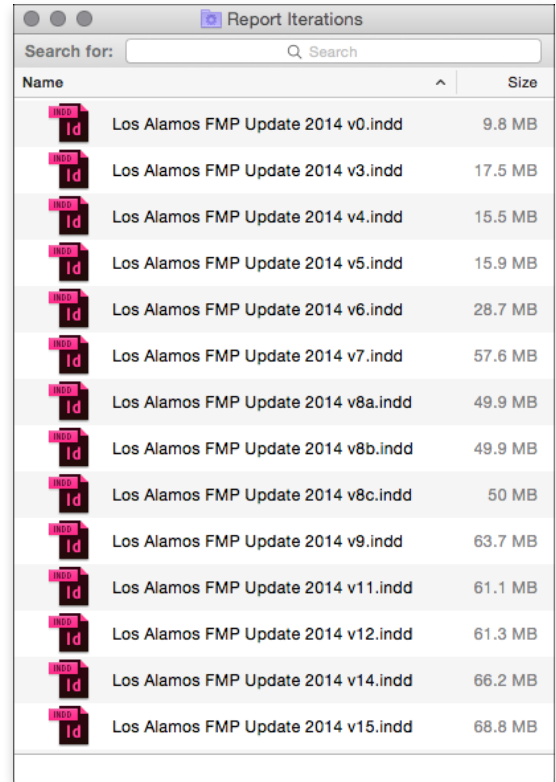
Example of a file iteration sequence:

- “West Capitol Campus Conceptual Map v1.ai”
- “West Capitol Campus Conceptual Map v2.ai”
- “West Capitol Campus Conceptual Map v3.ai”

You may need to further distinguish a file version with your initials or a date stamp:

- “West Capitol Campus Map for Print v3.ai”

If tacking data onto a file’s name becomes cumbersome, try adding that information to the file’s comment field.<sup>11</sup> You can reveal this information panel by selecting a document in the Finder and choosing File > Get Info:

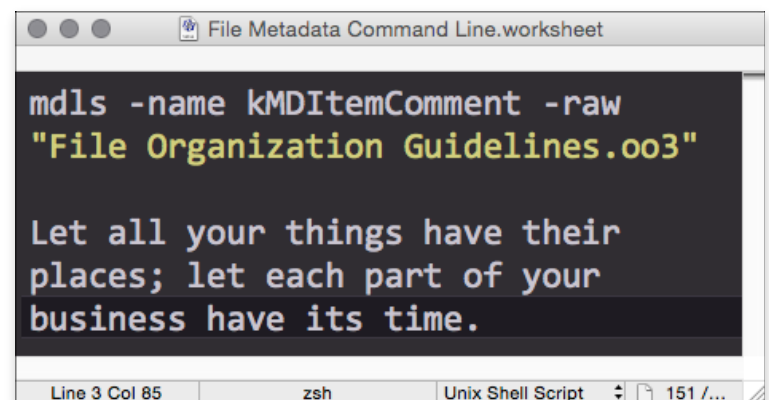
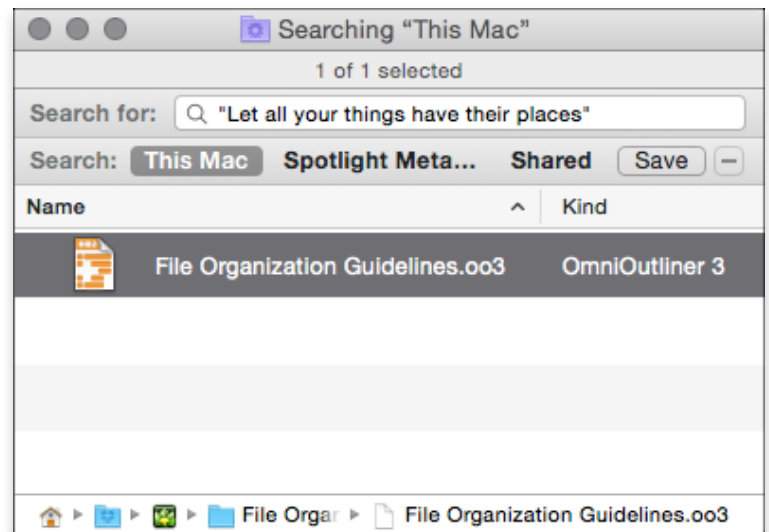
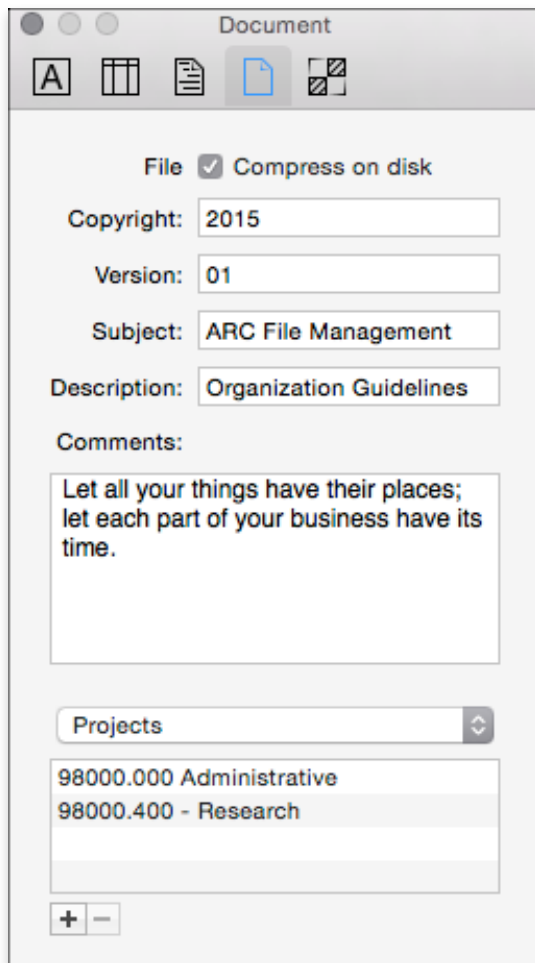


