



Automator Workflow Creation

MacLab Session LN

01/06/2009 – 3:00 PM – 5:00 PM

Speaker:

Ben Waldie

President, Automated Workflows, LLC

<http://www.automatedworkflows.com>

ben@automatedworkflows.com



Session Description:

This session will provide an introduction to constructing Automator workflows in Mac OS X 10.5 Leopard. We will begin by exploring Automator's interface and creating a few simple workflows. We will then discuss saving workflows as applications and plug-ins, recording manual tasks, performing looping, utilizing workflow variables, and more. Throughout this session, we will construct a number of example workflows. Finally, we will discuss next steps and resources for continued usage of Automator.

Table of Contents

<i>Automator Workflow Creation</i>	1
<i>Table of Contents</i>	2
<i>Goals of this Lab</i>	3
1. Introduction	4
What is Automator?	4
Automator's Reach.....	4
Uses for Automator	5
Benefits of Automator	5
Automator Changes in Leopard	5
2. Getting Familiar with Automator's Interface	6
Starting Points	6
Library List.....	6
Description Area	7
Workflow Area.....	7
Media Browser	8
Action Interface.....	8
Log Area.....	9
3. Creating and Running Automator Workflows	10
Steps to Create an Automator Workflow	10
Steps to Run a Workflow within Automator.....	11
Steps to Troubleshoot a Workflow within Automator	11
4. Saving Automator Workflows	12
Types of Saved Automator Workflows.....	12
Steps to Save as a Workflow or Application.....	12
Steps to Save as a Plug-in	13
5. Resources for Continued Learning	14
Mailing Lists	14
Websites	14
Books.....	14
Lab Materials.....	14

NOTES

Goals of this Lab

- Provide an introduction to Automator and its benefits
- Learn how to construct an Automator workflow
- Learn how to run an Automator workflow
- Learn how to create and run Automator workflow plug-ins for the Finder, the Mac OS X printing system, Image Capture, and the Mac OS X system-wide script menu
- Learn how to configure Automator workflows to run at scheduled intervals, using iCal
- Learn how to create watched folders with Automator
- Learn how to record and play back manual tasks with Automator in Leopard
- Learn how to utilize variables in Leopard-based Automator workflows
- Learn how to install and utilize Automator actions for third-party applications and processes
- Learn how to construct a variety of sample workflows for use with Mac OS X and iLife applications
- Learn how to construct a variety of sample workflows for use with third-party applications
- Next steps and resources for continued learning and usage of Automator

1. Introduction

What is Automator?

Automator, first released with Mac OS X 10.4 Tiger, and significantly updated in Mac OS X 10.5 Leopard, is an application that brings the power of workflow automation to the user level, with no programming or scripting required!



Within Automator, users work with two main types of components, actions and workflows. Actions are built by developers, and each action's purpose is to perform a single task, such as opening a file, checking your email, or rotating an image. Workflows are designed and constructed by users, by piecing together actions in a sequence, to create an assembly line of automated tasks.

Once constructed, workflows may be saved and triggered by a user in a variety of ways. Workflows may be run from within the Automator application, saved and run as an application, as a Folder Action, as an iCal alarm, as a print workflow, and more.

Automator's Reach

Automator is installed with over 150 different actions for performing a variety of tasks in Apple applications and the operating system. However, the power of Automator may be extended even further by installing new Automator-compatible applications, or by downloading and installing actions from third-party developers.

