Using the OPI Server

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About This Publication

This publication provides information about using the Infoprint Open Prepress Interface (OPI) server that allows Infoprint users working on the Mac operating system to generate low-resolution (layout) images (from EPS, TIFF, or JPEG source files) for use in any preprocessing activities outside of Infoprint Manager.

Who Should Use This Publication

This publication contains information for the Infoprint Manager for AIX system administrators who create and configure the Infoprint Open Prepress Interface (OPI) on both the Infoprint AIX server and your Mac operating system. IBM recommends that users separately acquire a license and copy of the Helios software, as described in this document.

Note that the OPI server can be used to provide input to the Infoprint Impositioning solution described in the *Using Infoprint Manager Impositioning with the Infoprint 4100 Advanced Function Printing System* document that is available from **ftp://ftp.software.ibm.com/printers/specs/imposition.pdf**.

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Using the OPI Server

The Infoprint Open Prepress Interface (OPI) server allows Infoprint users working on the Mac operating system to generate low-resolution images (from EPS, TIFF, or JPEG source files) for use in any preprocessing activities outside of Infoprint Manager. By using this support in an Infoprint environment, users can:

- Improve performance on print jobs that contain huge image data
- Save space on their personal computers by submitting the low-resolution images to Infoprint Manager, which contacts the OPI server at RIP time to print the high-resolution images.

While configuration of the OPI server must be performed on a Mac personal computer, you can use the HELIOS PCShare software product to submit OPI server jobs from Windows personal computers.

Note:

> The OPI server can be used with the Print Optimizer support from Infoprint Manager as part of the Impositioning solution, but the OPI server is not an essential piece of that solution. For more information about that solution, see *Using Infoprint Manager Impositioning with the Infoprint 4100 Advanced Function Printing System*, which is available from the **Infoprint Manager for AIX Administrator Tasks** web page at **http://www.printers.ibm.com/R5PSC.NSF/Web/aixadmin**.

This topic consists of the following procedures:

1. "Installing the OPI Server on AIX".
2. "Configuring the OPI Server" on page 2.
3. "Submitting Jobs to the OPI Server" on page 7.
4. "Troubleshooting the OPI Server" on page 11.

Installing the OPI Server on AIX

In order to take advantage of the Open Prepress Interface (OPI) server, you must install both EtherShare and EtherShare OPI on your Infoprint Manager AIX server. You can obtain these products from the Helios CD016 CD-ROM (see the **Helios Software_Currently shipping versions** web page at **http://www.helios.de/products/current.phtml**).

Once you have obtained the latest Helios CD-ROM, as well as both the *EtherShare Version 2.6 User manual* and the *EtherShare OPI Version 2.1 User manual*, you can prepare to install these software products on your Infoprint AIX server. Both manuals are available in the **/manuals** directory of your Helios CD-ROM. Ensure that you carefully read and review the installation chapters of both manuals before you attempt to install either product.

The following provides a series of guidelines you should follow while performing the installation of both products:

Notes:

1. Ensure that you install Ethershare prior to installing EtherShare OPI.
2. For most fields, you should take the default settings.

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3. All Helios software requires a HELIOS Activation Key or password in order to function.

   Refer to both the *EtherShare Version 2.6 User manual* and the *EtherShare OPI Version 2.1 User manual* for information about where you can obtain this material. Once you have purchased a Helios Activation Key, you can download software updates from their web site (**http://www.helios.de/download/**).
4. When you upgrade to new releases of Helios products, keep in mind that you must obtain a new Activation key.
5. If you do not change the default, AFP is the password that Helios sets on your AIX server.
6. When installing the Helios product, ensure that you have adequate space in the directories (**/usr/local/** by default) where the high-resolution images will be stored on your Infoprint AIX server.

   Note: Ensure that you do not specify the **/var/psf/segments** directory to contain these images when prompted for a directory to share.

Configuring the OPI Server

Once you have installed the OPI server on your Infoprint AIX server, you must perform configuration tasks in two locations:

1. "Configuring OPI Server from the Mac System".
2. "Configuring OPI Server from the Infoprint AIX Server" on page 6.

The following sections describe how to perform these tasks

Configuring OPI Server from the Mac System

Before you can submit jobs to take advantage of the OPI server, you must create a print queue and define layout settings on your Mac personal computer.

1. From the desktop, highlight the **Ether-Share-Admin** icon (see below) and select **File->Login** from the menu bar.

   Note: If the **Ether-Share-Admin** icon is not available on your desktop, select the **Ether-Share Applications** icon (which has been mounted through AppleTalk from your AIX server as shown in "Submitting Jobs to the OPI Server" on page 7) and open the **Admin** icon.

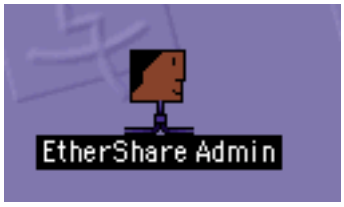

Figure 1. Ether-Share-Admin icon.

