C. Printer Configuration

IRIS lets you print menus, displays, and on–line documentation, as follows:

- Print the contents of a menu or a window by choosing **File–>Print** from the IRIS menu or utility menu bar.
- Print products from the Product Output Menu by choosing **Device–>** from the menu bar and selecting a printer from the pull–down list of devices.
- Print online documentation by choosing **File–>Print** from the Acroread window.

This appendix gives you some hints on configuring printers to work with IRIS menus and utilities and the online document viewer.

C.1 Configuring Printer Queues for IRIS use

The IRIS software always generates printer output in Postscript format, thus the most important matter in printing is to make sure that you have a postscript compatible printer.

The next note on printers is that IRIS always prints using UNIX type print queues. This implies that the computer that you are running IRIS on has at least one print queue setup on it. To setup a print queue, you should use the system administration tool on your computer. In HP–UX systems, this is the **sam** utility. In Linux PC systems, this is the **printtool**. After making any changes in **printtool**, you must click "Restart LPD" prior to using the printer you just configured.

Print queues can be for one of three types of printer configurations. The first is a **local printer**. In this case the printer is connected directly to the computer with via a parallel port connection. Printing information goes directory from the computer to the printer via the parallel port connection. The second queue configuration is for a **network printer**. In this case the printer is attached directly to the computer network. With a network printer, the printing information goes from the computer directly to the printer via the network. The third queue configuration is a **remote printer**. In this case the printer is connected up to another UNIX based computer either with a local or a network connection as described above. In this case, when a print job is executed, the printing information is first transferred over the network from the local computer to the remote computer. The remote computer then transfers the information to printer using the queue configuration configured (either local or network) on that remote computer.

Configuring a Local Printer Queue

Configuration for a local printer is the easiest — but perhaps not always practical. The reason why it is not always practical is that generally each computer does not have its own printer, but instead shares printers with other computers. None the less,

sometimes you may have a local printer with a direct parallel port connection. In this case, merely configure the printer to be a local printer of type postscript using the system administration tool described above. During the configuration, you must specify a name for the queue and the parallel port to be used. At this point, when IRIS is restarted, it will recognize this printer and be able to print images to it.

It should be noted that once a printer is configured locally on one computer, other computers can still use that printer by using a remote printer queue pointing back to this first computer. See the section on configuring remote printers for more information on this.

Configuring a Network Printer Queue

Network printers come in two different architectures. The first is referred to as "internal" and the second as "external". An internal architecture network printer has a network port (10/100 Base T) directly on the printer. An external architecture network printer is a printer with a parallel cable, and that parallel cable connects back to a hardware box called a "print server". The print server has the parallel port that connects to the printer and a network port (10/100 Base T) that connects to the network. The HP Jet Direct is a well known example of a print server product.

To configure your network printer (either internal or external), SIGMET recommends that you follow the instructions from the manufacturer. But generally these instructions have you either enter the printer configuration into the printer control panel, or to configure the printer through a network scheme such as BOOTP or TFTP. The main goal of this configuration step is so your printer can learn its Internet (IP) address. Again, refer to notes from your manufacturer to accomplish this step. Once this setup step is complete, you can use the **ping** command to test if the printer is recognized on the network.

Once the above is accomplished and your printer is recognized on the network, you must configure a print queue on your computer(s) to access it.

As is implied by a network printer, it is a shared device meaning more that one computer is capable of accessing it (via a queue). Configuration of a queue of a network printer depends on the type of platform you are configuring.

HP–UX: For HP–UX, you must install the optional Operating System software known as "**Jet Admin**" from HP. If the network printer you are installing is an HP, it is likely that this software was provided with the printer. If not, then the Jet Admin software can be downloaded from www.hp.com in the drivers section. This software can be installed with the HP–UX **sam** utility. Once the Jet Admin software is installed, you can use the **sam** utility to make a new printer queue of type "Network". During this process, you will need to specify the hostname or IP address of the printer and perhaps some other information depending on the installation circumstances.

Linux PC: For a Linux PC, it is not necessary to install any additional operating system software. To make a queue on a Linux system for a network printer, use the print manager that comes with the Linux **printtool**. Enter in a queue name. Specify

the printer as a **Jet Direct** printer. Specify the **hostname or IP address** of the printer. Specify **postscript** as the filter type. Remember in **printtool** to save the information, then click "Restart LPD" prior to attempting to print.

Because Linux systems need no special operating system files to do network based printing, Linux requires the network printer to handle **LPD** type printing. Most network printers do handle this type printing, but if you are not sure, then check with your printer or print server manufacturer. HP Jet Direct printer and Lexmark network printers have been tested and do support LPD type printing.

It should be noted that once a printer is configured as a network printer on one computer, other computers can still use that printer by using a remote printer queue pointing back to this first computer. See the section on configuring remote printers for more information on this.

For Red Hat Enterprise Linux, standard DeskJet/Inkjet Printers can also be used. It is recommended that drivers be downloaded from:

http://hpinkjet.sourceforge.net

Configuring a Remote Printer Queue

Configuration of a remote printer queue relies on a local or network printer queue already being configured on another computer, and that other computer will server as a relay point for print jobs from your computer. To setup a remote print queue use the system administration utility on your system. On HP this is **sam**, and on Linux this is the **printtool**. In the setup, you must specify a local queue name. Choose a name of your choice, but often this is the same as the remote queue name. Enter in the hostname or IP address of the remote computer that will serve as the relay point. Enter in the remote queue name which refers to the queue names as it is known on that remote computer.

