How to Run `MacBenesh` Under Mac OS X

Arthur Ryman, Dancewrite

International BenMove Congress, Paris, 2017-07-06

About Me

- **Arthur Ryman** is an independent software consultant currently developing a cloud-based web application for a major US water management company
- His involvement with Benesh Movement Notation began around 1984 when he collaborated with his sister **Rhonda Ryman Kane** and his future wife **Robyn Hughes Ryman** on the development of the `MacBenesh` editor
- He previously worked at the IBM Canada Laboratory from 1982 until his retirement from IBM in 2015
- He obtained a Ph. D. in Mathematics from Oxford University in 1975

Agenda

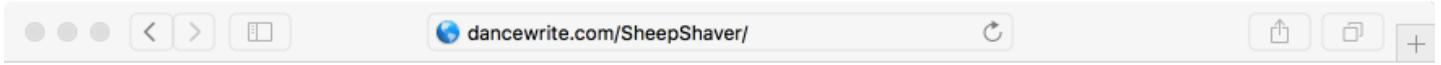
- Introduction
- `SheepShaver`
- `MacBenesh`
- Moving files between OS X and OS 9
- Printing to PostScript files
- `MS Word 6`
- `FileType`
- Copying files from floppy disks

Introduction

- `MacBenesh` let's you create, edit, and print high-quality Benesh Movement Notation (BMN) scores on Mac OS 9
  - OS X Tiger and earlier could run OS 9 applications in Classic mode
  - OS X Leopard (2007) and later could NOT run OS 9 applications
- Some `MacBenesh` users kept their old hardware running so they could keep using the application
- Fortunately `SheepShaver` lets you run `MacBenesh`, and other OS 9 applications, on modern OS X hardware
  - We are grateful **Sergei Konaev**, the archivist at the Bolshoi Ballet, who brought this to our attention on 2015-02-07!

Workshop Resource Page

- The best way to benefit from this session is to download the `MacBenesh` virtual machine onto your own MacBook and follow along during the workshop
  - We can also resolve any problems you hit
- This presentation and all related files are available from:
  - http://dancewrite.com/SheepShaver/



Downloads for How to Run MacBenesh Under Mac OS X

Arthur Ryman, *2017-07-05*

This page contains links to information and files for running MacBenesh under Mac OS X.

SheepShaver Virtual Machine Package

This package contains a fully configured, portable SheepShaver virtual machine. It's all you need to run MacBenesh under Mac OS X. Simply download and unzip the package, then double-click the SheepShaver icon named `macbenesh-machine.sheepvm`.

- `macbenesh-machine.sheepvm.zip` (145.9 MB)

Presentation

This presentation, titled *How to Run MacBenesh Under Mac OS X*, was prepared for the BenMove Congress, Paris, 2017-07-06. It describes how to use SheepShaver to run MacBenesh under Mac OS X. It explains where to obtain all the necessary components, how to install and configure them, and how to use MacBenesh with them.

- `macbenesh-osx.pptx` (3.7 MB) - PowerPoint
- `macbenesh-osx.pdf` (3.0 MB) - PDF

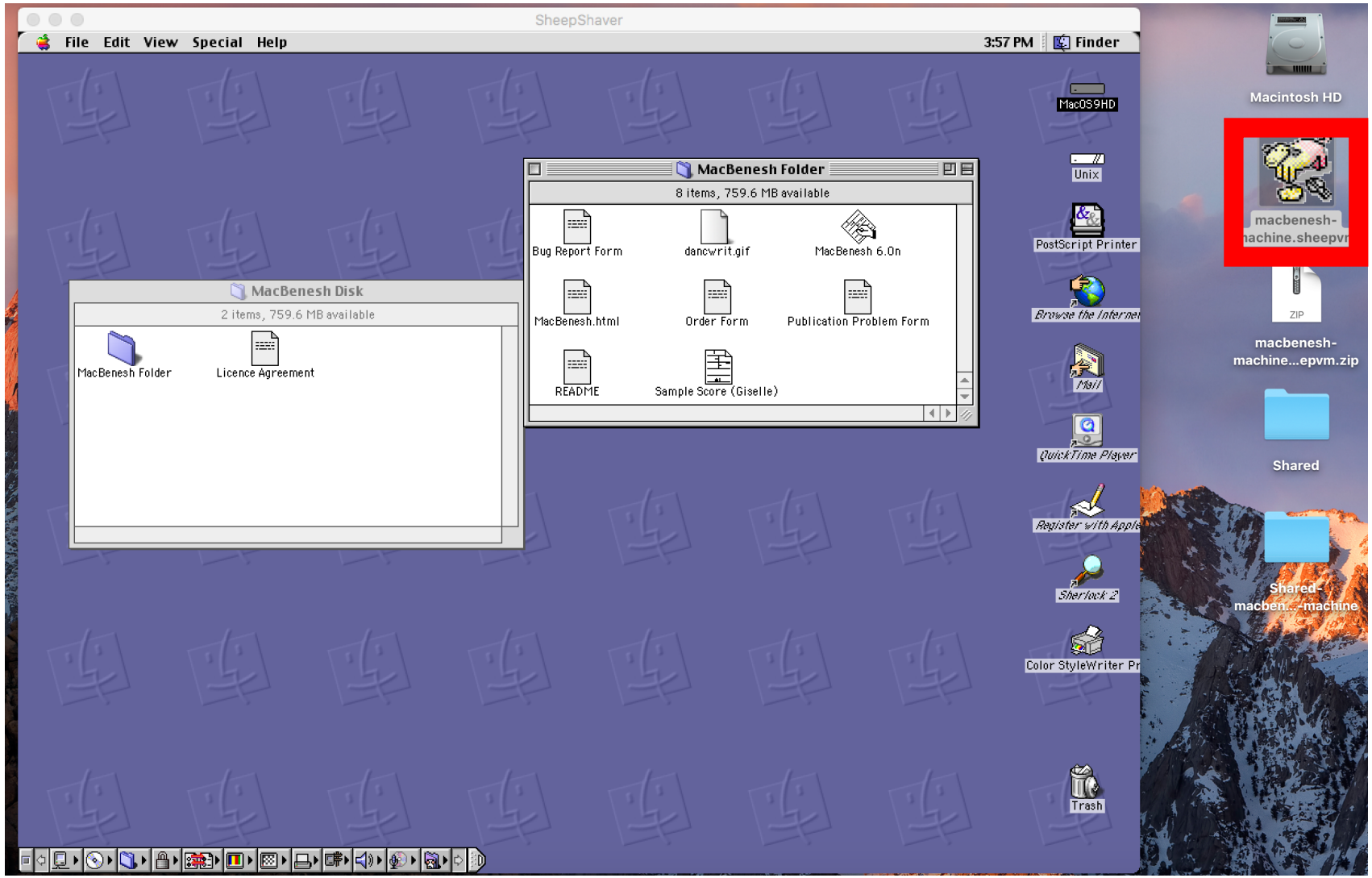
All Component Files

This archive contains all the individual components such as SheepShaver, Mac OS 9, MacBenesh, MS Word, FileType, and CarbonLib required to create the virtual machine package. Download and unzip this archive then follow the instructions in the presentation if you'd like to create the virtual machine package yourself.

- `macbenesh-osx-files.zip` (431.4 MB)

The `MacBenesh` Virtual Machine Package

- I have previously created a fully configured `SheepShaver` virtual machine package for `MacBenesh`
  - It contains `SheepShaver`, Mac OS 9, `MacBenesh`, `MS Word`, and other goodies
- Download (or copy from a USB flash drive)
  - macbenesh-machine.sheepvm.zip
- Unzip it onto your desktop and double-click the `SheepShaver` icon
  - `SheepShaver` will launch and you'll see an OS 9 desktop in a new window
- The **only** additional thing you need to do is configure the `Shared` folder
  - We'll do that later
- You can **ignore** the other installation and configuration instructions

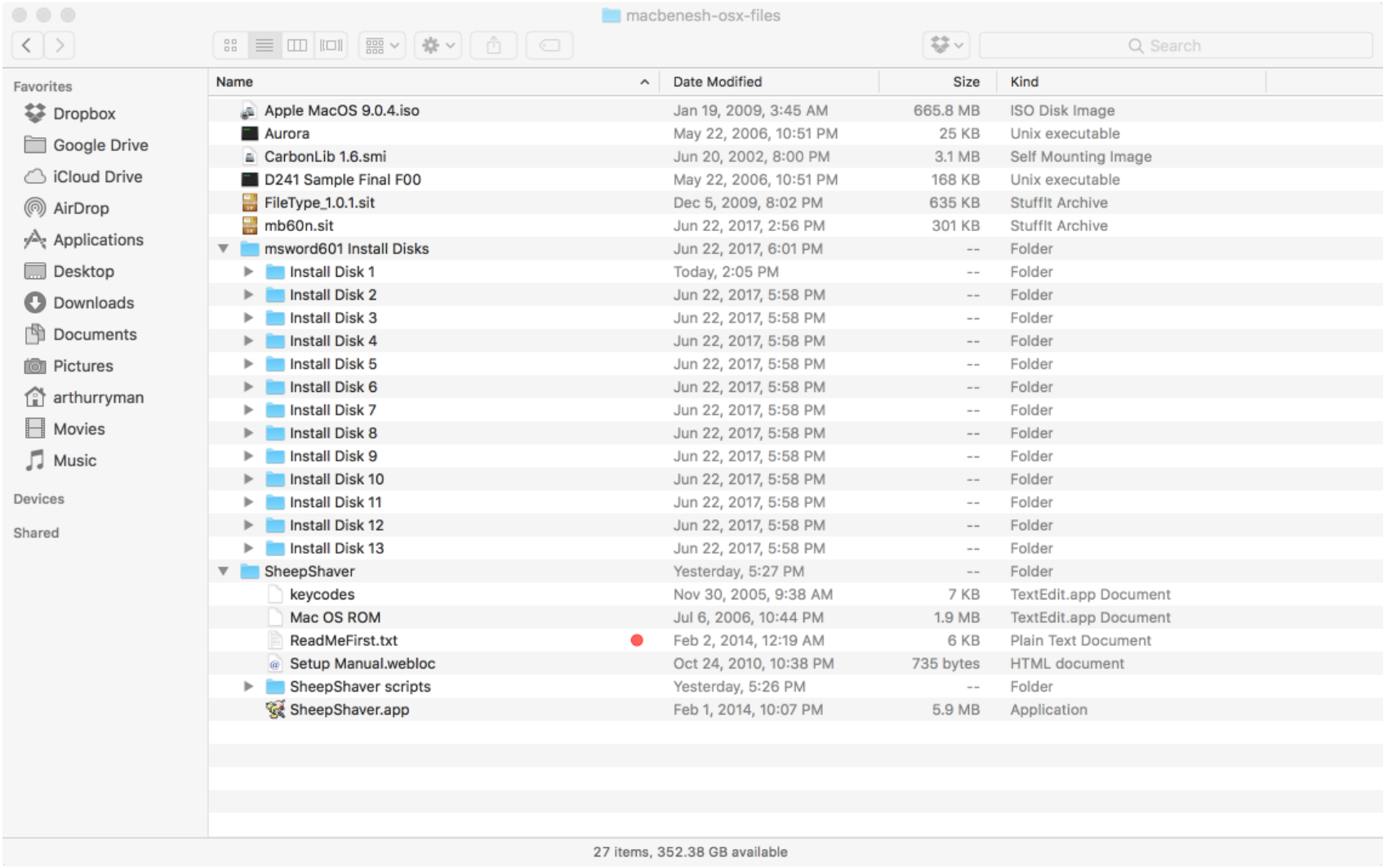

SheepShaver
File Edit View Special Help
3:57 PM
Finder
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Color StyleWriter Pr
Trash
MacBenesh Folder
8 items, 759.6 MB available
Bug Report Form
dancwrit.gif
MacBenesh 6.0n
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
MacBenesh Disk
2 items, 759.6 MB available
MacBenesh Folder
Licence Agreement
Macintosh HD
macbenesh-machine.sheepvr
ZIP
macbenesh-machine...epvm.zip
Shared
Shared macben...-machine

How the Virtual Machine Package was Created

1. Install `SheepShaver` in OS X
2. Install Mac OS 9 under `SheepShaver`
    1. Create `Shared` folder to move files between OS X and OS 9
3. Install `MacBenesh` under OS 9
    1. Create virtual PostScript `Desktop Printer`
4. Install `MS Word 6` under OS 9
5. Install `FileType` under OS 9

If After the Workshop You Want to Create the Virtual Machine Package Yourself…

- For your convenience, all of the files that you need to create the virtual machine package have been assembled into a single zip file:
  - `macbenesh-osx-files.zip`
- Unzip `macbenesh-osx-files.zip` to your OS X machine
  - The folder named `macbenesh-osx-file` will be created
- See the end of this presentation for links to where the components of `macbenesh-osx-files.zip` were obtained
  - You can download the components yourself from the original sources


macbenesh-osx-files
Search
Favorites
Dropbox
Google Drive
iCloud Drive
AirDrop
Applications
Desktop
Downloads
Documents
Pictures
arthurryman
Movies
Music
Devices
Shared
Name
Date Modified
Size
Kind
Apple MacOS 9.0.4.iso Jan 19, 2009, 3:45 AM 665.8 MB ISO Disk Image
Aurora May 22, 2006, 10:51 PM 25 KB Unix executable
CarbonLib 1.6.smi Jun 20, 2002, 8:00 PM 3.1 MB Self Mounting Image
D241 Sample Final F00 May 22, 2006, 10:51 PM 168 KB Unix executable
FileType_1.0.1.sit Dec 5, 2009, 8:02 PM 635 KB StuffIt Archive
mb60n.sit Jun 22, 2017, 2:56 PM 301 KB StuffIt Archive
msword601 Install Disks Jun 22, 2017, 6:01 PM -- Folder
Install Disk 1 Today, 2:05 PM -- Folder
Install Disk 2 Jun 22, 2017, 5:58 PM -- Folder
Install Disk 3 Jun 22, 2017, 5:58 PM -- Folder
Install Disk 4 Jun 22, 2017, 5:58 PM -- Folder
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Install Disk 10 Jun 22, 2017, 5:58 PM -- Folder
Install Disk 11 Jun 22, 2017, 5:58 PM -- Folder
Install Disk 12 Jun 22, 2017, 5:58 PM -- Folder
Install Disk 13 Jun 22, 2017, 5:58 PM -- Folder
SheepShaver Yesterday, 5:27 PM -- Folder
keycodes Nov 30, 2005, 9:38 AM 7 KB TextEdit.app Document
Mac OS ROM Jul 6, 2006, 10:44 PM 1.9 MB TextEdit.app Document
ReadMeFirst.txt Feb 2, 2014, 12:19 AM 6 KB Plain Text Document
Setup Manual.webloc Oct 24, 2010, 10:38 PM 735 bytes HTML document
SheepShaver scripts Yesterday, 5:26 PM -- Folder
SheepShaver.app Feb 1, 2014, 10:07 PM 5.9 MB Application
27 items, 352.38 GB available

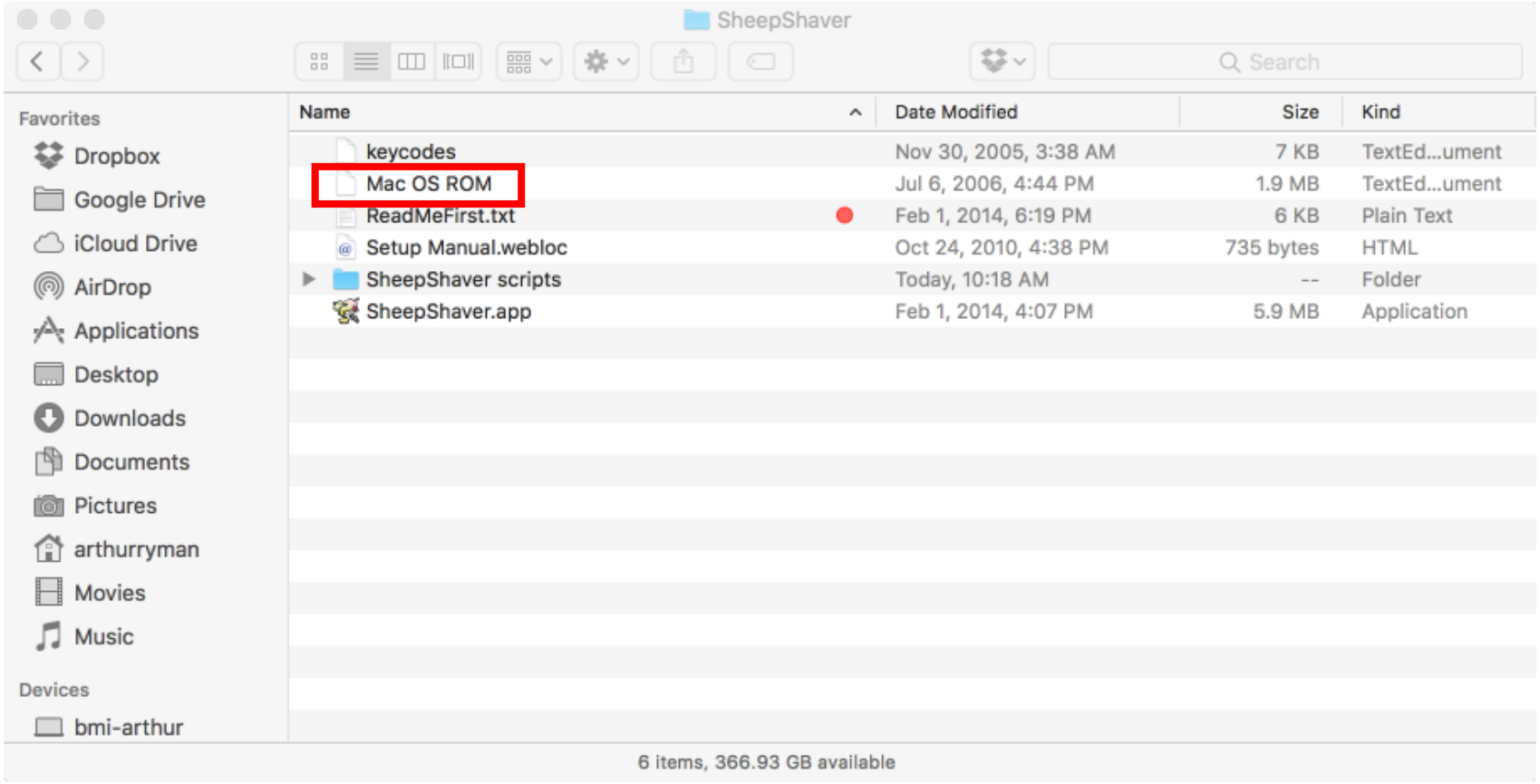
1. SheepShaver

Install `SheepShaver`

- `SheepShaver` is an OS X application that emulates a PowerPC so you can run OS 9 applications again
- Copy the `SheepShaver` folder from `macbenesh-osx-files` into your `Applications` folder