Text added to this field is visible within the Comments column header in each Finder window.

<sup>10</sup> [Revision Control Systems - https://en.wikipedia.org/wiki/Versioning\\_file\\_system](https://en.wikipedia.org/wiki/Versioning_file_system)

<sup>11</sup> [Version Control Guidelines - http://nidcr.nih.gov/Research/ToolsforResearchers/Toolkit/VersionControlGuidelines.htm](http://nidcr.nih.gov/Research/ToolsforResearchers/Toolkit/VersionControlGuidelines.htm)

Many applications encourage you to attach metadata<sup>12</sup> directly to open documents. Metadata can include user-defined details like authorship, copyright terms, and search tags. This contextual information is visible in the Finder, Spotlight searches, and Unix command line<sup>13</sup> utilities.

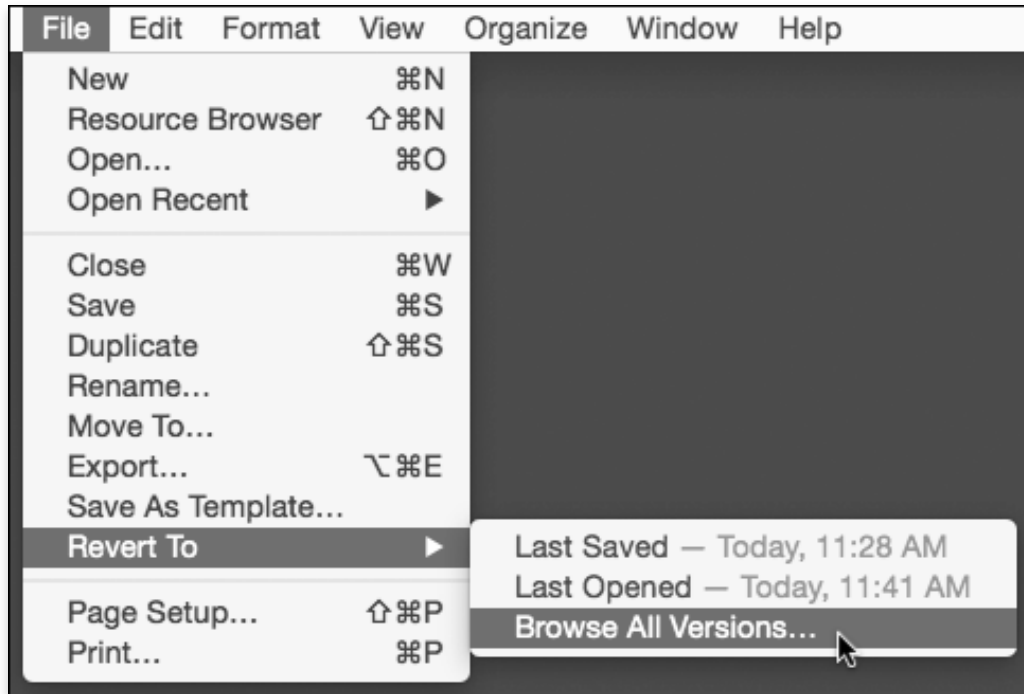


<sup>12</sup> <http://arstechnica.com/apple/2001/08/metadata/>

<sup>13</sup> [https://en.wikipedia.org/wiki/Command-line\\_interface](https://en.wikipedia.org/wiki/Command-line_interface)



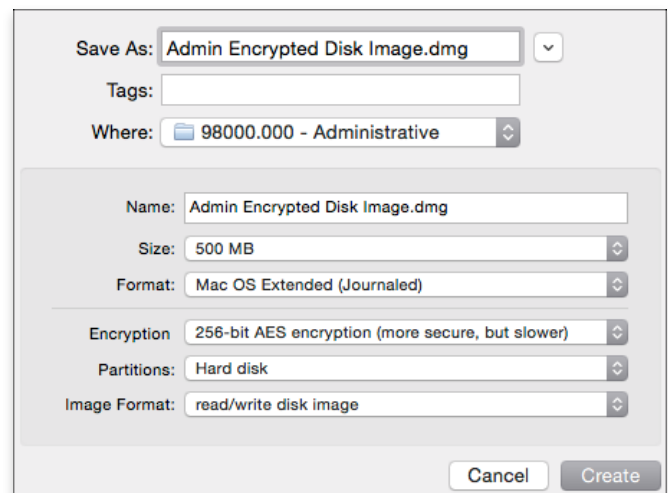
Some applications offer their own internal version history<sup>14</sup> mechanism. While helpful, this feature is not a substitute for proper file-level document management.



## Data Security

### Password-protected Disk Images

A disk image (with a “.dmg” or “.sparsebundle” file suffix) is a portable data file that behaves like a virtual hard disk. When unmounted, its contents are locked and inaccessible. Some of ARC’s projects require high-level security protocols, and an encrypted disk image is an effective way too ensure your sensitive data remains private. You can use Apple’s Disk Utility to create an encrypted disk image.

