WinQVT/Net

TCP/IP Services for Microsoft Windows
Version 3.98

QPC Software is pleased to announce the release of version 3.98 of WinQVT/Net, a suite of TCP/IP client and server applications for Windows 3.1 and Windows for Workgroups 3.1x.

Important Note:

WinQVT/Net 3.98 is strictly a Windows Sockets application. There is no TCP/IP transport included in this package; you must install a Windows Sockets package before you can use WinQVT/Net 3.98.

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.

Like all QPC emulation products, the present one offers exceptionally complete and accurate emulation of the DEC 'VT' series of text 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/SMTP client module, which allows you to receive and send Internet mail from the PC. In situations where there is no POP3 server, the WinQVT/Net's SMTP server can be used to receive mail.

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 three server applications, supporting FTP, SMTP, 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. The SMTP server allows you to receive email messages directly on your PC.

Packing List

This shareware distribution for WinQVT/Net 3.98 contains the following items:

Top-level Directory:

QVTNET16.EXE	16-bit program executable for Windows 3.1
QVTDLL.DLL	The accompanying DLL
QVTNET16.SYM	Symbol files for use by Dr. Watson
QVTDLL.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
NEWS.RC	A starter newsgroup file
README16.WRI	This file
RELNOTES.WRI	Notes on recent changes
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

* 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 and QVTNET.INI, in addition to this file, before you attempt to run WinQVT/Net.

A full 85-page user manual is provided to registered users of WinQVT/Net.

Hardware and Software Requirements

WinQVT/Net 3.98 for Windows Sockets requires a machine with:

* A 386 processor (or higher)
* A minimum of 4MB of memory (8MB recommended)
* An Ethernet or other network card, or SLIP/PPP dialup capability
* Windows 3.1 or Windows for Workgroups 3.1x
* A Windows Sockets TCP/IP protocol stack

* 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, but not restricted to Microsoft (for Windows for Workgroups), FTP Software, Frontier Technology, Novell, Netmanage, Lanera, Beam & Whiteside, and Sun. Some shareware/freeware implementations are also available.

At QPC, our testing is done mostly with Microsoft MSTCPIP-32.

Windows for Workgroups

If you plan to run WinQVT/Net under Windows for Workgroups, and you do not yet have a TCP/IP package, you should consider downloading Microsoft TCP/IP, which provides Windows Sockets services in the WfWG environment. Microsoft has made its TCP/IP available as a free download from `ftp.microsoft.com`.

If you do use MS TCP/IP, make sure that you set 'dispatch=sync' in QVTNET.INI. Otherwise, it's possible that WinQVT/Net will crash with a 'stack overflow' error. We aren't sure of the reason for this, since it doesn't seem to happen with Winsock's from other vendors, nor does it occur with Microsoft's Winsock for Windows NT. We have also found that FTP uploads (and downloads from the FTP server) tend to be slower with MS TCP/IP than with most other Winsock's. MS TCP/IP is otherwise a very good performer.

Windows NT

This version of WinQVT/Net can be made to run under Windows NT, using the 16-bit WINSOCK.DLL that ships with the operating system. However, we recommend that you use the 32-bit version instead. This is distributed in the ZIP package 'qvtntXXX.zip'.

SLIP and PPP

WinQVT/Net will run over SLIP and PPP connections, as long as they are supported by your Winsock package. Since these types of dialup connections often involve dynamic IP address assignment, it is important that you postpone launching any WinQVT/Net applications until after an IP address has been obtained from the host. Also, once WinQVT/Net is started, we recommend that you not launch any of the server applications until at least one client connection has been established.

Installing WinQVT/Net

The WinQVT/Net shareware distribution is best installed from the DOS prompt. This can be achieved from within Windows by spawning a DOS shell.

Note: this procedure assumes that you already have Windows Sockets installed. If you do not, you must acquire and install a Windows Sockets package prior to installing WinQVT/Net.