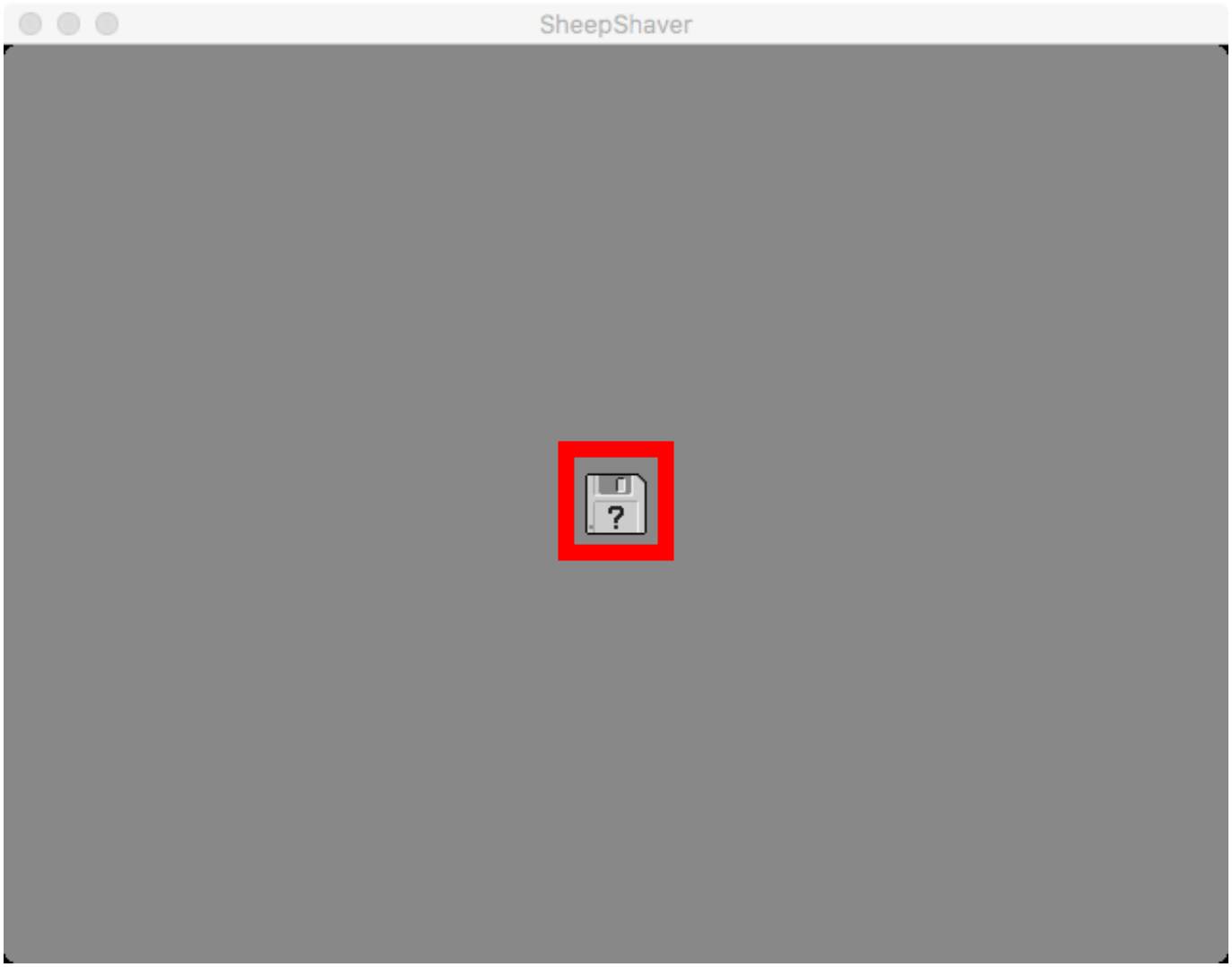
Note About the `Mac OS ROM` File

- The `SheepShaver` application will quit immediately unless it finds a ROM file
- Apple regarded their ROM file as proprietary and asked the developer of `SheepShaver` to not distribute it
- I have already obtained and copied the `Mac OS ROM` file into the `SheepShaver` folder to simplify the installation process


SheepShaver
Search
Favorites
Dropbox
Google Drive
iCloud Drive
AirDrop
Applications
Desktop
Downloads
Documents
Pictures
arthurryman
Movies
Music
Devices
bmi-arthur
Name
Date Modified
Size
Kind
keycodes
Nov 30, 2005, 3:38 AM
7 KB
TextEd...ument
Mac OS ROM
Jul 6, 2006, 4:44 PM
1.9 MB
TextEd...ument
ReadMeFirst.txt
Feb 1, 2014, 6:19 PM
6 KB
Plain Text
Setup Manual.webloc
Oct 24, 2010, 4:38 PM
735 bytes
HTML
SheepShaver scripts
Today, 10:18 AM
--
Folder
SheepShaver.app
Feb 1, 2014, 4:07 PM
5.9 MB
Application
6 items, 366.93 GB available

Launching `SheepShaver`

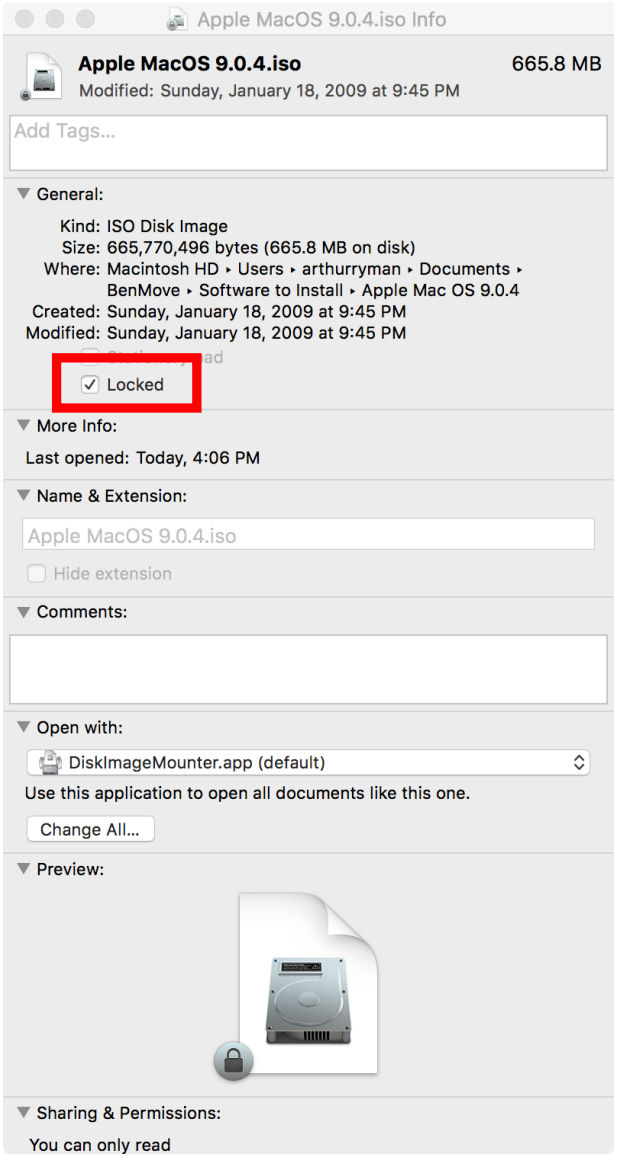
- You can now launch `SheepShaver` but you'll just see the diskette icon with a flashing question mark prompting you to install OS 9
- At this stage the only way to quit `SheepShaver` is by pressing `Control-Escape`
- Note that you may have to modify the Security Preferences for the application to allow `SheepShaver` to run


SheepShaver

2. Mac OS 9.0.4

Locking the Mac OS 9.0.4 CD image file

- `Apple MacOS 9.0.4.iso` is a CD image file that contains the Mac OS 9.0.4 installer
  - Copy `MacOS 9.0.4.iso` from `macbenesh-osx-files` to the `Desktop`
  - DO NOT double-click it since that will mount the CD image in OS X!
- The CD image file must be read-only since real CDs are read-only
  - Select `Apple MacOS 9.0.4.iso` in `Finder`
  - Open the `Get Info` dialog box.
  - Check the `Locked` checkbox.


Apple MacOS 9.0.4.iso Info
Apple MacOS 9.0.4.iso
665.8 MB
Modified: Sunday, January 18, 2009 at 9:45 PM
Add Tags...
General:
Kind: ISO Disk Image
Size: 665,770,496 bytes (665.8 MB on disk)
Where: Macintosh HD ▸ Users ▸ arthurryman ▸ Documents ▸ BenMove ▸ Software to Install ▸ Apple Mac OS 9.0.4
Created: Sunday, January 18, 2009 at 9:45 PM
Modified: Sunday, January 18, 2009 at 9:45 PM
Locked
More Info:
Last opened: Today, 4:06 PM
Name & Extension:
Apple MacOS 9.0.4.iso
Hide extension
Comments:
Open with:
DiskImageMounter.app (default)
Use this application to open all documents like this one.
Change All...
Preview:
Sharing & Permissions:
You can only read

The `Shared` Folder

- Create a folder named `Shared` on your OS X Desktop
  - This folder will appear as a folder named `Unix` in OS 9
- Use this folder to move files between OS X and OS 9.
- For example, when you print a `MacBenesh` score in OS 9, save the PostScript output file to the `Unix` folder, then go to OS X and drag it out of the `Shared` folder
- Use this folder only as a temporary place for transferring files
  - DO NOT run OS 9 applications from the `Unix` folder

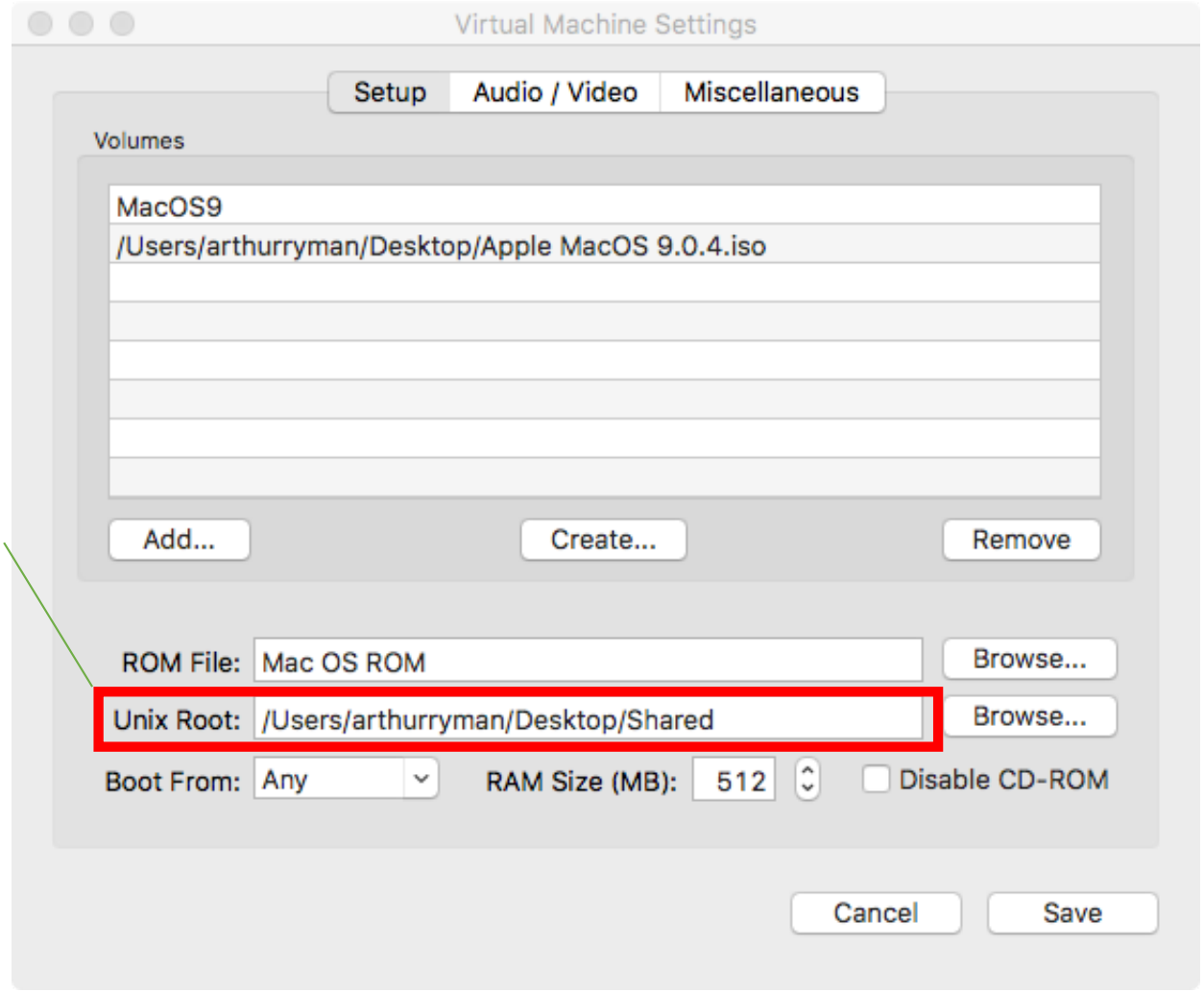
Configuring `SheepShaver` Virtual Machine Settings

- Launch `SheepShaver` and select the `Preferences` menu item from the `SheepShaver` menu to open the `Virtual Machine Settings` dialog box
- Configure the settings in each of the the three tabs as per the following slides:
  - `Setup`
  - `Audio/Video`
  - `Miscellaneous`

Virtual Machine Settings - Setup

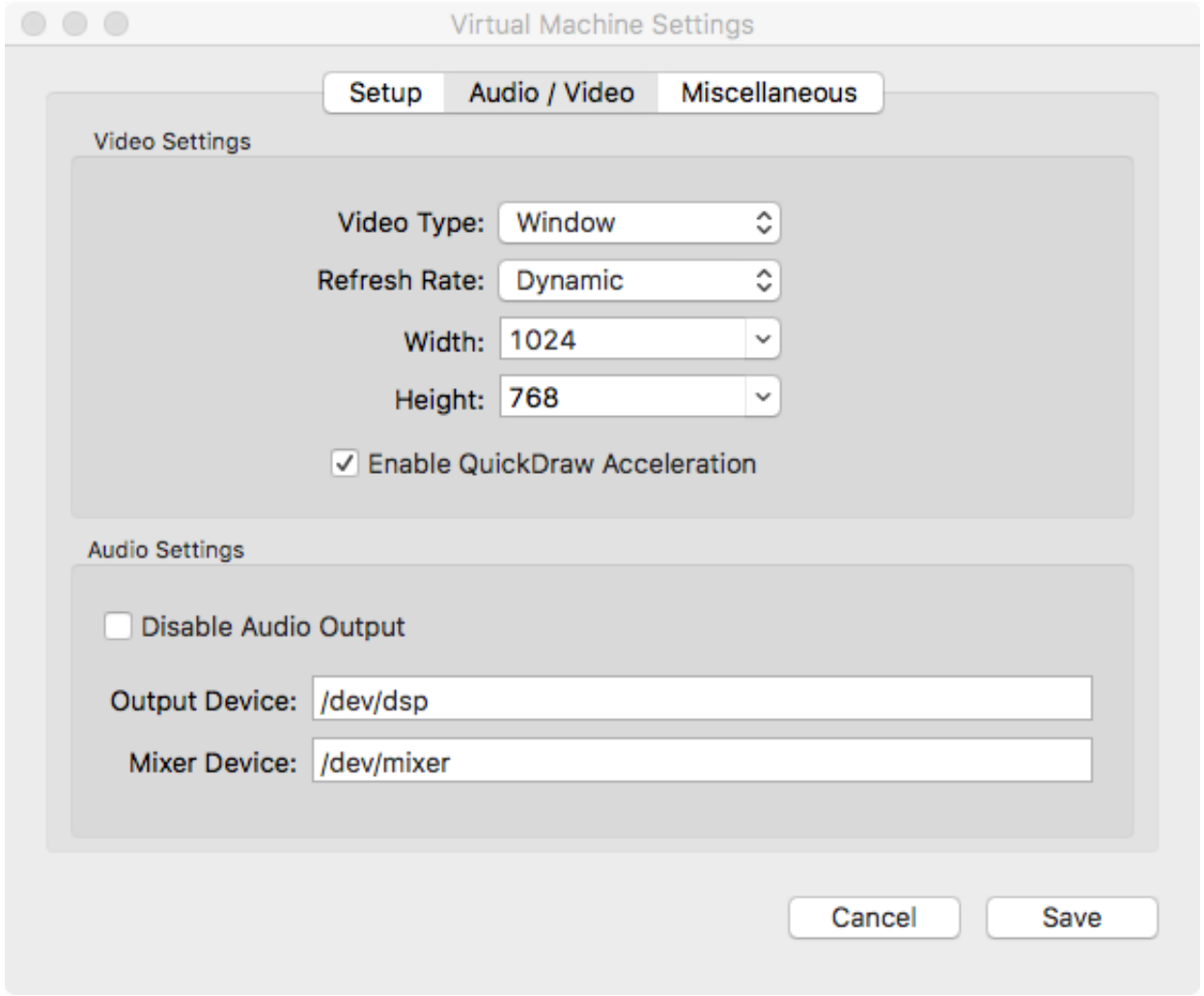
- Click the Create… button to create the disk image file for the virtual hard disk of the emulated Mac:
  - Save As: MacOS9 in the SheepShaver folder
  - Volume Size (MB): 1000
- Click the Add… button and select the Apple MacOS 9.0.4.iso file you copied to the Desktop
- ROM File: Click the Browse… button and select the Mac OS ROM file
- Unix Root: Click the Browse… button and select the Shared folder
- RAM Size (MB): 512