C.2 Displaying Print Queues

On UNIX systems, you can display a list of printer queues by issuing the **`sig_lpstat -listall`** command. This command displays the queues that are available on the system. To get more detailed information about the status of the queues, the **lpstat –a** command can be used.

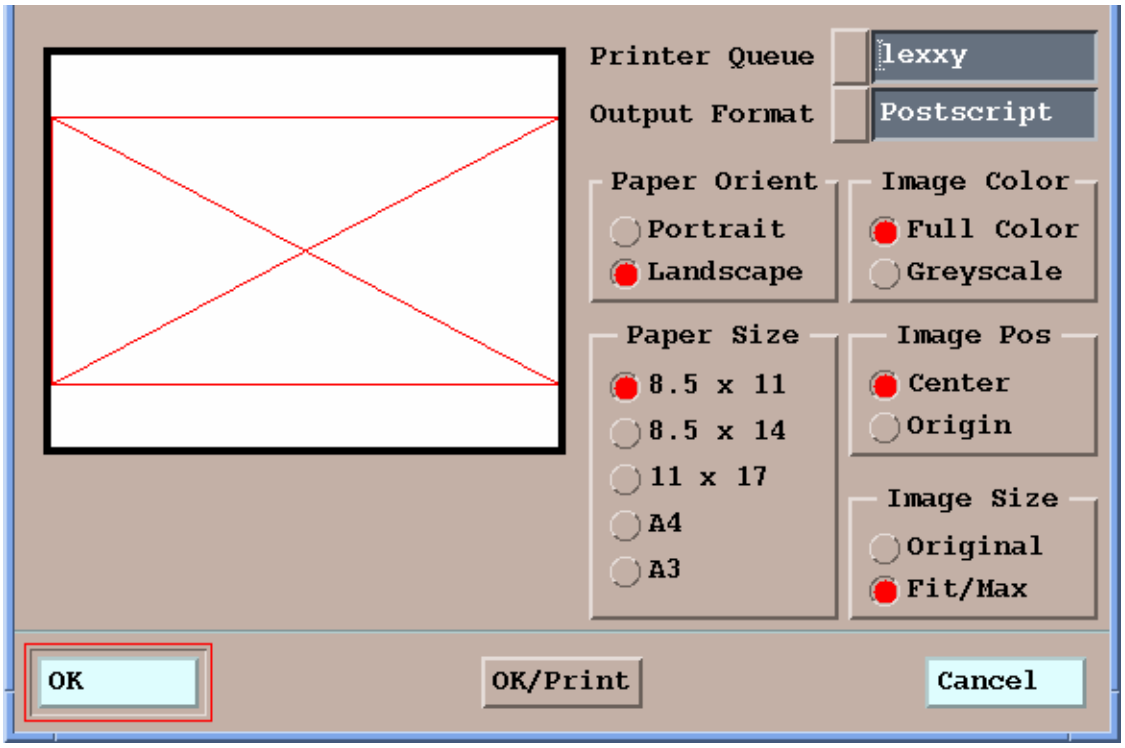
C.3 Configuring Printer Options

After you have worked with a menu, you may want to save the results to a postscript file or print the results for an archive of your IRIS system. Printed copies of IRIS configurations, product configurations, or schedules can be stored in a notebook to document how the system is used.

Printers are set up on a per-user basis. That way, users can send their results to the printers that are most convenient to them.

3.5.1 Printer Setup Menu

From any IRIS menu, choose **File–>Print–>Setup** to activate the Printer Setup menu.



Printer Queue

Enter the printer queue directly in the Printer Queue test field or click the push button to choose from the pull–down menu. The pull menu can contain up to 4 queue names that are configured on your system. Queues must be created at Operating System level before they will be displayed in the Setup Menu.

Output Format

The output format can be Postscript, GIF, of JPEG. If you have a postscript capable printer, then the postscript option will allow you to have control over more output options. The GIF and JPEG options are just graphic files and are best use with no

postscript printers such as InkJets, etc. The options for the output when using GIF or JPEG cannot be set in the IRIS Print Setup tool, but rather must be configured using the operating system printer configuration tools.

Paper Orientation

Portrait – Click on the toggle button to print the screen image vertically (↕) on the page.

Landscape – Click on the toggle button to print the screen image horizontally (↔) on the page.

Image Color

Full Color – Click on the toggle button for a full-color printout of your screen image. This option should be chosen for all full-color printers.

Greyscale – Click on the toggle button for a grayscale printout of your screen image. This option should be chosen for all black-and-white printers. **Note**: You may choose this option if you are using a color printer and desire a grayscale printout of your screen image.

Paper Size

The Paper Size option is designed to print the screen image on the size of the paper that is loaded in your printer—sizes 8.5 x 11, 8.5 x 14, and 11 x 17 are US standards (inches) and sizes A3 and A4 are International standards (metric).

Image Position

Center – Click on the toggle button to print the screen image in the center of the page.

Origin – Click on the toggle button to print the screen image in the upper left–hand corner of the page.

Image Size

Center – Click on the toggle button to print the screen image in the center of the page.

Origin – Click on the toggle button to print the screen image in the upper left–hand corner of the page.

Printing Options

OK – Click on the button to save the current settings.

OK/Print – Click on the button to save the current settings and print a hardcopy of the the screen image (i.e. QLW, Setup, etc). If the OK/Print button is desensitized, a printer queue was not selected.

Cancel – Click on the button to cancel any changes and ext the printer setup menu.