Here are the steps:

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. Create a Program Manager icon

You should now choose or create a Program Group for the WinQVT/Net icon. Having done this, you can 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\qvtnet16.exe
```

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

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

In this example, the working directory is also the location of the WinQVT/Net executable file. However, this need not be so. For example, if you are sharing a copy of WinQVT/Net over a PC LAN, you will want to keep your config and data files in your own private directory, regardless of where the executable is installed.

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

3. Start WinQVT/Net

When launched for the first time, WinQVT/Net will begin by presenting a dialog box that you should now use to enter the location of your 'hosts' file. This is shown on the dialog box as 'Hosts Directory'. Note that this is the directory portion only; WinQVT/Net will always assume that the name of the hosts file is 'hosts'. The configuration dialog cannot be completed until a valid hosts directory has been entered. If you cancel this dialog, WinQVT/Net will terminate.

After this initial dialog is concluded, WinQVT/Net will then present its 'Console' window, which is the 'home base' from which applications are launched. Once the console startup routine has been completed, you will be asked to specify a default printer for use by WinQVT/Net applications. This printer selection only has to be done once, and it is accomplished using the standard Windows printer-selection dialog. Note that if you do not select a printer at this time, you may have problems using any of the WinQVT/Net local print functions. You can, however, select a printer at any time, using the 'Setup - Printer' menuitem, which is available from the Console window.

WinQVT/Net Support Files

WinQVT/Net uses an assortment of external configuration and data files:

QVTNET.INI	Main configuration for all applications
QVTNET.RC	List of 'Terminal' configurations
QVTMBOX.RC	A list of logical 'mailboxes'
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. The files QVTMBOX.RC, QVTALIAS.RC, NEWS.RC, and QVTNEWS.KIL are maintained by the Mail and News modules of WinQVT/Net. All of the other files must be created outside of WinQVT/Net, using an ASCII text editor. The built-in Windows editor, 'Notepad', is more than adequate for this purpose.

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 WinQVT/Net 'Working Directory', as specified in the 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. However, most of the modifications to QVTNET.INI are performed from within WinQVT/Net, by means of dialog boxes.

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 first section, '[net]', contains the 'hostdir=' statement, which tells where the Winsock 'hosts' file is located. The [console] and [localio] sections contain statements which refer to the WinQVT/Net 'Console' window, and to the locally-connected I/O devices (keyboard and printer).

Note: Pay particular attention to the 'dispatch=' statement, which appears in the [console] section. The default value is 'async', but there are situations where a value of 'sync' is preferable. This is strictly trial and error, so we suggest trying both.

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] section contain a 'host=' directive, which specifies the name of the host machine on which the news server is running.

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.

Beginning in version 3.98, you can create QVTNET.RC entries from within WinQVT/Net terminal sessions. This is done by using the interactive configuration dialogs to create the setup that you want, after which you can save it in QVTNET.RC using the 'File - Save' menuitem. This eliminates the need to learn the syntax of QVTNET.RC statements.

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 must be terminated by a colon, followed by a single blank space. If multiple addresses are listed, they should be separated by commas, without blanks.

QVTALIAS.RC entries can be created from within WinQVT/Net, using the 'Add Alias' menuitem.

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 restrict 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 home 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, and optionally the on-line help file. When creating Program Manager icons for the various users, it will be necessary to provide a complete pathname for the executable:

> Command Line: c:\pub\qvtnet16.exe

Each user should then create their own personal directory for storing private copies of the other support files, most notably QVTNET.INI. 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.

> Working Directory: c:\mystuff

Each user's `QVTNET.INI` should contain statements that will point to the 'host' and 'help' directories:

> [net]
> ...
> hostdir=<directory which contains `hosts`>
> ...
> [console]
> ...
> helpdir=<directory which contains `WNQVTNET.HLP`>
> ...

Terminal Application

To open a terminal (telnet/rlogin) session, simply click on 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. If a connection cannot be established within one minute, the attempt will be abandoned, and an error message will appear on the Console.

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>***. You can also launch a new Terminal session from within the existing session by pressing* **<Alt-T>***.*

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.

Any and all changes made to the setup of the current session can be saved in `QVTNET.RC`, under the same - or different - configuration name. This is done using the 'File - Save' menuitem.

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 exactly three 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. If no filename has been given previously, you will prompted for one.

Starting Terminal Sessions from the Command Line

WinQVT/Net Terminal sessions can be launched at program startup, by specifying configuration names on the command line. A typical WinQVT/Net command line will look something like this:

```
c:\qvtnet\qvtnet.exe
```

Now assume that a QVTNET.RC configuration named 'myhost' exists. A terminal session on 'myhost' can be initiated at program startup by creating a command line that looks like this:

```
c:\qvtnet\qvtnet.exe myhost
```

Note: configurations that you intend to use in this way must include a 'host=' statement.

Using TNSTART to launch terminal sessions from Program Manager

The WinQVT/Net distribution package includes a program executable named TNSTART.EXE. This program can be used to launch Terminal sessions from the Program Manager panel, after WinQVT/Net has been started. To use TNSTART, you should create a Program Manager icon with a command line of the following structure:

```
c:\qvtnet\tnstart <host> [<configuration>]
```

In this command line, the <host> argument is the name or IP address of the target host, and the optional <configuration> argument is the name of a terminal configuration as defined in QVTNET.RC. The <host> argument may also contain the IP port number; this is done by appending a colon, followed by the port number (in decimal), to the IP address.

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 (i.e., no session).

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 without 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.

Note: FTP transfer rates, especially uploads, will sometimes depend on the Winsock package that you are using. Within the range of 16-bit Winsocks, we have seen transfer rates vary from 4Kb/Sec to 110Kb/sec, with the same client code.

News Reader

If there is an NNTP server running on your network, you can use WinQVT/Net to download and read Usenet articles. You will also be able to post both new and followup articles, or reply to another Usenet use via email.

There are a few setup steps that you must perform in order to enable the news reading facility:

1. From the Console, select the 'Setup - News' menuitem. Near the top of the ensuing dialog you will find an input field labelled 'Host', or something similar. Enter into this field the name or IP address of your News Server.

Next, enter a value into the 'Save Directory'; this is critical, in that all of the news articles that you will be reading are downloaded into this directory. WinQVT/Net will create this directory if it doesn't already exist.

Finally, you should enter values into the 'From:', 'Organization:', and 'Distribution:' fields. These will be incorporated into the headers of the articles that you post 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 may not be allowed to post articles!

Note: not all news installations employ access control.

3. Subscribe to some newsgroups. To do this, follow these steps:

* Start the News Reader

* Select the 'Newsgroups - Subscribe' menu option.

* A dialog box will be displayed, and you will be asked if you want to download a newsgroup list; answer this prompt affirmatively.

* After the download is complete, you should select some newsgroups. You must first select the major newsgroup category that you want to select from. This list is presented in the combo-box list located near the top of the dialog box. Once a category is selected, all of the newsgroups which belong to it will be displayed in the lower listbox.

* Select one or more newsgroups from the displayed list, then click on 'OK'

You can now use the 'File - Open' dialog to download articles belonging to the subscribed newsgroups, then read them.

Email

WinQVT/Net provides electronic mail services (receiving and sending) via the POP3 and SMTP protocols. You can use SMTP to receive and send mail directly to and from your PC; POP3 can be used to access mailboxes on a remote host.

If security is a concern, we recommend that you use POP3 for receiving mail rather than SMTP. Using POP3 also relieves you of the need to keep your PC running all the time. For sending mail, we recommend that you use SMTP, since not all POP3 servers support the sending of mail (the POP3 protocol itself specifies that SMTP should be used for sending mail).

The first thing you should do, before attempting to use Mail, is go to the 'Setup - Mail' dialog, which is available from the Console window, and enter the following mandatory items:

* The name or IP address of the POP3 host

* The name or IP address of the SMTP host

