MGS. Inc.

Computer Business Solutions

ClearPath A-Series Terminal Tool (C.A.T.T.)

Reference Manual

Version 3.0f

September, 2015 - Rev 1

ClearPath A-Series Terminal Tool Reference Manual

Version 3.0f

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1. Installing and Configuring C.A.T.T.

1.1 Introduction

The amount of time required to install and configure C.A.T.T. depends upon how you want users to access C.A.T.T. and how you want C.A.T.T. to access the mainframe. If you are installing C.A.T.T. on a PC for single user use, you can complete the process in as little as 5 minutes. The other options may require additional time.

1.2 PC Requirements for C.A.T.T.

The PC operating system can be Windows XP, Windows Vista, Windows 7 or Windows 8.

C.A.T.T. has been qualified on both the 32-bit and 64-bit versions of *Windows* as well. The minimum C.A.T.T. memory requirement is 32 MB, but 64 MB or more is recommended if you want to have several connections open at the same time using many screen pages. For Kerberos support, the minimum memory requirement is 64 MB.

If you want to do screen prints, a printer must be defined on the PC. It may be a network or virtual printer; it does not need to be a local printer that is actually attached to the PC.

1.3 C.A.T.T.-to-MCP Host Choices

The following methods are provided for connecting to the MCP Host from C.A.T.T.:

- MCP Telnet, the default. This requires that the user log on using the traditional MARC "Welcome" screen.
- MCP Telnet with Kerberos authentication. If the MCP host offers Kerberos support, C.A.T.T. responds and attempts to exchange Kerberos tickets. If the operation is successful, the user is automatically logged on with his Kerberos ID. The MARC "Welcome" screen is not used.
- MCP Telnet with SSL encryption. As of MCP release 13, the MCP host can offer Telnet over SSL. This mode offers the same functionality as standard Telnet with the additional security of SSL encryption.
- CCF with *Windows* networking. In this case the user logs on to his client machine instead, and *Windows* networking passes the user's credentials to the MCP with the password encrypted. Aside from the log on feature, this interface provides the same capabilities as the Telnet connection method. (This is the interface used by the Unisys GUI utilities, such as *NX AdminCenter*, which access the MCP.)
- CCF without *Windows* networking using the TERMPCM. This requires that the user log on using the traditional MARC "Welcome" screen. It provides all of the capabilities of the Telnet connection method.
- CCF without *Windows* networking or the TERMPCM. This requires that the user log on using the traditional MARC "Welcome" screen. It provides only a basic interface that does not include some of the features provided with the three interfaces described above. (This is included for backward compatibility purposes. Its use is not recommended.)
- CCF with SSL encryption using the TERMPCM. As of MCP release 13, the MCP host can offer CCF over SSL. This mode offers the same functionality as standard CCF with the additional security of SSL encryption.

- HTTP Tunneling. C.A.T.T. is able to connect to the MCP host using the Unisys HTTP Tunneling feature. This feature allows C.A.T.T. to connect to an IIS server running the Unisys HTTP tunneling DLL suing the HTTP protocol. In turn, the IIS server routes all messages to the appropriate MCP host.
- HTTPS Tunneling. This feature provides the same functionality as the standard HTTP tunneling with the addition of using SSL encryption.
- SecureCATT. SecureCATT provides a secure communications link between C.A.T.T. and the MCP server using AES encryption. The connection is either over Telnet or CCF. See the SecureCATT documentation for additional details.

If you are using MCP Telnet without Kerberos, you can connect to the Host using the default settings. Details are provided in the section titled, “Defining Telnet Connections”.

If you are using MCP Telnet with Kerberos, only one change is required to the default settings: you must provide the name of your MCP host in Kerberos Target Account format. Follow the directions provided in the section titled, “Defining Telnet Connections”. Then add the additional steps described under, “Defining Telnet Connections using Kerberos”.

If you are using CCF, use instead the procedures described in the section titled, “Connecting to the Host over CCF”.

1.4 Deployment Options

There are several methods available for deploying C.A.T.T.:

1. Install a copy directly on the user’s PC.
2. Install C.A.T.T. on a server and configure site-wide defaults for all of the users. Then deploy just icons to the users PCs.
3. Install C.A.T.T. on a server and configure site-wide defaults for all of the users. Then copy both catt.exe and an associated icon to each user’s PC.

You can deploy using all of these methods at the same site. One or more users can have their own copies of the program and the configuration files. Other users can have just an icon that points to a copy on the server. You can also install the program on a user’s PC but load the configuration files from the server.

This document describes how to deploy C.A.T.T. on a single PC. If this is your first experience with C.A.T.T., you should use this method to test the product yourself. After you gain some experience with C.A.T.T. and its features, you will find it easier to install using the other deployment options.

1.5 Installing C.A.T.T. for the First Time

To install C.A.T.T. on a single PC, do the following:

1. Open C.A.T.T. CD-ROM or open the provided C.A.T.T. zip file.
2. To run the *MGS Installer* double-Click the file **SETUP.EXE**

3. Follow the directions as prompted.

The *MGS Installer* will install catt.exe and several other files to the directory you specify. This directory will become the C.A.T.T. <*working directory*>. In the examples that follow, our C.A.T.T. <*working directory*> is C:\Program Files\GregPub\CATT\. The <*appdata directory*> is C:\Documents and Settings\<*user name*>\Application Data\CATT\.

The first time you run C.A.T.T., you will be prompted to enter your connection information and options. Proceed to the section titled, “Configuring C.A.T.T.”, below.

1.6 Installing a C.A.T.T. Update

If you already have C.A.T.T. installed on your PC and wish to retain your current configuration settings, installing an update is very easy.

1. Open C.A.T.T. CD-ROM or open the provided C.A.T.T. zip file.
2. To run the *MGS Installer* double-Click the file **SETUP.EXE**
3. Follow the directions as prompted.

Instructions are also available in the readme.txt file included with the release.

1.7 Installing C.A.T.T. in “Unattended” Mode

“Unattended” mode allows you to install C.A.T.T. using a batch file, avoiding the need to walk through the installation program screens. Not only does it speed up the process when installing multiple copies among users, but it can keep users from selecting options that may create problems for the support staff down the road. The syntax is within the bat file is as follows:

setup /unattended

The same syntax may be used from a Command Prompt.

It should also be noted that the batch file needs to change directories to navigate to the folder with the CATT install files, or reside in the same folder.

