5 *Tektronix Graphics*

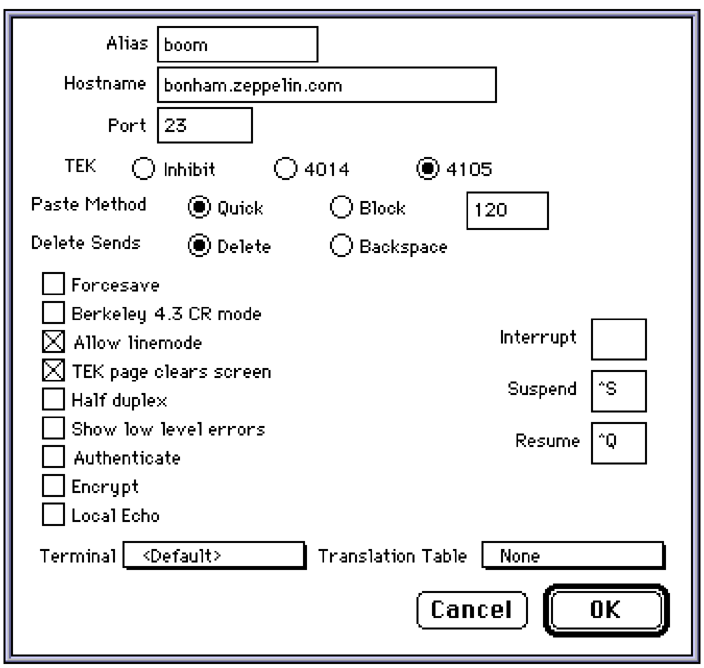
This chapter describes the Tektronix 4014 and 4105 graphics emulation capabilities of NCSA Telnet for the Macintosh and explains how to use these graphics windows. Tektronix vector graphics use mathematical descriptions to create images primarily as collections of lines.

Tektronix 4014 and 4105 Emulation

NCSA Telnet can emulate a number of graphical capabilities of Tektronix 4014 and 4105 terminals, including text modes, text sizing, zoom, and pan. Using Tektronix graphics with NCSA Telnet depends on host programs that can produce graphical images. When the host programs run and produce Tektronix 4014 or 4105 graphics commands, NCSA Telnet automatically switches to graphics mode, opens a graphics window, and does the drawing.

Starting a Tektronix Emulation

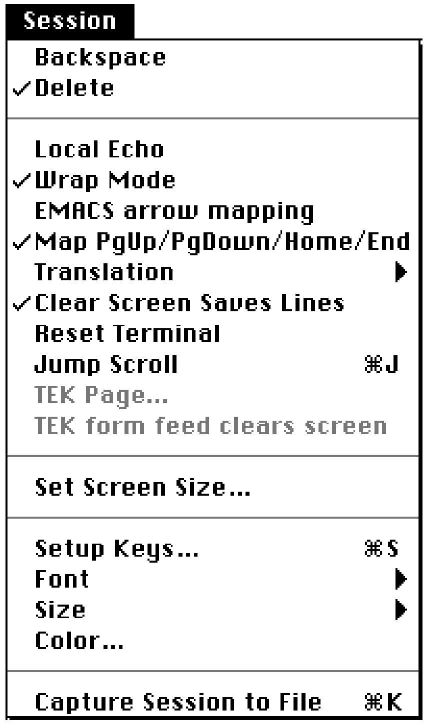
How you set the TEK options in the **Session Configuration Record** dialog box determines the type of Tektronix emulation, if any, for a given session. In the dialog box you can click on one of three TEK options: **Inhibit**, **4014**, or **4105**.



A host program generates the Tektronix clear-screen command sequence (ESC, FF) over an open connection. When NCSA Telnet receives this command, a graphics window opens. All graphical output from the session is redirected into this window until you either close the window or send the TEK `end` command.

Tektronix-Related Commands in the Session Menu

Two Tektronix-related commands appear in NCSA Telnet's **Session** menu:



TEK Page...

This command provides a quick way to create a **Tektronix Emulation** window without intervention from host software. Instead of waiting for NCSA Telnet to receive the clear-screen command sequence from the host, you can create the window immediately by selecting **TEK Page...**.

Just as you would use the PAGE key on a Tektronix keyboard to clear the window for the current session, you can select **TEK Page...** to clear a graphics window. If a Tektronix window is not open, selecting this command creates a cleared graphics window.

TEK form feed clears screen

When you select this command, NCSA Telnet's Tektronix emulation clears the current Tek window any time it receives a Tektronix clear-screen command sequence. If this command is not selected, NCSA Telnet creates a new window for the new Tektronix image. The session's name and time automatically become the name of each new window.

Tektronix Graphics Windows

NCSA Telnet lets you detach, delete, zoom and unzoom, copy, resize, and print graphics windows.

Detaching

Detach a graphics window by clicking on the text window for that graphic's connection. If you hold down the OPTION key, you can click on a window without detaching the corresponding graphics window. The title of a detached window no longer contains the bullet (·) that identifies it as the active output window.

The window can also be detached by host software. When the CAN character (dec 24) is received, the terminal is reset to VT screen emulation.

Deleting

Delete a graphics window by clicking on the close box in the upper-left corner of the window's title bar.