Apple applications that are Automator-ready include the following:

- Address Book
- Aperture
- Font Book
- iDVD
- iPhoto
- iTunes
- Keynote
- Mail
- Safari
- TextEdit

NOTES

Automator actions are also available for many third-party applications, including:

- Adobe InDesign
- Adobe Photoshop
- FileMaker Pro
- Graphic Converter
- Microsoft Office 2008
- NetNewsWire
- QuarkXPress
- Transmit

Uses for Automator

Since each action performs a single specific task, multiple actions can be intertwined in many ways to create a workflow that meets your very unique needs. Some common uses for Automator include:

- Backups
- Desktop Publishing
- File/Folder Creation
- Image Processing
- PDF Processing
- Podcasting
- Video Processing
- Website Maintenance

Benefits of Automator

There are many benefits resulting from the implementation of Automator in daily routines, including:

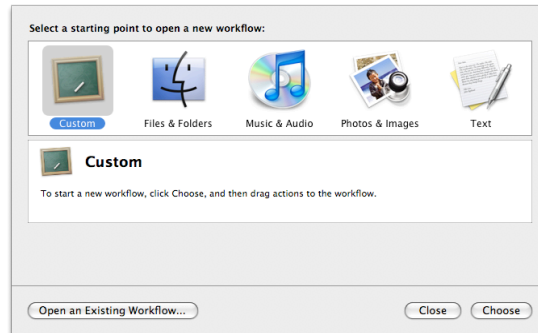
- Increased Consistency
- Increased Efficiency
- Increased Productivity
- Reduced Errors

Automator Changes in Leopard

- New interface: Faster, easier to navigate, more user friendly
- Starting Points: Templates for building workflows
- New and improved actions
- Watch Me Do (record manual tasks)
- Looping
- Workflow variables

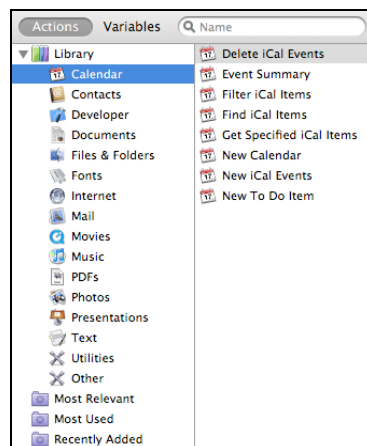
2. Getting Familiar with Automator's Interface

Starting Points



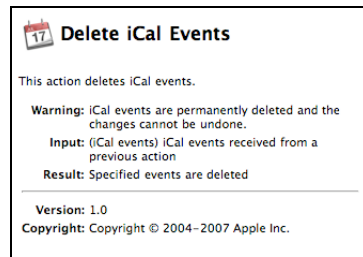
- Allow you to choose the type of workflow you want to create. Options include:
 - Custom (an empty workflow)
 - Files & Folders
 - Music & Audio
 - Photos & Images
 - Text
- Allow you to specify when and where content is retrieved. Options vary depending on the type of workflow chosen.

Library List

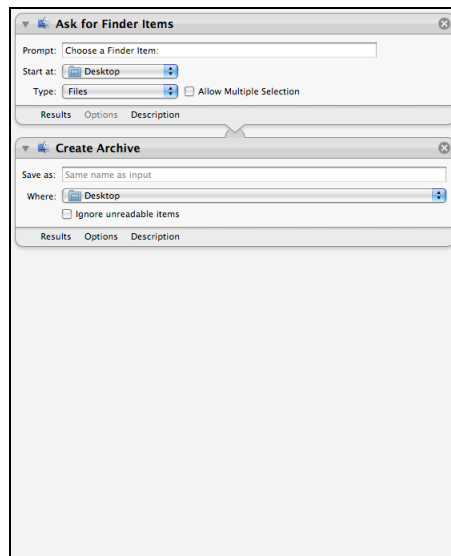


- Provides a list of categorized actions and variables

NOTES

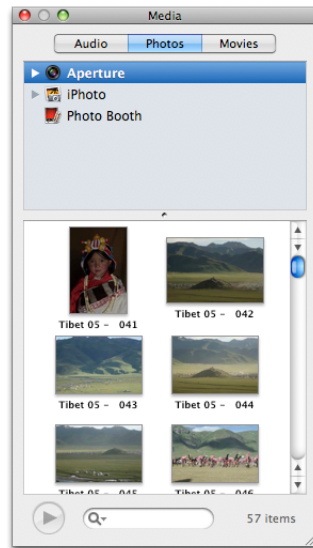
Description Area

- Displays a description of the currently selected action or variable in the Library list