2. To connect to the OPI server, you must do the following:
   a. From the **Select an EtherShare host** dialog, select the relevant AppleTalk zone on your Mac system, highlight it, and specify the host to which you are connecting (in this case, the Infoprint AIX server where the OPI server has been installed), and press **Ok**.
   b. From the **Connect to EtherShare server ...** dialog, type your Infoprint AIX password and press **Ok**.

Once you have successfully logged in, the **Users**, **Volumes**, **Groups**, and **Printers** file systems will appear cascading on your system. Figure 2 separates them into distinct emulations for clarity:

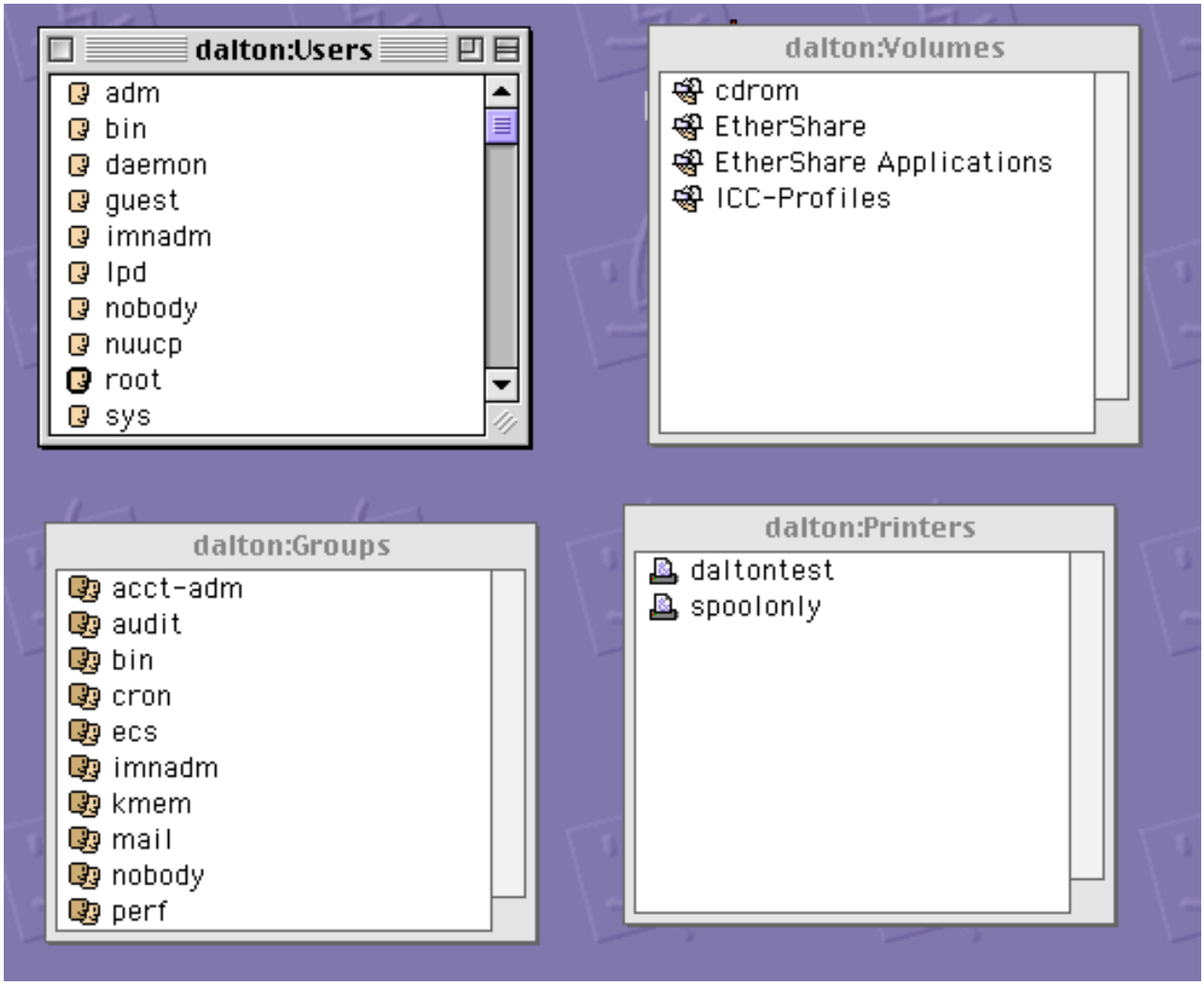

Figure 2. Four Infoprint File Systems on a MAC System.

3. To create a print queue on your Mac system that resides on the Infoprint AIX server, click on the **Printer** window to highlight it, and then take the **File->New** path on the main menu.
4. From the window (displayed in Figure 3 on page 4, select a name for the printer and save the results.