Select the `Shared` folder you created



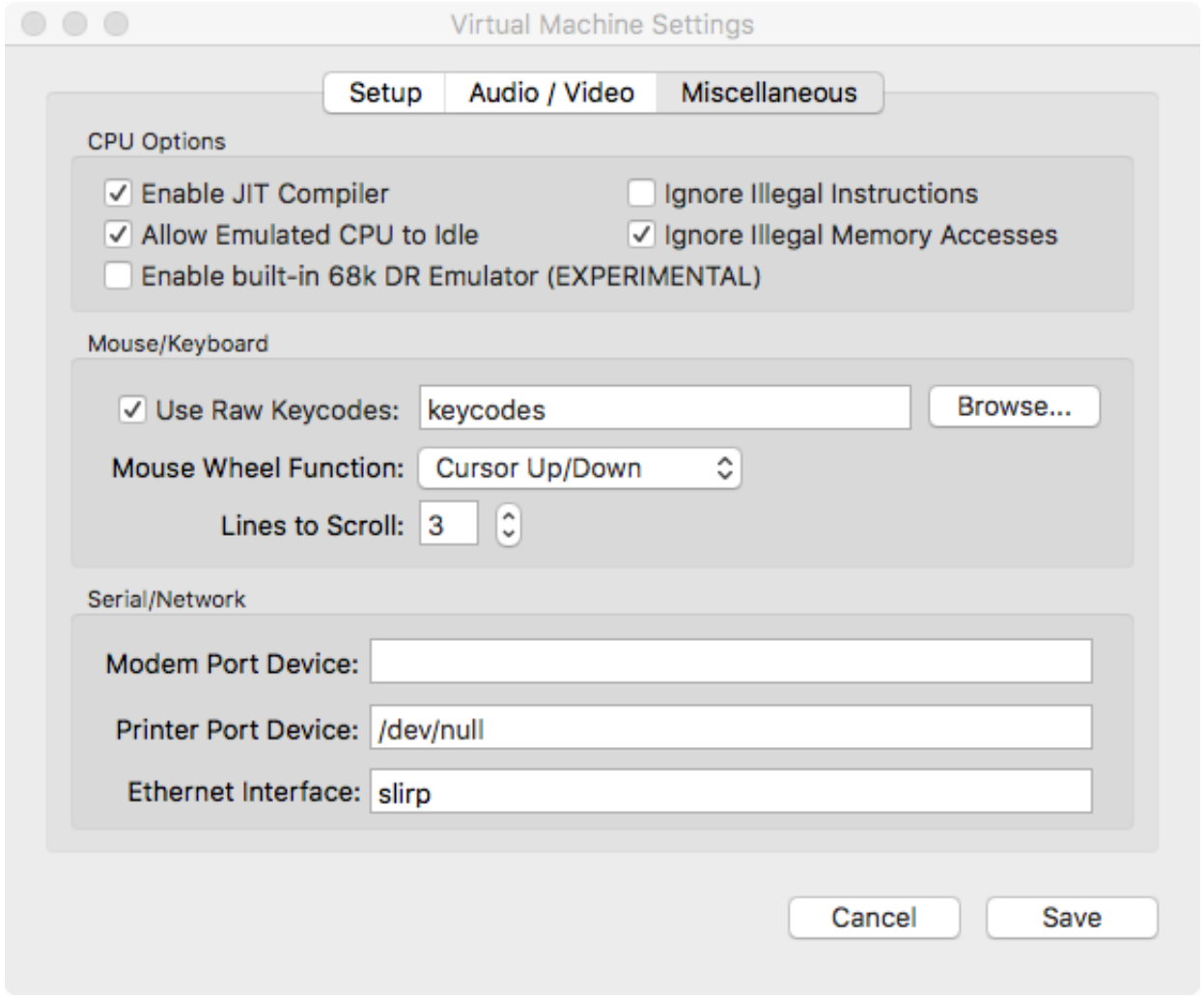
Virtual Machine Settings – Audio/Video

- Video Settings
  - Video Type: Window
  - Refresh Rate: Dynamic
  - Width: 1024
  - Height: 768
  - Enable QuickDraw Acceleration: checked
- Audio Settings
  - Ignore these


Virtual Machine Settings
Setup
Audio / Video
Miscellaneous
Video Settings
Video Type:
Window
Refresh Rate:
Dynamic
Width:
1024
Height:
768
Enable QuickDraw Acceleration
Audio Settings
Disable Audio Output
Output Device:
/dev/dsp
Mixer Device:
/dev/mixer
Cancel
Save

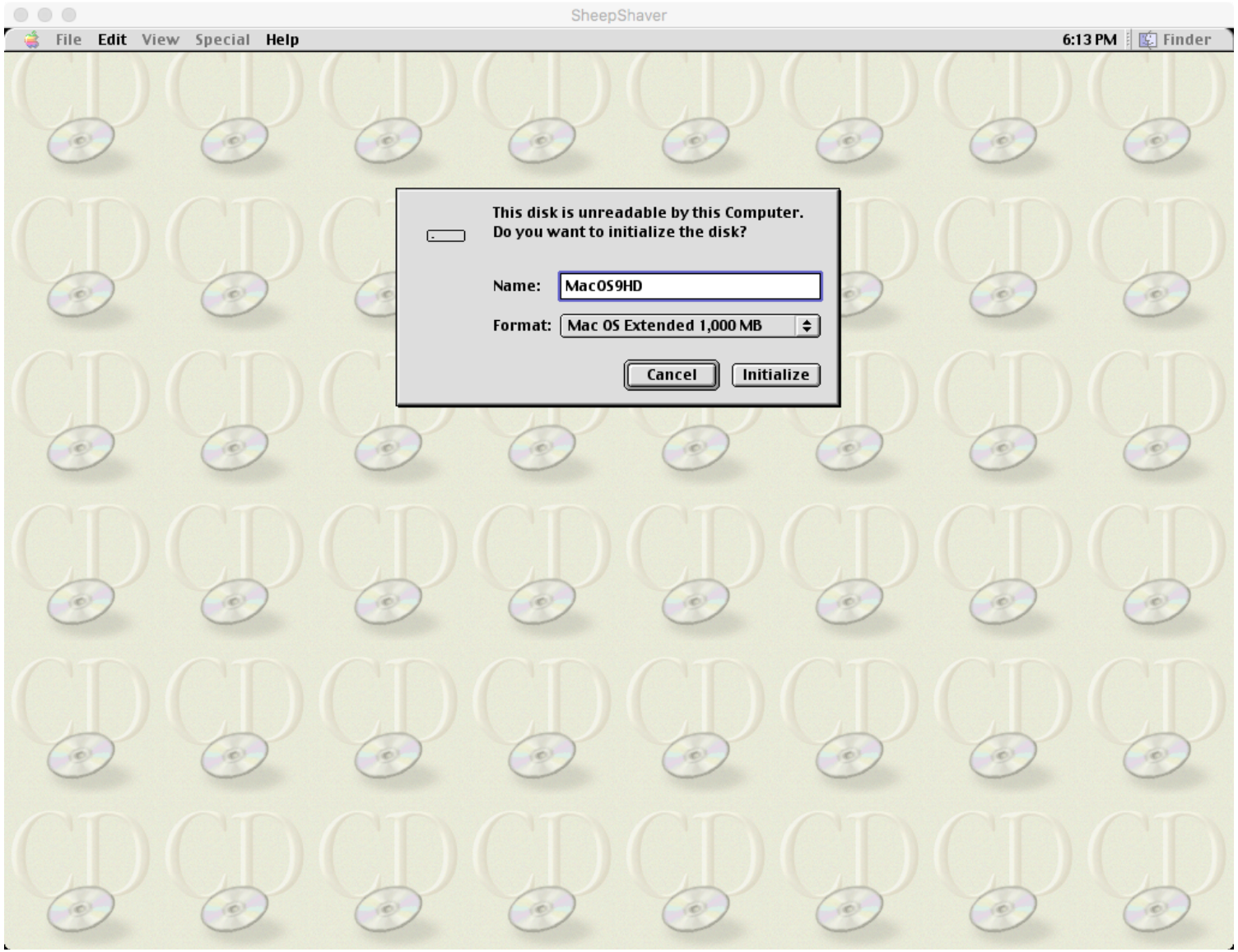
Virtual Machine Settings - Miscellaneous

- CPU Options – check the following
  - Enable JIT Compiler
  - Allow Emulated CPU to Idle
  - Ignore Illegal Memory Access
- Mouse/Keyboard - for non-US keyboards
  - Use Raw Keycodes: checked
  - Click the Browse… button and select the keycodes file in the SheepShaver folder
- Serial/Network
  - Ethernet Interface: slirp


Virtual Machine Settings
Setup
Audio / Video
Miscellaneous
CPU Options
Enable JIT Compiler
Allow Emulated CPU to Idle
Enable built-in 68k DR Emulator (EXPERIMENTAL)
Ignore Illegal Instructions
Ignore Illegal Memory Accesses
Mouse/Keyboard
Use Raw Keycodes:
keycodes
Browse...
Mouse Wheel Function:
Cursor Up/Down
Lines to Scroll:
3
Serial/Network
Modem Port Device:
Printer Port Device:
/dev/null
Ethernet Interface:
slirp
Cancel
Save

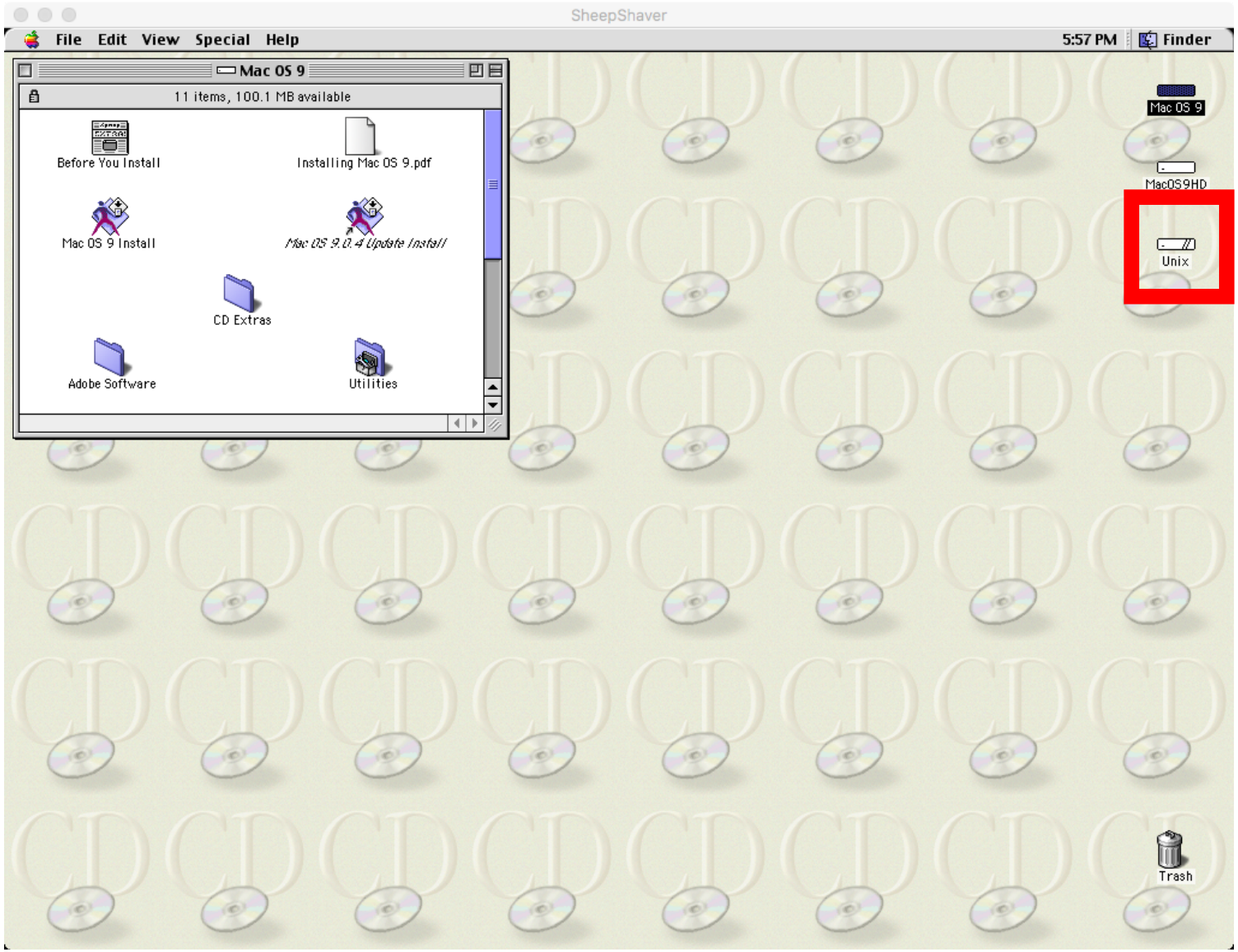
Booting `SheepShaver` from the CD image

- Click the `Save` button to save the `Virtual Machine Settings`
- Press `Control-Escape` to quit `SheepShaver`
- Launch `SheepShaver` again
  - `SheepShaver` boots from the OS 9 CD image and detects an uninitialized hard disk
  - Name the virtual hard disk `MacOS9HD`
  - Select `Mac OS Extended` format
  - Click the `Initialize` button


SheepShaver
File Edit View Special Help
6:13 PM
Finder
This disk is unreadable by this Computer.
Do you want to initialize the disk?
Name:
MacOS9HD
Format:
Mac OS Extended 1,000 MB
Cancel
Initialize

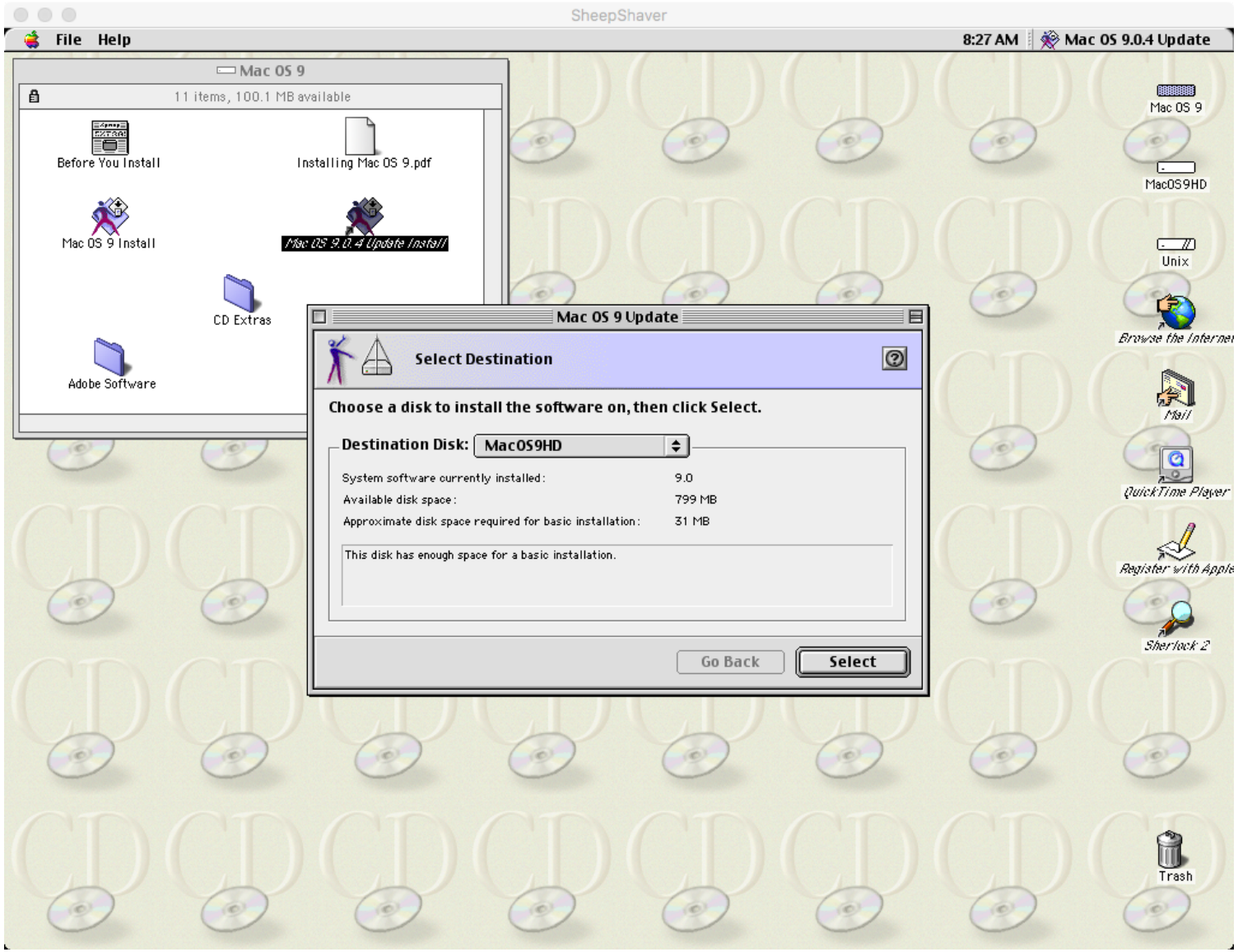
`SheepShaver` Booted from CD

- After the virtual hard disk MacOS9HD is initialize the usual OS 9 Desktop is displayed
- The CD is mounted as `Mac OS 9`
  - Double-click it to view its contents
- The CD contains two installers which we need to run
  - `Mac OS 9 Install` – run this first
  - `Mac OS 9.0.4 Update Install` – run this next


SheepShaver
File Edit View Special Help
5:57 PM
Finder
Mac OS 9
11 items, 100.1 MB available
Before You Install
Installing Mac OS 9.pdf
Mac OS 9 Install
Mac OS 9.0.4 Update Install
CD Extras
Adobe Software
Utilities
Mac OS 9
MacOS9HD
Unix
Trash

