WinQVT/Net

TCP/IP Services for Microsoft Windows
Version 3.96

QPC Software is pleased to announce the release of version 3.96 of WinQVT/Net, a suite of TCP/IP client and server applications for Windows 3.1 and Windows for Workgroups 3.1.

This archive contains the Windows Sockets version of WinQVT/Net. There is no TCP/IP transport included; you must use a third-party Windows Sockets package.

Services provided include:

Network Virtual Terminal

WinQVT/Net will support up to 15 simultaneous virtual terminal (telnet or rlogin) sessions. Each session resides in its own window, which can be moved, sized, and iconified according to standard Windows procedures. If you have a color display, you can use color (both foreground and background) to help differentiate visually between sessions; fonts can also be used to distinguish sessions.

You can select sessions quickly using either the mouse or the keyboard (with a single keystroke).

Like all QPC emulation products, the present one offers exceptionally complete and accurate emulation of the DEC 'VT' series of terminals, including the VT220, VT102, and VT52. The graphical capabilities of the Windows environment are used to provide support for features such as 132 columns, multi-national characters, and double-size characters.

WinQVT/Net has built-in support for the industry-standard 101-key PC keyboard, and for the DEC LK250 keyboard. Non-standard keyboards, such as those found on many laptop PC's, can also be used, with proper configuration.

FTP

With WinQVT/Net's FTP client application, you can transfer files to and from your PC. The FTP application runs in its own window, concurrently with any terminal sessions that may be running. Commands can be entered from the keyboard in the traditional manner, or by using the mouse.

Electronic Mail

Electronic mail is supported in the form of a POP3 client module, which allows you to send and receive Internet mail from the PC keyboard. For installations whose POP3 servers don't support the sending of mail, WinQVT/Net allows mail to be sent using the SMTP protocol.

Usenet News

For users with access to an NNTP server, WinQVT/Net includes a news reading and posting facility.

Network Printing

Using WinQVT/Net's `lpr` module, you can print PC files (text and binary) on printers and plotters which are attached to remote network hosts.

Servers

WinQVT/Net includes two server applications, support FTP and `rcp`. The FTP server allows remote users to log on to your PC and transfer files, using the FTP protocol. The `rcp` server allows files to be copied to and from the PC from the remote user's Unix command line.

Packing List

This shareware distribution for WinQVT/Net 3.96 contains the following items:

Top-level Directory:

`WNQVTWSK.EXE`	16-bit program executable for Windows 3.1
`WNWSKDLL.DLL`	The accompanying DLL
`WNQVTWSK.SYM`	Symbol files for use by Dr. Watson
`WNWSKDLL.SYM`	
`QVTNET.INI`	The main configuration file
`VT220.FON`	The DEC VTxxx fonts
`WNQVTNET.HLP`	The on-line Help file
`PASSWD.EXE`	FTP login security database maintenance
`TNSTART.EXE`	Remote application launcher
`README.WRI`	This file
`RELNOTES.WRI`	Notes on recent changes
`FAQ.WRI`	Frequently-asked questions (and answers)
`TERMCAP`	A sample VT220 'termcap' entry
`VTFKEYS.TXT`	DEC keyboard escape sequences

Documentation

This README file is one of five sources of information on how to set up and use WinQVT/Net. The other four (all in this distribution) are:

* RELNOTES.WRI, which contains a list of recent changes and enhancements

* FAQ.WRI, a list of frequently-asked questions and answers

* The sample QVTNET.INI file, which includes capsule descriptions of each of WinQVT/Net's setup parameters

* The on-line help file WNQVTNET.HLP, which can be accessed from the WinQVT/Net Console, or from any of the interactive applications.

We recommend that you print out and read RELNOTES.WRI, FAQ.WRI, and QVTNET.INI, in addition to this file, before you attempt to run WinQVT/Net.

A full 70+ page user manual is provided to registered users of WinQVT/Net.