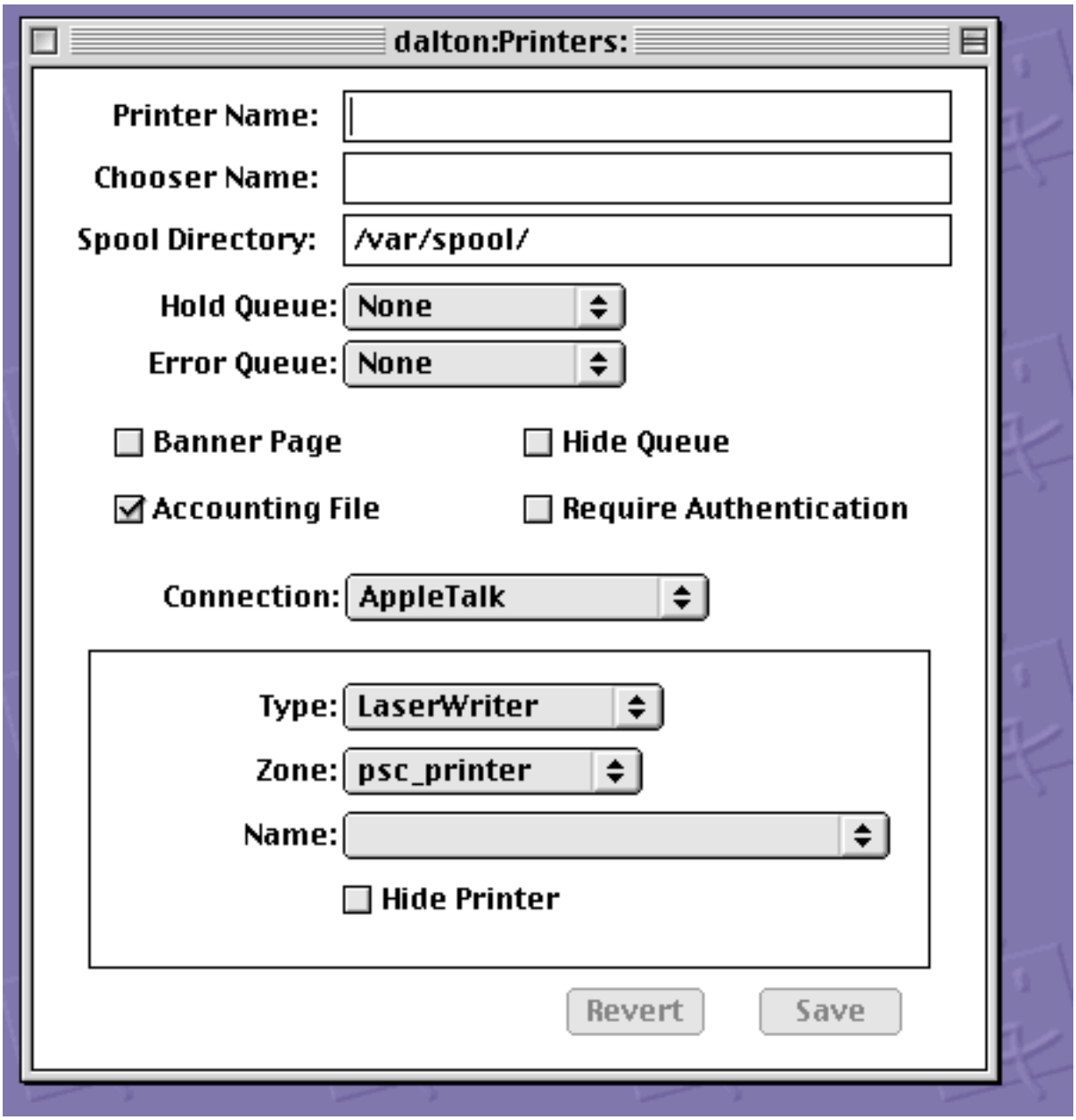

Figure 3. Print Queue Window.

5. Once you have created the print queue, use the **Lists->OPI/Server Settings** path on the main menu to display the layout and color settings. Usually the default values are sufficient. From the window displayed in Figure 4 on page 5 below, select a name for your print queue and take the defaults before pressing the **Save** button.