Workflow Area

- The area in which you construct your workflow. Drag actions to this area from the Library list.
- Within the workflow area, actions can be:
 - Configured
 - Re-arranged
 - Disabled
 - Deleted
 - Renamed

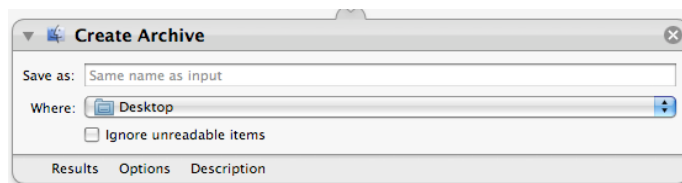
Media Browser



- Allows you to quickly browse audio, photos, and movies, and insert them into a workflow for processing

Action Interface

- An action's interface is displayed when the action is added to the workflow area. The following elements make up each action's interface:
 - *Action Settings* - Modifiable settings that control the action's behavior when the workflow runs



NOTE: Some actions may not have any configurable settings

- *Action Description Area* - Displays a description of the currently selected action or variable in the Library list

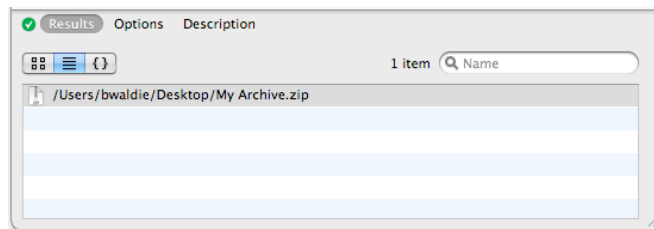
NOTES



- *Action Options* - Some actions can be configured to display when the workflow runs



- *Action Results* - This area shows the results of the actions, when run within Automator, allowing you to ensure that the correct information is being passed through your workflow



Log Area

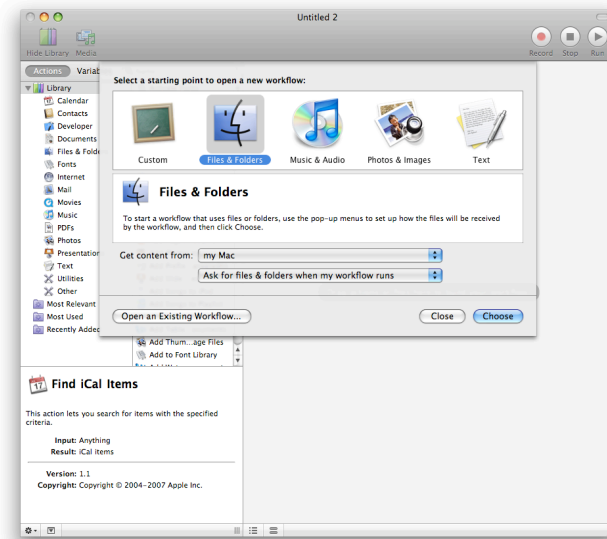
Log	Duration
✓ Ask for Finder Items completed	8.347 seconds
✓ Conversion from Files/Folders (com.apple.applescript.alias-object) to Files/Fol...	0.004 seconds
✓ Create Archive completed	7.396 seconds
✓ Workflow completed	15.747 sec...

- Allows you to view a list of tasks completed, and any errors that are encountered, when a workflow runs

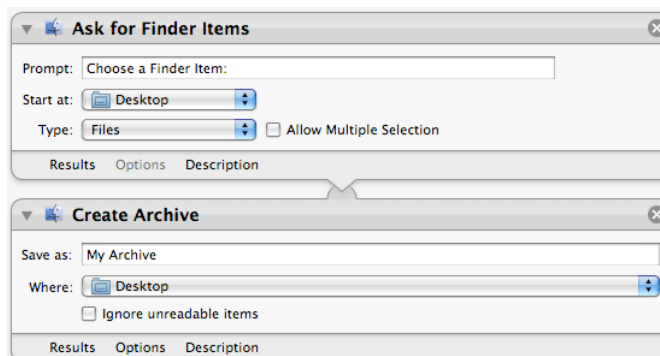
3. Creating and Running Automator Workflows