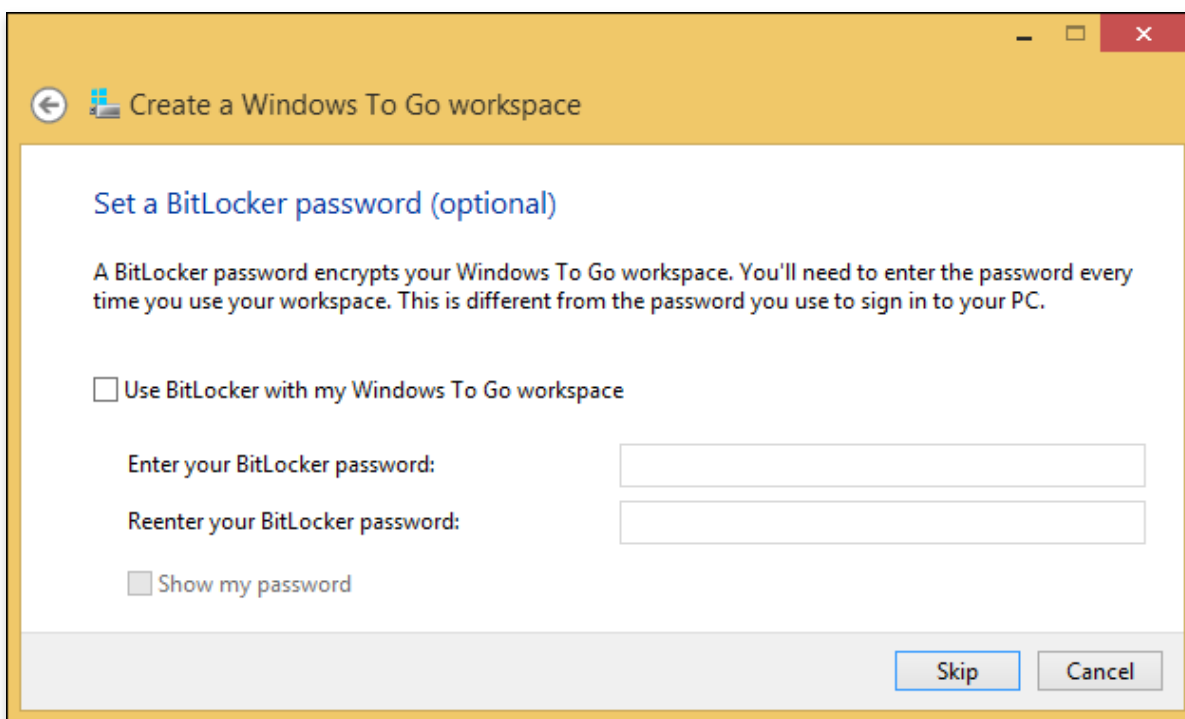
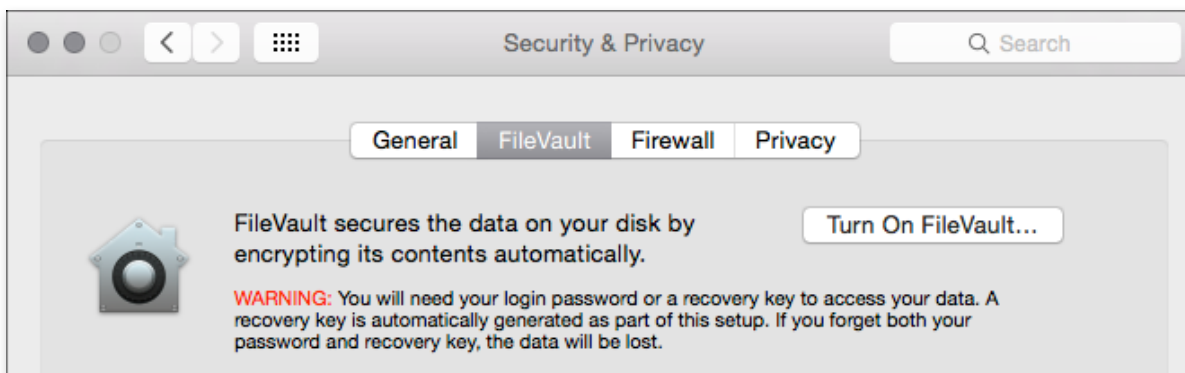


<sup>14</sup> OS X Lion: About Auto Save and Versions - <https://support.apple.com/en-us/HT202255>



## Full Disk Encryption

Another method of protecting data from unauthorized access is to encrypt the entire hard disk<sup>15</sup> using a built-in system service. Examples include Apple FileVault,<sup>16</sup> Microsoft BitLocker,<sup>17</sup> and dm-crypt<sup>18</sup> for Linux.



<sup>15</sup> [https://en.wikipedia.org/wiki/Disk\\_encryption#Full\\_disk\\_encryption](https://en.wikipedia.org/wiki/Disk_encryption#Full_disk_encryption)

