MrTerm Terminal Program

MrTerm Information

MrTerm is a terminal package designed for full VT102 and ANSI color support.
The design is to display VT102 and ANSI color with total accuracy.
The multiple configuration design allows several users to setup up different program layouts.

Features:
   Fixed 80 column design.
   No scroll bars used in the basic terminal.
   Nearly the complete set of VT102 Terminal Emulation supported.
       (Quite a bit more functionality over other Windows Software)
   ANSI color supported.
   Enhanced VT102 and ANSI specific for Mortal Realms Systems.
   Allowance of Winsock with multiple terminals.
   Dialing directory with unlimited directories.
   Scroll Back buffer with easy keyboard controls.
   Use of any fixed-width windows font.
   Redefinable keys.
   Simple, yet comprehensive configuration.
   Automatic font sizing based on window sizing.
   Full Windows clipboard support for input and output.
   Ability to integrate with Netscape, Mosaic or other WWW packages.

The use of mouse controls in the terminal package has a special purpose.
Any word pointed to when the mouse button is pressed, types that word out for you to the
connected host.   This allows repeating of previous commands, or statements in the visible
window.   This feature only works on letters.

MrTerm will not support any form of file transfers, whether FTP, Zmodem, or simple Ascii.   The
authors made this decision because with WinSock, the user will be able to simultaneously FTP
while the terminal is operating.

This program was developed because of the authors irritation that they could not allocate any
windows terminal package that supported the full VT102 instruction set.   The authors also have
not been successful in locating any packages that support ANSI color.   This program was not
designed to replace a comprehensive communications package, but it should replace any
simple terminal operations that the user would do.

Normal VT102 and ANSI codes are very verbose, and to simply change color takes around ten
bytes.   This terminal package has a proprietary method for increasing the speed of these
codes.   With this new system, color changes take only two bytes, which is the largest increase
in speed.   Most VT102 codes are increased in speed from 30% to over 4 times faster than
standard ANSI/VT102.

This Optimized VT102/ANSI feature is automatically enabled when MrTerm sees the beginning
of Mortal Realms.   The undocumented Mortal Realms command to turn this feature on and off
is TERM ON and TERM OFF.   When Mortal Realms starts, or the REFRESH command is
called, the terminal package sends the correct sizing code to Mortal Realms, so that the VT102
Rows are automatically configured.

The Spawn command will start up a new copy of the MrTerm program.   Each copy of MrTerm running in Win3.1 is defined by an instance number shown in the window title.   Suprisingly enough, Win95 does not include the ability to detect other programs running, so Spawn still works, but no instance numbers show up and the spawned program will assume the same attributes as the parent.   Win 3.1 children programs will be slightly shifted for better visibility.

MrTerm Save System

The save system of MrTerm allows several different configurations to exist.
Changes to configuration are not saved by the system, unless explicitly saved.
The ability to define a default start-up configuration by the Default selection.

The save system saves:
    Window layout positions, including the scroll-back buffer.
    Font selections for both the main menu, and scroll-back buffer.
    Configuration settings.
    Dialing directory entries.

When first starting the program, be sure to configure everything and save the configuration, then set the saved file as the default file.

MrTerm Scroll Back Buffer

The scroll-back buffer records the last 800 lines for user perusal.
The lines are numbered in reverse order, and automatically starts at the last line.
Simple keyboard controls can be used along with the scroll bars.

Keyboard Controls:
Up-Arrow	Move up one line.
Down-Arrow	Move down one line.
Page-Up	Move up one screen.
Page-Down	Move down one screen.
Home	Move to the last line.
End	Move to the first line.
Escape	Exit the scroll buffer.
Left-Arrow	Move left 10 characters.
Right-Arrow	Move right 10 characters.

The scroll back buffer can be used to copy data to the clipboard.   The use of both mouse buttons are required for this operation.   Clicking once each of the buttons to define the range of text that is to be copied.   The order of the buttons does not matter.   The column numbers will show various colors depending on whether the line is in the range, or one of the start/end points picked.   Also the text will be highlighted.   Only a complete row may be copied to the clipboard. Once the text is highlighted, simply press the INS   key to make the actual copy to the clipboard. Text may be send as output from the clipboard using the Dump option under edit.

MrTerm Reset Functions

The terminal can be reset by the simple RESET menu option.
The UNIX option does not reset the terminal, but sends the commands to define the amount of terminal rows to the host.   This allows VI and other appropriate Unix commands to know the amount of rows currently defined, without user intervention.
The Mortal Realms option tells a Mortal Realms system how many rows are in your display terminal.