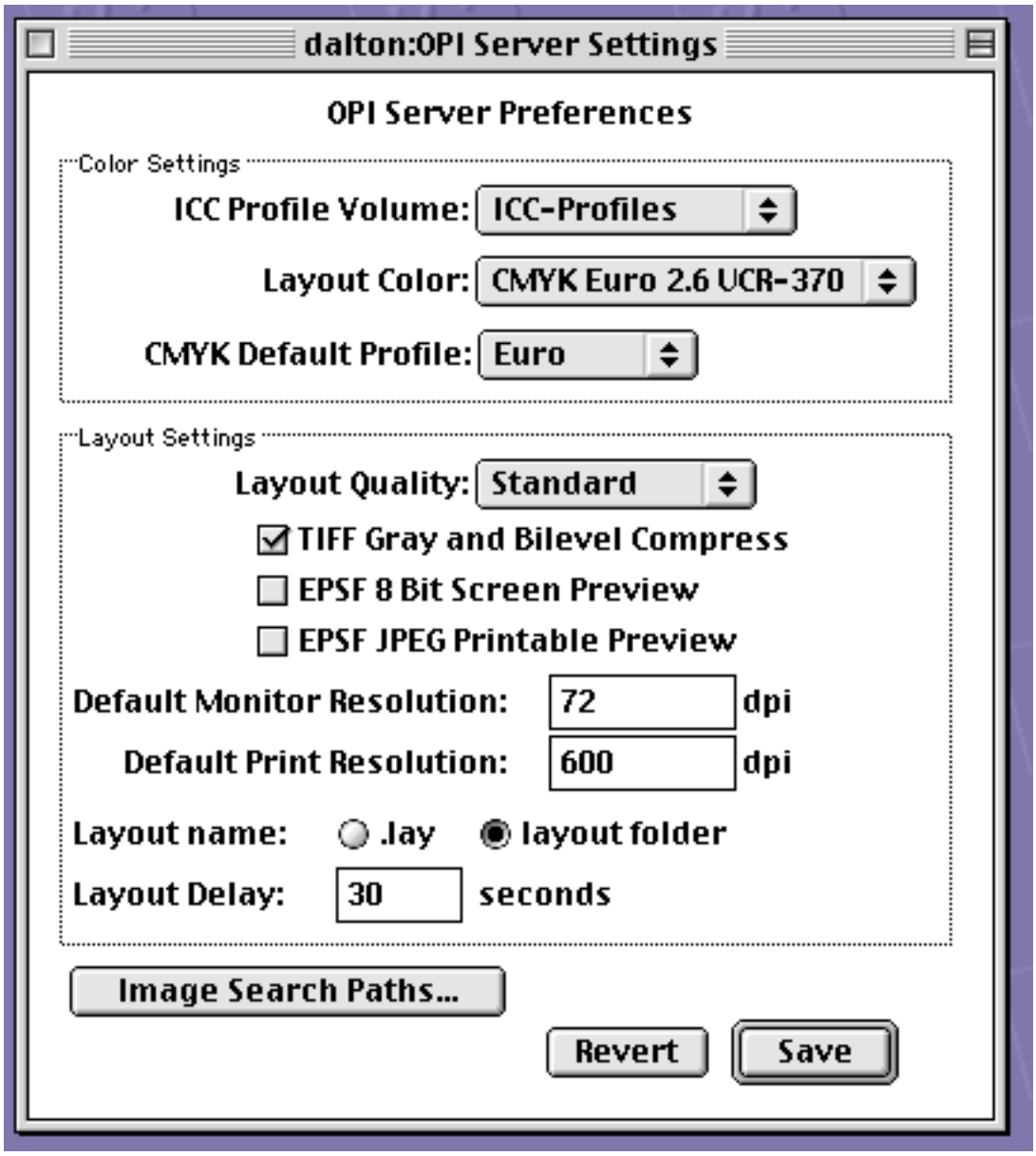

Figure 4. OPI Server Settings Window.

6. Once you have defined the print queue, highlight it (in this case, `daltontest`) within the **Printer** window and then take the **Printer->OPI/ICC Settings** path on the main menu.

   The International Color Consortium (ICC) format is a cross-platform specification which allows third party vendors – including Adobe Systems Inc., and Agfa-Gevaert – to develop profile tools and applications to support this standard.