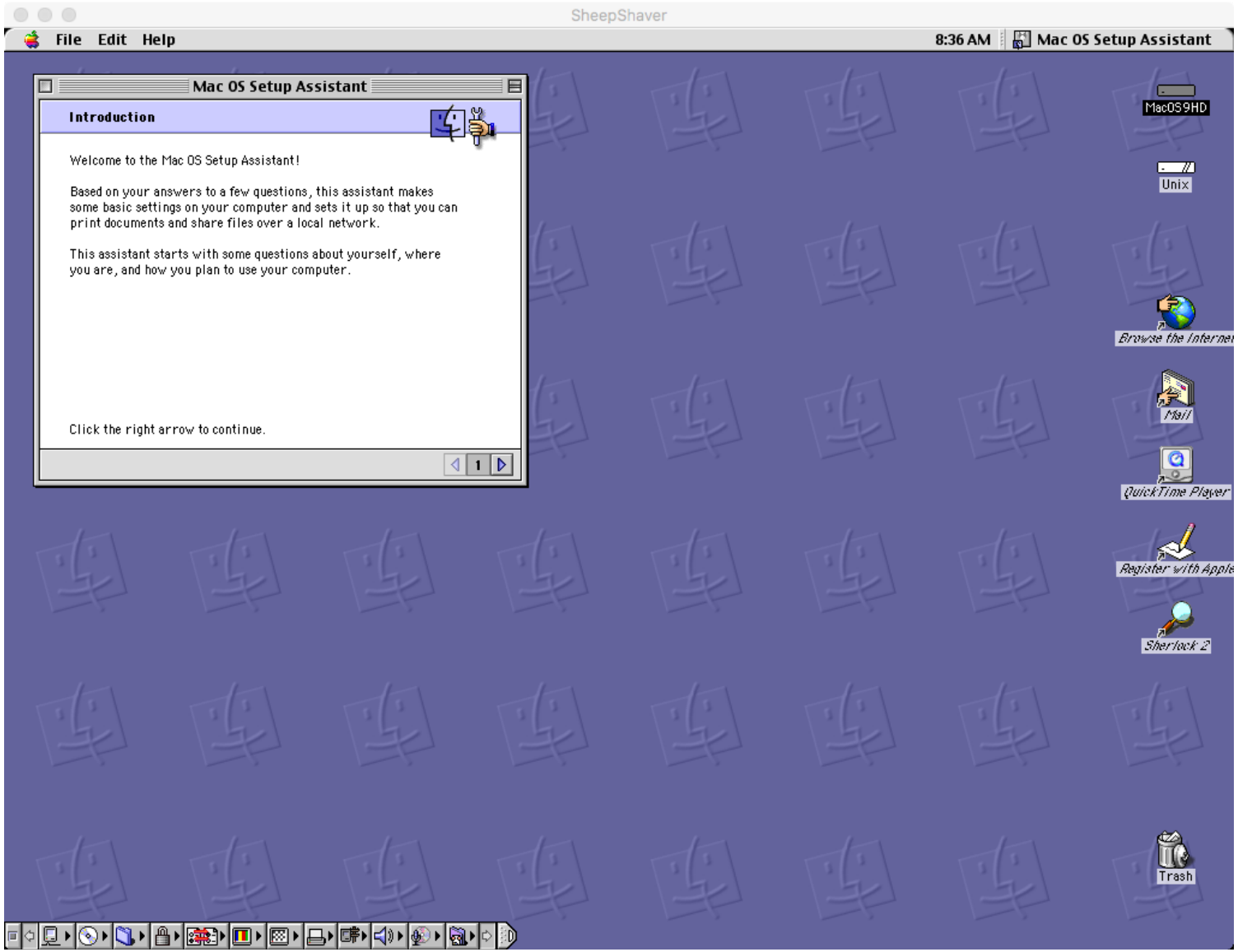
Installing Mac OS 9.0.4

- Double-click the `Mac OS 9 Install` installer on the `Mac OS 9` disk
  - Install Mac OS 9 as usual
  - The installation may appear not to make much progress initially, but be patient
- Double-click the `Mac OS 9.0.4 Update` Install installer on the `Mac OS 9` disk
- Using `SheepShaver Preferences`, select the `Apple MacOS 9.0.4.iso` volume and click the `Remove` button
  - Removing the CD prevents `SheepShaver` from booting from it the next time you launch `SheepShaver`
  - You want `SheepShaver` to boot from the virtual hard disk `MacOS9HD` from now on
- In OS 9, select the `Special -> Shut Down` menu item to cleanly shut down the virtual machine
  - `SheepShaver` quits


SheepShaver
File Help
8:27 AM
Mac OS 9.0.4 Update
Mac OS 9
11 items, 100.1 MB available
Before You Install
Installing Mac OS 9.pdf
Mac OS 9 Install
Mac OS 9.0.4 Update Install
CD Extras
Adobe Software
Mac OS 9 Update
Select Destination
Choose a disk to install the software on, then click Select.
Destination Disk: MacOS9HD
System software currently installed: 9.0
Available disk space: 799 MB
Approximate disk space required for basic installation: 31 MB
This disk has enough space for a basic installation.
Go Back
Select
Mac OS 9
MacOS9HD
Unix
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

Running Mac OS 9 under `SheepShaver`

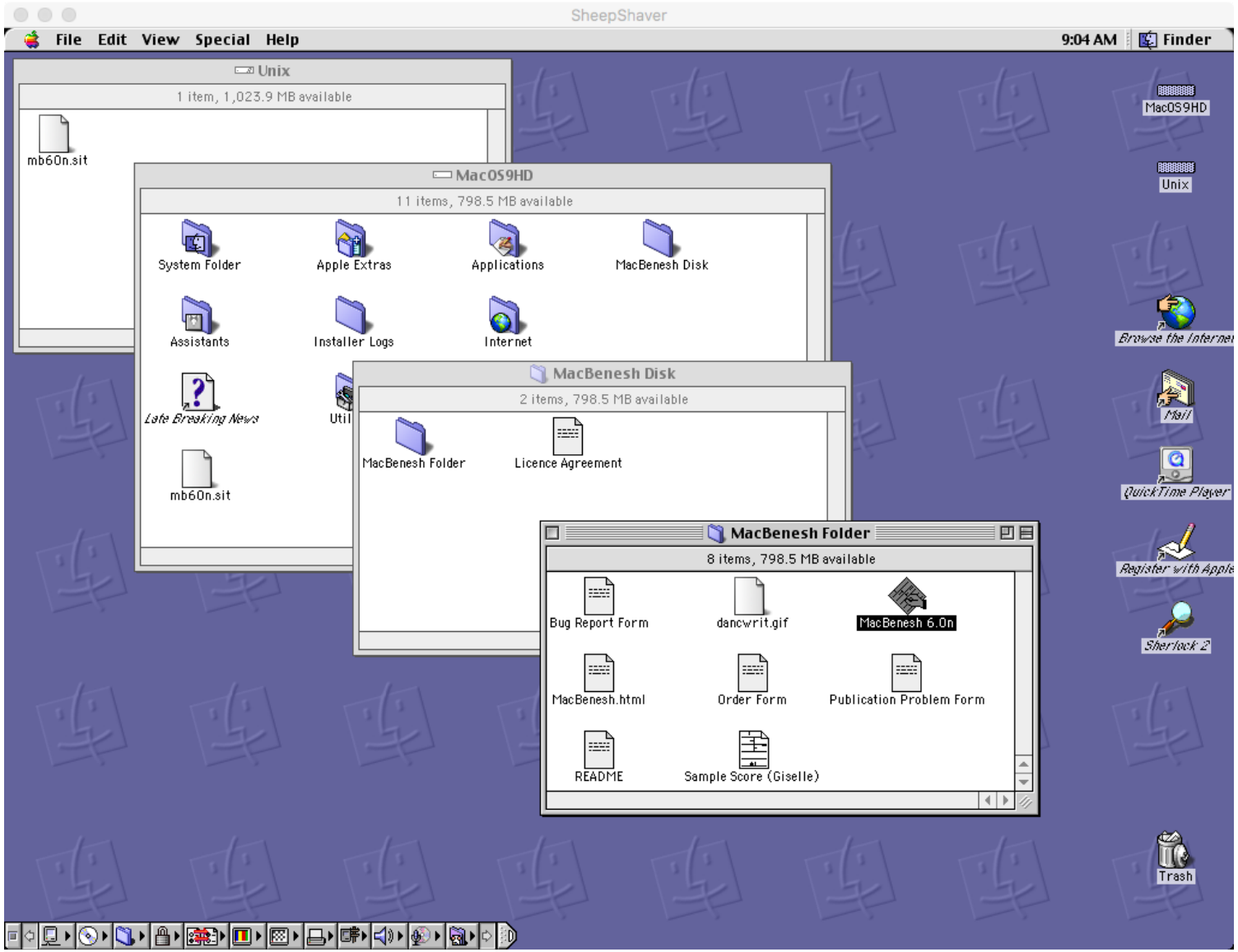
- Launch `SheepShaver`
  - The virtual machine will now boot from the installed copy of Mac OS 9.0.4 on the virtual disk `MacOS9HD`
- The `Mac OS Setup Assistant` runs the first time you boot from the newly installed Mac OS
  - **This program will probably freeze!**
  - To exit `SheepShaver` press `Control-Escape`, then launch `SheepShaver` again
- You now have Mac OS 9.0.4 installed and running
- You can configure network, sound, etc. but you won't need these for using MacBenesh
- You can toggle `SheepShaver` between window and full-screen display mode by pressing `Control-Return`


SheepShaver
File Edit Help
8:36 AM
Mac OS Setup Assistant
Mac OS Setup Assistant
Introduction
Welcome to the Mac OS Setup Assistant!
Based on your answers to a few questions, this assistant makes some basic settings on your computer and sets it up so that you can print documents and share files over a local network.
This assistant starts with some questions about yourself, where you are, and how you plan to use your computer.
Click the right arrow to continue.
1
MacOS9HD
Unix
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

3. MacBenesh 6.0n

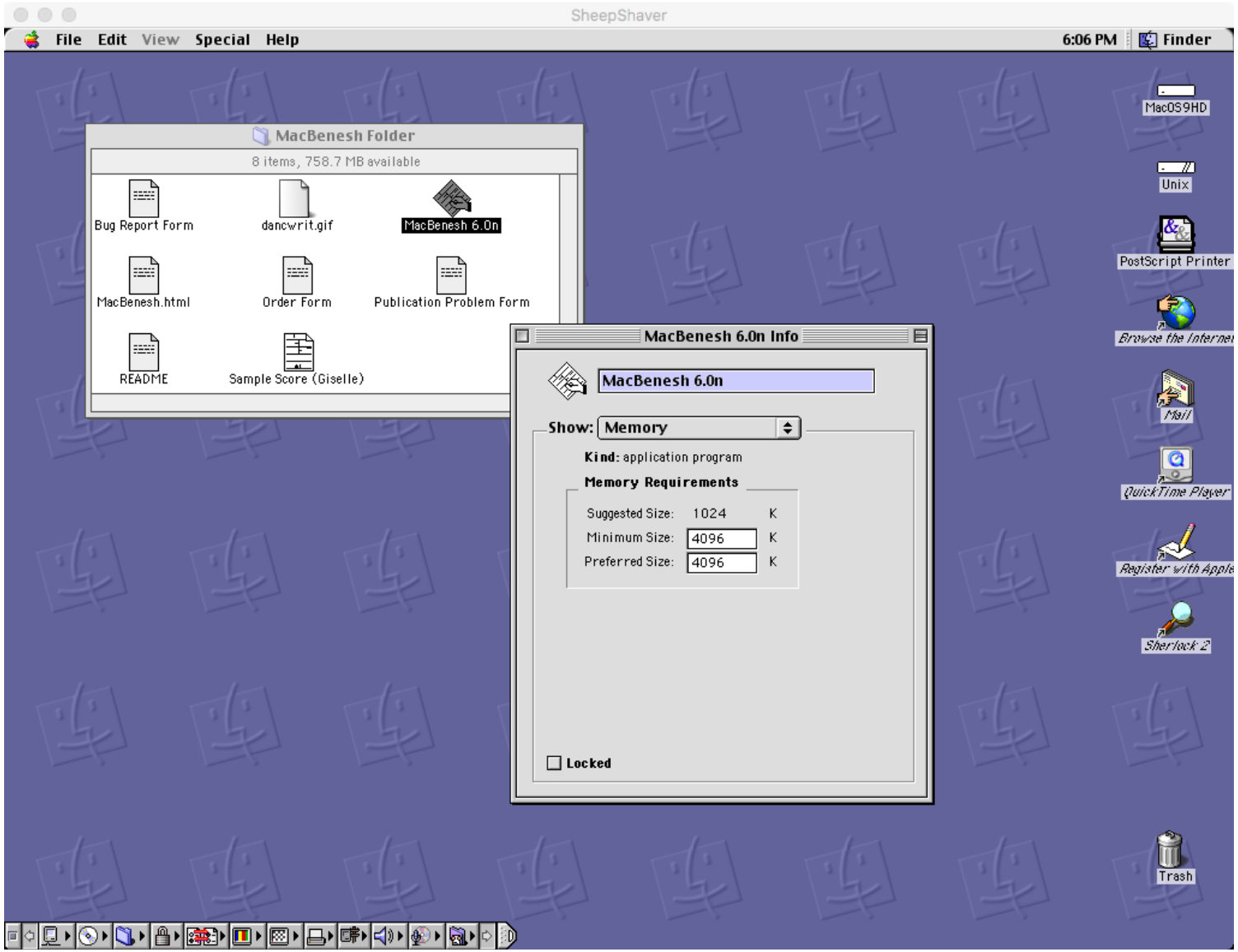
Install MacBenesh

- The latest version is MacBenesh 6.0n
- You should have a file named mb60n.sit which is a Stuff-It archive
- In OS X copy mb60n.sit from macbenesh-osx-files into the OS X Shared folder then in SheepShaver drag mb60n.sit from the OS 9 Unix folder into the MacOS9HD virtual hard disk
- In SheepShaver, double-click the mb60n.sit file to expand it
  - This creates the MacBenesh Disk folder which contains MacBenesh Folder
- Open MacBenesh Folder
  - It contains the MacBenesh 6.0n application and Sample Score (Giselle)
- MacBenesh is now installed


SheepShaver
File Edit View Special Help
9:04 AM
Finder
Unix
1 item, 1,023.9 MB available
mb60n.sit
MacOS9HD
11 items, 798.5 MB available
System Folder
Apple Extras
Applications
MacBenesh Disk
Assistants
Installer Logs
Internet
Late Breaking News
mb60n.sit
MacBenesh Disk
2 items, 798.5 MB available
MacBenesh Folder
Licence Agreement
MacBenesh Folder
8 items, 798.5 MB available
Bug Report Form
dancwrit.gif
MacBenesh 6.0n
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
MacOS9HD
Unix
Mail
QuickTime Player
Sherlock 2
Trash

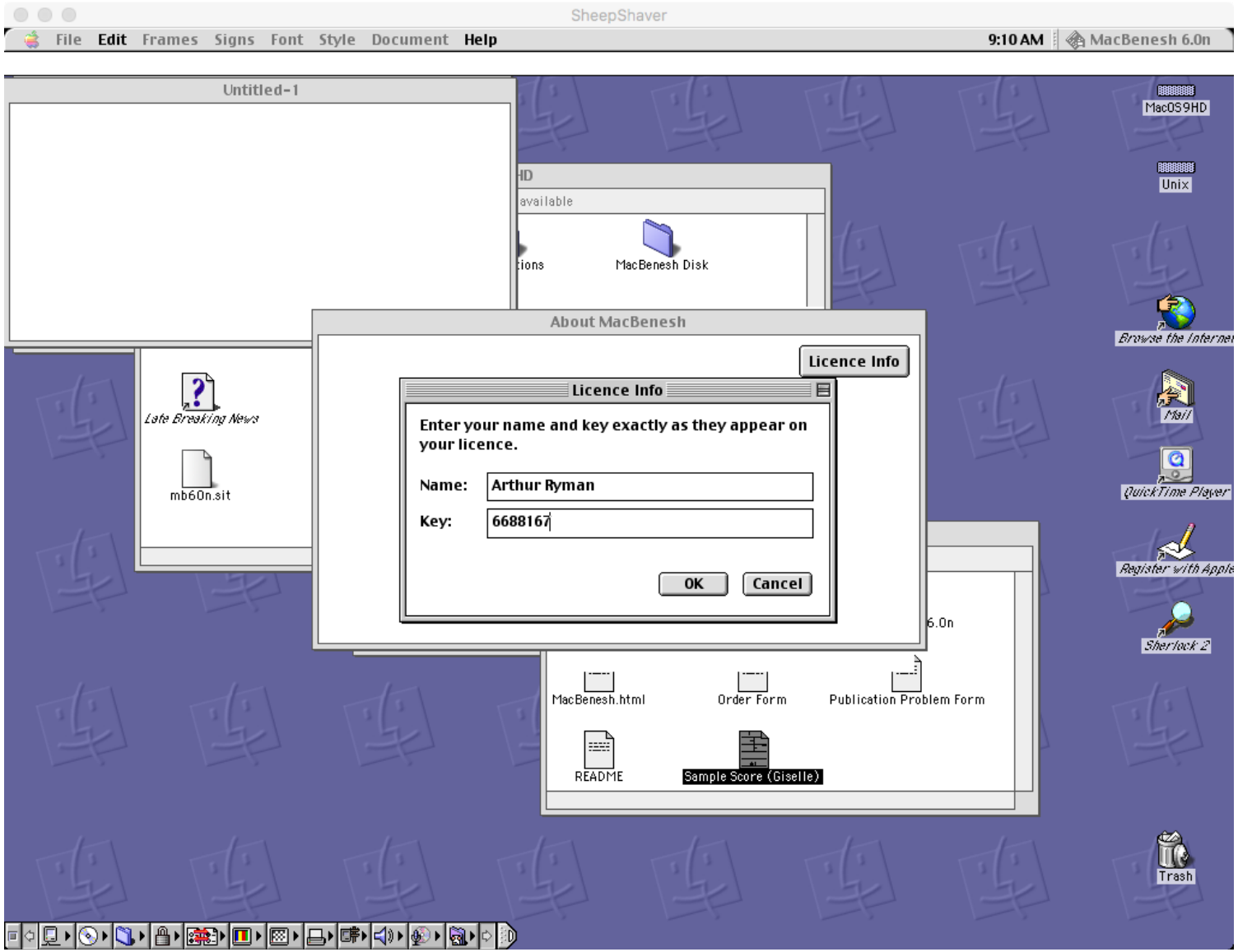
Increasing `MacBenesh` Memory

- `MacBenesh` memory is set at 1024 KB which is too low for use with `SheepShaver`
  - You will probably see `Low Memory` warnings
- Select the `MacBenesh 6.0`n application and open the `Get Info` dialog box
  - `Show: Memory`
  - Set `Preferred Size: 4096 KB`
  - Set `Minimum Size: 4096 KB`


SheepShaver
File Edit View Special Help
6:06 PM
Finder
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash
MacBenesh Folder
8 items, 758.7 MB available
Bug Report Form
dancwrit.gif
MacBenesh 6.0n
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
MacBenesh 6.0n Info
MacBenesh 6.0n
Show: Memory
Kind: application program
Memory Requirements
Suggested Size: 1024 K
Minimum Size: 4096 K
Preferred Size: 4096 K
Locked

