

Serendipity Blackmagic



User Guide

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Serendipity Software are constantly making improvements to the software and as such this manual may not contain the latest information. Every effort is made to maintain the manual and for the latest version please check the website www.serendipity-software.com.au. If you find any errors contained within this manual please detail them in an email to support@serendipity-software.com.au.

Serendipity Blackmagic

Product Overview

Serendipity Blackmagic is used to proof post RIP data to either an output device such as an inkjet printer or to a file format such as PDF. Serendipity Blackmagic runs as a server and client configuration. The server runs on a computer on the network and is protected by a USB dongle. This dongle licenses the level of software and the input and output drivers purchased. The client can run on the same computer or any other supported computer on the network, whether that be local (LAN) or remote (WAN). It connects to the server using the standard network protocol TCP/IP and is used as the configuration tool and monitoring application to the server. The Client is not licensed and you can run as many as you wish on the network.

Serendipity Blackmagic has an input filter for most of the major manufacturers proprietary RIPs. The input filters read the native RIP format and understands how jobs are assembled, the plates associated with a job and the directory structure. Some RIPs have databases and impositions which are also read and understood. Because it is the post RIP data the files that are proofed are the same files that are output as the final job on the press and thus data integrity is maintained. The files are RIPped once by the proprietary RIP and then output as many times as desired. The jobs reside on the RIP and are monitored by the Serendipity Blackmagic sever. These jobs are shown by the Client in a RIPMonitor with all of the associated plates stitched together. The files can be selected and submitted for processing by the sever as desired or it can be configured to process jobs automatically. At that point the jobs are copied (spooled) over from the RIP to the server leaving the original untouched. Once the whole job is spooled the server begins to work on the files.

The first process to take place is Imaging. This interprets the file format, completes any imposition assembling required (for supported imposition RIPs) or any merging of CT/LW files, preserves any screening on the files and samples the jobs resolution to change it to that of the output format configured. At that point an intermediate file format is created which is called the Image File.

This imaged file can be viewed using the Soft Proof Utility. The format maintains all the plates associated with the job and is viewed at the full output resolution. See “SoftProof” on page 99 for more information. The intermediate file can also be re-submitted at any time for processing again to the same

output or a different one. There is no need to spool and interpret the job again.*

After the imaging process has completed the job is passed to the rendering engine. This takes the imaged file and creates the file ready for output. This process involves applying any output characteristics such as orientation, cropping, colour management (ICC Profiles) etc. and creation of the format configured whether that is for an inkjet or a file format such as PDF. The intermediate format can be rendered as many times as desired. Each time, any of the output characteristics can be changed prior to rendering again.

The job is then submitted for printing to the output device or file format. Multiple output queues can be created and multiple devices printed to simultaneously. Most of the output devices supported use a direct printer driver and therefore the server has more control of them such as selecting specific media and printing directions etc.

The Client monitors the whole process from start to finish showing jobs progress in a QueueManager and Queue Status windows. Jobs can be managed separately by placing a job on hold, releasing a job, cancelling or promoting as desired. Or the processes (queues) can be paused at any time holding all jobs from Spooling, Imaging, Rendering or Printing. If a job fails the error can be examined, rectified and the job retried. There are logs that report all server and client functionality and job information from first detection on the RIP to final output. The logs can be searched, filtered or saved to a file.

The system creates a database of all the configurations, calibration curves etc. This database can be backed up on demand or automatically so a working copy is always available. It can be copied to any other Serendipity Blackmagic as a whole database or as individual items.

* This applies to any output characteristics. If any changes are required to the imaged file e.g. changing of plates, resolution etc. then the file will need to be submitted again from the RIPMonitor.

Installation

Overview

This section describes the installation process for each platform in turn. The Software is supplied on one CD for the Macintosh, Linux and Windows versions. The Macintosh, Linux and Windows versions come with a Dongle and require a dongle driver to be installed. If you have an existing installation of the software you are given the chance to upgrade that installation where all configurations are preserved.

What's on the CD

The CD contains all the elements to run Serendipity Blackmagic and associated programs. They are divided into directories and detailed below.

- Agent - Contains the Agent software for all supported platforms. Choose the subdirectory that matches the required operating system.
- Docs - Contains documentation.
- Dongle - Contains the dongle drivers for Linux, MacOSX and Windows.
- Drivers - Contains the Megarip PPDs for all supported platforms.
- html - Contains the information required for the web browser install. This normally automatically launches your default browser for the install to begin.
- linux - Contains the Serendipity Blackmagic and AppleTalk packages for Linux.
- macosx - Contains the Serendipity Blackmagic package for MacOSX.
- Serendipity Client - Contains the Serendipity Client for all supported platforms.
- testprn - Contains Serendipity internal test prints.
- windows - Contains the Serendipity Blackmagic package for Windows.

Windows Installation

We will make a fresh installation of the windows version step by step. If you are upgrading, see “Upgrade from V2 to V3 - Windows” on page 16

Installing the Dongle Driver

The first thing to do is to install the dongle driver. To do this follow the instructions below.

1. Remove all USB SuperPro dongles.
2. On the CD navigate to the dongle/windows directory.
3. Double click the SSD5411-32bit.exe file to launch the installer.
4. Click Next to continue with the installation
5. Read the License Agreement, select the accept option and click Next to continue with the installation.
6. Choose the folder location for the driver and click Next.
7. Choose Complete and click Next.
8. Click Install to install the driver.
9. Click Finish once the installation is complete.

Installing Serendipity Blackmagic

Once the dongle driver is installed you can install the Serendipity Blackmagic. If you are viewing the browser install with Explorer you can run the installer direct from the browser. If you are using another browser then you need to run the installer direct from the CD.

1. Either select and run the installer from the browser (Explorer only) or go to the CD and navigate to the windows directory and run blackmagic.msi
2. Select Next to continue with the installation.
3. Read the License Agreement and click Yes to continue with the installation. Click No if you do

not agree with the license agreement to terminate the install.

4. Click Next to choose the default installation location. If you wish to change the location, select Browse, choose the location and click OK followed by Next to continue.

note - You can type your own path and the installation program will make the folder for you providing your chosen location has valid permissions. Use back slashes (\) to separate directories.

5. Choose Full Install and click Next to continue.
6. Choose the name for the Start Bar and Icons and click Next to continue.
7. Click Finish once the installation has completed.

Installation of Serendipity Agent

If you are polling a RIP that runs on a Windows based machine, then the most efficient method is to use the Serendipity Remote Agent. This turns as a service on the windows machine where the RIP is and the Serendipity Blackmagic communicates with the Agent to poll and transfer jobs.

1. Go to the CD and navigate to agent/windows.
2. Run agent.msi to launch the installer.
3. Click Next to continue
4. Read the License Agreement and select Yes to continue the installation. Select No if you disagree with the License to terminate the install.
5. Select the installation directory. Choose Browse if you want to install it somewhere other than the default location. If the folder does not exist the installation will create it for you provided there are sufficient permissions in the chosen location. Then select Next to continue.
6. Make sure the Agent component is selected and click Next to begin installation.
7. Click Finish when the installation is complete.

Upgrade from V2 to V3 - Windows

When upgrading Serendipity Blackmagic from version 2 it is strongly recommended that the database and ICC profiles are backed up prior to the install. See "Backing up V2" on page 17

Removing the old dongle driver

First thing to do is to uninstall the current dongle driver and install the new one.

1. Make sure that the Server and Client are not running and remove any dongles connected to the PC.
2. On the CD go to dongle/windows/olddriver/WIN_NT and run the program SETUPX86.EXE
3. Choose Functions - Remove Sentinel Driver and confirm OK when prompted.
4. Once driver is successfully removed quit the program and restart the computer.
5. Once the computer has started again follow the instructions on installing the dongle driver above.

Installing the software upgrade

1. On the CD navigate to the windows directory and run the blackmagic.msi program.
2. Click Next to continue
3. Read the License Agreement and click Yes to continue. Click No not to accept the agreement and exit the install.
4. Select the directory where version 2 is installed and click Next
5. Select Upgrade and click Next.
6. Choose the name for the Start bar and desktop icons and select Next to begin installation.
7. Click Finish when the installation is complete.

Macintosh Installation

Administrator rights required for the installation of the Macintosh version. If you are upgrading from V2 to V3 then see "Upgrading from V2 to V3 - Mac" on page 17.

Installing the dongle driver



From Version 3.2.01 there is no separate dongle driver to install. The driver is installed as part of the general installation package. For versions prior to this please consult the respective manual for your version for installation instructions.

Installing Serendipity Blackmagic

1. Go to the macosx directory and double click the Serendipity Blackmagic.pkg to launch the package installation.
2. Select Continue
3. Read the License Agreement and click Continue
4. Select Agree
5. Choose the location to install the Software and click Continue (If you want a folder that does not exist then you need to create it through the finder).
6. Click Install to begin the installation.
7. Click Close once the install has completed.

Creating Dock Start Icons

To make it easy to start the Server and Client it is recommended that you create a shortcut on the Dock. To do this

1. Navigate to the install directory of the software.
2. Select the Serendipity Blackmagic program
3. Drag the program to the Dock and release in the desired position
4. Repeat the procedure with the Serendipity Client program
5. To remove the dock icons, drag them off the Dock onto the desktop and release.

Upgrading from V2 to V3 - Mac

When upgrading Serendipity Blackmagic from version 2 it is strongly recommended that the database and ICC profiles are backed up prior to the install. See “Backing up V2” on page 17

1. On the CD navigate to macosx and run the Serendipity Blackmagic.pkg
2. Click Continue
3. Read the License Agreement and click Continue
4. Select Agree to continue with the installation.
5. Select the drive and location to install the software into. Choose the folder Serendipity where V2 BlackMagic is currently installed
6. Select Upgrade to begin the installation.
7. Click Close when the installation is complete.

Backing up V2

Before you upgrade to version 3 from version 2 it is strongly recommended that you backup your current version of software. There are a number of methods you can use to do this which are detailed below.

Database Manager

You can use the database manager to create a backup of your configurations. Check the website under support for software updates of the latest version of the client. This has a fix for the database manager. Once you have upgraded to version 34 you can use the Archiver to install the database. See “Archiver” on page 117 for more info.

Saving database and ICC profiles

The other method is to save the database and ICC Profiles directory in another location before you upgrade. The database items are held in a directory called defaultss.dbd in the following location.

- Macintosh - /Applications/Serendipity/Black-Magic/lib/defaultss.dbd
- Windows - C:\Program Files/Black-Magic/lib\defaults.dbd
- Linux/Sun/SGI - ~bmagic/lib/defaultss.dbd

ICC Profiles can be found in the following location.

- Macintosh - /Applications/Serendipity/Black-Magic/lib/ICC
- Windows - C:\Program Files/Black-Magic/lib/ICC
- Linux/Sun/SGI - ~bmagic/lib/ICC

If you make a backup of these you can restore them if the upgrade has problems.

Using the database from V2

The third method for upgrading and preserving the existing configurations is to make a fresh install in a new location leaving the version 2 install untouched.

Then before you start the server for the first time copy the defaultss.dbd and ICC profiles into the new installation. See above for locations of V2 items. As version 3 starts for the first time the database will be converted to the new structure.

Running the software - A Tutorial

Overview

Once the software is installed you need to launch the Server and Client and begin the configuration. The Server must be started first and allowed to complete its initialisation process before the Client can be launched. This is so that the client can connect to the server. Once the server and client are running we will configure a basic setup for a printer and configure the monitoring windows to view jobs processing.

Starting the Server

Plug the dongle in the USB port. Navigate to the directory where the software is installed and launch the Serendipity Blackmagic program. by double clicking on the Server icon.



Serendipity Blackmagic

The server window will appear showing information about the server software and the initialisation process will commence.

Starting the Client

Once the server has completed its initialisation you can start the client. To do this navigate to the directory where the software is installed and launch the Serendipity Client by double clicking on the Client icon.



Serendipity Client

This should connect to the server that is already running and display the factory default Monitor window in the centre of the screen. From here you can

begin to configure the system or load a pre-configured setup.

Configuring manually

You can choose to configure your system manually or import a database and Monitor setup that has already been configured. (See “Archiver” on page 117 for importing a database and “Monitor” on page 27 for loading a pre-configured view.) This section will take you through the process of setting up a basic configuration to print a file to a printer and monitor the job through the process. For more detailed information about specific modules look at the relevant section of the manual. The factory default Monitor currently only has system queues. We need to configure specific queues for your process.

There are three sections that we need to configure in order to process jobs from the RIP to the printer. These are a RIP where we poll the jobs, a Pagesetup where jobs are processed and an output where the print job is sent. Before we create a Pagesetup we must first create an output as each Pagesetup must be linked to valid output.

There are two sections that we need to configure in order to process jobs to a printer. These are a Pagesetup where jobs are processed and an output where the print job is sent. Before we create a Pagesetup we must first create an output as each Pagesetup must be linked to valid output.

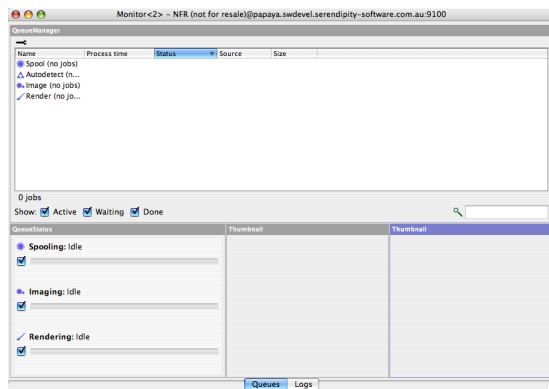
From the Serendipity Client select the Workbench from the Application menu. Select the Output from the data types list and create a new output. The name Untitled should be highlighted, if not select it until it becomes highlighted. Type a new name and press enter. This name will appear in the Pagesetup. Then we need to configure the output to your requirements. First, select the appropriate driver for your printer from the pull down list of licensed modules in the Queue section. Then choose a destination driver from the Destination section and enter the appropriate information, e.g. the IP address of the printer. See “Output” on page 55 for more information on the options. Save the setup.

Once you have an Output configured and saved, choose Pagesetup from the Data types list and create a new one. This will automatically select the Output you created above. If you have more than one output it will select the first one in the list. Again the name Untitled should be highlighted so type a new name and press enter. Configure the Pagesetup to match

your requirements. Initially the most important parts are to configure the resolution and colour space. The settings available are based upon the Output driver selected. See the Pagesetup section on page 59 for more information on the options. Once you have your base configuration set up choose File -> Save.

Now that you have configured the output and processing parameters you need to setup a RIP (if you are taking post RIP data) so that files can be displayed and submitted for processing. Select RIP from the Data types list and create a new one. A warning message will appear telling you that there is no RIP driver selected. Press OK to dismiss this message. The name Untitled should be highlighted to type a new name for the RIP polling queue and press enter. Select the appropriate RIP driver that matches your RIP, the polling method and path and save the configuration. See "RIP" on page 85 for specific details on the options available.

Once the base configuration is completed the Monitor needs to be configured so that jobs can be managed throughout the system. From menu choose WInow -> Monitor (if the Monitor is not running select Application -> Monitor). The basic factory setup has a QueueManager, Queue Status, Thumbnails and Logs that are set to look at default queues. These are configured across two tabs.



The QueueManager at the top needs to be configured to look at the Spool, Auto detect, Image, Render and new printer (output) queues so that can monitor and manage jobs through the system. To do this follow the steps below.

1. Right click in the QueueManager and select Configure -> Queue Order.
2. Select all the Queues on the left and drag them across to the right list at the bottom.
3. Click OK.

Then we need to configure the Queue Status in the bottom left corner. These monitor the jobs progress

on a particular queue. To do this follow the steps below.

1. Right click on the Queue Status window (bottom right) and select "Queue Order"
2. Select the Render, Spool and new printer and drag them over to the right side. (No need to monitor Auto Detect here).
3. Select the Spool in the right list and drag it to the top of the list. The order should be Spool, Image, Render, Print.
4. Click OK.

The Monitor now has a basic setup. You can test it out by printing an internal test print. Choose Test Prints from the Application menu, select the Quickcal and your printer and click Submit. You should see the test print move through the various queues and be sent to your printer.

Next we need to configure a RIPMonitor. We will do this in a new tab. At the bottom where the tabs are right click and choose New Tab. Enter the name RIP Queues and press OK. This creates a new blank tab and selects it. Then select layout and choose Add RIPMonitor from the list of modules. This creates a new RIPMonitor and places it in the top left corner. You will see your RIP that we configured earlier. To make the window bigger follow the steps below.

1. Choose layout > edit
2. Select the bottom right corner and drag it to fill the tab.
3. Select layout > Use
4. Click on the spanner to show the toolbar.
5. If you do not see any jobs, click on the poll button three times.
6. Adjust the headers by dragging them to resize to fit the column contents.

The RIPMonitor displays the jobs from the configured RIP Queue. Double clicking a job expands it to show the plates. You can select one or more jobs to submit to your printer which you can monitor and manage through the system.

You can move tabs around into your preferred order by selecting one and dragging it to a new location on the tab bar. Create new tabs as required adding various modules to customise your look.

Default Configurations

There are some default configurations (databases) that can be installed using the Archiver. These can be downloaded from the Serendipity Software website from the support section.

Serendipity Blackmagic Server

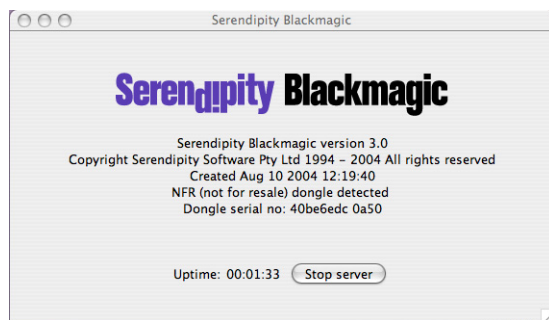
Overview

The server runs on the main machine where the dongle is installed. This handles the processing of all jobs through the system and must be started before the Client is launched.

As the Server starts it checks to make sure a valid dongle is installed on the machine and checks which modules are enabled (licensed). It calculates the speed of the machine that it is running on and checks the integrity of the database before loading it. Once the server is up and running a clock keeps a track of the duration that the server has been running for. The options available for the server are shown below.

Server options

Once the server is running the window below displays the server information and various options.



Startup Options

- Start server on launch - When this option is ticked the server will start once the application is launched.
- Restart server after crash - This option restarts the server after a crash.
- Start as slave - This allows you to run the server as slave device. See “Cluster Manager” on page 115 for more information.
- Start in safe mode - This starts the server but does not process any jobs or poll any rips. This is a maintenance mode that allows you to manage configurations if they become corrupt or configured incorrectly. Once maintenance is complete the server must be restarted again in normal mode.

File menu

- Stop server - Stops the server from running without quitting Serendipity Blackmagic.
- Start server - Starts the server if it is in a stopped state.
- Restart server - restarts the server.
- Close - Close the window. If the Server is running you are warned and asked to confirm Server shutdown.
- About - Shows information about the server. Clicking more/less info shows or hides valid dongle options including the versions of the current drivers.
- Quit - Does the same as close.

The Serendipity Client

Overview

The Serendipity Client is a Graphical User Interface which is used for configuration, maintenance and monitoring of the Serendipity Blackmagic server. The Client can be installed and run locally on the same machine or from any supported computer on the network using TCP/IP protocol. There is no limit to the number of clients that can be connected to the server. Each Client will have its own settings specific to the user.

Once installed the Client connects to a Serendipity Blackmagic server and loads the settings from the server into the Client interface. Any Client can access all of the job management and view the current status. The configuration can be open to all users or protected with a password which would prevent changes.

Look and Feel

The look and feel of the client follows a common theme and functionality. Any list can be ordered by selecting the title bars at the top of it. They can also be resized by clicking and dragging the dividers between titles. Anywhere there is a chooser to select an item from the database there is a search field indicated by a magnifying glass. Entering text in here filters the list showing only the items that match. You can also invert the search with `cmd+shift+i` (Mac) or `ctrl+shift+i` (windows). Inverting the search will hide the items that match. The search box turns black to indicate inverse search is selected.

There are also many ways to complete the same task such as configuring a Pagesetup from the QueueManager. Many options available using the right mouse click to bring up other menus. This will vary depending on the section of the interface where the mouse is.

There are three main sections to the client. The Workbench is used to configure the various parts of the server. This is used to create queues, set up input paths and various calibration functions. The Monitor is used for managing and viewing jobs as they pass through the system. Then there are the Applications that add functionality and provide tools for managing the server. There are also various menu options that have system utilities and system preferences.

Workbench

This is where the main configuration takes place. You can set up RIP inputs, Pagesetups, output paths, colour sets and curves. When items are created or changed in the Workbench they are saved to a database. This database is read by the server each time at start up. It can be backed up and copy to other servers. The Workbench has a split window. One side shows data types (which are database groups) and allows you to select items from the database, and the other displays the items information allowing you to make changes. The split window can be moved by selecting it and dragging it to resize as desired. You can also change the split view between horizontal or vertical depending on your preference by selecting the View option from the menu. The Data types section has two views. Browse allows you view and select any of the database items to display them. Clicking the tab with the magnifying glass flips to a search window allowing you to find any item that matches a search text entered.

The view of the Workbench will vary depending on the items selected. Simple items such as DotGain Curves are single items without references. The view allows you to create or adjust a single item and save it. Other items such as Pagesetups are more complicated with multiple configuration panels and multiple references. References are other items in the database that have been selected and saved with another item. When you select a Pagesetup for example there may be a reference of a Gradation Curve. These references can be selected and configured as needed or hidden from view.

With items that have more than one configuration module such as Pagesetups, they are split into logical areas. Each panel can be colour coded or hidden by clicking the cross (x) in the upper right of the box. This does not disable the panel items but hides it from view to make them simpler. You can hide items that are not being used for example. If you want to bring the panel back again right click and select Jump To Selection and choose the panel to jump to. The ones in brackets () are hidden. Items that you can choose in the Pagesetup such as a Curve or Paper Profile are references. These can be edited directly or new ones created, selected and saved with the Pagesetup.

Menu Items

- File

- New - Create a New Item in the database.
- Save - Save changes to the database.
- Duplicate - Make a copy of the currently selected Item.
- Revert - Reload the last saved version of the currently selected item.
- Delete - Delete the currently selected item.
- Show Orphans - Shows any item that is currently in the database but not being used by a Pagesetup or RIP.

Usage: This is used for cleaning up a database and deleting items no longer used. Selecting it will search through the database and then display all items that are considered orphans. You can select an harpoon, view its configuration and choose to delete if needed. This way you know that you are not deleting items that are in use.

- Edit
 - Undo - Undoes the last change. There are multiple undo's and this is configured in the System Settings.
 - Redo - Redoes the last undone change. There are multiple redo's depending on the undo status and setting in the System Settings.
- View
 - Split Vertical - changes the view so that the Data types and Items are displayed across the top of the window and the selected item is displayed across the bottom.
 - Split Horizontal - Changes the view so that the Data types and items are displayed on the left of the window and the item selected is displayed on the right.
 - Show Usage - This displays the items that the currently selected item uses i.e. they are linked together. For example the Pagesetup uses Outputs and Gradation Curves and Paper Profiles.
 - Reverse Usage - This reverses the Show Usage above. i.e. it shows what uses it. For example you can select a Gradation Curve and see what, if any Pagesetup uses the curve. (This used to be called Show Referers).
- Window
 - This shows any window of the Client that is open and it can be selected to bring it to the front.
- Help

- What's This - Select this and then click on any part of the interface to get a short help.

- Contextual Menu

- Add to Archive - Only available from the contextual menu (right click) it adds the selected items into a new Archive window. You can then add to this archive and when finished just save it in the normal way. See "Archiver" on page 117 for more information.

Folders

Folders are a great way to organise your configurations if you have a lot of items. You can create folders for any list item e.g. your Pagesetups and drag existing items into the folder or create new ones inside. The folders are based on a Client use which means that each user can have their own folder setup if they desire.



The folders are stored internally inside our database and are not real physical folders. You can only create, remove and manage items from within the Serendipity Client

Below shows you how to create folders and the various options available.



How To Create and Manage folders

You can create a folder in two ways. The first way is

1. Select a data type from the Workbench. e.g. Pagesetups.
2. Right click in the Item list where Pagesetups are displayed.
3. Select New Folder.
4. Highlight the name and type the name you wish.
5. You can now drag items from the same list into the new folder.

The second way to create a folder is

1. Select a data type from the Workbench e.g. Pagesetups

2. Select one or more existing items from the list.
e.g. some Pagesetups
3. Right click and choose “New folder with selections”.
4. Enter the name for the new folder.
5. Add extra items into the folder as desired.

This moves all the items you have selected into the new folder created.

Other options are as follows.

- To remove a folder(s), select the folders, right click and choose “remove folder”.



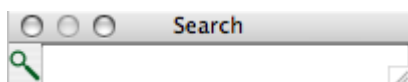
This only removes the folders and not the items within them. Any items listed inside a folder that is removed will be moved to the top level.

- Open selected folder - Opens all selected folders.
- Close selected folder - Closes all selected folders.

Searching

Within a database list of items you can search for items that match. This search is available on any list of items within the Client. These include for example lists of Pagesetups in the Workbench, Gradation Curves or Pagesetups in the submit chooser.

To start a search the focus must be on the list that you wish to search. For example, if you are looking for a Pagesetup called Epson 7800 Premium Luster 720dpi in the Workbench, select the Pagesetup type and either tab or click in the list of Pagesetups. Then type a question mark (?) on the keyboard. (shift /). This will then pop-up a small search box like the one shown.



Enter some text to match the Pagesetup we are looking for e.g. 7800. As you type the items that match are still displayed and those that do not are hidden from view. You can select an item from the

ones still displayed and leave the search filter box still open. This can be useful if you are editing all your 7800 Pagesetups. To dismiss the search box press the Escape key. This will show all the items again but the last one you had selected will still be selected.



You can also invert the search with Shift+cmd+i (Mac) or Shift+ctrl+i (windows). This hides items that match.

Monitor

The Monitor displays jobs before, during and after processing. It allows you to manage jobs through the system, plot their progress and give you feed back from the server and client via logs. You can add modules and configure the look to suit your requirements. A Monitor consists of one or more Tabs. Each tab can be named as desired and a background colour or image selected to personalise it. Modules are added, positioned and sized according to your requirements. The settings are saved per user so each user can create their own preferred view. You can also save your Monitor setup or load a pre-configured one.

The Monitor can be in one of two modes, Edit or Use which can be selected through the Layout menu or by right clicking on the Monitor background.

Edit

This mode allows you to move and resize modules on a Tab. The mouse pointer changes to a cross. You can resize a module by grabbing the corners or sides and dragging to your preferred size. Click anywhere in the modules and drag it to the desired position. As you move modules close to each other they will snap to each other.

Use

This is the normal user mode. It locks the module sizes and position and allows you to configure the modules preferences and manage jobs.

Menu Items

- Layout
 - Edit - Switches the Monitor to Edit mode.
 - Use - Switches the Monitor to Use mode
 - Dynamic Update - Enables or disables updates to the modules while in Edit mode.

- Show Titlebars - Shows or hides a title bar at the top of every module. e.g. QueueManager is displayed above the appropriate window.
- Add - Modules - This adds the various available modules to the Tab. See “Monitor Modules” on page 31 for more information on each one.
- Load - Loads a previously saved Monitor configuration.
- Save As - Saves the current Monitor configuration.
- Tabs
 - New Tab - Creates a new Tab.
 - Rename Tab - Renames the currently selected Tab.
 - Duplicate Tab - Duplicates the current tab and all modules in it.
 - Choose Tab Colour - Allows you to select a colour for the currently selected Tab.
 - Choose Tab Image - Allows you to select an Image for the currently selected Tab. Valid file types are PNG and JPEG.



It is recommended that you do not use a large image as this takes up memory.

- Clear Tab Colour - Reverts to the default colour.
- Clear Tab Image - Reverts to the default colour.
- Remove Tab - Deletes the currently selected Tab.
- Remove All Tabs - Deletes all Tabs.

Re-ordering Tabs

You can re-order tabs by selecting a tab with the mouse and dragging it into a new position. A red triangle appears showing the drop point between two tabs.

Monitor

The screenshot displays the Serendipity Monitor application window. The title bar reads "Monitor - NFR (not for resale)@kiwano.swdevl.serendipity-software.com.au 9.100".

- Fetch back log:** 60 minutes. Includes buttons for "Trim older lines", "Export...", and "Configure filter...".
- Server Log:** A table listing server activity with columns for "Date" and "Message".
- Queue Manager:** A grid of job thumbnails with status indicators (Done, Local TIFF, To-Epsos...). Below the grid are controls for "Show: Active", "Waiting", and "Done".
- Thumbnail:** A preview of a rendered image (a house).
- QueueStatus:** Multiple panels showing the status of different queues, such as "Local TIFF: idle", "Spooling: idle", "Imaging: mill-maize", and "Rendering: tree-cmyk".
- RIP List:** A table listing jobs with columns for "Name", "Size", "Date", and "Path".
- Operations:** A bottom bar with tabs for "Operations", "QManager", "RIP Input", "Server Log", "Softproof", and "Tab 6".

Monitor Modules

Overview

Modules are used for monitoring and managing jobs through the system. They can be added to a Monitor Tab as part of a Monitor layout or selected as a Floating Module where the window is standalone. Modules are added to a Monitor through the Layout menu (the Monitor must be selected). Floating Modules are available from the Applications menu. The available modules are detailed below.

RIPMonitor

This displays the RIPs that have been configured under the RIP section of the Workbench. Jobs that have been successfully polled are displayed showing any plates that are associated with them. These jobs can be submitted to a Pagesetup for processing. The RIPMonitors view can be customised as desired. There are many options available with the RIPMonitor, many of which are available as a context menu (right click). The context menu changes depending on the area you are in when you click. The various options available for the RIPMonitor are described below.

The View

- **Jobs** - This is the large window to the right and displays all successfully polled jobs from the selected RIP.
- **RIP List** - This is a list of all the RIPs that are configured allowing you to select each in turn to display the jobs on that RIP. This is shown on the left side of the window and can be shown or hidden as desired.

RIP Menu - This is a pull down list shown at the top of the window of RIPs configured and shows the current selection. This can be shown or hidden as desired.



Hiding this will also hide the Polling ON/OFF pull down selector. You can turn the Polling on or off from the right mouse button or by selecting the Toggle Polling check box next to the poll button on the toolbar.



If you only have one RIP configured then it is better to hide the left RIP list and top RIP menu as there is nothing else to display and it gives you more space to view your jobs.

Context menus

- **Poll** - Initiates a manual poll of the selected RIP.
- **Toggle RIP polling** - Turns the polling on or off. When the RIP is in the off state the name in the RIP list turns red.



The RIP jobs list is cached and sometimes requires clearing. To do this turn the RIP off and then on again. Then poll the RIP three times.

- **Show RIP Menu** - Shows or hides the RIP pull down list at the top of the window.
- **Show RIP list** - Shows or hides the RIP list on the left.
- **Edit RIP** - This gives you the ability to edit the RIP selected. You can choose to edit a single section or all sections of the configuration. Alternatively you can create a New RIP.
- **Colour Scheme** - Choose a colour for the module.
- **Font Options** - Choose the preferred font size.
- **Language Encoding** - Choose the language encoding for your operating system. This allows jobs to display correctly in the RIP-Monitor in the native language.

Context Menu options available for jobs.

These options are only available if a job is selected and are additional to the ones above. They are also available from the Toolbar. They are as follows.

- **Expand Jobs** - Shows the plates associated with the selected jobs.

- Collapse Jobs - Hides the plates associated with the selected jobs.
- Submit - Submits the selected jobs for processing. Selecting this brings up a chooser for you to select one of more Pagesetups to send the files to.
- Submit for De-imposition - Submits the selected jobs for de-imposition.
- Virtual Press - Adds the selected jobs to the Virtual Press. See Virtual Press on page 32.
- Group By Job - Keeps the plates in their respective job group when they are copied into the Virtual Press.
- All Jobs - Show both page and imposed jobs.
- Impose Jobs - Show only imposed jobs.
- Page Jobs - Show only single page jobs.
- Search - Search for jobs. Entering text will show only jobs that match. This matches any characters displayed in the jobs section. You can also invert the search with cmd+shift+i (Mac) or ctrl+shift+i (windows). Inverting the search will hide the jobs that match. The search box turns black to indicate inverse search is selected.

Effects - When you have multiple jobs selected to be copied into the Virtual Press, with this option ticked they are kept as their respective jobs. If you have the option disabled then all the jobs and plates selected are copied into as one job. This is useful if you are polling a RIP and the plates are shown as separate jobs with one plate each.

Buttons

- Poll - Initiates a manual poll of the selected RIP.
- Submit - Submits the selected jobs for processing.
 - Hold after imaging - Places the job on hold in the Rendering queue. i.e. after imaging has completed successfully. This option is available in the submit window.
- Virtual Press - Adds the selected jobs to the Virtual Press.
- Group By Job - When adding more than one job to Virtual Press with Group By Job option enabled the jobs are added to the history i.e. as separate jobs. If the option is disabled then the jobs are added as a single job i.e. all plates merged.

Usage - Disable the Group By Job option when the plates are displayed as separate jobs and you wish to submit them as a single job merged.

- Show - This option is available when the RIP selected is a supported Imposition RIP. i.e. Fuji Celebra or Scitex Brisbane. the options available are



You can enter some text that would only show in certain jobs. If you have jobs that have a common name or size you can have a RIPMonitor dedicated to viewing these job and enter the viewing these job and enter the text that is common in the search field to display only those jobs.

Virtual Press

Virtual Press gives you the ability to manage the plates of the job. You can drop plates, change plate colours and merge plates from other jobs. If a job contains an unallocated plate i.e. no colour, then you need to use the Virtual Press to allocate a colour for it (unless a replace colour set is selected that contains the plate.) The available options for Virtual Press are shown below.

History Options

The history keeps jobs that have been imported into Virtual Press. Any changes or additions are kept so the jobs can be re-submitted at any time without having to recreate the changes again. The history is held while the Client is running. Once the Client is quit the history is purged.

- Show History - This shows or hides the history window on the left.
- Arrows - Use the arrows to move up or down the jobs in the history window.
- Preferences - There are a couple of preferences available for the history which give you options after a successful submit. These are
 - Goto Next History - Moves to the next job in the list of the history after submit.

- Delete Current History - Deletes the job from the history list after submit. This is only available if Goto Next History is enabled.
- Dismiss VirtualPress - If enabled the VirtualPress will automatically dismiss after the job has been submitted.
- On Last History - This is used by the Dismiss VirtualPress option so it will dismiss after the last job in the history column has been submitted. Otherwise the VirtualPress will dismiss after each job.
- New - Create a new job in the history. This is an empty job so that plates can be dragged in from the RIP list to create a new job.
- Rename - Rename the selected job. Selecting the job name and hovering over it a short while will also enter edit mode allowing you to change the name.
- Delete All - Removes all jobs from the history list.
- Delete - Removes the currently selected job from the history list.
- Submit For Deimposition - Submits the currently selected job for de-imposition.
- Quick Submit - Shows a pull down list of the configured Pagesetups. The Quick Submit button submits the currently selected job to the Pagesetup shown.
- Choose - Allows you to choose a colour from the colour libraries. This is only available for special plates. You can also double click the plate in the list to choose a colour from the libraries.
- Submit - Submits the currently selected job for processing. This displays a chooser allowing you to select one or more Pagesetups to send the job to.
- Hold after imaging - Places the job on hold in the Rendering queue. i.e. after imaging has completed successfully. This option is available in the submit window.
- Clear - Removes the selected plates from the job.
- Clear All - Removes all plates from the job.
- Dismiss - Closes the Virtual Press window.
- Tint - Adjust the tint value of the special plate.



You can re-order the plates in a job by selecting the plate in the list and dragging it to a new position. The order of the list dictates the order that the plates are merged and can effect the job where plates have attributes like Opacity.



How to adjust the tint value of a special colour

You can adjust the Tint value or intensity of any special colour. This can be done by editing the Special Colour Set for a permanent change. Or to make an adjustment for a single instance simply double click on the tint value in the Virtual Press and enter a new value. This is stored in the history with the job but the colour in the library is not affected.



If you are unsure which set a particular colour is then use the search box in the upper right of the Special Set Chooser. This searches all sets for matches. NOTE: The search is case sensitive. The sets that match are displayed in the list on the left. Select each in turn to find the set you want and click OK.

- Revert - Reverts a colour back to its original state.

QueueManager

The QueueManager views the jobs in the system after they have been submitted. You can view one or more queues simultaneously, showing the jobs progress through the system. From the QueueManager you can manipulate your job in a number of ways such as holding, promoting and deleting. The various options available are shown below.

View Options

You can view a lot of information about each job as it passes through the system. You can choose the properties of a job you wish to view by selecting

which columns to show and which to hide. This is achieved by right clicking in the column header bar and choosing the properties you want to display. The columns can be re-arranged in the order that you prefer by selecting the title and dragging it along the bar to the desired position. The options available are shown in table 1

Table 1: QueueManager View Options

Property	Description
Name	Job name
Process Time	Time taken to process the job
Status	The Jobs current status
Source	Where the job was submitted from.
Date	The Date and time the job was processed.
Pagesetup	The Pagesetup the job was processed on.
Queue	The Output queue the job was processed to.
Size	The size of the job. (Disk space used)
Width	The width of the job
Height	The Height of the job.
DPI	The imaged resolution of the job.
Output Colour Space	The Colourspace of the output file.
Copies	The number of copies of the job
Screening	The screening applied to the job
Thumbnail	Show a thumbnail of the jobs.
JobID	The ID of the job
Node	The server or slave that the job was processed on

Table 1: QueueManager View Options

Property	Description
Signature Group	The Signature Group used to de-impose the job.
Signature	The Signature of the group used to de-impose the job
Page	The Page number of the job
Publication	The publication name
Notes	The number of Notes saved with the job

Actions

There are a number of actions that can be performed on a job. These are available as a context menu (right click) or by opening the tool bar (clicking the spanner) at the top of the QueueManager. You can choose which actions to show on the Tool bar by right clicking and turning them on or off as desired. You can also select the "Configure Toolbar" option which displays a chooser. On the left are the toolbar items that are available and on the right the items that are showing. You can move items between lists in a number of ways. Either selecting the item and clicking the arrow in between the list, double clicking the item or dragging the selected items between the two lists. You can then choose the order that they are displayed by moving items around in the "showing" list. Options become available when one or more jobs are selected. Only valid actions for the job status are shown. e.g. The action to "Nest Now" is only available when the job has a status of "waiting to nest". The options are

- Pause/Resume Printing - Pauses/releases the current queue. Jobs waiting in a paused queue are displayed in Red.
- Submit - Submits the selected jobs to the printer. Available when the status is "Done"
- Job Info - Gets information about the currently select job. The job info contains all details of how the job was processed and displays a thumbnail preview of the job and the configuration etc. You can print the Job Info by right clicking on the Job Info window and selecting Print. This will choose a system printer.



You can also get the JobInfo and thumbnail by double clicking on the job. If you have multiple jobs selected then the job info window will display info about all of them. As this can be quite wide you can scroll horizontally by holding the shift key and using the mouse wheel. If you hold the control key (windows) or cmd key (mac) and scroll with the mouse wheel then the font size will change.

- **.Modify** - Allows you to modify various attributes of the job. These are
 - Name - Change the name of the job.
 - Publication Name - Change or add a publication name.
 - Page number - Change the page number of the job.
 - Copies - Change the number of copies of a job.
 - De-Imposition - Change or assign a Signature group and signature to a job.
- **Cancel** - Cancels the currently processing jobs.
- **Delete** - Deletes the currently selected jobs.
- **Hold** - Holds the currently selected job. Available when the status is “waiting”.
- **Release** - Releases a currently selected held job.
- **Retry** - Retries a job that has failed.
- **Queue Order** - Allows you to configure which queues are viewed by the QueueManager. Selecting this presents you with a chooser window showing two lists. The “Available” queues on the left and the “Showing” queues on the right. To move queues between lists you can either select one or more entry and drag from one list to another. Alternatively you can double click an entry to move it to the other list. The order of the queues in the “Showing” list determines the order of the queues when they are sorted by any column apart from Queue. (When Queue is selected as the sorted column then they are sorted in alphabetical order.) Queues are sorted by clicking on the title bar.

- **View Imaged** - Views the imaged file in the Soft Proof application of currently selected jobs.
- **View Rendered** - Views the rendered file in the Soft Proof application of currently selected jobs.
- **Render again** - Submits the currently selected jobs to the rendering queue for processing. Available when the status is “Done”.
- **Nest Jobs** - Submits the currently selected jobs to be nested. This sends the job to the rendering queue to re-render for a nest. The Collating section of the output is used for the nesting parameters.
- **Nest Now** - Nests any job waiting to nest. This is available when the selected job has a status of “waiting to Nest”. Only one job needs to be selected and all jobs that have the waiting to nest state will be nested.
- **Duplex Now** - Duplexes any job that has a state of “waiting to duplex”. Only one job with that state needs to be selected for all job to be duplexed.
- **View Errors** - Views the errors of the selected job if the status is “Failed”.
- **Rush Jobs** - Moves the currently selected jobs to the top of the current Queue for processing next. The status must be “waiting”. Jobs that are currently being processed are completed first.



This moves the jobs up the current queue only. Therefore if the job is in the Imaging Queue and Rush Jobs is selected the job moves to the top of the Imaging Queue. Once complete it will move to the bottom of the Rendering Queue. You will need to rush jobs again to move it to the top of the Rendering queue.

- **. Move To Pagesetup** - Moves the currently selected jobs to another Pagesetup. This will send the jobs to the rendering queue again with the attributes of the selected Pagesetup. You can view the Pagesetup, edit it or create a new one prior to submitting the job.

- Copy to Pagesetup - Copies the selected jobs to another Pagesetup. This will send the jobs to the rendering queue again with the attributes of the selected Pagesetup. You can view the Pagesetup, edit it or create a new one prior to submitting the job.
- Show - You can show certain jobs in the QueueManager. You can select any or all of the options to filter the jobs. Choose between
 - Active - Jobs that are currently processing.
 - Waiting - Jobs that have a state of Waiting.
 - Done - Jobs that have completed.
- Search - Find jobs that are in the queue. Enter the text to search and all jobs that match the text are displayed. All elements of the job are searched, not just the name. This can act as a filter. You can also invert the search with cmd+shift+i (Mac) or ctrl+shift+i (windows). Inverting the search will hide the jobs that match. The search box turns black to indicate inverse search is selected.
- Show Idle Queues - Display Queues even if there are no jobs in them. Without this selected only jobs are displayed. This is only valid if more than one queue is showing per QueueManager.
- Group By Queue - Groups the queues together when sorting. i.e. if you are sorting by job name then the QueueManager is sorted alphabetically per queue. If it is not enabled then the whole name list is sorted alphabetically ignoring the queues. This is only valid when more than one queue is showing per QueueManager.
- List Colour - Allows you to pick a colour for the whole QueueManager list.

Usage - Select a colour for the list and turn off "Group by Queue". This will display alternating lines of colour in the list making it easier to see jobs and their attributes.

- Colour Scheme - Allows you to pick a colour for the QueueManager window.
- Font Options - You can change the font size of the QueueManager and the jobs displayed.
- Edit Output - Allows you to edit the output of the currently selected job. If no job is selected then you can only make a new one.



You can enter some text that would only show certain jobs. If you have jobs that have a common name or size you can have a QueueManager dedicated to viewing these jobs only. Enter the text that is common in the search field to filter the jobs.

- Refresh Queues - Updates the Queues.

Configure - There are a number of configuration options available from the context menu. These are shown below

- Queue Colour - Allows you to select a colour for the queue. The Queue colour of the selected job changes. This colour is carried through to the Queue Status window.
- Queue Order - Allows you to configure which Queues are viewed and their order. See Queue Order earlier on page 35.
- Print Gallery Mode - This displays the jobs in the QueueManager with a thumbnail, name, queue and status. You can change the size of the thumbnail from small, medium and large by selecting Apple + to increase size or apple - to decrease size. (control + and control - on windows)



This edits the Output and not the job. For the changes to be effective you would need to submit the job again for printing or rendering depending on the attribute changed.

- Edit Pagesetup - Allows you to edit the Pagesetup of the currently selected job. If no job is selected then you can only make a new one.



This edits the Pagesetup that the job was processed with. For the changes to affect the currently selected job you will need to re-render or re-image the job depending on the attribute changed.

- Edit RIP - Allows you to edit the RIP of the currently selected job. If no job is selected then you can only make a new one.



This edits the RIP of the source file i.e. where the job was submitted from (if it was a configured RIP). The job would need to be re-submitted again or the polling refreshed for the changes to be effective.

- Edit Signature Group - Allows you to edit the Signature Group of the currently selected job. If no job is selected that has been submitted through the deimposition module then you can only make a new one.



This edits the Signature Group that was used for de-imposing the job. For the changes to be affect the currently selected job it would need to be re-submitted for de-imposition again.



When you are editing any of the items from here you are editing the queue for all future jobs, not just altering the conditions for the currently selected job.

- Export - Allows you export data from the currently selected job. The available formats are
 - CIP3 - Exports job information to a file in CIP3 format at the selected resolution. Then choose
 - Version 2.1
 - Version 3.0
 - Rotation
 - Surface - Choose front or back
 - Compress Preview - Choose if the preview should be compressed.



Some presses are unable to files in compressed format.

- PDF - Exports the selected job in PDF at the resolution entered. Then choose
 - Compression - JPEG, ZIP or LZW. For JPEG and ZIP you also have control on the level and quality of compression.

- Postscript (separated) - Exports the current job as a separated PS file.
- Tiff Multichannel - Exports the current file as a multichannel Tiff.



The CIP3 export options allow you to choose the orientation before you export it. You can select orientation of 90, 180 and 270 degrees.

Queue Status

This module is a progress meter that shows current status of jobs active on the selected queue. You can change the look of the Queue Status and the Queue it is monitoring. The options are available by right clicking on the window and are detailed below.



Not all options listed below are available on all Queue Status windows. Some are only available while the job is currently in progress.

- Cancel Job - Cancels the currently active job. This is only available when a job is active.
- Job Info - Gets info about the currently active job. This is only available when a job is active.
- Pause Processing/Printing - Pauses the Queue so no further jobs will process. Any job currently active in the queue will finish. The text in the window changes to red showing it to be in a paused state.
- Resume Processing/Printing - Takes a queue out of a paused state so that jobs waiting to process through that queue can resume.
- Change Queue - Allows you to choose which queue the status window will show.
- Edit Output - Allows you to edit the output or create a new one. You can only edit if the queue is showing an output. i.e. if the queue is set to Spooling, Auto detect, Imaging or Rendering then you can only make a new output.
- Thumbnail - Turns on/off a mini thumbnail on the (printer queues only) which gives an indication how much has printed.

- Font Options - Allows you to change the size of the text.
- Queue Order - Select which queues you wish to view. Selecting this presents you with a chooser window showing two lists. The “Available” queues on the left and the “Showing” queues on the right. To move queues between lists you can either select one or more entries and drag from one list to another. Alternatively you can double click an entry to move it to the other list. The order of the queues in the “Showing” list determines the order of display.
- increase/decrease indent - Increases or decreases the size of the queue status in view.



Double clicking the Queue Status window displays a floating QueueManager window showing that queue. This has the full functionality of the standard QueueManager.

Thumbnail

This displays a thumbnail of jobs as they are imaging and rendering. The Thumbnail is updated with the progress at the same time as the imaging or rendering queue status is updated. There are a couple of options available from the contextual menu (right click) as follows.

- Show Imaging - Show the imaging thumbnail.
- Show Rendering - Show the rendering thumbnail.
- Normal thumbnail - Displays a small thumbnail.
- Large thumbnail - Displays a large thumbnail.



This means that you can display two thumbnail windows and configure one to be the imaging thumbnail and the other to be the rendering thumbnail.

DropZone

A DropZone is a place where you can drag and drop files for processing. You select Pagesetups or Pagesetup pools to add to the DropZone. These DropZones take the same file formats as the drop folder. See DropFolders on page 60 for more information. The available options are

- Add DropSpot (Pagesetup) - Select one or more Pagesetups to add to the DropZone. Selecting this displays a chooser window showing all available Pagesetups.
- Add DropSpot (Pagesetup Pool) - Select one or more Pagesetup Pools to add to the DropZone. Selecting this displays a chooser window showing all available Pagesetup Pools.
- Remove DropSpot - Remove the selected DropSpot. This option is only available when right clicking over a DropSpot.
- Edit Pagesetup - Allows you to edit a section of the selected Pagesetup, all sections or create a new one.
- Set Copies - Set the number of copies for every job dropped on the zone.
- Set Colour - Select a colour from the list for currently selected DropSpot
- Increase DropSpot Inset + - Increases the size of the DropSpot.
- Decrease DropSpot Inset - - Decreases the size of the DropSpot.
- Reorder DropSpots - Displays a reorder window. Select one of the more DropSpots in the list and drag them to a new location or use the up and down arrow keys to move the position. Click OK when finished.
- Font Options - Allows you to change the size of the text.

Status

Shows the current disk status (usage) of the server processing areas such as spooling, temporary directories and DropFolders. You can change these disk locations by editing the etc./ss.conf file in the installation directory. See... The options available are

- Update - Checks the disks and updates the view.
- Preferences - Sets the Status window preferences. Available items are
 - Update interval - Sets the time between updates.
- Colour Scheme - Changes the colour of the Status window.
- Font Options - Allows you to change the size of the text.
- Question - Used for messages that ask questions e.g. "Job contains unassigned colours. Do you want to add them to Virtual Press"
- Information - Used for messages that tell you something. e.g. "Job has a duplicate plate".
- Warning - Used where the message is more important. Usually the Client failed to do something but operation can still continue. e.g. "Failed to save new password. Old one will continue to be used."
- Critical - Used for serious errors that will most likely effect operation. e.g. "Failed to load rendering dll". You will normally need to take action to rectify this before continuing.
- Search - You can search the log for jobs or messages. Enter the text of characters that you want search and the ServerLog only displays the lines that match the search.

ClientLog

The ClientLog displays any messages that pop up during normal Client operation. There are different levels of message from informative to serious errors. All messages are held for a user determined length of time. There are various options available with the ClientLog which are shown below.

- Fetch back log - Displays the log for the time specified e.g. retrieves and displays the last 4 hours of messages. Choose the time from the pull down list.
- Trim older lines - Trims the log based on the time selected in Fetch back log. i.e. if this is set to 60 minutes then the log file is trimmed back so that only the last 60 minutes remain.
- Export - Allows you to export the log to a file.



When you export the log file you can choose to export everything that is in view or select entries to export. Use the filtering options and fetch back log choice to limit the view before exporting. Selecting export displays a chooser allowing you to enter a name and select the location to name and select the location to save the file. You can also choose to save the file as a html or tab delimited text file.

Filtering options

You can choose which message to display in the log and which ones to hide by selecting one of more of the following filter. All messages are still saved to the log.

Display Options

You can choose part of the message to show by selecting the columns to display and those to hide. By right clicking over the column headers and you can turn the columns on or off. You can also change the order of the columns by selecting the column headers and dragging them to the desired position. The available options are

- Type - The level of the message reported. i.e. Question, information, warning or critical.
- Date - The time that the message was reported.
- Source - This is the Module or Application that reported the message. e.g. Soft Proof
- Summary - A summary of the message that was reported.
- Command - Internal command that is used to communicate messages to and from the server by the Client.
- Error - An error code reported by the server. This is useful for debugging problems.
- Action - The Action that was taken by the user in response to the message. i.e. the button that was pressed when the message popped up.

ServerLog

The Server log shows messages from the server. The options are

- Fetch back log - Displays the log for the time specified e.g. retrieves and displays the last 4 hours of messages. Choose the time from the pull down list.
- Trim older lines - Trims the log based on the time selected in Fetch back log. i.e. if this is set to 60 minutes then the log files is trimmed back so that only the last 60 minutes remain.
- Export - Allows you to export the log to a file. Selecting this displays a dialogue window with various options as shown below.
 - Destination File - Choose the filename and location where the file is to be saved. Use the Browse button to navigate to your preferred location.
 - Message Lines - Choose to save all messages in the log window or only those that are highlighted. This way you can save just a couple of lines if desired.
 - Format - Choose the format to save the file in either html or plain text. The plain text file is saved with tabs characters between the columns.
 - Cancel - Revert back to the server window without saving anything.
 - Save - Save the file based on the settings selected.
- Configure Filter - You can filter messages in the log. Choose between the following
 - Completed Jobs - Show messages about completed jobs.
 - Polled jobs - Show messages about polled jobs.
 - Errors - Show errors from the server.
- Search - You can search the log for messages. Enter the text of characters that you want search and the ServerLog only displays the lines that match the search.