* Your mail return address. The exact value that you use will depend on whether you are going to use SMTP or POP3, but in any event a valid return address must be present before you can send mail.

* The 'Save Directory' name. This is where incoming mail will be stored by the SMTP server.

You should also read the release notes on Version 3.98 (`RELNOTES.WRI`) and study the section on 'Mailboxes'. WinQVT/Net uses the abstract concept of the 'mailbox' to refer to a mail repository, which may be located either locally (in a directory on your PC), or remotely (a POP3 server on a remote host). Once you understand mailboxes, you can create them from the 'Open' dialog. Click on the 'New' button, and you can enter the data elements that define mailboxes.

These are:

Mailbox Name:	human readable, can contain blanks
Mailbox Type:	'remote' or 'local'
Mailbox Location:	server name, for remote, or directory path, for local
Username:	login name, for remote mailboxes only

Mailbox definitions are stored in a textfile in the home directory, named `QVTMBOX.RC`.

Note: though the mailbox name can contain blanks, you will not be able to receive mail into such a mailbox with WinQVT/Net's SMTP server. Mailboxes which are expected to be targets of the SMTP server should not have names which contain blanks. See RFC822 for details.

If you already have a mailbox on a Unix host, and if there is a POP3 server running on that host, you can create a WinQVT/Net mailbox entry for that machine, and proceed directly to logon to that server, using your usual login name and password.

Local mailboxes should be created as subdirectories under the main 'mail' directory, which is the one given as the 'Save Directory' on the 'Setup - Mail' dialog. The first-level subdirectory should be your POP3 username (if any). If you are not using POP3 at all, you should still establish a username for yourself, and make it the name of the first subdirectory under 'mail'. The next level of directories should contain two initial entries, 'mbox' and 'newmail'. The SMTP server will want to place incoming messages into the directory '\mail\<username>\newmail'.

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.

acl_default specifies whether the default access for unlisted directories is 'allow' or 'deny'.

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.

Normally, a <directory name> specification applies only to that directory, and not to its subdirectories (if any). You can, however, extend access to subdirectories by appending an asterisk ('*') to the directory name.

Access to directories which are not named in QVTNET.ACL is controlled by the QVTNET.INI directive 'acl_default'. The default value of this directive is 'allow', which means that access will be allowed. The alternative is 'acl_default=deny', which means that access will be denied by default, and only the directories named in QVTNET.ACL will be available to users of the FTP server.

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.

SMTP Server

New in WinQVT/Net 3.98 is the SMTP server, which allows you to receive electronic mail directly on your PC. Once you have set up the Mail client application, very little additional setup is required in order to use the SMTP server. In fact, as long as you have created at least one local mailbox, you can use the SMTP server to deposit new mail into that mailbox without additional configuration; all you have to do is make sure that mail is addressed to that mailbox.

Consider the following setup:

* User name 'smith'
* Machine name 'mypc'
* Domain name 'oursys.com'

Mail addressed to 'smith@mypc.oursys.com' will either be placed into the mailbox named 'smith' - if one is defined in QVTMBOX.RC - or will be placed into the directory 'c:\mail\smith\newmail', where 'c:\mail' is the name of the Mail 'save directory'.

Note: mailbox names for use with SMTP should contain only alphanumeric characters, periods, and dashes (no blanks allowed). They should not exceed 63 characters in length. Details are specified in RFC822.

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. Mastercard, VISA, and American Express are accepted.

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 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:

qpcsoft@s-cubed.net

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

Our voice number is:

(716) 377-6010

We can also be contacted via fax:

(716) 377-8305

Thank you for your interest in WinQVT/Net!