The Disconnect option utilizes the Hangup String in the Config menu when connected using the COMM ports.

The Dump Clipboard option will copy the contents of the clipboard to the terminal as if it was typed.   This can be used for such things as dumping the contents of a notepad file to the middle of an email message or text editor, such as VI.   The maximum allowed size for this transfer is 32k bytes.

MrTerm Configurations

MrTerm allows several simple configuration options.
The configurations are defined for using COMM ports, unless the WinSock option is selected.
The selects of a COMM port, or WinSock is mutually exclusive.
The Boarder option draws a single pixel gray boarder around the terminal window.
The BS is DEL is for VMS users.   These systems normally swap the Back-Space key with the Delete key.
The Rows selection many change based on text font, by decreasing amounts if the fonts are too large to fit everything in one screen.   This means that enter the value of 80 (the maximum allowed value) will make the terminal as large as your windows system will allow.   The number here will change after the OK button is selected.

The default initialization string is:
at&f&c1&d2

The default dial string is:
atdt

The default hangup string is:
ath

After changing any of these values, it is suggested to save the configuration, otherwise the change is temporary.

The current version of MrTerm does not support the inclusion of delays, or returns in its strings. This might be added in future versions.

Keyboard Redefinitions:
Using the redefinable keyboard system is simple, with on-screen messages on the steps required to define a key.   Currently there is no method of redefining the cursor movement keys. The function keys may be redefined, with the exception of F10, which is used by the Windows operating system as a menu selector.   All function keys may have separated definitions for use SHIFT and CTRL combinations.   The numeric keypad can be separately defined from the normal number definitions.   The numeric keypad does not handle numbers as normal text, but as redefined values, so their selection in the redefinition menu will default to the basic redefined text.   It is highly advised to only change the function keys, the page movement keys, or the numeric keypad.   It is fairly obvious that, for example with the q key redefined, there might be problems.

There are two special codes that the keyboard redefinitions interpret.   These are used to add the escape character (Ascii 27) and the return character.   To use an escape character simply add the two characters ^e.   To use a return add ^m.   An example could be the use of the F1 key to issue a write and quit command for the VI text editor.   This would require the redefinition to be ^e:wq^m.   The escape used here is to take the editor out of entry mode.

Contrast Control:
Contrast control has been added to adjust the displaying of variations of boldness.   The various display modes change the primary windows text color, and the contrast option can help with these inconsistencies.

Winsock Debug:
Winsock mode uses the TELNET protocol.   For users that wish to see information on what this protocol is doing, check the WS Debug option.   This extended information may cause unwanted information to be displayed, so its use is not suggested during normal operation.

Fast Text Mode:
This is for use on machines that are not able to display text as fast as desirable.   The normal system uses internally stored font caching and placement to display text fast, with total accuracy.   In older model machines, this method may prove to be too slow.   To disable the normal text displaying routines used, and use the basic windows routines, select this flag.   The use of this flag may distort the picture somewhat.   Minor adjustments to the size of the text may be made in the Font Configuration menu.   The use of this flag will also increase the startup speed of the program, and reduce memory, as the cache building routines are disabled.

Maximum Scroll Lines:
MrTerm does asynchronous receiving and transmitting.   This means that data arrives continuously.   The display system lags behind the display system somewhat.   Maximum scroll lines is the amount of lines you wish the display to lag behind the data.   Since it takes some time to display and scroll a page, this value is added to adjust the scrolling speed of the computer running it.   With a very fast system, a Max Scroll Lines of 1 gives the best visible response, and only allows one line to arrive before displaying.   With a very slow machine, a setting of 10 to 20 may drastically help, with a noticeable display lag.   The default setting is 5.

Comm Config:
This menu changes the method of connection to match the specifications of the modem.   This option is global for all phone lines dialed, so a slower speed, or alternate configuration will require a separate saved version.   The most common setup, using CTS and Software Flow Control, is configured at startup.   These settings should be changed if the user experiences difficulty in connection, but usually the settings should be a maximum value.   During connection, most modems arbitrate speed to the desired value, regardless of the selected speed.

Integrating MrTerm with WWW Browsers:
MrTerm has the ability to be called by any normal browser package.   MrTerm uses the same command line parameters as the normal Telnet application, and may take its place in most situations. As an example of this, here is the instructions for integrating with Netscape:

Run Netscape
Enter the Options/Preferences Window
Enter the Applications and Directories section
Under the TELNET application, change to reference mrterm.exe or mrterm32.exe
   Include the full path to MrTerm here.