Display Options

You can choose the parts of the message to show by selecting which columns to display and which to hide. Right click over the column headers and you can turn the headers on or off. You can also change the order of the columns by selecting the column headers and

dragging them to the desired position. The available options are

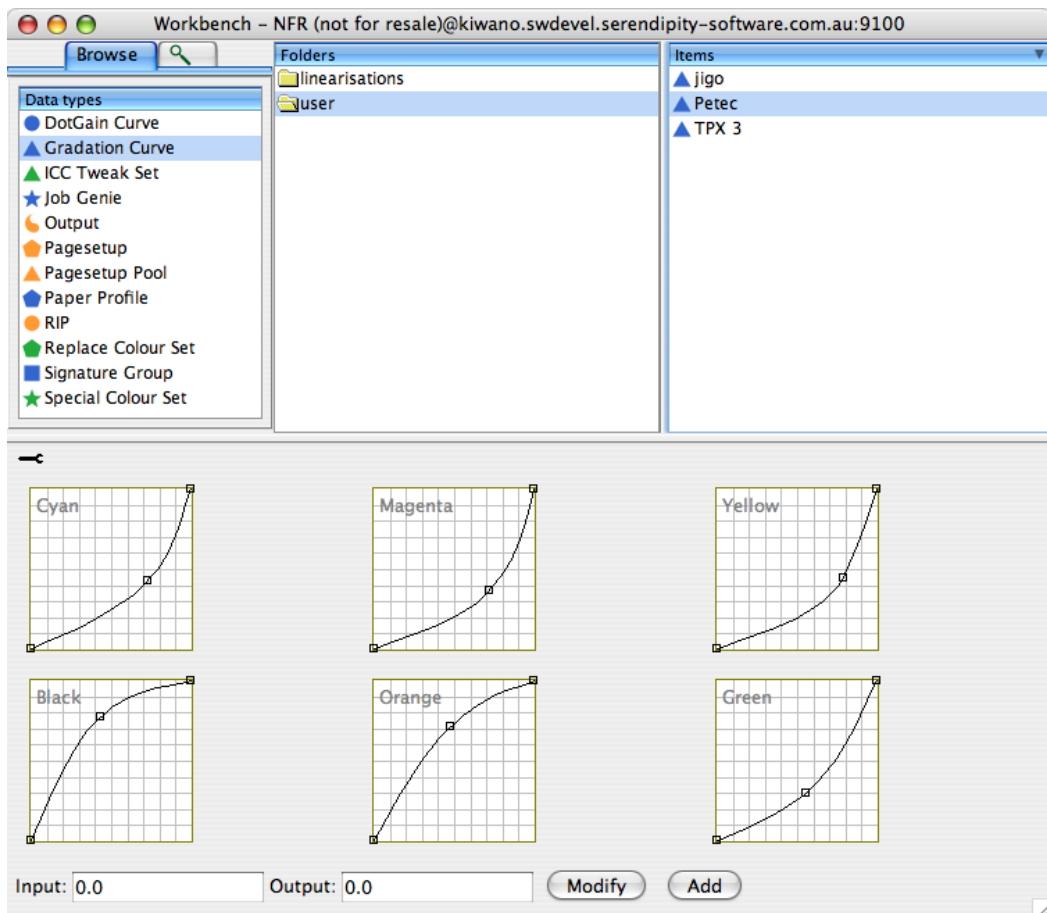
- Module - This is the function that the server used.
- Routine - This is the operation inside the function.
- Date - The time that the server called the module.
- Message - The message that resulted from the routine.

Cluster Status

This is a monitor that allows you to see the current status of any masters or slaves that are running. The options are

- Cluster Manager - Open the Cluster Manager to manage the Cluster.
- Refresh - Update the status.
- Increase Inset + - Increases the gap between the list items.
- Decrease Inset - - Reduces the gap between the list items.
- Font Options - Allows you to change the size of the text.

Workbench



Dot Gain

Overview

A DotGain curve can be used to compensate for or represent dot gain on the final output. You can create and apply a DotGain curve to a Pagesetup to change the output. This may be applied for two reasons. Firstly, after initial calibration you may find that the resultant output is either slightly too dark or slightly too light. A dot gain curve can be applied to the process or specials (or both) to make the print lighter or darker accordingly. The other place that a DotGain curve would be applied is to represent a presses or printing process dot gain on the proof. This in particular is used in Flexographic workflows to better represent the final output on the proof. The available options are as follows.

- Show/Hide Original curve - A green line appears showing where the curve was last saved. This allows you to see where you have edited the curve from.
- Increase Margin - You can increase the margin around the graph area.
- Decrease Margin - You can decrease the margin around the graph area.

Usage - You would need to increase the margin if the handle (end point) from the bezier curve adjustment is outside of the viewable area (window pane). By increasing the margin you are able to see and move the handles. Use the decrease margin option to enlarge the graph area again.

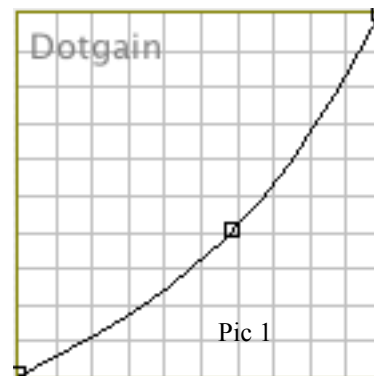
- Dotgain Table - This allows you to enter values manually to adjust or create a curve.

Usage: Select the first value field and enter the value that was read e.g. if you read 7% at the 5% mark you enter 7 in the field. Press the Enter key to enter the value and move to the next value in the column. Once completed close the table and save the curve.

1. Create a new curve. This is created as untitled. Select “untitled” and enter the name that you wish to call the curve.
2. Left click on any point of the curve and drag it to the desired position. The curve produced is a bezier curve which has handles on each end of a line allowing you to manipulate the curve smoothly.
3. Grab one of the handles with the left mouse button to change the curve without moving the fixed position or anchor.
4. Select another part of the curve with the left mouse button and drag to another position.
5. To remove the points, select the anchor point and press the delete key.
6. Save the curve once completed.



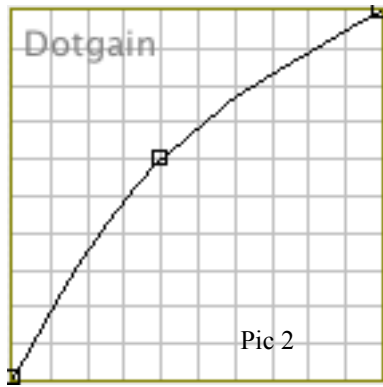
If the print is too dark then create and apply a curve with a slight dip (pic 1). - If the print is too light then create and apply a curve with a slight arch (pic 2).



The Process and Special Dot Gain curves only apply to CMYK input jobs. RGB jobs will not be affected



How to Create a New Curve



Gradation Curve

Overview

A Gradation Curve is used to adjust colour in a job by applying a curve to the process colours individually. There are six process curves available, CMYKOG. The Gradation Curve can be applied to a Pagesetup in two places. Either as a Linearisation curve or as a Correction Curve. A linearisation curve is normally applied as part of the early calibration stage and this is recommended. See the “Calibration Guide” on page 133 for a more detail. A Correction curve is normally applied if a small amount of fine tuning is required after normal calibration procedures. The available options for the curves are as follows.

Curve View Options

There are four view options available.

- **Single** - This views each curve in a separate tab. The other curves are available by selecting the relevant tab at the bottom of the window.
- **Six: 3 x 2** - This views all the curves on a single screen in a 3 x 2 matrix i.e. two rows of three curves.
- **Six: 2 x 3** - This views all the curves on a single screen in a 2 x 3 matrix i.e. two columns of three curves in each column.
- **Four: CMYK, Two: OG** - This views the four process curves together with the other two (Orange and Green) available by selecting the tab at the bottom of the screen.
- **Show/Hide Original curve** - A green line appears showing where the curve was last saved. This allows you to see where you have edited the curve from.
- **Increase Margin** - You can increase the margin around the graph area.
- **Decrease Margin** - You can decrease the margin around the graph area.

Usage - You would need to increase the margin if the handle (end point) from the bezier curve adjustment is outside of the viewable area (window pane). By increasing the margin you are able to see and move the handles. Use the decrease margin option to enlarge the graph area again.

- **Gradation Table** - This allows you to enter values manually to adjust or create a curve.

Usage: Select the first value field and enter the value that was read e.g. if you read 7% at the 5% mark you enter 7 in the field for the respective colour. Press the Enter key to enter the value and move to the next value in the column i.e. on the same colour. Once completed close the table and save the curve.

- **Preview Curves** - Displays a window of all the curves in their respective colours so that you can assess them in relation to each other. This is updated dynamically as changes are made.
- **Lineariser** - Loads a Linearisation curve directly into the Lineariser Application. See “Lineariser” on page 113 for more info.
- **Tool Bar** - Click the spanner to show or hide the tool bar. Right click in the tool bar area to show/hide the Curve view options.



How to Create a Gradation Curve

1. For a correction curve select the user folder and create a new curve. This creates an Untitled curve
2. Select “Untitled” and enter the desired name.
3. Choose the preferred curve View Option.
4. Select a point in the curve that you wish to adjust with the left mouse button and drag the curve to the position desired. This produces a bezier curve.
5. The curve can be adjusted by selecting either handle (end points) of the Bezier curve and moving or extending them.
6. Select another point on the curve to adjust in the same way as desired.
7. To remove points, select the anchor points and press the delete key.
8. Repeat for all the process colours as required.
9. Save the curve once complete.

10. The curve is then available for selection in the Pagesetup.

ICC Tweak Set

Overview

This module allows you to build up a library of colours that need “tweaking” (adjusting) for accurate output. A Tweak Set alters colours during the ICC mapping stage from input to output profile and is selected on a per Pagesetup basis. The ICC profiles are not edited in any way and the Tweak Set can be selected as desired. Each colour that requires alteration is selected and then adjusted by adding or subtracting process colours from it, or making it lighter or darker. An accurate visual representation is shown on the screen and the point in the colour space can also be viewed. Colours can be created manually by entering the CMYK or LAB values or input automatically using an on-line spectrophotometer. The interface is split into two parts. The left side shows the input values and the right side is the place where adjustments are made or the tweaked side. The available options are as follows.

The Interface

- Colourspace - Choose between Input Profile or LAB input. i.e. the values used to create the colour that you wish to alter. If the input profile selected is RGB then the sliders change to RGB. If it is CMYK then the sliders change accordingly.
- Influence - Choose the area around the specified colour that will be affected. This is determined as a scale of 1 to 5 with 1 being the least influence and 5 being the greatest influence i.e. a greater number of colours affected around the selected colour.
- Tweak Value - Use the CMY sliders to add to or subtract from the colour to be adjusted. Make the colour darker or lighter by adjusting the slider accordingly.
- Rendering Intent - Choose the rendering intent that the colour is to be altered in. Options are Perceptual, Colorimetric or Saturation.
- New Tweak - Creates a new Tweak in the rendering intent selected. This can also be achieved by right clicking in the rendering intent window and selecting New.
- Copy - Used to copy the selected Tweaks. Select the tweaks by clicking with the mouse. Use the shift for block selection and the Control (apple) key for multiple selection. The Copy option is available by right clicking over a tweak after selecting one or more tweaks.
- Paste - Used to paste tweaks from the clipboard to the rendering intent selected. The Paste option is available by right clicking after tweaks have been copied.
- Change White Point - Allows you to change the white point of the paper. Select the button and enter the X,Y,Z points. If you have a spectrophotometer connected you can measure the white point directly into the system.
- Zoom - You can zoom in and out of the LAB colour space so you can see the point that you are tweaking in relation to the whole space.
- L-Value - You can move up and down the L value so that you can see the point you are tweaking in relation to the Lightness.
- ICC Profiles - Choose the input and output profiles that you are using to tweak. These must match the ones selected in the Pagesetup as they get stored with the Tweak Set and are used during the mapping process.
- Spectrophotometer - Choose an on-line spectrophotometer that you have connected to read values directly into the Tweak Set. Once selected press the Activate to connect and take measurements.



This must match the rendering intent of the Pagesetup for the mapping to work.



If the device is being used by another application (including a Serendipity application) then it will fail to connect. Quit or disconnect others first.



How to Create a Tweak Set

1. Create a new Tweak Set by selecting New from the menu or apple N. (control N on Windows).
2. Choose an input profile. This must match the input profile selected in the Pagesetup that you are creating a Tweak Set for.
3. Choose an output profile. This must match the profile selected in the Pagesetup that you are creating a Tweak Set for.
4. Enter the name of the Tweak Set you are creating and press enter. If the name "Untitled" is not selected then select it and wait until it changes for editing.
5. Select the rendering intent for the Tweak Set. This should match the Pagesetup that you are using the Tweak Set with. You can copy and paste colours between rendering intents and all colours can be saved in all rendering intents. Only the colours saved in the Set under the rendering intent that match the Pagesetup are adjusted.
6. Create a New Tweak manually or by reading a colour with an on-line spectrophotometer.
7. Select the colour space that you are going to use to create the colour. (If using the spectrophotometer then the colour space changes to LAB and shows the colour values read.)
8. Create the colour you want to adjust by moving the sliders or entering the values in the boxes. If using a Spectrophotometer then the values are entered automatically.
9. Change the influence value to affect more or less colours around the values entered.
10. Make adjustments to the colour as desired.
11. Repeat for all the colours you want to create in the Tweak Set and save.
12. Go to the Pagesetup and select the Tweak Set under the ICC section and save.

Job Genie

Overview

The Job Genie is used by some RIP input filters for polling. For these types of RIP the jobs are polled and stitched together based on their naming convention. For example, Tiff Based (Generic) input filter takes jobs from RIPs that produce 1 bit Tiff files. These RIPs are very common and produce a wide range of naming conventions. When the naming convention is standard such as “jobname_platenname.tif” then the generic Tiff input filter can poll these correctly. But when the names are more unusual such as “J3717p1S1CCyan.tif” you need to use a Job Genie to poll and stitch the names together into a single job. With the Job Genie you can specify the make up of the job. What parts of the name are the jobname and what parts the plate. The available options for the interface are detailed below.

The configuration window is split into two sections. The column on the left allows you enter a task. See Tasks below. For each Task there are four sections that require consideration as shown by the window on the right. This allows you to configure what files are collected, how the job names are made up, how they should be stitched together and how they are displayed in the RIPMonitor. These sections are separated into tabs which need to be configured in turn.

Tasks

For each Job Genie that you select in a RIP input filter there will be one or more tasks. For each task you specify how the job names are collected, how they are made up and how they are displayed. You may need more than one task to collect all the files in a given path if the naming varies. Jobs are constructed in the order of the tasks. Once a jobname is matched by a given task then that jobname is removed from subsequent searches by following tasks. Therefore the order of the tasks is important.

Ordering

To change the order of a task, select it with the mouse and drag it to the position in the list as desired. The options associated with the tasks are

- Log - This displays the matching process in the Server log for the task selected. This can be

useful to debug problems where configurations are not matching files properly.

- Add - Adds another task to the list. To change the name of the task, select the name and wait for it to change to edit mode. Enter the name and press enter or click anywhere in the window with the mouse.
- Duplicate - Copies the currently selected Task to a new one.
- Delete - Deletes the currently selected Task.

Tab 1 - Collect Files

This specifies how files are collected together. The files collected are then sorted according to the configurations in the other steps. Files are collected by defining two parts. First is the action and the second is the definition. The definition has a text box for you to specify the characters that make up the definition and are to be matched according to the action. The options are

Actions

- ignore files - Do not include any files that match the definition specified when the input filter collects them ready for sorting.
- ignore directories - Do not look in directories that match the definition specified when collecting files ready for sorting.
- descend directories - Only look in directories specified by the definition to collect files ready for sorting.
- include files in directories - Include all files in the directories specified by the definition when collecting files ready for sorting.
- include files - Only collect files specified by the definition.



With the above actions the "include files in dir" has precedence over all other actions. If this is matched then files and directories at the same level are ignored. Files and directories within the directory that is matched are then subjected to a search governed by any other action specified.

Definitions

- ending with - Any file or directory as specified in the action with a name that ends with this.
- beginning with - Any file or directory as specified in the action with a name that begins with this.
- containing text - Any file or directory as specified in the action where a name contains this text.
- named - Any file or directory as specified in the action that is explicitly named this.
- Filename Length - You can specify a minimum and/or a maximum filename length when searching for jobs for sorting.

default - 0 (disabled)

- Add - Adds the action and definition specified to the list of files to collect.
- Apply - Applies changes to the currently selected action and definition in the list.
- Delete - Deletes the currently selected action and definition from the list.



The Add, Apply and Delete buttons are only available if a change to an existing entry a change to an existing entry then the Apply becomes available. If actions are not added or applied to the list before a Save then the list is not updated.



How to Create a Task

1. Add a new Task and change the name if desired.
2. Select an appropriate action.
3. Select an appropriate definition
4. Enter the characters that you wish to match according to the action and definition configured.
5. Click Add to add the item to the list.



If you do not enter anything in the collect files tab then all files in the path will be collected and passed on for sorting. This is less efficient and can take a long time if there are a lot of files in the path that are not the jobs you want to find. It is better to try and specify only to collect files that match the jobs you want and ignore all others.

Tab 2 - Filename Break Down

This allows you to specify the construction of a filename. This is done by breaking it down into parts and giving each part a user definable name. Once all the parts of the filename are identified they can be grouped together to make complete jobs. With most jobs there are common elements which would make up the job name and there are unique elements which may identify the plate colour or specific file marker. The options for Filename Break Down are

- Case Sensitive Matches - This is used to match case when the criteria for matching contains user specified input. i.e. "Part contains specific words", "Match to separator" and the "Truncate" option. If any of these are used and the case sensitive matches is selected then only those characters that match the specific case entered are matched.
- Read Direction - This is the direction that we read the filename. You can choose to read it from left to right or from right to left. Click the arrow to change the read direction.



Usually it is easier to determine the filename parts by dealing with the endings first. In this case we would reverse the arrow and read from the right to left.

- Parts - This is a block diagram that shows you the break down of the job. Each part is given a name and identifies a section of the filename. Clicking the Read Direction arrow changes the order of the parts to show you which part is going to be read first.



If you are creating a new Job Genie then you will not see any parts in the diagram are until you create them.



When you to name the parts its a good idea to give them meaningful names as this helps later when you are managing them.

- Add - Add Parts to the list.
- Apply - Update the selected Part with changes.
- Delete - Delete the selected Part from the list.
- Part Name - Specify a name that you want to call the part you are about to describe. This can be anything but meaningful names are useful when choosing the groups later.
- Part Contains - Specify from the pull down list what the part will contain. The choices are.
 - any character - The part can contain any valid character.
 - numbers only - The part must only contain numbers.
 - hexadecimals only - The part must only contain hexadecimal numbers i.e. 0 - 9, A - F.
 - specific words - Specify a specific word or characters in the text box that the part must contain.
- Match - Choose to what point in the filename that you are going to match to. This may be a specific separator or end of string. i.e. read

along the filename until this point, looking for the valid Part matching specified above. The choices are

- to separator - Enter a character in the text box to specify as a separator. i.e. continue reading the part until you reach this separator.
- to end of string - Match everything from this point to the end of the filename (string).
- to numeric separator - Match everything from this point until you find a number.
- to non-numeric separator - Match everything from this point until you find anything that it not a number.
- to "." (full stop) separator - Match everything from this point until you find a full stop.
- to "-" (hyphen) separator - Match everything from this point until you find a hyphen.
- to "_" (underscore) separator - Match everything from this point until you find an underscore.
- to "\$" (dollar) separator - Match everything from this point until you find a dollar (\$) symbol.
- to " " (space) separator - Match everything from this point until you find a space.
- to number of characters - Match the number of characters that are specified in the text box.
- Truncate from character - You can choose a character to identify in the filename and remove all characters from that point onwards. e.g. if you have a large number of 0's in a group you can choose to remove those 0's from the group so that they are not displayed.



The "to separator" and Truncate from Character" options allow multiple entries separated by commas where each entry is searched for a match. e.g. you can specify "to separator a,b,c" where if any of the separators a, b or c are matched then it is valid.

Separator Options

Separators are the characters that determine the end and beginning of a part. e.g. with cyan.tif the full stop (.) between cyan and tif is the separator. As this is part

of the filename you still need to decide what to do with this separator. There are three options.

- discard separator - Ignore the separator.
- include separator with this part - Include the separator with part that you are describing.
- include separator with next part - Include the separator with the next part that you describe.

Usage: With a filename such as job.cyan.tif where we parse the name in the forward direction, we describe the first part as name to separator full stop (.) - and the next part as plate to full stop (.). Discard separator creates the two parts as “job” and “cyan”. Include separator with this part (for name) would produce a part as “job.”. Include separator with next part (plate) produces a part as “.cyan”. This is really only used if the separator is a character that you want to display in the RIPMonitor, say a page marker. The most commonly used option is discard separator. In the example above if we used “include separator with next” then we could not identify the colour as it will be called “.cyan”.

Tab (3) - Jobname + Plate

This section allows you to configure which parts should be grouped together to complete a job and which part identifies the plates of the job. You can specify how the plates are described and control specific mapping. The available options are shown below.

Job Grouping

Decide how the files are grouped to form a job.

- Only group files in the same directory as job - check this box to group filenames together in a directory. Files in different directories will not be grouped into one job.

Usage - Used when job directories are created containing all the plates. Sometimes the filenames vary for the name of the job but because they are all placed in one directory per job they can be grouped together.

- Group files with parts - This displays the parts that were created in Tab 2. Select the part or parts that make up the job name.

Plate Identification

You need to define which part created in Tab 2 is the plate part and how it is written. The options are

- Plate Part - Select the part of the filename that describes the colour from the pull down list. The pull down list contains the part that you created in Tab 2.
- Plates are
 - defined by words - The plates names are complete names e.g cyan, pantone 252.
 - defined by numbers - The plates are defined by numbers. e.g. 0 is cyan, 1 is magenta etc. If this is selected two other options are available.
 - Starting plate number - Enter the number that plates start at. This is usually 0 or 1
 - Plate Order - Choose the plate order between KCMY + specials or CMYK + specials. i.e. the starting plate number as defined above starts as K or C depending on the order.
- Map letters c, m, y, k to process names - If the plates are named with just letters e.g. cyan is represented by c, then select “defined by words” and choose this option.
- Strip leading zeros from colour names - Sometimes colour names have multiple zeros before the plate number. This option can be used to remove the leading zeros.

Plate Mapping

You can map plate names so that they appear correctly in the RIPMonitor. A list of plates that require mapping can be created. The options available for plate mapping are

- Case Sensitive Mapping - Select this if the mapping should check for case.
- Add - Add the mapping into the list.
- Apply - Apply changes to the currently selected mapping.
- Delete - Remove the currently selected mapping from the list.
- Prefix number literals with user text - You can add a prefix to numbers that you are polling. e.g. if the colour is called 254 you can prefix the word pantone in front of the number making the special plate become pantone 254.



How to Map a Plate

1. Enter the colour name you want to map.e.g. 100
2. Enter the new colour name. e.g. 100 CVC
3. Click Add.
4. Repeat as needed for all the colour names that you wish to map.

Tab (4) Display

This section allow you to configure how the job names are displayed in the RIPMonitor. The options available are

- Display Specification - This shows the parts that were created in Tab 2.
- Jobname String - This shows what will be displayed in the RIPMonitor for each job. You can enter any valid character or use group parts.
- Job Directory - Allows you enter the job directory into Jobname String field.



How to Display the Jobname in the RIPMonitor

To display the Job Name in the RIPMonitor select the Part displayed in the list that was created as the Job name. This may consist as one or more parts. e.g. you may want to select a job name and an edition name. Click the Job Directory to display the directory name that the files are found in. To display parents of directories change d1 to d2. The higher the number the higher up the directory structure you will display. Each time you select a Part or Job Directory it enters or removes the item from the Jobname String field. The items are added at the current cursor position. You can add spaces, any other characters or text as desired at any point of the field.

Usage - Use the directory in the Jobname String field when “only group files in same directory as job” is enabled. This is because the filenames usually have no real meaning but are all grouped into one directory where the name of the directory is the job name.

Output

Overview

This section describes the Output module of the Workbench. The Output handles processed jobs and determines where the file is going and what format is created. The format that is produced is determined by the "Output Driver" and the method of delivery is determined by the "Destination". There is one other section to the Output called "Collating" which are the details for the Nesting and Duplexing features.

Queue

This section handles the output format and queue parameters. The options are

- Output Driver - Select the desired output driver from the list available drivers. The available drivers depends on the options enabled on the dongle.

Effects - The selected driver affects the options in a Pagesetup that point to it. For example, if you select an inkjet output device as your driver, then only the supported resolutions and colour spaces available in the Pagesetup for selection are those supported by the device chosen. If you select a file format such as Tiff Image then any resolution can be entered in the Pagesetup.



The output driver must be selected before the Pagesetup can be created.

- Status - Choose whether the output queue is on (Active) or off (Inactive).



This can also be controlled from the QueueManager. Just right click on a job and choose "Pause printing" or "resume printing" depending on its current state.

- AutoPause - Select a time duration that the queue should pause for after processing a job.

Usage: Mainly used for double sided plotters so that there is a pause in sending the next job giving the

plotter time to turn a sheet ready for the back side to be printed or time to load another sheet.

- AutoClean - This determines the number of jobs to keep in the output queue. Once the set limit is reached the oldest jobs are removed.

Default - Off - no jobs are removed.

Destination

This section determines the method of delivery of the print job to the final destination. Depending on the destination driver selected there may be some additional options. The drivers and options are:

- Command / script - You can select a script or command to be run once a job has completed.
- Epson FireWire - This is to drive an Epson printer with firewire.



This is only available for the Mac OS X version. To print via the FireWire on a windows platform you need to use the Local Print Queue and print to an installed printer configured to use FireWire.

- Custom Settings - Choose the Epson FireWire device you have connected. These appear as EpsonFirewire[1] for the first device found. The second device is called EpsonFireWire[2] and so on. These are determined by the order that the devices are plugged into the Mac and turned on.



If this order changes e.g. you turn your printers on in a different order then the destinations will also have to be changed.

- Epson XIO - Prints to an Epson connected via the Firewire using Epson XIO interface on the Mac OS X.



Requires the Epson driver to be installed on the Mac first.



This is only available for the Mac and required on later model Epson printer and newer version of OS X. There is a Firewire driver also but if this does not work use the XIO. For Windows users install a driver and connect directly via Firewire and in the destination choose Local Print Queue. Follow the steps below to configure this.

- FTP - You can send your completed job to a remote machine using ftp. Enter the Username, Password and Hostname/IP address of the remote machine and the path that you want the files to be sent to on the remote system. The path must be valid and must have write permissions.
- Custom Settings: Language encoding - Set the encoding to match your system so filenames are displayed properly.
- Local Device - If you have a printer connected as a serial or parallel printer then you can send your file direct to the device. For example, for a printer connected to the first parallel port on your local machine you enter LPT1 as the path.
- Local Folder - Choose a local folder to send the output file to. Enter the path or select the "Choose" button to browse and select a folder.



The folder must exist and have write permissions.

- Local Print Queue - You can print to a local print queue.

1. Create a local printer and test it.
2. Enter the exact name of the printer in the Path.



You can also use this to print to a windows printer on another machine. In the path location enter \\<machine>\<printer> where <machine> is the name of the windows machine that has the printer and <printer> is the exact name of the printer. The printer must be shared.

- LPR Port - You can use LPR to print jobs to printers that accept it. Enter the Hostname /IP address of the printer and the path.

Usage: Not all devices require a path to be entered. This is a good option for Epson printers that have a network card. Just enter the IP address of the printer (no path required) and save. This method is faster than TCP/IP printing for these devices.

- Nowhere - This is mostly used for internal testing. Files created by the print driver are not sent anywhere. They are left in the default raster location. see Directory Structure.
- Custom Settings - You can select a print time to simulate for testing purposes.
- PAP (Appletalk) - You can select a networked Appletalk device to print to. Select the "Change" button to bring up a chooser showing valid Appletalk devices.
- Secure ftp (sftp) - Send the job to a secure server using sftp. Enter the Hostname, Username and Path to send the file. The path must be valid and the user have sufficient privileges to write to that location.
- Custom Settings - With a secure server there are more authorisation settings that must be set. Public and private keys and proxy settings. Enter a valid port number and choose your language encoding for the file transfer.



Language encoding can help with correct display of 2 byte file names on other systems.

- TCP/IP port - Print to a networked device over TCP/IP. Enter the Hostname or IP address and select the port number of the device. See Networked Printers for more info.

- USB Printer - Prints to a printer connected via USB.
- Custom Settings - Allows you to select available printers connected via USB and turned on. Printers are shown with full descriptions.

Collating

Collating is a method of gathering various outputs and grouping them together. There are two methods of collating available depending on the Output Driver selected. If you select an output driver that supports duplexing then the additional duplexing collating method becomes available. Otherwise the only available option is Nesting. The parameters vary depending on which one is selected. All options are shown below.

Duplexing

You can duplex jobs with multiple pages to form double sided printing. This is only available for printers that support duplexing mode. See Duplexing for a list of supported drivers. The options are

- Add Separator Page - Adds a blank page in between duplexed sets.



This is useful when de-imposing and duplexing perfect bound jobs. A blank page is inserted after the "Maximum jobs" is reached for duplexing to start e.g. if you are duplexing 16 page sections then set the Maximum jobs to 8 (8 duplexed jobs - 16 pages) a blank page will be added to the output after each 16 page section.

- Top Page - Determine if the top page is an odd or even number.
- Maximum Wait Time - The time to wait before duplexing begins.

Effects - If the Maximum wait time is reached and the back side of the pages have not yet been processed the queue will still begin to duplex those pages available. This will result in single pages where the backs have not yet completed.

- Maximum Jobs - Set the maximum number of jobs for duplexing. If this value is reached then

duplexing will begin. See also "Add Separator Page" above.



You can also control the duplexing from the QueueManager. Simply select a job waiting to duplex, right click and choose "Duplex Now" to duplex all jobs waiting to

Nesting

You can nest multiple jobs together for a single output to save media and time. The parameters for nesting are as follows

- Enable Automatic Nesting - You can set the queue to nest jobs automatically when the configured conditions (such as maximum wait time) are met.
- Auto rotate when nesting - Enable auto rotation when nesting occurs.

Usage - You can set up a Nesting queue for jobs that may be less urgent. Therefore you can send jobs to the nested queue as desired and when the conditions are met, nesting will begin. If you choose the auto rotate when nesting option the jobs may be rotated when nesting occurs. This is determined by the nest criteria and jobs waiting to nest in order to find the most efficient use of the nesting area.



If you select the auto rotate option then you should make sure that the rotate option in the Pagesetup is set to "none". There is no need to spend time rotating a job if it may be rotated at nesting time. See "Sheet" on page 67n for more info.



You can nest any job that is in an output queue at any time even if you have not enabled Auto nesting. Basic parameters are still required to determine the size available. i.e. Sheet width and coverage.

- Copies - Specify the number of copies you want of the nest. e.g. if you have 7 jobs making up a nest and enter 5 in the copies field, you

will get 5 copies of the same 7 jobs nested and printed.

- **Maximum Wait Time** - Specify how long to wait before nesting begins. Once the time is reached, nesting will begin and any job that is waiting to nest will be nested into a single job. The start time is determined by the first job that appears waiting to nest.
- **Minimum Paper Coverage** - Specify the minimum paper coverage that must be reached by jobs waiting to nest before nesting will begin. Once reached any jobs waiting to nest will be nested into a single job.
- **Maximum Jobs** - Specify the maximum number of jobs in a nest. If there are more jobs in the queue than the number specified then that number of jobs will nest and the remaining jobs will stay waiting to nest until the criteria is reached again. e.g. Maximum Jobs specified as 5 and there are 7 jobs waiting to nest then 5 will nest and 2 will be waiting.
- **Media Width** - Specify the media width.



This parameter required for nesting to work.

- **Gap Between Jobs** - Enter the size of the gap between the jobs in the nest.
- **Minimum Total Height** - Specify the minimum total height of a nest. i.e. The combined height of the jobs waiting to nest must reach this before nesting commences.
- **Maximum Total Height** - Specify the maximum total height of a nest. i.e. If the combined height of the jobs waiting to nest reaches this then nesting will commence.



The minimum and maximum height settings are calculated along with the media width specified to determine the nest parameters.

Pagesetup

Overview

A Pagesetup consists of many modules that can be configured to manipulate your job for the desired output. You set up page sizes, orientation, colour management, screening and printer publishing amongst other options. Some of the modules are relevant to the Output Driver and will change depending on which one is linked to the Pagesetup. Each module deals with a related area and those that are not relevant can be hidden for a simplified view. Each module is described below.

Pagesetup Modules

Output

This module selects the output for the Pagesetup and the subsequent properties. To change the output choose the Change Output option. From here you can select an output that has previously been made, edit it or create a new one. You can also enter a search string to filter the list in the search filter box below the list. See "Output" on page 55 for more information on creating outputs. The options available for Output are as follows.

- Resolution - Select or enter the resolution of your choice. If the output chosen is a printer then only the printers supported resolutions are available. If it is a file format then you can enter your own value.



If you are printing to a file format you can enter a single resolution value e.g. 600 which will be taken as 600 x 600. Or you can enter a horizontal and vertical resolution e.g. 300 x 600.

- Colourspace - Choose the output colour space as desired. This can be either Gray, RGB, CMYK, CMYKOG or N-Colour* depending on the output chosen.



The setting here affects the ICC profiles that you can choose for the output and how the Paper Profile is generated.

*For more information on N-Colour see page 149

- Antialiasing - Choose 2x2, 3x3 or 4x4 or none. Antialiasing is designed to smooth jagged edges and is mostly used when the output does not have sufficient resolution to display edges smoothly. It does this by adding shades of grey or colour around edges to blur them. The values increase the amount of pixels used for antialiasing.

Effects - The greater the amount of antialiasing the longer the processing time. This also has a greater affect if rotating the job.

When to use - When creating JPEGs, TIFFs or PDFs for display on a monitor. Or when output is set to low resolution.

Default - None



You should not use Antialiasing then the input screening is set to Preserve and your incoming data is sceneed.

- Priority - You can assign a Priority to a Pagesetup. The higher the number the higher the priority. Pagesetups with a higher priority are sent jobs ahead of those with a lower priority. i.e. Jobs waiting to Image or waiting to Render will process through Pagesetups with higher priorities than jobs submitted to lower priorities queues. Numbers can be negative.

Default - 0

- Auto Publication Name - This creates unique publication name for every job passed through the Pagesetup.



Use this feature for duplexing from PDF or PS files. Submitting a multipage document as one job will allocate all pages with the same publication name.

Custom Settings

This varies depending on the output chosen. It controls properties that are specific to the output driver selected. e.g. if JPEG is chosen as the output

then the customise section allows you to select the Quality. If the output is for an Epson device then the customise allows you to select items such as paper types, ink types and cut methods. Choose Edit to select the options required.

Publish

This module allows you to choose how you publish the Pagesetup so that you can send jobs to it. The options for publishing are

DropFolders

Publish a DropFolder for the Pagesetup. This allocates a folder where files can be dropped in for processing. See file types on page 60 for valid formats.

- Mac or Windows - Choose to publish a folder for Mac or Windows.
- Location - Select a folder as a drop folder. The folder must exist and have read and write permissions.
- Default - Resets the drop folder location to the default one.

Default location - Serendipity Blackmagic install dir/drop/<“Pagesetup name”>

Valid file types - Postscript, PDF, JPEG, TIFF Image, Serendipity Blackmagic Image, EPS, PNG.

Printers

You can publish the Pagesetup as a printer so that machines on the network can select it and print direct from applications. Options are

- Mac or Windows - Choose to publish a printer for Mac (appletalk) or Windows. The Pagesetup name is used as the printer name.



**How to - See
“Publishing a Windows
Printer” on page 165**

TCP Port

You can publish the Pagesetup as a TCP Port to allow unix based computers or other Serendipity Blackmagics to print to it. The options are

- Activate port number - Select this to show a text field allowing you to enter a port number.

The computer's hostname or IP is used and each Pagesetup has its own port number.

Colour Correction

There are a number of tools that you can use to manipulate or fine tune the colour to achieve the results that you want. The options available are as follows.

- Replace Colour Set - Select a Replace Colour Set from the list of available sets. From the pop up chooser you can preview the set, edit it or create a new one. See “Replace Colour Set” on page 81 for more info.
- Process DotGain Curve - Select a DotGain Curve to be applied to the Process colours only. This is one curve that effects all process colours. From the pop up chooser you can preview a curve, edit it or create a new one. See “Dot Gain” on page 43 for more info.
- Specials DotGain Curve - Select a DotGain curve to be applied to the Special spot plates only. One curve effects all special colours the same. From the pop up chooser you can preview a curve, edit it or create a new one. See “Dot Gain” on page 43 for more info.
- Correction LUT - Select a correction LUT to be applied. From the pop up chooser you can preview the curves, edit them or create new ones. See “Gradation Curve” on page 45 for more info.
- Linearisation LUT - Select a linearisation LUT to be applied. This is normally done as part of the standard calibration process with the use of the Lineariser. See “Lineariser” on page 113 for more info. From the pop up chooser you can preview the curves, edit them or create new ones. See “Gradation Curve” on page 45 for more info.

ICC Profiles

This is where you can choose if you use ICC profiles as your calibration method. You can choose which rendering intent is used and the profiles for calibration and colour space conversion. ICC profiles are used to match colours from one device, say a press, to another device, say an inkjet. It does this by mapping an input to an output colour. See the “Calibration Guide” on page 133 for more information. The options available for ICC Profiles are shown below.

- Always Use ICC - Enable this to always use ICC profiles. If this is not enabled then the ICC profiles selected are only used in colour space conversion.
- Intents - Choose the desired rendering intent to use. The choices are
 - Perceptual - All colours are moved proportionately to each other so that the eye perceives the colours to be correct. i.e. Colours that are out of gamut move into gamut and those that are in gamut move proportional to the ones out of gamut.
 - Relative Colorimetric - Those colours that are out of gamut are moved into gamut and those in gamut are left untouched.
 - Absolute Colorimetric - The colours are left alone so those that are out of gamut will not be able to be reproduced.
 - Saturation - Those colours that are out of gamut move into gamut but all colour increase in Saturation as a result.
- Retain Pure Black - When ICC Profiles are used then all colours, even solids are made up of a mix of different colours. This generally means that black text contains more than black. Selecting “Retain Pure Black” uses black only for areas that contain just black.



Not suitable for some devices with light black as these can tend to look brown or yellowish. Therefore ICC profiles are needed to correct and make the blacks look black.

- Input RGB Profile - Select an RGB Input profile. This is used to convert input data that is in RGB to LAB. This should be a scanner or digital camera profile.
- Press Profile - Select a Press Profile. This is a match profile and is used to convert input data from CMYK to LAB. This can be a multicolour profile or a CMYK. If you select a multicolour profile an additional option will be available called Press Inks. See below.
- Press Inks - This is available if a multicolour press profile is selected. For multicolour Press profiles you must specify the plates used in the ICC and the order of those plates. Selecting this option displays a special colour set chooser. From here you can select a pre-

defined set or create a new one. See See “Special Colour Set” on page 95 for more information.



IMPORTANT: For this to work you must create the same colour names used in the ICC and have them in the same order. The order for the ICC is specified during the ICC Creation. This is independant of the actual Press order. Change the order by dragging colours around the set. The order is specified as the “Colour” (left column) order descending. For more information on the multicolour workflow see “Multicolour Press Profile” on page 151

- Output ICC Profile - Select an Output profile. This is the printer or other output profile and is used to convert the LAB data to the output colour space. This output could be RGB, CMYK or CMYKOG depending on the output device chosen and the colour space selected.
- Output Tweakset - Select a Tweakset from the list of available sets. From the pop chooser you can preview the set, edit it or create a new one. See “ICC Tweak Set” on page 47 for more info.
- Device Link Profile - Select a device link profile. Selecting this disables all the other ICC settings.



You can store your device link profiles anywhere within the ICC folder. It is a good idea to create a new folder called Device Link to them separate from the other profiles. You can create any folders under the ICC main folder and the ICC Chooser will see it and display the profiles.

Upload ICC

This option is available on all of the ICC Choosers detailed above. If the ICC profile is located somewhere other than the default ICC folders you can use this function to upload it to the server ICC folders so that it can be used. Selecting this displays a file chooser where you can browse and locate your ICC to upload.



Because this is a Client side option you can use this function for moving ICC profiles from the machine that they were created on to the Server. This can be either on the LAN or WAN as a remote machine.

Colour Keys

Colour Keys allows you to merge some plates and separate others from a single job submission. e.g. You can merge the CMYK plates together and print the 3 specials as separate jobs. Or you can create a progressive proof with C, CM, CMY, CMYK, CMYKS1 etc. The list on the left shows available plates and the list on the right show the assembled colour keys. The order of the keys dictates the print order. Options available as shown below.

- Enable Colour Keys - Select this to turn the colour keys module on.
- Plate - List of available plates.
- Add - Adds the select plates to the Plate combinations list on the right.
- Progressive - Used to make progressive proofs. See “HowTo” below.
- Deselect - Deselects any plates currently selected in the plate list.
- Remove - Removes the selected Plate Combination from the list.
- Remove All - Clears the Plate Combination list.



How to build a Progressive Proof

1. Select the first plate that you wish to have in the progressive e.g. Cyan.
2. Click the “Add 1 Plate” button to copy the plate into the plate combinations list.
3. Click the “progressive” button to add the first plate and next plate in the list as a merged job.

4. Repeat to continue adding the next plate in the list.



How to build Selective Colour Keys

1. Select the plate or plates from the available list.
2. Click “Add” to create an entry in the plate combinations list.
3. Repeat with the plates as desired.
4. Deselect a single plate by clicking the plate again.
5. Choose the “Deselect” button to deselect all plates currently selected.

Screen Printing

This mode separates a job into single plates and prints them as black. This is designed to print with a halftone dot onto a clear film media. To increase the density of the output you can choose a combination of inks. This can be used to produce films for use in the Screen Printing Industry. The options available are shown below. See “Screen Printing” on page 153 for more information.

- Enable Screen Print Mode - Turns the screen printing mode on.
- Ink Combination - Select the inks to be combined for a single separation output.



In screen printing mode all the jobs are separated and you must have a Paper Profile where only one dot for each colour is on.

See “Screen Printing” on page 153 for more info.

Output Screening

You can apply screening to the output file if desired. There are a number of screening types and options available. See below for an explanation of each. This is only available if the Output driver supports Screening.

- Method - Choose the preferred method of screening. The options are

- FM Screening - There are a number of variations on FM Screening. These are
 - Stochastic - Standard Stochastic screening.
 - Stochastic-2 and 3 - Stochastic screening with progressively increasing amounts of noise mixed in. This is done to overcome some artifacts caused by InkJet printers.
 - Stochastic Fast - A fast version of the Stochastic screening mode. Slightly lower quality than Stochastic.
 - Error Diffusion - Error Diffusion Screening.
 - Ordered Dithered - Ordered Dithered Screening.
- Halftone Screening - Select halftone to place a traditional rosette dot on the output. The available options are
 - Dotshape - Choose the dot shape to suite your requirements from Round, Inverted Round, Elliptical, Inverted Elliptical, Diamond, Euclidean or Line.
 - SuperCell - Choose SuperCell screening instead of standard halftone.
 - Angle, degrees - Enter the desired angle for each plate.
 - Screen, LPI - Enter the desired screen ruling for each plate.
 - Defaults - Use this to select a default value based on the output resolution.

Usage: Because inkjet printers are generally low resolution compared with an imagesetter or CTP device you cannot achieve a very high LPI with these sorts of devices. Typically with a device that is run at 720 x 720 dpi, you can run it up to about 65lpi. With variable dot printers you can get away with a higher LPI but this is still not very good for contract quality proofing. If you wish to add good halftone dots on the proof then you must create a 1 bit Tiff file at high resolution and high LPI, and then use the Tiff generic input filter to read the files in with preserve screen set. See "Adding dots to contone data (ref)". The exception to this rule are screen printers as they are generally running jobs at 65 lpi or lower. The SuperCell screening produces a much better quality output than standard halftone and is recommended.



The special colour angle and ruling is assigned as per the order that they are printed. Each special plate is assigned in order and if you have more specials than the 8 available the first one is used again for special number 9 etc.

Input Screening

The input screening module determines how the screening on the input data is to be handled. There are two main choices and the options available for each are as follows.

- Handling - Select the method used to handle incoming screening data. The choices are
 - Descreen - Descreens the incoming data with either
 - D-Dot - removes the dots.
 - Fast - Quick descreening algorithm

Usage - D-Dot is used where the output job is being sent to a photocopier or similar device which has a front end RIP that applies a screen of its own. If you did not remove the dot the job would be double screened, producing poor output. Use fast for all other methods when the incoming screening is not to be preserved.

- Preserve - This preserve the dots from the incoming data so that the same dots on the final job are shown on the proof. The choices are
 - Real Dot Technology (RDT) - Used to preserve the dot structure.
 - Fast2 - Similar to RDT but a faster method.
 - RDT Smooth 1, 2 and 3 - This is RDT with progressive levels of smoothing.

Usage - The Fast2 method should be used where the dot structure is not very important. It will preserve the dot but it is a quick low quality method The sharpest dot structure will be achieved using RDT. However you will sometimes get introduced moire caused by the head weaving of the printer, the resolution and screen ruling of the original file. You can compensate for this by selecting the RDT smooth 1, smooth 2 or smooth 3 options.

Effects - Increasing the level of smoothing will take longer to process and the dot structure will become progressively less sharp with each level increase.



This is only used on screened input data and not on contone jobs.

Postscript Options

These options are only used when the incoming data is Postscript. The choices are shown below.

- Use Bounding box - Some Postscript jobs do not place a pagesize in the job information. Checking this will use the bounding box as the pagesize.
- Simple RGB to CMYK Conversion - This is a compatibility mode from older versions of the product. Images are converted from RGB to CMYK quickly using a basic method. The colour is not very accurate and not recommended for contract proofs.
- Fail on RGB Images - This causes a job to fail if it contains RGB images. If this is not checked the jobs will process but RGB images will be ignored and not print.
- Antialiased Subsampling - Use this to assist in the rendering of some fonts.
- Allow More Than 4 Spot Colours - Enable this if PDF or Postscript files are being processed with more than four spot plates.



If you are not processing jobs with more than 4 spots regularly it is a good idea to leave this off because when it is on processing time is longer. You can always create a duplicate Pagesetup for PDFs with lots of specials only.

- Disable PDF autoseparation - This turns off autoseparation for PDF files.



When processing PDF's with special plates you need to have each special plate defined in the System Specials. (See See "Colour Management" on page 128 This then separates the PDF maintaining accurate colour separation. However if you are sending a lot of PDF's to the system with lots of different specials then it can be time consuming to keep adding specials. Enabling this option will still handle PDF's with spots but it will not separate them but process them as CMYK. This will be faster and there is no need to have the special in the library but the colour will not be as accurate and you do not get the



This option can cause a problem in some circumstances e.g. white text in a black background in which case disable the option and send the file again.

Resampling

This section allows you to configure the method for sampling the incoming data and changing the resolution from the input to that of the output. The choices are

- Nearest Neighbour - This is the fastest method but less accurate. Choices are made as the closest pixels from input to output and can result in jagged edges or stepping effects.
- Bi-Linear - This is a medium quality sampling method and take longer than Nearest Neighbor. This takes the weighted average of 4 pixels from input to output.
- Bi-Cubic - High quality sampling method which takes longer to calculate than Bi-Linear. It uses the weighted average of 16 pixels from input to output
- Filtered - Serendipity's own sampling method giving the highest quality. It takes longer to process than Bi-Cubic and uses an averaged area from input to output.

Effects: Each of the resampling methods take more time to process than the previous one, increasing from

Nearest Neighbour as the fastest to Filtered as the slowest. Each process provides smoother output than the previous one.

Usage: For contone data such as Postscript and PDF Filtered provides better resampling. For screened data Bi-Linear provides a good compromise between output quality and processing time.



When the input screening is set to Preserve then the setting here is ignored.

Logo

You can position your own company logo or sign off slugline anywhere around the job. The options available are shown below.

- Enable Logo - Turn the logo effect on or off.
- Dimensions - Enter the dimensions you wish the logo to come out.
- Logo File - Select this button to choose your logo file.

File type - EPS

Usage - You can use this for placing a colour bar on the side of a job to check for consistency. The logo passes through the same colour management as the job and can therefore be verified.



The file is not rotated during output (except if auto rotate in the nesting is enabled). Therefore if you position the logo file along the left or right side the EPS file should be created in the appropriate orientation.

Effects

Various effects can be applied to jobs passing through the Pagesetup. Effects are applied in order that they appear. Some effects have separate attributes to customise them to suite your needs and these can be edited once they are in the Applied Effects column. The available options are as follows.

- Enable Effects - Turn the effects on or off.

- Available Effects - A list of all the effects available. These are
 - Border - Places a boarder around the job. You can specify the line width and colour by choosing edit.
 - Centering - Centers the job in the page area specified.
 - Cropmarks - Places cropmarks around a job. You can specify line width, line length and clearance by choosing edit.
 - Margins - Specify margins around the job.
 - Mirror - Mirrors the job.
 - Negative - Negates the job.
 - Pagenumber - Places the pagenumber in the middle of the page as a watermark. You can configure scale factor and opacity. You can also choose between page number of the job or the page number of the signature (when using de-imposition).
 - Rectangle - Draw a rectangle around the job inset at the desired distance, line width and colour.
 - Signature Decorations - Allows you to place page lines (from the signature), and page numbers on the job. The options for this are
 - Drawing mode - Choose how the numbers and lines are to be printed between Merge or Overprint.
 - Print page numbers - Select the checkbox to enable the printing of page numbers.
 - Text Scale Factor - Enter the size of the text as a factor of the page size in %.
 - Text Colour - Select a colour for the pagenumber to be printed in.
 - Print trim lines - Select the checkbox to enable the printing of the trim lines.
 - Trim line mode - Choose between spreads or page for the lines.
 - Line width - Enter the width the line will be drawn with.
 - Units - Select your preferred units for the line width value.
 - Line Colour - Select a colour for the line to be printed in.



Choosing lines for spreads will print a line around paired pages i.e. the spread. Choosing lines for pages will print a line around the page. So if you are printing paired pages then a page line will show where the single page fits on the spread and show two page outlines on the single spread.

- Slugline - Places job info on the job. There are a number of options available for this which are
 - Full - Shows everything that is configured.



If you are using a narrow format paper and want to have the Full Slugline but it does not fit on the paper loaded you can select the custom slugline line and turn all the options on. This will show an item per line. e.g. If you select colour correction then the attributes that affect this will be placed on one line. See custom below.

- Brief - Shows Jobname, Pagesetup used and Date.
- Signature and Pagenumber - Shows the Signature Group, Signature and page-number.
- Custom - Allows you to select the fields to display.



Fields selected will only be printed if they are relevant to the job. e.g. if you select the field "Cropping and rotation" but cropping is left on 0 and rotation on None then these will not be printed. You therefore could have a number of fields selected but nothing will be printed on the sheet.

- Font encoding - Choose one of the available font encodings to suit your system.
- Font size - Enter your desired font size between 1pt and 500pts for the slugline.
- Text Colour - Choose a colour to print the slugline in. Choose CMYK or LAB.
- Unsharp Mask - Applies an unsharp mask to the job. Separate options are
 - Amount - The amount to change at the edges as defined in percentage.
 - Radius - The area that should be affected measured in pixels - 1 - 200.
 - Threshold - The point at which the effect should occur measured in pixels. 0 - 255
 - Screened data - A tick box which applies additional calculations when the incoming data is screened.



The unsharp mask affects the edges within an image and you can control this with the parameters available. The radius tells us how large an area to affect around the edges. The larger the radius the greater the effect and longer it takes to process. If the preview resolution is high then a given radius will have less effect than if the resolution is lower. If the detail is quite fine then a smaller radius should be used. Higher radius values can also cause halos at the edges.