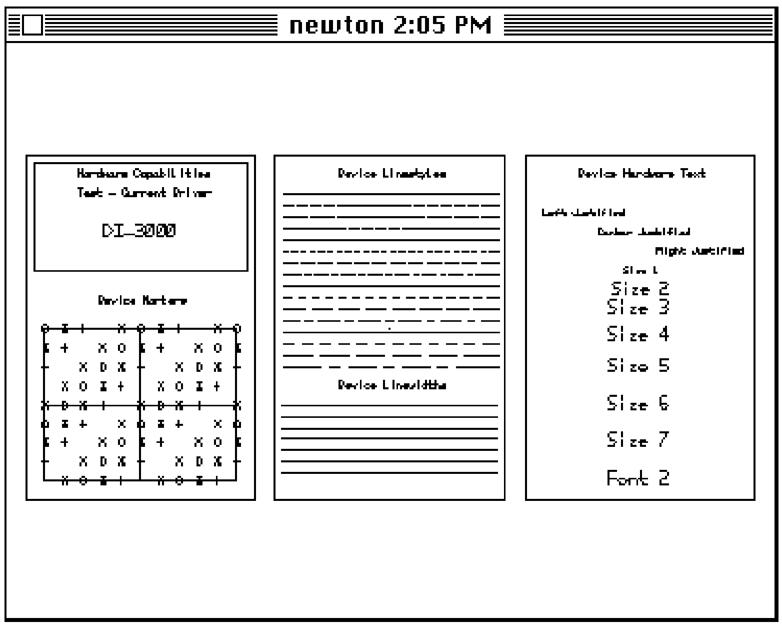
Zooming and Unzooming

To magnify (*zoom* in on) a portion of a drawing in a graphics window, drag a selection rectangle around the area you want to view more closely. When you release the mouse button, the selected section of the drawing expands to fill the entire window. To prevent distortion or stretching of the TEK image, the magnified selection always maintains the same aspect ratio as the TEK window.

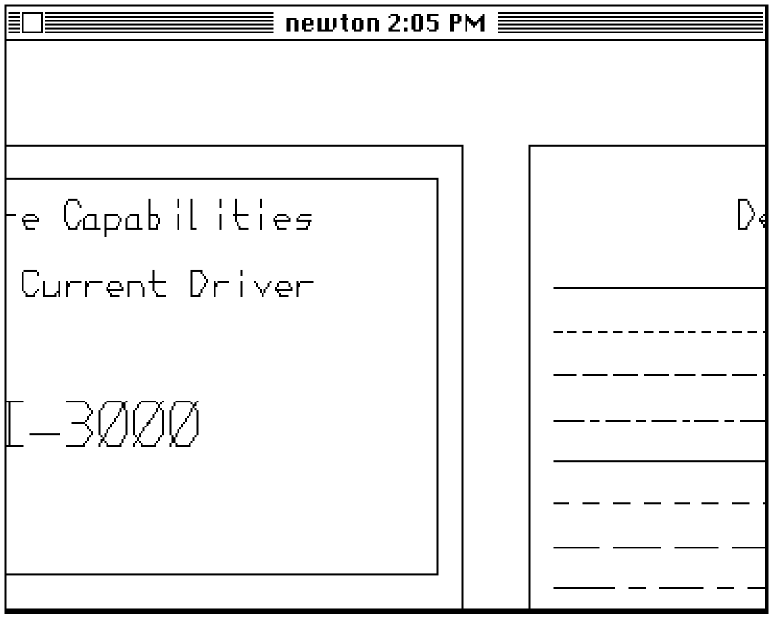
To *unzoom* and see the entire drawing, double-click anywhere in the window.

You can copy and print the contents of both zoomed or unzoomed windows. When you copy or print a zoomed window, only the visible portion of the window is copied or printed.

This screen shows a normal-size **Tektronix Emulation** window with zero magnification:



This screen shows a portion of the same drawing in zoomed magnification:



Copying

To copy the contents of a graphics window onto the Macintosh clipboard, activate the window by clicking on it, then choose **Copy** from the **Edit** menu. Now you can paste the graphic into another Macintosh application.

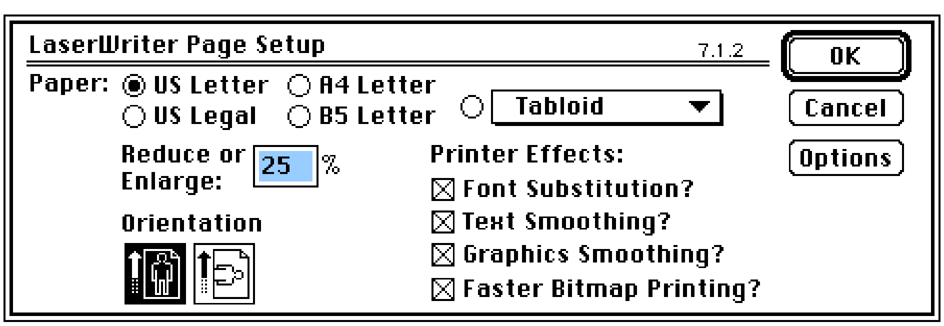
Resizing

To resize a graphics window, click and drag the lower-right corner of the window. The **Tektronix Emulation** window does not have a grow icon.

Printing

To print the contents of a graphics window on a local printer or on a remote printer on the AppleTalk network, first activate the window by clicking on it and then choose **Print Selection** from the **File** menu.

NCSA Telnet centers and scales all graphics to fit the page. To achieve the best possible resolution on a LaserWriter, in the **Page Setup** dialog box enter 25 as the **Reduce or Enlarge** option percentage, as shown in the sample below.



The 25% setting makes the lines thinner but does not change the size of the image.

For more information about the **Page Setup** dialog box, refer to your Macintosh user's guide.