Using this procedure will call MrTerm instead of the normal Telnet program when browsing into any reference that requires a Telnet.   This method does not utilize the normal dialing window, and obviously can only be accomplished when using the Winsock mode of MrTerm.

Using Proxy Servers with MrTerm:
Proxy servers may be used directly with MrTerm software.   In the Comm Config dialog there is a reference to Proxy and Port.   When not using a proxy server, the Proxy entry should be

blank.   To use a proxy server, enter the name of the server in the entry and add the port number.   The proxy server system is designed to work with plain text servers, such as WinGate (shareware by others).   It initially connects to the proxy server and then types out the destination that is picked in the dialing directory, or command line.   This allows proxy servers to be used in conjunction with web browsers.

MrTerm Fonts

Only fixed width fonts may be selected in MrTerm.

Fonts may be selected separately for both the Terminal and Scroll back buffer.

Font size determines the window boundaries.   Changing fonts to larger sizes may reduce the amount of rows in the terminal, but decreasing their size will not increase the amount of rows.

On large screens or high resolution windows systems, the selection of Courier may look better if it is Bold.

To connect to a BBS system and see the ANSI graphics correctly, the suggested font is 8514oem.   This is the only Windows based font that include all the normal DOS graphics characters.

FONT CONFIGURATION:
The Cache size specifies the size of color font caching used.   This value may be from zero to ten.   Use of this value may increase memory usage to unacceptable sizes.   To determine the total size of the font caches used, pick the Winsock Status on the main menu.   The font caching may slow down a system where colors change quite frequently, and the caching system is dedicated for color caching.   If monochrome text is most often displayed, then a cache size of one is sufficient.   In most cases, a cache size of four will suffice.   The font cache statistics can be used to determine how efficient a cache is.   Remember that cache hits are faster than misses, but a cache miss is slower than using no cache at all.

Font adjustment modifies the size of each character by a specified amount of pixels.   It is possible to condense the height of the text by changing the Vertical Font Adjust to a negative number.   These values are limited to a positive or negative value of one-half the pixel size of the font being used.

WINDOW FRAME SIZING:
The frame of the terminal window may be resized.   Changing the vertical size will increase or decrease the amount of rows displayed.   Changing the width of the terminal will located the nearest integer size of the font being used that fits the window size selected.   Regardless, the terminal will maintain eighty columns, and a minimum of 10 rows, and a maximum of 80 rows.

Using Windows95 with the dynamic window resizing has proven to be problematic with this program, and it is suggested to turn off this feature in windows, if the user plans on using the dynamic font sizing of MrTerm.   This is due to the fact that windows will try to select the font size many times during the resizing operation.   To turn off the frame sizing feature of MrTerm, simply check off the Boarder in the Config menu.

MrTerm Dialing Menu

The dialing directory is fairly simple to use.
To add an entry, type out the Name and Address.
Using COMM lines, the address should be the phone number.
Using WinSock, the address is the IP address of the host.

The last selected directory entry shows up in the pull-down list.
This is the directory entry that is saved as the default directory entry.
If the DIAL ON STARTUP entry is selected, the default entry is started after the system first loads.

An optional entry for IP port number is allowed for Winsock Configurations, although it defaults to 23, which is the standard setting for telneting to a Unix host.

Mortal Realms

Mortal Realms is a multi-user game with a text interface.
The game is a long-play adventure game.
There are several thousand places to go, and hundreds of creatures to meet.
Mortal Realms systems include an advanced VT102 and ANSI color interface to ease game play.   Use of MrTerm with Mortal Realms will enhance the game playing experience significantly through reduced transmission rates, and graphical display windows.

The main Mortal Realms System may be found at:

hydrogen.ee.utulsa.edu 4321

The authors of MrTerm also created Mortal Realms.
Stop by some time.   :)

Future Additions to MrTerm

A pop-up menu with commonly typed commands may be used with mouse selections.
A set of Reactive programs will allow custom responses to text that the program sees, similar to a batch file or MUD client.
Support for speech synthesis in reading particular sets of text.
Support for speech recognition in enter commands.

The ability to dump a commands output into a side window for non-scrolling browsing.   A user could dump a directory listing into a side window, and continue doing normal operations in the primary, while looking over the directory list.