Hardware and Software Requirements

WinQVT/Net 3.96 for Windows Sockets requires a machine with:

* A 386 processor (or higher)
* A minimum of 4MB of memory
* An Ethernet card
* Windows 3.1, Windows for Workgroups 3.1x, or Windows NT
* Windows Sockets

* WinQVT/Net *will not run* under Windows 3.0, or on machines with a 286 processor.

Windows Sockets

Windows Sockets is the industry-standard transport layer for the TCP/IP protocol in the Microsoft Windows environment. 'Winsock' implementations are sold commercially by a number of vendors, including Microsoft (for Windows for Workgroups), FTP Software, Frontier Technology, Novell, Netmanage, Lanera, Beam & Whiteside, and Sun. Some shareware/freeware implementations are also available.

Windows for Workgroups

If you plan to run WinQVT/Net under Windows for Workgroups, you will need to obtain Microsoft TCP/IP, which provides Windows Sockets services in the WfWG environment.

Make sure that you a) enable Windows Sockets; and b) specify at least 8 sockets. The default value (4) is not adequate.

Windows NT

This version of WinQVT/Net can be made to run under Windows NT. However, we recommend that you use the 32-bit version instead. This is distributed in the archive 'qvtnt396.zip'.

Installing WinQVT/Net

WinQVT/Net should be installed from the DOS prompt, with Windows not running. This is because changes must be made to the runtime environment (i.e., `AUTOEXEC.BAT`).

1. Create a home directory

The very first thing you should do is create a 'home' directory for WinQVT/Net on your hard drive:

```
C>mkdir qvtnet
```

All of the files in this archive should be moved into the home directory except for `VT220.FON`, which should be moved to \WINDOWS\SYSTEM:

```
C>move vt220.fon \windows\system
```

2. Edit the Windows Sockets `hosts` file

All Windows Sockets implementations include a set of 'database' files, such as 'hosts', 'networks', and 'services'. At this time, you should make sure that your PC is represented in the 'hosts' file. Entries in hosts are of the following form:

```
<IP address>          <host name>
...
<Your IP address>     <Your PC's host name>
...
```

Note: this step is unnecessary if your Winsock transport performs runtime address acquisition, using the BOOTP protocol.

3. Modify your `AUTOEXEC.BAT`.

The WinQVT/Net needs to have access (read-only) to the 'hosts' file that is native to your Windows Sockets environment. This file will not be in the WinQVT/Net home directory, so you must tell WinQVT/Net where it is. This is done by means of the QVTHOST_DIR environment variable.

QVTHOST_DIR is implemented by adding a statement to your `AUTOEXEC.BAT`:

```
set QVTHOST_DIR=c:\winsock\etc
```

Note that only the directory pathname is used, not the entire filename. WinQVT/Net assumes that the name of the hosts file is '`hosts`'.

If you omit QVTHOST_DIR, WinQVT/Net will assume that the hosts file is located in the

Windows directory!

4. Reboot the PC

This will install the QVTHOST_DIR variable which was set up in the previous step.

5. Start Windows

If your `AUTOEXEC.BAT` doesn't automatically start Windows, you should do so now.

6. Create a Program Manager icon

Once Windows is up and running, you should choose or create a Program Group for the WinQVT/Net icon. Having done this, you should now use the Program Manager 'New' menuitem to create an icon for WinQVT/Net.

The two critical fields that you must fill in are 'command line' and 'working directory'. The 'command line' field should be filled in with the complete pathname of the WinQVT/Net executable:

```
Command Line: c:\qvtnet\wnqvtwsk.exe
```

The 'working directory' field should be filled in with the name of the WinQVT/Net home directory:

```
Working Directory: c:\qvtnet
```

Note: If the 'Working Directory' field is left blank, it's possible that WinQVT/Net will not be able to find its support files, in which case it probably won't run.

7. Start WinQVT/Net

If there are no configuration or startup problems, WinQVT/Net will start by presenting a small 'Console' window in the upper-right corner of the screen. All of the various application modules are started from the console.

If WinQVT/Net is unable to determine the local node name and/or IP address, the condition will be reported and the program will terminate. This condition can be corrected by 1) making sure that your 'hosts' file contains a reference for your PC; and 2) making sure that the environment variable QVTHOST_DIR exists, and that it points to the directory that contains the 'hosts' file.