<sup>16</sup> <https://support.apple.com/en-us/HT204837>

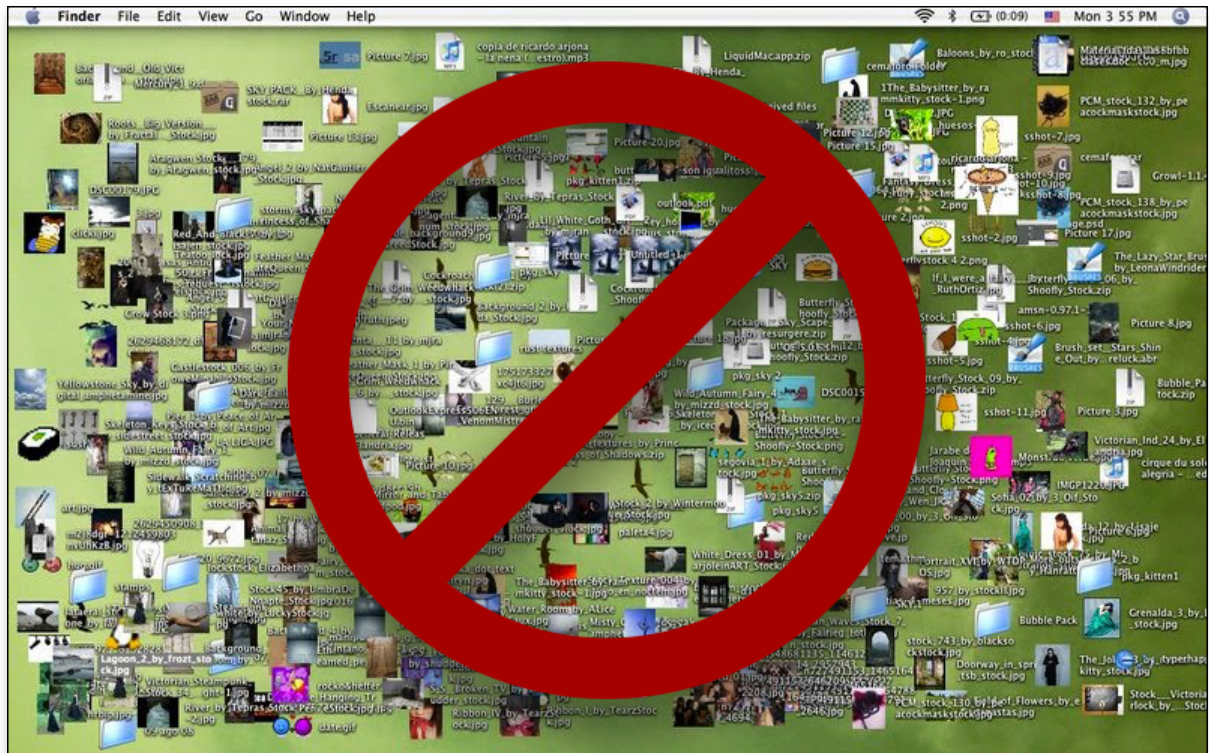
<sup>17</sup> <https://en.wikipedia.org/wiki/BitLocker>

<sup>18</sup> <https://en.wikipedia.org/wiki/Dm-crypt>

## User Folders

### Desktop

The Desktop is the background area of the file browser, usually adorned with a wallpaper image or color tone. Use this area sparingly for temporary files.<sup>19</sup> Don't store project folders, files, or applications here. A more efficient way to quickly access your data is with Finder sidebar favorites, Dock shortcuts, and instant search utilities like Spotlight or LaunchBar.<sup>20</sup>



### Public > Drop Box

One of the default file sharing locations on OS X is called “Drop Box,” and resides in the “Public” directory of your home folder. This folder has no relation to the popular commercial file synchronization service called “Dropbox.”<sup>21</sup> If you receive a new item in this location, remember to move it into an appropriate project folder.

<sup>19</sup> [An Overly Cluttered Desktop Can Seriously Slow Down Your Mac - http://lifehacker.com/5893054/](http://lifehacker.com/5893054/)

<sup>20</sup> [Instantaneous Launching Utility - https://en.wikipedia.org/wiki/LaunchBar](https://en.wikipedia.org/wiki/LaunchBar)

<sup>21</sup> [Cloud Storage Service - https://www.dropbox.com](https://www.dropbox.com)

## Downloads

Files that you obtain through a web browser or email program usually end up in the Downloads folder in your home directory. Try to keep this location clean by periodically discarding outdated files.

## Library

The hidden user library folder contains application settings and system configuration files. You'll generally have no need to modify its contents, but if you'd like to peek inside, hold down the Option key and choose Go > Library in the Finder.

# Email

Try not to store email messages indefinitely inside your inbox. After reading a new message, either file it away or delete it.<sup>22</sup> Don't force yourself to constantly sift through all those distracting old messages.<sup>23</sup>

Some users create dedicated email folders corresponding with each active project, and store all related incoming and outgoing messages there. Others rely on dynamic searches and smart folders to keep relevant communications together. It can also be helpful to export an archive of a project's messages as a read-only copy for later reference.

When composing a new message, indicate its project (name, number, or other identifier) in the subject line as a courtesy to your recipient.

# File Servers

ARC workstations can connect to various local network hosts to share project data. One such network host is called "ARC Server," and contains a share point nicknamed "ARC Drop Box." This network volume should adhere to the same directory hierarchy as any other project folder, and is subject to periodic administrative reorganization.

When adding a new file to a server directory, also keep a copy on your local machine. If a network outage or server disruption occurs, you would still have access to your work data. Likewise, before editing a document that resides on a remote server, copy it to your local machine. If a network disruption struck in mid-edit, your data could become corrupted. Working from your local hard disk is faster, and allows your computer's built-in backup services to better protect your data.