The threshold gives a level that should be affected where 0 affects more of the image and 255 very little.

The amount states the size of the change where a higher value is a greater change at the edges.

- Watermark - Places a watermark across a job. You can select the watermark file, the scale and the opacity (transparency) of the watermark by choosing edit. You can also select whether to stretch the watermark. See below.



The scale of the Watermark is proportional to the size of the job. 100% represents the same size as the job in the smallest direction. If you select the stretch option then horizontal and vertical sides are stretched to the scale amount e.g. a setting of 100% will then fit both the shortest and longest sides. The watermark will be anamorphically scaled.

Sheet

The sheet attributes allow you to manipulate the job in various ways. The options are as follows.

- Fitting Method - There are various fitting methods available. These are
 - None - Do not do any fitting.
 - Fit Width - Shrinks the job to the width specified in media width if the job is larger. The height is sized proportionately.
 - Fit Height - Shrinks the job to the height specified in media height if the job is larger. The width is sized proportionately.
 - Fit Width Height - Shrinks the job to fit width or height specified in media width and media height. Chooses the most appropriate dimension and scales the other proportionately.
 - Scale - Scales a job to the amount specified.
 - Tile - Tiles a job that is larger than the specified tile size in media width and media height. You can specify an overlap as required.
 - De-Imposition - You can de-impose a large job by using a de-imposition signature. You can create a signature with the signature editor and select it here. See “Signature Group” on page 89 for more info.

Usage - This can be used to take an imposed file like an 8up, de-impose it into 2ups or singles and print it on a smaller printer or produce a single page PDF files.

- Media width - Specify the width of the media.

- Media Height - Specify the height of the media.

Usage - The Media width and height is used by the fitting methods, the rotation options and the centreing.

- Rotation - Choose the rotation required from
 - None - No rotation
 - 90 - Rotates the job 90 degrees clockwise
 - 180 - Rotates the job 180 degrees
 - 270 - Rotates the job 270 degrees clockwise.
 - Auto - Rotates the job to fit best using the media width and height specified.

Usage - Auto is very useful for saving media. If the job fits better rotated saving media then the job will be rotated, or if the job does not fit along the width or the height then it will be rotated to fit. If you are using roll media then width only needs to be specified. If you are sending to a nesting queue then you may prefer not to rotate and calculate the size of the jobs and the number you can get across the sheet. See also “Auto rotate when nesting” on page 57

Effects - Rotating a job will take longer. The larger the job the longer it will take. More memory can assist in the speed of rotating. Rotation takes place at the beginning of rendering and so will effect things like cropping and margins.

- Centreing - You can centre a job if desired. Choose between
 - Vertically - Centres the job vertically according to the media height specified.
 - Horizontally - Centres the job horizontally according to the media width specified.

Usage - You can use this if you need to centre a job at anytime. In particular you may need to use it when printing to a double sided printer to help match your front and back sides.

- Accuracy Correction - You can compensate for media stretch or paper feed errors by specifying a correction amount for width and height.



How to Calculate Accuracy Correction

1. Create a job with a 1 metre square on it and print it.
2. Measure the square after time to normalise.
3. Enter the measured values into the respective fields e.g if you measure width and height of 1.03m and 0.95m respectively then you enter 1.03 in the width field and 0.95 in the height field.
 - Cropping - You can crop a job in all directions. Enter values for Left, Top, Right or Bottom.



When specifying the cropping you need to take into account any rotation that has been applied as cropping takes place after rotation.

- Margins - You can specify a margin around your job. Enter values for Left, Top, Right and Bottom.

Usage - You may have to specify a margin to shift a job over or compensate to a printers set margin.

- Effects Mirror - This mirrors the job
- Effects Negative - This negates the job.

Pagesetup Pools

Overview

Pagesetup Pools allows you to print to one or more Pagesetups. You can choose to load balance between multiple Pagesetups or print to multiple Pagesetups simultaneously. These can be published in the same way as an individual Pagesetup or you can setup auto proof from a RIP configuration.

Publish

You can publish a pool of Pagesetups so that you can send jobs to the pool. The available options for publishing a Pool are shown below.

DropFolders

Publish a DropFolder for the Pagesetup Pool. This allocates a folder where files can be dropped in for processing. See file types for valid formats.

- Mac or Windows - Choose to publish a folder for Mac or Windows.
- Location - Select a folder as a drop folder. The folder must exist and have read and write permissions.
- Default - Resets the drop folder location to the default one.

Default location - Serendipity Blackmagic install dir/drop/<“Pagesetup Pool name”>

Valid file types - Postscript, PDF, JPEG, TIFF Image, Serendipity Blackmagic Image, EPS, PNG.

Printers

You can publish the Pagesetup Pool as a printer so that machines on the network can select it and print direct from applications. Options are

- Mac or Windows - Choose to publish a printer for Mac (appletalk) or Windows. The Pagesetup Pool name is used as the printer name.

See “Publishing a Windows Printer” on page 165

TCP Port

You can publish the Pagesetup Pool as a TCP Port to allow unix based computers or other Serendipity Blackmagics to print to it. The options are

- Activate port number - Select this to show a text field allowing you enter a port number.

Job Queuing

You can control the way the pools work and the importance of the queue. The available options are

- Priority - You can assign a Priority to a Pagesetup Pool. The lower the number the higher the priority. Pools with a higher priority are sent jobs ahead of those with a lower priority. Numbers can be negative.

Default - 0

Pool Type

Decide what sort of pool you are going to use between

- Load Balancing - You can spread jobs across the Pagesetups selected in the pool. You can choose between
 - By Print Area - We calculate the area of each job and the queue with the least amount of print area queued is sent the next job.
 - By number of jobs - The queue with the least number of jobs is sent the next job.

Usage - This is ideal for printing to two or more printers that are the same quality, the same media and the priority is to get the job out of the next available printer. Each printer is calibrated separately to ensure quality. By Print Area is more efficient as the larger the print area the longer it will take to image, render and print. The queue loading is determined at the time of imaging. If a print queue is paused then jobs will be sent to queues that are active.

- Prints to All Pagesetups - Choose to print to all Pagesetups selected in the pool.

Usage - This is ideal if you want a job to print locally and remotely. One Pagesetup can be configured to drive a local printer and the other can create a JPEG image and transmit it to a remote Serendipity Blackmagic. Alternatively you may want to create a PDF file to send to a customer at the same time as printing a hard copy.

Pagesetups

This displays all the Pagesetups configured in the system. For each Pagesetup there is a summary of its configuration. These are shown by the column headers which can be turned on or off as desired. Simply right click in the header area and select the columns you wish to view or hide. The columns can be repositioned by selecting the header and dragging it to the desired position.



How to Create a Pagesetup Pool

To select one or more Pagesetups to form the Pool you are creating, select the check box to the left of the name. Choose your Pool Type and decide if you are publishing it or just using it from an internal source such as RIPs. Then save the configuration.

Context menu

There is a context menu associated with each module of the Pagesetup Pool. This allows you to colour code the background of the module for a customised view. There is another context menu option available on the Pagesetups list, which is as follows

- Edit Pagesetup - Allows you to edit the currently selected Pagesetup. Choose all sections or a particular module. You can also create a new one.
- Edit Output - Allows you to edit the Output of the currently selected Pagesetup. Choose an individual module or select All Sections. You can also create a new one.

Paper Profile

Overview

The Paper Profile is the first stage of calibration. It matches paper and ink characteristics very closely with the Output driver, resolution and colour space settings selected. With a Paper Profile you can choose the ink droplet size and light ink mix to be used. There are two parts to creating a Paper Profile. The first stage involves the printing of a density chart through a pre-configured Pagesetup, measuring the values and making selections of dots to be used. Some automated tools are available to help good dot selection. The second stage allows you to set ink limits for a mixture of one, two, three and four inks by printing a chart and determining the point where the inks mottle or fail to dry. For a detailed explanation of creating a Paper Profile see the “Calibration Guide” on page 133. The options for the Paper Profile are shown below.

Context Menu Options

The options for printing and measuring charts are available from a pop up context menu by right clicking anywhere in the Paper Profile area. The options are

- Measure Patches - Use this when you have printed the density chart out and want to measure it using a supported instrument. After selecting it you are prompted to choose an online device and select the desired density standard. Not all instruments support all available standards. Consult your instrument manual for supported types. See “Supported Density Standards” on page 109. Once the device is ready to read values the measuring window displays.
- Change Pagesetup - This allows you to change the Pagesetup that is currently assigned to the Paper Profile to a different one.
- Print Density Chart - Prints a density chart. Selecting this displays a chooser allowing you to select a Pagesetup to print the chart to.
- Print Inklimit Chart - Prints the ink density chart. Selecting this displays a chooser allowing you to select a Pagesetup to print the chart to.
- Preview Graph - Show a graph of the patches that are currently turned on. See “Graph” on page 72 for more information.

- Sift and Sort - Shows/Hides the sift and sorting options on the left.

Sift and Sort Options

This is located on the left side of the interface and has options to set how the patches are ordered and some preset sifting options. (See Sift and Sort above). The order pull down menu offers three choices (except Black which has two sort options) which are detailed below.

- Sift - This uses inbuilt intelligence to select the correct dot combination based on the density readings taken and the output device selected in the Pagesetup. After selecting this you are presented with the DotSieve Algorithm Selector where you can choose an algorithm from the list to match your device.

Sort order

- Patch number - This sorts the patches in patch numbered order.
- colour density - This is the density of the colour, sometimes called real density. It is the colour content of the patch e.g. for Cyan density this is the value of cyan measured.
- Visual Density - This describes how dark the colour is i.e. how much light the colour is absorbing. It is measured as Black. Some programs measure colours as CMYV where V is for visual (This is not available as a selection for Black as this is the same as colour density).



Sometimes inks can have a high cyan or magenta density i.e. a high content of the colour but they are not very dense visually. It is important to select colours that visually increase in density as well as colour density. See “Calibration Guide” on page 133 for more information.

Graph

This shows the dots that you have selected to be on for each of the colours. The position on the graph gives a proportional representation showing where the dot starts to turn on and off and how close the dots either side are. You can turn the graph plots on or off by checking the tick boxes under the graph. Hovering the mouse over a point on the graph displays a tool tip giving you information about the dot.



If a colour is not shown on the graph but the check box is ticked then the dots selected are most likely a poor choice and may not be valid. You will need to change your dot selection until the graph shows the colour.

Density Patches

This area shows the patches that make up the Paper Profile. The number of patches will vary depending on the device and configuration of the Pagesetup that it is linked to. E.g. a variable dot device with light inks will show 16 patches where light inks are used and 4 patches where they are not. Devices that do not have light inks and are not variable dot will only have 2 patches for each colour. You can turn patch on or off by clicking the upper half of the patch. Clicking the lower half of the patch allows you to manually enter density values for that patch number. For colours that have visual and colour densities, select the number that you wish to enter. D for density or V for visual. Pressing enter or Tab stores the value and moves to the next patch for the next entry. Hovering the mouse over the patch number displays a tool tip giving you information about the patch.



When entering values manually make sure that you have the patch sort order set to patch number.

Separation control

This is available when the Paper Profile is linked to a Pagesetup for a printer that has light inks, they are enabled and the option “treat light inks as separate channel” is enabled. This is set in the Custom Settings of the

Pagesetup. The separation control gives you the ability to adjust where the light inks mix with its respective heavy ink. e.g. you control where the Cyan starts and there adjust where the light cyan finishes. The sliders on the left show the inks where control is allowed i.e. those with light inks as well as heavy inks. The graph in the middle changes as you adjust the sliders so you can see the effect of different values. To view individual inks on the graph click the ink colour check boxes at the bottom. See “Separation Control” on page 148 for more information.

Ink Limits

The Ink limits tab reveals controls for limiting the ink mix of the channels applied in the Paper Profile. For example if your driver has “Treat light inks as separate channels” enabled then you will have a larger number of inks to mix, up to 8 channels. You also get a summary of the driver configuration from the selected Pagesetup and has some colour controls for the Paper Profile. The options available are

- Yule Nielsen Number - You can set the YN number for the paper you are profiling if you know it.

Default = 2

- Ink Limits - Set the ink limits for the Paper Profile. These are determined after printing a chart and determining the point that a mixture of ink causes problems. Enter the value for each ink combination. For this there are two options.
- Algorithm - Choose the type of ink limiting between.
 - Standard - Simple ink limiting based on ink percentages.
 - Enhanced - Optimised for variable dot printers.



This is not available if you have “Treat light inks as separate channels” enabled in the Custom settings and the algorithm is preset for optimum results. With newer printer where the ink saturation is high it is possible to set the ink limits too high just because they are dry. But too high and this can cause problems in image areas of real jobs. Do not be afraid to bring the ink limits down to about 100, 175, 230 and 250 for the 1, 2, 3 and 4 ink limits respectively.

- Pagesetup information - This displays information about the driver and Pagesetup configuration that is important to the Paper Profile.



How to Create a New Paper Profile

1. Create a new Paper Profile. Choose File -> New
2. Select a Pagesetup. (This needs to be pre-configured)
3. Enter the name of the Paper Profile.
4. Select “Print Density Chart” from the context menu. Choose the Pagesetup that you are creating a Paper Profile for and click OK.
5. After a short time (to let the print stabilise) select “measure patches” and choose your on-line densitometer or spectrophotometer. After measurement is complete click OK. (See below for manual entry procedure)
6. Select the dots that you want to use for each colour. Do this either manually or using the Sift option (recommended for novice users). See the “Calibration Guide” on page 133 for information on good dot selection.
7. Save the Paper Profile.
8. Go the Workbench and select you Pagesetup. Choose Paper Profile under the Colour Correction module and select the profile you have just created. Save the Pagesetup.
9. Go back to your Paper Profile and select “Print InkLimit Chart” from the context menu. Select the Pagesetup you are calibrating and click OK.

10. Enter the ink limit values and save the Paper Profile.

For more information on correct calibration procedures see the “Calibration Guide” on page 133.

Manual Entry Procedure

If you do not have a supported on-line densitometer or spectrophotometer you can still create a Paper Profile providing you can read the densities. Ideally you need to read both the visual and real densities of all of the patches as the assessment of which ones to select is based on both. Once done you enter the values by simply selecting the first patch on each colour, enter the density and press Enter. This will automatically move to the next patch. Make sure that the patch sort order is set to “Patch Number”. Where a patch has both real and visual densities i.e. anything except Black, make sure that you select the D value to enter the real density and the V value to enter the visual. Pressing Enter will move to the next in the same group i.e. All visuals can be entered first and then all real densities.

You can also import values from a text file. Choose the “Measure Patches” option and select “from text file” from the list of supported devices. This will display a file chooser allowing you to locate and select a file to read into the Paper Profile. The file format is CMYK space delimited.

Press

Overview

The Press configuration contains the attributes of a press. These attributes include dimensions as well as printing attributes such as a Colour management for a particular printing stock. These settings are then used in the SoftProof to show the effects of printing a job on a particular press and in the Ink Keys Viewer to obtain percentage % colour values for each key on the selected press. The options are shown below

This allows you to build up various profiles of paper and press combinations and apply them in the SoftProof on the fly to see the effects and get a more accurate soft proof.

Dimensions

This panel allows you to enter size of the press and the number of keys. This would be the printable sheet area.

- Size - Enter the width and height of the printable press sheet size.
- Number of Keys - Enter the number of the keys across the width.
- Key width - This displays the width of one key as calculated from the width and number of keys. You cannot enter a key width.

Colour Management

There are a number of colour management settings that can be configured for the press. Each press will have different printing characteristics and you can map those characteristics for easy selection in the SoftProof. The options are

- Replace Colour Set - Select a Replace Colour Set to be applied. See “Replace Colour Set” on page 81 for more information.
- Press ICC Profile - Select a Press ICC.
- Paper Colour - There are three options
 - None - Do not change the paper colour.
 - ICC Profile - Use the white point from the ICC profile and apply that as the paper colour.
 - Custom - Allows you to enter your own value for the paper colour. You can also use the Spectrophotometer to measure the paper white directly into the configuration.

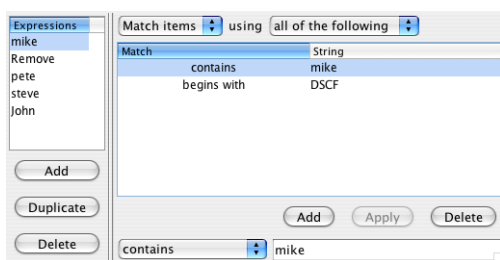
Regular Expression *

Overview

The Regular Expression is used in conjunction with the RIPs. It is a filter where by you can have jobs auto proofed based on matching a particular set of rules. A regular expression is constructed here and then selected in the RIP as a filter under the auto proofing section. Once selected, new jobs that match are submitted for auto proofing. All jobs are still displayed in the RIPMonitor.

What is a Regular Expression

A Regular Expression is a method used to match strings, and a string is a one or more characters. This is similar to a search where you enter some text and the results are displayed, like in the QueueManager search function. The result displays anything that matches the characters that you entered. The Regular Expression here is a little more complicated but the principles are the same. You can apply rules to the characters you enter such as include or ignore these items. You can also build multiple expressions to define the jobs that you wish to auto proof.



Expressions

The Expressions are displayed and entered in the left list. Each expression is used to match something. You can create multiple expressions to match different jobs or ignore certain jobs. For each expression you enter the string to match and specify the conditions. e.g. what to do if you find anything that matches. The Expressions are handled in the order that they are shown. You can move the expressions around by selecting them and dragging them to the new position. If the first expression matches a job name, and that expression rule is to ignore items then that job is not passed to other expressions for further consideration. So the order can be important if multiple expressions are used. You can change the name of an expression by

selecting it and then clicking in the name so that it changes to edit mode. The options available are shown below.

- Add - Adds a new Expression to the list.
- Duplicate - Makes a copy of the currently selected expression.
- Delete - Removes the currently selected expression.

Match List

This is where you specify what you want to match and the rules to apply. You can enter one or more strings to match and apply different rules to each. See examples in the how to section at the end. The options are as follows

- Match Items - Matches the strings entered. i.e. if the string matches a job name then it is retained for further consideration by other expressions. If no other expressions exist then the job would be submitted for auto proofing.
- Ignore Items - Ignores anything that matches the strings entered. i.e. if a job name matches the strings then it is ignored and not submitted for proofing or passed to other expressions for further matching.
- Any of the following - The match is true if any string match condition is met. i.e. if you have two or more match strings in the one expression and either of them match a job name then the Match Items or Ignore Items rule is applied.
- All of the following - The match is true if all string match conditions are met i.e. if you have two or more strings in the one expression, all must match a job name for the Match Items or Ignore Items rule to be applied.

String Entry

Enter the string to match. This is a job name or part of a job name. The match then depends on the following conditions that you select with the string.

- contains - The job name contains the entered string.

- begins with - The job name begins with the entered string.
- ends with - The job name ends with the entered string.
- is - The job name matches the string entered exactly.
- does not contain - The job name does not contain the string entered.
- does not begin with - The job name does not begin with the string entered.
- does not end with - The job name does not end with the string entered.
- is not - The job name is not the string exactly.

Buttons

- Add - Add the match string to the list.
- Apply - Apply changes to the selected match string in the list.
- Delete - Remove the selected match string from the list.



How to Create a Regular Expression

In this example we will create a regular expression to match some job names. The process involves deciding which jobs you want auto proofed, creating a Regular Expression for them and selecting that it in the RIPMonitor.

List of Job names

DSCF-mike-test2.jpg
 DSCF-mike-test3.jpg
 DSCF-mike-test4.jpg
 DSCF22913-p.jpg
 DSCF22913-t.jpg
 DSCF22913.jpg
 DSCF22919.jpg
 john-DS3test2.jpg
 john-DSCFtest.jpg
 john-DSCFtest2.jpg
 michael-DSCFtest3.jpg
 mike-DSCFtest2.jpg
 mike-DSCFtest3.jpg
 mikes-DSCFtest3.jpg

pete-DS2test.jpg
 pete-DSCF223test2.jpg
 pete-DSCF223test3.jpg
 petec-DS2test.jpg
 petec-DS2test2.jpg
 petec-DS3test2.jpg
 petec-DSCFtest.jpg
 peterc-DSCFtest.jpg
 ppp-petetest3-p.jpg
 spps-pptest3-p.jpg
 steve-DSCFtest.jpg
 steve-DSCFtest2.jpg
 steve-DSCFtest3-p.jpg
 steve-DSCFtest3.jpg
 stevie-DSCFtest3-p.jpg
 stevie-pptest3-p.jpg
 stevie-test3-p.jpg

From this list we will auto proof the following

- pete and peter jobs but not petec jobs
- john jobs but not the job john-DS3test2.jpg
- mike jobs where mike is in the middle of the job name only
- steve jobs but not stevie

This is how we do it.

1. Create a new Regular Expression and give it a name.
2. Add a new Expression and change the name to "mike".
3. Choose "Match Items" using "all of the following".
4. Enter the string "mike" at the bottom and choose "contains". Then select Add.
5. Enter the string "DSCF", choose "begins with" and select Add.
6. Add another expression and name it "Remove".
7. Choose "Ignore Items" using "any of the following".
8. Enter the string "DSCF", choose "begins with" and select Add.
9. Add another expression and name it pete.
10. Choose "Match Items" using "all of the following".
11. Enter the string pete, choose "contains" and select Add.

12. Enter the string petec, choose “does not contain” and select Add.
13. Add another Expression and name it steve.
14. Choose “Match Items” using “any of the following”.
15. Enter the string “steve”, choose “contains” and select Add.
16. Add another expression and name it john.
17. Choose “Match Items” using “all of the following”.
18. Enter the string “john”, choose “contains” and select Add
19. Enter the string “john-DS3test2”, choose “is not” and select Add.
20. Save the Regular Expression.
21. Choose your RIP from the Workbench. Enable “AutoProof”, select a Pagesetup or Pagesetup Pool to proof to and select your Regular Expression from the Filter button.
22. Save the RIP.



Most of the expressions can go in any order. But for this example you cannot have the Remove Expression before the mike expression. If you do the jobs that we want with mike in the middle start with DSCF and would be removed from the jobs that match before the mike expression got to work on them. Therefore they would not auto proof.

Replace Colour Set

Overview

The Replace Colour Set is used to match and replace certain colours as they pass through the system. You can match and replace process or spot colours and choose to match on names or positions. Colours can be created directly or imported from popular desktop applications or the internal Special Colour Set.

Usage - There are a few uses for the Replace Colour Set. It is used to create a digital blue line which replaces all the colours with varying values of blue which allows you to see traps much easier. It can also be used for replacing special colours where the name varies, such as Pantone 101 C and Pantone 101CVC. This way you can catch vary names of colours from jobs and match all of them easily.

The Tabs

There are five tabs where colours are created or imported when creating a replace set. Each Tab has a specific function when used to replace colours. Each Tab is described below.

Tab 1 - Process

This Tab allows you to specify any of the process colours you want to be replaced. The left of the tab shows the colour that is used to replace. The right has two boxes, one with a diagonal line and one with the current process colour. These are split with a text field showing the name of the colour placed.

There are a number of ways you can create a replacement colour for the process colours. These are

1. Select the process colour patch on the right e.g. Cyan. This copies that process colour into the replace patch on the left. With the replace patch selected (i.e. shown in the colour adjustment section), adjust the values as desired.
2. Double click the replace patch on the left. This displays a chooser allowing you to select a colour from a Special Colour Set. Choose a Set and select a colour and press OK. Make adjustments to the values as desired.
3. Drag a colour in from a Special Colour Set or another Replace Colour Set and drop it on the replace patch on the left. Select the colour and make any adjustments required.

4. Use an on-line spectrophotometer to read a colour directly into the replace set.

Tab 2 - Exact

Configure colours for an exact match of an incoming colour name to replace. This is not case sensitive.

Tab 3 - Partial

Configure colours for a partial match of an incoming colour name to replace. This means that if any part of the name matches it will replace. e.g. if you enter 243 in the match it will match Pantone 243 and replace it. The match is not case sensitive.

Tab 4 - Position

This replaces a colour based on the position of a special plate.

Tab 5 - Remaining

This allows you to allocate one colour to replace special plates that are not matched by anything else. This only replaces special colours and not CMYK process colours.



Using the Exact Partial and Position Tabs

These three tabs work in the same way. There are a number of options available via the context menu (right click) for adding and configuring colours which are detailed below.

- New Colour - Creates a new untitled colour in the tab. You can then adjust the colour using the sliders on the left and changing its properties. Select the name (Match Plate) of the colour (untitled0001) to change it to the name you are going to match from your job.
- Delete Colours - Deletes the selected colours. This is only available when you right click over the colours. You can also use the keyboard delete key.
- Duplicate Colours - Makes a copy of the selected colours. This is only available when you right click over the colour.
- Rename Match - Allows you to rename the match plate. See the renaming options below.

- Rename Original - Allows you to rename the original name. See the renaming options below.
- Add Colours From Library - Allows you to select one or more colours from any Special Colour Set created in Blackmagic. Choose a Set and select the colours you want and click OK.
- Import Colours - Allows you to import colours from popular desktop applications or previously exported colours from Blackmagic.
- Export Colours - Export the colours to a file. You will be prompted for the file name and destination of the file.



If the set contains a mix of CMYK and LAB colours you will be prompted to choose either CMYK colours or LAB colours to save as they cannot be saved in the same file.

Renaming Options

When selecting either of the rename options you are presented with a 'find and replace' window. The options for this are as follows.

- Find - Enter the characters to find in the list.
- Replace With - Enter the text to insert in place of the characters found. You can use any valid characters including spaces. If nothing is entered then any characters found are deleted.
- Ignore Case - Choose whether your match is case sensitive.
- Wrap Around - Continue at the top of the list when the bottom is reached.
- Rename All - Rename all items that are found.
- Rename Selected - Only rename the selected colours if the characters are found.
- Rename Current - Rename the currently selected colour if the characters are found. If more than one is selected then the first one in the list is checked for a match and renamed if true.
- Find Previous - Searches backwards.
- Find Next - Searches forwards.
- Prefix With/Append - These are two more options available from the pull down menu in place of Find that allow you to add characters before or after the names.

Usage - You can use this for fast renaming of all your specials if for example they are named Pantone XXX and you want them to have a Pantone XXX CVC, you can use Append with CVC and rename All or rename Selected.

Column Headings

These give information about the plate and can be turned on or off as desired. Right click in the header area and select the headings you want. Change the order of the headers by selecting and dragging to your preferred position. The headers available are

- Match Plate - The plate name of the job that will be matched for replacement.
- Original name - The original name of the colour.
- Space - The colour Space.
- Mode - The Paint mode of the colour. See Paint Mode.
- DotGain Curve - The name of the dot gain curve applied to the plate.

Colour Adjustment

This section allows you to view and adjust the colour values and properties. The name of the colour selected is shown at the top. A window displays the Original and the Adjusted or Modified colour. With an accurate ICC profile selected in the Client settings the colour represented is accurate. The available options are as follows.

- Colour Space - Choose between LAB or CMYK. The sliders change accordingly allowing you to make your adjustments.
- Paint Mode - Choose the paint mode for the Colour. The choices are
 - Overprint
 - Knockout
 - Primer
 - Opaque

The diagram changes to give you a visual representation of the paint mode. When Opaque is selected a slider becomes available allowing you to choose the opacity of the colour.

- DotGain Curve - Choose a dot gain curve to apply to the colour.



Any dot gain applied to a colour has priority i.e. it will ignore and special or process dot gain applied globally for that colour.

- Spectrophotometer - Choose a supported spectrophotometer to read colour values directly into the replace Colour Set.



How to enter colours with a Spectrophotometer

Select the device and select Activate. Once connection has been established you can measure colours and a new entry will be made into the tab selected for each reading. De-activate the Spectrophotometer when finished.

RIP

Overview

The RIP module allows you to configure how you get your Ripped jobs from your RIP into Blackmagic. Different RIPs store their files in different formats and in different locations. You must select the correct input filter and path to match your RIP as well as the network address and method of file transfer. The configuration is split into sections which are shown below. For a more detailed look at RIPs see Getting your files into the system.

Driver

This section allows you to select the input filter that you are going to use to poll and interpret the incoming file format. The driver must match the type of Ripped file that you have. The other sections of the RIP configuration may change depending on the RIP input filter selected.

- RIP Driver - choose the RIP driver (input filter) from the list of supported RIPs. The available drivers depend upon the bits that are enabled on the dongle.
- Custom Settings - Depending on the driver selected there may be some specific parameters that need to be setup to have a valid configuration. Use the Edit button to setup these parameters. See RIP Specific configuration.

Polling

This is where you configure how to poll the Ripped files. Polling is the method used to look for files. When you poll, Blackmagic looks in the specified location (defined under Paths) for files that match the RIP Driver selected. A list is compiled and sent back to Blackmagic for displaying in the RIPMonitor. It takes three (3) successful polls before a file is shown in the RIPMonitor. The files must be stable i.e. has not changed since the last poll. See Input of Files for more information. The options available are

- Enable Polling - Turn the polling on or off.
- Poll Interval - Configure how frequently you should poll the files.

Effects - The poll interval should be set according to your specific requirements. Setting the poll interval too short can flood the network with polling requests (packets) causing it to slow down. Setting it too long can take a long time to show stable files ready for submission.



This value is used in conjunction with the Poll Service Refresh in the System Settings.

- Fast Polling - This will automatically poll two (2) more times as soon as one (1) automatic poll has completed. i.e. it will not wait until its next scheduled poll interval before it polls again.

Effects - Files can appear incomplete in the RIPMonitor if there has not been sufficient time between polls for a jobs complete set of plates to finish Ripping.

Usage - It is recommended that this is only used when all plates of a job are available at one time or on static data i.e. data that does not change such as during a testing stage.

- Log Statistics - Log the polling statistics in the server log. The log message reports “started automatic poll on <date>” when polling starts and then “Completed automatic poll on <date>” when finished.

Usage - Determine how long it takes for one poll or confirm that polling is taking place.

- Ignore Mod Time - Ignores the modification time on the file. Useful for Harlequin RIPs that update the modification time on the file when moving the job between the held and active queues.



The first ever poll of a RIP always takes longer than subsequent polls.

Connection

Specifies the method used for polling, The options are

- Method - Depending on the method of connection chosen the options available change. The connection methods and options are as follows
- Agent - The Serendipity Agent is installed on the RIP where the files are located. This is used for polling and submission of the RIPped files to Blackmagic.
 - Hostname/IP - Enter the hostname or IP address of the RIP computer where the files are located and the agent is running.
 - Localhost - This is used when the files appear locally to Blackmagic. This can be either on it's own disk or via a mounted volume through nfs or mapped drive with netbois.
 - No options as this is local.
- FTP - Uses FTP to poll and transfer the files from the RIP to Blackmagic.
 - Hostname/IP - Enter the hostname or IP address of the RIP computer where the files are located. FTP must be running on the RIP computer.
 - Username - Enter a valid user name for logging into the RIP computer.
 - Password - Enter the password for the Username specified above.

File Transfer Priority

This specifies the priority to be used for transferring files from the RIP to Blackmagic. You can adjust from Lowest to Highest or anywhere in between.

Effects - Sometimes a high priority can effect the RIP performance especially on older RIPs. This can cause some problems such as RIPs pausing. If this happens reduce the priority.

Default - Highest - Always use this unless there are problems.

Paths

Specify the paths to the RIPped files that reside on your RIP. This may be a single path or multiple paths and can be made up of striped paths. The path structure is dependant upon the RIP Driver selected. See RIP Specific info for more information. The options available are shown below.

- New - Adds a new path or stripe path to the Paths field. Select this displays another win-

dow where you can type the path or Browse to locate the folder that contains the jobs.



The Browse option only works if the connection method has been specified and is valid.

- Delete - Deletes the selected paths.
- Delete All - Removes all the paths from the list.

Usage - Most RIP drivers use recursive polling i.e. they will poll down the directory structure into sub directories from the top level directory specified in Paths. The more sub directories that have to be searched for jobs the longer it takes. You should specify the path as far as possible to your files.

- Stripe Paths - Some RIPs place jobs on different drives but in the same location. They can add more drives to a RIP giving it a new mount point e.g E:/RIPjobs, F:/RIPjobs and G:/RIPjobs. These all have a common path of RIPjobs but are “striped” across 3 drives. Therefore you would specify the drives (E:, F: and G:) in the Stripe paths and the Path (/RIPjobs) in Paths.

Usage - This is important for RIPs that share plates from single jobs across multiple drives e.g. Cyan and Magenta on E drive and Yellow and Black of the same job on F drive. If this is not set up as a stripe the plates will not be stitched together.

AutoProofing

Jobs can be submitted manually from the RIPMonitor as desired. Alternatively you can configure your RIP to have the jobs submitted automatically via the AutoProof facility. This way any new job that appears, is stable and meets the criteria specified will be submitted for processing. The options available are shown below.

- Enable AutoProofing - Turns the AutoProofing on or off.

Printing

Specifies how the jobs are to be printed. The options are

- Copies - Specify the number of copies to be printed when automatically submitted.

default - 0 (disabled)

- Use Pagesetup - Print to the selected Pagesetup.
- Pagesetup Pool - Print to the selected Pagesetup Pool.
- Choose - Select an existing Pagesetup or Pagesetup Pool. The chooser that displays also allows you to create a new one.

Usage - If you are autoproofing to one printer/ Pagesetup then choose Use Pagesetup and select the one you want. If you want to send the file to more than one queue, then choose Pagesetup Pool. These can be configured to share jobs across them or print to all of them. See “Pagesetup Pools” on page 69 for more info on Pools.

Criteria

You can select certain conditions that must exist before a job is automatically submitted. The options are

- Delay (minutes) - The length of time to wait to see if a job changes prior to submitting.

Usage - A job may change as other plates are RIPped and added to the job. A suitable amount of time needs to be specified to ensure a complete job is submitted.

- Minimum Plate Count - Specify a certain number of plates that must exist before a job is submitted for AutoProofing.
- Must Have - Select which process plates must exist in the job before AutoProofing.
- Filter - Select a Filter to use for auto-proofing. See “Regular Expression” on page 77.

Advanced

- Delete Jobs From RIP After AutoProofing - You can select to delete jobs after AutoProofing is successful.



This is only available when the jobs are local i.e. resident on the same computer or mapped drive that the server is running on. In this case the connection method specified is set to localhost polling.

Usage - This may be used when a temporary file is created such as when adding halftone dots to unscreened data. See Adding dots

- Hold after imaging - Places the job on hold in the Rendering queue. i.e. after imaging has completed successfully.

Job Filtering

This is only available when the RIP Driver is set to poll imposition RIPs. You can specify if AutoProofing should be carried out on All jobs or just imposed jobs.

Testing

Once the configuration is complete you can test that the parameters you entered are correct. The configuration must be saved before a test can be done. If it is not you will be prompted to save and test. A test poll check RIP connection, Path validity and job presence i.e. are there any jobs that match the RIP driver in the location specified. Messages appear in the window to alert you to problems or give you confirmation that the configuration is valid.



The configuration may be valid but there may not be any RIPed jobs in the path selected. Testing will alert you to this.

Signature Group

Overview

The Signature Group gives you the ability to build groups of signatures which are used for de-imposition, i.e. taking an imposed file and splitting it into smaller files. These are normally either as single pages or 2ups but any size can be created. The signatures can either be imported or created manually giving parameters such as sheet size and page size etc. (See HowTo “How to Create a New Signature Manually” on page 92). Files can then be selected and submitted for de-imposition as needed or you can create a setup where files are de-imposed automatically. There are many options available for the Signature Group and are shown below.

The layout of the interface has a toolbar along the top with various options (detailed below). On the left there is a tabbed area that switches between the “Signatures” for a given group and “Pages” which allows the configuration of the individual signature. You can switch between the signatures and pages by either selecting the tab or by clicking on a page in the signature (for Pages options) or the background (sheet indicated by the white area) for the signature list.

Tool Bar

The Tool Bar has a number of options. Some are display options and some are actions. These options are also accessible via the contextual menu (right click). You can display or hide the tool bar by clicking on the spanner icon. You can set the options that appear in the tool bar by right clicking in the tool bar area and choosing your preferred options or selecting the “Configure toolbar”. This will present you with a chooser showing available items on the left and displayed items on the right. Either double click or drag the options between the two list. Alternatively you can select items and click the arrow keys. Re-order the buttons on the list to your preferred display order. The available options on the toolbar are as follows

- Group - Groups two or more pages together. Pages must be the same size and alignment. The Group button is only available when valid pages are selected.
- Ungroup - Ungroups a group of pages. Only available when a group is selected.
- Suppress Pages - Suppress the selected page or pages (marks it not for print).

- Auto Paginate - Automatically allocates page numbers to the signature. This will include any page that is currently suppressed.
- Offset Page Number - Offsets the page numbers by the desired amount. A pop up window allows you to enter the offset value. This then adds that amount to the each page number.
- Edit Page Number - Edits the page number of those selected. Tab moves to the next selected page. The page numbers can also be edited by clicking on the page.
- Pair Pages - Automatically pairs the pages along the long sides. The pages must match i.e. the headers must be in the same position and they must be joined i.e. no gap. If there is a gap then the manual pair option must be used.
- Pair Pages Horizontally - Pairs pages in the horizontal direction.
- Pair pages Vertically - Pairs pages in the vertical direction.



Pages must align and have the same orientation for pairing to be successful.

- Rotate selected signatures - Rotates the selected signatures by the amount chosen. The options are
 - 90 Degrees Clockwise
 - 90 Degrees Counter Clockwise
 - 180 Degrees
- Rename Signatures - This allows you to rename signatures. Selecting this displays a rename box allowing you to search for and replace names.
 - Find - Enter the characters to find in the list.
 - Replace With - Enter the text to insert in place of the characters found. You can use any valid characters including spaces. If nothing is entered then the characters found are deleted if one of the rename options are selected.
 - Ignore Case - Choose whether your match is case sensitive.

- Wrap Around - Continue at the top of the list when the bottom is reached.
 - Rename All - Rename all items that are found.
 - Rename Selected - Only rename the selected signatures if the characters are found.
 - Rename Current - Rename the currently selected signature if the characters are found. If more than one is selected then the first one in the list is checked for a match and renamed if true.
 - Find Previous - Searches backwards.
 - Find Next - Searches forwards.
 - Prefix With/Append - These are two more options available from the pull down menu in place of Find that allow you to add characters before or after the names.
- Import Signatures - You can import signatures made by other applications. See [How to Import a Signature](#) on page 92 The available types are
 - DynaStrip - Imports signatures created with DynaStrip. Selecting this displays a file chooser allowing you to select one or more signatures. The file names are usually named with a sheet number and an extension of .dsf - e.g. myjob (Sheet 00001).dsf
 - Preps - Imports signatures created with Preps. Selecting this displays a file chooser allowing you to select one or more signatures. The file types are Prep Templates.
 - Krause - Imports signature from Krause imposition package. Selecting this displays a chooser allowing you to select one of more signatures. The filenames usually end in a number such as jobname.001.
 - JDF - Imports any JDF based signature. These include signstation. Selecting this displays a chooser allowing you to select one or more signature files. The file types have a .jdf extension.
 - Facilis - Imports Facilis signatures. Selecting this displays a chooser allowing you to select one or more signature files. The file types are named with a .dai extension.
 - Selective Import - Tick the box to select which signatures out of a group that you wish to import. You can also perform various tasks on them at import time. Selecting this option prior to choosing the type of signature to import will display further options. See [How to use Selective Import](#) on page 93 These are
 - Inclusive Page Grouping - This option attempts to group pages that differ by very small amounts. Grouping allows for the pairing function to work.
 - Rotation - Choose to rotate the signatures during import.
 - Offset Page Numbers - Offset the page numbers of the those signatures imported by a number.

Display Options

There are two different display options

- Top Align - Displays the configuration section along the top of the of the display area and the signatures along the bottom.
- Left Align - Displays the configuration section along the left of the of the display area and the signatures along the right.

Usage - The view is a personal preference and should be used in conjunction with the window split option to suit your display.

- Import Language Encoding - This allows you to select the appropriate language encoding for the signatures so that the names can be displayed correctly in the native language.

Signatures

With the Signatures tab selected all the signatures for the group are shown. Below the list are the options that apply to the signature. Some of these options are for individual signatures and some will apply to all selected. If more than one signature is selected and a parameter is displayed in bold (such as width) it means that the parameter differs between the selected signatures.

You can also multi-select the signatures and change some page parameters by clicking on the Page tab. The available options are then displayed. Below details the options for the signatures. See [Pages](#) on page 91 for the pages configuration information.

- New - Creates a new Untitled signature.
- Delete - Removes the selected signatures from the list.
- Duplicate - Makes a copy of the selected signatures.

Press Sheet

Enter the dimensions of the press sheet. The options are

- Width - Width of Press Sheet
- Height - Height of Press Sheet.
- AutoFit - Changes the Press Sheet size so that the pages fit.

Plate Options

Turn the plate options on or off by selecting the click box. The plate settings are as follows

- Plate Width - Enter the width of the plate.
- Plate Height - Enter the height of the plate.
- Centre Offset - Enter the value to Offset the centre by. This is dependant upon the gripper position.
- Gripper size - Specify a value for the Gripper.
- Position - Choose where the gripper is positioned.



The plate width and height will alter the Press Sheet size if the plate size is larger. If the plate size is smaller then the Press Sheet size is not affected.

Viewing the Signatures

Click on the individual signature to view it. Select more than one signature to view more signatures at the same time. Because of the size when viewing multiple signatures only limited information is practically available. It can help with checking page numbers, head directions and grouping/pairing. You can increase or decrease the thumbnail sizes with the + and - keys.

In this mode you cannot edit the page properties. To edit a particular signature double click it.

Pages

From here you configure the attributes of the pages that are on the press sheet. This is split into two sections describe below

Grid Attributes

- X and Y position - This sets the position of the selected group or page and is in respect to the top left of the press sheet to the top left of the page or group.
- Page Size - Select the size of the single page selected from one of the pre-set page sizes or choose Custom.
- Page Width - Enter the width of the single page selected. The pre-set page sizes automatically fill this in.
- Page Height - Enter the height of the single page selected. The pre-set page sizes automatically fill this in.
- Orientation - Select the orientation of the selected page between Portrait or Landscape.
- Columns - Enter the number of columns for the signature.
- Rows - Enter the number of rows for the signature.
- Gutter X and Y - Enter the size of the gutter for the signature.



If you select a gap first then the value is applied to the selected gutter only. If you wish to apply a value to either All, Even or Odd then you need to select it from the pull down menu first and then enter the value. Then press Enter to apply the value.

- Delete - Deletes the selected pages or groups.
- Duplicate - Duplicates the selected page or group. This is positioned at top left (X=0, Y=0).
- New/Place - Creates a new page or group. Selecting this changes the button to be "Place". You then enter the page attributes as desired and press place to position the page or group.



If you change your mind press the Escape key to cancel the Place.

Page Attributes

- Number - Enter the number of the pages selected.
- Top Bleed - Enter the amount of top bleed to apply to the selected pages.
- Bottom Bleed - Enter the amount of bottom bleed to apply to the selected pages.
- Left Bleed - Enter the amount of left bleed to apply to the selected pages.
- Right Bleed - Enter the amount of right bleed to apply to the selected pages.
- Page head - You can select the position for the head of the currently selected pages. As you choose the diagram shows the change. The page head is indicated by a line and folded corner. Choose between
 - Page Head Up
 - Page Head Down
 - Page Head Left
 - Page Head Right



How to Create a New Signature Manually

1. Create a new Signature Group and enter a name for the group.
2. Select the Signatures tab and choose “New” to create a new signature. Enter the name for the signature.
3. Select the Pages tab (or click on the page).
4. Enter the values as desired for the grid and page attributes.
5. Paginate the pages as desired. Either manually enter the page numbers or select all pages and choose Auto Paginate.
6. Select Signatures tab and choose Autofit or enter the desired values for the press sheet.
7. Save.

You can now select files for de-imposition and choose the new signature to use to de-impose. You

can also select the signature in the Pagesetup for auto de-imposition. Any jobs that are submitted to the Pagesetup and match one of the Press Sheet Sizes of the Signature Group will use the signature for de-imposition.



The tolerances of the press sheet size for matching signatures in the Pagesetup for auto de-impose is less than or equal to 1 inch in width and height. If no signature is found within these tolerances then the job passes through without being de-imposed.



How to Import a Signature

1. Create a new Signature group.
2. Select the import button for your signature.
3. Navigate to locate your signature files. Select one or more files to import and choose Open.
4. Make adjustments as necessary to the signature and save.

Below is a list of adjustments and tips on how to achieve them.

1. Rotate all the signatures 90 degrees.
 - Select the Signature Tab
 - Select all the signatures
 - Choose 90 degrees rotation
 - save
2. Adjust the plate attributes to all signatures.
 - Select the Signatures Tab
 - Select all the signatures
 - Choose “Use Plate” and enter the values as desired.
 - Save
3. Change the head position on all pages on all signatures.
 - Select the Signatures Tab.
 - Select all the signatures.
 - Select the page head in the desired direction.
 - Save
4. Pair all pages horizontally on all signatures.
 - Ensure all pages have the same page head direction and size that you wish to pair.

- Select the Signatures Tab.
- Select all the signatures.
- Select Pair Pages Horizontally.
- Save



How to use Selective Import

1. Ensure the “Selective Import” tick box is checked.
2. Choose the signature import button that matches the type you have e.g. Dynastrip, Preps etc.
3. Use the browser to locate your signatures. More than one can be selected simultaneously. Select open when ready.
4. Select a single signature from the list to view it. Select multiple signatures to import. Use Shift key for group selection or control key for selective selection. Or cmd+A (control+A) for everything.
5. Select the attributes to apply to the signatures during the import stage. e.g. If you want to rotate all the pages by 90 degrees, select it from the menu.
6. Choose OK to import the selected signatures.
7. Repeat as needed.

Special Colour Set

Overview

The system uses Special Colour Sets to identify and match colours when jobs are polled and processed. Colours can be created internally or imported from popular applications such as Adobe Photoshop. Multiple sets can be built and used at any time. You can create colours in CMYK or LAB space or read values directly into the system with an on-line spectrophotometer. The colours property can also be set and an individual dot gain curve assigned if desired. With a colour calibrated monitor (ICC profile saved into the system. See “System Settings” on page 127) an accurate representation of each colour in the set is shown.

The window is split into two sections. The right shows a list of the colours in the special set. The properties for each colour are also shown. The left section allows you to adjust those properties. Selecting a colour from the list loads its attributes into the colour adjustment section allowing you to alter the values as desired.

Toolbar

The toolbar has a number of options available. Clicking the spanner icon reveals/hides the Toolbar. You can customise the view by right clicking in the toolbar area and selecting which options you show. All the options are available from the context (right click) menu on the colour list. The options are shown below.

- New Colour - Creates a new untitled colour in the list. You can then adjust the colour using the sliders on the left and changing its properties with the paint mode selector. Select the name (untitled) of the colour to change it.
- Delete Colours - Deletes the selected colours. You can also use the delete key.
- Duplicate Colours - Makes a copy of the selected colours.
- Add Colours From Library - Allows you to select one or more colours from any other Special Colour Set created in Blackmagic.
- Import Colours From Files - Allows you to import colours from popular desktop applications or previously exported colours from Blackmagic.

- Export Colours To File - Export the colours to a file. You will be prompted for the file name and destination of the file.



If the set contains a mix of CMYK and LAB colours you will be prompted to choose either CMYK colours or LAB colours to save as they cannot be saved in the same file.

- Rename Colours - Allows you to rename one or more colours. This is done using a Find and Replace search tool. Selecting will display another window with various options shown below.
- Find - Enter the characters to find in the list.
- Replace With - Enter the text to insert in place of the characters found. You can use any valid characters including spaces. If nothing is entered then the characters found are deleted if one of the rename options are selected.
- Ignore Case - Choose whether your match is case sensitive.
- Wrap Around - Continue at the top of the list when the bottom is reached.
- Rename All - Rename all items that are found.
- Rename Selected - Only rename the selected colours if the characters are found.
- Rename Current - Rename the currently selected colour if the characters are found. If more than one is selected then the first one in the list is checked for a match and renamed if true.
- Find Previous - Searches backwards.
- Find Next - Searches forwards.
- Prefix With/Append - These are two more options available from the pull down menu in place of Find that allow you to add characters before or after the names.

Usage - You can use this for fast renaming of all your specials if for example they are named Pantone XXX

and you want them to have a Pantone XXX CVC, you can use Append with CVC and Rename All or Rename Selected.

Column Headings

The list of colours has a series of columns that give information about the properties of the plate. These column headers can be turned on or off as desired. Right click in the header area and choose the preferred headings. Change the order of the headers by selecting and dragging to your preferred position. The headers available are

- Colour - Gives a visual representation of the colour.
- Name - The plate name. This is the name that is used to match the colours with.
- Space - The colour space of the plate.
- Mode - The Paint mode of the colour i.e. Overprint, Knockout, Primer or Opaque.
- Tint - The tint or intensity of the colour.
- DotGain Curve - The name of the dot gain curve applied to the plate (if any).

Colour Adjustment

This section allows you to view and adjust the colour values and plate properties. The name of the colour selected is shown at the top. A window displays the Original colour and the Adjusted or Modified colour. With an accurate ICC profile selected in the Client settings the colour represented is correct. The available options are

- Colour Space - Choose between LAB or CMYK. The sliders change accordingly allowing you to make your adjustments.
- Paint Mode - Choose the paint mode for the Colour. The choices are
 - Overprint
 - Knockout
 - Primer
 - Opaque

The diagram changes to give you a visual representation of the paint mode. When Opaque is selected a slider becomes available allowing you to choose the opacity of the colour.

- Tint - Adjust the intensity of the colour by adjusting the slider or entering a tint value in the box.
- DotGain Curve - Choose a dot gain curve to apply to the colour.



Any dot gain applied to a colour has priority i.e. it will ignore and special or process dot gain applied globally for that colour.

- Spectrophotometer - Choose a supported spectrophotometer to read colour values directly into the Special Colour Set.



How to enter colours with a Spectrophotometer

Select the device and choose Activate. Once connection has been established you can measure colours and a new untitled colour is created in the list. Select the name to change it to the correct name of the colour. De-activate the Spectrophotometer when finished.

Applications

ClusterManager - NFR (not for resale)@kiwano.swdevel.serendipity-software.com.au:9100

Master:
 Product: Serendipity Blackmagic Version: 3.0
 Hostname: kiwano.swdevel.serendipity-software.com.au IP Address: 192.168.3.45
 Speed: 167.28 Processors: 2
 Platform: Darwin 7.5.0 Power Macintosh
 Process: Imaging Jobs Rendering Jobs

Slave Nodes:

IP Address	Name	Speed	Platform	CPU	Version	Product
192.168.3.12	yang	45.22	Linux 2.4.26 i686	2	3.0	Serendipity Blackmagic Slave
192.168.3.9	ying	53.15	Linux 2.4.26 i686	2	3.0	Serendipity Blackmagic Slave
192.168.3.30	192.168.3.30	75.29	Windows NT 5.2 Intel	2	3.0	Serendipity Blackmagic Slave

Spectrophotometer - NFR (not for resale)@kiwano.swdevel.serendipity-software.com.au:9100

L: 41.039 x: 0.146
 a: 20.408 y: 0.119
 b: -58.266 z: 0.396

Colour Name Space Mode Δe

Pantone 2726 C	Lab	Overprint	3.9
Serendipity Blue	Lab	Overprint	5.5
Pantone 2736 C	Lab	Overprint	20.7
REB	Lab	Overprint	26.5
Blue 072	Lab	Overprint	37.7
Gloss varnish	Lab	Opaque 10%	50.1
PRB	Lab	Overprint	52.7

Densitometer - NFR (not for resale)@kiwano.swdevel.serendipity-software.com.au:9100

Last Measurement

1.522

C: 0.161
 Y: 0.582
 K: 0.637

Magenta

ib/

Off

Yule Nielsen Number: 2.0

Name	Colour	Density	Cd	Md	Yd	Kd
Untitled0001	Magenta	1.060	0.139	1.060	0.472	0.539
Untitled0002	Yellow	0.197	0.064	0.070	0.197	0.073
Untitled0003	Cyan	0.760	0.760	0.292	0.128	0.479
Untitled0004	Cyan	0.955	0.955	0.318	0.142	0.552
Untitled0005	Magenta	1.296	0.135	1.296	0.503	0.581
		1.199	0.075	0.097	1.199	0.101
		1.522	0.161	1.522	0.582	0.637

Chatting with "Cane Toad"

Started chat
 Friday August 13 2004 10:40:39

Elvis: Hi there Cane Toad
 Cane Toad: Elvis - There you are
 Elvis: Are you hallucinating? 😊
 Cane Toad: Hows the weather?