If you want to change any of the installation options (i.e. the destination folder), you can change them within the file named “setup.inf”

1.8 Configuring C.A.T.T.

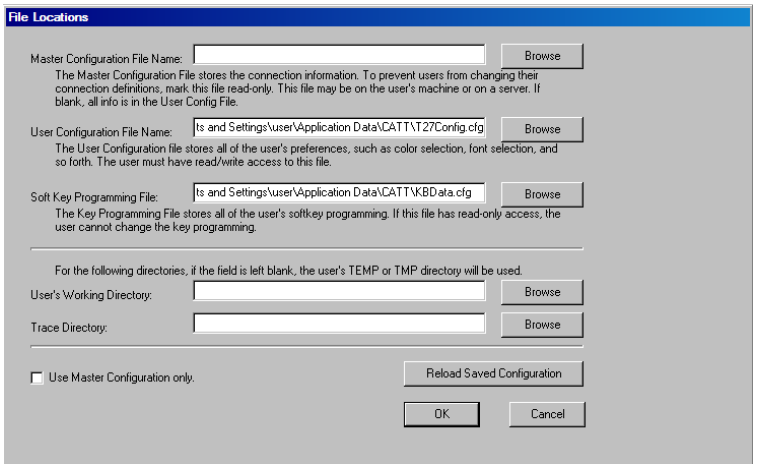
1.8.1 Defining C.A.T.T. File Locations

When C.A.T.T. is run, it first looks for a configuration file named floc.cfg. This file directs the program to its other configuration files. On new installations, this file is stored in the C.A.T.T. <appdata directory>. On existing installations, it will be either the <*appdata directory*> or the <*working directory*>.

Note. If you already have an floc.cfg file, the first screen you see when running C.A.T.T. will be either the **Connection Information** screen or, if you have auto-startup connections defined, your MARC log on screen(s). In this case, if you want to change any of your File Location information, you need to go to the **File Locations** screen. The command sequence for this is: **Preferences | File Locations**

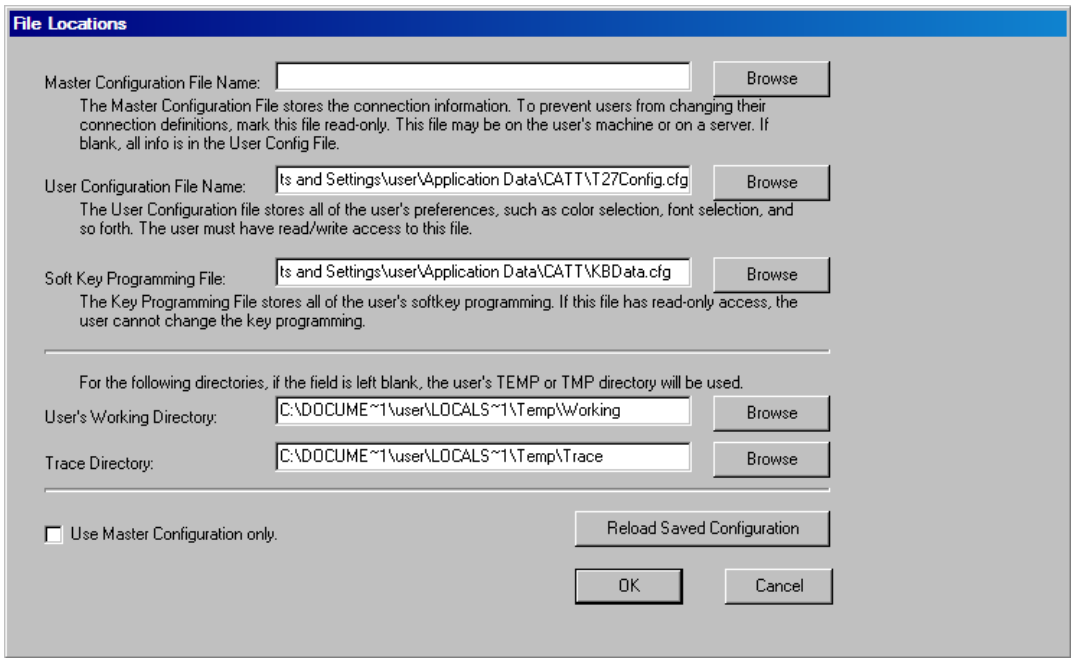
When you run C.A.T.T. for the very first time, there will be no floc.cfg file available. In this case, C.A.T.T. will generate a series of defaults for your file locations. It will then automatically display the **File Locations** screen so that you can verify whether or not the entries are correct. You can accept the defaults or edit the entries.

The screen below shows how the **File Locations** screen will appear the first time you run C.A.T.T.



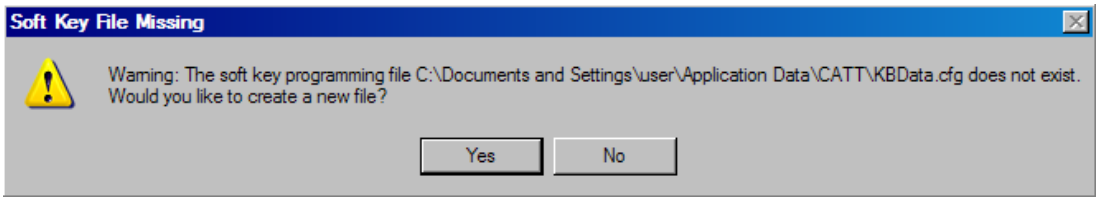
When installing C.A.T.T. on a single PC for your own use, it is recommended that you create separate directories for the **User Working** and the **Trace Directory**. To do this, enter the desired directory names you want. The **User's Working Directory** is where miscellaneous files are stored when no other directory is supplied. This includes files you save through the **Save Continuously** and "print to disk" commands. The **Trace Directory** is where diagnostic trace files are saved for trouble reports.

The screen below illustrates sample entries for these two directory names:



Click **OK** to save these preferences and exit the **File Locations** screen. If the directories you specify do not already exist, they are automatically created.

On a brand new installation, the next message you receive is the following prompt:



If you want to use the soft key programming feature (recommended), click **Yes**. If you click **No**, you will not be able to use the soft key programming feature until you've come back to the **File Locations** screen and created this file.

To return to the **File Locations** screen at any time, click **Preferences** and then **File Locations** from the main menu.

1.8.2 The License Screen

On a brand new installation, the next screen that appears will be the **About** screen. It has this format:

If you have a valid serial number from MGS Inc., click the **Change** button. This will bring up the **Change Registration Information** screen. You can fill in the registration information on that screen and click **OK** to save it.

To leave the above screen, click **OK**. This will bring you to the **Connection Information** screen.

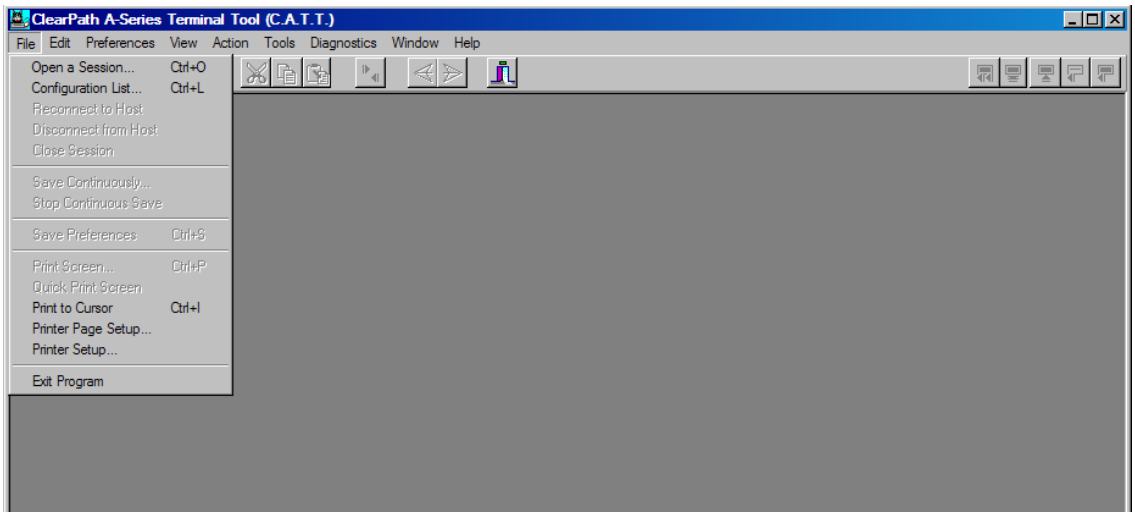
1.8.3 Accessing the Connection Information Screen

The **Connection Information Screen** is where you define the connections you will use to connect to the MCP host. When you first run C.A.T.T., the screen is brought up automatically so you can select the connection(s) you want to open.