WinQVT/Net Support Files

WinQVT/Net uses an assortment of external configuration files:

QVTNET.INI	Main configuration for all applications
QVTNET.RC	Alternate 'Terminal' configurations
QVTALIAS.RC	List of aliases for mail recipients
QVTMAIL.SIG	Default 'signature' file for mail messages
NEWS.RC	List of subscribed Usenet newsgroups
QVTNEWS.KIL	Killfile for news reader
QVTNEWS.SIG	Default 'signature' for news articles
QVTNET.ACL	Access control lists for FTP and rcp servers
FTPSERV.HLO	Welcome message for FTP server

The QVTNET.INI file is represented by a sample file in this distribution. The others contain local data which will be unique to each installation. With the exception of NEWS.RC, which is created and maintained by the News Reader application, all of these files will be created by you, using an ASCII text editor.

See the Release Notes for descriptions of the file formats used by each file.

All configuration files should reside in the same directory. This should be the 'Working Directory', as specified by Program Manager 'Properties' dialog.

QVTNET.INI

WinQVT/Net reads its basic setup information from the QVTNET.INI file. This is a standard ASCII text file that can be read and modified using any ASCII text editor.

The construction of a valid QVTNET.INI file is critical to the proper functioning of WinQVT/Net. See the sample file for an explanation of the required setup parameters, as well as the optional ones that you can use to customize your environment.

The most critical lines in QVTNET.INI are 'name=' and 'ip='. Both of these statements are found in the [net] section of QVTNET.INI.

Here is an example:

```
[net]
name=mypc
ip=28.1.13.75
...
```

Note: in many network environments, the assignment of node names and IP addresses is reserved to the network administrator. We therefore suggest that you consult with your local network authorities before attempting to run WinQVT/Net. The consequences of an addressing error of some kind, such as address duplication, can be very unpleasant!

The next two sections of `QVTNET.INI`, [console] and [localio], contain statements which refer to the WinQVT/Net 'Console' window, and to the locally-connected I/O devices (keyboard and printer).

The remaining sections are for each of the main application modules, including [terminal], [ftp], [nntp], [pop], [lpr], and [servers]. These sections provide critical information to the applications. For example, the [nntp] and [pop] sections contain a 'host=' directive, which specifies the name of the host machine on which the news server and mail server, respectively, are running. Much of the information in `QVTNET.INI` can be entered from within WinQVT/Net, using the various dialogs which are accessed from the 'Setup' menu.

For more detailed information on each of the `QVTNET.INI` directives, see the sample file included in this package. Each statement is accompanied by a brief description of its meaning and uses.

QVTNET.RC

Setup instructions for a 'default' terminal configuration are contained in the [terminal] section of `QVTNET.INI`. You can, however, greatly increase the convenience of using the Terminal module by creating additional configurations. These will be placed in the file `QVTNET.RC`.

Each `QVTNET.RC` configuration entry consists of a number of lines of text. The first line must be structured as follows:

```
name=<configuration name>
```

Configuration names can include embedded spaces, as long as the entire name is enclosed in double quotes. For example,

```
name="White on Blue 24x80"
```

might refer to a configuration which uses white characters on a blue background, in a 24x80 window. Configuration names can be up to 80 characters long.

The remaining lines will be of the form `<item>=<value>`, where `<item>` is one of the configurable items listed in the [terminal] section of `QVTNET.INI`, and `<value>` is the value that should be assigned to that item in the current configuration. All of the items contained in the [terminal] section of `QVTNET.INI` can be used in `QVTNET.RC` as well.

There is one important item that you can use in `QVTNET.RC` that is not found in `QVTNET.INI`. This is the 'host=' directive. By using this directive, you can associate a configuration with a host. The effect of this association is to reduce the number of

mouse-clicks (or keystrokes) needed to start a terminal session. You won't have to select both a host and a configuration. Instead, just select the configuration, and the associated host will automatically be selected. Note that this is only a default selection; you can still select a different host for any particular session.