Send

kiwano-epson7600 - Nesting

16	17	18	19	20	21
75%	80%	85%	90%	95%	100%
1.127	1.269	1.406	1.619	1.86	2.287
1.053	1.215	1.369	1.491	1.652	1.843
1.056	1.173	1.286	1.42	1.699	1.909
0.935	0.102	0.164	0.231	0.302	0.372
0.432	0.493	0.543	0.587	0.622	0.669
0.713	0.749	0.922	1.11	1.197	1.255
1.289	1.328	1.36			

Advance Options

Yule Nielsen Number	Maximum Densities Override
Black 2	Black 2
Cyan 2	Cyan 1.7
Magenta 2	Magenta 0
Yellow 2	Yellow 0
Orange	Orange
Green	Green

Curves: C M Y K O G

SoftProof

Overview

The SoftProof Tool is used for previewing jobs in the system. You can preview the Imaged data or Rendered data of a job or load one of the supported file formats. When previewing the Imaged data you see all the plates of the job at the full output resolution*. The rendered preview is shown at 180dpi** and only shows the plates of the output colour space. The plates can be turned on and off or replaced with any colour from the Special Colour libraries. You can also replace all plates with a complete replace colour set. You can apply effects such as zoom in or out, rotate or mirror. You can also export CIP3 data to a file. With an accurate ICC profile selected in the system settings the preview will be colour correct.

The SoftProof opens with a main display window which holds the image. This is displayed in a Tab (shown at the top of the screen). You can load more than one image into the SoftProof. Each image loads into a separate tab. On the right there is a tab navigator which displays a thumbnail of the job loaded in the SoftProof main window allowing you to click the thumbnail to view the full job i.e. switch tabs. You can also click on the tab or cycle through them using the apple right/left arrow (mac) or control left/right arrows (windows).

* This is the default setting and the preview resolution can be changed through the System Settings. See "Client Settings" on page 129.

** This is the default setting and the preview resolution can be changed through the System Settings. See "Server Settings" on page 127.

Starting the SoftProof Tool

There are two methods to start the SoftProof Tool.

1. From the Application menu of the Serendipity Client. Choose SoftProof.
2. From the QueueManager by selecting a job and choosing View Imaged or View Rendered.

Once the SoftProof Tool is running there are many available options. These are detailed below.

File Menu

- Load Image - Loads an image file direct into the SoftProof. Image file types supported are

- Canon RAW format
- JPEG
- PNG
- PPM
- Serendipity Blackmagic Image
- Tiff

- Load Jobs - Loads completed jobs into the SoftProof. These can be Imaged or Rendered and are shown in a Job Chooser so you can select one of more.



You can multi select using the Shift or Control keys to open more than one image in Tabs of the SoftProof. To open an image into a new tab first create a new tab on the SoftProof and load a job into that new tab.

- Save Serendipity Blackmagic Image -Saves the preview as a BM Image file. This can be submitted or placed in a hot folder or drop-zone.



This is only available from the menu under File. The scanner must be connected and operating normally for this to work and uses the manufacturers driver to capture. Please consult the scanners user guide for more information.

- Export - Allows you export data from the SoftProof Tool. The available formats are
 - CIP3 - Exports job information to a file in CIP3 format at the selected resolution. Then choose
 - Version 2.1
 - Version 3.0
 - Rotation
 - Surface - Choose front or back
 - Compress Preview - Choose if the preview should be compressed.



Some presses are unable to files in compressed format.

- PDF - Exports the selected job in PDF at the resolution entered. Then choose
 - Compression - JPEG, ZIP or LZW. For JPEG and ZIP you also have control on the level and quality of compression.
- Postscript (separated) - Exports the current job as a separated PS file.
- Tiff Multichannel - Exports the current file as a multichannel Tiff.
- Submit - Submits the current job to a Pagesetup with any current changes. This re-images and re-renders the file.



When submitting the image back to be processed again with the relevant changes the current image resolution is submitted. Therefore if you have restricted the resolution in the System Settings this is the resolution that will be used. For example the default rendered preview resolution is set to 180dpi and the default imaged preview is set to the Pagesetup Output resolution. It is therefore recommended that that you are cropping and re-submitting and leave the rendered preview for low resolution soft proofing. See “System Settings” on page 127 for more information on preview resolutions.

- TWAIN Acquire - Uses connected scanner to import direct into the SoftProof Application.

Press

The Press section allows you to have some pre-configured press settings that can easily be applied to the image currently being viewed therefore showing you the resultant output for a particular press. The settings include a width of the press, the number of keys and some colour management information. This allows you to

configure and store information about a Press and stock being used. This is then used for softproofing and in the Ink Keys Viewer for press ink settings.

The Press characteristics are stored in the database under a Press data type in the Workbench. The options from the SoftProof are

- Ink Keys Viewer - Opens the Ink Keys Viewer (See below for more information)
- Choose Press - Select a pre-defined press configuration.
- Edit Press - Edit the press configuration.

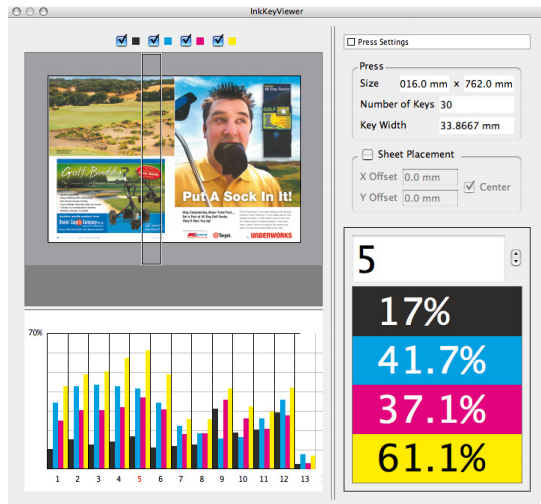
Selecting or changing the press setting will update the display of the image currently loaded to show the effects. This will also affect the Ink Keys Viewer if it is open. See “Press” on page 75 in the Workbench for configuration information.



The SoftProof remembers the previous settings for the next time it is used. Therefore if you have a Press configuration selected then this will be used for all subsequent jobs viewed. If the Press has a Paper Colour selected then this will alter the view accordingly. To remove this effect you either need to “Choose Press” and select “None” which in turn will affect all subsequent loads. Or you can double click on the Paper Colour in the Channel Viewer and select “none” there which will change it for the currently viewed job only.

Ink Keys Viewer

The Ink Keys Viewer is available under the Press menu. Selecting it will display another window with the image loaded in the upper half and a number of press ink keys as defined the selected Press characterisation settings in the lower half. (If one is not yet configured then a default set of values is used). The press configuration is shown on the right with ink key values for the currently selected key. For each key at the bottom there are colour bars representing the amount of an ink used in that section of the job. Selecting a different key will give you new ink values and so on. For Press configuration information see “Press” on page 75 in the Workbench.



The options for the Ink Keys Viewer are as follows

- **Colour Check boxes** - Positioned above the image these show the inks or plates that are used in the job. Clicking on one of them will turn the others off and leave the one on. Click each in turn to view another colour. Shift Click to 'add' or 'subtract' another plate to/from the view. e.g. click cyan and then shift click magenta to view those two plates together.
- **Ink Keys** - The keys at the bottom of the window show the inks that are selected to be viewed on a graph. The scale of the graph varies depending on the amount of ink in the job. Hovering the mouse over a key will show the % ink values for the key below the pointer. Click a key and a bar will show over the job to display the currently selected section. Click another key or use the up and down arrow keys to move the bar to a new key position.
- **Press Settings** - These show the values for the currently loaded Press. These are width, height number of keys and calculated key width. Double click the title bar (or click in the square box to the left) to show/hide the press settings.
- **Sheet Placement** - This shows the job as positioned on the press sheet where the sheet is defined in the Press configuration. You can have the job centred or offset from the left and top. This gives a true position for the press.

You can adjust the window to suite your requirements. Dragging dividers between the image and the keys and the press settings will give more display area to other areas.

Signatures

In the SoftProof there are many utilities that can be used when viewing jobs that have Signatures or a Publication associated with them. If a job does not have either of those then these menu items are disabled.

- **Spreads** - This will display adjacent pages or spreads. e.g. pages 2 and 3 will be shown. Selecting it again turns the spreads view off.
- **Reverse page viewing** - Will display the reverse side of a page through the page currently loaded. Available when viewing a page as part of a publication. Reverse page must be processed. Options are
 - **Set Transparency** - Enter a level of transparency for the back page to come through the front. Changing the value while a page is loaded dynamically updates the view.
 - **Rotation** - Define the rotation of the back page in relation to the front page. This is remembered for next time.
- **Signature Overlay** - Overlay the signature used to de-impose a job. Available only if job has been de-imposed.
- **Thumbnail** - Displays a Thumbnail of pages in the Pages Pane when viewing a publication.



The Page Pane is only displayed when you are viewing a page from a publication. The Thumbnail shows the page where the mouse pointer is currently over. The Page Pane is the same as that used in the FlipBook.

- **Edit Signature** - Allows you to make changes to the signature without closing the SoftProof.



You can make changes to the Signature and view the fitting in the SoftProof window using Signature Overlay. Then when you have it correct you can release the imaged file to render and de-impose with the edited signature. Note that there is a limit to the accuracy of the SoftProof view when compared to the printed output.

Notes

Notes gives you the ability to draw a rectangle and make a note on the SoftProof. The note is attached to the file you are viewing (imaged or rendered) and remains attached until it is either deleted or the job is removed from the system. You can have as many notes as you wish and they can be hidden or shown as required. There is a Note Viewer to keep track of the notes and a “note” column in the QueueManager which shows the number of notes attached to a job. The options are as follows.

- Show Notes - Shows/hides the notes
- Note Viewer - Opens/Closes the note viewer window.

Functionality

To draw a note Choose the Note tool (N). Click and drag to draw a rectangle on the image. Once you release the mouse the Note will appear for you to type the message. You can resize the both the rectangle and the note. You can reposition both the rectangle and note. If you move the rectangle then the note moves with it in the same relative position. If you move the note then this is independent.

To hide or show an individual note double click on the rectangle to click in the top left of the note to hide it. To locate a note from within the Note Viewer double click on it. The currently selected rectangle is shown with a cyan boarder. Rectangles that are not selected are shown with a yellow boarder.

To delete a note either select it in the Note Viewer and press <Delete> key or select the rectangle on the image and press <Delete>.

If you are viewing a publication then moving the mouse into the page pane will show any pages with

notes in yellow. If the notes are made on the rendered file but you are viewing the Imaged file the note viewer will display that test greyed out. Double clicking on the note entry in the viewer will give you the option to open the rendered preview to display the notes.

To view the number of notes associated with a job, turn on the Notes column in the QueueManager. See “QueueManager View Options” on page 34



If there is more than one person viewing the a job and updating or adding notes at the same time then the changes are not reflected in the other SoftProof. The number of notes (if this is changed) is updated in the QueueManager but to view the change the job must be reloaded into the SoftProof.

View Options

There are many tools to manipulate the image which are available from the “View” Menu or by right clicking in the image area. The Options are

- Rotate 90 CW - Rotates the image 90 degrees clockwise.
- Rotate 180 - Rotates the image 180 degree.
- Rotate 90 CCW - Rotates the image 90 degree counter clockwise.
- Zoom in/out - Zooms in or out of the image.
- Mirror - Mirrors the image.
- Negative - Negates the image.
- Sharpen - Applies an unsharp Mask. Options are
 - Amount - 1 - 500%
 - Radius - 1-100 pixels
 - Threshold - 0 - 255 levels



The unsharp mask affects the edges within an image and you can control this with the parameters available. The radius tells us how large an area to affect around the edges. The larger the radius the greater the effect and longer it takes to process. If the preview resolution is high then a given radius will have less effect than if the resolution is lower. IF the detail is quite fine then a smaller radius should be used. Higher radius values can also cause halos at the edges.

The threshold gives a level that should be affected where 0 affects more of the image and 255 very little.

The amount states the size of the change where a higher value is a greater change at the edges.

- Default zoom level - Set the default zoom level for future jobs opened in the SoftProof.



The default is 0 which means "do not change the factor and open at 100%". The level is set either positive (greater than 100%) or negative (less than 100%) as a factor from 100%. So a value of 2 will open the subsequent SoftProof windows as 300% (100%+100%+100% or 3x100). Likewise a factor of -2 will open at 33.33% (3x33.33=100%).

- Default rotation - Set the default orientation for future jobs opened in the SoftProof. Choose between 90 CW, 180 or 90 CCW.
- Job Info - Displays information about the job and how it was processed.
- Loupe - Displays a Virtual Loupe on top of the image in the SoftProof window. The loupe can be resized and magnification changed as follows.
 - To resize the loupe
 - Drag the corner of the loupe to resize it
 - Use the mouse scroll wheel.

- To zoom in or out
 - Hold the apple key (mac) or control key (windows) and use the scroll wheel on the mouse.
 - Right click inside the loupe and select zoom in or zoom out.
 - Move the mouse to the top left or bottom left to show a + or minus respectively. Click the + to zoom in or - to zoom out.
- To Dismiss the loupe
 - Press escape
 - Right click and choose Close Loupe
 - Press L
 - Move the mouse to the top right and click on the red X.

- Page Boundary - This places a red line around the page area of the job. This is viewable when the Soft Proof window is large and image is reduced so that you can see where the page is.
- Full Screen - Changes between full screen mode and window mode.
- Show All - Shows the whole job in the window.
- Show Actual Pixels - One pixel of the screen is equal to one pixel of the job. This is shown at 100%.
- Show Approximate Print Size - Shows an approximation of the actual size of the job.



This is more accurate when viewing the Imaged Preview (providing the preview resolution has not been restricted to a low resolution in the System settings).

Tools

There are four tool choices

- Zoom - Allows you to zoom in or zoom out. Clicking the mouse zooms in twice the current

percentage factor. Holding the shift key and clicking zooms out to half the current percentage factor. You can also click and drag over a certain area to zoom in. This works in the both the main window and the navigator.

- Crop - Allows you to crop an image and re-submit it. See “How to Crop an image and Re-submit it” on page 105
- Measure - Allows you to take a measurement on the image. The cursor displays as a rule. Use the shift key to draw straight lines.
- Pan - Allows you to navigate around the image. The cursor displays as a hand.



You can crop in either the main window or in the thumbnail navigator window. It can be useful to make a rough crop in the thumbnail window first and then fine tune it in the main window. You can pan at any time by holding the space bar and dragging. Release the space bar to revert to the previous tool.

The Navigator

The Navigator is a small preview window that shows the whole job irrespective of the zoom level of the main SoftProof window. It can be selected from the Navigator Menu item and a tick next to the name indicates it is open. You can also choose to use either a Large Navigator window or standard size.

With the Navigator up moving the mouse pointer inside will display a red box showing the respective area that is shown by the main window i.e. its current zoom level. If the main window is zoomed in (scroll bars are visible) then the red box will smaller than the navigator window size. As you move the mouse around the window you will see a black box move that is the same size. Use the black box to view another part of the main window. A single click will reposition the main window to show the portion of the image selected.

The navigator window can also be used with some of the SoftProof tools. With Zoom selected click and drag to view a particular area and the main window changes to the selected area. With the crop tool selected you can click and drag to mark a crop area.

Reposition that marked area as desired and crop the area by either pressing <Enter>, double clicking or right clicking and selecting Crop. To cancel the crop right click and select Cancel.



You cannot alter the crop size box on the Navigator window. To change the size you need to cancel the crop and redraw it.

The Channel Viewer

The Channel Viewer shows the channels or plates of the job currently being viewed in the SoftProof. You can turn plates off and on by clicking in the tick box to the left of the plate name. The plate colours are also shown on the contextual menu and selecting them turns the plates off/on.

The plates can also be reordered by clicking and dragging a plate to a new position. You can also change the plate colour and its associated attributes by double clicking the plate or selecting it and right clicking. (See contextual menu items below).



Once you have reordered your plates you can re-submit the file for processing with them in the new order.



Note: Plate colours cannot be changed or rearranged if the colour space is RGB

You can launch the Channel Viewer from the Plates menu or from the contextual menu (right click) on the main SoftProof window. The channel viewer display options are as follows.

- Name - The plate name.
- Value - The percentage of that colour at the point of the colour selector. This is the cross point of the hand cursor displayed on the main image window. Total ink displays the total amount of ink at the point of the colour selector i.e. the sum of all the plates percentages.
- Mode - The Paint Mode of the colour as defined in the Special Colour Set or Replace Colour Set. (If it is not defined then the default is overprint.)

- Tint - The intensity or tint value of the colour.



You can change the tint value of the colour by changing it in the Special Colour Set which will change it permanently for that colour. Alternatively you can double click on the tint value in the channel viewer and entering the new value. This changes it for the instance you are viewing the job and for a re-submit only. The swatch in the database is not affected this way.

- DotGain - The name of the DotGain curve applied to the colour. This is blank if no DotGain is applied.
- Search - At the bottom of the Channel Viewer there is a search or filter field. Enter a text string and items in the Channel Viewer that match are displayed.

Contextual Menu Items

By right clicking on the Channel Viewer a contextual menu appears with some additional options. These are

- Choose Plate Colour - Select a plate colour from a Special Colour Set. This is only available if you right click on a colour. You can also double click a colour to replace it.
- Choose Paper Colour - Select a special colour from the Special Colour Set to use to simulate the paper colour.



Once the Paper Colour is selected it is remembered next time the SoftProof is used. The Paper Colour will affect all the colours. In order revert back to no paper colour you must explicitly set the colour to None from the Paper Colour selector,

- Apply a Replace Colour Set - Select a Replace Colour Set to replace all colours with.
- Revert All Plates - Changes all the plates back to their original values.



How to use the Measure Tool

1. Select Measure from the Tools Menu.
2. Click on the image at the starting point.
3. Hold the mouse button and drag to the end point.
4. Hold the Shift Key while dragging to draw straight lines in either a horizontal or vertical direction.
5. Release the button to display the distance from the start point to the end point.



How to apply a Digital Blue Line

1. Load an Image by selecting a job in the QueueManager and choosing "View Imaged"
2. Right click in the Channel Viewer and select "Apply Replace Colour Set".
3. Choose "Blue Line" from selection on the left and click OK.
4. Right click and select Revert All Plates to revert to the original view.



Any changes here are only changes to the preview. The job is not altered in any way.



How to Crop an image and Re-submit it

1. Open an image in the SoftProof.*
2. Choose Crop from the Tools menu option
3. Click on the image in the main window or thumbnail and drag to draw a rectangle

4. Position the rectangle by dragging it to where you want it. Resize from the corners as desired. (Resizing a cropped area is only available in the main window.)
5. Press the Enter key and the image will crop. Alternatively you can double click inside the rectangle or right click and choose “crop” from the contextual menu.
6. To crop the area you are currently viewing in the main window simply have the crop tool selected, move to the thumbnail window and press the Enter key. This allows you to zoom into a particular area and crop what you are viewing.
7. To cancel out of a crop press the escape key or right click and choose “cancel” from the contextual menu.
8. Once cropped, right click on the image and choose “Submit”
9. Select the Pagesetup you wish to send the file to and press the submit button.



***Note: The resolution of the preview determines the input resolution of the submitted image. Therefore if you view the rendered file and you have the Print Preview set to say 180 dpi then this will be the resolution of the file you submit. It is therefore recommended for high resolution output that you view the Imaged Preview and crop that. This also needs to be the full imaged resolution. See “Client Settings” on page 129 for more information on preview resolutions..**

Densitometer

Overview

The Densitometer Application allows you to take readings of densities with any of the supported on-line devices and display them on screen. When measuring a colour, the densities of all four colours are read each time. i.e. the CMYK content of the measured patch. A large display area shows the colour measured with the values of the other three colours to the right. You can view percentage dot area and the patch colour. The values can be recorded and saved to a file if desired. The available options are shown below.

Measure Targets

This is available from the menu bar or via the context menu (right click) on the application window. This allows you to measure the solid densities for the process colours and also measure the paper white. With these values stored the colour percentage can be calculated and displayed. You can measure or update an individual density or measure all targets.



To read percentage tint values of any plate you must read the paper white and the solid density value for that colour.

- Delete - Deletes the selected readings from the list. You can also use the keyboard Delete key.
- Delete All - Clears all the reading in the list.



The reference values remain stored while the application is running.

- Font Options - Set the text size to the preferred size.

Export

You can export the values from the list to a file. The options available are

- All - Saves all entries on the list.
- Selected - Just save the entries from the list that are selected.

Selecting either of these options displays a window allowing you to choose the values that are saving. The choices are

- Name - Save the name of the colour.
- Colour Density - The highest density reading regardless of colour i.e. the highest value read of either C,M,Y or K.
- Cyan/Magenta/Yellow/Black density - The density reading of the chosen colour. i.e. if cyan is selected then the cyan density for each reading taken. This is the value displayed in Cd column of the list.
- Colour Percentage - The percentage reading of the highest density read as displayed in the Dot% column.
- Cyan/Magenta/Yellow/Black Percentage - The percentage reading of the chosen colour i.e. if cyan is selected then the percentage reading of cyan for each reading as displayed by the C% column.



The percentage values must be present for the values to be exported (see Measure Targets above). If they are not then the exported file will show a 1% value in place of the reading.

- Order value - Choose whether to export the file in CMYK or KCMY order.
- Separate Values With - Choose whether to separate the values with a tab character or a space.
- Cancel - Cancels the Export action.
- Export - Displays a file chooser allowing you to enter a name and select a location where the file will be saved.

Miscellaneous options

- Yule Nielsen Number - Enter the YN number for the paper you are reading if you know it.

default - 2

- Densitometer - Choose one of the supported densitometers or spectrophotometers from the available list.
- Instrument Density Standard - Select your desired density standard from the available list. See “Supported Density Standards” on page 109 for more information.
- Activate/Deactivate - Connects or disconnects to the chosen device.
- Add - Adds the measured values to the list. This appears after the densitometer has connected without error.



After selecting a densitometer from the list and choosing activate there may be messages reported from the device which will be displayed in the status field. The status field is shown when the device connects without error. Follow any messages when prompted. e.g. measure cyan solid etc.

Colour List

This is a list of readings taken if the Add is enabled. Each reading is appended to the list and the values that are measured are displayed. The columns can be resized or reordered as desired by dragging the header to the preferred position. The columns are

- Name - Name of the colour read - Defaults to Untitled but can be changed by selecting the name and entering a new one.
- Colour - Shows the dominant colour read. i.e. the one with the highest density value.



This may not be the colour that you perceive it is, but the contents that make up that colour are recorded and the colour is calculated and shown.

- Density - The density value for the colour. This is the highest density read from C,M,Y and K. i.e. it shows the density of the colour stated in the “Colour” column.
- Cd/Md/Yd/Kd - The C,M,Y and K densities of the colour read.

- Dot% - The percentage dot of the colour shown in the “Colour” column.
- C%/M%/Y%/K% - The C,M,Y and K percentage values for the colour measured.



If any of the % columns are blank then the reference paper white or solid density for that colour have not be measured.

Usage: The Densitometer Application is a utility that allows you to use your densitometer or spectrophotometer that does not have a display to read values. This can be as a one off reading to compare densities or you may want to read values and export them for plotting on a graph. There is no requirement to use this for the normal operation of Serendipity Blackmagic.



How to make a Density Measurement

1. Connect the device to the computer where the client is running.
2. Choose the device from the list, choose your preferred density standard and select Activate.



Note: The density standard can be changed at any time during the process. You need to give the instrument time to change. The status line will instruct you when you can read the next measurement. See below for more information.

3. Follow any instructions shown on the status window at the bottom.
4. Measure the Paper White and Solid densities of the process colours where you are taking your measurements from.
5. Select “Add” check box to append the readings to the list.
6. Take your measurements.
7. Export the values to a file if desired.

8. Turn Off the measurement device.

Table 1: Supported Density Standards

Instrument	Density Standard - Status				
	A	E	I	T	default
DTP41	✓	✓	✓	✓	✓
DTP34	✗	✗	✗	✗	✓
DTP22	✓	✓	✓	✓	✓
DTP20	✓	✓	✓	✓	✓
Spectrolino	✓	✗	✗	✓	✓
EyeOne	✓	✗	✗	✓	✓



Not all instruments support all density standards. This table is not a complete list. Consult your instrument user guide for more information.

Spectrophotometer

Overview

The Spectrophotometer application allows you to measure colours with a spectrophotometer and view the accuracy of the measured value against an imported value when mapped through a selected ICC profile. You can select special sets, a match ICC profile and choose one of the supported on-line spectrophotometers to measure a delta E reading amongst other colour models.

The window is split into two sections. The right side allows you to import and view a Special Set which is used as the comparison base. The left side displays the measured values. Selecting a particular measured value then matches the closest colour of the imported set, giving it relative Delta E values. These can also be filtered to only show the closest matches for better viewing. The options available are as follows.

- Load Set - Select a special set to load. This is the set you want to use to compare measured values with. Choose from any of the special colour sets you have created.



If you are unsure which set a particular colour is then use the search box in the upper right of the Special Set Chooser. This searches all sets for matches. NOTE: The search is case sensitive. The sets that match are displayed in the list on the left. Select each in turn to find the set you want and click OK.

- Match ICC - Select a match ICC profile.
- Rendering Intent - Choose the rendering intent.
- Spectrophotometer - Select a spectrophotometer from the supported devices.
- Activate - Connect to the selected Spectrophotometer.



Once you connect to the device the pull down list of devices changes to show you any status messages from the device and the values that are measured.

- Turn Off - The activate button changes to Turn Off once successful connection to a device has been achieved.
- Add - Select this to append to the list for each reading. If this is not selected then the currently selected colour is updated. This is available after the device has connected successfully.
- ΔE - Select the value of delta E that you wish to display. This is used in conjunction with the Show all swatches option. See below.
- Show all swatches - Select this if you want to view all swatches. By un-selecting this only those swatches that are below or equal to the delta E value entered are displayed.
- Export - This is a menu option to allow you to export the measured values into a file. The choices are
 - All - Saves all the measured values to a file.
 - Selected - Saves only those entries that are highlighted.

By selecting either of these two options you are presented with a dialogue box asking you to choose the format. The options are

- Lab - Exports just the Lab values.
- xyz - Exports just the xyz values.
- Lab xyz - Exports the Lab values followed by the xyz values on the same line.
- xyz Lab - Exports the xyz values followed by the Lab values on the same line.
- Separate Values With - Choose if the values are to be separated with spaces or Tabs.

Column Headers

Both the lists (loaded set and measured values) have various column headers. These can be used to sort values by clicking in the header. The columns can be turned on or off by right clicking in the header area and selecting the desired columns to display or hide.

You can re-order the columns by selecting them and dragging to the desired position along the headers. The columns headers are detailed below.

- **Colour** - Gives a visual representation of the value loaded or measured. Select an appropriate ICC profile for the monitor under the System settings for an accurate view.
- **Name** - The name of the colour. You can change the name of the measured value by highlighting the name and entering a new one.
- **Space** - The colour space of the colour.
- **Mode** - The mode of the colour. This can be either overprint, knockout, primer or opaque.
- **DotGain Curve** - Displays the name of any dotgain Curve that has been applied to the colour.
- **Delta E** - The calculated delta E difference between the selected colour from the measured list and the colours in the imported list.
- **CEI94, CMC(1:1), CMC(2:1), Delta L, Delta a, Delta b** - Various colour models showing the calculated difference between the selected colour from the measured list and the colours in the imported list.

heading the values are shown in ascending or descending order of Delta E. Un-selecting the “Show all swatches” check box and entering 10 in the delta E box will only display the values that are below 10 Delta E.

You can drag and drop Lab colours from any special colour set or replace colour set on to the measured list (left). You can also drag any colours measured into any special set or replace set.



How to use the Spectrophotometer

1. Load a special set. If the ones that you want are not available then you can create one with the special colour set module. See “Special Colour Set” on page 95.
2. Select an ICC profile. This should match the ICC profile you are using in your Pagesetup.
3. Choose the rendering intent that you are using in your Pagesetup.
4. Select the spectrophotometer that you have connected.
5. Choose Activate and follow the instructions in the status messages.
6. Measure your values.

As you measure you will see the values change on the loaded list of colours. If you select the delta E column

Lineariser

Overview

The Lineariser Application creates a linearisation curve of your output device and applies it to your Pagesetup. It is the third step in the calibration process and brings your output device to a known state i.e. Linear. This means that a 50% cyan will print out at 50% etc. It achieves this by printing a step wedge chart on the output device in the colour space specified by the Pagesetup. This is then measured with an on-line densitometer and the resultant correction curve saved. After this stage ICC profiles can be created and applied to the Pagesetup for accurate colour. If the printer varies with ink batches or head wear then a quick re-linearisation process is all that is required to get back to the same linear state that the ICC profiles were created with initially. Therefore the original ICC profiles can be re-applied to achieve the same colour output.

When you first start the Lineariser you will see two windows. One is the actual Lineariser window which is at the back and the other is a Lineariser Wizard. The wizard takes you through the step by step process from printing the chart to making the measurement. During the linearisation process any other colour management that is applied is temporarily disabled except for the Paper Profile. See the “Calibration Guide” on page 133 for more information on creating a colour managed path. The options for the Lineariser and Wizard are detailed below.



You must create your Pagesetup before the linearisation process.

Wizard

Launch the Lineariser from the Application Menu. This will start the Linearisation Wizard and place it on top of all the other windows. The wizard window is split into two sections. On the left there is a list of Pagesetups that are configured on the server. The right side shows a graph that displays a Linearisation curve if one is currently applied to the selected Pagesetup. On the far right is a list of Pagesetups that use the curve. If you are updating a curve that is used by more than one Pagesetup you can see which ones will be affected. The description below will take you through the Wizard step by step explaining the options.

First Step

From the first window you must select a Pagesetup to linearise from the list of Pagesetups. Select Next to move to the next step in the wizard. This is only available once a Pagesetup is selected. Choose Cancel to exit from the linearisation process.

Second Step

The second stage is to select the an instrument from the supported devices on the left list to match the device you have. Then select the instrument density standard you wish to use. See “Supported Density Standards” on page 109 in Densitometer for more information.



If you don't have one of the supported devices you can still linearise by selecting Manual Entry providing you can measure density values. Manual entry allows you to enter values via the keyboard.

Selecting the Manual Entry will exit from the Wizard and display the Lineariser window. See “Lineariser window” on page 114 below if you select this option.

Once you have selected your device you need to select “Print Chart”. The appropriate chart will be submitted to the Pagesetup you selected in the first step.

Once the chart has printed and had a short time to stabilise you can select Next to move to the final step and measure the chart. Choose Back to take you to the previous screen so you can make a change.

Final Step

The Final stage takes you to the measuring window. It connects to the instrument that you selected and prepares it for reading. At the bottom of the window is a status field which tells you what to do. You can move back to a previous stage by selecting the Back button. Once you have read each strip you can choose the Submit button to save the measurements and apply them automatically to the Pagesetup you are linearising. You can re-read a strip at any time by selecting the strip and following the messages in the status window. To exit from the linearisation process choose the Cancel button.



If you are using the Xrite DTP20 Pulse then there are two methods you can use. You can either have the device connected while making measurements in the normal way or measurements can be taken offline and then uploaded to the Client later. See "Using the Xrite DTP20 Pulse" on page 157 for more information on using this device with the Lineariser.

If you selected "from text file" in the instruments list you will be presented with a file chooser allowing you to browse and select a text file to import values. File format should be CMYK space delimited.

When you submit your linearisation you will be prompted to enter a name for the curve. If the Pagesetup already has a curve applied then you are presented with a choice. You can either create a new curve with a new name or Overwrite the existing curve.

Effects - If you have several Pagesetups using the same curve then overwriting the existing curve will update all Pagesetups. Creating New will only apply to the Pagesetup you are linearising. If you wanted all your Pagesetups to use the new curve you would need to select each Pagesetup in turn and update them with the new curve.

Lineariser window

The Lineariser window displays all of the patches in the patch window area. If there are no values entered in the patches then they are shown as blank solid patches. If they have values then the patches are displayed in shades of the colour with the density readings in the middle. To change or enter a new value into a patch simply select the square to change to edit mode. Enter the value and press either Enter or Tab to move to the next patch still in edit mode. Select the patch again to come out of edit mode. At the top of the window the Curve Name (if one exists) is displayed along with Pagesetup you are currently linearising. The options for the Linearisation window are as follows.

Advanced Options

- Yule Nielsen number - Enter the Yule Nielsen value if you know what it is for the media you are using.

default = 2

Effects - The Yule Nielsen (YN) number or N-factor is used to compensate for dot spread on different media types. This is basically a "fudge factor" added to the standard Murray-Davis formula used to calculate dot area from a density reading. If you use an N Factor of 1 then no compensation is made and just the Murray Davis equation is used. We have found that a N factor of 2 seems to work well with most media types. As you make adjustments to the values you will see the curve preview on the graph change showing the effect of the value you entered.

- Maximum Densities Override - Enter a value to limit the top end density for each of the process colours.

default = 0 i.e. No override

As you make adjustments to the override values you will see the curve preview on the graph change showing the effect of the value you entered.

- Curves - These are a series of check boxes for each output colour. You can use these to turn off the respective colour in the graph preview.



This is only for the preview and has no effect on the output.

- Clear Patches - This resets all the patches removing all values. This is available as a right mouse click in the patch area of the window.
- Submit Linearisation - This saves the values and attaches it to the Pagesetup you are linearising. If there is already a curve saved to the Pagesetup you are prompted to create a new one or overwrite the existing one. See Submit Linearisation in the Wizard section on page 113 for the effects of New or Overwrite. This option is available from the Linearisation menu.

Cluster Manager

Overview

Clustering is the ability to share the workload of processing jobs across multiple devices. Slaves can be installed on other machines on the network and jobs be sent to them from the master for processing. The cluster manager allows you to add and manage Slave devices. You can enable them to be used for Imaging, Rendering or both. As a Slave device starts up its speed is calculated. When a job is submitted for processing the master machine has priority as no network traffic is required. If the master is busy processing another job then the job can be sent to the fastest available slave. The Slave processes it and once complete, sends the job back to the master. It is then ready to accept another job. Slaves can be installed on any machine on the network. The options are as follows.

Master

This displays information about the master machine such as platform, version and speed. You can also decide if the Master machine should handle Imaging and Rendering jobs by clicking the appropriate check box. You can also select “Schedule last” which allows Slave nodes to have priority over the master when jobs are processing. This has the advantage when polling large RIPs as it allows the master to concentrate on gathering the list of jobs and displaying them.

Slave Nodes

The slave node list shows the slaves that are available and running on the network.* Information about each slave is displayed in the window. You can enable a slave in the cluster by selecting the check box next to the IP address. You can choose if a slave is to handle Imaging or Rendering jobs or both. Once selected the Master handles the clustering in the most efficient manner. Slave monitoring can be viewed by selecting the Cluster Status Monitor module.



If there is a node in the list that is greyed out and will not let you select the IP address entry, then the slave is off line.

- Add Slave - Allows you to add a slave that cannot be seen. Sometimes slaves on subnets

cannot be detected. Selecting this allows you to enter the hostname or IP address of the slave and add it to the list. The slave must be running.

- Refresh - This searches the network for slaves.
- Remove offline slaves - This removes a slave from the list that has gone off line.
- Pick processing pool - Select a Pagesetup Pool for a particular slave. Note: This is available as a contextual menu item (right click) when over a slave only. See “How to Direct Jobs to a Specific Slave” on page 115 for more info.

Column Headings

The Slave Node list contains details about the slave devices available. These are displayed under columns headings. You can customise the view and turn the headings on or off by right clicking in the header area and selecting the columns you wish to view or hide. You can move the position of the column by selecting the name and dragging it along the header bar to your desired position. The column headers available are

- IP Address - The IP Address of the machine that the slave is running on.
- Name - The Name of the machine.
- Speed - The speed as calculated by the slave when it starts.
- Platform - The operating system that the slave is running on.
- CPUs - The number of CPU's the slave platform has.
- Version - The version of software that slave is running.
- Product - The Serendipity Product Name.



How to Direct Jobs to a Specific Slave

1. Make sure the slave is running.
2. Create a Pagesetup and configure it as required.

3. Create a Pagesetup Pool and select your Pagesetup. See “Pagesetup Pools” on page 69 for more information.
4. Open the Cluster Manager and right click over the slave. Select “Pick processing pool” from the contextual menu. A Pagesetup Pool chooser will appear displaying the available pools. Select the pool that you created above.
5. You will see the pool under the Processing pool column in the Slave node list. (you may need to expand the window or use the scroll bar.)
6. Submit a job to the Pagesetup or Pagesetup Pool and it should be directed to the slave allocated for processing.
7. Add more Pagesetups or Pagesetup Pools as desired.



For more information on configuring a Cluster see the special section “Clustering” on page 191.

Archiver

Overview

The Archiver allows you to make backups or archives of your configurations. Individual items or complete systems can be archived for safe keeping. Archived items can then be loaded into the Archiver for adding into the database. This can be used for copying a system or recovery from failure or corrupt configurations. You can also configure your system to automatically backup your settings on a regular basis.

The window is split, showing a list on the left of the items in the archive. These may have been added from the database or a loaded archive. The right side shows a preview of a selected item on the archive list. There are a few options for the Archiver Application which are available from the top menu (File and Edit) or the context menu (right click). These are as follows.

File Menu

- Open Archive - Open a previously saved archive. This presents you with a chooser allowing you to browse and select an archive to load.



You can also load an archive by dragging the database into an open Archiver.

- Save Archive - Save the archive to a file. Choose a name and suitable location.
- Close Archive - Removes all items from the archive list.
- Perform Full Backup - Adds all your items to a new Archiver window. Once done you are prompted to choose a name and location to save the file. Once saved the Archiver window is dismissed automatically.
- Automatic Backup Preferences - Allows you to configure the frequency, time and location that a system backed up is performed. The options are
 - What Day - Choose a day of the week, every day, every number of days or never.



Note: If you choose every 2 Tuesdays then a backup will be performed every 2nd Tuesday. Alternatively enter the number of days between backups e.g. 90 days will run 4 times a year.

- What Time - Choose the time the backup should be performed.
- Location - Choose the location the archive should be saved to.



A check is performed when the client is first started and then every hour afterwards to see if a backup should be performed. The Client must be running for a backup to take place. The table below gives you a guide as to when a backup would occur in different scenarios.

Table 1:

Auto Backup Time	Client Started	Client Quit	Time Backup Performed
Monday 2am	Monday 9am	No	When client is started i.e. 9am
Tuesday 12.10pm	Tuesday 9.30am	No	Tuesday 12.30pm
Every-day 12am midnight	Tuesday 8.20am	No	When client is started - then 12.20am each day

Table 1:

Auto Backup Time	Client Started	Client Quit	Time Backup Performed
Wednesday 11pm	Thursday 8.30am	No	The following Wednesday at 11.30pm
Sunday 10pm	Monday 8am	Friday 5pm	Never

- Add to database - Choose to add items from the Archive to the database. You can either add the whole archive or selected items.
- Remove from Archive - Remove the selected items from the archive.
- Expand - Expands selected items if the item contains references. e.g a Pagesetup will contain at least an Output and ICC profiles. Expanding the Pagesetup will display the other items connected with it.
- Collapse - Collapses the selected items if they are expanded.

Edit Menu (and context menu)

- Add to archive (all) - Select between everything or all of a particular data type e.g. All Pagesetups.
- Add to archive (selection) - This allows you to select individual items from the database to add to the archive. Selecting the type e.g. Gradation Curves, displays a chooser with all the Gradation Curves allowing you to choose one or more to add to the archive.
- Exclude ICC Profiles - This is a toggle which will allow you to create an archive but not include any ICC profiles. Produces a much smaller archive useful for emailing.



This only works when a manual selection of items to archive is use. When either "Perform full backup" or an automatic backup is done then ICC profiles are always included.



You can also add items to the archive directly from the Workbench by dragging and dropping them on to an Archive list.

FlipBook

Overview

The FlipBook is an application that allows you to view a publication as a virtual book. A publication is defined as a collection of pages with the same publication name. This is usually a book or magazine that has been de-imposed but a publication can consist of any number of pages.

You can load the publication and flip through pages as you would a real magazine or book. This allows you to check that your de-imposition has worked correctly. You can check pages are in the correct order, orientation and there are no duplicates. Larger views of the pages can be called up and the whole publication can be exported to PDF.

Starting the FlipBook

There are two ways to start the FlipBook

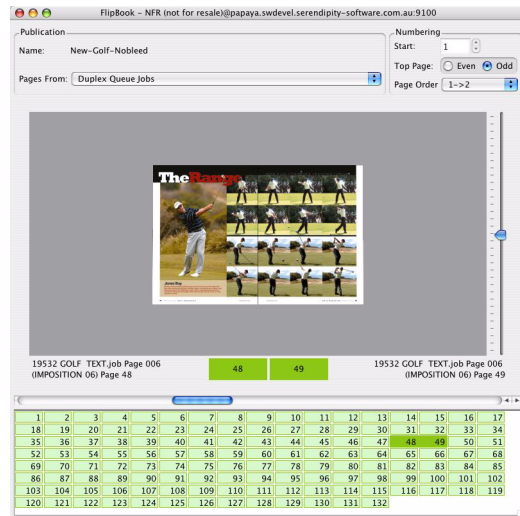
1. From the Application menu of the Serendipity Client. Choose FlipBook. Once open you can drag a publication into the FlipBook to load it.
2. From the QueueManager by selecting a job and choosing View FlipBook (or using the shortcut key).



From the QueueManager the View FlipBook is only available if the job has a publication name.

See “How to Add a Publication Name to a Job” on page 122 for information on creating a publication.

Once you start the FlipBook you will see the window below. This shows a magazine as a complete publication. The pages that make up the publication are shown in the lower half of the window and thumbnails of the pages currently in view.



Along the top the loaded publication name is displayed. Below this you have option to choose pages that make up the FlipBook.

- Duplex Queue Jobs - This loads jobs from the same publication name that have a state of “waiting to duplex” or “Duplexed”.
- All Jobs - This loads all jobs with the same publication name.



If you have a magazine that you have de-imposed ready to duplex then you want to select the pages from “Duplex Queue Jobs” in the viewer. Otherwise you also get the imposed signatures as these have the publication name as the single pages and results in having multiple pages the same in the publication.

Numbering is displayed on the top right of the window and gives you a couple of options.

- Start - Enter the page number that is the starting page.
- Top Page - Choose whether the top page is odd or even.
- Page Order - Choose between reading left to right or right to left



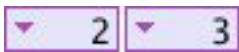
If the first page loaded is page 1 then you cannot alter the start page number. If the first page loaded is greater than 1 then you can enter a lower value as the start page number. This can be used if you are viewing a part publication where the first pages have not yet been processed.

Pages

The bottom section of the window displays the pages that make up the publication. The pages that are displayed are based on the page numbers that are currently loaded in the FlipBook. i.e. the ones finished rendering. The page numbers change colours depending on their state.



Light Green indicates that the pages are loaded into the FlipBook and can be viewed. These show as dark green when they are selected.



Purple indicates that there are duplicate pages. i.e. they have the same publication name and page numbers. This may be because All Jobs is selected at the top of the window. (See All jobs on page 119). Dark purple indicates the pages are selected. Clicking on these pages allows you to select and view the alternative page.

6	2	19532 GOLF TEXT.job (IMPOSITION) Page 7
22	2	19532 GOLF TEXT.job Page 007 (IMPOSITION 07)
38	3	



Light Red indicates that the page is not in the FlipBook. i.e. it is missing. This occurs because there are other pages greater than the numbers displayed that are there. This could be because that imposition signature has not yet rendered. As they render you can simply reload the publication to update the pages.

Options

When you first start the FlipBook (if started from the QueueManager) the pages of the publication are loaded and displayed in 2D (two dimensional) view. There are various ways to navigate through the publication.

- Clicking on the page of the image - If you click on the right page then you move forward through the publication. If you click on the left page you move backwards through the publication.
- Clicking on the pages of the publication - These are displayed in the lower half of the window. The image jumps to the page pairs that you select.
- Space Bar - The space bar moves forward to the next pair of pages. Hold the shift key and press the space bar to move backwards through the publication.
- PageDown and PageUp - Use these buttons on the keyboard to navigate forward and backwards respectively through the publication.
- Arrow keys - Using down or right arrow keys to move forwards through the publication and left or up to move backwards.
- Scroll bar - Moving the scroll bar below the image moves forwards and backwards through the publication.

Menu Items

There are various options available from the context menu (right mouse click) and the window menus. These are as follows.

- Job Info - Gets information about the currently select page. The job info contains all details of how the job was processed and displays a thumbnail preview of the job and the configuration etc. You can print the Job Info by right clicking on the Job Info window and selecting Print. This will choose a system printer.
- Swap page with - This allows you to swap the currently selected page with another page from the same publication currently loaded in the FlipBook.
- View Imaged - Views the imaged file in the SoftProof application of currently selected jobs.
- View Rendered - Views the rendered file in the SoftProof application of currently selected jobs.



You can also view the Imaged or Rendered preview by holding the shift key down and clicking on the page that you wish to view. First time you do this you are asked to choose which preview you wish to view (providing the job contains both previews). If you leave the SoftProof open you will not be prompted to choose which preview type (Imaged or Rendered) you wish to load the next time. The last type selected will be used as the default.

- View 3D - View the publication in three dimension. This shows the page turning as you navigate through. The speed can be adjusted in the preferences.



The performance of the page turning may vary depending on the size of the thumbnail being viewed and the performance of the graphics card.

- Once in 3D you can use the slider on the right turn the publication up and down.
- Select the 3D again to go back to 2D.
- To change the size of the thumbnails make the image window (3D area) larger or smaller as required.

- View as Calendar - This is only available in 3D mode and changes the flip axis to horizontal so that it flip up and down in the same as a Calendar.
- Export - Exports the FlipBook as a PDF. You can select the resolution, compression type and quality. You can also choose between exporting the whole book or a range of pages. You are then prompted for a destination to save the file to.
- Export as spreads - This also exports the Flip-Book as a PDF but as spreads. You have the same options as above.
- Export as movie - Exports the FlipBook as a Quicktime Movie. After selecting this you are presented with three options

- Codec Type - Choose the preferred compression type from the menu.
- Quality - Choose the preferred quality.
- Keyframe spacing - Choose how often a keyframe is saved.



The settings you choose affect the size of the movie, the quality and the compatibility with other applications. There are many Codec types available and not all work on all systems. Commonly used ones are Apple MPEG 4 and the Sorenson types. Increasing the Quality setting also increases the file size. This is also true for the keyframes. The more keyframes you choose i.e. the lower the spacing the better the quality but the larger the file size. Basally using trial and error you will find the best settings to give you the result you want.

- Borders - This turns borders on/off around the pages. This is useful to see the individual pages when spreads as close fitting. The red boarder shows the click area.

- Smaller Thumbnails - Reduces the size of the thumbnails. You can also use the minus (-) key.
- Larger Thumbnails - Increases the size of the thumbnail. You can also use the plus (+) key.



Boarders and thumbnail size change options are only available in 2D mode.

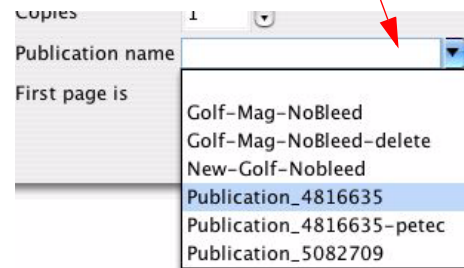
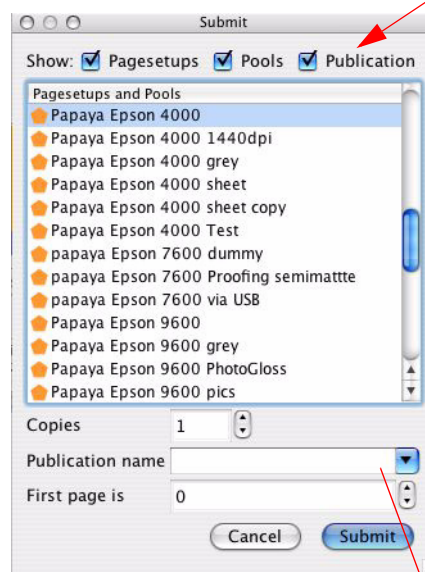
- Render Queue Thumbnails - This views the Rendered thumbnails instead of the Imaged thumbnails.
- Reload Publication - This reloads the current publication with files from the queue. This is used if additional files have been processed as part of the publication or changes have been made and the publication needs to be updated.



How to Add a Publication Name to a Job

1. If you submit files for de-imposition you will be prompted to enter a publication name as the last stage of the submit process.
2. When you submit a file for processing from the RIPMonitor or from the Application/Submit menu option you can enter a publication name. By default the publication option is hidden. Clicking on the “Publication” tick box displays two additional options at the bottom of the submit window.

Publication



Previous Publications entered

3. By modifying the job from the QueueManager and adding a publication. This is done by selecting one or more jobs, choosing modify from the menu and entering a publication name.

Once a job has a publication name it can be viewed in the FlipBook.

MonitorCalibrator

Overview

The MonitorCalibrator is an application that allows you to create an ICC profile of your monitor using a supported spectrophotometer. The profile can then be used to display colour swatches and SoftProof previews accurately. Creation of the profile is very simple requiring one of the supported devices and taking only a few minutes. The device is placed on the screen and a series of measurements taken. From here the profile is created. Below describes the application options and how to use it.

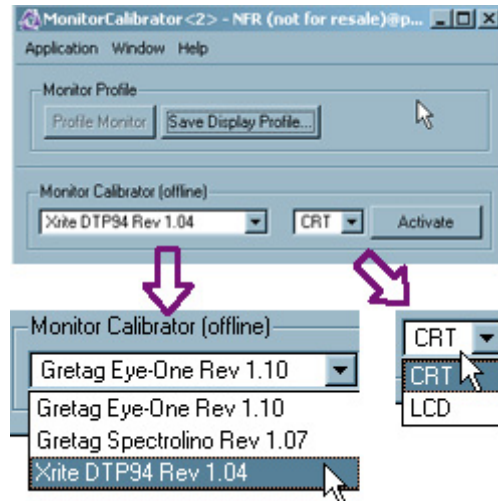
Starting the MonitorCalibrator

Launch the MonitorCalibrator by selecting it from the Application menu. If you have not previously set the match profile and monitor profile in the System Settings then you will be prompted to select both profiles. If you have a match profile to use then select it, otherwise just select a default one for now. Same goes for the monitor profile, a default one will do. These can be changed at any time. Once started you can create a profile for your monitor as described below.

Options

- Profile Monitor - Profiles the monitor using an on-line device. This is greyed out until a supported device is connected and activated.
- Save Display Profile - Saves the measured profile just created. This should be saved in the default ICC monitors directory.
- Monitor Calibrator - Choose one of the supported devices.
- Display Selection - Choose the type of display you are calibrating between CRT and LCD.
- Activate - Activates the selected on-line device. It must be plugged in and powered on to work.

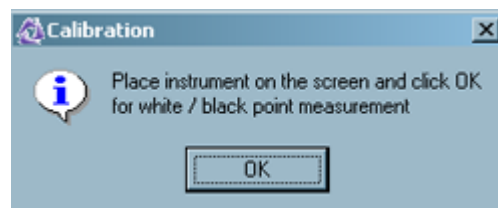
1. Launch the MonitorCalibrator from the Application menu. You will be presented with the window below



2. Choose the device that you have connected to the client machine.
3. Choose the type of display you have and select the "Activate" button.
4. Depending on the device you will be prompted to get it ready to read, In the case if the Xrite DTP94 you are presented the following window.



5. You need to place the device on an opaque surface such as the desk to calibrate it's offsets. You are then prompted with the next message.



6. Place the device on the screen and press OK. The display will now show black followed by white. Once done you are ready to calibrate.