You can also bring up the **Connection Information** screen at any time through either of two methods:

1. Click on the "open door" icon on the speed bar.

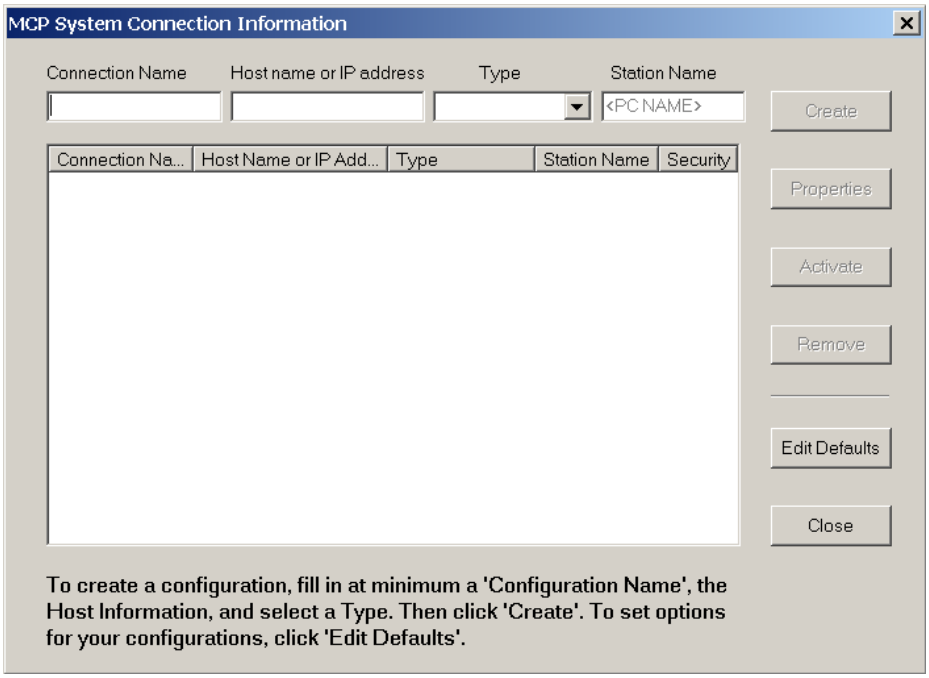
2. Select **File** and then either **Open a Session** or **Configuration List** from the main menu.



Either method will bring up the **Connection Information** screen.

1.8.4 Defining Telnet Connections

When first installing C.A.T.T., you will have no connections defined. The **Connection Information** screen will appear thusly.

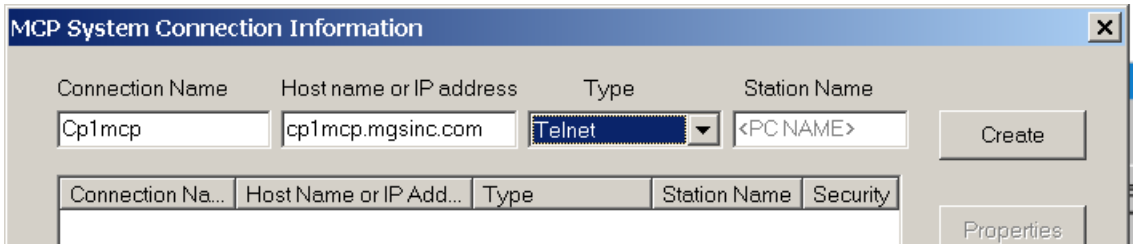


As described on the screen, you must fill in three of the four edit boxes to define your first connection.

1. In the **Configuration Name** field enter any name of your choice to identify the connection. C.A.T.T. will automatically capitalize the first letter and put the others in lower case. Your name must be composed of just letters and digits.
2. In the **Host name or IP Address** field enter the host name or IP address that identifies your MCP host.

3. In the **Type** field, select the type of connection you are defining from the drop-down box. There are seven choices available. To define a Telnet-based connection, select **Telnet**.

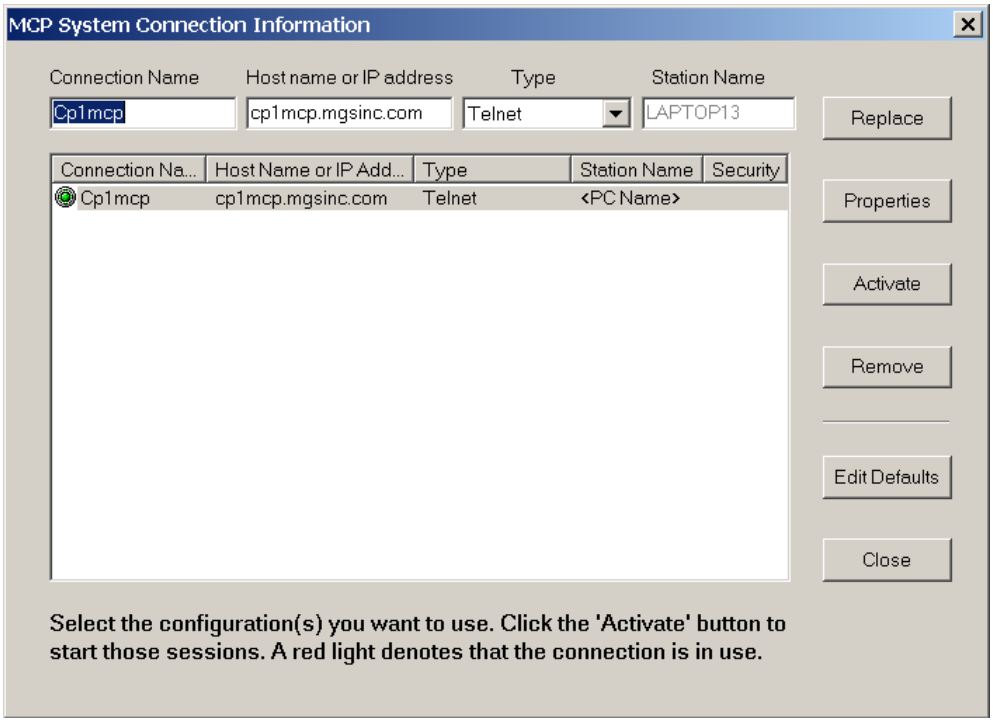
4. By default, the **Computer Name** field is not available. This field identifies the "station name" your PC will use to log on with. It defaults to your computer's name (or a derivative thereof). At this point, the top of the form could look like this:



5. Now click the **Create** button, and your connection is defined. You will see it appear in the list box below the edit fields.