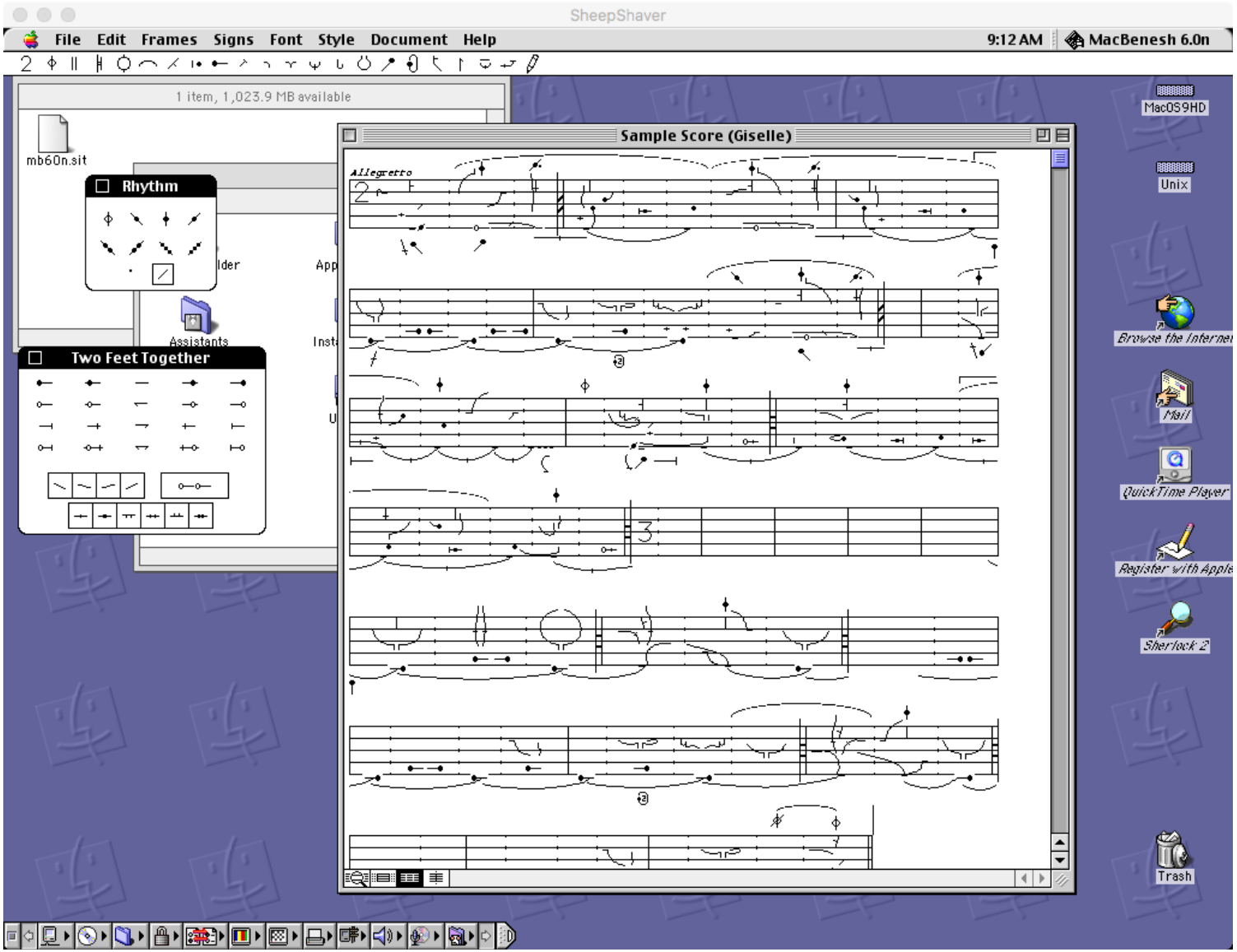
`MacBenesh` Licence Info

- Launch `MacBenesh 6.0n`
- A `Licence Info` window appears if you have not yet entered this information
- `MacBenesh 6.0n` is free for use and has a special licence key
  - Enter your name
  - Enter the special licence key `6688167`
  - Click the `Save` button
- Quit `MacBenesh` and launch it again
  - The `Licence Info` window should NOT appear now


SheepShaver
File Edit Frames Signs Font Style Document Help
9:10 AM
MacBenesh 6.0n
Untitled-1
MacBenesh Disk
About MacBenesh
Licence Info
Licence Info
Enter your name and key exactly as they appear on your licence.
Name:
Arthur Ryman
Key:
6688167
OK
Cancel
Late Breaking News
mb60n.sit
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
MacOS9HD
Unix
Mail
QuickTime Player
Sherlock 2
Trash

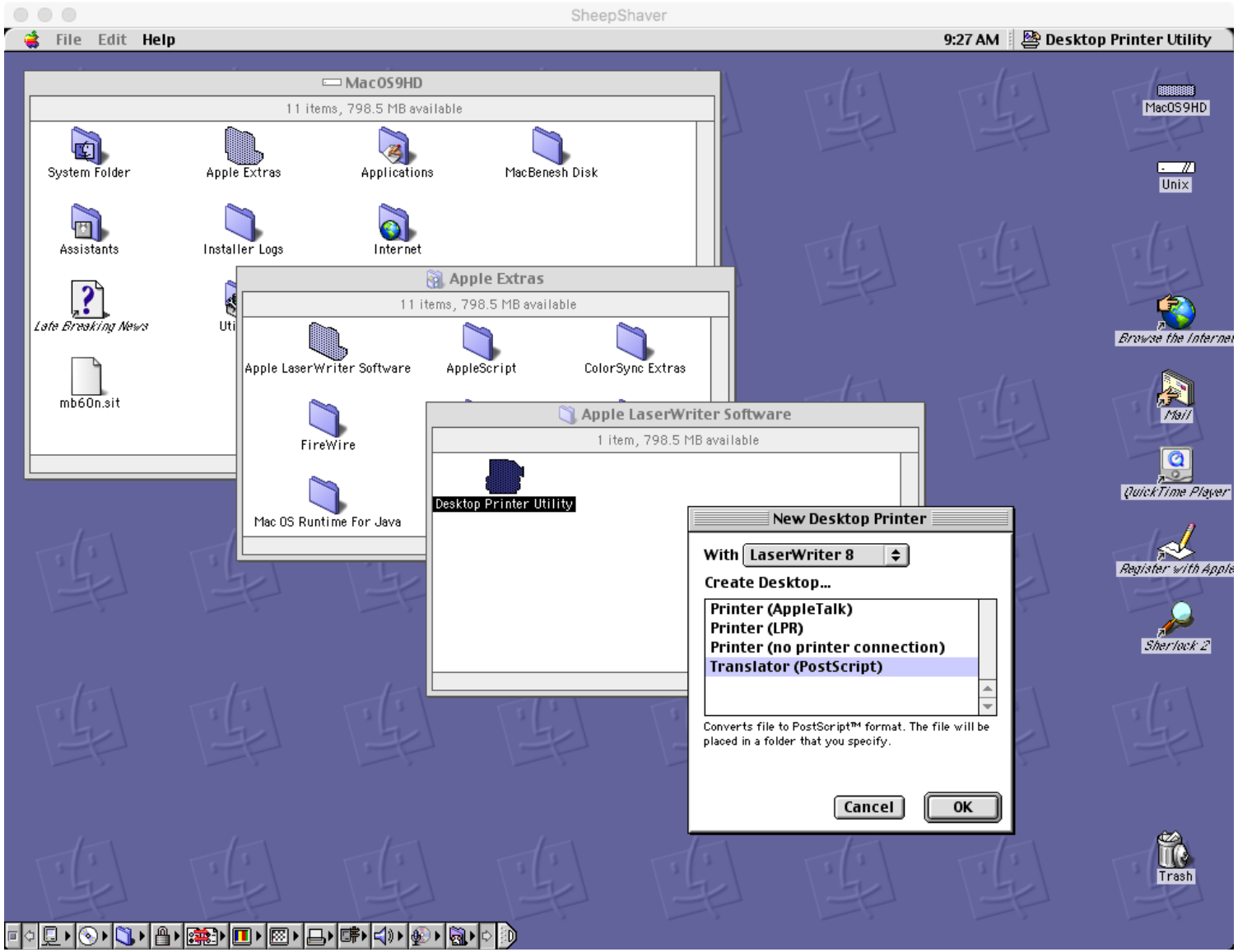
Open the Sample Score

- You can launch `MacBenesh` by double-clicking the application or a score
  - **Bug**: Double-clicking a score launches `MacBenesh` but does not open the score
  - You need to open the score using the `File -> Open` menu item
- Verify that `MacBenesh` is working correctly by opening `Sample Score (Giselle)` using the `File -> Open` menu item


SheepShaver
File Edit Frames Signs Font Style Document Help
9:12 AM
MacBenesh 6.0n
1 item, 1,023.9 MB available
mb60n.sit
Rhythm
Assistants
Two Feet Together
Sample Score (Giselle)
Allegretto
MacOS9HD
Unix
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

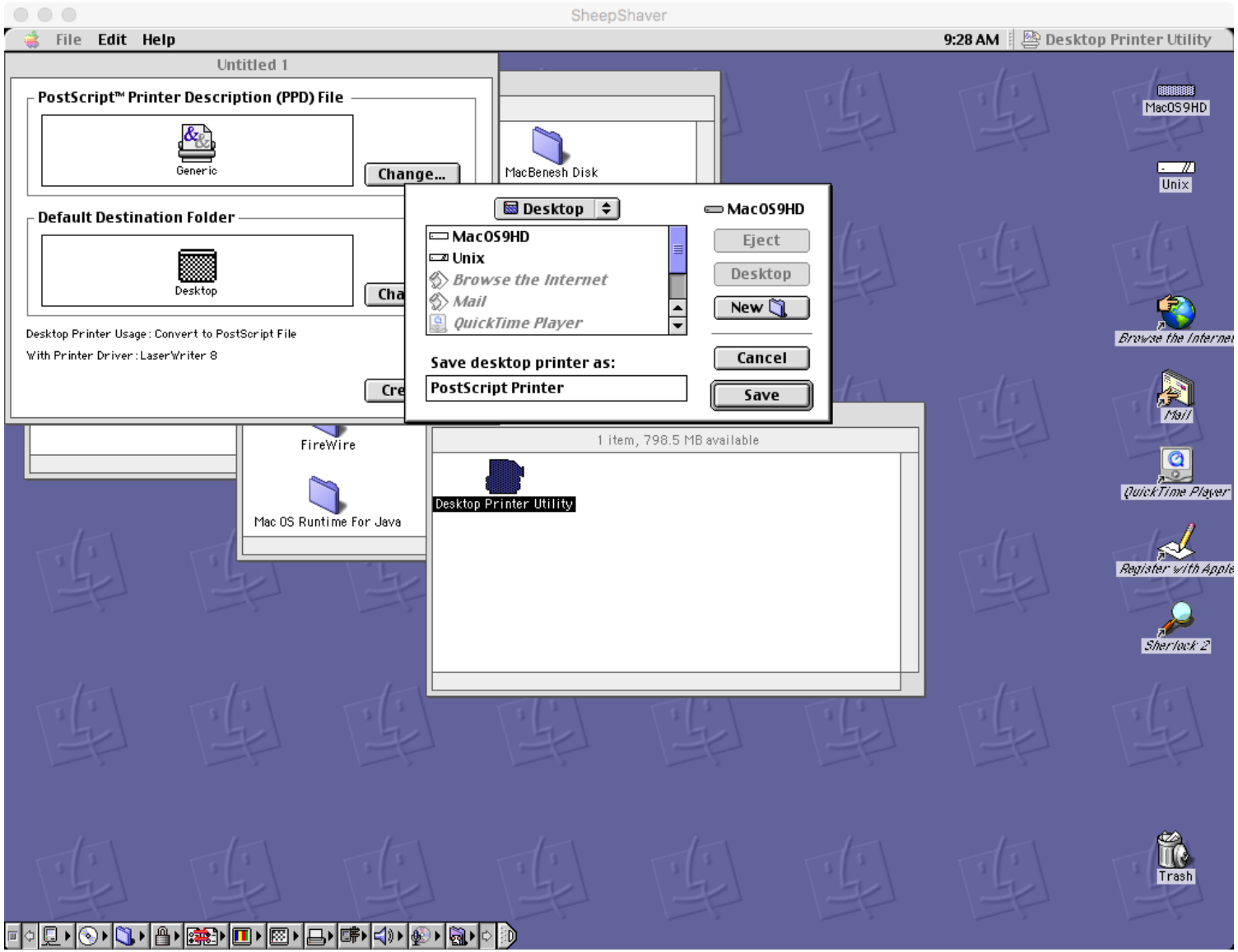
Printing Scores to PostScript

- To use `MacBenesh` with other OS X applications, print the score to a PostScript file in OS 9 and then convert the PostScript file to PDF in OS X
  - View in `Preview`
  - Edit in `Adobe Illustrator`
- To print the score to PostScript you must create a virtual PostScript printer in OS 9
- In OS 9, launch the `Desktop Printer Utility` application
  - Located in the `MacOS9HD -> Apple Extras -> Apple LaserWriter Software` folder
- Select
  - `With: LaserWriter 8`
  - `Create Desktop…: Translator (PostScript)`
- Click the `OK` button


SheepShaver
File Edit Help
9:27 AM
Desktop Printer Utility
MacOS9HD
11 items, 798.5 MB available
System Folder
Apple Extras
Applications
MacBenesh Disk
Assistants
Installer Logs
Internet
Late Breaking News
mb60n.sit
Apple Extras
11 items, 798.5 MB available
Apple LaserWriter Software
AppleScript
ColorSync Extras
FireWire
Mac OS Runtime For Java
Apple LaserWriter Software
1 item, 798.5 MB available
Desktop Printer Utility
New Desktop Printer
With LaserWriter 8
Create Desktop...
Printer (AppleTalk)
Printer (LPR)
Printer (no printer connection)
Translator (PostScript)
Converts file to PostScript™ format. The file will be placed in a folder that you specify.
Cancel
OK
MacOS9HD
Unix
Mail
QuickTime Player
Sherlock 2
Trash

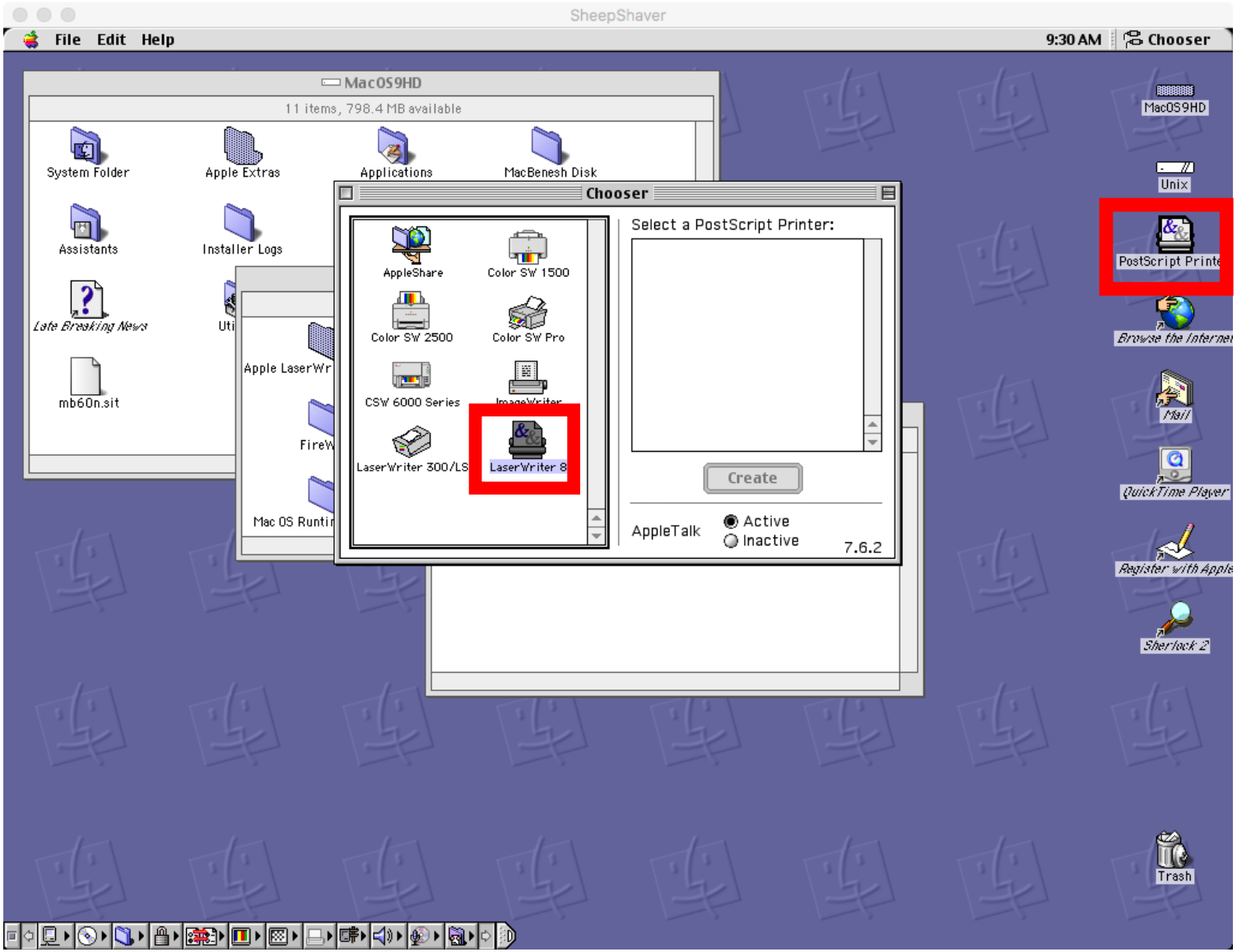
Creating a New Desktop Printer

- Save the printer to the `Desktop`
- Name the printer: `PostScript Printer`
- Click the `Save` button
- An icon named `PostScript Printer` appears on the `Desktop`


SheepShaver
File Edit Help
9:28 AM
Desktop Printer Utility
Untitled 1
PostScript™ Printer Description (PPD) File
Generic
Change...
Default Destination Folder
Desktop
Desktop Printer Usage : Convert to PostScript File
With Printer Driver : LaserWriter 8
MacBenesh Disk
Desktop
MacOS9HD
Unix
Browse the Internet
Mail
QuickTime Player
Eject
Desktop
New
Cancel
Save
Save desktop printer as:
PostScript Printer
FireWire
Mac OS Runtime For Java
1 item, 798.5 MB available
Desktop Printer Utility
MacOS9HD
Unix
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