7. From the dialog (displayed in Figure 5 on page 6), ensure that the **OPI Active** checkbox is checked.

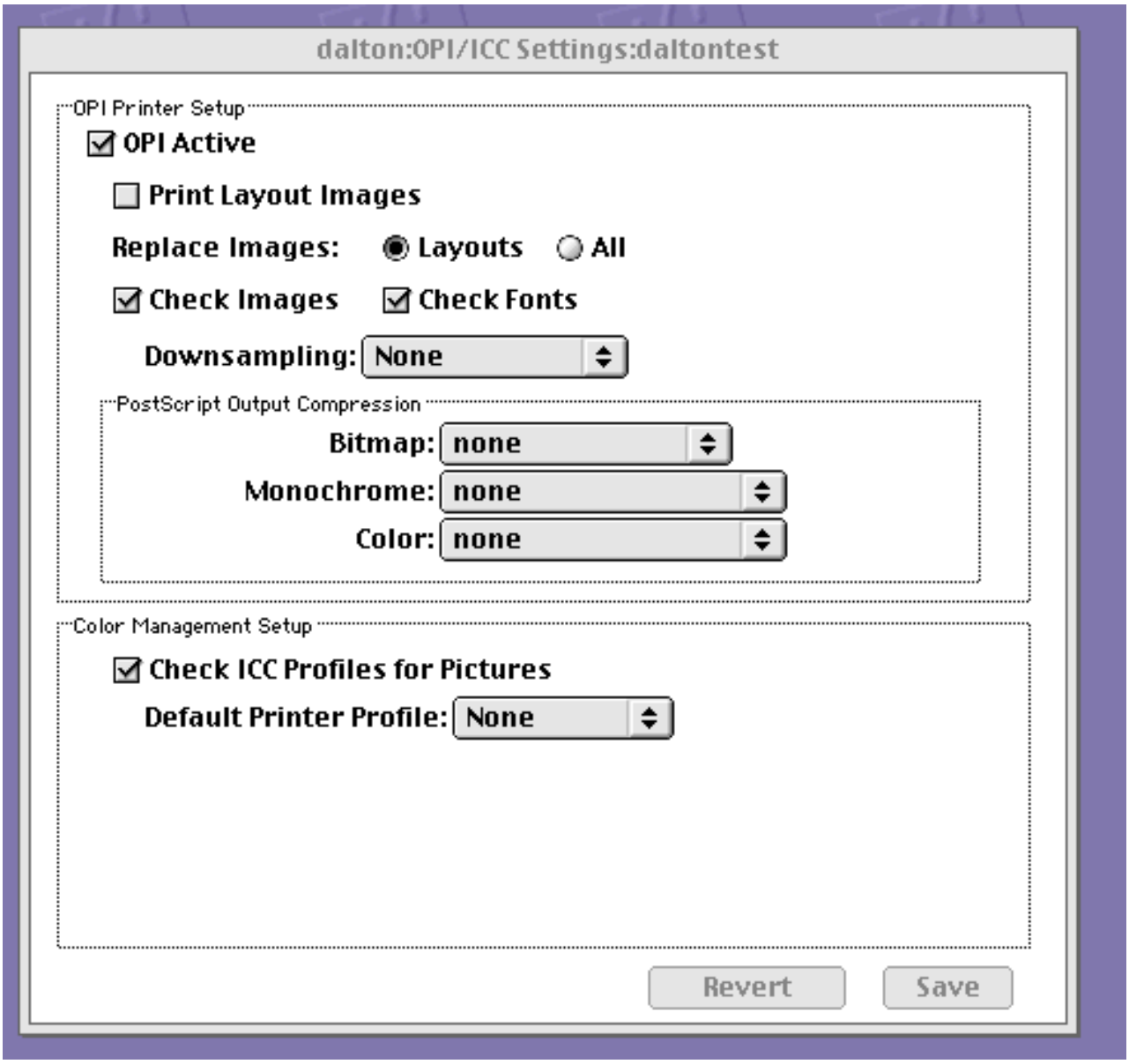

Figure 5. OPI/ICC Settings Window.

8. Save this setting and exit the dialog by pressing the **Save** button.

Configuring OPI Server from the Infoprint AIX Server

Before you can begin to submit jobs to the OPI server on your MAC system, you must configure the PostScript transform to support the OPI server. Use the following procedure.

Note: If your installation uses either an Infoprint 60 printer, a Network printer, an Infoprint 2000 printer, or a Lexmark printer, follow these directions substituting **3160d.cfg** for **ps2afpd.cfg**. The **ps2afpd.cfg** file runs the PostScript RIP for the larger printers, including IBM Infoprint 3000, IBM Infoprint 4000 (all models), and the IBM Infoprint 4100.

1. From an AIX command line, access both the **ps2afpd.cfg** and the **3160d.cfg** files that reside in the **/usr/lpp/psf/ps2afp** directory by default.

2. Using your AIX editor of choice, edit the files and remove the comment marks (#) to the left of the opi_server_resolution_program near the bottom of both files. When you are finished, the bottom of both files should resemble the following example, where **daltontest** is the Helios print queue name. This sample has been modified so that the final line prints correctly. In the actual file, the last two lines of the file appear as a single line.

```
######################################################################
# Enabling OPI Server support:
# uncomment the line below, and modify the queue name as appropriate
# use the name of the Helios queue that has the associated color profile to use
# in place of
#<heliosprintqueuename> opi_server_resolution_program = /usr/local/es/psresolve \
-onoincludeheliosdicts daltontest
```

   Note: If you did not install the Helios EtherShare program in the default directory, you must ensure that the path is listed correctly for this line in both files.

3. To run the OPI server, you must either stop and restart the PostScript (**ps2afpd**) daemon or shutdown and reboot the Infoprint AIX server.

   If you choose to stop and restart the PostScript daemon,

   a. From an AIX command line, specify `ps –ef | grep ps2afpd` to find the process number of the PostScript daemon running on your server.
   b. Specify kill *pnumber*, where *pnumber* represents the process number of the PostScript daemon process.
   c. Restart the PostScript daemon by specifying the following command:

      ```
      /usr/lpp/psf/bin/ps2afpd -C /usr/lpp/psf/ps2afp/ps2afpd.cfg
      ```

Submitting Jobs to the OPI Server

In order to submit jobs to the OPI server, using the following procedure is recommended.

1. On your MAC system, create the high resolution images that you will be incorporating in print jobs.

   These high resolution images can come from a scanner, digital camera, or any other source from which you obtain images.