Note that the prompt at the bottom of the screen has changed. With at least one connection defined, you can now select the connection and open it if you desire.

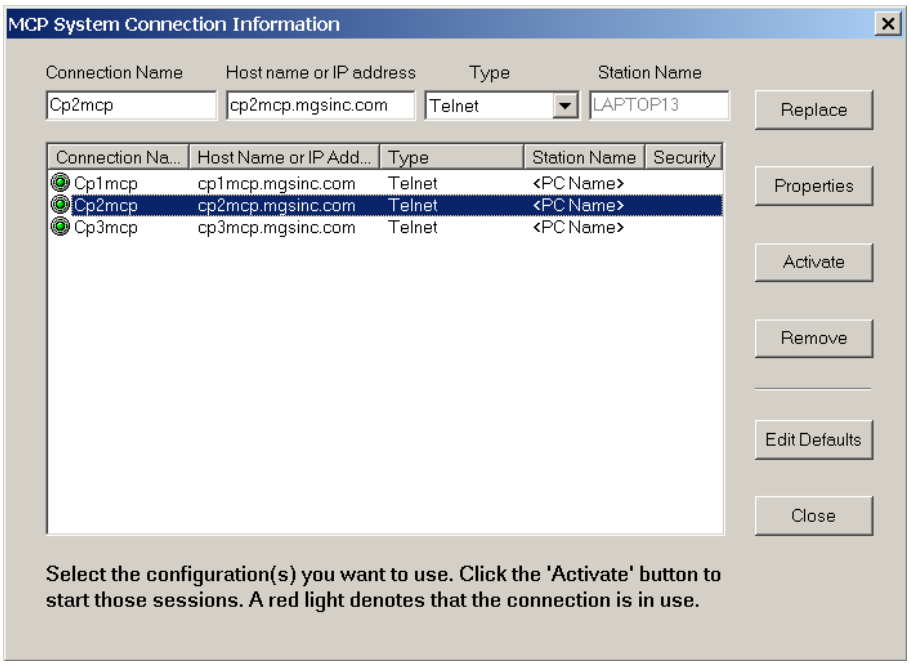
6. To create additional connections, repeat the steps listed above. You can create any number of different connections. When using Telnet connections, just be sure that you do not define two connections to the same host that use the same station name. (For more information regarding station names, see the section titled, "The Connection Options Page" in the "C.A.T.T. Program Options" chapter.)



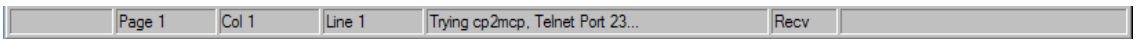
1.8.5 Opening your Telnet Connection

To open a connection and begin an MCP session, do the following:

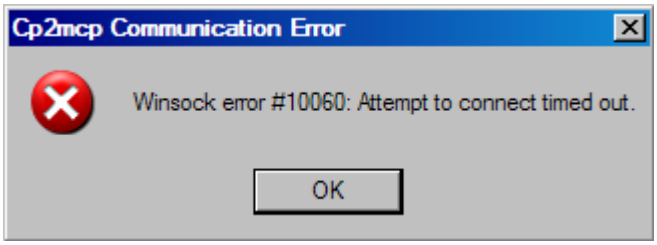
1. Select the connection of your choice in the list box.
2. Click the **Activate** button. For example:



This example opens the connection named Cp2mcp, directed at the MCP host named cp2mcp.mgsinc.com. (**Note.** You can also open a connection by double-clicking on the connection inside the list box.) When you open a connection, the **Connection Information** screen will immediately disappear. C.A.T.T. will attempt to contact Telnet on your MCP system. As the operation progresses, you will see messages in the status bar of the main screen reporting the name of the target machine and the target port number. For example:



In this case we are trying to open a connection to Telnet via port 23 on the MCP host cp2mcp. If the operation fails, you will get an error message such as:

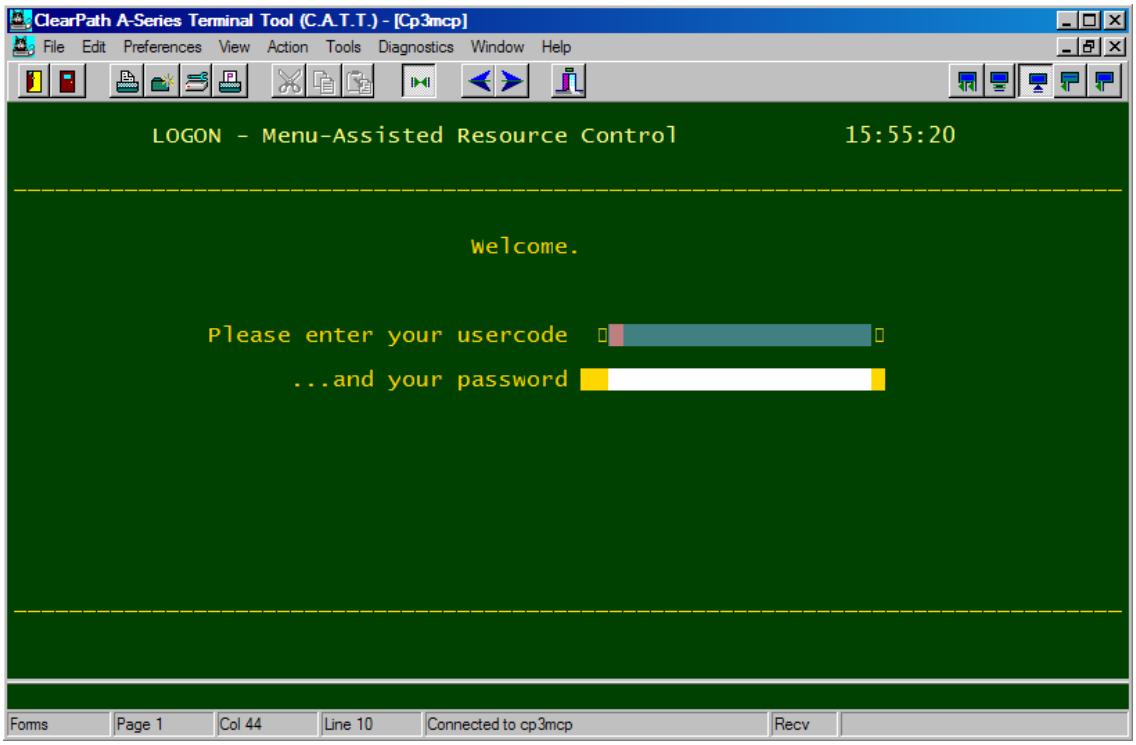


This message, “Attempt to connect timed out”, means that C.A.T.T. could not locate the machine by the host name or IP address specified. Possible causes are:

- The DNS lookup failed.
- The host is not reachable from the PC.
- The host is down. The error message gives you the “winsock” error number followed by a

translation of that error number.