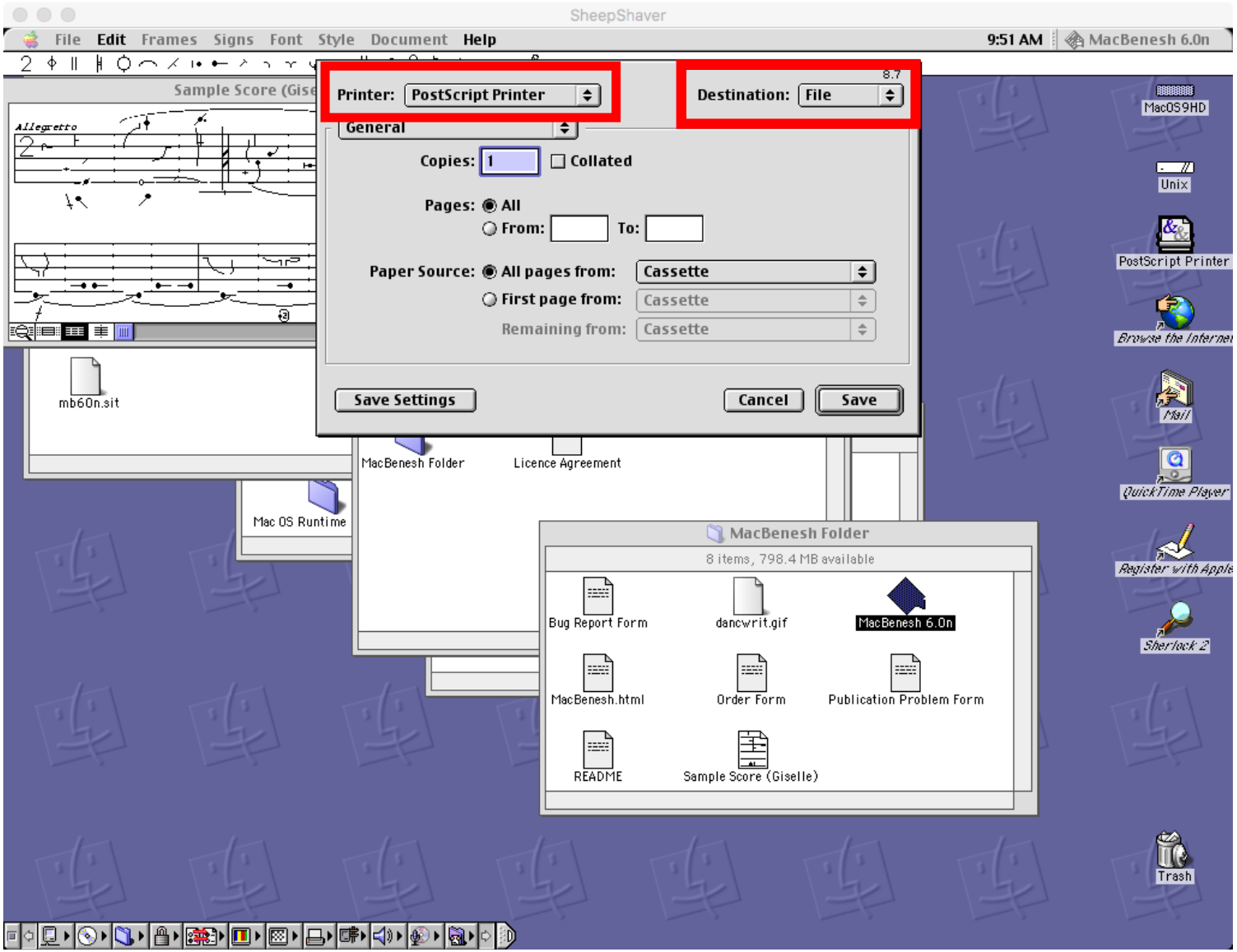
Selecting the PostScript Printer

- Mac applications print to the printer selected by the `Chooser`
- From the `Apple` menu, select the `Chooser` menu item
- Select the `LaserWriter 8` printer driver
- Close `Chooser`


SheepShaver
File Edit Help
9:30 AM
Chooser
MacOS9HD
11 items, 798.4 MB available
System Folder
Apple Extras
Applications
MacBenesh Disk
Assistants
Installer Logs
Late Breaking News
mb60n.sit
Chooser
AppleShare
Color SW 1500
Color SW 2500
Color SW Pro
CSW 6000 Series
ImageWriter
LaserWriter 300/LS
LaserWriter 8
Select a PostScript Printer:
Create
AppleTalk
Active
Inactive
7.6.2
MacOS9HD
Unix
PostScript Printe
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

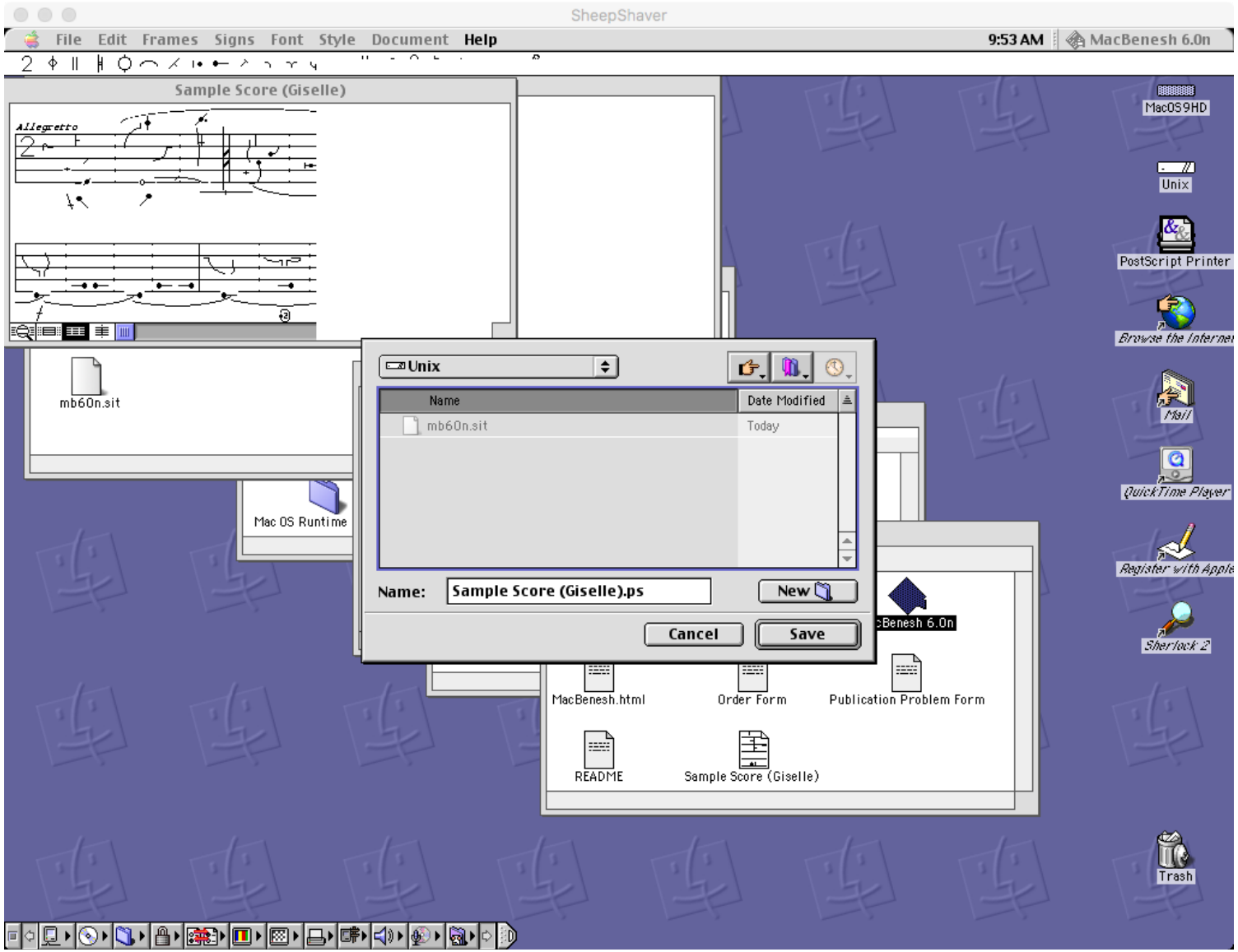
Printing the Sample Score

- Launch `MacBenesh` and open the sample score
- Select the `File -> Print` menu item
- The `Print` dialog box should show the following settings
  - `Printer: PostScript Printer`
  - `Destination: File`
- Click the `Save` button
  - Next you need to enter where the PostScript file should be saved


SheepShaver
File Edit Frames Signs Font Style Document Help
9:51 AM
MacBenesh 6.0n
Printer: PostScript Printer
Destination: File
General
Copies: 1
Collated
Pages: All
From:
To:
Paper Source: All pages from: Cassette
First page from: Cassette
Remaining from: Cassette
Save Settings
Cancel
Save
MacOS9HD
Unix
PostScript Printer
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash
mb60n.sit
MacBenesh Folder
Licence Agreement
Mac OS Runtime
MacBenesh Folder
8 items, 798.4 MB available
Bug Report Form
dancwrit.gif
MacBenesh 6.0n
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)

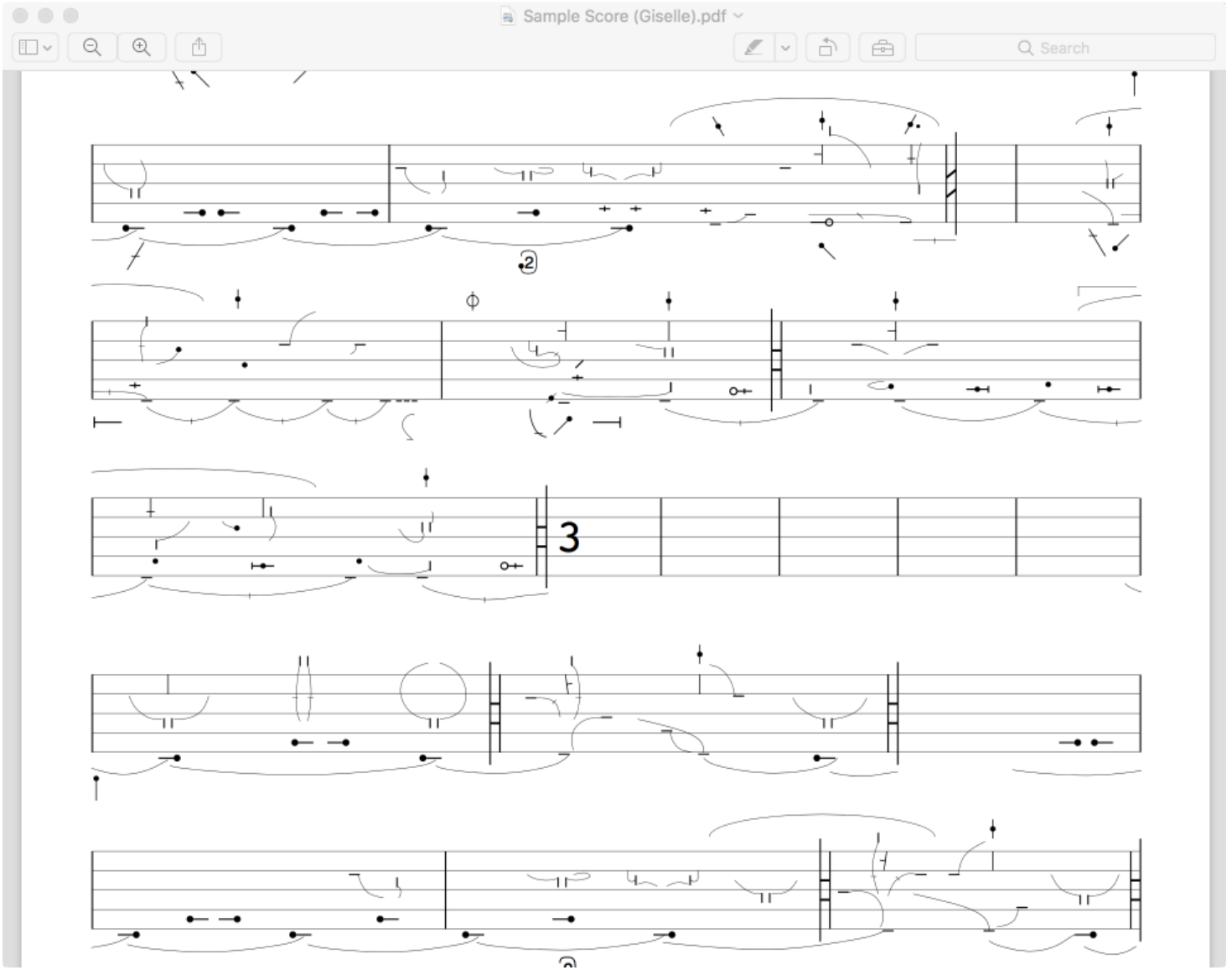
Saving PostScript Files to the `Unix` Folder

- After you create the PostScript file you'll need to move it to OS X in order to work with it further so create it in the `Unix` folder
- Select the destination to be the OS 9 `Unix` folder
  - This corresponds to the OS X `Shared` folder
- Click the `Save` button
- `MacBenesh` will send the print output to the virtual PostScript printer
- After a few seconds a PostScript file will appear in the `Unix` folder


SheepShaver
File Edit Frames Signs Font Style Document Help
9:53 AM
MacBenesh 6.0n
Sample Score (Giselle)
Allegretto
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
mb60n.sit
Mac OS Runtime
Unix
Name
Date Modified
mb60n.sit
Today
Name:
Sample Score (Giselle).ps
New
Cancel
Save
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
Trash

Converting PostScript to PDF

- In OS X open the `Shared` folder and double-click the new PostScript file `Sample Score (Giselle).ps`
- `Preview` launches and automatically converts the file to PDF
- Save the PDF file in another OS X folder
  - Only use the `Shared` folder for temporary file transfers between OS 9 and OS X
  - Important files should be kept permanently in other OS X folders
- You now can create and edit `MacBenesh` scores in OS 9 and convert them to PDF in OS X!


Sample Score (Giselle).pdf
Search
2
3

4. MS Word 6

Using MacBenesh with MS Word 6

- You can copy and paste notation frames between MacBenesh and MS Word 6
- Notation frames pasted into MS Word 6 print with high quality
  - MacBenesh used QuickDraw comments to preserve editable versions of the notation frames in clippings
  - Microsoft dropped support for QuickDraw comments in later versions of MS Word
- Using SheepShaver you can install MS Word 6 and work with your old documents!

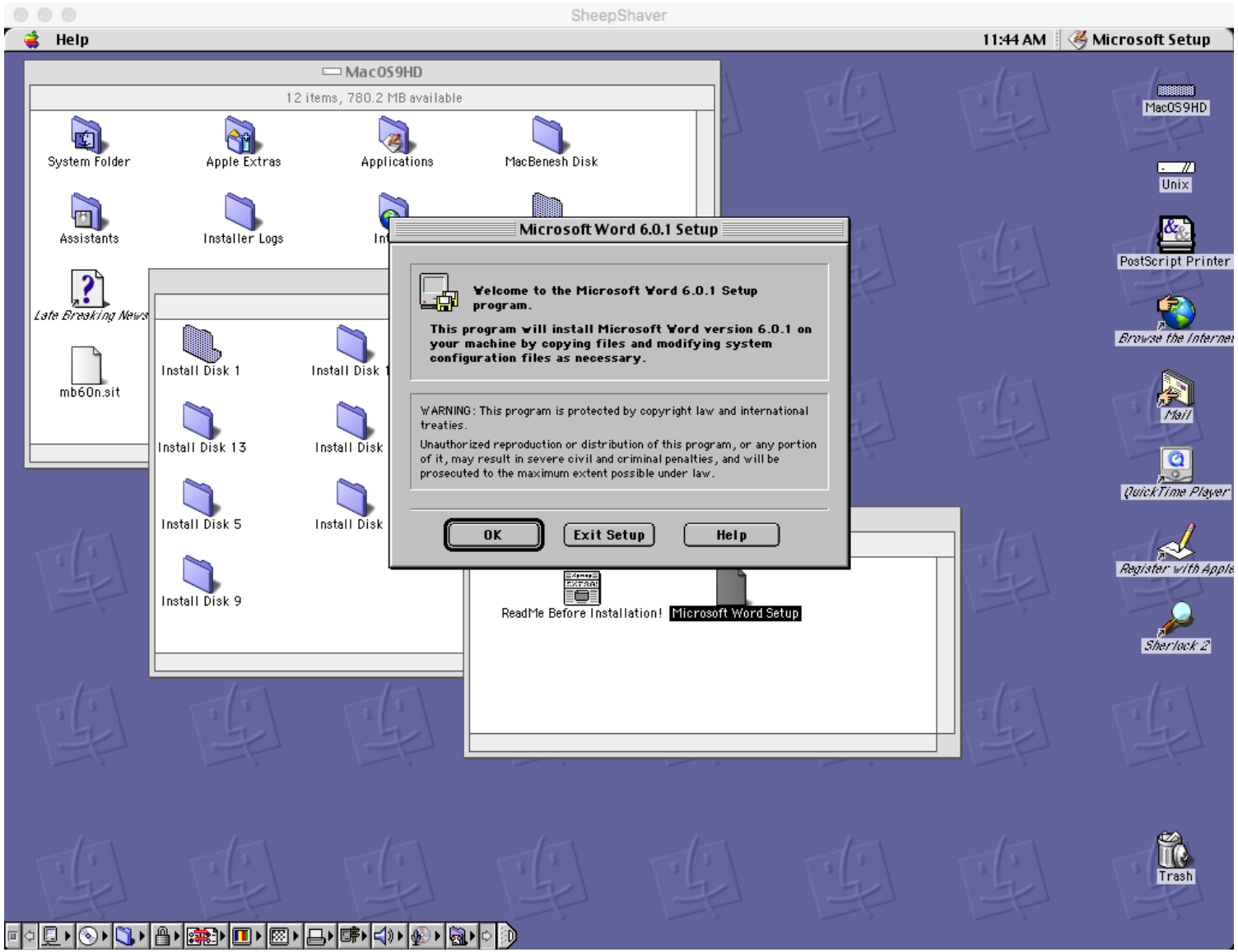
Installing MS Word 6.0.1

- The `msword601 Install Disks` folder contains the setup program for MS Word 6.0.1
  - The installer came on 13 diskettes
- In OS X copy the `msword601 Install Disks` folder from `macbenesh-osx-files` into the `Shared` folder then in OS 9 move it from the `Unix` folder onto the `MacOS9HD` virtual hard disk
- In OS 9 open the MacOS9HD -> `msword601 Install Disks` -> Install Disk 1 folder
  - You should see the `Microsoft Word Setup` program

SheepShaver
File Edit View Special Help
4:06 PM
Finder
MacOS9HD
20 items, 741.9 MB available
Apple Extras
Applications
Assistants
Aurora
CarbonLib 1.6.smi
D241 Sample Final FO
FileType
Installer Logs
MacBenesh Disk
mb60n.sit
msword601 Install Disks
Utilities
Web Pages
msword601 Install Disks
13 items, 741.9 MB available
Install Disk 1
Install Disk 10
Install Disk 11
Install Disk 12
Install Disk 13
Install Disk 2
Install Disk 3
Install Disk 4
Install Disk 5
Install Disk 6
Install Disk 7
Install Disk 8
Install Disk 9
Install Disk 1
6 items, 741.9 MB available
ReadMe Before Installation!
Microsoft Word Setup
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