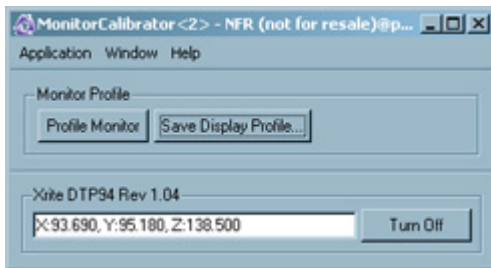


How to Calibrate your Monitor

7. With the device still on the screen select the “Profile Monitor” button. A series of colour patches will display. When finished you need to save the profile.
8. Choose “Save Profile” and choose a suitable location. It is a good idea to place it in monitors under the ICC directory which is part of the install.



9. Turn the device off and close the application.



10. You then need to select the profile in the Client System Settings. Choose System Settings from the Application menu.
11. Select Client Settings (middle tab) and select the choose monitor profile button under the Colour Management section.
12. Select OK. See “System Settings” on page 127 for more info.

Each time you update the monitor profile if you save it in the same location with the same name then your client will always use the updated profile. If you choose either a different location or name then you will have to select it in the System Settings each time.

Application Menu Items

Overview

The section covers various utilities and extra functionality that can be accessed through the Application menu. The options are shown below.

Submit Files

Select files to send to a Pagesetup for processing. Choose between Tiff, JPEG, Postscript and PDF. You can select one or more files to submit for processing. Once you select Open you are presented with a chooser showing the Pagesetups and Pagesetup Pools. Select one or more Pagesetups or Pools to submit your files to and click Submit. This will then copy them into the system for processing. You can use the flow control to hold the job after imaging. This places the job in a held state in the rendering queue.

Submit Files For Deimposition

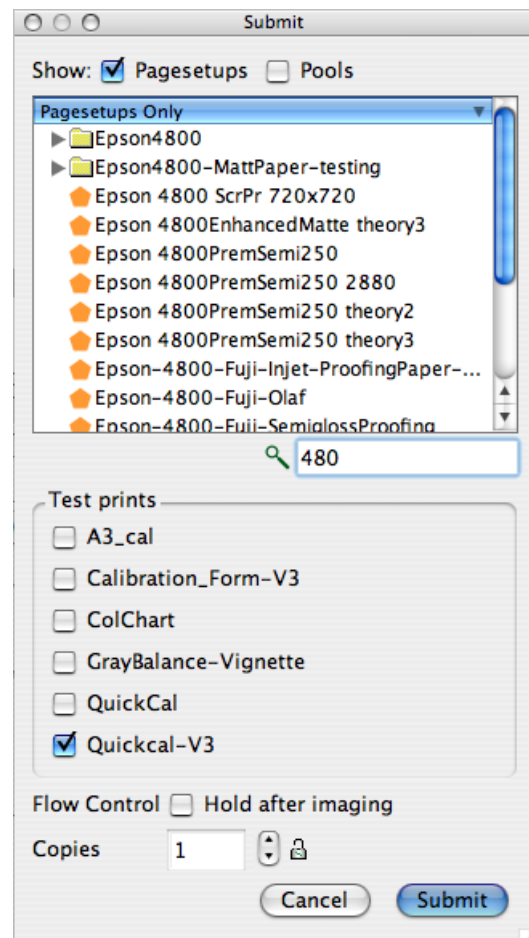
This allows you to submit files for de-imposition. After selecting one or more files you are presented with a chooser to select a Pagesetup and then a signature to use for the de-imposing. See deimposing for more info.

Test Prints

Allows you to submit one of the internal test prints for processing. You can select one or more Pagesetups and send multiple copies if desired.

Submit Chooser

All of the submit options throughout the interface when submitting to a Pagesetup uses the same window called a Submit Chooser. This includes submitting a file from the SoftProof. The Submit Chooser displays a list of Pagesetups and Pagesetup Pools allowing you to select one or more to send the file to. There are also a number of options available on the submit chooser which are described below.



At the top of the window you select to show Pagesetups and/or Pagesetup Pools. Use the filter box (search) to find your Pagesetup easily (if you have a lot). Entering text will filter the ones that do not match. You can also invert the search with `cmd+shift+i` (Mac) or `ctrl+shift+i` (windows). Inverting the search will hide the ones that match. The search box turns black to indicate inverse search is selected.

Flow control allows you to submit the file for imaging and then hold it in a “waiting to Render (held) state. This allows you to prioritise jobs or make rendering attribute changes before releasing. e.g. you can view in the SoftProof, make a change to a signature and then release it to de-impose.

Copies sets the number of copies to print. Changing the number of copies will change it for this submission only. Next time you open a submit chooser the number will be back to 1 unless you lock it by clicking on the lock icon. This will prevent change and always have that number of copies

selected to submit. To change it you need to click the lock again and set the number of copies as desired.

Connect To Server

This allows you to connect to a server that is running on the network. You can search for active servers by clicking the Search button. Choose the server you wish and select Connect. Alternatively you can enter the name or IP address of the server in the Server Address field. The "Server Details" field displays information about the server selected by the Active Servers pull down selector.

If you have multiple servers (Masters) running on the network then the list of the servers is cached on the first "connect to" selection. After that the server selection dialogue appears quickly showing the servers currently cached. If a new server appears after this time the "search" button must be pressed to find the new server and add it to cached list. Likewise, if a server becomes unavailable then the connect will fail and you must update the list again with the search button.

Authorisation

You can lock the server to prevent changes to the configuration. This allows you to see all options and make changes but you are prevented from saving anything. If you try to save an item when the lock is on a warning message displays instructing you to unlock the server and try again. To lock the server you must first enter a password and verify it. Once done the server becomes locked and the "Lock Changes" menu item shows a tick against it. To make a change to an item you must unlock the server by select the Lock Changes again and entering the password. You are then able to save your changes. Once you have made all of your changes you need to lock the server again to prevent further changes. Your password remains the same until it is either changed or removed. To remove the password select "Change Password", enter the current password and click OK without entering anything in the new password field. This sets it to none.

ChatterBox

You can Chat to other users connected to the same server as yourself. Selecting the ChatterBox option displays a window showing the clients that are connected to the same server. If the user has entered a Nickname in the System Settings then this name is displayed otherwise the machine name is used. If the users name is greyed out and cannot be selected to start a chat

then that user has selected the Away option at the top of the selector window.



How to Initiate a Chat

Select the user and click the Start Chatting. Enter the text and press Send or hit the enter key. Your message is shown next to your name. Your name is either your Nickname as specified in the System Settings or your machine name and is coloured in Green. Messages received from the another user are displayed next the the users name which is coloured Red.

When you have finished your chat simply close the window.

Broadcast Message

This allows you to send a message to all users that are connected with a client to the same server that you are connected to. Selecting the Broadcast option displays a window allowing you to type your message and press send. The message is displayed on the users window for a short time but will automatically dismiss if it is not acknowledged by clicking OK.

Download PPD

This downloads the PPD from the server to your desired location. Selecting this displays a chooser allowing you to navigate where you want to save the PPD on your disk. This saves having to get the PPD off the disk. Use the PPD when installing a local printer.

Quit

This quits the Client. When you quit the session is saved for the next time to start the client. i.e. all the windows and positions that you currently have are saved and remembered.

System Settings

Overview

The system settings contains default values and preferences for the server and client. The system settings are split into 4 tabs, Server settings, Client Settings, Server Info and Application Shortcuts. The Server settings are saved to the server and are therefore common for all clients connected. The Client settings are customise options for the client you are using at that time and may vary between clients and users connected to the same server. The Server Info displays information about the server you are currently connected to such as version number, speed and IP address. The Application Shortcuts allow you to configure your own shortcuts to launch new items of the software. The System Settings is available from the Application menu. The details of all the options are shown below.

Server Settings

General

- Default Units - This allows you to set the units that are used by the server. Choose between mm, inches, cm, points or picas.
- Maximum memory for PS RIP - Allows you to set the maximum memory that will be used by the Postscript RIP.

Default = 0 - which uses internal setting of 64MB

- Maximum memory for Rotation - Enter the maximum memory that can be used for rotation.

Default = 0 (Server chooses the default depending on system configuration.)

- Low quality Thumbnail - selecting this produces a lower quality thumbnail. This is faster but some detail may be lost in the thumbnail.
- Compression - This controls the compression for the intermediate file format (the imaged file). The choices are Faster or Better.

default - Faster



Selecting Faster improves the performance as it does not take a long time to compress the file. However this results in a larger file. If disk space is a priority choose "better" which produces a smaller file but takes longer. This has no effect on the output quality.

- Maximum Print Preview resolution - Enter the maximum resolution for the rendered preview.

Default = 180 dpi.



Normally set this low e.g. 72 to 180 dpi so it is quicker to generate and view the Rendered file. For a detailed preview the imaged file can still be viewed at full output resolution.

See also "Maximum Preview Resolution" on page 129

- Polling service refresh - Set the interval between poll service checks i.e. how long between checking to see if any RIPs require polling.

default = 50 seconds

- Server Back Log - Number of days to keep the log. Older days are trimmed when the server starts. 0 means that the log will not be trimmed.



If the log is not trimmed it can become quite large over time and take up disk space.

- Processes - Allows you to control the number of processes that the machine will handle. i.e. the number of imagers and renderers that will run in parallel.



The default is one image and one rendering process. You can have a maximum of two times the number of CPU's. e.g. if you have a single Dual Core Processor you can have up to 4 imagers and 4 renderers running. These do not have to be the same. You can have 2 imagers and 4 renderers if you wish. These can be monitored in the Cluster Manager. See "Cluster Manager" on page 115 for more information.

- Minimum Broadcast Interval - This sets the time interval that the server sends out updates to connected clients. Default value is 2s (This is the minimum that can be set - 0 disables user configuration).



Normally there is no need to change this. But if you have a large number of clients connected to the server with a busy network then you can slow the updates down to reduce network traffic. The side effect is if people are working on jobs they will not see changes as quickly. So the setting needs to be done with work load in mind.

Colour Management

- ICC Engine Accuracy - Select Faster or Better depending on your preference.
- Default Profiles - Select the default profiles that are used when you first create a Pages-etup.
- Apply ICC correction to CMYK Specials - Select this to apply ICC correction to CMYK specials.



By default CMYK specials are not affected by the ICC colour engine. This is generally preferred but in some instances you may want to have your specials corrected by the CMM. This is also a compatibility for early versions.

- Change System Specials - Select a Special Colour Set for plate matching. This is used by the RIPMonitor and Polling service for plate assigning.



If you are unsure which set a particular colour is then use the search box in the upper right of the Special Set Chooser. This searches all sets for matches. **NOTE:** The search is case sensitive. The sets that match are displayed in the list on the left. Select each in turn to find the set you want and click OK.

Working Paths

You can change the default location of the paths that the server uses to process jobs. These are as follows

- Spool - The location where the job is spooled to prior to processing.
- Raster - This holds all the imaged, rendered and print jobs while they are still live in the system.
- Temp - After spooling the job is moved to the temp directory where it is worked on.
- Drop - This is the default location for the drop folders. See "DropFolders" on page 60 for more info.



The raster directory holds all the jobs while they are in the system and as such can be very large. If you move this it needs to be placed on a disk that has plenty of space. A server restart is required if any of the paths are changed for the changes to take effect.



How to Change the System Default Paths

1. Decide where you want to move the folders to.
2. Create the folders needed.

3. Click the paths button for the one that you wish to change.
4. Navigate to the new folder location.
5. Click OK.
6. Quit the client and restart the server.

Client Settings

- Internationalisation - Select your preferred language from those available. This displays all client and log messages in the chosen language.
- Turn Sound FX Off - Select this if you wish to disable the sound effects. Sound effects are used for things such as drag and drop and error message alerts.
- Undo Levels - Set the number of levels for undo. Default is 0 which means no restriction.
- Instant Messaging Nickname - Enter a nickname that you wish to use for the Chat utility. See “ChatterBox” on page 126.
- Memory Cache maximum size - Sets the maximum cache size for the SoftProof tool.

Default = 0 (Server chooses the default depending on system configuration.)

- Maximum Preview resolution - Sets the maximum preview resolution for the SoftProof Tool for both Imaged and Rendered.

Default = 0 - which is the full job resolution of the output file e.g. 720 dpi and is recommended. See also Maximum Print Preview Resolution on page 127

- Choose Monitor ICC Profile - Select a Monitor profile for the display that you are running the Client on.
- Choose Match ICC Profile - Select a match profile.



The profiles are used so that any colour element viewed on the display is shown as accurately as possible. This includes the SoftProof and any colour swatch such as those in the Special Colour Sets. Therefore it is recommended that you calibrate your monitor and use the same match profile as used in your Pagesetups.

Application Shortcuts

This displays a list of the Applications and modules for which you can create your own keyboard shortcut. You can use any valid combination of keys but you need to make sure that they are not being used by other applications or system software. To create a short follow the steps below.



How to Create an Application Shortcut

1. Select an item from the list
2. Click on the right side of the selected item (under the shortcut heading).
3. Type your preferred shortcut. e.g. select and hold modifier keys (if you are using modifier keys) and press the letter that you wish to use.
4. Repeat for other applications on the list.
5. When finished click OK.

Server Info

This displays information about the Serendipity Blackmagic Server you are connected to and the platform that it is running on.

Special Features

Calibration Guide

Overview

Calibration takes several steps to achieve the optimum output quality available from the printer. Once initial calibration is done then maintenance is quick and easy. The principle for each printer is the same. The steps involved are as follows

- Configuring a Pagesetup
- Creation of a Paper Profile
- Apply ink limits to the Paper Profile
- Linearisation
- Creation of ICC profiles
- Applying ICC Profiles
- Minor adjustments

With this section we will work through calibrating an Epson 4000 step by step. The first section will deal with the quick and simple method which is the automatic Paper Profile creation. At the end of this section there is an experts section which details a manual approach to Paper Profile creation.

At the end of the guide are sections covering the different colour options. These include “N-Colour”, “Treat Light Inks as Separate Channels”, “Separation Control” and “Multicolour Press Profile”.

Equipment used in example

Serendipity Blackmagic
Epson 4000
Suitable media loaded
Densitometer and/or Spectrophotometer.
ICC Profiling software

Before you begin make sure that the printer is running at its optimal level. Check to make sure that the heads are clean and printing correctly.

Configuring a Pagesetup

This is the first and most important step. The Paper Profile is based around the printer driver and the configuration of it. The important elements are resolution, colour space, ink type (Pigment, dye, matt etc.) and the use of light inks or not. (See also “Treat Light Inks as Separate Channels” on page 147 and “N-Colour” on page 149). If any of these change the Paper Profile must be re-created as the Serendipity Blackmagic server will not process any jobs where there is a mismatch between the values and Paper Profile. Other important values are printing direction and paper type. While these can be changed and the job

still process through OK, you may find that the quality is not as good.

We will set the Epson 4000 up as follows

- Ink type - Pigment Black and Light Black
- Resolution - 720 x 720 dpi
- Colour Space - CMYK
- Use Light inks - Yes
- Direction - Uni Directional
- Paper Type - Premium Luster Photo Paper 250

Once you have configured your Pagesetup ready to print then we can create a Paper Profile. See other relevant sections in the manual if you are having difficulty with Pagesetup and output configuration.

Creating a Paper Profile

The aim of the Paper Profile is to better match ink and paper characteristics for a given printer. By printing a chart and measuring it we can better determine how the inks in the machine react to the paper when they are printed. Not all inks and droplet sizes produce good results and therefore we need to determine what works and what does not. The Paper Profile is generated directly from the printer driver based on the settings that you make in the Pagesetup, which is why the Pagesetup needs to be created correctly first.

As we mentioned, the chart that gets printed is generated from the printer driver. It creates a series of squares in the colour space configured, utilising all ink combinations (light and dark) and printer dot sizes (for variable dot devices). For a simple device that does not have light inks and only one dot size this would print one patch per colour space. If the colour space was CMYK then you would get a solid K, C, M and Y. In the case of the 4000 then you get a lot more, 15 in fact which is a combination of light and dark inks and 3 dot or droplet sizes. See the “expert Section” on page 139 for more info and examples.

The squares are measured and then a decision is made as to which combination of dots should be turned off and which should be left on. This section takes the automatic approach and makes the decision for you based on the measurements. If you want to make your own decisions you need to read through the expert section at the end. Here is what you do.

1. Select Paper Profile in the Workbench and create a new one.

2. Choose your new configured Pagesetup and click OK.
3. Enter a name for the Paper Profile.

What you will see is a series of square patches in the colour space you have configured in your Pagesetup. The number will vary as we said depending on the type of printer and configuration you have selected. For the Epson 4000 configured as above you will see Black, Cyan and Magenta with 16 patches and yellow with 4*. The first patch for each colour is to represent the paper value for that colour.

* If you have “Treat Light Inks as Separate Channels” on page 147 or “N-Colour” on page 149 selected then you will see fewer patches. Refer to the relevant section for more information.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000
V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000
V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000
V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000	D: 0.0000
V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000	V: 0.0000

Print Density Chart

Next you need to print the density chart to the Pagesetup that you are calibrating. Choose “Print Density Chart” from the tool bar options or by right clicking anywhere on the Paper Profile.



This will print a chart that looks the same as the one on the screen. There is no need to turn any other colour management off (if you have any on) in the Pagesetup as everything is automatically disabled. Because the job is generated internally from the print driver there is no preview of the job.

Measure the Patches

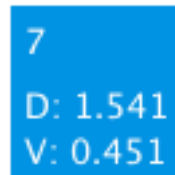
Once the job has printed allow it to stabilise for a few minutes. Depending on the printer, inks and media it may come out wet so you will need to let it dry before you measure it. If you have one of the supported on-line Spectrophotometers or Densitometers you need to connect it to the computer where the client is running. Then select the Measure patches option. This will then present you with a list of supported devices. Select the one you have from the list and click OK to continue. The Client will connect to the measurement device and display the measuring window with the first patch highlighted ready to measure. This first patch is the colour or density of the paper you are printing on. Measure each of the patches in turn until complete. The patches will highlight in turn and

return to the first patch again once the last patch is read. If you need to re-measure any patch simply click on it and read it again. It then advances to the next patch after a successful read. Click OK when you have read all the patches to close the measure window and store the measurements in the Paper Profile. Then choose File/Save to save the measurements in the database.

Manual entry

If you do not have one of the supported devices you need to measure the values for all the patches and enter them into the Paper Profile manually. To do this make sure that the sort patches option is set to patch number and click on the patch you want to enter a measurement for next to the D or V value. When you have entered the value, pressing the tab or enter key moves to the next patch for the next measurement.

D and V values

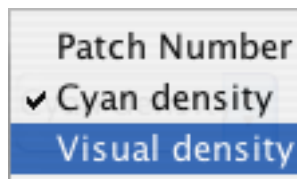


The D value is the density and the V value is the visual. When you use one of the supported on line devices both these values are automatically read and entered for all colours except for the Black. The Density (D) of a colour refers to the colour

content and is the traditional method for measuring density. e.g. a Cyan has a density of 1.5D. The Visual (V) value of the colour refers to how dark the colour is. This is the same as the Black content as Black is an amount of light reflected or absorbed. Both values are measured and used to assess which dot combination works well. See the “Expert Section” on page 139 for more information on assessing the values.

Sifting the results

Once all the measurements have been entered you need sort the values in the appropriate order. For the Black channel select “Black Density” from the pull down menu. For the Cyan and Magenta choose “Visual Density” and for the Yellow choose “Yellow Density”. This will order the colours in the selected mode.



As a general rule if you have a device with light inks then you order those values in Visual Density (except for Black) and others in

Colour Density (or real density). Then select the Sift button for each colour in turn and select an appropriate sifter from the list. For the Epson 4000 we

will choose Epson with UltraChrome inks. Once you have sifted each of the colours save the Paper Profile.

Select the Paper Profile

Now that you have an initial Paper Profile you need to select it in the Pagesetup that we are calibrating so that all further prints are done using the Paper Profile we have just created. Go to the Pagesetup, select the Paper Profile and re-save the Pagesetup. Then go back to the Paper Profile ready for the next stage of calibration.

Ink Limits

The next stage in the process is to set ink limits for mixes of ink. We do this by printing a chart out that has increments of one, two, three and four inks mixed. Then for each mix you need to determine at what point the ink bleeds and limit it before it reaches that point, there by restricting the amount of ink on the paper.



Select the “Print Inklimit Chart” from the Paper Profile we are creating and choose the Pagesetup that we are calibrating. If you want to confirm that the Paper Profile is saved to the Pagesetup you can check the preview of the Pagesetup in the submit window. Alternatively choose File>Show Referrers. This will display any Pagesetup using the currently selected Paper Profile. Select OK to print the chart.

When the chart has printed it is a good idea to get the print immediately so that you can see where the inks are dry and where they are wet. For each of the four ink limits determine the point that the mix of inks produce a good neutral colour and are clearly defined. The patches should not bleed or mottle. The Colours of the two inks combined should maintain the colour that the two inks make. i.e. The magenta and yellow produces a red colour so make sure that this stays red. Some inks and papers tend to move towards orange at the upper end and this will give you problems when measuring ICC charts. Same goes for the Blue and Green. Determine the point that the colours produce good balanced results. With modern printers this is generally very easy but some of the older ones produce some strange results so the whole scale needs to be assessed. The single colours should not need to be adjusted. If they do then the Paper Profile patches

probably need re-assessing. See the “Expert Section” on page 139. When you have selected the values enter each limit in the inklimit section of the Paper Profile and save it. The Paper Profile is now complete.



With newer printer where the ink saturation is high it is possible to set the ink limits too high just because they are dry. But too high and this can cause problems in image areas of real jobs. Do not be afraid to bring the ink limits down to about 100, 175, 230 and 250 for the 1,2,3 and 4 ink limits respectively.

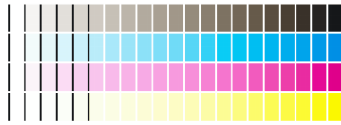
Linearisation

Once the Paper Profile is made and saved to the Pagesetup we need to linearise the printer. This brings the printer to a neutral known state, making sure for example that a 30% cyan actually prints out at 30%. It does not grey balance the printer. That is handled in the ICC profile. The linearisation process uses a wizard to print and measure a chart to create the linearisation curve. The linearisation curve is automatically applied to the Pagesetup. When the chart is printed all other colour management except for the Paper Profile, is disabled. This way quick linearisation updates can be done without having to remember to disable ICC's, correction curve etc. You basically update the linearisation curve on a regular basis, bringing the printer back to the same point that the ICC profiles were originally applied so maintenance is quick and easy. Print a chart, measure it and apply and continue with your work.

Printing the Linearisation Chart

From the Application menu select the Lineariser. This will display two windows, the lineariser application underneath and the linearisation wizard on top. Select a Pagesetup from the list of available Pagesetups. If a curve already exists in the Pagesetup the graph will display the curve and the name of all the Pagesetups that are currently using the curve. In our example we created a new Pagesetup so there should not be any curve applied. Click next to continue. You are then presented with a list of supported densitometers and spectrophotometers and a manual option. If you have one of the instruments, select it from the list and click Print Chart. The device must be connected to the machine that the client is running on and powered on. The correct linearisation chart is then submitted to the

Pagesetup for processing and printing. If the device is not connected an error will occur and no chart is printed. Click next to continue to the measuring window.



Linearisation Strip

Reading the Linearisation Chart

Depending on the device you have, the patch or strip to be measured will be highlighted. Measure each patch or strip in turn following the instructions at the bottom of the window. If you want to re-measure a patch or strip, select it again and measure it. You can only measure strips with a strip reader or patches with a spot reader.

Submitting the curve

When complete click “submit”. If the Pagesetup did not have a curve applied to it as in the example we are doing, you will be presented with a save window allowing you to enter a name for the curve and OK to save it. When you save the curve it is automatically applied and saved to your Pagesetup. If you do have a curve there then you are presented with a choice. Cancel, Create New or Overwrite. The choice you make depends on your preferred method of working. The consequences of the option you choose are as follows.

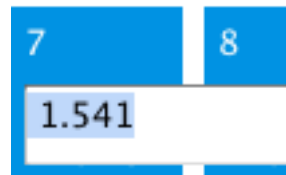
- **Cancel** - This does not alter the current curve in any way. The measurements that you have just taken are discarded and the wizard is dismissed. You are left with the Lineariser window showing the patches and curve for the current linearisation applied to the Pagesetup. From here you can enter values manually (see below), adjust the advanced options (see below) and save or close it.
- **Create New** - This creates a new curve based on the reading that you have just taken. You will be asked to enter a new name for the curve and the data will automatically be applied to the Pagesetup. The important thing to note here is that the curve will only apply to the Pagesetup you are calibrating. If you have more than one Pagesetup pointing to the same printer, say a direct output and a nested output you can end up with one Pagesetup being calibrated and the other not. i.e. one will have the old curve and this one the new curve. You must therefore remember to manually attach

the new curve to any Pagesetup that currently shares the same curve (providing you want to maintain them the same).

- **Overwrite** - This will overwrite the current curve with the data that you have just read, therefore creating a new curve. This is a good way to keep multiple Pagesetups that point to the same printer with the same media in linearisation. However you also need to be aware that all Pagesetups that reference the curve will have the curve data updated. This may not be your aim. To find out what Pagesetups are using the curve either go back to the first part of the Linearisation wizard and check the Pagesetups that reference it. Alternatively select the curve in any section in the Workbench and select “Show referrers” from the File menu.

Manual Entry

If you do not have one of the supported on-line devices then you can still create a linearisation curve providing you can take density readings. When you are presented with the choice of devices to choose from, select Manual Entry from the list and print the chart. Then select Finish and you will go straight to the lineariser window. To enter your first value click on the square that corresponds and the number in the box will be highlighted.



. Enter the density value for that square and press “Return/enter” or “Tab” key to move to the next square. You can click to particular squares if you only have a few

values to enter. Press the Esc key to de-select the number entry box. When you have entered all the values you need to select the “Submit Linearisation” option from the Lineariser menu. This will offer the same options as the automated method. i.e. if the Pagesetup does not have a curve currently then you are prompted to enter a name. If there is a curve there already then you are presented with the choices of “Cancel”, “Create New”, “Overwrite”. See above for the action meanings.

Once all the data has been measured and submitted the Pagesetup and printer should be at a neutral state. This is a state that we can get back to easily by quickly re-linearising. From here you can go on to make your ICC profiles.

ICC Profiles

With your Pagesetup linearised you are ready to create an ICC profile. The first thing to do is to make sure that there are no other colour management settings enabled, except for the Paper Profile we have just created and the Linearisation curve. If you have ICC enabled then turn it off. Make sure that there are no correction curves, dot gains etc. applied. Once done you need to select the ICC chart that you wish to print and send that through the Pagesetup we have linearised. The chart is usually offered as part of the test prints in the ICC software and come as Tiff files. You can print this by creating a drop zone, drop folder or simply using the submit button from the Application menu.



There are instances that you may have a curve applied before the ICC Profiles are created. But this is rare and not recommended as a general rule. One reason is that the curve applied at the time of printing the ICC chart must always be applied with the ICC profile or incorrect results will occur. The Linearisation curve is important however as this brings the printer back to the same point each time.

Assess the chart

When the chart is first printed, examine the patches for any wet inks, smudges, head errors (blocked nozzles) or mottling. If the nozzles are blocked run a head clean and verify they are clear with a test print and then submit the chart again. If there are smudges you need to discard the chart, find the source of the smudging and fix it before you continue. Smudges may cause faulty readings which will not yield very good results.

If the inks are coming out wet you probably need to go back and reassess your Paper Profile ink limiting. If you do make any adjustments in the 2, 3 or 4 ink limits there is no need to re-linearise as the single inks have not been affected. If the patches in the Paper Profile need to be changed then linearisation will be required as the single inks will change as well.

If you see mottling then you can normally remove this by adjusting the ink limits in the 2 or 3 ink limit level and then rendering the chart again. (Re-rendering takes the intermediate file and re-applies all the output colour management as currently set up in the Pagesetup). With some media's (particularly on some

older printers) it is difficult to eliminate the mottling, so you need to reduce it as much as possible without compromising too much on the ink limits. i.e. making them too low so there is little density there.

Once you have determined that the chart is good you need to leave it to stabilise before you measure the values. This time will vary depending on the media and ink set, but quite often 30-60 minutes for good quality media with Pigment inks should be sufficient. Once the chart is ready, you need to measure it according to the profiling software's instructions, and create your ICC profile. It is beyond the scope of this document to detail the process of creating an ICC profile. Suffice to say that most ICC profiling software can produce very good profiles and very bad profiles. But they are generated based on the decisions you make and the chart that it reads. The settings will vary depending on the media you are proofing on. You should consult the relevant profiling documentation on the creation of an ICC Profile.

Placing the profile

Once you have your ICC profile created you need to copy it into the ICC Printers directory in the Serendipity Blackmagic software. These are found in the following default locations. (If you installed your software in another location other than the default then go to the installation area)

- Mac OSX
 - /Applications/Serendipity/Serendipity Blackmagic/lib/icc/printers
- Windows
 - C:\Program Files\Serendipity\Serendipity Blackmagic\lib\icc\printers
- Linux
 - \$HOME/Serendipity Blackmagic/lib/icc/printers

Simply copy the ICC profile that you have just created for the printer into one of the folders above. Then go to the Workbench in the Client and choose the Pagesetup that we are calibrating. Find the ICC profile section and choose your newly created ICC profile for the output Profile. This is only half of the ICC profiling solution. Before we can enable the ICC profiling you need a Match profile.

Match Profile

The Match profile or Input profile is also very important. This usually has a greater bearing on the

final output quality than the Printer profile. You can have the best printer profile but if the Match profile is rubbish then the system will match rubbish. Therefore a very good match profile is essential for colour calibration. The match profile is a fingerprint of the device that you want to represent on your proof. This should be your press as this is the final product that the customer will get. Therefore your proof should show accurately what the press is capable of and the end result of each job. The process of creating a Press (Match) profile is the same as running a normal print job. The IT8 chart should be passed through your RIP, films or plates created and the job run on the press on a common stock. Leave the chart to stabilise and measure it in the same way as you did for the Printer profile. Again, consult the Profiling Software documentation for details on creating a good profile. The most important thing when creating a Press profile is to make sure that everything is running to optimum performance. The Film and Plate setters are calibrated correctly and the Press is running evenly. This can take some time to adjust but the efforts put in should result in a good quality profile.

Once you have the Match profile you need to copy it into the system as you did for the printer profile. This just needs to be copied into the match folder. The locations are as follows

- Mac OSX
 - /Applications/Serendipity/Serendipity Blackmagic/lib/icc/match
- Windows
 - C:\Program Files\Serendipity\Serendipity Blackmagic\lib\icc\match
- Linux
 - \$HOME/Serendipity Blackmagic/lib/icc/match

Once you have placed the input profile into the match folder you need to select that in the Pagesetup that we are calibrating. Once you have selected the Match profile you need to turn on the “Use ICC Always” option and select the rendering intent. See the Pagesetup section “ICC Profiles” on page 60 of the manual for information on each choice. For most pre-press applications the best one to choose is Relative Colorimetric. Save the Pagesetup with the new settings and you are now ready to send a job and check for colour. It is also recommended that you create an archive of your newly calibrated Pagesetup so that you have a working copy on hand. If you have multiple Pagesetups sending to the same device and

media then you need to enable the ICC in each and select the ICC profiles, linearisations and Paper Profiles. If you run different media in the printer then you probably need to create new Paper Profile, linearisation and ICC for the printer. But because the press is the same then the match profile can still be used.

Tuning calibration

Some times there are requirements to make small adjustments to the colour. There are a number of tools available for this. Here is an indication on what is available and when you might use them.

Correction LUT

This would be used if you felt that one of the process colours needed adjusting. There is one curve for each and it can be manipulated as desired. Say you find that the proofs are a little too warm in the three quarter tones and you need to drop out some of the magenta. You can create a new curve, select the magenta curve and make your adjustments as required in the troubled area. See “Gradation Curve” on page 45 for information on how to create and alter Gradation Curves.

Dot Gain

When adjusting the calibration with the Dot gain curve you use it when you need to affect the overall view of the job. This is because there one curve for Process colours and one for specials. If for example the proof is coming out too dark then you can apply a Dot Gain curve to lighten the output. See the “Dot Gain” on page 43 for more information on creating and altering Dot Gain curves.

Tweak Set

An ICC Tweak Set can be applied to alter specific colours. A Tweak Set can only be used when the incoming data is unscreened. If you can identify a particular colour that needs adjusting then that colour can be selected and changed to match the required output. For the Tweak Set to work the Use ICC always must be selected and the ICC profiles and rendering intent used in the Pagesetup must match the ones used when creating the Tweak Set. See the “ICC Tweak Set” on page 47 for more information on creating and adjusting colours with a Tweak Set.

RGB Workflows

If your data coming in is RGB based then you need to create an Input or Match profile for the RGB device you need to match. This profile will be used when ever the data needs to be converted from RGB to CMYK for output, whether or not the

“Always Use ICC” is enabled or not. The device can be a scanner, camera or Monitor. The rules for creating a match profile are the same. The RGB profile needs to be placed in following locations.

- Mac OSX
 - /Applications/Serendipity/Serendipity Blackmagic/lib/icc/monitors
- Windows
 - C:\Program Files\Serendipity\Serendipity Blackmagic\lib\icc\monitors
- Linux
 - \$HOME/Serendipity Blackmagic/lib/icc/monitors

Expert section - Manual dot selection of Paper Profile

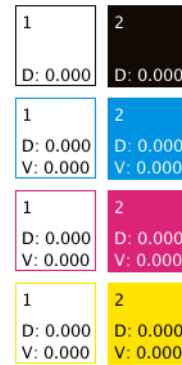
This section is aimed at the expert that wants to make their own decisions on which dots to use for the Paper Profile and which ones not to. It will take you through the process of assessing the patches and choosing the correct patches, followed by a real scenario. You still need to go through the initial process of creating a Pagesetup, creating a new Paper Profile and printing the density chart out. Please refer the above section for this as it does not change.

As we have discussed the Paper Profile is designed to match ink and paper characteristics for a given printer with a given configuration. If certain parameters change then the Paper Profile will more than likely need to be recreated. This means calibrating again from the beginning as the Paper Profile is the basis of all calibrations.

The Printers

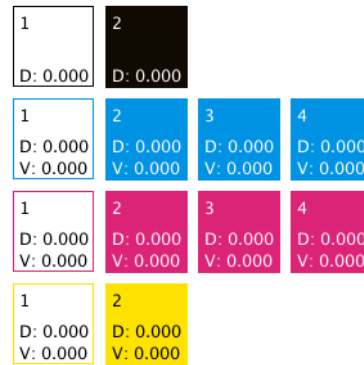
Printers vary greatly as does the ink and media. With newer printers we have light inks and variable dot. With older printers you may just get the basic CMYK. Therefore the patches that you print and read will vary depending on the device. With the older printers the Paper Profile is very basic. A CMYK non variable dot device such as

a HP1050 has just one patch (plus the paper density) and as this is either on or off any value can be used



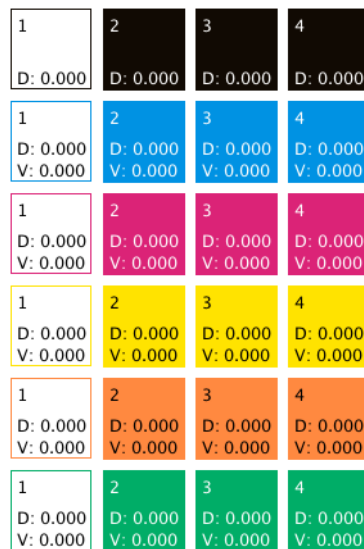
Paper Profile for HP 1050

As you begin to add light inks to printers then the dot selection becomes more important.



Paper Profile for Epson 9000

Or you can have variable dot.



Paper Profile for Roland FJ600 - CMYKOG - No Light Inks

Then with variable dot and light inks the combinations are greater and the selection more complicated.

Paper Profile for Epson 10000

The tables below shows the full combination of dots with and without light inks with variable dots.

Patch no	Inks					
	Light Inks			Heavy Inks		
	Dot Size					
	small	med	large	small	med	large
1	✗	✗	✗	✗	✗	✗
2	✓	✗	✗	✗	✗	✗
3	✗	✓	✗	✗	✗	✗
4	✗	✗	✓	✗	✗	✗
5	✗	✗	✗	✓	✗	✗
6	✓	✗	✗	✓	✗	✗
7	✗	✓	✗	✓	✗	✗
8	✗	✗	✓	✓	✗	✗
9	✗	✗	✗	✗	✓	✗
10	✓	✗	✗	✗	✓	✗
11	✗	✓	✗	✗	✓	✗
12	✗	✗	✓	✗	✓	✗
13	✗	✗	✗	✗	✗	✓
14	✓	✗	✗	✗	✗	✓
15	✗	✓	✗	✗	✗	✓
16	✗	✗	✓	✗	✗	✓

light inks, heavy inks and variable dot

Patch no	Inks	
	large light	large heavy
1	✗	✗
2	✓	✗
3	✗	✓
4	✓	✓

light inks and heavy inks

Measuring the patches

After you have printed the density chart, let it dry and stabilise for a short time. Once done you need to measure the patches. There are two methods you can use to read the data into the Paper Profile. Firstly is to use one of the supported on line devices which measures and saves the relevant data direct into the system and this method is recommended. Secondly is to read the density of the patches with another device and manually enter the data via the keyboard. If you are going to input the data manually you need to measure two values for every colour apart from Black. These are the real density and the visual density of each colour and are indicated by D (real) and V (visual) on the interface. Basically the real density is the value of the colour. e.g. the Cyan value of the cyan patch and this is the traditional value we associate with density. The visual density is how light or dark the value is and represented as the black content of the colour. The reason we take both these values will become more apparent when we assess the actual values, but you will notice that sometimes patches that increase in a real density will not always increase in a visual density. Once you have measured all of the patches you need to save the values so that we can begin choosing the patches.

Choosing the patches

There are a few steps to consider when selecting the patches.

Assessing the print

The first thing to do is assess the print. Look for patches that are bleeding, or mottling. Mottling can occur where inks dry at different rates and are not laid down evenly. Sometimes due to the light ink and dark ink not mixing and one drying quicker preventing the other from drying properly. Look for inks that tend to change colour. i.e. some inks in the cyan and magenta

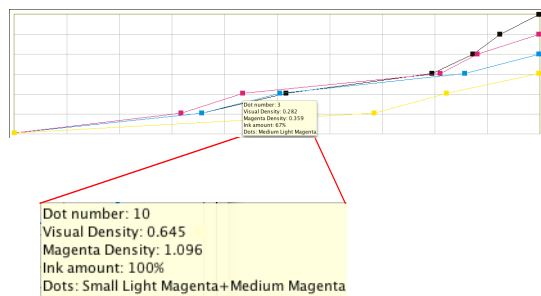
Patch no	Inks		
	Dot Size		
	small	med	large
1	✗	✗	✗
2	✓	✗	✗
3	✗	✓	✗
4	✗	✗	✓

tend to shift away from cyan and magenta changing to look more blue and ruby coloured respectively. Once you have identified certain patches that should not be used you can look to turn them off.

You may find it easier initially to sort the patches by Patch number (when saved the patches are sorted in one of the density orders). Then click in the patch's upper half to turn the dots off that you have visually assessed to be poor. Once done sort the patches by either colour (real) density or visual density. As a general rule you sort patches in visual density where light inks are used. i.e. cyan and magenta, and sort the others as real density.

Evaluating the densities

Once you have eliminated visually poor patches you need to look at the density values that you measured for those patches that are still on. The patches represent a vignette of the colour and therefore must increase as evenly as possible. Taking each colour in turn you need to assess the densities for the sort mode you are in. i.e. if you have sorted visually then assess the visual values first. Make sure that the values of adjacent patches are not too close in value. If they are you get a hump or band in the colour. Generally they should not be any closer than 0.05. If there are two patches side by side that are closer, then you need to turn one of them off. As they have similar densities, keep the one that uses less ink. This can be determined in a couple of ways. The tables above show the dot combinations which you can use as a guide. You can also get the values from the patches or graph points by hovering the mouse over the dots that you need to choose. This will display a tool tip telling you the amount of ink coverage that patch has. Once you have chosen the values for one sort mode,



check the other. i.e. if you have selected the dots for the visual density, change the sort to real density and check for the same criteria. Also, as you change the sort order make sure that none of the patches that are still on switch places with one another. This usually proves to be problematic and you should turn one of them off. Again choose the one that uses more ink to disable. Repeat this for each colour in turn until you are satisfied that your dot selection is good.



As a general rule we find that patches 4,8,12 and 16 are poor (where light inks are used) and in particular the Cyan and Magenta, These patches often mottle when printed or be very close in density to an adjacent patch. Therefore most times these points will already have been eliminated by other decision choices but if they remain and you get problems then these patches are a good place to start to solve them.



When selecting which points to keep and those to remove you need to make sure that the last patch has sufficient (real) density for a matched output. If not then output results will be poor.

The Graph

The graph is used as visual indication of how the values are used. Moving the mouse over a point will display a tool tip giving information about the patch. It will tell you the dot combination and the ink coverage. The horizontal scale is set in 10% increments. This can be used if you see a problem at a particular point, say 75%. You can see which patch/patches are causing the problems. Each patch is “on” at the point displayed by the graph. They turn on before the patch and switch off after the patch. The point that this happens depends upon the distance of the previous and next patches. They fully merge with the adjacent patches mid way between them.

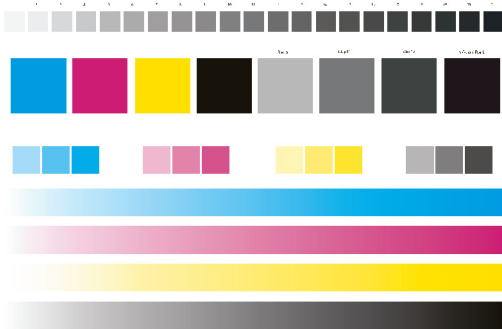
The graph displays all of the process colours. You can turn the display on and off by checking the tick box below the graph for each colour. This is only a visual display and has no affect on the output.



If a colour is not shown on the graph but the check box is ticked then the dots selected are most likely a poor choice and may not be valid. You will need to change your dot selection until the graph shows the colour. Otherwise the job may fail to render and report "Inconsistent data in Paper Profile" errors.

Printing a vignette

After you have made your selection you need to print a chart out and make sure that the dot selection works well on a vignette. Make sure that the sort order is correct and saved. Make sure that the correct Paper Profile is selected in the Pagesetup and that no other colour management is enabled and print a chart with a vignette of each colour. You can download a test chart (shown below) from the Serendipity Software ftp site at <ftp://ftp.serendipity-software.com.au/pub/downloads/GrayBalance-Vignette> Make sure that the



Grey Balance Vignette Chart

vignette is nice and smooth. If you see an area where there is a sharp transition or a hump in the vignette you need to go back to re-assess your selection. Estimate the area where the anomaly is and then use the graph to determine which patch or patches are the problem. Change the ones that you select, save and re-render the vignette chart. Sometimes you may find that changing the sort mode, say from Visual to Real will fix the problem. This simply moves the points that the dots are turned on and off. Slight problems will most likely be hidden by the linearisation and ICC profiles. Once you are happy that the values are correct you can continue with the calibration process.

Practical Example

In this last section for the Paper Profile we will work through a real example. Taking each decision in turn, explaining the reasons for the choices made and showing the results.

We will profile the Epson 4000 at 1440dpi by 720dpi using Premium luster 250 paper with light inks (pigment) and photo black.

The Pagesetup was configured and saved and the Paper Profile density chart printed. This was measured using an Xrite DTP 34 and the results are shown below.

1	D: 0.039	0.033	0.031	0.242	0.274	0.267	0.274	0.264	0.213	0.204	0.247	0.207	0.274	0.253	0.243
1	D: 0.048	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242	0.242
1	D: 0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039
1	D: 0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039
1	D: 0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039

Paper Profile sorted by Patch number for Epson 4000 at 1440 x 720 dpi

The Table below shows the density values of the patches as read. You will see the values that violate the rules and need to be fixed.

Table 1: Starting Densities

Patch No.	Black	Cyan		Magenta		Yellow	
	Rd	Rd	Vd	Rd	Vd	Rd	Vd
1	0.039	0.048	0.033	0.03	0.034	0.019	0.034
2	0.657	0.745	0.278	0.404	0.313	1.041	0.088
3	1.033	1.224	0.367	0.644	0.439	1.243	0.107
4	1.442	2.242	0.624	1.288	0.691	1.307	0.128
5	1.274	1.658	0.54	1.106	0.646		
6	1.607	2.092	0.617	1.339	0.712		
7	1.714	2.196	0.672	1.519	0.746		
8	1.458	2.261	0.855	1.917	0.831		
9	1.934	2.105	0.758	1.785	0.802		
10	1.935	2.217	0.808	1.901	0.826		
11	1.904	2.273	0.859	2.011	0.844		
12	1.437	2.035	0.998	2.186	0.899		
13	1.687	1.997	1.134	2.101	0.967		
14	1.574	1.72	1.198	1.955	0.967		
15	1.53	1.733	1.238	2.029	0.99		
16	1.435	1.814	1.351	2.315	1.048		

Rd = Real Density Vd = Visual Density

From the values you will see that the patches will vary depending on the order that we sort them. For example the highest patch of Cyan when sorted visually is patch 16 at 1.351D. However after sorting

sure that the last patch of each colour has sufficient density to achieve your match criteria.

So for this calibration obviously black does not change as there is only one density value. For Cyan we notice two things. First is that patches 7 and 9 switch depending on the sort order. This also happens with Patches 11 and 12. This can cause us some problems so we need to eliminate one of each of them. Based on the ink coverage rule we choose to keep 9 and 11, and eliminate 7 and 12. We also know that 12 can cause us some problems which is an additional factor in our decision. The next thing we notice with Cyan is that patches 6 and 9 are close in density (and patch 11 is not far off either). Because patch 6 and 9 place the same ink down you have to use other factors to determine the best one to keep. 6 has a smoother dot transition from patch 5, but I chose to turn off patch 6 (based on visual value and assessment) and patch 11 and retain patch 9. We do not need patch 11 as the density is far in excess of that needed for pre-press and patch 11 places more ink than patch 9. So I kept patch 9 as this has a darker appearance (visual density) than patch 6 and it is the last patch. Either would probably yield similar results.

With Magenta the only patch that may cause concern is patch 12. It is close to patch 11 in both real and visual and as we know that 12 can cause some problems (although less so in Magenta) we do not need 12 to achieve a maximum density so we can also eliminate this.

Now that we have assessed the patches visually and the values using both visual density and real density, we are ready to run a vignette test print to see how smooth the resultant patches are. Before we submit the job, change the sort from real to visual for both Cyan and Magenta as this generally produces better results. Then save the Paper Profile. The result is shown below.



Paper Profile sorted by visual density before printing first vignette

Then make sure that you select the Paper Profile in the Pagesetup and save before you run the test. Print the vignette and have a look to see how smooth it is. From the print run with this Paper Profile selected I found that Cyan, Magenta and Yellow were all fairly smooth. But the black had some sharp transitions at the top end. This was around the 80% area. So I had

to look at the values of the patches to try to eliminate the transition. One thing to note is that when you turn a dot off, the other dots will move positions to accommodate the change. I tried changing some of the dots at the upper end. For example, turning 9 off and 10 on. This had no noticeable effect. By turning dot 7 off it had a small effect but the transition was still quite severe. Each time you make a change you need to save the Paper Profile and run the job again to see if the change has had the desired effect. Eventually I tried turning off dot 4, which as we know can cause problems. The result was a smooth black vignette. The final Paper Profile used is shown below.



The final Paper Profile used

You will see that there are not many dots actually used. This is a by product of higher resolutions. The essential thing is to get the right combination so that you can create good ICC profiles and get accurate colour matching. After this we now ink limit, linearise and create ICC profiles as detailed earlier in the guide.

Summary

So we now have a nice Paper Profile which we can use to calibrate the system. As you will have realised after reading this last section and after having a go yourself, there is no definite set rule. The Sift button is the best of everything to produce good Paper Profiles. But when creating one manually there are many factors involved in making your decisions. The decisions I made are based on experience gained during a lot of testing. It is not the definitive guide or the only way to choose the patches. You may well get the same end results with different patches. This is a guide to help you understand the process involved and give (as much as possible) the experience gained during development so you can make your own decisions.

The most important thing to understand is that good calibration starts with a good Paper Profile. Because everything else comes from this and if the ink types, dot sizes and paper combinations are not producing very good results at this early stage it will not be helping as we create ICC profiles.

Lineariser - Expert Section

The lineariser is a fairly basic application with very little in the way of expert sections. Its main function is to create a curve for a particular device and apply it to a Pagesetup. The curve is applied on top of the Paper Profile and designed to make the printer linear. Therefore for a given printer and paper Paper Profile you can always return to the linear state from where the ICC profiles are created. It is for this reason that a wizard is used for the first stage to assist guiding you through a standard linearisation. There is an advanced section in the main Lineariser window. This is explained below.

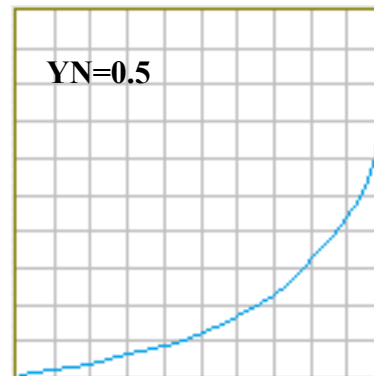
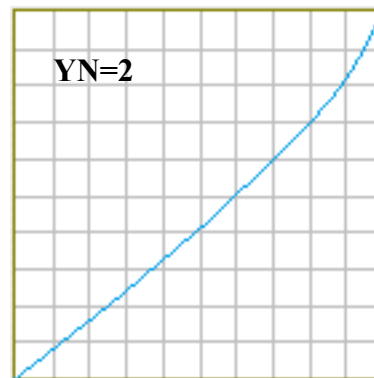
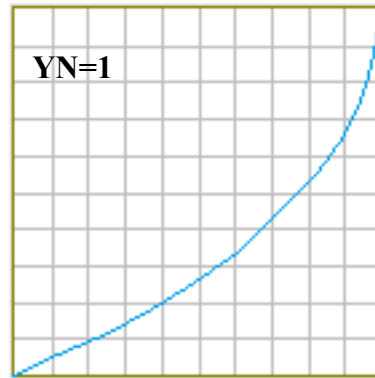
Yule Nielsen Number

As described in the lineariser section of the manual the Yule Nielsen (YN) number is essentially a fudge factor applied to the standard Murray-Davis formula used when calculating dot percentage area from density.

The value is used to compensate for various media types as some react different to others in the way a dot will spread on a particular media and thus affect the dot percentage value. It can sometimes be helpful to change the YN number and some manufacturers will quote a YN number for a given media, but this is rare. The YN formula used for calculating the dot percentage is as follows.

$$\text{Dot \%} = \frac{1 - 10^{\frac{-\text{dot}}{\text{YN}}}}{1 - 10^{\frac{-\text{solid}}{\text{YN}}}} \times 100\%$$

Where dot is the value of the density of the value you are measuring and solid the density of the solid patch. Therefore a Yule Nielsen value of 1 has no effect on the dot percentage area. A value other than 1 will compensate for the dot spread on the media. If the YN is greater than 1 then the dot % decreases and if the YN is less than one the dot% increases. This can be seen from the graph on the lineariser.



Remember that the curves display the compensation. Therefore if the YN number is less than 1, the dot percentage calculated is increased and so the curve that we apply will go down. The reverse is true for the a YN number greater than 1.

For most of the testing that was done during the development stage the value of 2 (which is the default setting) seemed to work well. However we also noted that on occasions better results were obtainable by setting different values for each process colour.



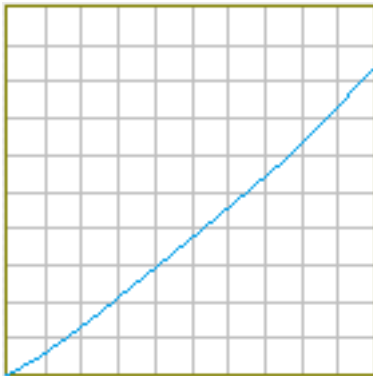
Because you create the ICC profiles after linearisation, then any value entered will be used for printing the ICC chart and will therefore affect the output. This means that when the ICC profiles are applied the same YN number must always be used in the lineariser to obtain correct results.



Any value entered in the Maximum density override will be used when printing the chart for the ICC profile and therefore must always be used when using that profile. This must also be remembered when creating new linearisation curves.