If the attempt to connect is successful, you get a MARC log on screen:



The status bar shows the host to which you are connected.

At this point, you can log in and perform normal MCP functions. You have successfully configured C.A.T.T. for access to your system!

1.9 Customizing C.A.T.T.

1.9.1 How Preferences and Options are Handled

There are two types of options supported in C.A.T.T. These are:

- Options that apply to the entire program.
- Options that apply at the individual connection level.

Options that apply to the entire program are selected through menu settings. For example, there are options that determine how text copying is handled, which tool bars are displayed, and whether the program should prompt you before exiting. These are all controlled through various selections on the main menu.

There are a great many more options that apply at the individual connection level. These are your standard T27 configuration options, such as the number of screen pages, characters per line, lines per page, the color selections, the display font, and so forth. These options are all set on the **Properties** screen.

C.A.T.T. provides a sophisticated “inheritance” system for defining connection level options. To minimize the amount of work you have to do in setting configuration options, C.A.T.T. provides a *Default Environment*. Options you set in this Default Environment become defaults for all of the connections you define.

They can be overridden at the individual connection level as desired. So:

- If you make a selection at the Default Environment, that selection is automatically inherited by every connection you define.
- You can override any setting in the Default Environment for an individual connection by editing that connection's **Properties**.

Selections must be made for every option provided. If you do not provide a selection in the Default Environment or at the connection level, the built-in default value is assumed.

Note. If you are using a Master Configuration File, there are two Default Environments you control. You can make default option selections and store them in the Master Configuration File. The user can also define his own default option selections in his User Configuration File. The rules of inheritance are then:

<built-in program default>

🡻□

<Master Configuration File default setting>

🡻□

<User Configuration File default setting>

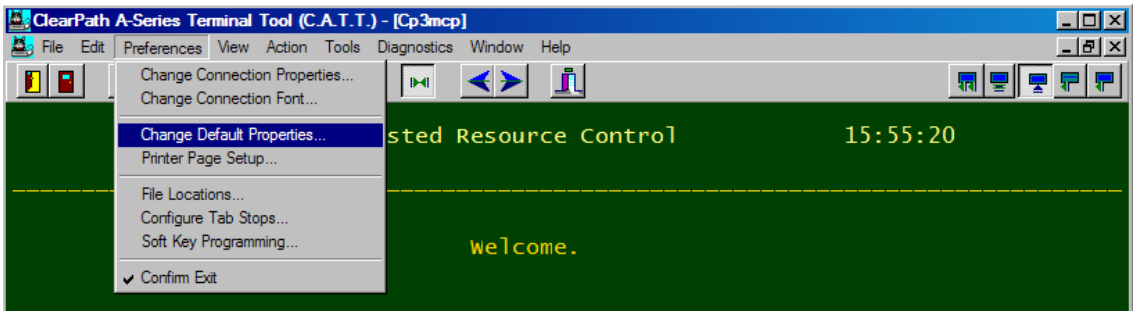
🡻□

<Individual connection property>

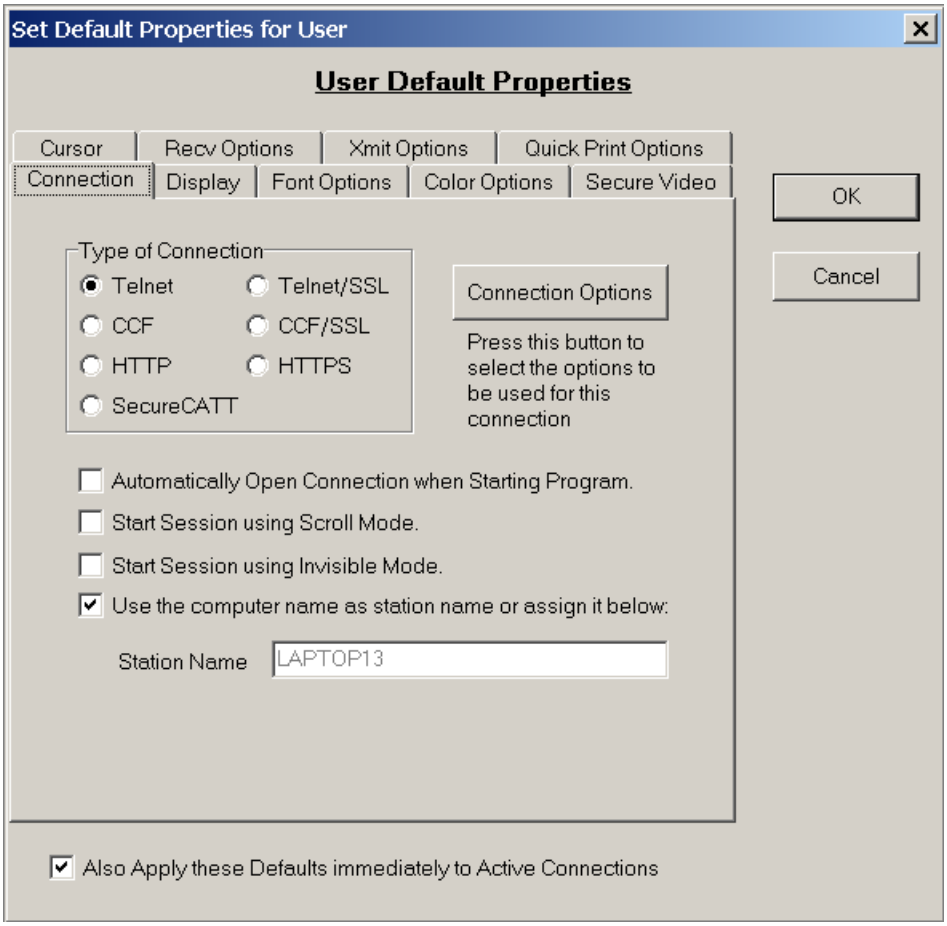
1.9.2 Accessing the Default Properties Screen

There are two ways to access the **Default Properties** screen. From the main menu, you can select **Preferences** and then **Change Default Properties**.

Alternatively, you can open the **Connection Information** screen (via **File | Open a Session...**) and then select the **Edit Defaults** button.