Run `Microsoft Word Setup`

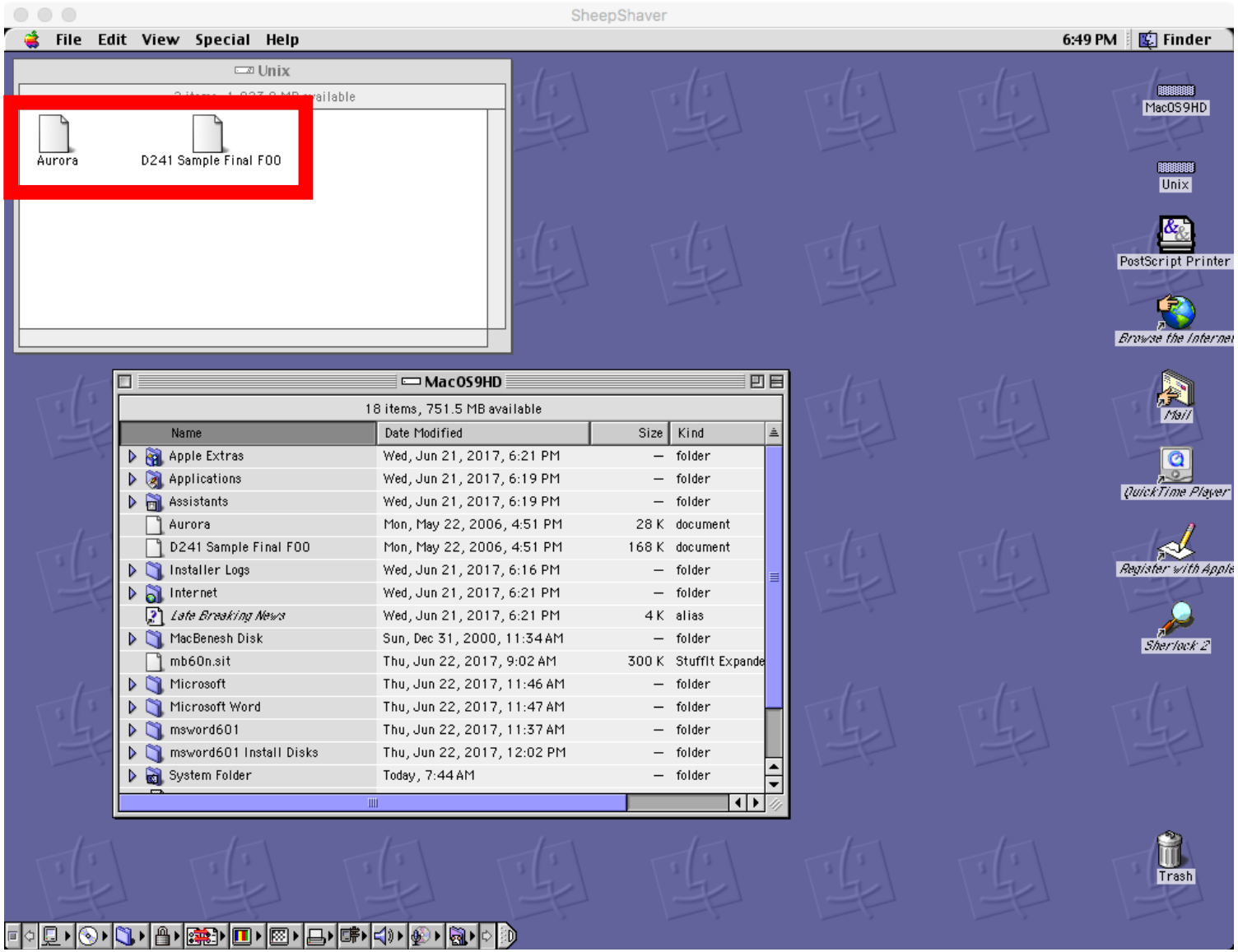
- Double-click the `Microsoft Word Setup` program
  - The installer starts
- Follow the installation process as usual
  - MS Word 6.0.1 should now be installed


SheepShaver
Help
11:44 AM
Microsoft Setup
MacOS9HD
12 items, 780.2 MB available
System Folder
Apple Extras
Applications
MacBenesh Disk
Assistants
Installer Logs
Late Breaking News
mb60n.sit
Install Disk 1
Install Disk 13
Install Disk 5
Install Disk 9
Microsoft Word 6.0.1 Setup
Welcome to the Microsoft Word 6.0.1 Setup program.
This program will install Microsoft Word version 6.0.1 on your machine by copying files and modifying system configuration files as necessary.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
OK
Exit Setup
Help
ReadMe Before Installation!
Microsoft Word Setup
MacOS9HD
Unix
PostScript Printer
Mail
QuickTime Player
Sherlock 2
Trash

5. `FileType`

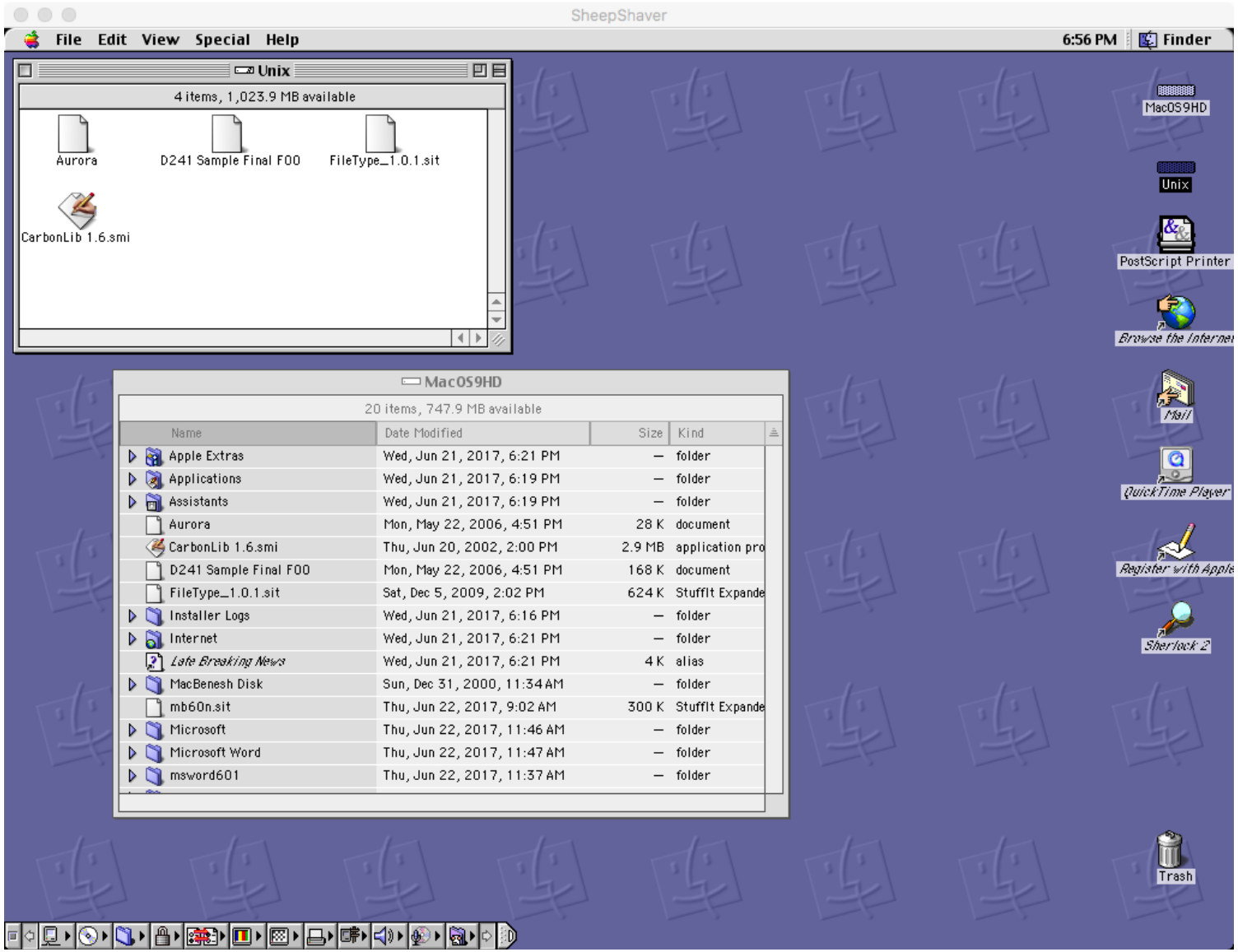
Accessing Your Old Documents

- If you have floppy disks that contain old `MacBenesh` or `MS Word` documents you'll need to plug in an external floppy disk drive and copy them to your OS X disk
  - Borrow my SmartDisk VST Floppy Drive during this workshop
- You may also have old documents on CDs, DVDs, as email attachments, etc.
- You may need to restore the OS 9 `File Type` and `File Creator` (`File Info`) on these files in order to open them in MacBenesh
- The following screenshot shows two old documents that are missing their `File Info`:
  - `Aurora` (`MacBenesh`)
  - `D241 Sample Final F00` (`MS Word`)


SheepShaver
File Edit View Special Help
6:49 PM
Finder
Unix
Aurora
D241 Sample Final FOO
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash
MacOS9HD
18 items, 751.5 MB available
Name
Date Modified
Size
Kind
Apple Extras
Wed, Jun 21, 2017, 6:21 PM
folder
Applications
Wed, Jun 21, 2017, 6:19 PM
folder
Assistants
Wed, Jun 21, 2017, 6:19 PM
folder
Aurora
Mon, May 22, 2006, 4:51 PM
28 K
document
D241 Sample Final FOO
Mon, May 22, 2006, 4:51 PM
168 K
document
Installer Logs
Wed, Jun 21, 2017, 6:16 PM
folder
Internet
Wed, Jun 21, 2017, 6:21 PM
folder
Late Breaking News
Wed, Jun 21, 2017, 6:21 PM
4 K
alias
MacBenesh Disk
Sun, Dec 31, 2000, 11:34 AM
folder
mb60n.sit
Thu, Jun 22, 2017, 9:02 AM
300 K
StuffIt Expande
Microsoft
Thu, Jun 22, 2017, 11:46 AM
folder
Microsoft Word
Thu, Jun 22, 2017, 11:47 AM
folder
msword601
Thu, Jun 22, 2017, 11:37 AM
folder
msword601 Install Disks
Thu, Jun 22, 2017, 12:02 PM
folder
System Folder
Today, 7:44 AM
folder

FileType and CarbonLib

- FileType is a Mac application that lets you edit the File Type and Creator info on documents
- FileType requires CarbonLib which is a runtime library provided by Apple
- Copy the files CarbonLib 1.6.smi and FileType_1.0.1.sit from macbenesh-osx-files into the OS X Shared folder
  - You should also copy the sample files Aurora and D241 Sample Final F00 from macbenesh-osx-files to practice setting File Info
- Open SheepShaver and copy the files out of the OS 9 Unix folder and into MacOS9HD

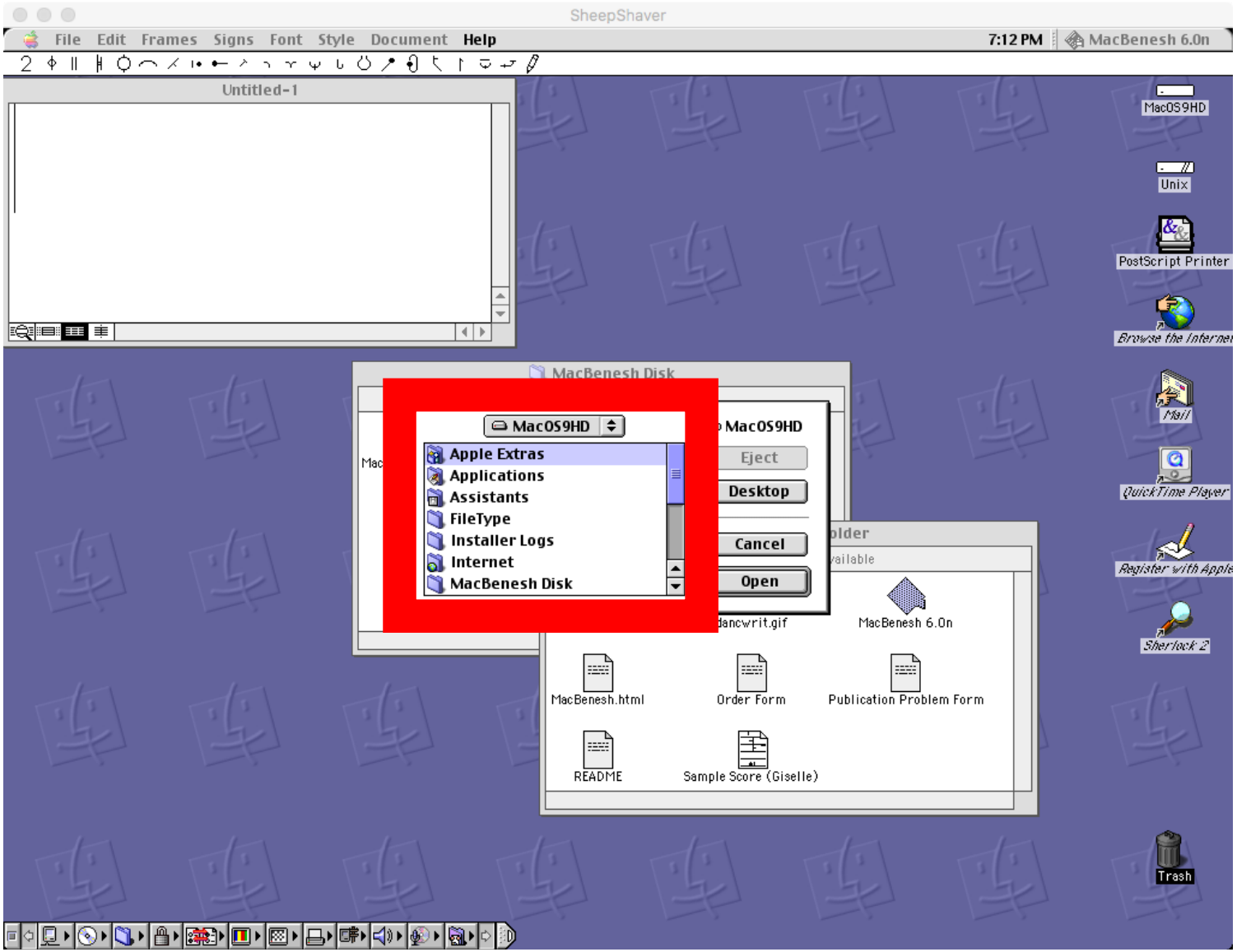

SheepShaver
File Edit View Special Help
6:56 PM
Finder
Unix
4 items, 1,023.9 MB available
Aurora
D241 Sample Final FOO
FileType_1.0.1.sit
CarbonLib 1.6.smi
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
MacOS9HD
20 items, 747.9 MB available
Name
Date Modified
Size
Kind
Apple Extras
Wed, Jun 21, 2017, 6:21 PM
folder
Applications
Wed, Jun 21, 2017, 6:19 PM
folder
Assistants
Wed, Jun 21, 2017, 6:19 PM
folder
Aurora
Mon, May 22, 2006, 4:51 PM
28 K
document
CarbonLib 1.6.smi
Thu, Jun 20, 2002, 2:00 PM
2.9 MB
application pro
D241 Sample Final FOO
Mon, May 22, 2006, 4:51 PM
168 K
document
FileType_1.0.1.sit
Sat, Dec 5, 2009, 2:02 PM
624 K
StuffIt Expande
Installer Logs
Wed, Jun 21, 2017, 6:16 PM
folder
Internet
Wed, Jun 21, 2017, 6:21 PM
folder
Late Breaking News
Wed, Jun 21, 2017, 6:21 PM
4 K
alias
MacBenesh Disk
Sun, Dec 31, 2000, 11:34 AM
folder
mb60n.sit
Thu, Jun 22, 2017, 9:02 AM
300 K
StuffIt Expande
Microsoft
Thu, Jun 22, 2017, 11:46 AM
folder
Microsoft Word
Thu, Jun 22, 2017, 11:47 AM
folder
msword601
Thu, Jun 22, 2017, 11:37 AM
folder
Trash

Installing `CarbonLib 1.6`

- `CarbonLib 1.6.smi` is a self-mounting image of the installer for `CarbonLib 1.6`
- Double-click `CarbonLib 1.6.smi` and run it
  - This mounts a virtual diskette named `CarbonLib` that contains the installer named `Apple SW Install`
- Double-click `Apple SW Install` and run it
  - This installs `CarbonLib 1.6` and restarts OS 9.