Maximum Densities Override

The only other section in the lineariser is the maximum density override. This allows you to cap the top end density to any value less than the maximum value read. If you enter a value less than the highest value measured then you will see the curve change. The top end will move down and the rest of the curve will adjust to compensate for the new end position. This means that values in the middle will change as well.



curve with Max density override set to 1.4D - Max measured = 1.7D

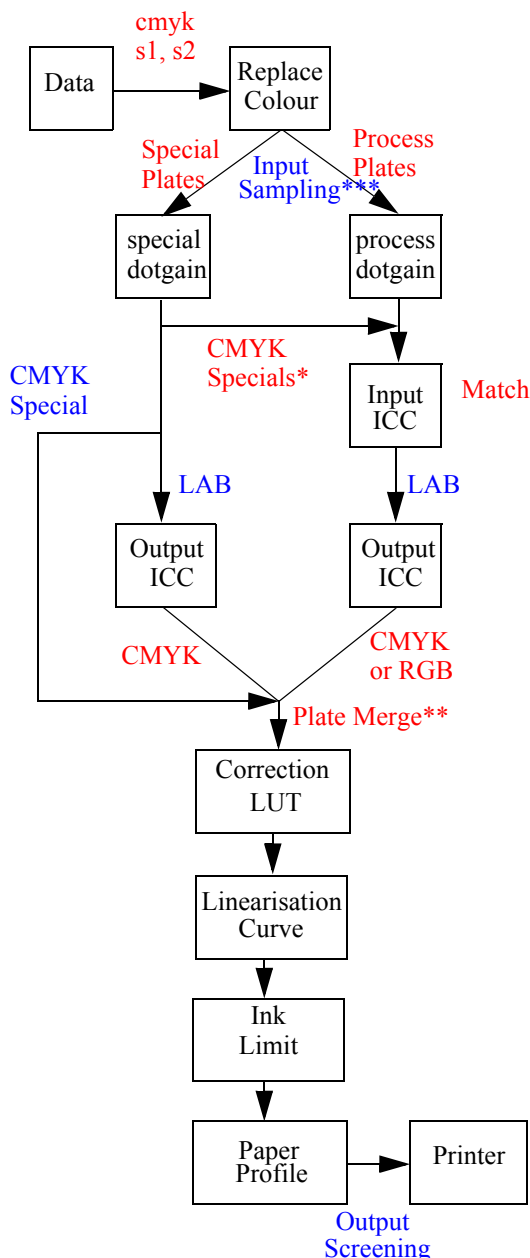
Pros and Cons

There are various arguments for and against setting a maximum density override. In general the match ICC profile would set the maximum density values so there should be no need to set them here. However some users have found it an advantage to set the values to the target densities that you require for the final proof output, and doing so have achieved very good results. Reducing the density of the output that is used to print the ICC chart will affect the gamut. However, as the gamut of a press is generally smaller than that of a proofing device this may not have any noticeable effects.

It can sometimes be desirable to drop the top end densities of the output prior to ICC creation. Sometimes there is a need to boost the values after ICC is applied. But really this should only be used as a last resort and is not desirable as a general rule. If the top end densities drop then the ICC profiles are generally to blame and therefore should be corrected. As mentioned earlier it is the Match profile that has the biggest bearing on the output and that sets the output top end densities.

Colour Management diagram

Below is a diagram that shows the flow of data through the various stages of colour management.



* CMYK Specials - This is the path of CMYK specials if the option “apply colour correction to CMYK specials” is enabled in the system settings.
 ** Plate Merge - Also at this point the opaque, overprint, knockout and individual colour dot gain curves are applied.
 *** Input Sampling - This is where the sample method is applied and the preserve screen functions etc.

Different Paper Profiles

As we stated at the beginning of this guide the Pagesetup must be configured before creating a Paper Profile. This is because the settings of the Pagesetup determine how the Paper Profile is generated by the printer

driver. So far we have look at one type where the light inks are mixed with the heavy inks in dot combination patches and are placed in order according to a density scale.

Here we will look at two other Pagesetup configurations that have a bearing on how the Paper Profile is generated. The first is where we treat each ink as a separate channel and the second using an N-Colour space. Each produce a different Paper Profile from the ones described earlier, and both have their set of guidelines on their implementation.



Not all the printer drivers have these new options available.

For the following descriptions and procedures it is assumed that you have read and understood the previous parts of the calibration guide.

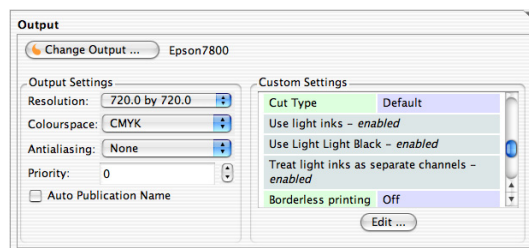
Treat Light Inks as Separate Channels

Overview

The theory behind this method is to use more light inks in the highlight area’s of a job and more dark ink in the shadow area’s. This is done by choosing the patches to use in density order starting with the light inks and moving to the dark inks and merging them gradually and smoothly in the middle.

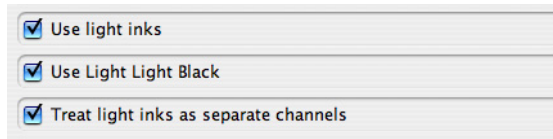
Procedure

As before you need to configure the Pagesetup before you create a new Paper Profile. In order to use this new calibration method you need to enable the “Treat light inks as Separate Channels” which can be found in the customise section of the Pagesetup.



Output section of the Pagesetup showing the customise area

Select edit and find the section “Treat light inks as separate channel”



Make sure that the option is enabled and save the Pagesetup.



If you do not see this option then the printer driver you are using is probably not compatible with the new feature.

Go to the Paper Profile section in the Workbench and create a new one. Select the Pagesetup you have just saved and click OK. The Paper Profile looks like this (for and Epson 7800)

1 D: 0.000	2 D: 0.310	3 D: 0.796	4 D: 2.000	LLK
1 D: 0.000	2 D: 0.310	3 D: 0.796	4 D: 2.000	LK
1 D: 0.000	2 D: 0.310	3 D: 0.796	4 D: 2.000	K
1 D: 0.000 V: 0.000	2 D: 0.310 V: 0.310	3 D: 0.796 V: 0.796	4 D: 2.000 V: 2.000	Lc
1 D: 0.000 V: 0.000	2 D: 0.310 V: 0.310	3 D: 0.796 V: 0.796	4 D: 2.000 V: 2.000	C
1 D: 0.000 V: 0.000	2 D: 0.310 V: 0.310	3 D: 0.796 V: 0.796	4 D: 2.000 V: 2.000	Lm
1 D: 0.000 V: 0.000	2 D: 0.310 V: 0.310	3 D: 0.796 V: 0.796	4 D: 2.000 V: 2.000	M
1 D: 0.000 V: 0.000	2 D: 0.310 V: 0.310	3 D: 0.796 V: 0.796	4 D: 2.000 V: 2.000	Y

Paper Profile with Treat light inks as separate channels enabled

The next few steps are the same as the other Paper Profiles.(See earlier in the guide). You need to print the density chart out and measure the patches. The chart you print will look the same as the picture in the Client.

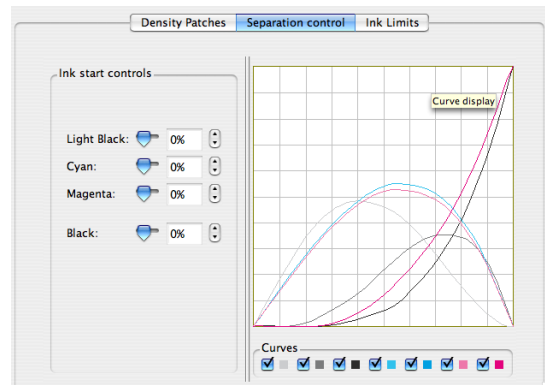
Once you have the values for the patches measured and saved then you need to select the patches to keep on and those to turn off. The principles for selection are the same as the other Paper Profiles. Only this time as the inks are treated as separate colours which means that each patch is a dot of a certain size and colour. The most important thing to remember is that although the inks are treated separately in the driver, you have to think of them as a colour. Therefore for example you need to assess the patches for the Black altogether and then the Cyan all together etc.

The first stage is always a visual assessment of the printed patches and discard any that are bleeding. Then you need to check that the density in which ever scale you choose increases in value. Make sure for example that the patch 4 of Light Black is not denser than patch 2 of Black. If it is then one must be turned off. Then make sure that the densities are not too close together. Again you have to assess the patches on the light colours with those on the dark. If they are too close you will get stepping in a plain vignette.

Once you are happy you have chosen the patches you want to use you need to select the Paper Profile in the Pagesetup and save it. Then print the Grey Balance vignette chart out and assess the smoothness of the vignettes. If they look good you can move to the next stage. If they are poor then you need to reassess the patches you have chosen.

Separation Control

When light inks are treated separately there is an added control available called Separation Control. This gives you the ability to change where the inks mix within a colour. For example with the Epson 7800 here you can control where each of the separate blacks merge with the adjacent black.

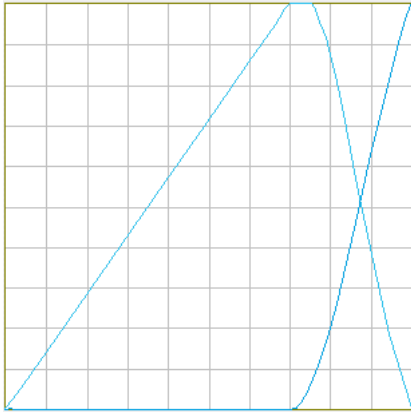


Epson7800 default settings

You can adjust the sliders on the left for each of the inks in turn to adjust where the heavier inks starts.

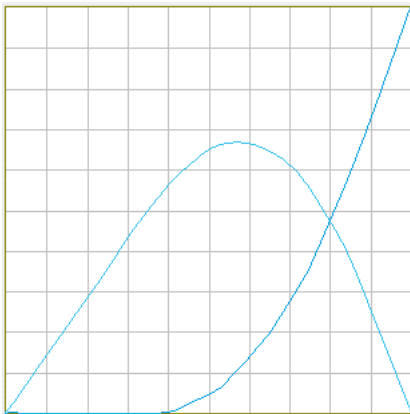
This in turn controls where the lighter ink finishes and how the crossover happens.

The best way to see the effect of changes you make is print a vignette of the colours like the Grey Balance Vignette chart. You need to make sure that the vignette is nice and smooth. Pushing curves to extreme amounts results in clipping and banding in the vignette.



Cyan set to start at 70%

Here we show an extreme case where the Cyan is set to start at 70%. You can see some clipping in the light cyan as it has in to too high and come back to 0. This will result in sharp bands in the output. You need to keep the Light Cyan as a gradual curve as shown below.



Cyan set to start at 30%

This results in Light Cyan being used where cyan tints are 30% and lower. As the amount of Cyan in an area of a job exceeds 30% then the heavy cyan starts to be used as well. As you get to about 55% the light cyan begins to reduce as heavy cyan takes over as the dominant ink.

It is a good idea to begin by leaving the values as default. Then adjust if desired to change the transitions always ensuring that the output remains

smooth. Further calibration such as linearisations and ICC profiling will remove slight anomalies as long as the basics are the best possible. If you continue to have problems then you need to reassess the patch selection.

Ink Limiting

The next stage is ink limiting. Print the chart out and then assess the patches. Look for points where the colour is good and there is no bleeding or mottling occurring.

Look for points where the ink tends to go flat (dull) or transparent (on a glossy type media). This is the result of dot sizes and ink types on the media used that are not mixing well. If by avoiding this it makes the limit too low then you may need to reassess the patches chosen and change some.

Because the inks are treated as a separate channel you will see that for this printer there 8 ink limits to set. i.e. 100% of each ink will produce 800% of ink coverage. The best way to handle this is to print the ink limit chart out, assess the 4 ink mix and use this value for 800%. Then work down from there for the 7 inks, 6 inks etc.

Once you have basic ink limits set then you can set the Yule Nielsen value. The default value for Yule Nielsen is 2 however under some conditions it can be beneficial to change that. If you set a value of 1 then YN has no effect at this stage. There is still a YN value on the linearisation so you can still compensate for dot spread. Experimenting with different values can produce optimum results for the ink and media combination you are calibrating. See “Yule Nielsen Number” on page 145 for more information.

Once you have the patches and ink limits chosen you need to save and continue with the calibration by linearising and creating an ICC profile. This is the same as the method described earlier.

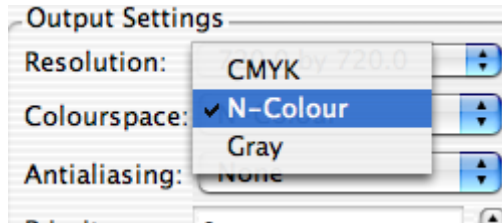
N-Colour

Overview

The N-Colour space is designed for use with printers where the ink is not standard for the printer driver selected. e.g. if you replace an ink with white for example you can create a Pagesetup to for this. The way this works is by having the ability to create a Paper Profile in which you can specify the inks you have installed in the printer and the order of those inks. This needs to be done in conjunction with an ICC profiling software that supports multicolour profiles.

Procedure

As in the previous procedures you need to start by creating a Pagesetup. The specific requirements for this to select N-Colour colourspace from the pull down menu.



If you do not see this option then the printer driver you are using is probably not compatible with the new feature.

Once you have the Pagesetup configured and saved select the Paper Profile editor and create a new Paper Profile for the configured Pagesetup. The Paper Profile will display with each colour shown as a separate band or channel (the same as it does for “treat light inks as separate channels”). The initial display will show the default inks in the default ink order. You can change the ink names and order of the inks as required. (See below)



The ink order initially displayed is the order that the density chart will be printed which is the default order of the printer driver. This also corresponds to the ink cartridge housing on the ink cartridge housing on the printers. It is therefore recommended that you leave the inks in the default order initially until you have measured the values.

You can change the name of the inks at any time. To do this highlight the name on the left of the patches and enter your new name. If the names are not shown make sure that the sift and sort button is enabled.



The ink colour displayed in the interface will always show the default colour. i.e. for LLK the colour will be a light grey colour. This corresponds to the location of the ink in the printer. Therefore if you change the LLK cartridge for another colour you will need to know which cartridge is used. The name should be changed to represent the ink colour being used.

The next step is to print the density chart. Click on the Print Density Chart button and the select the Pagesetup that you are calibrating. Once the chart has printed you need to measure the patches as you would for any normal Paper Profile. Once measured save the Paper Profile.

Next you need to make your patch selection as you would with any other Paper Profile. Visually checking the printed density chart for poor patches and checking the values measured. See earlier examples for more information.

Printing the ICC

Overview

Once you have your patches selected the final stage is to create an ICC profile. For this you need to have ICC profiling software that supports multicolour profiles. The ICC profiling software has the ability to generate a test chart that consists of the colour values that you wish. These are the colour values of your inks that are installed in the machine, including any spot colours. The order of the ink channels in the Paper Profile must match the order of the inks specified in the ICC Software. You submit the ICC chart through the Application menu. Once printed you measure the chart and create an ICC profile that can be used in the N-Colour Pagesetup.

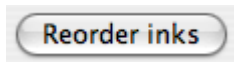


There are no ink limits or automated linearisation processes to do.

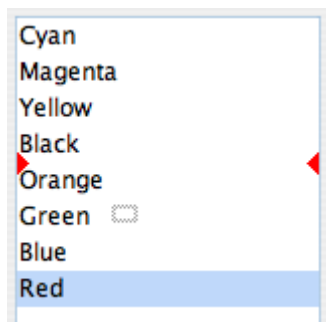
Procedure

Firstly, make sure that the Paper Profile you created earlier is saved in the Pagesetup you are calibrating. Then in your ICC profiling software create your ICC chart according to the instructions of your particular ICC software. You need to save your chart in a DCS2 format.

Once you have your chart created you need to change the order of the inks to match the order of your ICC chart. To do this click on the reorder inks button



You are then presented with a list of the colour names that you have entered.



To re-order the inks simply select the colour or colours you want to move and drag them to the desired place in the list. Once done press OK and save the Paper Profile. Here is an example of an ordered Paper Profile.

Sift... Visual density	1 D: 0.055 V: 0.052	2 D: 1.469 V: 0.524	3 D: 2.374 V: 0.763	4 D: 2.563 V: 0.969
Cyan	1 D: 0.052 V: 0.053	2 D: 0.989 V: 0.575	3 D: 1.761 V: 0.732	4 D: 2.000 V: 0.785
Magenta	1 D: 0.060 V: 0.052	2 D: 0.973 V: 0.093	3 D: 1.224 V: 0.117	4 D: 1.366 V: 0.136
Yellow	1 D: 0.049	2 D: 0.836	3 D: 1.560	4 D: 2.134
Black	1 D: 0.051 V: 0.051	2 D: 0.388 V: 0.293	3 D: 0.630 V: 0.417	4 D: 0.919 V: 0.539
Red	1 D: 0.053 V: 0.050	2 D: 0.751 V: 0.295	3 D: 1.304 V: 0.409	4 D: 1.886 V: 0.534
Blue	1 D: 0.049	2 D: 0.229	3 D: 0.375	4 D: 0.546
Orange	1 D: 0.047	2 D: 0.527	3 D: 0.974	4 D: 1.419
Green				

Then from the Serendipity Client select “Submit ICC Chart” from the Application menu. Select your chart file and submit it to the Pagesetup we are calibrating. Print, measure and create your ICC profile to your requirements and save it to your Pagesetup. This now gives you a multicolour output. The final section below talks about a multicolour press profile as the input match.

Multicolour Press Profile

If you have Press setup with special colours then it is possible to utilise this to produce more accurate proofing results. This is achieved by creating a multicolour press profile of your printing press on the stock you are using. You will need an ICC profiling package capable of creating multicolour profiles with the number of channels you need. This profile can then be imported into the system and used by the CMS for accurate matching. Follow the procedure below to set up a multicolour workflow.

Procedure

The first place to start is to create an ICC profile for your multicolour press. Make sure that the press is running at its optimum level and print a chart*. Once printed and left for a short time to stabilise measure the chart with your ICC profiling software. Save your results so that you can always try different settings from the same set of measurements. Create your ICC profile based on the profiling software’s guidelines.

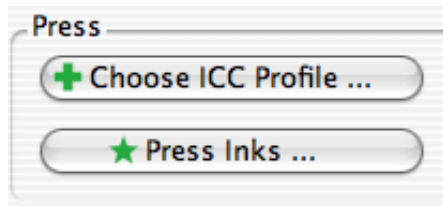


***The chart is generated from your ICC profiling package. Generally you specify the number of channels you are printing with, the ink values (colours) and the names. The package then creates a chart in a DCS format for the device you are using to measure the printed patches on. It is important that you note down the ink names and order that use as these are needed by the system later.**

Once you have the profile copy it into the system under the lib/icc folder. It is a good idea to keep your multicolour profiles separate from the other ones so create a directory called “multicolour” under the ICC folder and copy your profile there. (or you could use the upload ICC feature from within the software. See “Upload ICC” on page 61).

From within your Pagesetup click on the “Choose ICC profile” button under the Press section of the ICC part. Locate your multicolour ICC profile and click

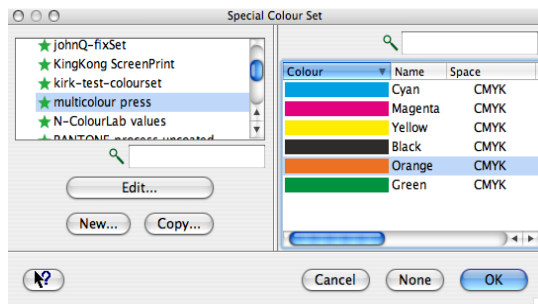
OK. Once the ICC is selected and it is detected as being a multicolour ICC, another button will be available underneath called “Press Inks”



Press inks button appears after a valid multicolour ICC profile is selected in the Press section.

With multicolour profiles the system has no way of automatically knowing what inks have been used in the creation or in what order they are. Therefore you need to tell the system by creating a special colour set that consists of the inks that are on the press stations. You also need to make sure that the order of the inks is the same as that in the ICC profile which would have been assigned when the ICC was created.

Clicking the Press Inks button you will see a chooser showing the available special sets.



Special colour set chooser with a multicolour set

If you have a set you created earlier then select it and click OK. Otherwise create a new set, save it and select it.



There are two very important things to remember for this to work. Firstly the names of the inks need to match the names that were used in the creation of the Press profile. Secondly the printing order of the inks also need to match. In a Multicolour ICC you get to specify the printing order. You need to match that order here when you create your special set.

The order of the plates is that specified by the Colour column in the set.

Colour	Name
Cyan	Cyan
Magenta	Magenta
Yellow	Yellow
Black	Black
Orange	Orange
Green	Green

The set is always saved in descending order by colour. Even if you click on another column heading or click on the Colour heading to reverse the order, when it saves the order is descending. Therefore in this example the ICC profile would need to have been created as Cyan being the first ink channel and Green being the last channel or 6th ink in the order.

When you have the set in the correct order and with the correct names click OK to link the set into the Pagesetup. For the press input side that is all that is required. You need to create an output profile for your Printer as and apply that in the output section of ICC and then enable the Always use ICC option and save.

With some printers having additional inks such as orange and green or RGB you can create an output profile that is multicolour also. This should allow you to achieve a wider gamut for some jobs that have previously been difficult to proof and is especially useful in the packaging markets. Any adjustments that need to be done are better done from within the ICC package as there are many more controls that can be used for tweaking multicolour workflows. Please consult your profiling software documentation for more information.

Screen Printing

Overview

The Screen Printing functionality is designed to print film separations on an inkjet printer. A file is submitted for processing which is then separated into the jobs respective plates. Each plate is printed as a black separation with a halftone dot applied at the colours respective screen angle. Because of the requirements of producing a film output the density needs to be higher than with normal proofing. This can be achieved by increasing the resolution so more ink is laid down or by mixing inks, for example black and cyan or magenta. This is done by laying the inks down on top of each other to produce a denser dot. Depending on the media and device densities up to 4.2D can be achieved but this is normally in excess of what is required.



If you are using the Black Patch only then you can choose Gray as the colour space which may result in slightly faster processing. However in this mode you cannot mix inks to produce a denser output. If you select CMYK and configure a paper profile accordingly then you can choose to use black only of a mix of colours at a later stage without having to recreate a Paper Profile.

- Resolution - Choose an appropriate resolution.

Configuration

The configuration is very similar to a standard setup to print to a device. The output's configuration is the same and an appropriate Pagesetup is made to control the page parameters. A very basic Paper Profile and linearisation is made to complete the setup. Below we will work through the configuration step by step and discuss the options available.

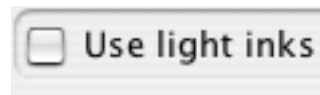


You can achieve a higher density with a higher resolution but this means it is slower to process and slower to print. Depending on the printer and media you may find that lower resolution produces sufficient density.

- Customise Section - Select appropriate media, choose Uni-Directional or Bi-Directional and turn the "Use Light Inks" off.

The Pagesetup

First thing to do is create the Pagesetup that links to an output to send the data to the device. If you are unfamiliar with creating a Pagesetup and output you should read the appropriate sections in the other parts of the manual. Once the Pagesetup is created we can configure the sections required for Screen Printing. These are as follows

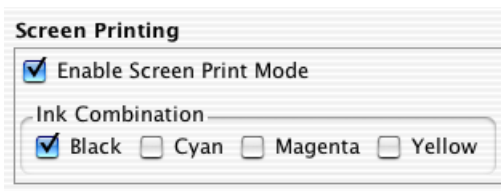


- Colour Space - Select CMYK



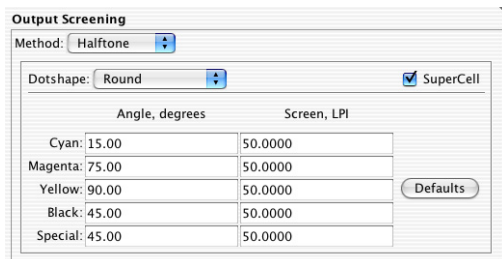
Obviously Bi-Directional is faster but may produce slight banding or may not be as dense as printing in Uni-Direction. Also you can use the light inks if you want and this effects the patches that are available in the Paper Profile. But in the Screen Printing mode you can only have one patch on per colour. In testing better results were achieved by not using the any light inks.

- Screen Printing - Enable Screen Print mode and select black ink.



Once you select this option jobs being submitted to this Pagesetup will always be separated and printed using your selected colours. You must select one of more inks to use from the available selection. If you selected Gray as the colour space then you will only see black as the choice. You can mix inks together to produce a more dense output on the film.

- Output Screening - Select Halftone and choose the SuperCell option. Choose your preferred dot shape and enter the preferred screen angles and screen ruling.



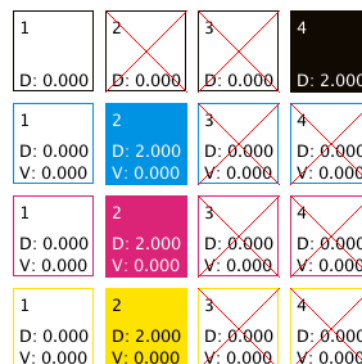
Supercell gives a better shaped dot and the round dot tends to be more commonly used. The default angles of 15, 45, 75 and 90 are shown however these can sometimes produce undesirable effects. These effects are mostly caused by the yellow plate and to counteract this it sometimes desirable to offset all the angles by 7.5 degrees. This would make them the following.

- Cyan - 22.5 degrees
- Magenta - 82.5 degrees
- Yellow - 97.5 degrees
- Black - 52.5 degrees
- Special - 52.5 degrees

The Paper Profile

Once you have the Pagesetup configured you need to save it and create an appropriate Paper Profile. As we have already discussed in the Screen Printing mode you can only have one patch turned on for each colour. Therefore the value for the patch does not matter but which one you choose does.

For a variable dot printer such as the Epson 7600, when the light inks are turned off you will see 4 patches for each colour. The first patch represents the media and the other 3 the dot sizes which are small, medium and large. You must choose one of these dot sizes for each colour.



Above shows an example using the patch 4 of the black and patch 2 of each of the other colours. There is no need to measure the value for the patches but a value needs to be entered so we have entered 2 as the colour density value in our example. You also do not need a visual density value providing you keep the

sort set on colour density. See the “Paper Profile” on page 71 in the manual for more information the Paper Profile itself.



You may want to experiment with different sizes of dot. All you need to do is enter a value for another dot and turn it on while turning the other off. In testing we have found that a combination of large black (patch 4) and small magenta (patch 2) produced good results. If you try to use too much, for example large black, large cyan and large magenta you get wet output and the dots tend to 'fill in' in the shadow area. If you use large dots of a colour like Cyan then the film comes out looking blue instead of black. So black should always be the dominant colour.

Ink Limiting

There is no need to enter any ink limiting as the plates are separated so there is no mixing of 2, 3 and 4 inks. (This is different to ink combinations in the Screen Printing mode).

Linearisation

Linearisation is very simple and there is no need to use the Lineariser. Creating a simple Gradation Curve and applying it to the Pagesetup is the easiest method. In testing we found that the film media reacted fairly linear across the tint values and making an adjustment at 50% was sufficient. And because we are printing black separations then a curve on the black plate is all that is required. Follow the steps below to make a simple linearisation curve.

1. Print a gray scale linearisation chart* through the Screen Printing Pagesetup and measure the 50% value.
2. Create a new Gradation Curve and select the black separation.
3. At the bottom of the editor enter 50 in the input value field, the measured value in the output field and click “Add”.
4. Select “Invert Curve” and save the gradation curve.

5. In your Pagesetup select the Gradation curve just created from the Linearisation chooser and save the Pagesetup.

* You can submit one of the gray test charts in the lib/charts directory which is part of the installation. e.g.

lib/charts/dtp34/linearisation_K.bmg

Summary

The above is a guide to configure a setup to print film separations for use in the Screen Printing industry. You need to run some test jobs to choose the most suitable patches, ink combination and resolution for the device and media that you are using. If you choose a different resolution, colour space or the use of light inks then you need to create a new Paper Profile. If you wish to try different sizes of dots then you need to adjust the Paper Profile turning a different size dot on and the current one off.

During the testing period many combinations of ink (colours), dot sizes and resolution were tried. Different output devices and media will produce different results so a different combination of patches and ink mixing may work better. During our testing the higher resolution (1440dpi) produced the most dense output at around 4.18 D but the trade off is in the time it takes to rip and print. By running at a lower resolution (720dpi) the jobs processed quicker but the density drops to just under 3 at around 2.8D. This is often acceptable for a lot of applications but will vary depending on the media and device used and testing will prove the most suitable setup.

The most commonly used settings were CMYK with an ink combination of Black and Magenta. This used the large black (dot 4) and the small magenta (dot 2) and gave a slight reddish tinge to the black which is desirable in the Screen Printing industry.

Using the Xrite DTP20 Pulse

Overview

The Xrite DTP20 Pulse is a spectrophotometer that can be used to read spectral data and density. It is capable of strip and spot measurements and all the relevant client applications support this device. In most of these applications the device is used the same as any other device, connected to the computer and taking spot measurements. However, with the Lineariser application the measurements can be measured either connected (online) or disconnected (offline) from the client in which case they are then downloaded to the application later.



Note: There are two drivers available in the list of supported devices for the DTP20. To follow this section for offline reading then select the Old Firmware driver. To read with the device connected then select the driver version 1.08 or greater. For online measurements your instrument must have Firmware version FB01v1.03 or greater.

This section will detail the Pulse's use with the Lineariser Application using the device offline, how to take measurements and download them. For more information on the Pulse itself please refer to the manufacturers manual.

Lights and Sounds

On the operation button there is a light that changes colour depending on the status. There is also a beep that changes depending on the status. The one important are detailed below.

- Green
 - Solid - Ready to read
 - 2 Pulses then solid - Successful read.
 - slow pulsing - Chart completely read
- Blue - Clear memory
- Yellow - Calibration

- Red - Error
- Red/Orange cycling - Downloading data.

Consult the operators guide for a full list of light indications.

- Beep
 - Single short - Read OK
 - Single long Dull - Error
 - Double - Successful read



How to Linearise with the Xrite DTP20

As stated above the measurements are made off line i.e. not connected to the Client. Once all the strips are taken the device is then connected to the computer and the data is downloaded.

1. Print the chart - Although measurements are taken off line the device must be connected to print the chart. Connect the Pulse to the client, start the lineariser, select a Pagesetup and device from the list and print the chart. (See "Lineariser" on page 113 in the manual for more info.
2. Clear the pulses memory - Any previously read target data is stored in the device until the memory is cleared. To clear the memory do the following.
 - Press the operation button three times. The light should turn Blue.
 - Press and hold the operation button for about 3 seconds until there is a beep and the light goes out

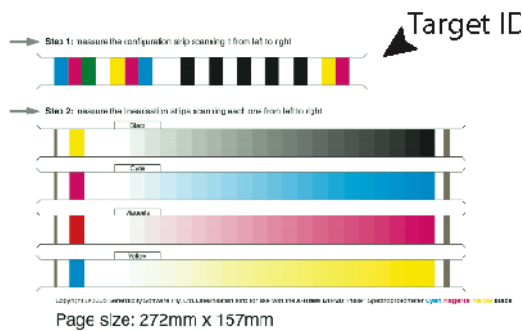
The light pulses green twice and then turns to a solid green indicating that the instrument is ready to make measurements.

3. Calibrate the device - It is a good idea to calibrate the device before measurement. You need the Pathfinder with the calibration patch for this. To calibrate do the following
 - With the instrument on and light indicating solid green, press the operation button 3 times. The light turns Blue.
 - Press the button 3 more times and the light turns yellow.

- Place the instrument on the calibration patch and while the light is still yellow, press and hold the operation button to make a calibration.

After a few seconds you will hear a short beep, the light will go out for a short time and then pulse green twice to indicate a successful calibration. This is followed by a solid green light indicating the instrument is ready to take measurements.

- Read the Chart - The chart has an additional strip called a target ID that must be read first to set the instrument up. This tells the instrument the type chart it is reading. Make sure the instrument has a solid green light on.



- Position the chart on the backer board and position the path finder guide so the reading window is over the target ID.
- Place the instrument on the Pathfinder at the start of the strip.
- Press the operation button once. You hear a short beep and the green light goes out.
- Slide the instrument to read the target ID.

After it has read the strip you should hear a double beep followed by 2 short pulses of the green light to indicate that it has read successfully. The light then turns solid green.



A dull beep and red flashing light indicates a bad reading. When the light turns solid, re-read the target ID. If the problem persists re-calibrate and try again.



Errors in reading are usually caused by reading too fast. Use a steady motion from start to finish and make sure you don't move too fast

- Move the pathfinder guide to the black strip.
- Press the operation button. After a beep slide the instrument along the strip to read it.

A successful read is indicated by a double beep, followed by two short pulses of green light and then a solid green.

- Repeat reading each strip in turn.

Once you have read all the strips on the chart the instrument will show a slow green pulsing light. This indicates the whole chart has been read successfully. If you get any errors reading any strip, wait until the light displays solid again and re-read that strip.

- Download the data - Once all read you need to download the readings to the client.

- Connect the device to the USB port on the client.
- Launch the lineariser, select the pagesetup and click next.
- Select the Pulse from the list and click next.

The pulse will start to download the measurement data to the Lineariser application. The light on the device should pulse red/orange as it is downloading. Each strip will report loading data and once they are all done, measurement OK will be displayed. Continue with the lineariser in the normal way. See "Lineariser" on page 113 for more information.



If you get an error while downloading the data then you need to start the download again. Just press the back button to take you back one step and then Next to start the download again.

Setting up a DoubleProof or SpinJet

Overview

Double sided proofing can be achieved using various double sided printer. This document will guide you through setting up and configuring the Pagesetup to successfully print front and back and show you the adjustments needed to back the images up accurately. The printers currently supported are the Fuji DoubleProof and the Techsage SpinJet. The setup described below was done on a DoubleProof 5000 using a roll of media that was 1067mm wide. For the front and back calibration a test file was created for this size media. This test file called doubleproof_centreing.pdf can be downloaded from the Serendipity ftp site at the following location

<ftp://ftp.serendipity-software.com.au/pub/downloads/>

Configuration

It is assumed that you have the printer switched on and loaded with media. And that you already have a valid output configured that will print to the device and it is selected when creating the Pagesetup. The correct driver for the 5000 machines is the Doubleproof / Spinjet 5000.

In order to successfully back up the front and back side prints you need to configure two pagesetups. One for the front side and one for the back side. Both point to the same printer and vary only in margin and rotation depending on your working method e.g. work and turn, work and tumble etc.

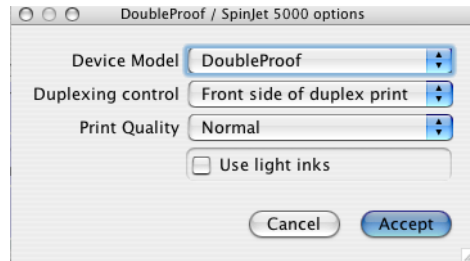
The Pagesetups

The first one we create is called "DoubleProof - front". This is configured as a standard pagesetup selecting the preferred printing resolution. e.g 600 x 600 dpi.



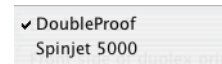
The type of paper loaded automatically for the second sheet is the first paper type in the list as specified by the printer. This is a HP Coated media and as such is limited to one of two printing quality or Normal or Best. Normal is the fastest method which is a Productivity setting.

In the customise section you are presented with the following options.

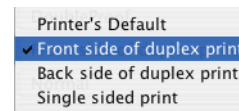


From this you need to select the following options.

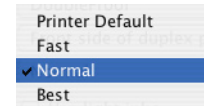
Device



Duplexing control



And finally choose your quality type



Once selected you need to save the Pagesetup. You can then duplicate this changing the name to be "Doubleproof - back". For the back setup you need to change the duplexing control to be the "Back side of duplex print". Also you need to set the rotation (under the sheet settings) to be 180 degree



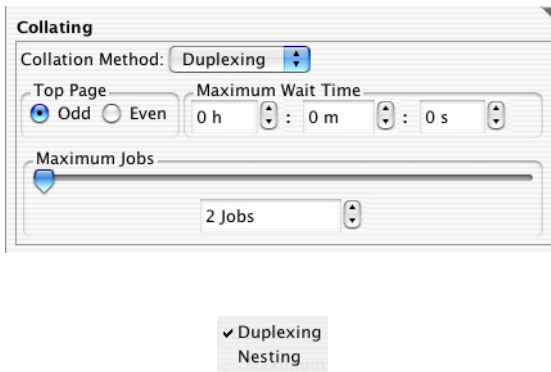
This is to facilitate both heads at the top of the page. This can be changed later to suite your workflow. Save the back Pagesetup.



Make sure that you do not have the slugline or logo box enabled on either Pagesetup as these are placed outside the image but form part of the job. This will effect where the image is positioned making it difficult to align.

The Output

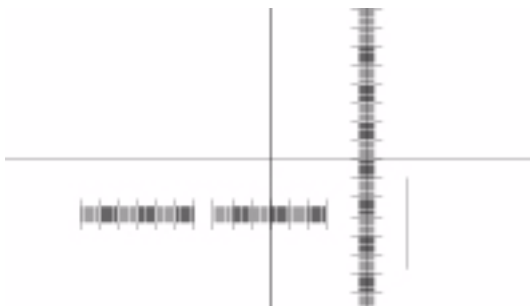
The next thing you need to do is setup the duplexing mode. Select the output that you are using to print to the device. At the bottom in the collating section select collation method as Duplexing.



Set the Top page as Odd and the Maximum Jobs to 2. This means that every two pages will be duplexed to create a single page (two sided) job.

The Test Page

You can create your test page if you wish. The basic principles are to make it the full width of the media with some part of the image all the way to the end and to make the depth long enough to allow double sided printing to take place. The specification for this should be in the user guide of the device. For our test job for media 1067mm wide the job looks like this.



The job is 1067mm x 540mm and has a cross exactly in the middle stretching to the edges of the dimension. This enables you to determine where the printable area is so that you can select the correct margins.

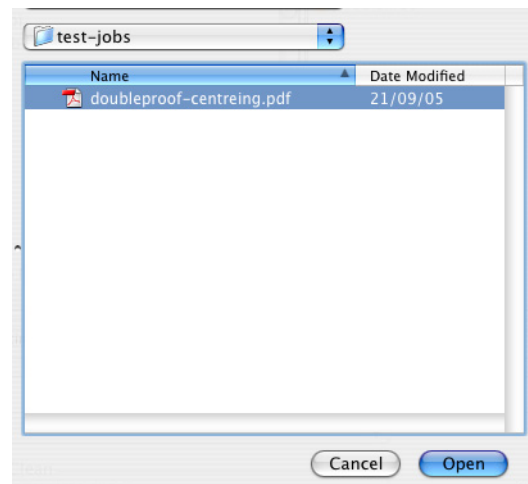
Printing the job

To print the job, follow the instructions below.

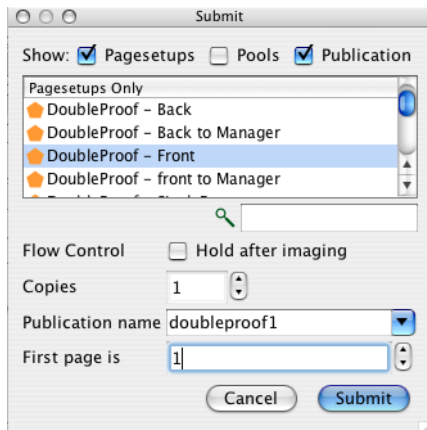
1. Select "Submit" from the Application menu.



2. Choose the job and select Open.

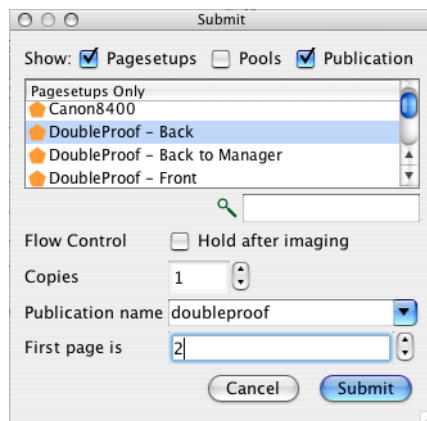


- Choose the Front side Pagesetup from the list. Enter a publication* name, make the first page to be 1 and select Submit.



*** If the publication pull down is not available then you need to select the Publication tickbox at the top of the window.**

This will send the test job to the front Pagesetup. So you now need to repeat the procedure to send the same test job to the back Pagesetup. The only difference is you enter the first page is 2. See below.



You need to make sure that you select the same publication as this will make sure that it gets duplexed with the front page also going to the same publication. Here we used the name doubleproof but you can use anything as long as front and back (page 1 and 2 respectively) are assigned to the same publication.

This will process the two files. The Back side will rotate 180 degrees. As the first job appears in the output queue it should have a status of “waiting to duplex”. When the back also appears in the queue it will have the same state for a short time and then duplexing will begin. A new job will be created which

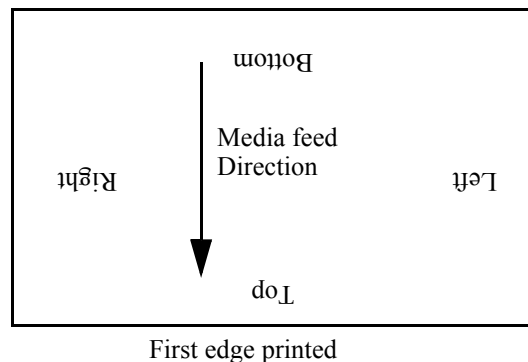
is a combination of the two single sides. The first side will print, cut and be held by the double sided unit. The roll media will unload and the held sheet will load back in and align ready for printing. The second page of the duplexed job will then print and you can begin your calibration.



Make sure that you mark the lead of the job for the front and back pages as they are printing. You need to know which is the top of the job and which is the front in order to calibrate successfully.

Printer specifics

The way the printer is configured, the first part of the job is the top and the left and right are taken from the media feed direction as it is printing. See diagram



As the printer feeds this way the double proofing unit holds the media by the bottom. When the roll has unloaded the bottom is fed back into the printer and is therefore the first out. Because we rotate the back page by 180 degrees the first part of the job printed is the bottom. This will therefore line up with the bottom of the front page.

Calibration

Lay the sheet on a table and measure the margins. This is the distance between the edge of the media and start of the image. You need to measure front and back and you can enter the details on the test print. Measure the vertical line length front and back also. For the device

used for this document the following values were measured.

Table 1: Uncalibrated Values

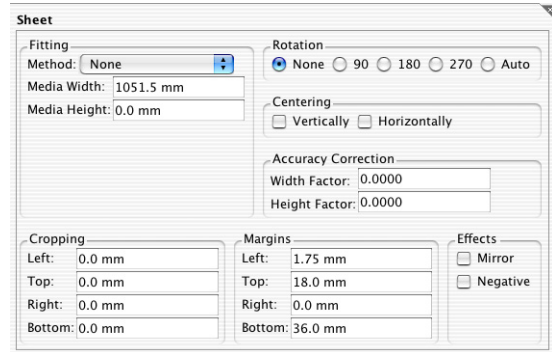
	Front	Back	Gap
Left	6.0	5.5	
Top	7	18	
Right	3.5	8	
Bottom	6	36	
Vertical			30
Horizontal			2
Measurements in mm			



If you have a light table you can measure both back and front from the front.

The line length for the front was 540mm which it should be as this is the first page printed. The back however was 499mm. This is because there was not enough front page to allow the back page to print as a sheet. Being a sheet it needs more area to grip the page.

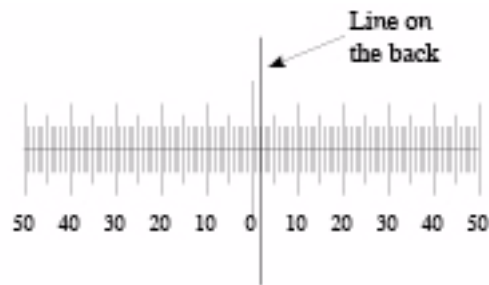
To do this take the values measured as the back top and bottom margins and enter those values as the front margins under sheet options.



Margins	
Left:	0.0 mm
Top:	18.0 mm
Right:	0.0 mm
Bottom:	36.0 mm

Select the DoubleProof - front Pagesetup and enter the values you measured as shown above. Save the Pagesetup and repeat the process of submitting the test print to front and back as before. This time when job has printed the vertical gap should be a lot closer and the line vertical length should be 540mm indicating that there is now sufficient page area to print the job as a sheet on the back.

The final part is to bring into alignment the vertical and horizontal lines. In the test print you can use the printed rules to determine the gap. With this print I can see that my vertical gap is 5.5mm and horizontal gap is 2 mm. (The horizontal gap was actually measured from the first print and you can enter that value in the first step if you wish). The only thing to determine is which way the image needs to be moved.



Looking at the horizontal line first I can see that front image (shown by the rule) needs to be pushed to the right for it to line up. Therefore I need to place a 2mm margin on the left margin of the front sheet. If the line was the other side of the 0 I would then have to enter a back left margin to push the back image away from the edge to the right.

For the Vertical margin I can see the front image is higher than the back. But you cannot move the front image down because this then shifts the bottom margin and so the gap does not get smaller. You therefore need to shift the back. Remember which part of the back is printed first you can determine the direction to move the image and it should always be the lead. For our configuration where the back is rotated the lead image is the bottom of the job. But the rotation happens before the margins are set. Therefore the margin must be entered as a top margin on the back side Pagesetup.

Select the DoubleProof - back Pagesetup and enter a top margin of 6mm. Save the Pagesetup and you can print the job again to check and make small adjustments to the margins if necessary.

Limitations

You should be able to achieve a high accuracy when backing up. You can correct for paper stretch by using the accuracy correction but this will alter the size of the image printed and you may need to adjust your margins again. There is no way in the software at present to compensate for skew. The only way to fix this is to reload the paper. Subsequent loads may alter paper position slightly and therefore margin may also need adjusting so it is good practice to run the test job out again to check after each new roll is loaded.

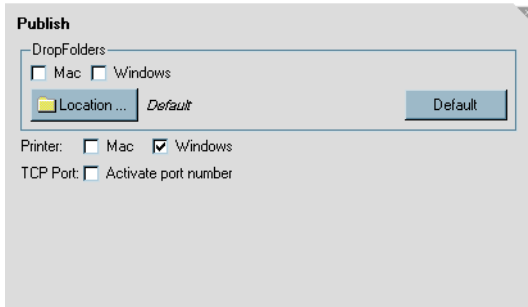
Publishing a Windows Printer

Overview

This section will take you through the steps required to publish a printer on a windows machine. You need to have your Serendipity Blackmagic running and a configured Pagesetup. There are two stage to this. First is to publish the Pagesetup to the Windows machine and second is to add a printer Windows machine to link to the Pagesetup.

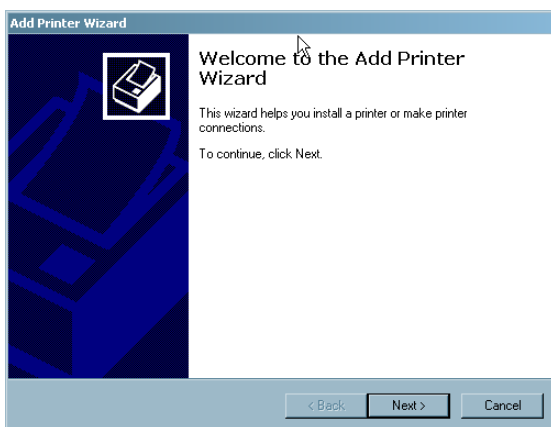
Method

Once you have your Pagesetup configured and working you need to publish it as a Windows Printer

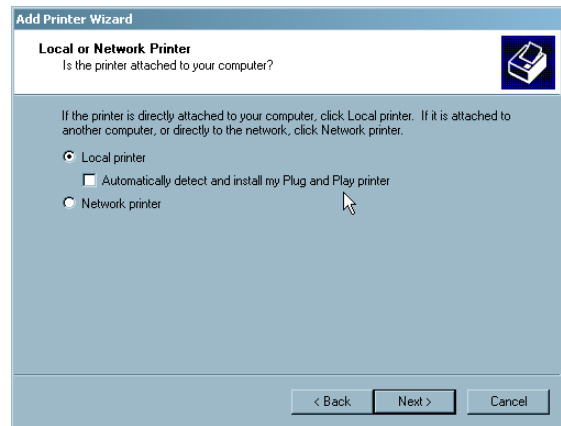


Check the “windows” check box and save the Pagesetup. This will make the Pagesetup available to the Windows system using the name of the Pagesetup.

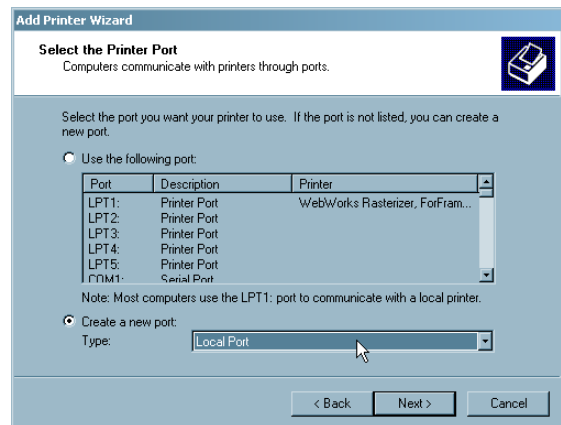
Then select Settings > Printers from the Windows OS and run the “Add Printer”.



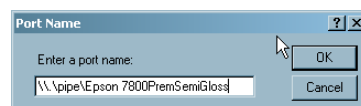
Choose Next to continue.



Make sure you have Local Printer selected and click Next.



Choose “Create a new port” and choose Local Port from the pull down list. Click Next to continue.



You are then asked to enter the port you want to add. Here you enter the following

`\\.\pipe<Pagesetup Name>`

The Pagesetup Name needs to be the full name of the Pagesetup.

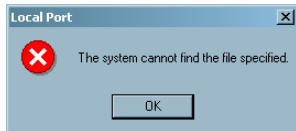


It is a good fail safe method to click on the name of the Pagesetup and wait until it changes to edit mode as if you were going to change the name of it. Then copy the name and paste it into the text field so that the name matches.

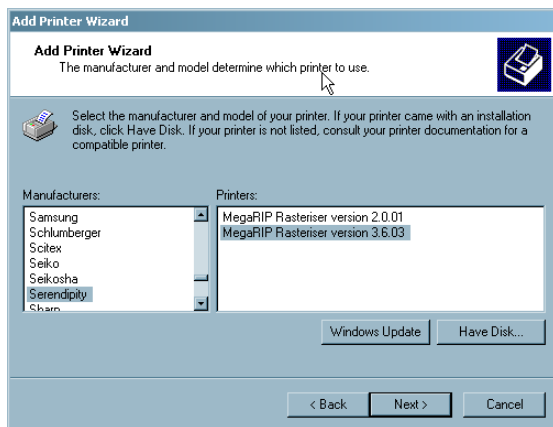
Click OK to accept the name and close the window.



You must have the server running and the Pagesetup published so that the printer can find and verify that the port exists. If you do not you will get the following error

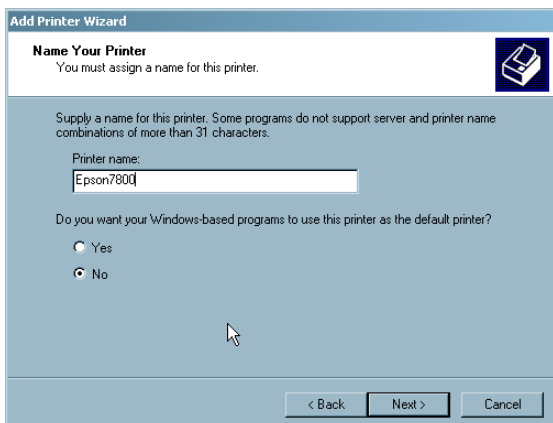


This will also occur if you type the name incorrect.