A configuration entry in `QVTNET.RC` does not have to include specifications for all of the items found in `QVTNET.INI`. Instead, you can assign new values only when you want values different from those given in `QVTNET.INI`. In all other cases, the configuration will 'inherit' the values from `QVTNET.INI`. This feature allows you to quickly set up a series of configurations that are visually quite different from the default, without having to repeatedly set values which already have acceptable defaults.

QVTALIAS.RC

WinQVT/Net's email module will use this file as a list of aliases for mail recipients. When sending a mail message, you can select one of these aliases instead of the recipient's actual email address. In addition, the alias can be used to represent not just one person, but a list of people, all of whom will receive the message.

The format of `QVTALIAS.RC` entries is:

```
<alias>: <address>[,<address>,...]
```

The <alias> portion of the entry may contain blanks, but it <u>must</u> be terminated by a colon, followed by a single blank space. If multiple addresses are listed, they should be separated by commas, <u>without</u> blanks.

NEWS.RC

The `NEWS.RC` file contains the list of subscribed newsgroups. This information is used by the News Reader application. Each line of text in `NEWS.RC` is of this form:

<newsgroup name> [<number of last 'read' article>]

`NEWS.RC` is created and maintained by the News Reader.

QVTNET.ACL

WinQVT/Net's FTP and RCP servers allow remote users on the network to access your PC for the purpose of transferring files. The QVTNET.ACL file is used to <u>restrict</u> this access; it allows you to keep certain directories hidden from all but a few authorized users, or from all users. This ACL security is above and beyond the basic logon security, which is managed by the PASSWD.EXE utility.

Each line of QVTNET.ACL is of this form:

<directory pathname> [<username>,<username>[,etc]]

The <directory pathname> is the fully-qualified pathname of the directory that you want to protect. This is followed by a single blank space, after which comes the comma-separated list of users who are authorized to access files in the specified directory. If the user list is empty, then no one will allowed to access the protected directory.

Sharing WinQVT/Net

In order for WinQVT/Net to use the various configuration and support files, it must be able to find them on the disk. Normally, in a simple single-user installation, all of the support files will be placed in the same directory with the executable files. This directory - the <u>home</u> directory - will be specified as the 'Working Directory' when setting up the Program Manager icon for WinQVT/Net.

This may not be the optimum approach, however, if you want to share a single copy of WinQVT/Net among several users. You will be able share the executable, the on-line help file, and the hosts database file `hosts`. All of the other support files will have to be private to each user.

To share WinQVT/Net on a file server, you should first identify the directory which will contain the program executable files. This directory can also contain the on-line help file (the `hosts` file will always reside in the directory specified by your Windows Sockets implementation).

Each user's `AUTOEXEC.BAT` should contain 'set' statements that will point to this directory:

       set QVTHOST_DIR=<directory which contains `hosts`>
       set QVTHELP_DIR=<directory which contains `WNQVTNET.HLP`>

Each user should then create their own personal directory for storing private copies of the other support files. This directory that should be given as the 'Working Directory' in Program Manager (the 'New' or 'Properties' dialog). It will be treated by WinQVT/Net as the 'home' directory.

Terminal Application

To open a terminal (telnet/rlogin) session, simply press the 'Terminal' button, and wait for the 'Start Terminal Session' dialog to appear. All of the hostnames which are defined in `hosts` will be shown in the left-hand listbox. The right-hand listbox should contain the single entry, 'Default' (unless you have already created a `QVTNET.RC` file, with some additional configurations).

To start the session, select a host from the 'Hosts' list, and (optionally) a configuration from the 'Configurations' list, then press 'Ok'. WinQVT/Net will dismiss the dialog, and attempt to start a Telnet session on the selected host. As soon as a connection is made, a 24x80 Terminal window will be displayed, containing the remote system 'login' prompt. You can now proceed with your Telnet session.

Opening a New Session

New sessions can be started by returning to the console window and pressing the 'Terminal' button again. This will bring up the same dialog that was presented previously. As before, simply select the host/configuration that you want and click on 'Ok' to start the new session.