2. To connect to the shared directory folder on the Infoprint AIX server, use Chooser (see Figure 6 on page 8).

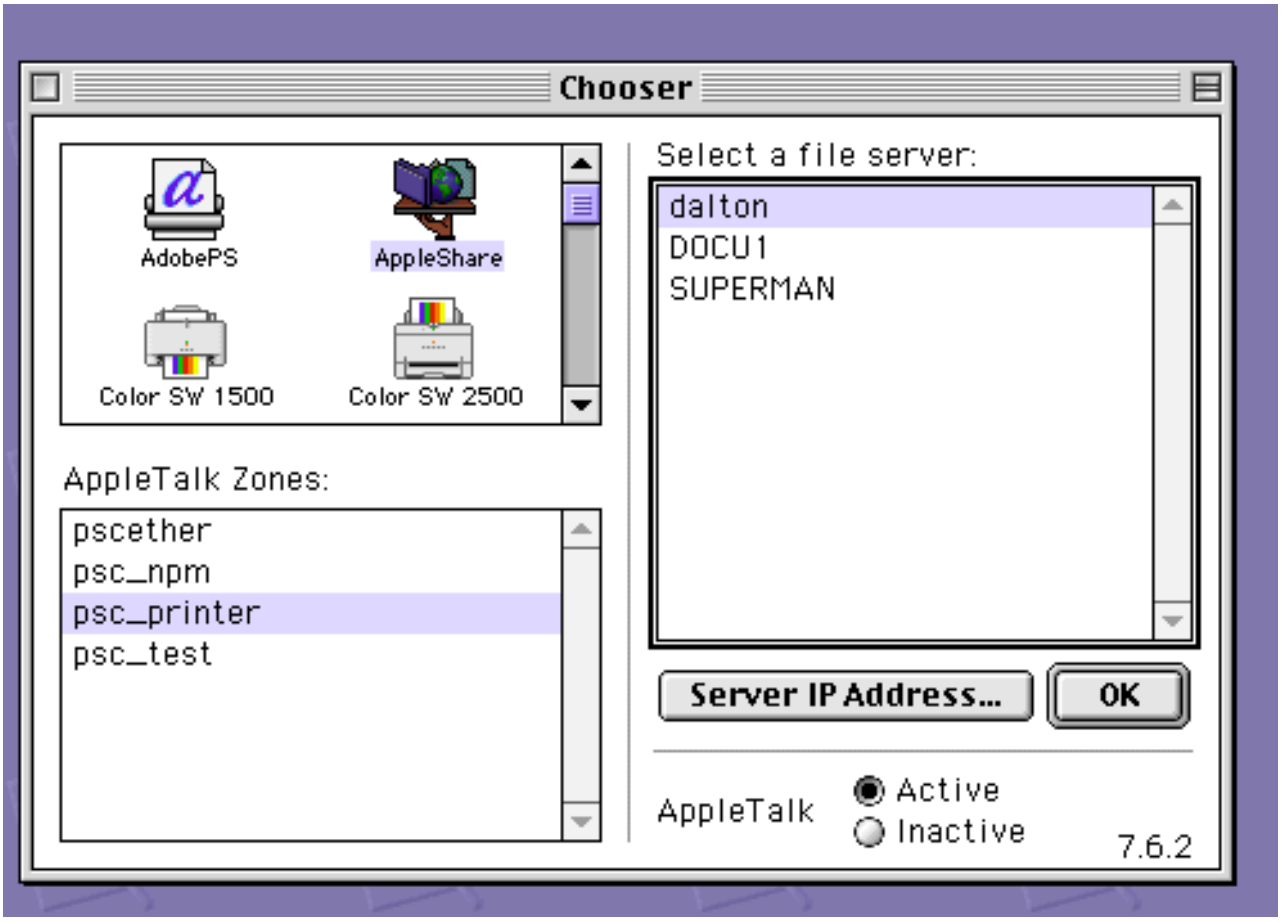

Figure 6. Chooser Selections

a. Highlight the values **AppleShare** (for the communication protocol between Mac and AIX), **psc_printer** (for the relevant AppleTalk zone), and **dalton** (for the name of the Infoprint AIX server.

b. Press **OK**, and then from the next pop-up, press **Connect**.

c. From the **Dalton** dialogue(displayed in Figure 7 on page 9) – where **Dalton** is the name of the Infoprint AIX server – press **OK**.