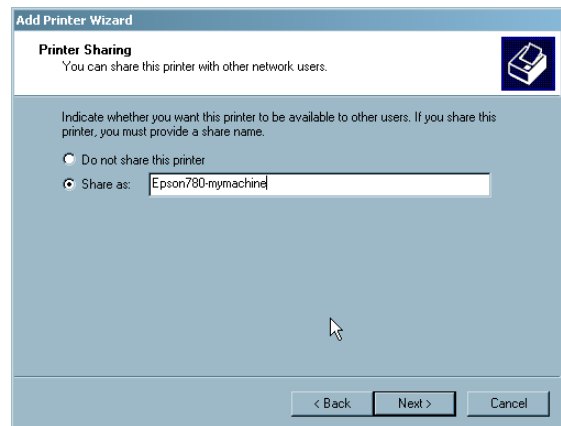


You are then asked to choose a driver. If you do not have the Serendipity Megarip driver installed on your system you can select the “Have Disk” and browse to locate the PPD. This can be found on the CD (see page 15) or it can be downloaded from the server. See “Download PPD” on page 126 for more information.

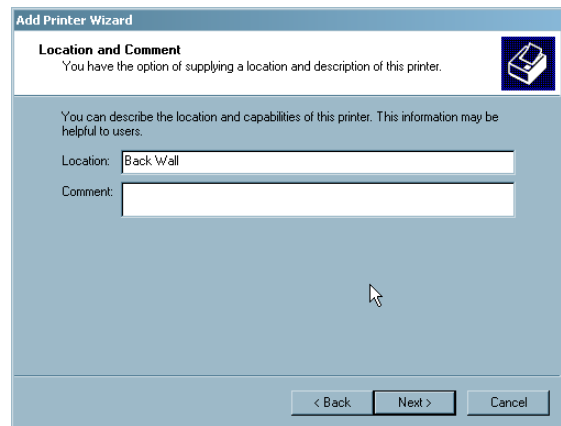
Once you have the driver selected click Next to continue.



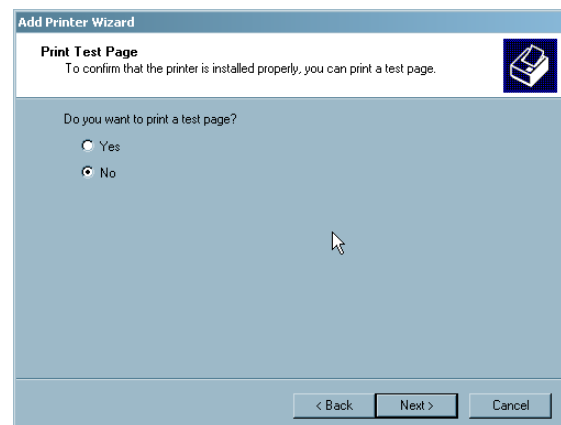
You then need to supply a name for the printer. Enter the name and click Next.



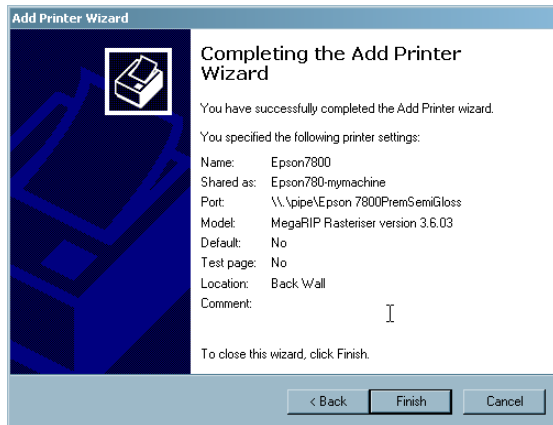
You can then choose to share the printer to make it available to other computers on the network. Enter a share name and click Next.



If you share the printer you will be asked to enter some information to help identify the printer. Click Next to continue.



You can choose to print a test page if you wish although this is not necessary as we have confirmed that the port is valid in previous steps. Click Next to continue.



You then come to the final screen which shows a summary of the printer you have just created. You should now be able to print to the Pagesetup from any network computer that can see the printer published. Click Finish to close the window. You will now see your printer in the list.

Deimposition Tutorial

Overview

The deimposition module allows you to check an imposition signature against a job to verify that it is correct. There are a number of steps for this to take place. The signature that you used to create the job that is going to press is imported into the system and adjustments made to suite the job and the output method. The Job itself is then submitted for deimposition which involves matching the imported signature and selecting the output. The complete imposed pages image with the assigned signature and can be viewed in the SoftProof when complete. During the Rendering stage the imposed pages are separated out according to the assigned signature. Page numbers are taken from the signature and given to the deimposed pages. These page numbers are then used for duplexing and the FlipBook generation.

This section will take you through the various stages needed to deimpose a job using a signature. We will work through a practical example that can be used as a tutorial so you have a better understanding. Each stage will be explained in detail with the various options available. Tips on how to check signatures, common pitfalls and to fix them for the desired output. The various output options will also explained.

The job we will use in the tutorial will be in Serendipity Blackmagic Image format with signatures generated in Dynastrip. Various signature types will be tested and output to a Xante CL30, PDF and a Quicktime movie. The job, signatures and Pagesetups can all be downloaded from the website so you can work through the tutorial as you go.



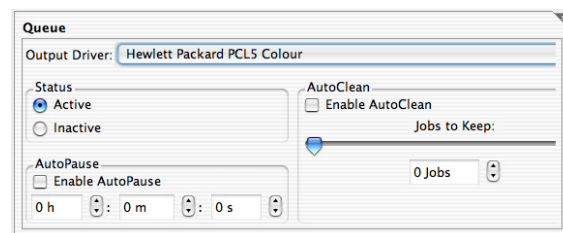
It is expected that you have the server and client installed and running. And that you have a basic understanding of the operation of the software.

Configuring the Pagesetup and Output

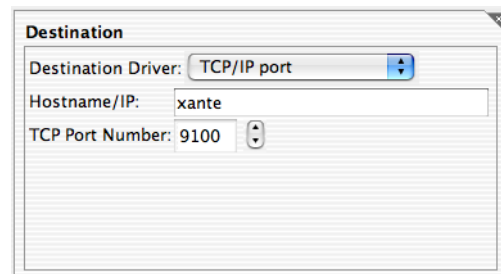
The first stage it to configure the Pagesetup and Output that we are going to use. Because you can generate the PDF and Quicktime movie form the QueueManager we will configure a Pagesetup for the

Xante CL30 so that we can print a duplexed job out. You can just as easily create a Pagesetup for PDF output as this has all the configuration functionality that allows duplexing. If you do not wish to duplex the job then any Pagesetup will do, for example to a JPEG output.

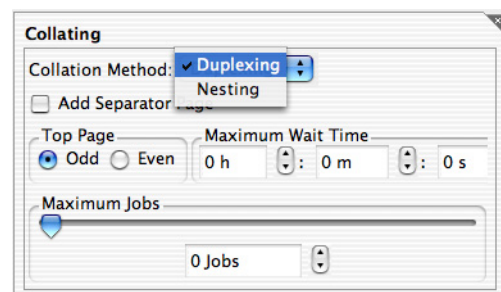
1. Select Output from the Workbench and create a new output called Xante Duplexing Out.
2. Select the output driver as Hewlet Packard PCL5 Colour.



3. Select a destination driver of TCP/IP and enter the IP address and port number of the printer.



4. In the collating section select Duplexing.



5. Save the Output.



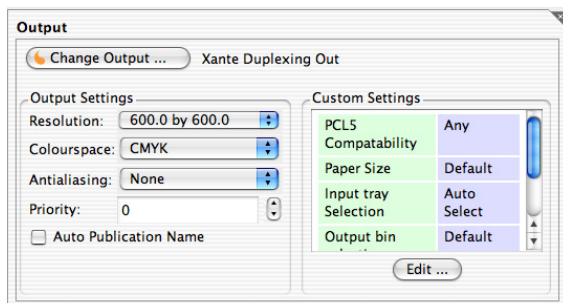
If you have another laser printer capable of duplexing then you can configure the output for this. The driver is probably the same but the destination driver may be different. Select the one appropriate to your printer. The other duplexing controls we will adjust later.

Now that you have the output you need to configure the Pagesetup to point to the output.

1. Select Pagesetup from the Workbench and create a new Pagesetup called Xante Duplexing.
2. Select the Output “Xante Duplexing Out”. Set the resolution to 600 x 600 dpi and output colour space to CMYK.



Note: 600 x 600 will produce better quality but will take longer to process and print. For performance and fast production you should set the resolution to 300 x 300dpi.



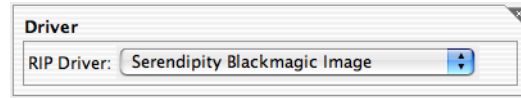
3. Make sure that the Output ICC profile is a CMYK one.
4. Save the Pagesetup.

Configuring a RIP

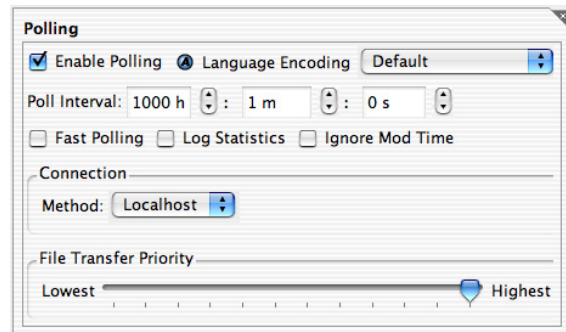
The next stage is to configure a RIP setup to poll the files. You do not have to do this for the Serendipity Blackmagic Image files as you can submit the jobs from the Application Menu. But for any RIP job that uses a dedicated input filter you need to use a RIP setup.

1. Select RIP from the Workbench and create a new RIP called BImage Local.

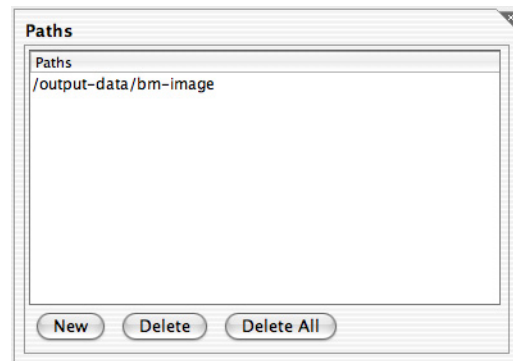
2. Select Serendipity Blackmagic Image from the list of available RIP drivers.



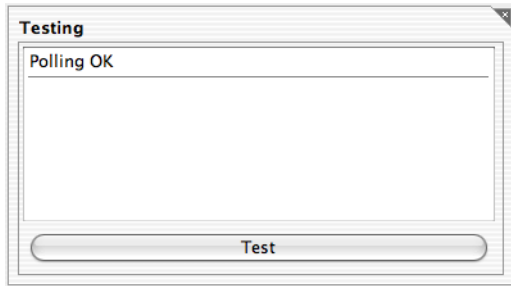
3. Under the polling section choose Localhost as your method and set the poll interval at 1000 hours (we do not need to continually look for new files so a long poll time is fine).



4. Create a new path to the folder where you have the Ripped image files.

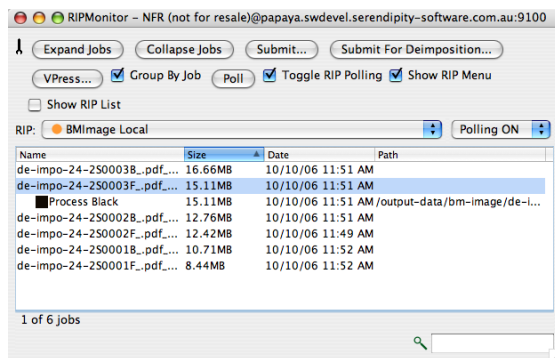


5. Click Test and then select “Save and Test” when prompted. Make sure that the test returns Polling OK. If not correct the errors until the polling test is successful.



Now that the RIP is configured to look at our Ripped pages we can poll them to be sure they view correctly.

1. Select your RIPMonitor from the monitor or launch a new one.
2. Choose the RIP “BImage Local” and make sure that polling is turned on.
3. Click on the “Poll” button three times.

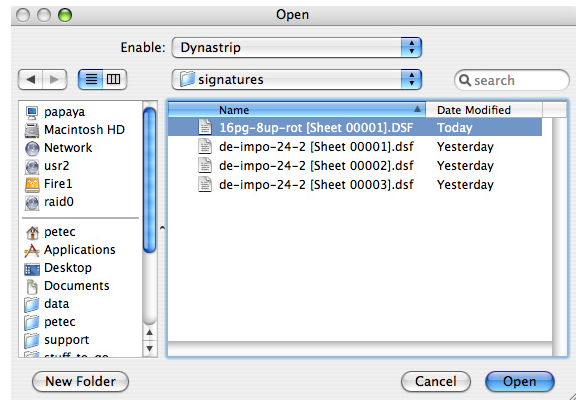


The jobs should appear in the RIPMonitor after the three polls have completed. If they do not then there must be a problem with the configuration which you will need to correct and try again. The jobs will only show a single black plate as the input filter does not parse the job looking for plates. Once you see the jobs you are ready to move to the next stage.

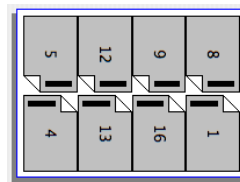
Importing the Signature

The next stage is to import the signatures that we are going to use to deimpose the job. The Signature Group has a number of import filters for the various imposition packages that we support. To import your own signature choose the filter that matches (see the relevant section in the manual for more information). For this tutorial we will select the Dynastrip import filter.

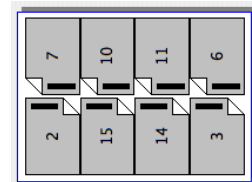
1. Select the Signature Group from the Workbench and create a new Signature item called “Deimposition Tutorial 1”.
2. Make sure that the “Selective Import” is not checked and click on the DynaStrip button.
3. Browse to the location of the signature, select it and click Open.



This should import two signatures, each as an 8up, one for the front (indicated by the plus + sign) and one for the back (indicated by a minus - sign).



Sheet 1 + (front)



Sheet 1 - (back)

4. Save the Deimposition Tutorial 1.

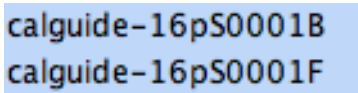
We now have a system ready to deimpose Ripped files. Quite often the signatures will need some adjusting so that deimposition is achieved in the desired way. This may involve rotation of signatures, head direction change or pairing. Rotation usually needs to be performed due to the orientation of the job which has

been rotated by the RIP for output to the film/plate setter. Therefore it is no longer in the same orientation as the signature was created. Pairing would be required if you are printing paired outputs e.g. Printing two A4 pages on one A3 sheet. Once you have an understanding as to how your jobs and signatures match you will probably make the same adjustments each time you import. We will not make any adjustments at this stage but will be making some corrections later.

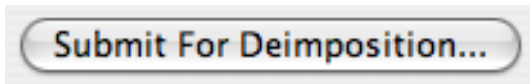
Submitting for Deimposition

Now that we have the job in the RIPMonitor and the signature imported into the Signature Group we are ready to submit our first job.

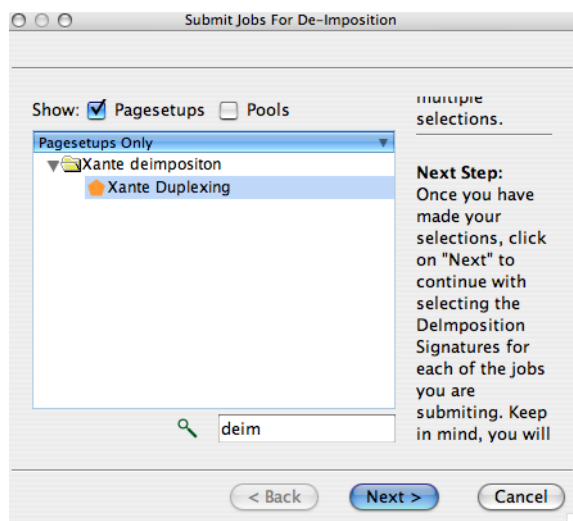
1. Select your RIP BImage Local in the RIPMonitor where your jobs are displayed.
2. Select the two jobs called calguide-16pS0001B and calguide-16S0001F.



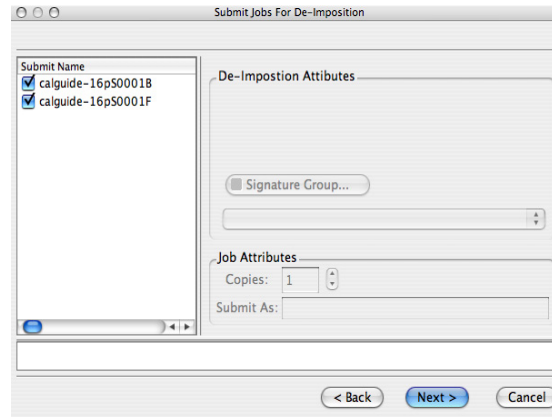
3. Click on the "Submit For Deimposition" button. This will show the first stage of the deimposition wizard.



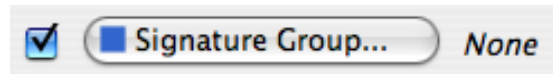
4. Select the Pagesetup called "Xante Duplexing" and click next.



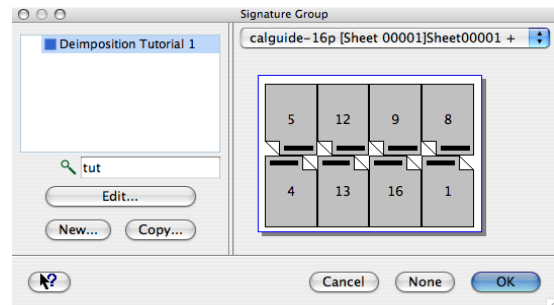
This will show the next stage where you allocate the signature group to use for the deimposition.



5. Select both of the jobs in the list and click on the "Signature Group" button.



6. From the list of Signatures select the group called "Deimposition Tutorial 1" and click OK.

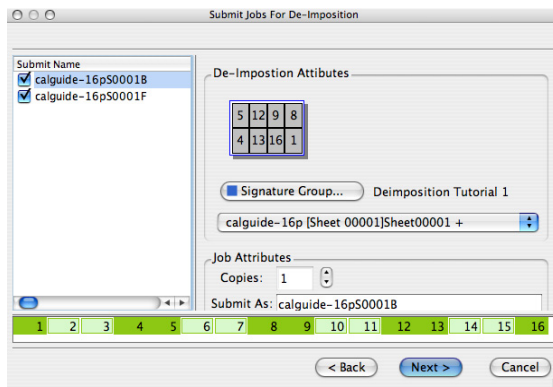


This will assign the signature you imported earlier to the job you are submitting. The pages from the signature are shown in the page area.



They should all display in green and be complete from page 1 to page 16. Selecting each signature in

turn will display the pages for that job in dark green and the other job(s) in light green.



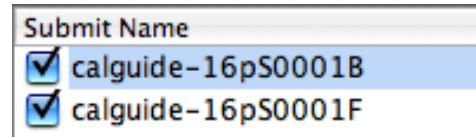
Currently selected jobs pages show in dark green

But these page number come from the signature, not the job. Therefore it is easy to get the wrong signature assigned to the wrong job.

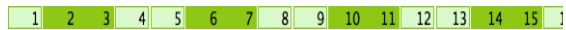
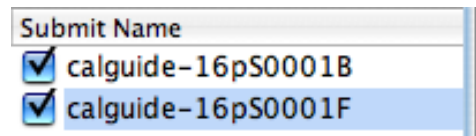
Check to make sure that the correct signature is allocated to the correct job. The order they are assigned is the order of the jobs in the list. i.e. the first one in the list is given the first signature in the group. So it is important that the signature group is in the correct order for the book you are deimposing, and that the order of the jobs are also in the correct order. By making sure that they are you can save a lot of time and the potential to make mistakes.

Select the first job in the list and check the signature that is assigned to it. The one marked with the F (for front) should have the signature with the + on it. The pages should be 1, 4, 5, 8, 9, 12, 13, 16 and the B (back) should be the other pages i.e. the signature with the - sign.

Here we show in our example the signatures have been allocated incorrectly. This was because the order of the jobs in the list had the Back sheet job first which was assigned the front sheet + signature.

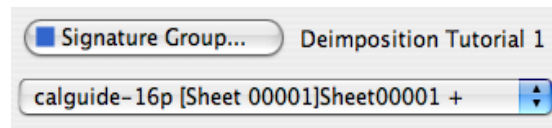


S0001B (back) shows pages 1 and 16 i.e. the front signature

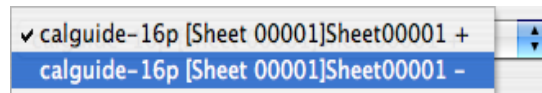


S0001F (front) shows pages 2 and 15 i.e. the back signature

To fix this select the first job in the list (Back). On the right you will see the signature that is allocated to it.



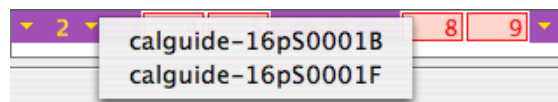
Click on the signature sheet pull down list and select the other signature from the group which is the - one.



At this point both jobs will have the same signature allocated to it and this will initially change the colours of the pages to Purple and Red.

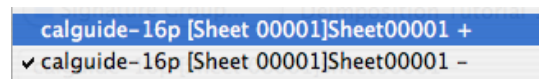


This indicates that there are some pages missing from the job (red) and some that have duplicates (purple). If you click on one of the purple pages you will see the jobs that have that page allocated.



Click on page2 to reveal that jobs F and B have a page 2 in them

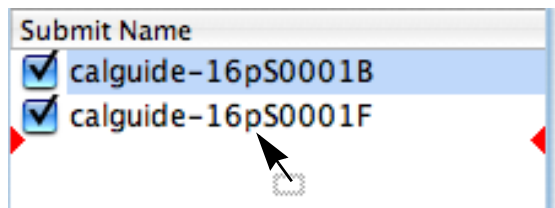
Select the other job in the list now and click on the drop down menu to change its signature.



All of the pages should change to green again. The front job should include the pages 1 and 16 and the back job should include the pages 2 and 15.



You can reorder the jobs in the list into the correct order by selecting one of more jobs and dragging to another position. If you do this before you select your Signature Group then the correct signatures should be allocated when assigned.



Drag the jobs into the correct order

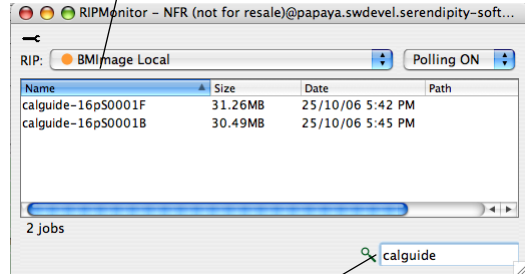
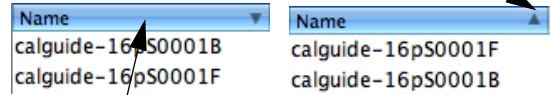
Now that we have the correct signature assigned to the correct job we can continue to submit the job. Click Next to move to the final screen.



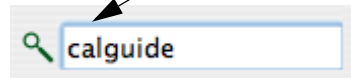
The best way to get the jobs into the correct order is to do so in the RIPMonitor. You can do this by clicking on the "Name" column in the RIPMonitor to sort them alphabetically. Repeated clicks switches the order between descending and ascending order. This can be used in combination with the search box to find and sort your jobs easily. But it is still a good idea to check them in the deimposition window to ensure that the signatures match the jobs.

Click the header to change the sort order.

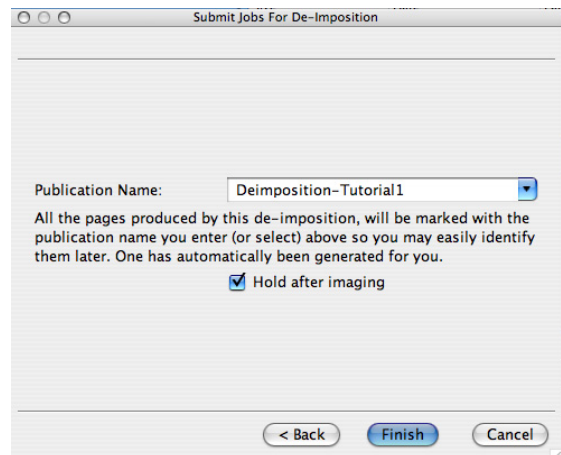
Sort order indicated by the arrow



Use the search box to filter jobs



The final stage of the submission phase is to allocate a publication name. All the jobs that are part of the same publication need to have the same publication name. You can use the default one or enter your own. The drop down menu shows the last 5 publications used.



1. Enter a publication name of "Deimposition Tutorial 1".
2. Click on the "Hold after imaging" check box
3. Click "Finish"

Once you are familiar with the whole deimposition process, your own signatures and jobs then you will probably not wish to hold after imaging. But for this example it will give us a chance to see if we have it right or if corrections need to be made by viewing the file in the softproof.

Checking the Imaged File

Once the two jobs have passed through the imaging process they will then be held in a “Held (Rendering)” state (because we checked the “hold after imaging” check box). This gives us an opportunity to view the file against the signatures to see if they fit.

First we need to reduce the resolution of the imaged preview. This will make it faster for viewing and the pages will display smaller.



For finer adjustments you probably want to leave the preview resolution set to the output resolution. Although viewing the page positions in SoftProof can only be used as a guide as there are limitations to the accuracy.

1. Select “System Settings” from the Application menu.
2. Select “Client Settings” and enter 96dpi for the “Maximum Preview Resolution.
3. Click OK so save the settings and dismiss the window.

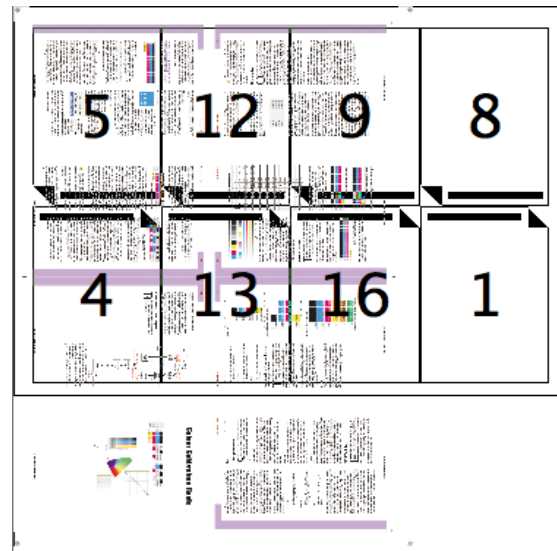
Now we can look at the files. Select both the jobs in the QueueManager and select View Imaged (either from the toolbar or right click). This will open the files in the SoftProof tool.



Depending on the version of software you have it will either open both the files in the same SoftProof window under separate tabs, or open two SoftProof windows.

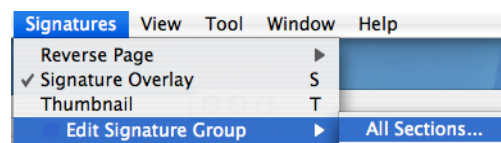
When the jobs have loaded, make sure that you can see the whole job. You may have to zoom out. From the Signature Menu select Signature Overlay (or press S). This will overlay the signature that is assigned to the job you are currently viewing.

For our example you will see that the signature overlay is in a different orientation to the job.



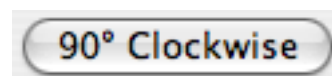
This is a common problem. The Job is Ripped in the correct orientation for the output device i.e. an imagesetter or platesetter but this is a different orientation for the Signature. There are two ways that you can correct this. One is to rotate the job to match the signature and then submit the job again from the SoftProof application. While this works it would probably require this be done for every job. The best method is to rotate the signature. If you look at the other page you will see that it too is in the wrong orientation. So all signatures need to be rotated.

You can edit the signature from within the SoftProof so that you can see the changes. From the Signature Menu item select Edit Signature Group > All Sections.



This will display the Signature Group edit window for the group “Deimposition Tutorial 1”. Here you can adjust the signature and apply the changes and see them directly in the SoftProof window.

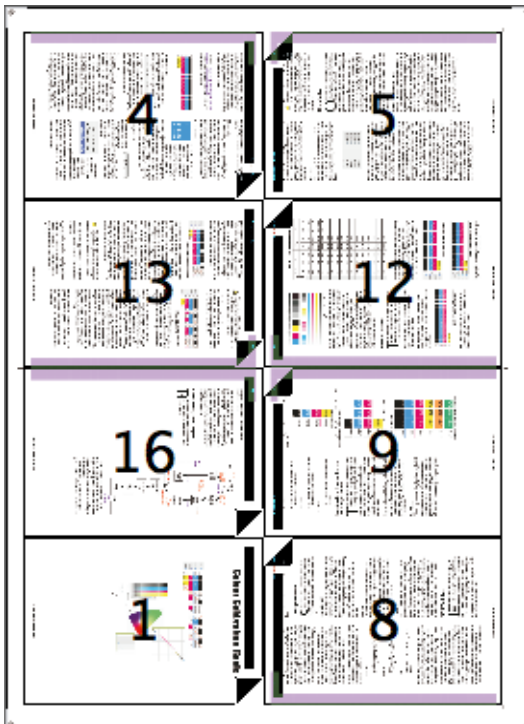
1. Select both signatures in the list.
2. Click 90° Clockwise



3. Select each signature in turn and check they are rotated.

- Click Apply to save the changes. (OK this will apply and close the window).

Click back to the SoftProof and check to see that the change has applied and now looks correct.



- Click OK to close the window.

Close the SoftProof window(s) and release the jobs held in the queue so that they can pass through the rendering queue.

The Rendering Process

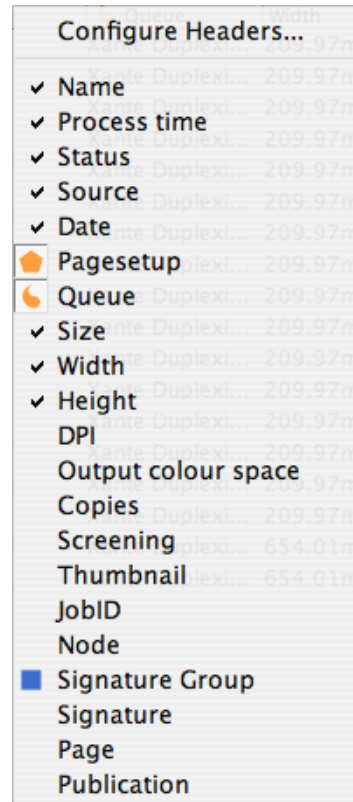
The rendering phase has two stages. First the complete job (each 8 page imposition) is rendered. The last part of this process is to split the job into the pages according to the signature and pass them into the rendering queue. The second stage is the rendering of the individual pages into the output format.

Once the rendering of all the pages is complete, run a QueueManager and view the “Xante Duplexing” queue. Because of the way we configured the output in terms of the “Collating” section, you will see that the single pages are in a state of “Waiting to duplex”. The full 8up imposed jobs are “done”.

You can view the job info about these (double click a job) and see their previews. You will notice that the imposed pages (8ups) do not have a rendered preview only an imaged because the rendered section of these are the individual deimposed pages. These imposed pages can be viewed (Imaged Preview) in the

SoftProof as we did earlier. You can make further adjustments to the signature and render the files again.

The other important sections in the QueueManager is the signature and publication information. Right click the mouse on the column headers to display the header option.



You will see at the bottom there are four options which are important to signatures.



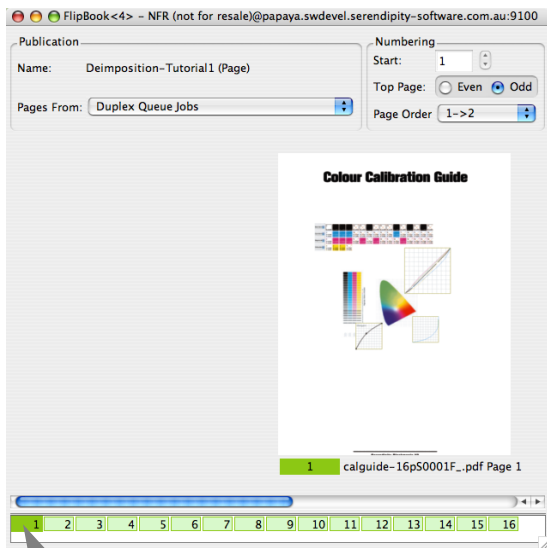
You can turn any of these on to get the relevant information for each job. If you turn on the Page and Publication options you will see that the each of the deimposed pages have a page number. The page number has been extracted from the imposition signature and applied to the page in the job. The Publication name is the name we gave it in the final stage of Submitting for deimposition. This is useful when you have a number of publications that are in production. You select all the jobs in any given publication by right clicking (or from the Toolbar menu) and choosing “Select Publication”

Viewing and Exporting

Once the jobs have been deimposed and are in a “Waiting to duplex” mode you can then view the completed publication and export it in various formats.

FlipBook

The FlipBook is a viewing tool that assembles the pages into a virtual book based on the page numbers extracted from the signature. Select one of the pages in the publication, right click (or choose toolbar option) and choose “View FlipBook”.



Pages pane shows the currently selected page from the publication

When you first open the FlipBook it launches in 2D mode (otherwise it remembers the previously used mode). The Page pane at the bottom shows the pages that make up the publication. These are shown as green if all the pages are present. Dark green indicates the currently selected page(s). You can navigate through the publication by clicking on any of the pages. You can also use the space bar, arrow keys, scroll bar, mouse wheel or clicking on the page image. See the FlipBook for more info.

Exporting as PDF

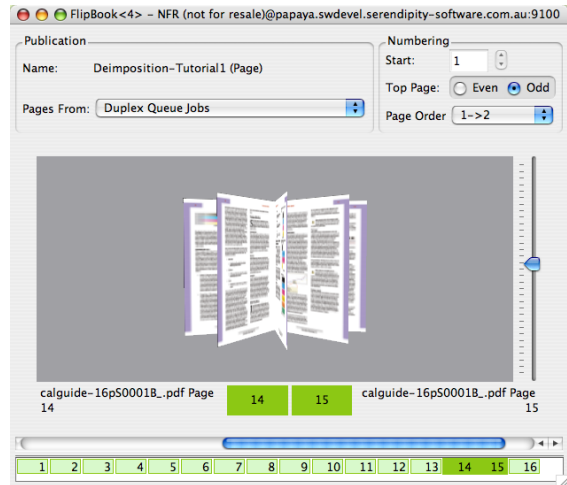
With the publication loaded as a book you can export the publication as a whole. This allows you to view the book in a PDF reader and makes it easily transportable. There are two options when exporting as a PDF. First is to export as single pages i.e. each output PDF page is one page from the publication. The second option is to “Export as spreads”. This outputs a single PDF page for every 2

adjoining pages from the publication i.e. a spread. For each option you can choose either the whole publication or a page range and are asked to choose resolution, compression type and filename.

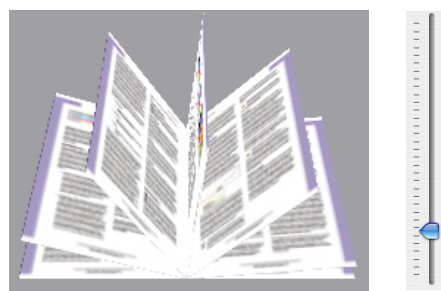
Export as movie

A further option allows you to export the publication as a QuickTime movie. For this you need to be in 3D mode. This is a virtual FlipBook with animation of the pages turning as you flip through the publication.

Select “View 3D” from the menu (or right click) to change the book into 3D mode.



This has all the same functionality as the 2D mode but displays the book in 3D. You can flip through the pages and same and see the pages turn. Use the slider to orientate the book in the desired view.



Move the slider to change Orientation

Now you are in 3D mode you can select Export as movie (QuickTime). You have options to choose the format the video is encoded in and level of compressions for them. To control the speed of the pages as they turn you need to change the Flip Time under the View Preferences. Size the window to a reasonable viewing size prior to exporting as this produces better output when viewing.

For more information on the FlipBook see the relevant section of the User Guide. There are some other useful tools which we will use later in the tutorial. But for now we are finished with the FlipBook so you can close it.

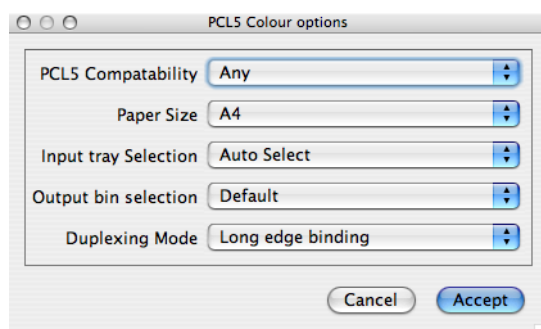
Printing the job

The next stage is to print the job to the printer. Currently the jobs are held in the print queue in a “Waiting to duplex” state. This was because the criteria that we specified for the output under the Collating section was such that the manual duplexing of the jobs would be required. Later we will see how to set the output to automatically duplex the job when pages are ready.

Duplexing a job manually occurs on a publication basis. You select one page from a publication and press the “Duplex now” button and all pages from that publication that are in a “Waiting to duplex” mode will be duplexed. At this stage we are unsure if we have the printer setup in the correct duplexing mode. So we will only duplex a few pages as a test.

From our publication of 16 pages we will duplex the first four pages only. Select the QueueManager that is looking at the Xante printer and make sure that the column header titled Page is turned on. (Right click in the headers and select page from the list). Locate the page column and click on the header to order the job in page order starting at 1 and descending to 16. Select pages 5 - 16, right click and select Hold. This will prevent these pages from duplexing. Then select one of the first 4 pages, right click and select “Duplex now”. This will duplex the first 4 pages and prepare it for printing. If you double click on the print job you will see the pages that make up the print job.

Printers will vary depending on the setup of the individual printer e.g. how the duplexing unit works, what trays you have and the paper loaded. Most common problems relate to the duplexing side and paper tray selection. This is all controlled in the Custom settings of the Pagesetup.

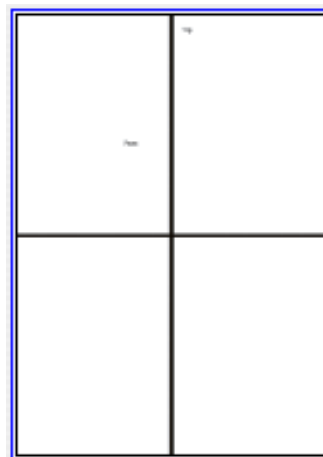


If the paper size is correctly configured then the input tray should automatically select the correct tray. Unless you have two different types of media loaded that are the same size, in which case you will need to explicitly set the input tray. The other common mistake to make is the type of binding used between short edge or long edge. The effect of choosing the wrong one is that turning the page in the book, the back side will be upside down. i.e it duplexed it on the short edge of the page. For single page deimposition the correct one is usually the long edge binding.

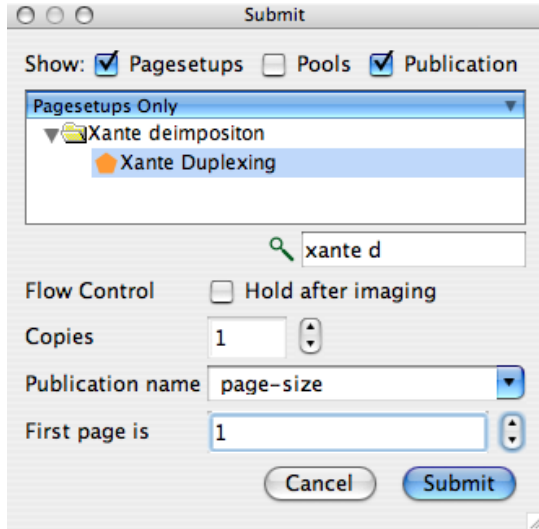
Once you have the pages duplexing correctly the only other thing to worry about is the page positioning. Different printers have different print margins. These will generally differ from left side to right side so we must accommodate these differences.

We do this by using the centering option in the sheet panel of the Pagesetup. But we cannot centre on the print page size e.g. A4 because this does not take into consideration the margins of the printer. Therefore we need to find the printable area. The easiest way to do this is create a job with the same pagesize of your duplex job. In this case it is an A4 job so we create a job 210mm x 297mm. Then draw a cross from edge to edge to go through the middle in both the horizontal and vertical direction. i.e. if this prints exactly centred then the crosses should be directly on top of each other when held up to the light.

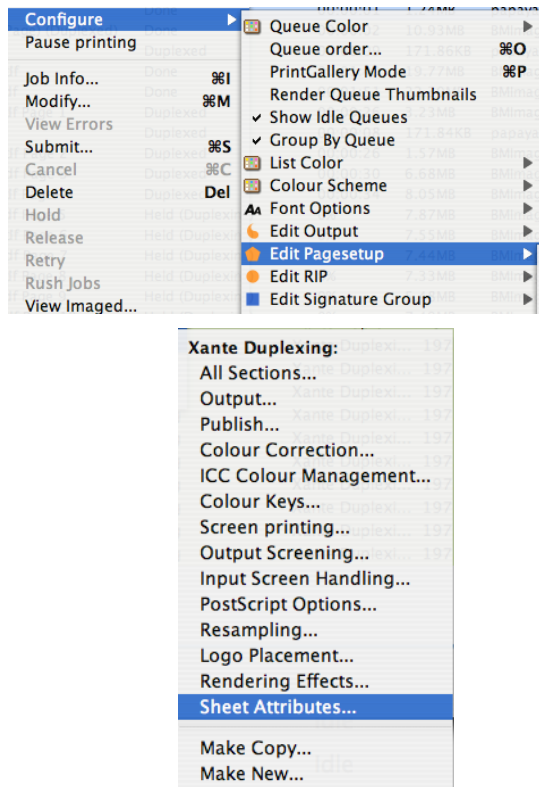
You can create your own or print the A4-cross.tif job in the Tutorial.



Print the job to the “Xante Duplexing” queue twice. The first time assign it a publication and enter a page number of 1.



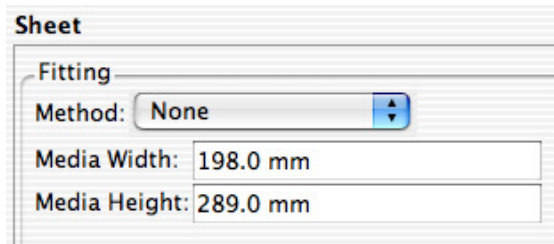
The second time select the same publication but give it a page number of 2. When the job passes to the printing queue it will also be in a “Waiting to duplex” mode. Select one of the pages and choose “Duplex now”. When the job has printed measure the length of both lines. This indicates the printable area. Go to the Sheet panel in the Pagesetup and enter the width and height of the printable area. A quick way to do this is select one of the pages from the cross job, right click and choose Configure > Pagesetup > Sheet Attributes.



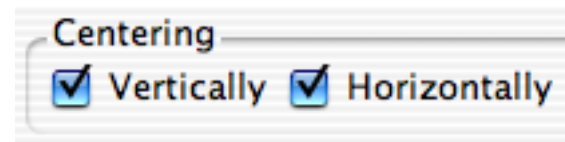
Right click on the job to Edit the Sheet Attributes for the job



When you edit an attribute from within the QueueManager you are editing the Pagesetup that was used to process the job not an individual job ticket. All job processed there after will be affected by the change



Then select the Centre Horizontally and Vertically check boxes.



Render both jobs again and duplex them to see the results.

Accuracy will depend on the printer itself and this may vary. There is no setting available to accommodate skew. This is purely down to the paper loading and feeding and problem may be a factor of the printer, paper or environment. If they are still slightly out then try increasing the dimension that is out by 1mm and re test.

Once you are happy with you have the positioning correct you can print the whole job. To do this you need to render all the pages again. First cancel the jobs currently waiting to duplex. Then select one of the pages from the job, right click and choose “Select Publication” from the menu. All pages from the publication will be selected as well as previously duplexed jobs i.e. the pages 1 - 4 we duplexed and printed earlier. Hold down the apple key (control key) and de-select these duplexed jobs (named Deimposition-Tutorial1) and then click on the Render again button (or right click and select Render again). All the pages will be moved to the render queue and processed with the new sheet attributes. Once completed they will again be in a “Waiting to duplex” state. Select one of the pages and choose “duplex now” from the contextual (right click) menu. Check that the job print correctly in page sequence order. You have now completed the first deimposed

duplexed job. For the next Tutorial we will take the same job but print it on A3 sheets.

Paired Deimposition Output

The following tutorial will build on the previous tutorial using the knowledge gained and add some extra functionality. We will use the configurations created in the first tutorial so if you have jumped straight to this point but want to follow the tutorial you will need to go through the first section for the configuration or install them from the tutorial archive.

For saddle stitch and perfect bound jobs we can print paired pages and folded them. For the A4 job in Tutorial 1 this means printing on an A3 sheet and folding them in 16 page sections.

Output and Pagesetup

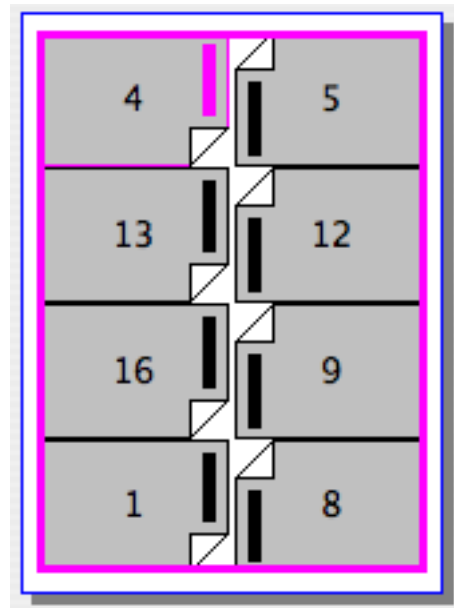
As before we will begin with the output and Pagesetup. Because the output configuration does not change we can use the same one created for the previous example and create a new Pagesetup to use it.

Go to the Workbench and select the Pagesetup we created in tutorial 1 and duplicate it. Change the name to Xante Duplexing A3 and make sure that it is pointing to the output to the “Xante Duplexing Out”. Change the paper size in Custom settings to A3 and then in the Sheet section set the media width and height back to 0 and un-check the centering options. Save the Pagesetup.

The Signature

In the Workbench select the Signature Group “Deimposition Tutorial 1”, duplicate it and change the name to “Deimposition Tutorial 2”. This signature has the correct orientation for the job because we edited the signature from within the SoftProof and saved the changes.

Select the first signatures from the group and select page 4.



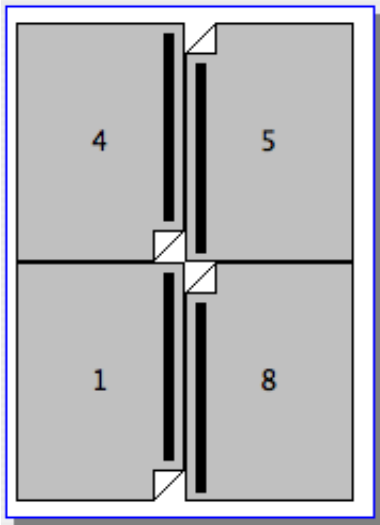
The first thing you will notice is the pink line around the whole signature and selected page. This means that the pages are all grouped together. For pages to be grouped certain criteria must be true. Most importantly they must be the same size and positionally in line with each other. Grouping is important because pages must group for pairing to occur. With the page still selected you will also notice the page pairing buttons.

Pair Pages Vertically

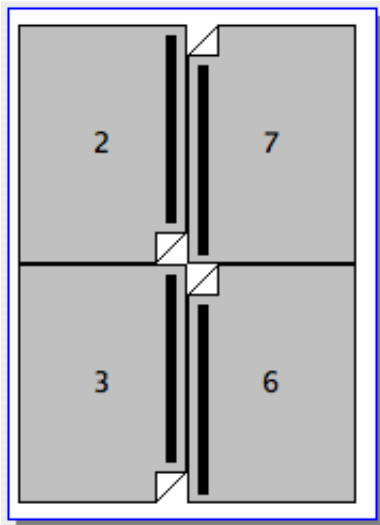
Pair Pages Horizontally

You will see that the Pair Pages Vertically button is available but the Horizontal button is not. This is due to the head direction being in opposite directions. Heads must be the same direction within a pair. Select a page from the other signature in the group and you will notice this is the same.

Our test job is a 16 page 8up A4 imposition. By pairing the pages within the Signature and forming one page from two we are changing the deimpose area of the job. With Page 4 selected in the first signature press the “Pair Pages Vertically” button.



The pages pair and take the lowest page number from the pair and assign it to the new page. Once we have paired the pages once there is nothing more to do with this signature. We then need to repeat the procedure for the other signature which will look like this.



With just two signatures it is fairly easy to select each one in turn and pair the pages. But when the publication consists of a large number of signatures then this can be quite time consuming. If all the signatures in the group obey the rules and the pages are part of a group then we know that they should all pair the same way. You can do this easily by selecting all the signatures in the group and then clicking the “Pair Pages Vertically” button. You can try this with these signatures. Either undo the changes or click on the Signature Group name (Deimposition Tutorial 2) again and this will load the previously saved version. Just click “Don’t Save” when prompted. Then select

both signatures. The diagrams disappear but you can see the pairing button is available. Once paired check each signature in turn and then save the group.

Submitting for deimposition

We are now ready to submit the jobs again.

1. Select the RIP “BMImage Local” from the RIP-Monitor to view your jobs again.
2. Select the same two pages and submit for deimposition.
3. Select the new Pagesetup “Xante Duplexing A3” and click Next

The job (in our example) is displayed with the first page as the Back sheet and the second page as the front sheet. This is the wrong way around so we will change them before we allocate the signature.

4. Select the job called calguide-16pS0001B and drag it to the bottom of the list. (If your’s is already at the bottom of the list then you do not need to do anything).
5. Select both Signatures and click Signature Group.
6. Select “Deimposition Tutorial 2” from the group list and click OK.

You will see that there are only 8 pages in the publication this time but they should still all be green.

7. Check each signature in turn and ensure that the front job has pages 1, 4, 5, and 8 and the back job has pages 2, 3, 6 and 7. Click Next to continue.
8. Enter a Publication Name of Deimposition-Tutorial2. Make sure the “Hold after imaging” is selected and click finish.

The process is the same as for the first tutorial. The jobs are submitted for imaging with the respective signatures assigned. Once they have passed through the imaging queue they will be “Held Rendering” so that we can check the signatures are correct.

9. Select both the signatures in the queue and click “View imaged”
10. Zoom the pages to fit the window and press “S” to view the assigned signature.
11. Once you are happy with the jobs, release them to be rendered ready for duplexing.

In the print queue for the A3 output select pages 3-8 and hold them. Then duplex and output pages 1 and 2. (Make sure that you have some A3 paper in your printer).

Check the printed output. Depending on your printers duplexing module you may have the correct output. But for the Xante you will notice that the orientation is incorrect. This is easily fixed.

1. Select the one of the pages from the job you just printed e.g. page 1.
2. Right click and select Configure > Edit Pagesetup > Sheet Attributes.
3. Change the orientation to 90° and click OK. (OK will apply the change and close the window).



When you have the page dimensions set (which we will do next) you can actually set the rotation mode to Auto. If you like for now you can simply add default height and width settings and enter auto rotation.

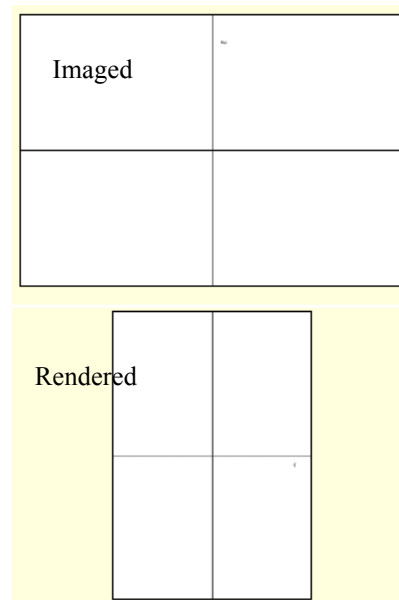
4. Select both the jobs (page 1 and 2) click “render again”.

This will now rotate the pages during the rendering phase. Once rendering has finished, duplex the jobs and check the output. The pages should now be in the correct orientation. But you now may find that the back side is 180 degree to the front page. This is again caused by the duplexing mode (binding) which is set in the Pagesetup custom settings.

1. Choose the first page from the job again, right click and select Configure > Edit Pagesetup > Output.
2. Click Edit on the Custom settings and change the Duplexing mode to be Short edge binding.
3. Click accept and then OK to save the changes and dismiss the window.
4. Select both the pages again and render once more.

You should see the pages now back up correctly. The one thing left to do is check the centering for the A3 pages.