A tip: you can quickly 'hot-key' from a 'Terminal' session back to the Console window by pressing **<Alt-C>***.*

Note that there is nothing preventing you from starting another session using the same host and/or configuration as your first session. Should you do this, you can still distinguish between the first and second session by referring to the session number, which is displayed in the window title bar.

Cycling Between Sessions

If you have a mouse, you can activate a session by moving the mouse cursor to any part of that session's window, then clicking the left mouse button once.

Using the keyboard, you can move from the current session to the next by pressing **<Alt-N>**. This will cause the next session in WinQVT/Net's list to become the current session. The screen image and all operational characteristics of that session will be restored (including the state of the <CapsLock> key). If you press <Alt-N> while currently working with the last session in the list, WinQVT/Net will 'wrap around' to the first session.

Standard Windows methods for switching the foreground window will also work, such as pressing <Alt-Tab> or <Alt-Esc>.

Changing the Terminal Operating Characteristics

The 'Setup' menu contains items that you can use to change a session's operating characteristics 'on the fly'. The first item, 'Terminal', provides a dialog box that allows you to change values relating to the keyboard and display.

The 'Colors' dialog allows you to select new foreground and/or background colors for a session.

The 'Font' and 'Window' menuitems allow you to change the font size and window size, respectively.

Note that, although you can use these dialogs to change the behavior of a running session, you cannot save any of these changes. To make a permanent change in your setup values, you must edit the QVTNET.RC file (or use the Console's 'Configuration' dialog).

Fonts

WinQVT/Net's terminal module allows you to use one of five distinct fonts: DEC, IBM, ANSI, 'Terminal', and 'Custom'. The 'DEC' font is provided by QPC, and is an exact emulation of the DEC Multinational Character Set, as found in the VT2xx terminals. The next three are standard Windows fixed-pitch fonts, and are used as found in the Windows environment.

If you are running an application that uses the DEC line-drawing characters, you must use WinQVT/Net's DEC font. If you use one of the built-in fonts, the line-drawing characters will not appear.

You can also use the 'Custom Font' menu option to select from among all of the fixed-pitch fonts in your Windows installation.

The DEC font included in this package (`VT220.FON`) is designed for use with VGA display adapters. It may also work on displays whose resolution exceeds the VGA-standard 640x480, but the character size may be smaller or larger than the optimum for those displays. Registered users will receive a complete set of fonts for all PC display systems, including EGA (640x350), Hercules (720x350), and Super-VGA (800x600, 1024x768).

Keyboard Mapping

WinQVT/Net employs a keyboard mapping that is closely tied to the DEC LK201 keyboard:

DEC	IBM
PF1	NumLock
PF2	'/' on keypad
PF3	'*' on keypad
PF4	'-' on keypad
- (minus)	<Ctrl> + '+' on keypad
, (comma)	'+' (on keypad)
Enter	Enter (on keypad)
HoldScreen	Pause
PrintScreen	<Alt-F2>
Data/Talk	Not Supported
F6 - F10	F6 - F10
F11 - F20	Shift-F1 - F10
Help	F11
Do	F12

The numeric keypad is forced into 'NumLock' mode by WinQVT/Net. As a result, only the cursor keys on the separate inverted-T keypad will work as cursor-control keys.

The following keys are located on the separate 'Editing' keypad. Each key is mapped to its physical equivalent on the DEC keyboard:

Find	Insert
InsertHere	Home
Remove	PageUp
Select	Delete
PrevScreen	End
NextScreen	PageDown

The mapping of these keys may be changed to editing the 'keypad=' line in `QVTNET.INI` to read 'keypad=IBM'. This will create a 'logical' instead of a 'physical' mapping.

The DEC user-defined keys (DECUDK) are accessed by pressing <Ctrl-F6> through <Ctrl-F10> for the first five, and <Ctrl-Shift-F1> through <Ctrl-Shift-F10> for the last ten.