Either method will bring up the **Default Properties** screen, which looks like this:



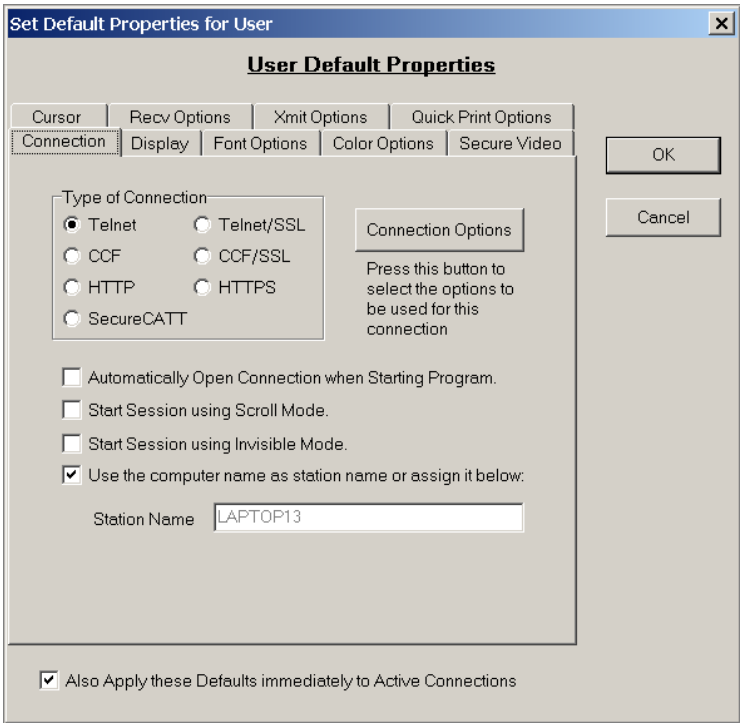
1.9.3 Making the Main Display more Appealing — a Tutorial

C.A.T.T.'s default settings provide standard T27 emulation that most of us are familiar with. However, by selecting a few judicious defaults, you can make the display far more user-friendly. The following instructions describe how to vastly improve the display appearance while introducing you to the ease with which you can select configuration options.

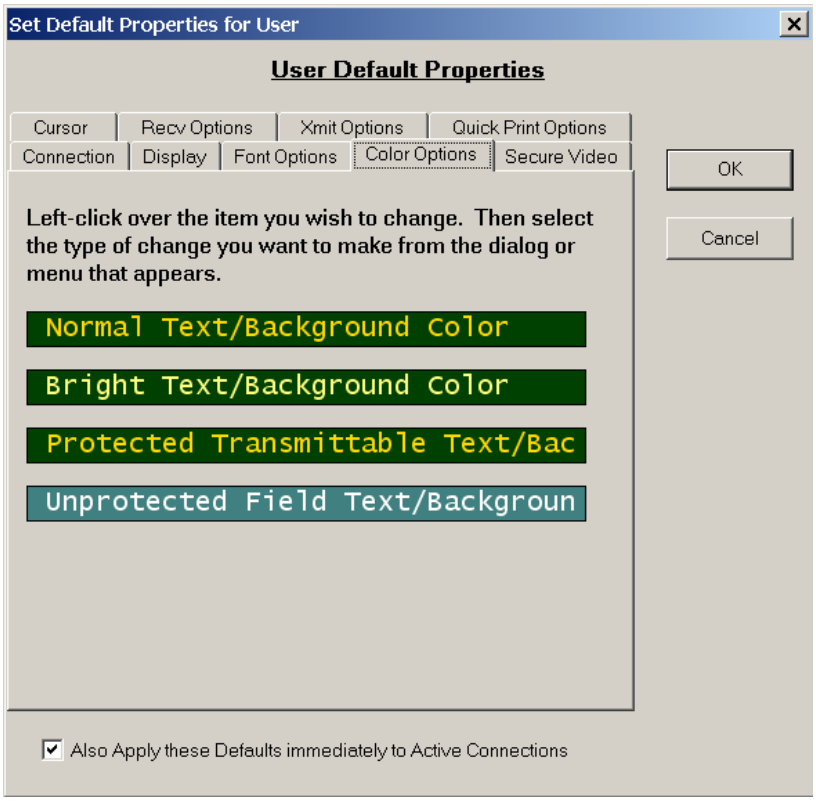
1.9.3.1 Making Color Selections

The first step is to select some appealing screen colors. The procedure is:

1. Bring up the **Default Properties** screen, as described above.

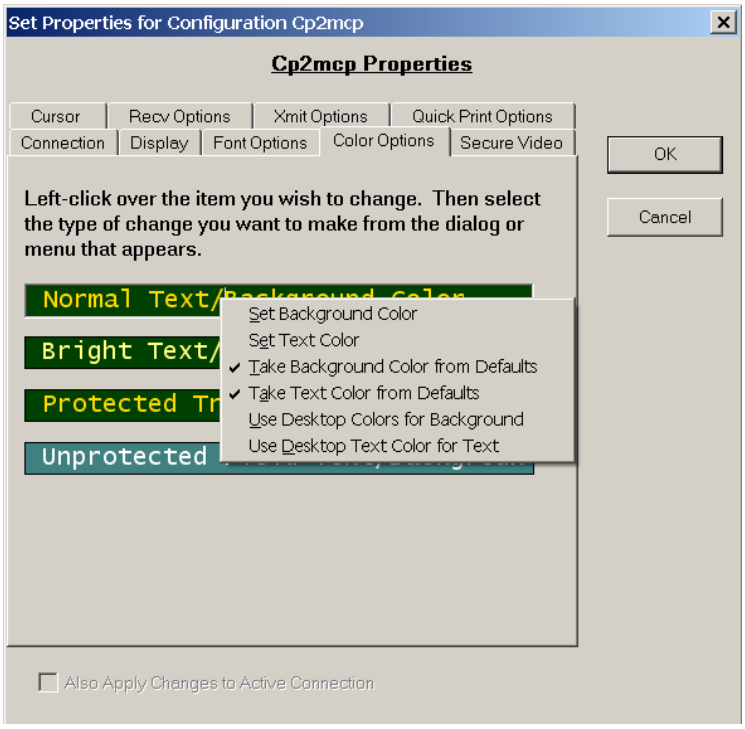


2. Select the **Color Options** tab.



The current selections are displayed. This particular screen shows a default background color of dark green.

1. To change a color, left-click on the bar that represents the color you want to change. To make the overall screen more appealing, click on the bar that reads Normal Text/Background Color. This brings up a context-level color menu.



2. Now select **Set Background Color**. This brings up a standard color dialog.

3. Choose a color that appeals to you. If the palette doesn't provide any, you can click **Define Custom Colors>>** to bring up an additional dialog that lets you choose any color your monitor supports.

A light font on a dark background is more appealing to the eyes. Green is also easy on the eyes — it's in the center of the color spectrum. Choose the green that's in row 5, column 3 of the main color palette. The

default yellow font color looks appealing on this green as well.

The color options in C.A.T.T. permit you to choose any colors you want for your screen font and background. Select the color you want and click **OK**. You are returned to the color options page with the colors updated.