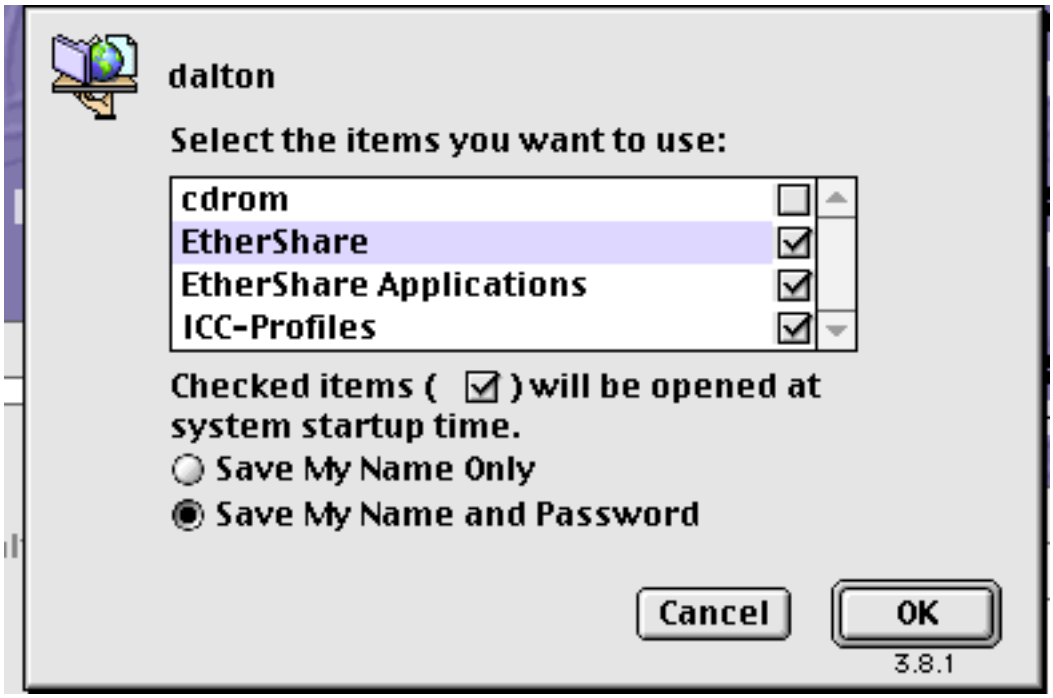

Figure 7. Sample Connection Dialog.

d. The final dialog will provide a message similar to the following:

```
dalton in psc_printer via AppleTalk
```

where `dalton` is the name of the Infoprint AIX server and `psc_printer` is the zone in which that queue is defined.

Select **OK**.

3. From your desktop, click on the **EtherShare** icon to access the shared folder directory.
4. Figure 8 on page 10 shows both the shared directory and the associated layout directory, where the OPI server will put a low resolution image for each image you place in the main shared folder.