WinQVT/Net also supports the DEC LK250 keyboard. If you are using an LK250, you should set 'keyboard=lk250' in the '[localio]' section of `QVTNET.INI`.

Key Redefinition

WinQVT/Net's terminal module allows you to arbitrarily redefine almost any key on the keyboard. The exceptions are the modifier keys: <Shift>, <Ctrl>, <Alt>, and <CapsLock>.

The key-redefinition capability is accessed through the 'Keymaps' menu option. Two separate dialogs are presented: one for the 'main' keyboard, and one for the smaller keypads which are located on the right-hand portion of the IBM 101-key keyboard.

To redefine a key, you should:

* Bring up the appropriate keymap (the one that contains the right key)
* Click on the button which represents the key that you want to redefine
* Type in the string that you want to be transmitted when that key is pressed.

Key-redefinition strings may be up to 80 characters in length (in total).

Each key can have up to four separate redefinitions:

* one for when the key is pressed in its unmodified, or 'base' state
* one for when the key is pressed together with the <Shift> key
* one for when the key is pressed together with the <Ctrl> key.
* one for when the key is pressed together with both <Shift> and <Ctrl>

These strings should be entered into to the input field as one continuous string, with each of the substrings separated by the '|' (pipe) character. For example:

```
        test|TEST|Test|tEST
```

is a key-redefinition string containing four parts, one each for the base state, the shift state, the <Ctrl> state, and the <Ctrl+Shift> state. If you omit one or more of the four states, the default behavior for the key will be used (if one exists).

The caret ('^') character can be used to specify a control character; this notation for the first 32 control characters is supported by WinQVT/Net. For example, the <Esc> character (0x1b) could be notated as '^['.

Another, more versatile notation for non-printing characters is also available: this is the C-style 'backslash' notation. For example, '\033' could be used to represent the <Esc> character. If you use this type of notation, you must supply <u>exactly three</u> octal digits, including leading zeros if required.

Key redefinitions will be saved to disk after you exit from the keymap by pressing the 'OK' button.

FTP Client

WinQVT/Net allows you to have one FTP session in addition to your terminal sessions. To start an FTP session, go to the Console window and press the 'FTP' button (or select 'FTP' from the Services menu). Once the FTP window has come up, you can use the 'Open' menuitem to begin an FTP session. The FTP 'login' dialog box contains a drop-down list box showing the names of the hosts which are defined in your `hosts` file, and also provides input fields for your login name and password. All three must be filled in before you can begin the FTP session.

If you cancel the dialog, the login window will disappear, but the FTP window will remain, in a 'closed' state.

When you are ready to close the FTP session, enter the command 'bye' or 'quit' at the 'ftp>' prompt. This will terminate the FTP connection and close the window. You can terminate an FTP session <u>without</u> closing the window by using the 'close' command. All of these commands are also available from the menu bar.

Note that FTP runs concurrently with any terminal sessions that you may have started. You can switch back to one of them at any time.

News Reader

If there is an NNTP server running on your network, you can use WinQVT/Net to read Usenet articles directly from the server. There are two setup steps you must perform in order to enable the news reading facility:

1. Find the [nntp] section in `QVTNET.INI`, find the 'host=' entry, and type in the name of the host machine on which the NNTP server is running. If you do not have a nameserver on your network, you will have make sure that there is an entry in the `'hosts'` file for this machine. Alternatively, you can provide the IP address of the NNTP host directly as the value of the 'host=' configuration entry.

Also, fill in values for the three 'posthdr' statements:

       posthdr_from=<your name>
       posthdr_org=<name of your organization>
       posthdr_distrib=<default distribution>

These will be used when posting articles to the net.

2. Contact your system administrator, and have your PC added to the 'nntp_access' list. Make sure you ask for posting privileges, or you will not be allowed to post articles!

Note: where present, the name of this access control file may be different for different news servers.

The News Reader will, at startup time, immediately attempt to open a connection to the

NNTP server. If successful, a 'connected' message will appear in the text window. You should now proceed to select one or more newsgroups to read, using the 'Subscribe' menu option. This procedure allows you to filter the newsgroup list by proving the first few letters of the newsgroup name, such as 'rec' or 'comp'; a filtered list is much easier to deal with when attempting to find a particular newsgroup.