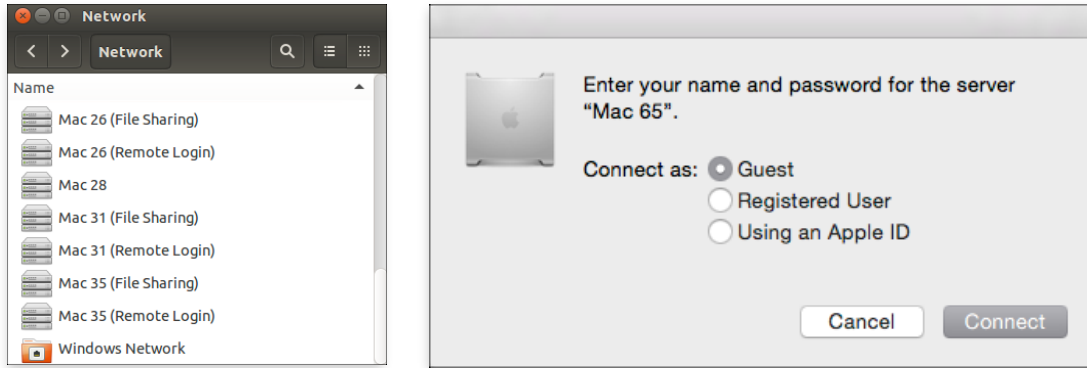
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<sup>22</sup> <http://xph.us/2013/01/22/inbox-zero-for-life.html>

<sup>23</sup> <http://zenhabits.net/email-zen-clear-out-your-inbox/>

## Network Guest Access

You can view a list of available servers within a directory called “Network” in your file manager. Most workstations grant limited access permissions to unauthenticated guest connections.



## Network Registered User Access

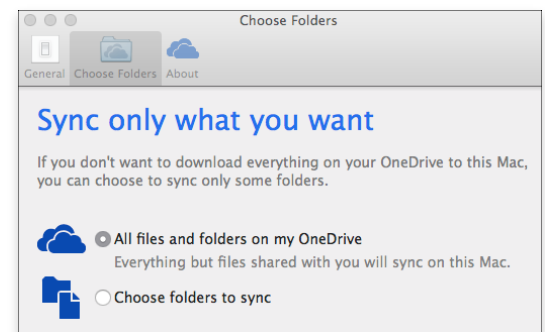
Many workstations require authentication before you can access them. The standards and procedures for ARC usernames and passwords are inconsistent. So at the moment, it’s best to ask an office manager or IT manager for help with a connection.

# Commercial Synchronization Services

Online network file services like Dropbox, Microsoft OneDrive, and Apple iCloud have their own idiosyncrasies about file organization. For example, Dropbox places its synchronization directory in your home folder by default. In order to keep your documents synchronized between devices, you may need to migrate active project folders to this alternative location.

Some services like Microsoft OneDrive offer granular control, allowing you to exclude certain subfolders altogether.

You can use symbolic links and aliases<sup>24</sup> to make a folder appear to exist in more than one location simultaneously. For example, you can store a folder in Dropbox’s default location, then drag an alias to your Projects folder. The folder’s content remains accessible from either location, yet consumes no additional storage space.



<sup>24</sup> <http://macs.about.com/od/faq1/f/What-Are-Aliases-Symbolic-Links-And-Hard-Links-In-Mac-Os-X.htm>

# Conclusion

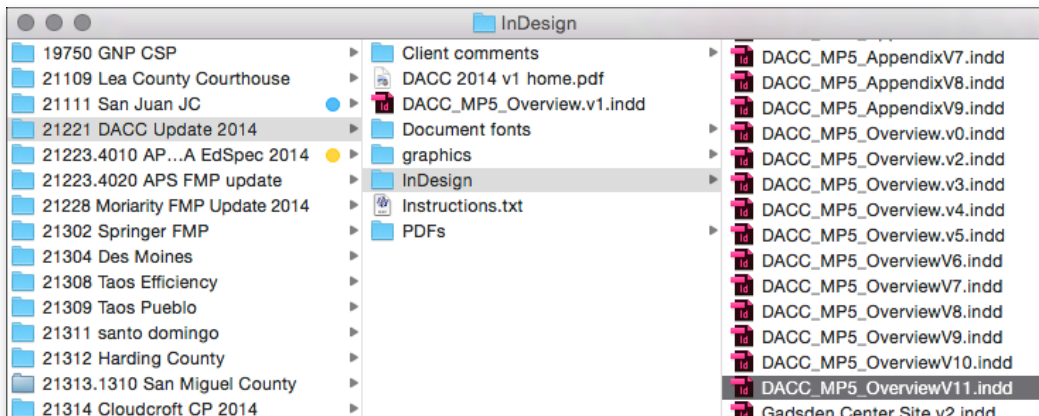
Keep your work files organized in a centralized location named **Projects**. Store related files together, use descriptive file names, and preserve iterations of each file as your project evolves. Don't store files permanently on the Desktop.