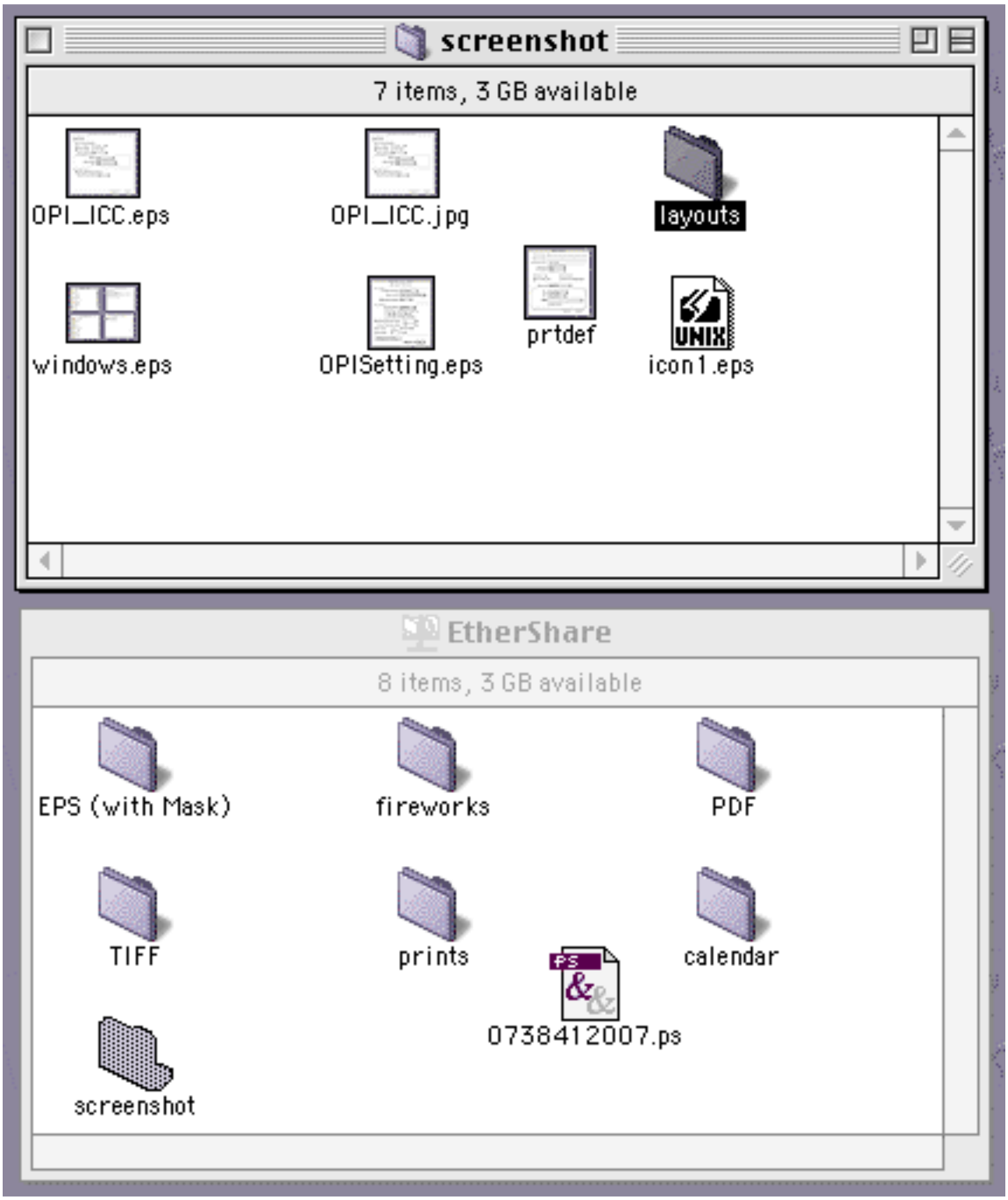

Figure 8. Sample Shared Directory and Layout Directory.

5. Place the images that you created in step 1 in a directory under the shared folder from Ethershare, creating whatever directory structure you want to organize the files.

   The OPI server automatically creates a layout subdirectory that will contain low resolution images of each high resolution image you put in the main directory.

6. From the desktop, double-click on the **Tagger** icon, then complete the following procedure to tag high resolution images with **ICC** profiles necessary for the scanner that was used to create the images:

   a. From the main menu, select **File->New**.

b. From the RGB Profile dialog, specify `other`.

c. Select the correct **ICC** profile for your high resolution images.

   To determine the correct **ICC** profiles required by your particular images, consult the online Helios documentation and help systems.

d. Within the Tagger program, select your images, specify **high-res** image, and select **Open**.

e. Tag each image by selecting the **Tag image...** button and the **Open** button in sequence.

   Repeat this step for each image that you plan to use.

7. From your layout application (for example, Quark, Adobe Pagemaker, etc.,), create a document and place the low resolution image from the layout folder in the document.
8. From your layout application, select the print option and select the **OPI setting** so that you can include images in the document.

   Change these settings if you want low resolution images included in the PostScript output file. Because only the high-resolution images are printed, these changes will not affect output. Instead, these changes only affect pre-RIP processing, such as the use of a PostScript file in Preps software if the OPI server is used as part of the Infoprint impositioning solution.
9. Select the **print to file** option because it generates a PostScript file as output.
10. Using your method of choice (for example, the EtherShare folder you installed on your MAC system, Infoprint Submit, or some form of file transfer protocol), transfer the PostScript file generated in the previous step to your Infoprint AIX server.
11. On the Infoprint AIX server, you can either print this PostScript file using a **pdpr** command, or use the PostScript file as input to the Preps software for the first step in the Infoprint Impositioning Solution.

    For more information on the Impositioning solution, see *Using Infoprint Manager Impositioning with the Infoprint 4100 Advanced Function Printing System*, which is available from the **Infoprint Manager for AIX Administrator Tasks** web page at **http://www.printers.ibm.com/R5PSC.NSF/Web/aixadmin**.

Troubleshooting the OPI Server

The following describes some common errors that you might experience when using the OPI server, with possible recommendations for how to resolve the problems.

A low-resolution image or no image prints

Attempt to resolve this problem by:

- Checking the OPI/ICC Settings on the Helios print queue (see Figure 5 on page 6). Ensure that the check boxes for **OPI Active**, **Check Images**, **Check Fonts**, and **Check ICC Profile for Pictures** have all been checked. If any are unchecked, check those check boxes, save the settings, and try running the jobs again.
- Check to ensure that the PostScript transform is using the correct configuration file (either **ps2afpd.cfg** or **3160d.cfg**), depending upon the type of printer you are using. Also, check this file to ensure that the OPI server has been enabled (for specific instructions, see "Configuring OPI Server from the Infoprint AIX Server" on page 6), and that the OPI server resolution program has specified the correct path (by default, this path is **/usr/local/es/psresolve**, as displayed in 7).

PostScript RIP fails with an OPI error

Attempt to resolve this problem by:

- Ensuring that you have downloaded and specified the necessary Helios updates from the Helios site at **http://www.helios.ed/download**.
- Test the Helios resolution program on an OPI file.

  Do this task by specifying the following from an AIX command line:

  `/usr/local/es/psresolve` *queuename* `<file.ps > fileout.ps`

  where *queuename* represents the printer queue you created in Figure 3 on page 4 and `file.ps` is the name of the PostScript output file that resulted when you specified `Print to File` from your layout application.

  By examining the results of the **fileout.ps** file, error codes, and error messages, you can gather valuable diagnostic information that can be used to resolve the problem.
- Ensure that you have properly tagged the high resolution image as described in “Submitting Jobs to the OPI Server” on page 7.

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