Once you have subscribed to a few newsgroups, you can read articles from them by selecting the newsgroup from the listbox, then pressing the 'Load Articles' button. Double-clicking on the newsgroup name will accomplish the same thing.

Email

If there is a POP3 server available on your network, you can use WinQVT/Net to receive (and possibly send) electronic mail from your PC. If you do not have a POP3 server available, you will <u>not</u> be able to use WinQVT/Net to read mail. You will, however, still be able to send mail, using SMTP).

The only configuration that is required to use the Mail application is the 'host=' entry in `QVTNET.INI`. As with the News reader, this entry can be either a host name or IP address. If you supply a name, the host must either be documented in `hosts`, or you must have a nameserver on your LAN provide an address for that machine.

WinQVT/Net's mail module is capable of both sending and receiving mail. However, the details of sending mail may vary, depending on the POP3 server which is installed at your site. The POP3 protocol itself doesn't specify any particular mechanism for sending mail. However, the Berkeley POP3 server - 'popper' - supports an extension to the protocol which allows you to send mail through the server. This extension - the 'XTND XMIT' command - is not supported by all POP3 servers.

If your POP3 server doesn't support XTND XMIT, you will have to use the SMTP protocol for sending mail. In order to do so, you should find the 'protocol=' line in the [pop] section of `QVTNET.INI`, and change the value from POP3 to SMTP. Also, you should enter an appropriate email address, <u>not containing your PC's node name</u>, as the value of the 'smtp_return=' directive in the same section (there is no default).

Network printing using `lpr`

WinQVT/Net includes a small application that allows you to submit files which reside on your PC for printing on a remote printer (i.e., a printer which is attached to a host elsewhere on the network). The `lpr` module is fairly simply to use. The only setup requirement is that you must have assigned a node name to your PC, and placed it in `QVTNET.INI`. Of course, WinQVT/Net will not run at all without a node name, so there are effectively no special setup requirements for `lpr`. All of the remaining required data items can be supplied at runtime.

Host setup: you must ask your system adminstrator to add your PC to the list of hosts which are allowed to communicate with the line printer daemon, '`lpd`'. If your PC is not on this list, the daemon will reject your request to establish a TCP connection. There may be separate lists for each host, so you should make sure to contact the administrator of each system that you want to use for printing. Normally, this list is kept in the file `/etc/hosts.lpd`.

To use `lpr`, you start by selecting 'lpr' from the Services menu. This brings up a dialog box, which contains the following elements:

* A list box containing a list of all the hosts which are defined in your `hosts` file. If you have included a 'hostname=' directive in the [lpr] section of `QVTNET.INI`, that host will already be selected when the lpr window is initially displayed.

* An input field for entering the print queue name. The default queue, as specified by the 'qname' directive, will already be present in this field.

* An input field for entering the username under which your print job will be submitted.

* A set of radio buttons for selecting the file type (text or binary)

* An input field for entering the name of the file to be printed.

* A pushbutton labelled 'Files', that you can use to activate a file-selection dialog.

All of these fields are required in order to start a print job. Only then will the 'Print' button be enabled. After you press 'Print', a series of messages will track the progress of the job, until completion.

Server Applications

WinQVT/Net includes two server applications, FTP and `rcp`. These applications allow remote users on other systems to access your PC's file system.

FTP Server

WinQVT/Net provides a background FTP server facility. This feature allows remote users to access your PC remotely using FTP. Only one logged-in user at a time is allowed.

There are several `QVTNET.INI` configuration directives which are associated with the FTP server. These are:

passfile   the file which contains the list of authorized users and their passwords

login_dir   the directory to which authorized users will be attached at login time

anonftp_dir   the directory to which 'anonymous' users will be attached. These users will not be able to log to any other directories, except for subdirectories within the same tree.