## File Management Software

A file manager is a software application devoted to organizing and managing files and folders. Some examples appear below.

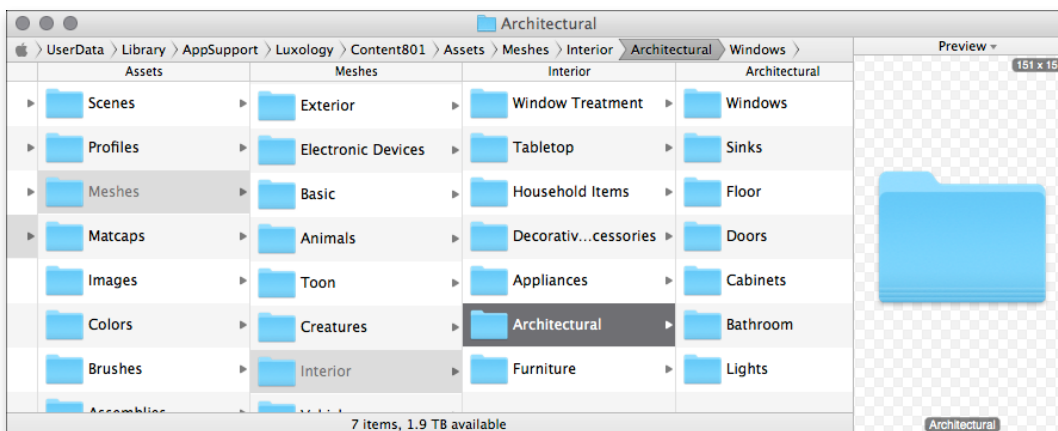
Apple Finder

[https://en.wikipedia.org/wiki/Finder\\_\(software\)](https://en.wikipedia.org/wiki/Finder_(software))