Steps to Create an Automator Workflow

- Launch Automator
- From *Starting Points*, choose the type of workflow you want to create
 - Specify where the content will come from and when it should be retrieved
 - To build an empty workflow, choose *Custom*



- Build onto the workflow by dragging actions from the Library list to the workflow area
- Configure action settings and options



NOTES

Steps to Run a Workflow within Automator

- Click *Run* in the toolbar

**Steps to Troubleshoot a Workflow within Automator**

- View the *Results* area in each action in the workflow area to ensure that the correct information is being passed throughout the workflow
- View the workflow log to monitor the tasks that are being performed as the workflow runs, and to learn about any errors that may have occurred

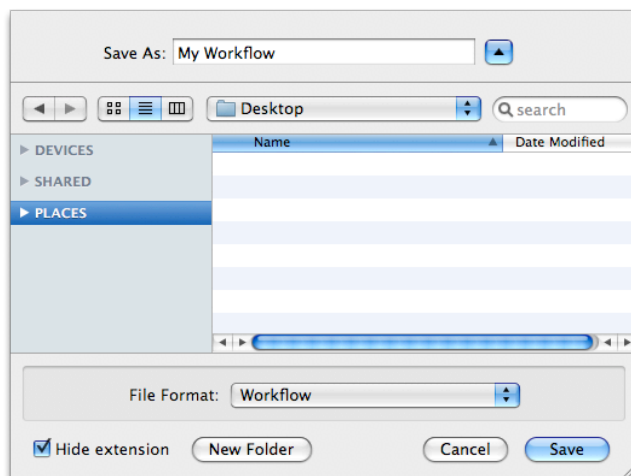
4. Saving Automator Workflows

Types of Saved Automator Workflows

- *Workflows* - They can be opened and run in Automator
- *Applications* - They can be run by double clicking on them or dragging and dropping files/folders onto them
- *Plug-ins* – To be run from, or integrated into, another application or process. Automator workflows can be saved as the following types of plug-ins:
 - Finder's contextual menu
 - iCal alarms
 - Folder Actions
 - Image Capture automatic tasks
 - Print menu (PDF export)
 - Script Menu

Steps to Save as a Workflow or Application

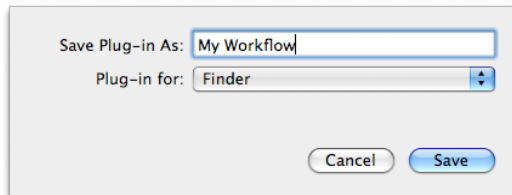
- Choose *Save As* from the *File* menu
- Enter a name for the workflow
- Choose *Workflow* or *Application* from the *File Format* popup menu in the save panel that appears



NOTES

Steps to Save as a Plug-in

- Choose *Save As Plug-in* from the *File* menu
- Enter a name for the workflow
- Choose the desired type of plug-in from the *Plug-in* for popup menu in the save panel that appears



NOTE: Some plug-in types will display additional options in the save panel. Configure these as desired.

5. Resources for Continued Learning

Mailing Lists

- Apple's Mailing Lists
<http://lists.apple.com>
 - Automator Users Mailing List
 - Automator Developers Mailing List

Websites

- Automator.us – Tutorials, actions, workflows, and more
<http://automator.us>
- Apple's Mac OS X Downloads Site – Actions and workflows
www.apple.com/downloads/macosx/automator
- MacScripter's Automator Actions
<http://automatoractions.com>
- Automated Workflows, LLC – Books, Tips, Actions, and more
www.automatedworkflows.com

Books

- Automator for Mac OS X 10.5 Leopard: Visual QuickStart Guide (Peachpit Press)
www.peachpit.com/vqs/automator



Lab Materials

- www.automatedworkflows.com/presentations.html