A small utility program, `PASSWD.EXE`, is provided for the maintenance of the password file. It is a DOS program which uses a simple TTY interface that is self-explanatory.

FTP server security depends on whether or not you have implemented a password file. If there is no password file, users can login at will; no passwords are required, and there are no access restrictions (other than those indicated in `QVTNET.ACL`). If you do create a password file, then only users whose names are included in this file will be allowed to log in.

If you provide a value for the 'anonftp_dir' directive, WinQVT/Net will allow 'anonymous' logins. Anonymous users operate under some restrictions:

* Access is restricted to a single directory tree (as specified by 'anonftp_dir')
* Anonymous users are not allowed to delete files, or overwrite existing files.

Note: if you don't specify an anonymous login directory, anonymous logins will not be permitted!

Authorized users have fewer restrictions, but access control lists can be used to protect certain files and directories from authorized users also. The set of access control lists is stored in the `QVTNET.ACL` file, which should be placed in the WinQVT/Net home directory. Each access control list occupies a single line in `QVTNET.ACL`, and is of the form:

```
<directory name> [<username>,<username>,...]
```

The `<directory name>` is mandatory, and gives the name of the directory to which

the ACL applies. The optional `<username>` entries give the names of the users who are authorized to access the named directory. Each username should be the name of a valid FTP user as created by `PASSWD.EXE`. If `<username>` entries are present in an ACL, they should be separated from the `<directory name>` by a single blank space. The `<username>`'s themselves should be separated by comma's, and there should be no blanks anywhere in the list.

You can completely cut off access to a directory by creating an ACL with an empty list of usernames. The inverse - a directory with no access control - will occur if no ACL is created for a directory; any valid user will be able to access it (possible exception: anonymous users).

In the present release, there is no attempt to distinguish different classes of access (e.g., read-only vs. read/write). This sort of refinement may be added in a future release.

rcp Server

WinQVT/Net also provides a server that allows remote users to copy files to and from the PC using the BSD `rcp` command. This server makes use of the same security features as does the FTP server, particularly the user-validation facility. Unlike FTP, however, there is no provision for 'anonymous' users; only documented users will be admitted.

Registration Information

WinQVT/Net is a shareware product. Should you find it satisfactory and suitable for your needs, we ask that you remit your registration fee to:

> QPC Software
> P.O. Box 226
> Penfield, NY 14526
> (USA)

The registration fee for WinQVT/Net is $40, except for students, who can register for $20. For shipment outside of North America, please add $5.

Institutional customers: purchase orders are welcome! Please be sure to provide the name of an end-user contact for the purpose of receiving updates.

Registered users receive a printed user manual, a complete set of fonts, and free access to upgrades for a period of one year. Please allow one to two weeks for delivery; longer if shipping outside the USA is required.

If possible, please include the name and Internet (or Compuserve) address of a contact person to whom correspondence and updates can be addressed.

If you upload this program to another bulletin board or ftp site, please do so in .ZIP or .LZH format (whichever is supported), and be sure to include ALL of the original files that are in this package, without modification.

Other QPC Products

QPC Software offers a complete line of asynchronous DEC emulation products for most major personal computing environments, including MS-DOS, Microsoft Windows, Apple Macintosh, and OS/2. All are of high quality and provide exceptional value. Please write to us for a complete price list, including information on discounts and site licenses.

Contacting QPC

You can contact QPC electronically via Internet mail. Our email address is:

`djpk@troi.cc.rochester.edu`

Our account is set up to provide an automatic response to all received messages. The content of this response will vary, but it will usually contain the version numbers and locations of the most recent releases of WinQVT/Net. If you don't receive this automatic reply, it probably means that we would be unable to respond to your message by using the return address information in the message header. To help us in these situations, please send your message again, and include a reliable return address at which you can be reached.

Also, before sending us mail asking about setup or configuration, please read all of the documentation in this distribution first, including the release notes, the FAQ, and SETUPS.TXT. Most of the information that we have on setting up WinQVT/Net is included in these documents.

We can also be contacted via fax:

(716) 377-8305

Thank you for your interest in WinQVT/Net!