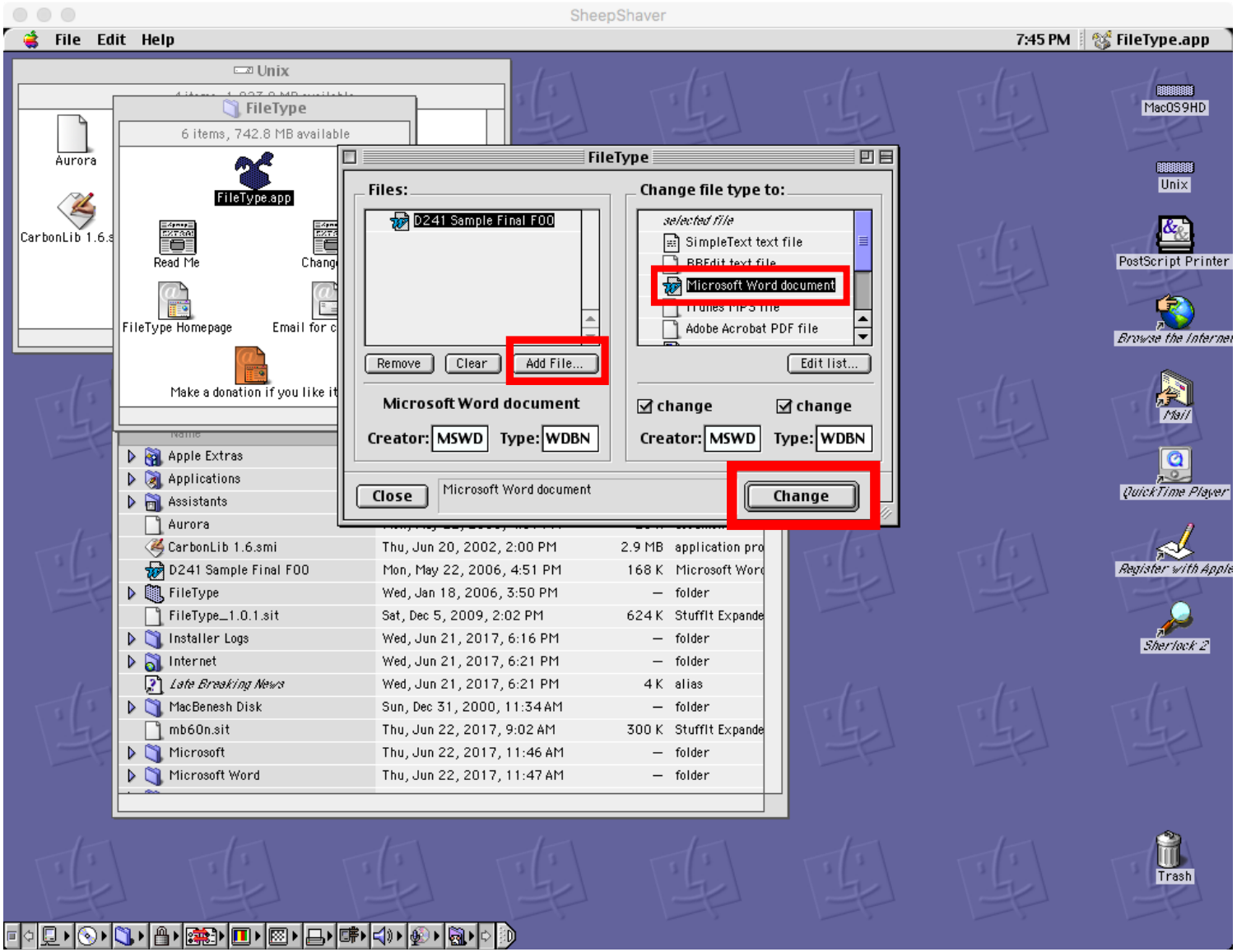
Installing and Running `FileType 1.0.1`

- Double-click the StuffIt archive `FileType_1.0.1.sit` to unstuff it
  - This creates a folder named `FileType` which contains the `FileType.app` application
- Launch `MacBenesh` select the `File -> Open` menu item and try to open `Aurora`
  - Note that `Aurora` is not listed in the `Open` dialog because it has lost its `File Info` in the process of being transferred from OS 9 to OS X
  - We'll restore its `File Info` using the `FileType` application later
- Cancel the `Open` dialog


SheepShaver
File Edit Frames Signs Font Style Document Help
7:12 PM
MacBenesh 6.0n
Untitled-1
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
MacBenesh Disk
MacOS9HD
Apple Extras
Applications
Assistants
FileType
Installer Logs
Internet
MacBenesh Disk
Eject
Desktop
Cancel
Open
MacBenesh 6.0n
MacBenesh.html
Order Form
Publication Problem Form
README
Sample Score (Giselle)
Trash

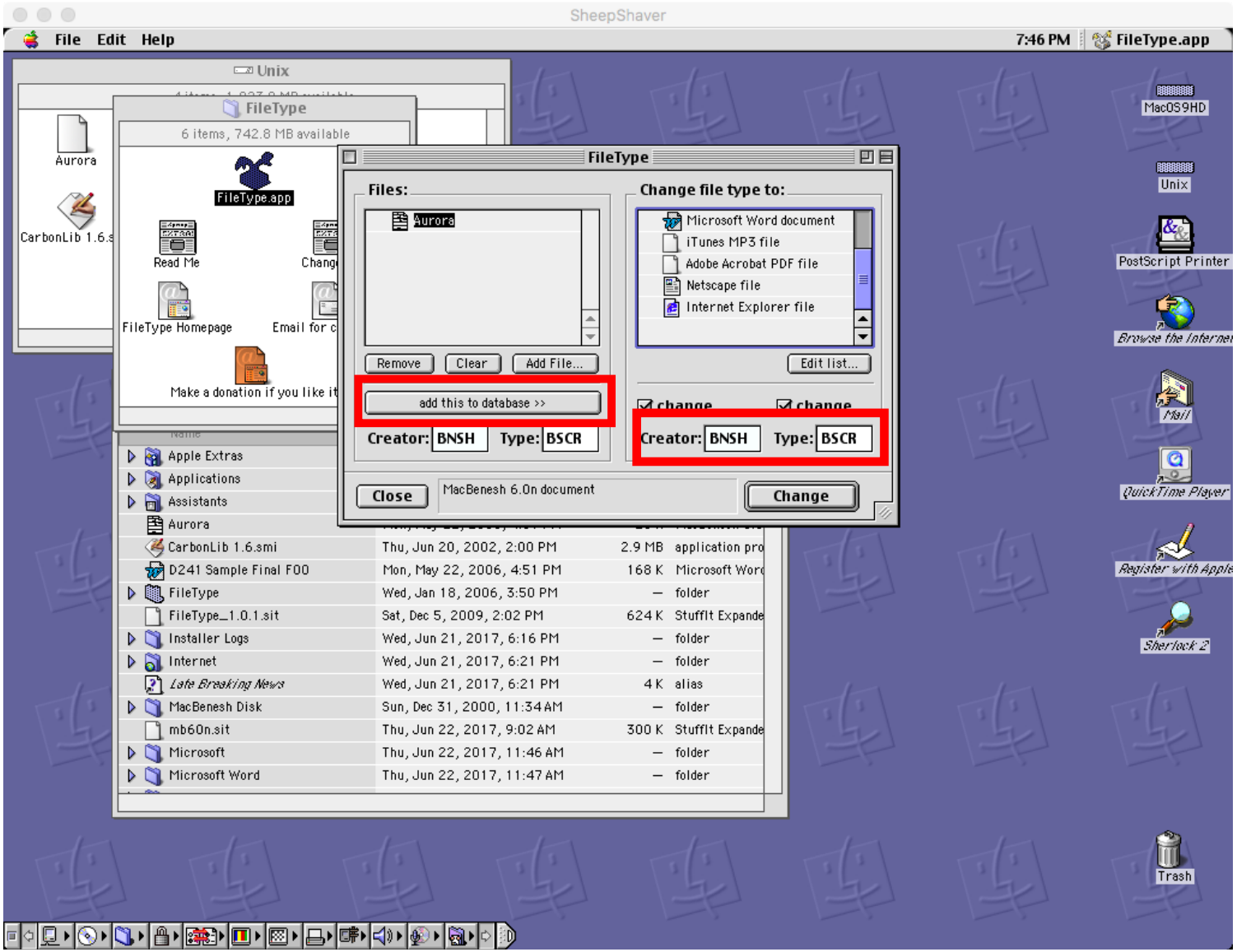
Setting File Info for MS Word Documents

- Launch the FileType.app application
- Click the Add File… button and add the file D241 Sample File F00
- In the Change file type to: list select Microsoft Word Document
- Click the Change button
  - This sets the File Info to MS Word
- Now you can open D241 Sample File F00 by double-clicking it in Finder


SheepShaver
File Edit Help
7:45 PM
FileType.app
Unix
FileType
6 items, 742.8 MB available
FileType.app
Read Me
FileType Homepage
Make a donation if you like it
Aurora
CarbonLib 1.6.s
FileType
Files:
D241 Sample Final FOO
Remove
Clear
Add File...
Microsoft Word document
Creator: MSWD
Type: WDBN
Change file type to:
selected file
SimpleText text file
Microsoft Word document
Adobe Acrobat PDF file
Edit list...
change
change
Creator: MSWD
Type: WDBN
Close
Microsoft Word document
Change
Apple Extras
Applications
Assistants
Aurora
CarbonLib 1.6.smi Thu, Jun 20, 2002, 2:00 PM 2.9 MB application pro
D241 Sample Final FOO Mon, May 22, 2006, 4:51 PM 168 K Microsoft Word
FileType Wed, Jan 18, 2006, 3:50 PM — folder
FileType_1.0.1.sit Sat, Dec 5, 2009, 2:02 PM 624 K StuffIt Expande
Installer Logs Wed, Jun 21, 2017, 6:16 PM — folder
Internet Wed, Jun 21, 2017, 6:21 PM — folder
Late Breaking News Wed, Jun 21, 2017, 6:21 PM 4 K alias
MacBenesh Disk Sun, Dec 31, 2000, 11:34 AM — folder
mb60n.sit Thu, Jun 22, 2017, 9:02 AM 300 K StuffIt Expande
Microsoft Thu, Jun 22, 2017, 11:46 AM — folder
Microsoft Word Thu, Jun 22, 2017, 11:47 AM — folder
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

Setting File Info for MacBenesh Documents

- Click the Clear button to clear the Files: list
- Click the Add File… button and add Aurora
- Select Aurora and enter the values:
  - Creator: BNSH
  - Type: BSCR
- Click the Change button
  - This sets the File Info for Aurora to the values used for MacBenesh documents
- Now Aurora will appear in the MacBenesh Open dialog


SheepShaver
File Edit Help
7:46 PM
FileType.app
Unix
FileType
6 items, 742.8 MB available
Aurora
CarbonLib 1.6.s
FileType.app
Read Me
FileType Homepage
Make a donation if you like it
FileType
Files:
Aurora
Remove
Clear
Add File...
add this to database >>
Creator: BNSH Type: BSCR
Change file type to:
Microsoft Word document
iTunes MP3 file
Adobe Acrobat PDF file
Netscape file
Internet Explorer file
Edit list...
change
change
Creator: BNSH Type: BSCR
Close
MacBenesh 6.0n document
Change
Apple Extras
Applications
Assistants
Aurora
CarbonLib 1.6.smi Thu, Jun 20, 2002, 2:00 PM 2.9 MB application pro
D241 Sample Final FOO Mon, May 22, 2006, 4:51 PM 168 K Microsoft Word
FileType Wed, Jan 18, 2006, 3:50 PM — folder
FileType_1.0.1.sit Sat, Dec 5, 2009, 2:02 PM 624 K StuffIt Expande
Installer Logs Wed, Jun 21, 2017, 6:16 PM — folder
Internet Wed, Jun 21, 2017, 6:21 PM — folder
Late Breaking News Wed, Jun 21, 2017, 6:21 PM 4 K alias
MacBenesh Disk Sun, Dec 31, 2000, 11:34 AM — folder
mb60n.sit Thu, Jun 22, 2017, 9:02 AM 300 K StuffIt Expande
Microsoft Thu, Jun 22, 2017, 11:46 AM — folder
Microsoft Word Thu, Jun 22, 2017, 11:47 AM — folder
MacOS9HD
Unix
PostScript Printer
Browse the Internet
Mail
QuickTime Player
Register with Apple
Sherlock 2
Trash

Adding `MacBenesh` to the `FileType` Database

- You can save the `File Info` values used for MacBenesh documents in the `FileType` application by adding it to the `FileType` database
- With `Aurora` selected, click the `add this to database >>` button
  - Name the entry: `MacBenesh Score`
- You can now use this database entry to easily set the `File Info` for other `MacBenesh` scores just like you did for `MS Word` documents

Conclusion

Summary

- `SheepShaver` lets you run Mac OS 9 applications such as `MacBenesh` and `MS Word 6` on modern Mac hardware under OS X
  - Note that Apple now refers to OS X as macOS
- You move files between OS X and OS 9 using the OS X `Shared` folder, which appears as the OS 9 `Unix` folder
- You can print `MacBenesh` and `WS Word 6` documents to PostScript files in OS 9 and convert them to PDF using `Preview` in OS X
- When you move old documents from OS X into OS 9 you can restore any missing `File Info` using `FileType.app`

References

- How to Run MacBenesh under OS X, Arthur Ryman, https://docs.google.com/document/d/1zu2CrO-aexFndiKs0EJUwUtThmNIUSIjISsXKPcE4xg

Where to Obtain the Components Used in **`MacBenesh`** Virtual Machine Package

SheepShaver

- SheepShaver is an OS X application that emulates a PowerPC so you can run OS 9 and its applications
- See SheepShaver builds for Mac OS X, links and downloads at http://www.emaculation.com/forum/viewtopic.php?f=20&t=7360&sid=63235b985d85756ebaad89a5794e952e for complete installation instructions
- Download the latest version of the SheepShaver application at http://www.xs4all.nl/~ronaldpr/sheepshaverforum/SheepShaver_UB_20140201.zip

Mac OS ROM File

- Obtain a ROM file from http://www.redundantrobot.com/#/sheepshaver
- Download http://www.redundantrobot.com/sheepshaver_files/roms/newworld86.rom.zip
- Unzip it if necessary
  - You should have a file named `newworld86.rom`
- Rename the file to `Mac OS ROM` and move it into the `SheepShaver` folder

Mac OS 9.0.4

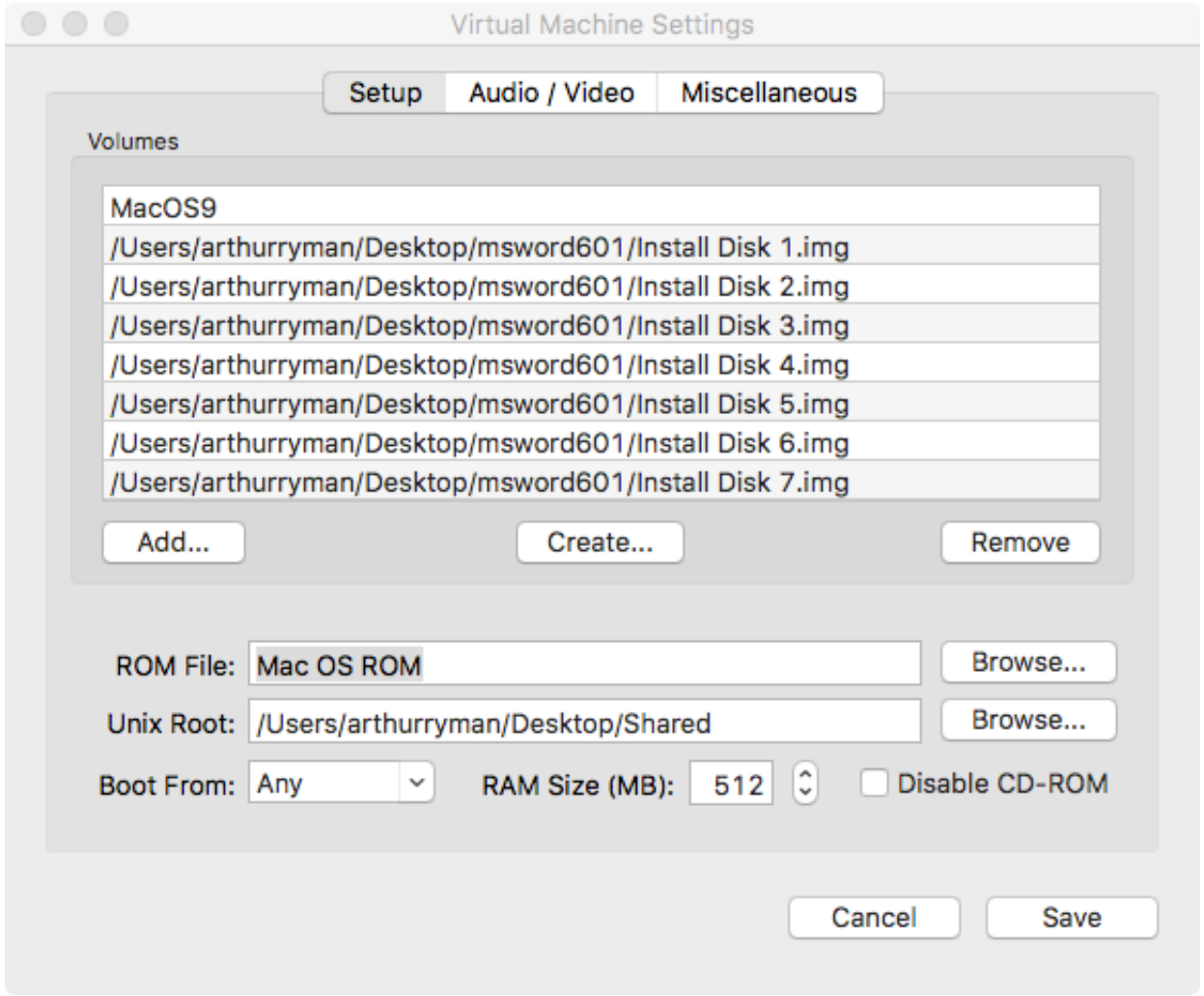
- You can get an ISO CD image of Mac OS 9.0.4 from https://winworldpc.com/download/3E3DC7CB-18DA-11E4-99E5-7054D21A8599
- Download the file from one of the mirrors. You should have a file named `Apple Mac OS 9.0.4.7z`
- Note that the file extension is `.7z` which means the file is a 7-zip archive. You'll need a program such as `The Unarchiver` to unzip it
  - See http://unarchiver.c3.cx/unarchiver
- After unzipping you should have a folder named Apple Mac OS 9.0.4 which contains the CD image file Apple MacOS 9.0.4.iso

MacBenesh 6.0n

- The latest version is MacBenesh 6.0n
- Download it from https://drive.google.com/open?id=0B8yLWckVUiuGanlLM214QVdqXzQ
- You should have a file named `mb60n.sit` which is a StuffIt archive

MS Word 6.0.1

- Downloaded MS Word 6.0.1 for Mac from WinWorld https://winworldpc.com/download/437DE870-18DA-11E4-99E5-7054D21A8599
  - You get a 7-Zip archive file named `Microsoft Word 6.0.1 (3.5).7z`
- Unzip the archive
  - You get 13 Mac 3.5” diskette images named `Install Disk 1.img` etc.
- As a shortcut for you, I have extracted these diskette images into 13 folders by mounting them in SheepShaver
  - I then copied the folders back to OS X and zipped them into the file named `msword601 Install Disks.zip` which you can download from https://drive.google.com/open?id=0B8yLWckVUiuGWkpuQVdlOEpkOUU


Virtual Machine Settings
Setup
Audio / Video
Miscellaneous
Volumes
MacOS9
/Users/arthurryman/Desktop/msword601/Install Disk 1.img
/Users/arthurryman/Desktop/msword601/Install Disk 2.img
/Users/arthurryman/Desktop/msword601/Install Disk 3.img
/Users/arthurryman/Desktop/msword601/Install Disk 4.img
/Users/arthurryman/Desktop/msword601/Install Disk 5.img
/Users/arthurryman/Desktop/msword601/Install Disk 6.img
/Users/arthurryman/Desktop/msword601/Install Disk 7.img
Add...
Create...
Remove
ROM File:
Mac OS ROM
Browse...
Unix Root:
/Users/arthurryman/Desktop/Shared
Browse...
Boot From:
Any
RAM Size (MB):
512
Disable CD-ROM
Cancel
Save

`CarbonLib 1.6`

- `CarbonLib` is a runtime library provided by Apple
- Download it from https://www.macupdate.com/app/mac/4474/apple-carbonlib

FileType 1.0.1

- FileType is a freeware for non-commercial use application that lets you set File Info on Mac OS files
- Download it from http://www.frederikseiffert.de/filetype/