Again from the previous example we know that we need to find the printable area. This may be the same as it was for the A4 pages (the margins may be the same so you would subtract the margin value from the page size) it is still a good idea to check this. Create another job as before on an A3 sheet and draw lines across the middle. Duplex the job and measure the lines (you only need to print one side really as they are generally the same and are only using the one Pagesetup for front and back sides) and enter the values for the page width and height. The important thing to remember this time is that we are rotating the page. Rotation occurs before centering so the width and height are transposed. Check the job info from the job the first time you printed it to get the page dimensions. These are printed in W x H order so you can use it as a guide.



Page Dimensions	284.48mm x 411.99mm	
	Width	Height

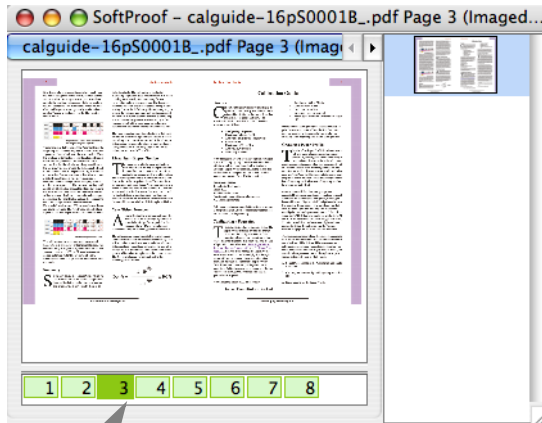
Once you have job centred you can print the whole publication. You can either submit the job again for deimposition or you can select the pages in QueueManager and render them again. Remember that you can only re-render done jobs so any jobs “Waiting to duplex” need to be cancelled and then submitted for rendering again.

SoftProof features for Signatures

There are a couple of other features in the SoftProof tool that are available when viewing jobs with signatures that we have not looked at. For this we will use the A3 pages that we have just deimposed.

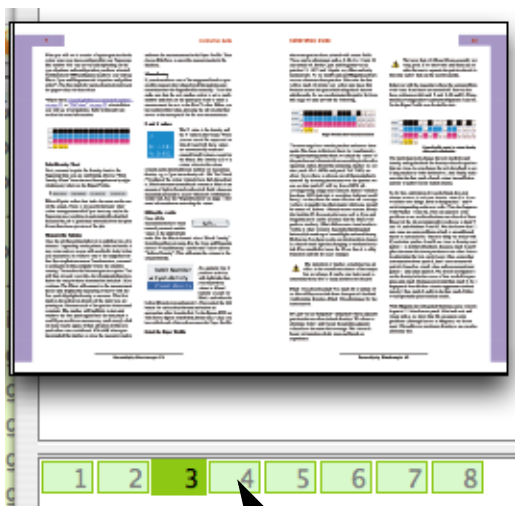
In the QueueManager choose one of the pages e.g. page 3 and select View Imaged. You will see once the

page has loaded that there is also a pages pane at the bottom of the SoftProof window. You get this when you view a job that belongs to a publication.



Pages Pane

The pages pane works in the same way as it does for the FlipBook. Click on another page (light green) from the publication to load it in the SoftProof. Because you are viewing the Imaged Preview then all other pages you load will also be the Imaged Preview. To make selection of the pages easier we can turn on the Thumbnail preview. This is available from the Signatures menu or you can simply press the letter T in the SoftProof window. Now when you hover the mouse over a page in the pages pane you will see a thumbnail of the page you are currently over.

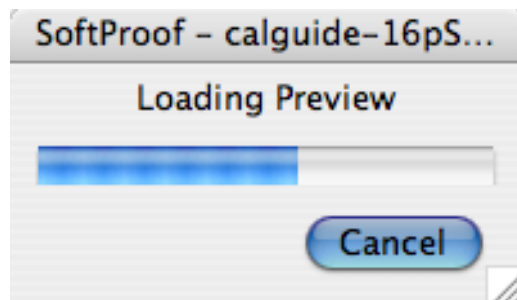


With the mouse pointer over page 4 the Thumbnail from page 4 is displayed above.

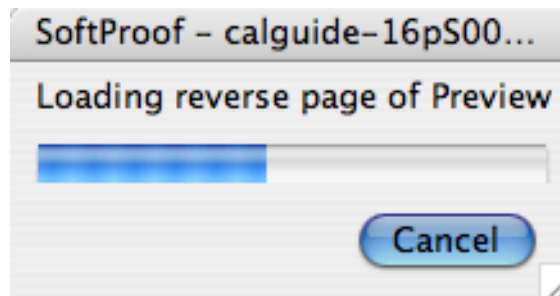
To turn the Thumbnail viewing off simply deselect the option in the menu or press T again.

The other useful feature is “Reverse Page Viewing”. This allows you load a page in the SoftProof and then see its reverse or back side as a show through effect, just as if you held the printed sheet up to the light. You can enable this by selecting the Signatures > Reverse Page > Show, or by pressing the letter B (Back) in the SoftProof. This will load the front page and then load the back page. The amount you show through is controlled by the Transparency setting. This can be changed very quickly so you can see the effect of different transparency settings.

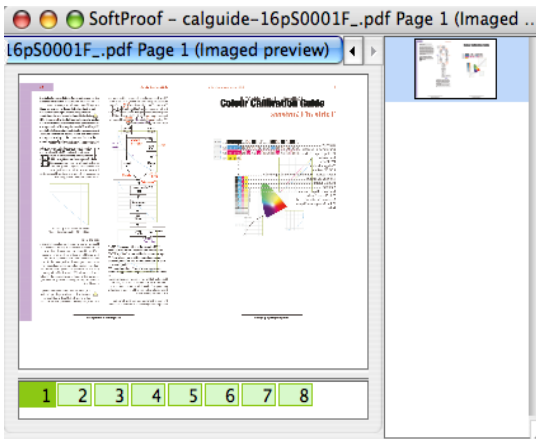
First, click on Page 1 load it and then press B to load the back (page 2).



Loads the front side

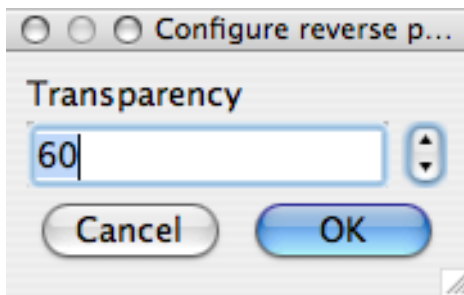


Loads the Back side



SoftProof window showing the reverse page loaded

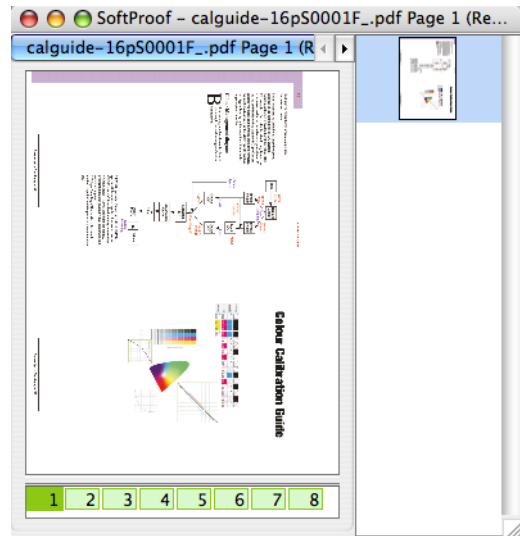
To change the Transparency level either select Signatures>Reverse Page>Transparency, or simply press O.



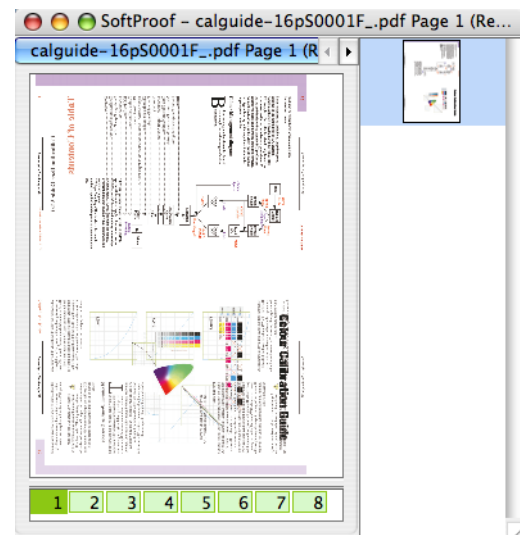
Change the transparency value and press OK to the change instantly in the currently loaded jobs.

There is one more setting to be aware of which is the effect of rotation in the job. Currently we are looking at the Imaged Preview that does not have any rotation applied to it. But for this job we had to rotate the output for the printer so the rendered job is different.

Reduce the size of the SoftProof window so that you can open another next to. Zoom out (press apple - or ctrl - key) so that you can still the page OK. Then select the same job (page 1) in the QueueManager again and select View Rendered.



Because of the rotation this loads in a different orientation. But now look what happens when we look at the reverse page. (Press B to load the back)



We can see that the rendered preview for the back looks different than the imaged preview for the back. One appears to have been spun a different way. In fact they have both been spun in the same direction but the SoftProof is currently not allowing for this. To compensate for the change in orientation you need to rotate the back page. Select Signatures>Reverse Page>Rotate 180 and this will change the back in to the correct orientation for viewing. The setting is remembered so viewing all subsequent rendered pages will be correct. But if you look at the Imaged preview then you will need to select No rotation from the menu. See the diagram below for an explanation why this occurs.



Imaged



R is reflected for back side



Rendered file rotated



R is reflected for the back side



When placed behind the view is different from the imaged

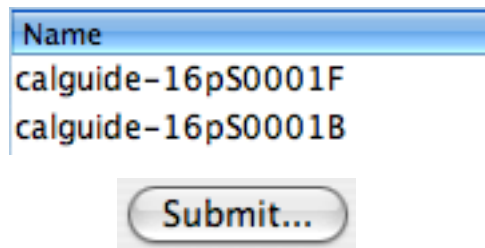
Creating a Folding Sheet - Tutorial 3

When using the deimposition feature the resultant output is a completed publication e.g. a book or magazine. To get to that stage we have imported the signature templates used to create the job and we have used the RIPed job as the incoming data. But some users still like to have the imposed sheet, backed up in

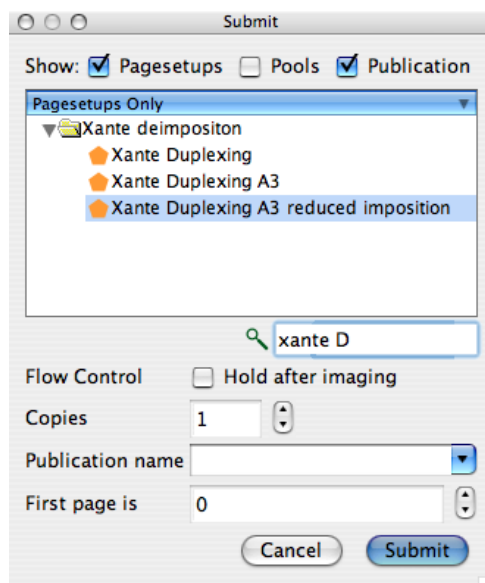
their hands so that they can fold it themselves. This is very easy to produce. For our next tutorial we will take the same job and signature and print them on the Xante in a reduced format.

First we need to create the Pagesetup to shrink the job. We have already created one for the A3 printer that is backed up nicely so we can use this one. Select it from the Workbench and duplicate. Change the name to Xante Duplexing A3 reduced imposition. Scroll to the Sheet section and change the fitting method to “Fit Width & Height”. We already have the width and height settings from the previous configurations. This will now shrink the page proportionally to fit in the defined area. Then select rotation of None because the job is imaging in the correct output orientation so no need to rotate it. And finally we should still have the centering options enabled so that the pages back up correctly. When complete save the Pagesetup.

Now in the RIPMonitor, select the RIP list with our jobs in and make sure that the sort order has the front sheet above the Back sheet. Select both jobs and click “Submit”.



This will display the standard Submit window.

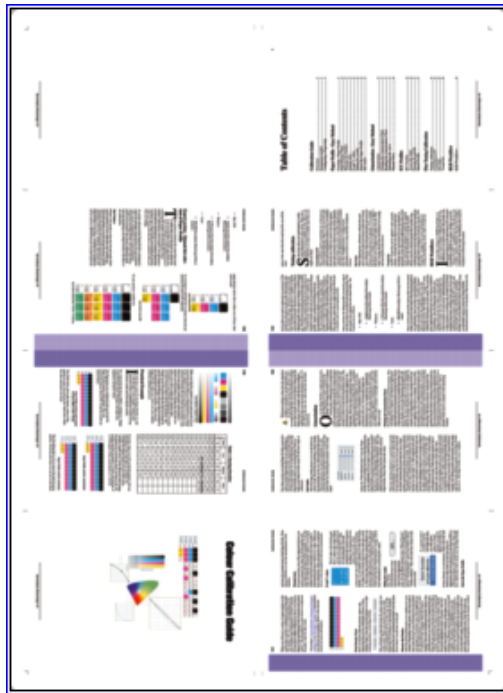


Make sure that the publication check box is ticked at the top of the window. This will show the publication

drop down selector at the bottom. In this area enter a publication name of imposition-reduced and set the first page as 1.

Publication name ▼
 First page is ▲ ▼

Because we ensured we had the front sheet first in the list then this will be assigned the first page number which in this case is 1. All subsequent pages are numbered accordingly in order. Click Submit to finish and send the jobs for processing. The jobs will follow the same course as before only this time no deimposition takes place. They will fall through to the print queue and go into a “Waiting to duplex” state. Duplex the jobs and print them out to see the output. It should look something like this on an A3 sheet.



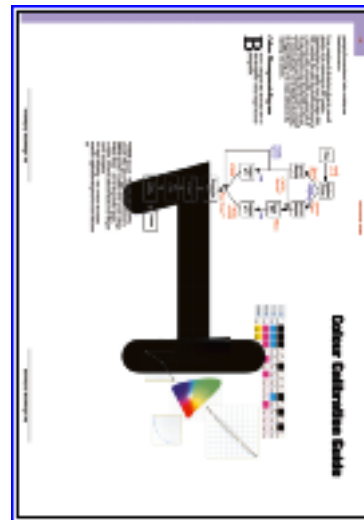
Because this is part of a publication you can open the image in the SoftProof and view the back page as a show through just as you can on a single page. You can also send this out to an A4 size sheet just as easily following the same principles. Make sure that you view the rendered output prior to duplexing and printing to make sure that you have the correct orientation. If you do not then you rotate the page and submit the job again.



If you do need to rotate the page then you will need to submit the job again from the RIPMonitor otherwise the size will be smaller. This is because the imaged file has already been reduced in a fit width and height so the rotated output will then be smaller.

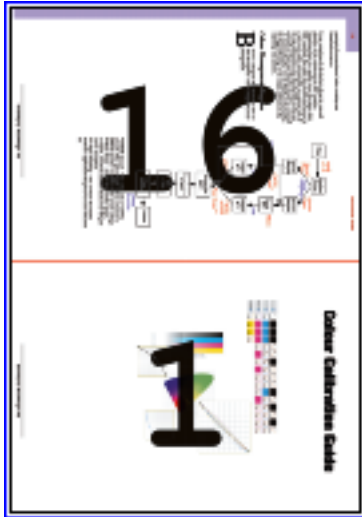
Rendering Effects

There are a couple of rendering effects that can be applied to the job which can be quite useful. The first is called Pagenumber. As the name suggests this adds a page number on the job. You can choose the scale factor and colour of the number as well as its properties i.e. merge (overprint) or knockout. Providing there is a page number assigned to the job then the effect will work. But this effect has limitations. Only one number is printed per print job so if you are pairing pages then the resultant page number for the pair is the number that is printed.



Here you can see that the two pages paired which resulted in page numbering of 1 and this was the number used to print.

The other rendering effect is called Signature decoration. And this has two parts to it. One is draw a line around the pages according to the applied signature. The other is to print the page number similar to the above. But this time the number printed is from the signature and not the page number assigned to the job. An example of the previous page is shown below with the signature decoration enabled.



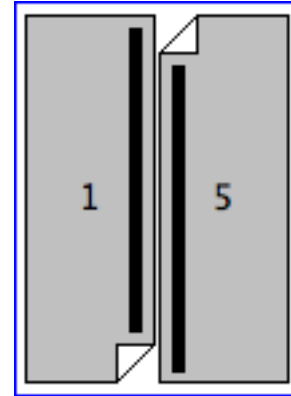
Here you can see the page numbers have come from the Signature. The page numbers are preserved despite being paired.

Tutorial 4 - 16 page imposed output

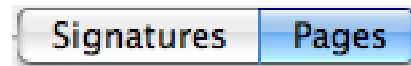
For the next tutorial we will create a reduced output of the 16 page imposition with page numbers and page lines printed on the output. The first place to start is with the Signature. When we printed the reduced size version of this job before we did not apply any signature to it as no deimposition was taking place and we were only shrinking it. However this time we need to apply a signature to the job so that we can extract the page sizes and numbers for the rendering effect.

Select the Signature Group in the Workbench and choose the group called Deimposition Tutorial 1. This was the original imported signature with only a rotation applied. Duplicate the group and call it Deimposition Tutorial 4. Currently the signature is set up for separate A4 pages. When we printed spreads on the A3 sheet we paired the pages making a single page from the two adjacent pages. This time we are printing the whole imposed page so we need to make the whole imposition signature as a single page. We do this by continually pairing until it becomes one.

Select the two signatures in the group. The diagram should disappear and the pair buttons (Pair Pages and Pair Pages Vertically) should become available. Click on the "Pair Pages" button twice. (You can click on the Pair Pages Vertically as it has the same effect here). After this you will notice that the Pairing buttons are no longer available. Select the first signature in the group and you should see the following.



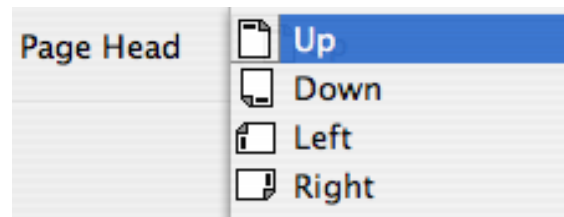
You cannot pair these pages any more because their heads are in opposing directions. Select both the signatures again and click on the Pages tab.



Then scroll to the bottom where you will see the Page Head button.

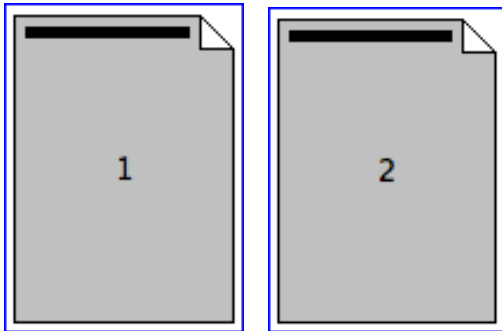


From the pull down menu select page head up. It may currently display up because this is the first item on the list it chooses by default. Simply select up again. The page head direction will affect the orientation of the imaged job. If we selected left or right then we need to rotate the job in the rendering stage and seeing as rotation adds processing time then this would be inefficient. We could use a Page head direction of down and although there is no rotation necessary for output there is some internal rotation taking place which also increases processing time, so the best orientation is up. If you find your printing direction is such that you have to add a rotation when the page head is up, then try a different head direction with no rotation in rendering. Finding the most efficient method will be a benefit and one that is unlikely to change.



Now the page heads are all in the same direction you can select the Pair Pages again. Select the Signatures tab again and choose each signature in turn. You will

see that they are now a single page numbered page 1 and 2.

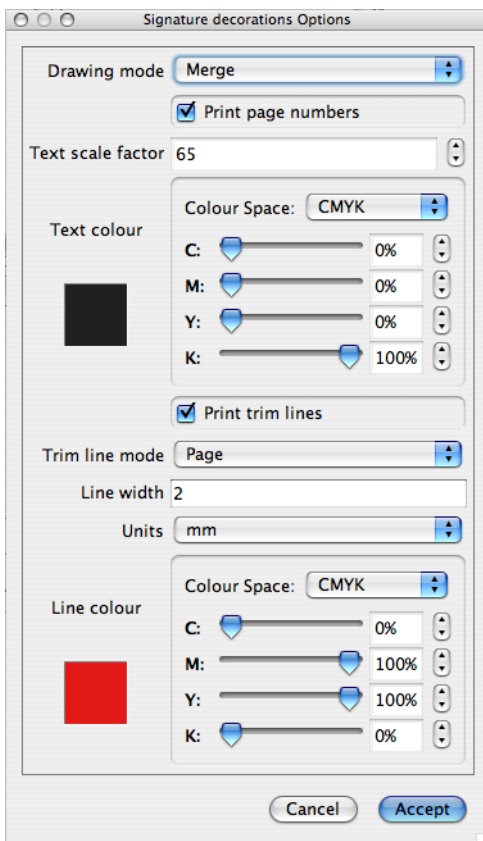
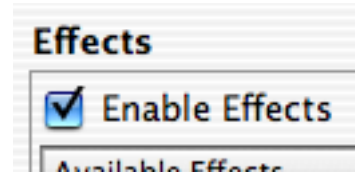


Save the Signatures and select Pagesetup from the Workbench. Choose the previous Pagesetup called Xante Duplexing A3 reduced imposition and ensure that the rotation is set to “None”.

In the Effects section you will see on the left a list of available render effects. Find the effect called “Signature decoration” and double click it to move it to the right list (the applied effects). You can also click the “Add” button. Then select it on the right list and double click (or select edit) again to display the available configuration options.

your colour, a scale factor (proportionate to the page area, so 100 is the full page area) and whether to merge or overprint the numbers. (In fact the Merge or Overprint applies to both sections, page numbers and lines).

The second section handles the trim lines. Again you can choose your own colour, the thickness of the lines and whether they should be applied to the page or the spreads. Applying to Spreads will place a line around the paired signature pages. So for this tutorial this would place a line around the whole job. Choosing Page places a line around the original individual page in the signature which means for this tutorial each of the 8 pages on each side will have a line around it where it will be trimmed. For our tutorial select Page for the Trim lines and leave the rest on default. Ensure that both sections are ticked and click Accept. Then make sure that the “Enable Effects” button is ticked and save the Pagesetup.



In this option window there are two sections, each of which can be turned on or off. The first section covers the printing of the page numbers. You can choose



This is where the other rendering effect called Pagenumber is located. It has the same configuration attributes as the Page number in the Signature decoration effect. But the page number would only apply the paired signature page number which is this case would be 1 for the front and 2 for the back. See above for more information.

Find your RIPMonitor again and select the same jobs as before. Choose the submit for deimposition button, select the A3 reduced imposed Pagesetup and then select our new Signature Group “Deimposition Tutorial 4”. Make sure that the front and back pages match signature 1 and 2 respectively, give it a publication name of imposition-reduced-with-pagenum (next screen) and then Finish. When the jobs have passed though to the output queue, check that they are correct, duplex them and check the printed output. It should look something like the picture below.



Creating PDF Configuration

If you don't have a printer to send jobs to then you can create a Pagesetup to output to a PDF which will allow you to experience all the functionality previously described apart from the actual printing of the jobs. You can still see the effects by viewing the rendered previews.

You start by creating a new Output and then a Pagesetup.

1. Select Output from the Workbench and create a new one called PDF.
2. Select PDF as the output driver.
3. Choose Local Folder as the destination and enter the path to a folder to store the PDF outputs.
4. In the Collating panel choose Duplexing.
5. Save your new Output.
6. Select Pagesetup from the Workbench and create a new one and call it PDF Deimposition.
7. Select the PDF Output and choose a resolution of 300dpi.
8. Select CMYK as the colour space and choose ZIP compression under custom settings.
9. Make sure that the Printer ICC selected is a CMYK one.
10. Save the Pagesetup.

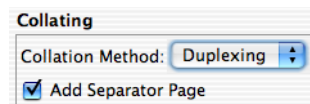
This is all you have to do for a PDF configuration. All of the previous examples described will work in the same way with this configuration. There will obviously be no need to position the pages on the printed output.

Adding Separator Page

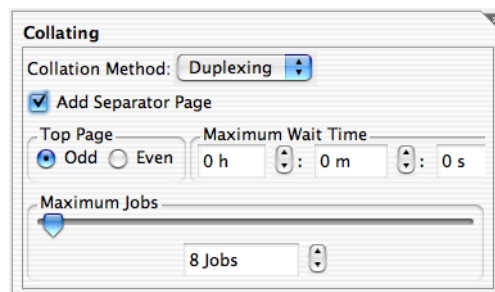
When proofing a complete booklet or magazine as paired pages that is perfect bound it can be useful to find each section easily so that they can be folded ready for the final assembly. Each section is usually 8 or 16 pages and a book will contain a number of these sections which need to be folded.

To help find the sections you can use the function called "Add Separator Page" under the duplexing section of the Output. To achieve this follow the steps below.

1. Select the output of your paired pages example above.
2. Select the "Add Separator Page" check box.



3. Enter the Maximum number of jobs that make a section. For example if your sections are 16 pages, then the number of jobs for a section would be 8 because they are paired.



4. Save the Output.

This means that for each group of 8 pages that are sent to the printer an additional blank page will be added at the end. You can then collect your job from the printer, locate each section, fold it and discard the blank separator page.

Clustering

Overview

Clustering is a method where multiple computers are used to share the workload of jobs. Sometimes called distributed processing, clustering consists of a Master machine and one or more Slaves on the same network. The Master is the controller that handles jobs coming in, where they are distributed and jobs going out. The Slave accepts jobs from the Master, processes them and passes them back once complete.

The Master server is protected by a dongle that licenses the inputs and outputs that are allowed. The Slave servers are also protected by a slave dongle which will process anything licensed by the Master. Each Slave must have it's own dongle.

The Master functions as a normal Serendipity Blackmagic. Here you configure the RIP(s) that you wish to poll, the Printers that you are printing to and the Pagesetup to process the job as desired. The Serendipity Client connects to the master allowing you to control the process. Jobs are submitted in the normal way and spooled onto the Master. Once spooled, the job may be processed locally by the Master machine or passed to a Slave to process depending on the configuration of the Cluster. Each process, Imaging and Rendering, can be completed by either the Master or Slave.

A Slave can handle one Image and one Render at any one time. If a job is passed to a Slave for Imaging or Rendering, it is processed and when complete the job is passed back to the Master for the next stage in the process. At that time the Slave imager or Renderer then becomes available for another job. All required processing attributes are sent with the job to the Slave from the Master e.g. ICC profiles, tweak sets, Gradation Curves etc. The Slave runs as a 'dumb' server and does not allow Client connections. There is nothing to configure on the slave anyway.

Configuring a Cluster

Here we will show you how to setup a cluster, the configuration options and how to monitor jobs. We will use a Master machine and two Slaves.

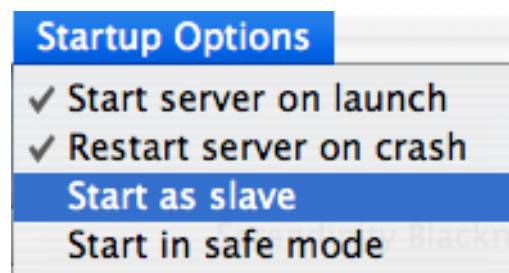
Installation

Installation is very simple. You need to verify that the machines you are using for the Cluster are connected to the same network and can 'see' each other. See connection diagram at the end of this section. For both

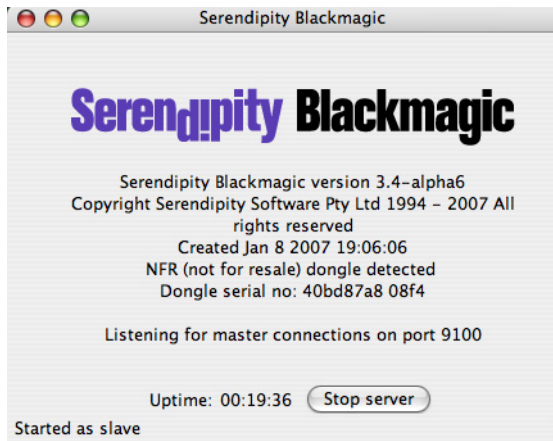
the Master and the Slave the installation is the same as any standard install. Use the same CD to install on all machine to make sure that the same version is used between Master and Slaves. Each Slave must have the dongle driver installed and the dongle attached to the USB port. The Slave installation will install everything as a Master install as it is the dongle that determines the operational mode of the software. A clustering environment is not restricted to one platform type. So you can have a cluster consisting of any number of platforms with different operating systems (from those supported by the software) should you choose. Simply follow the installation instructions for that particular platform. See Installation section for more info.

Starting the software

For Master and Slave you launch the server by double clicking on the Server icon. See... The server window has an option to start as a Slave. If you had two Master dongles then you can run one as a slave. To do this you would start the server and then once the server window has appeared you can then select the "Start as slave" option from the Startup menu. Once selected you need the choose "Restart server" from the File menu. (There is no need to wait until the server is fully started until you restart). For a Slave dongle this option is always enabled as the dongle is checked on launch.



Once the server is running you will see in the bottom left corner that the window states it has been started as a slave.

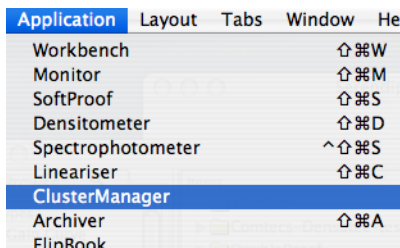


Once the Slave server is up and running there is nothing more to do on the Slave machine its self.

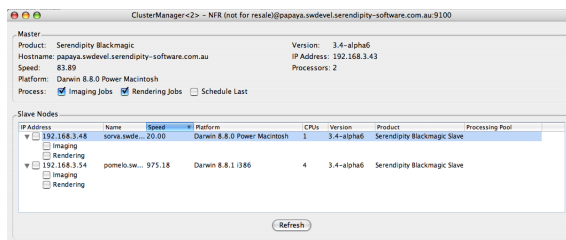
You start the Master as you would a conventional Server and once that is up and running you need to start the client to connect to the Master server.

The ClusterManager

Once the Master and Slaves are up and running you need to configure how the cluster will handle jobs. Generally the Master will discover the slaves on the network and show them in the ClusterManager. Start the ClusterManager by selecting ClusterManager from the Application Menu.



This will display the following window.

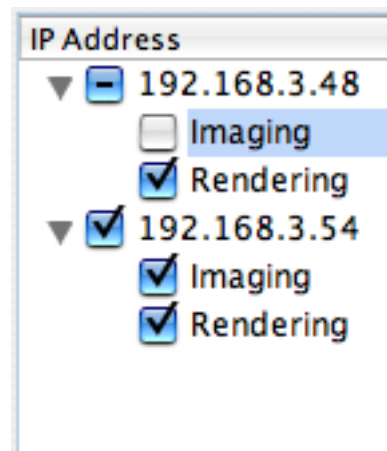


The top section of the window describes server information for the Master. The window in the lower half describes information about Slaves. For all available nodes (including the Master) you get

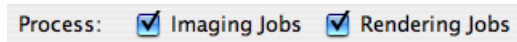
information about the software version, platform, operating system, IP address and performance.

The performance is calculated on the server startup by exercising the machine with typical tasks performed during the normal processing of a job. From this a speed rating is calculated. This speed rating is used not only to gauge the performance of a particular computer but when jobs are passed to a Slave they are sent to the fastest Slave available. This helps to utilise a cluster in the best possible manner.

For each processing node you have the ability to control what tasks they perform. Below shows two slaves.

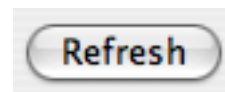


Here you can choose if a machine is to handle jobs for imaging, rendering or both. Simply uncheck the relevant box to disable the tasks. For the Master machine you select the appropriate check box in the upper half of the window.



Adding a Slave

If you do not see your Slave listed in the window then first you can try clicking the Refresh button at the bottom.

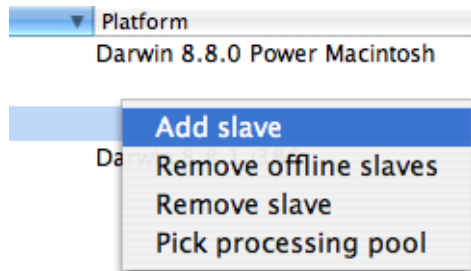


This goes in search of new Slaves not currently listed in the ClusterManager. This may occur if you have started the Slave since you have launched the ClusterManager. (When the ClusterManager is launched it looks on the network for Slaves).This

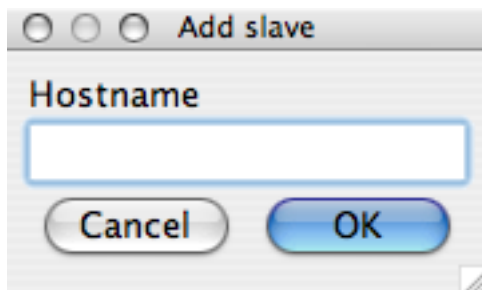
should show any new Slaves in the list allowing you to manage them.

If you have Slaves on different networks then sometimes the automatic search will not discover a node. In this case you need to add the Slave manually. You'll need the IP address of the machine that the Slave is running on. To add a Slave do the following.

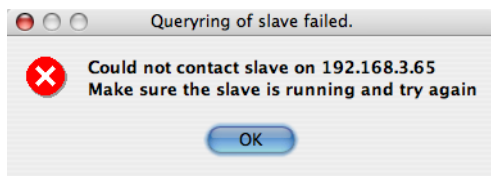
1. With the ClusterManager running, right click in the Slave Nodes section at the bottom



2. Select Add Slave from the list.
3. Enter the Hostname or IP Address of the machine where the Slave is running in the window and press OK.



If this is successful then the Slave will be added to the list. If not then you will see the following error message.



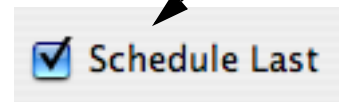
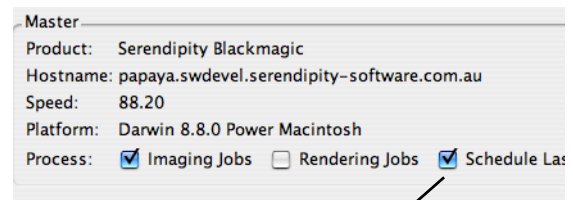
If you see this please see the troubleshooting section at the end.

Clustering Options

As we have said, the ClusterManager controls how the jobs are distributed. In the default configuration all the nodes are configured to handle both imaging and rendering tasks. This is done in the order of Master first as there is no network activity involved. Then if the Master is busy, it will pass it on to the fastest available Slave. See Speed rating above.

Schedule Last

You can override the default configuration and set the Master machine to process jobs last. i.e. priority passes to the fastest Slave available and only when all Slaves are busy will the Master process a job.



Advantage

The Master machine is handling all the tasks for the server to function. It talks to the Polling agent, displays jobs in the RIPMonitor and spools the jobs into the system. It is also printing jobs, displaying them in the SoftProof and serving other Clients on the network. This can all take processing power and it can be an advantage to allow the Master more power to handle these tasks.

Disadvantage

More jobs will be passed around the network so traffic will be increased and can become a bottle neck. Also generally the Master machine is the fastest in a clustering environment and it maybe favourable for it to process more jobs. You can also configure multiple imagers and renderers on the Master allowing multiple jobs to process simultaneously. This facility is not available for Slaves. See System Settings for more info.

Image, Render or both

Another control you have is to choose the tasks each machine in the Cluster is going to perform, imaging, rendering or both. You may choose for one Slave to Image

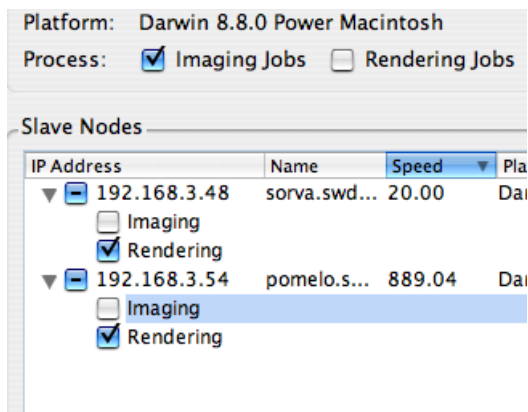
only and another to render only.or the Slaves to just render and the Master to just image.

Advantages and Disadvantages

Again like the schedule last above you can turn off the imaging on the Master to allow it to handle other tasks more efficiently. But this can depend on the hardware configuration and the only way to get the best configuration is to test some different combinations to see which performs best.

Imaging is CPU intensive and rendering is generally disk intensive. But each Cluster may perform slightly different depending on the hardware, network and workload. The ability to customise the tasks each machine performs helps obtain the most productive Cluster possible.

To change the tasks that each machine performs simply check or uncheck the relevant tick box for that machine.



Using a Processing Pool

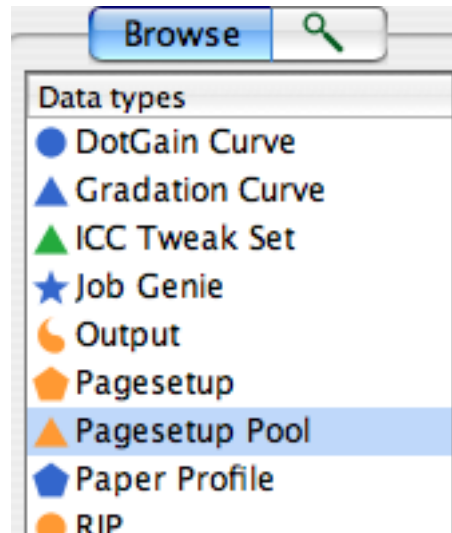
The Processing Pool gives you the opportunity to keep a Slave free for processing jobs that are sent to one or more designated Pagesetups. This works by creating a list of allowable Pagesetups that a Slave can process jobs from. The jobs are still sent to the first available Cluster node that has priority. But if that node is a Slave with a Processing Pool attached, then the pool is checked to see if the it contains the Pagesetup that the job was sent to. If it does then it will process the job. If not then the job will pass to the next in the list of available nodes.

Setting up a Processing Pool

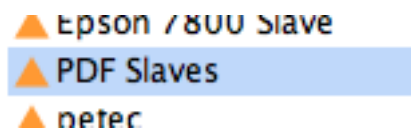
The best way to illustrate how this works is to configure a Cluster using a Processing Pool. In our Cluster we have a Master with a speed of 133 and two Slaves, A and B with speeds of 78 and 963 respectively. We have a printer that we want to keep busy and therefore want to keep jobs away from Slave

A with a speed of just 78. We want to keep this slave to producing A4 PDF files at 300dpi for emailing to clients.

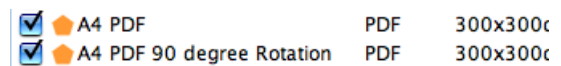
First thing to do is make sure that you have the Pagesetups configured as you wish for the printer and PDF's. We have 4 Pagesetups for the printer with different media types and resolutions and two for the PDF's with different orientations. Then you need to create a new Pagesetup Pool for the PDF Pagesetups.



Call it PDF Slaves.

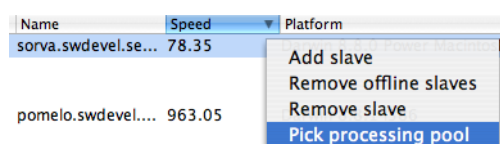


Then select the two PDF Pagesetups you have created and save.

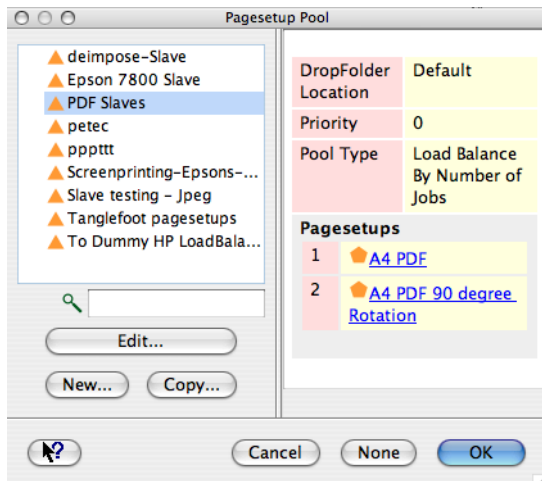


Once saved, open the ClusterManager and make sure that your Slaves are displayed in the Nodes list. The processing pool is displayed in a column which by default is on the far right of the window. You may need to scroll to the right or make the window large enough to see it.

Select the Slave A anywhere and right click.



This will display a chooser showing the available pools.



Select the PDF Slaves pool we created and click OK. This will then add the pool to the Slave and display it in the ClusterManager.

CPUs	Version	Product	Processing Pool
1	3.4-beta1	Serendipity Blackmagic Slave	PDF Slaves

Removing a Processing Pool

To remove a Processing Pool from the Slave you need to do the following

1. Right click on the Slave.
2. Select Pick processing pool
3. Select None from the Pagesetup Pool chooser.

Printing to a Processing Pool

Sending jobs to the Cluster that has a pool does not change. You still submit jobs to your desired Pagesetup in the normal way. What this does is filter jobs and serves two purposes. One is to keep a Slave free for processing jobs for a particular workflow. The other is to keep jobs away from a particular Slave that may be slower.

In our example we know that the only jobs being processed by Slave A are ones that are sent to either A4 PDF or A4 PDF rotated. There will not be any high resolution print jobs that take a long period of time. However, this does not mean that jobs sent to the PDF queues will only be processed by Slave A. The ClusterManager configuration will still determine the most suitable node. If the Master is free and you do not have Schedule Last selected then this will have priority over Slave A for the jobs. Likewise, if the Master is busy or Schedule Last is selected then job will first fall to the fastest slave - i.e. Slave B providing it is not currently processing a job. This is because it does not currently have a Processing Pool selected so it can therefore process any job. If you

wanted to keep the PDF jobs way from Slave B then you simply create a Pagesetup Pool for the printers (and any other Pagesetup you want to allow it to process) and select it in the ClusterManager for Slave B just as we did for Slave A.

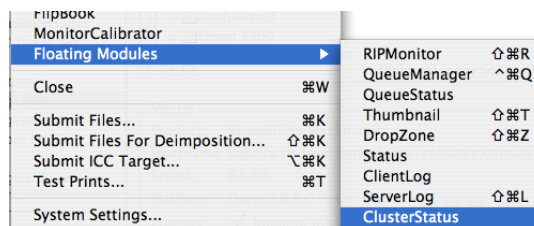


The Master will always be allowed to process any job unless Imaging and / or Rendering tasks are unselected.

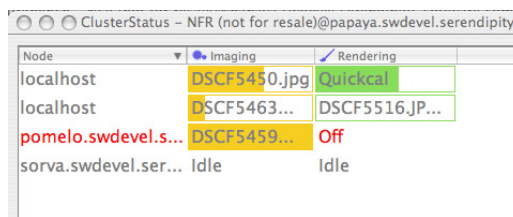
To give a Slave more priority of processing jobs for particular Pagesetup enable the Schedule Last for the Slave. This way the Slave will always be checked first for jobs in its processing pool and only if it is busy will the job pass to the Master.

Monitoring a Cluster

Once you have the Cluster configured as you wish you can monitor the progress of jobs through the cluster using the ClusterStatus. This can either be added as a floating windows or as a module onto a tabbed monitor display. To launch a floating ClusterStatus select it from the Application menu under Floating Modules.



This will display a monitoring window that contains all the nodes in the ClusterManager.

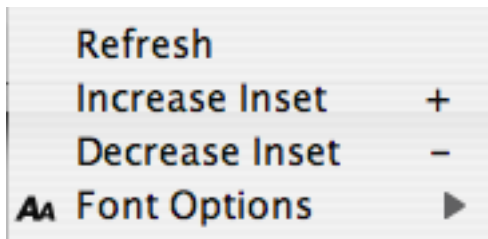


Here we see job processing through the Cluster. We have a Slave called Pomelo that currently has Rendering disabled as shown in red. You will also see that no jobs are currently passing through Sorva as this is configured with a processing pool for the PDF's and these job have been sent to other queues other than the two PDF queues.

Options

There are 4 options for the ClusterStatus which only control the view. There is no control of the Cluster from the Status window. This is all done from the

ClusterManager. The options are available by right clicking in the window. These are as follows.



- Refresh - Updates the status window.
- Increase Inset + - Increases the gap between the lines of each node.
- Decrease Inset - - Reduces the gap between the lines of each node.
- Font Options - Allows you to choose a different font size.

It can be quite useful for a ClusterStatus to increase the font size to say 16 points and increase the spacing between the lines. You may also need to increase the size of the window.

Troubleshooting

There is not really very much that can go wrong with the Clustering. Here are a few things to look for in the event that things do not work as you expect.

Jobs not processing through a slave.

The possible reasons for this are:

1. Slave is not configured to Image or Render or both. Check the ClusterStatus to see if either of the processing tasks have been disabled. To enable them open the ClusterManager and enable the appropriate task. See “Image, Render or both” on page 193.
2. Slave has a Processing Pool attached and the Pagesetup you are submitting jobs to is not contained within the pool. Here you can either un-select the pool or add the Pagesetup you are submitting to, to the Pagesetup Pool. See “Using a Processing Pool” on page 194 above.
3. The Slave has gone off line. To check this open the ClusterManager and check the Slave. If the ClusterManager is already open then click the Refresh button. This will check for Slave status. If you see the Slave appear greyed out or disabled

(see pic below) then this indicates that the Slave is currently not on line.

IP Address	Name	Speed	Plat
192.168.3.48	sorva.swdevel.se...	78.35	Dar
192.168.3.54	pomelo.swdevel....	963.05	Dar

Here the Slave called pomelo is currently off line. In this case check that the Slave server is up and that machine is still connected to the network and can see the Master. If there is a problem with the Slave check the error log (see “Slave errors log” on page 196). Once you resolve the problem you need to either click the Refresh button or close and open the ClusterManager again.

4. The Slave and Master are different versions. The Slave should always be upgraded when the Master is upgraded to maintain the same versions in a Cluster.

Slave errors log

The slaves all create an error log which logs all the messages from the Slave. This is located in the installation directory on the Slave’s own machine and is called errors.log. This can be viewed with a normal text editor and can help you track a problem. Or it can be sent to support for assistance in tracing a problem.

Removing an offline slave

Slaves remain in the ClusterManager until they are removed. This is because once a cluster is configured it is not going to change much and an off line Slave may simply be because the machine has rebooted and it will come back on line again shortly. When a Slave is shown in the ClusterManager it is also shown in the ClusterStatus.

To remove a Slave do the following

1. Open the ClusterManager
2. Right click in the window on a Slave
3. Choose either
 - Remove Slave - Removes the currently selected Slave irrespective of its current status. i.e. online or off line.
 - Remove offline Slaves - Removes all Slaves that are currently off line.

You cannot find a Slave

Once you have started your Slave successfully you should be able to see it in the ClusterManager. If not then you need to add the Slave manually. See “Adding a Slave” on page 192. If this fails then there are a couple of things to check.

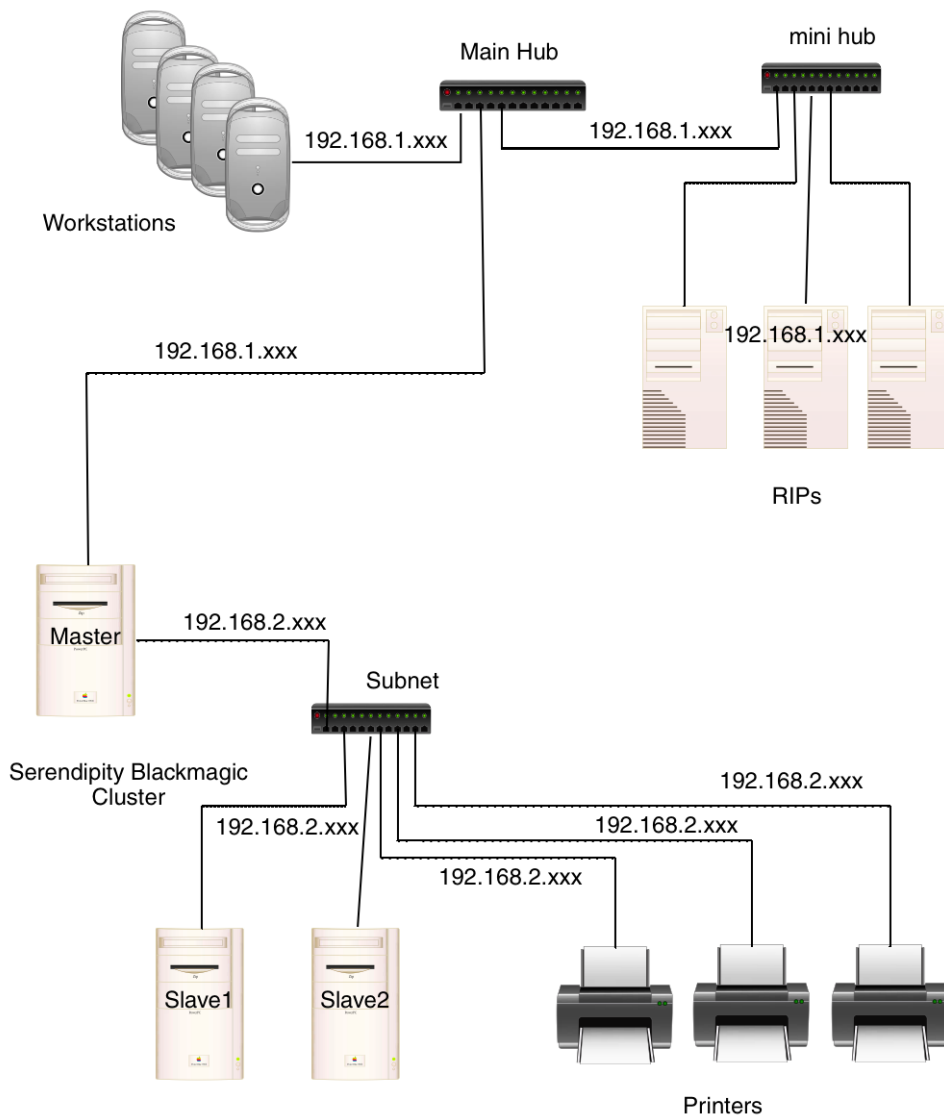
1. Verify that the Slave is still running and the clock is still counting up.
2. Check the error log for any messages. See “Slave errors log” on page 196.
3. Check that the Master machine can ping the Slave machine. If not then there must be a network problem and you need to contact your network administrator for assistance.

4. Check that the ports on the machines are open for the Slaves to connect to the Master and that they are not being used by anything else. The port numbers for the Slave are as follows

- 9103/tcp - server connects here and submits jobs via this port
- 9103/udp - listens to broadcasts so the server can enumerate available slave servers.

5. Make sure that the Slave is the same version as the Master. Slaves should always be upgraded if a Master is upgraded.

Serendipity Blackmagic Cluster Configuration



Appendix

Glossary

Client - GUI that monitors jobs and allows configuration of the server.

Clustering - The use of multiple machines on a network for distributed processing.

CMM - Colour Management Module.

CRT - Cathode Ray Tube. Describes the type of monitor.

CTP - Computer to Plate

Data types - Database groups such as Pagesetups or RIPs etc.

DPI - Dots Per Inch (resolution)

EPS - Encapsulated Postscript File

FTP - File Transfer Protocol - Method for copying files between computers across networks.

GUI - Graphical User Interface.

ICC - International Color Consortium

ICC Profile - A colour lookup table that is used for converting colour of a job from one device to another.

LAN - Local Area Network

LCD - Liquid Crystal Display

LPI - Lines Per Inch (screen ruling)

Master - A master server control Slave nodes in a Clustering environment.

QueueManager - Client module that displays job queues and any jobs in those queues.

Queue Status - Monitors the progress is a job through the system.

Real Density - Colour content of a patch as measured.

RIP - Raster Image Processor

Server - Software module that handles the processing of jobs.

Slave - A separate processing node on the network. Used for processing jobs by a Master.

TCP/IP - Transmission Control Protocol / Internet Protocol

Visual Density - The darkness of the patch measured. i.e. how much light is absorbed. The more light absorbed the darker the visual density.

WAN - Wide Area Network

Workbench - Serendipity Client Application used to configure the server.

YN - Yule Nielsen Number

Yule Nielsen Number - A “fudge factor” used when calculating % tint (dot area) from density readings.

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<one line to give the program's name and a brief idea of what it does.>

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