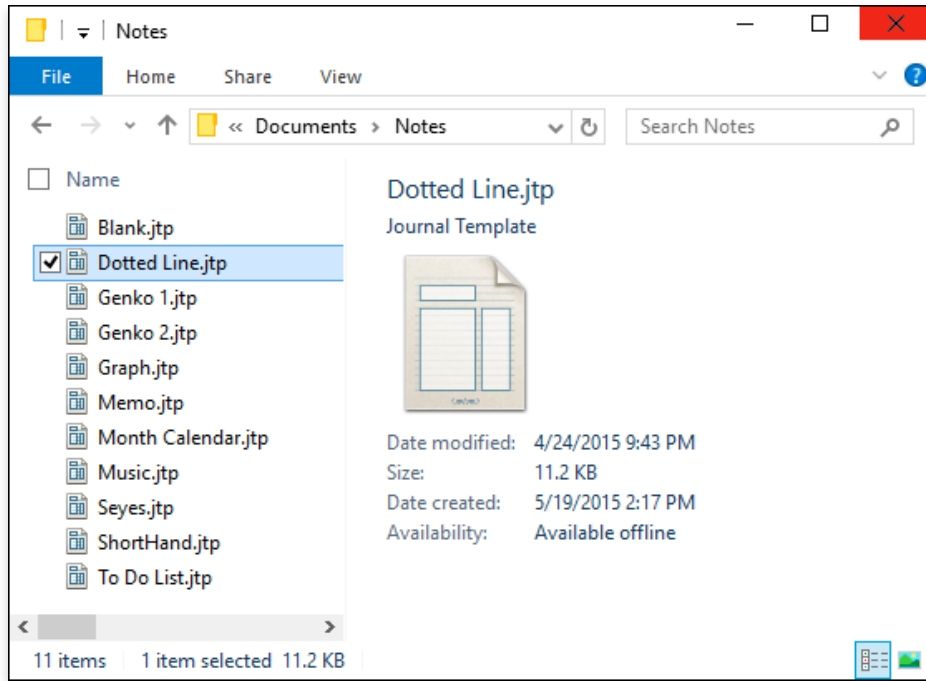
Cocoatech Path Finder

<http://www.cocoatech.com/pathfinder/>



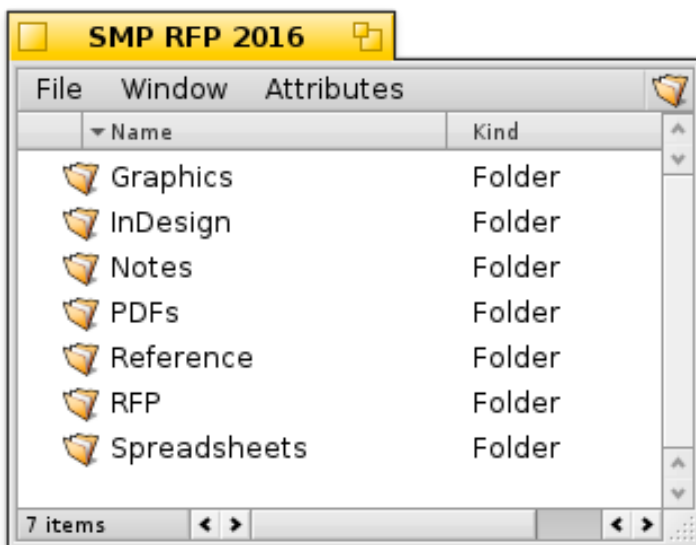
## Microsoft File Explorer

[https://en.wikipedia.org/wiki/File\\_Explorer](https://en.wikipedia.org/wiki/File_Explorer)



## Haiku Tracker

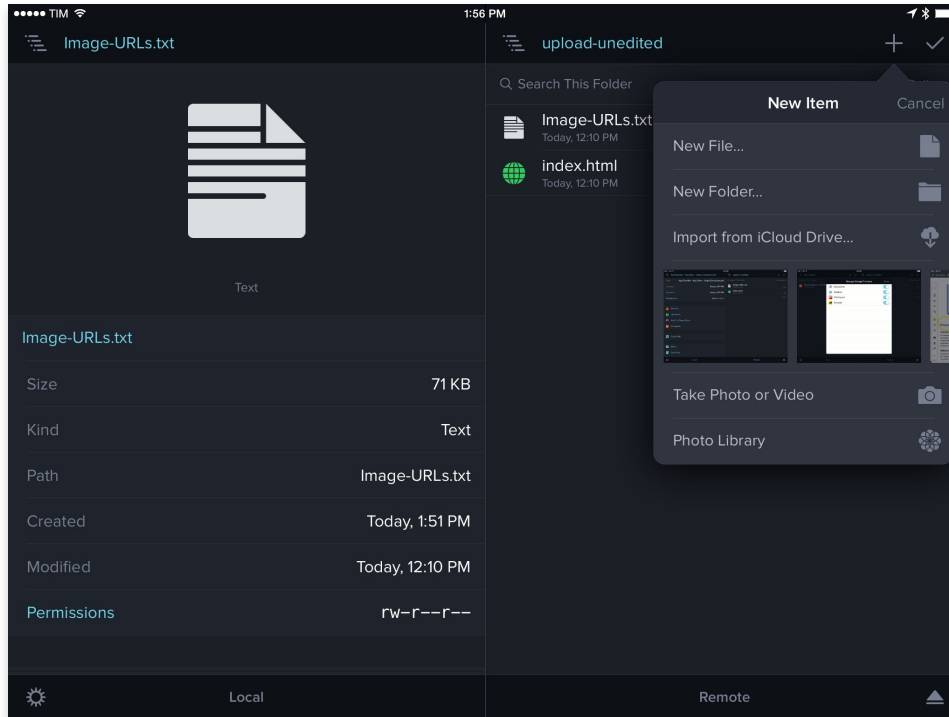
<http://www.haiku-os.org>





Panic Transmit

<http://panic.com/transmit-ios/>



## Other Useful File Resources

Objective Development LaunchBar

<https://www.obdev.at/products/launchbar/>

Houdah Software HoudahSpot

<http://www.houdah.com>

TLA DragThing

<http://dragthing.com>

Zardetto, Sharon *Take Control of Spotlight for Finding Anything on Your Mac*

<http://www.takecontrolbooks.com/spotlight>

McElhearn, Kirk *Take Control of LaunchBar*

<http://www.takecontrolbooks.com/launchbar>