Note that all of the backgrounds have changed except for the Unprotected Field Text/Background. That is because the Bright Text/Background Color and the Protected Transmittable Text/Background Color both default to the background color selected in Normal Text/Background Color.
You can repeat the steps above on each of the color bars to change the background color of each field type. To change the font color, proceed as follows:

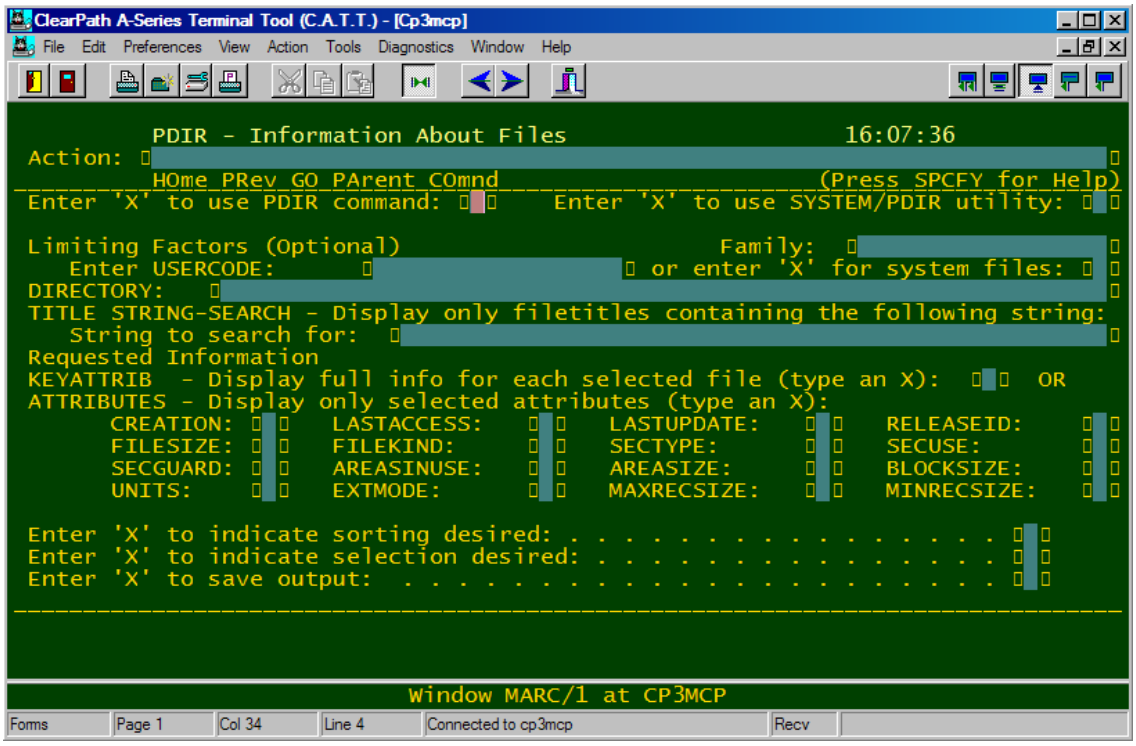
1. Left-click on the bar that describes the text color you want to change: Normal, Bright, Protected Transmittable, or Unprotected. The same context menu will appear.
2. Select **Set Text Color** on the context menu. The same color dialog will appear.
3. Make your color selection and click **OK**. This will return you to the **Color Options** page with your selection shown in the color bars.

If you have an active connection open to an MCP host, you can now click **OK** on the **Default Properties** screen and immediately see the effects of your changes. At the bottom of the **Default Properties** screen is a check box with the caption, "Also Apply these Defaults immediately to Active Connections". If this box is checked when you click **OK**, your new default settings will immediately take effect on all connections that do not have conflicting individual settings. You will immediately see how your color selections affect the display.

1.9.3.2 Making Unprotected Fields More Appealing

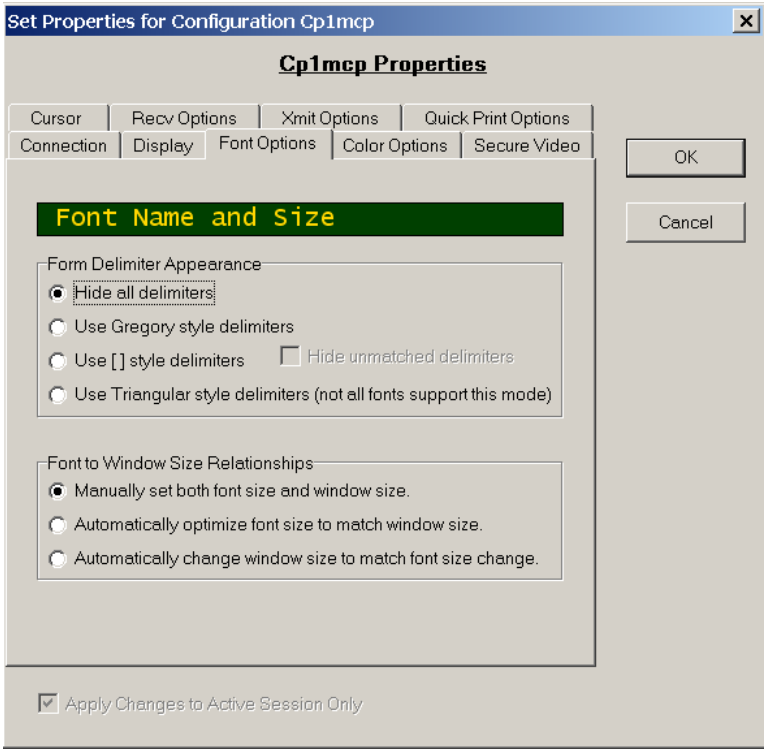
The most distracting items in a standard T27 screen display are the field delimiters. As you may have noticed in the previous discussion, C.A.T.T. gives you a rather unique ability. You can select a different background and font color for unprotected fields. This means that you can highlight unprotected fields on a form using color instead of form delimiters.

By default, C.A.T.T. defines an unprotected field background color and font color. The background defaults to a turquoise, and the text defaults to white. However, to abide by the standard, the form delimiters are also enabled by default. This causes a screen to appear thusly:

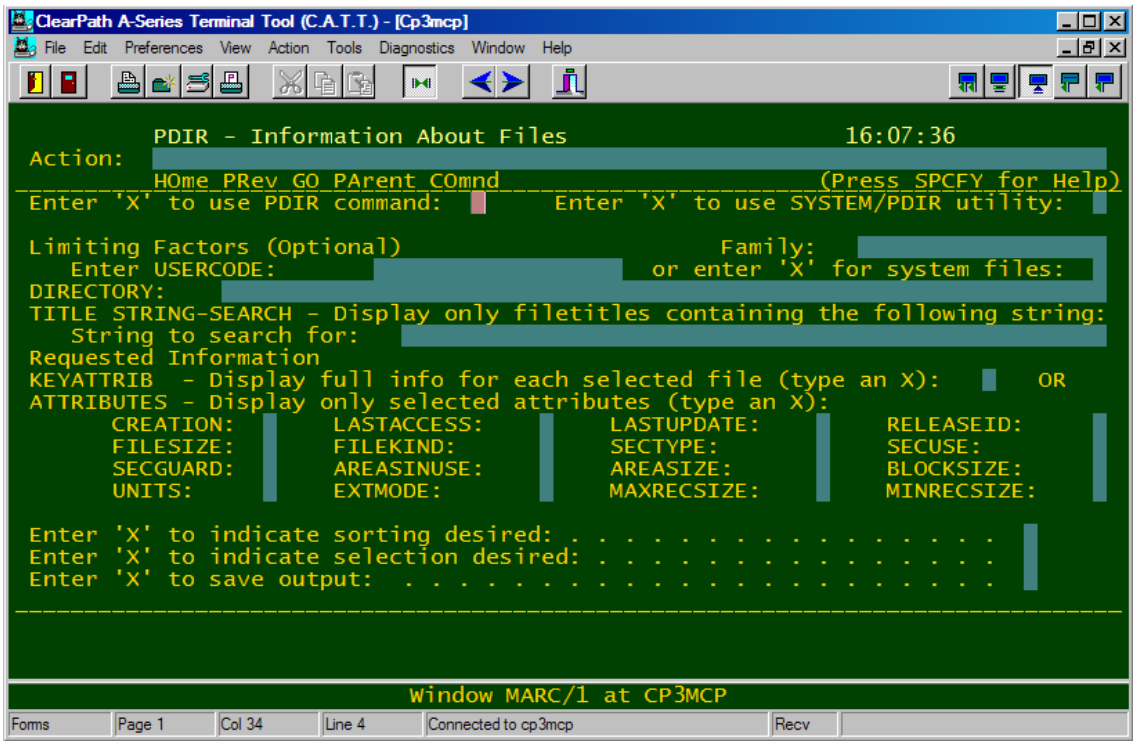


You can vastly improve the screen appearance by turning off the delimiters. The steps are:

1. Goto the **Default Properties** screen.
2. Select the **Font Options** tab.
3. Change the radio button selection to Hide all delimiters.



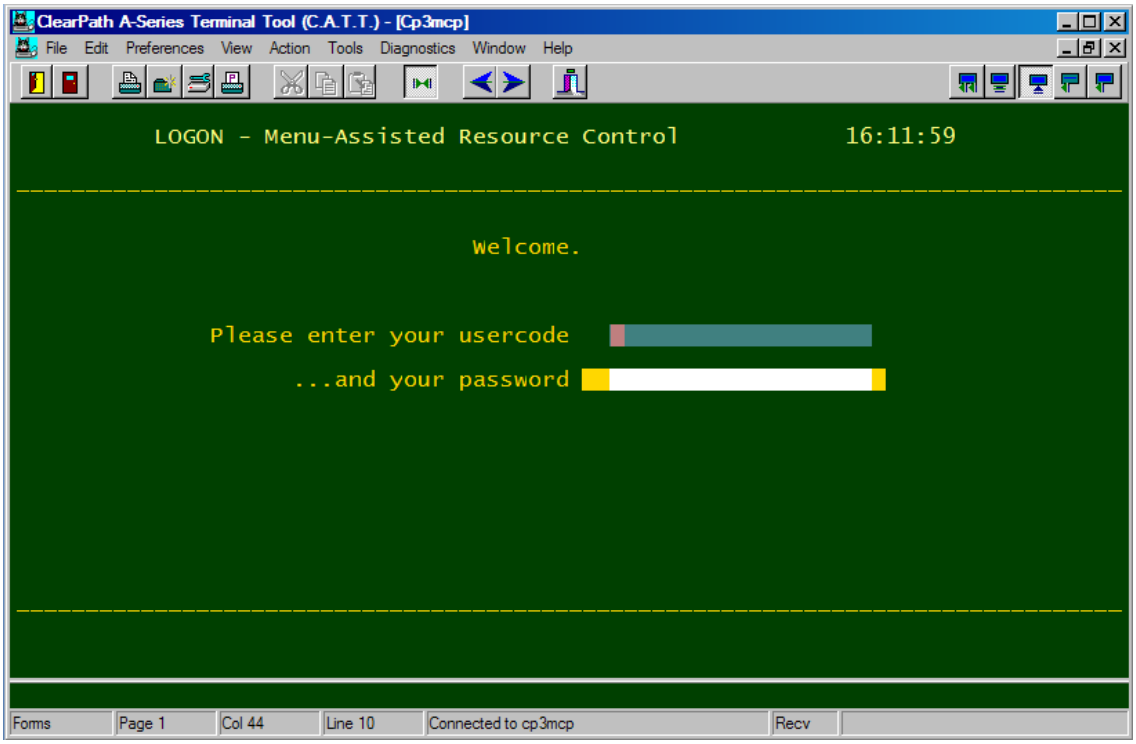
4. Click **OK**. Now the screen appears thusly:



With the delimiters removed, the screen is much easier to read. The unprotected fields are still easily discernible, and there are no distracting field delimiters.

1.9.3.3 Formatting Secured Fields

Secured video fields are another case where a little tweaking can greatly improve the overall screen appearance. In the TD800 series terminals, secured video fields occurring in protected-transmittable areas of the screen had the same background color as the screen itself. This allowed the programmers to “hide” data on the screen that was sent back with a transmit. Later terminals, such as the MT983 and the T27, did not do this. In some older applications, secure video fields are prefixed with a “reverse video” character to imitate the TD800 behavior.



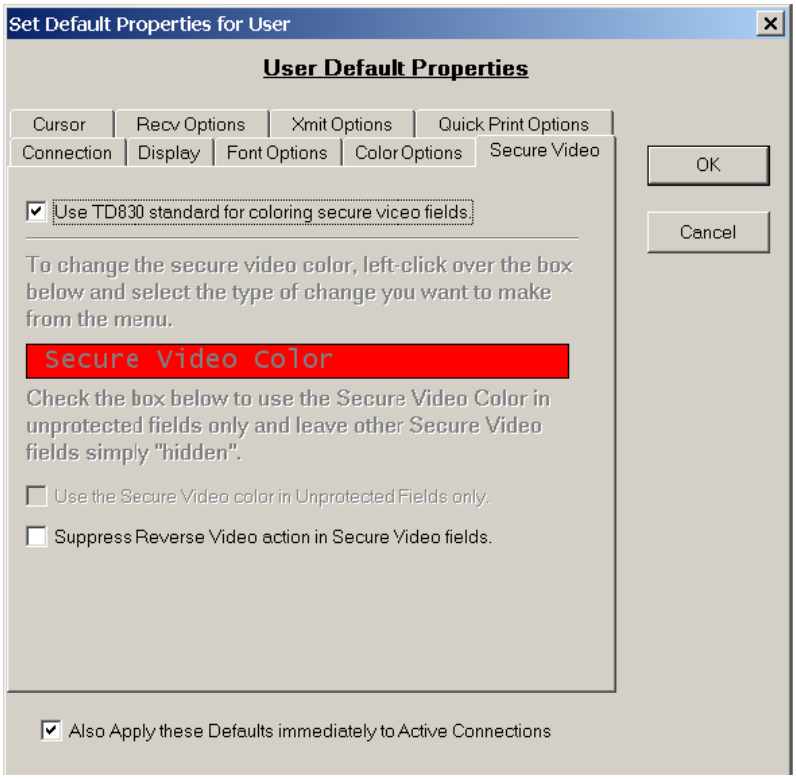
C.A.T.T. provides several options for configuring your secured video fields in order to create a more appealing screen.

By default, secured video fields are displayed as on a T27. Both the background and the foreground of the field are in the font color. In addition, the “secure video” escape character and the field delimiters are also “disguised” in this manner. Thus, with default settings, the MARC log on screen appears as shown at the start of this section.

The yellow spaces in the **Password** field are the “secure video” character, the left delimiter, and the right delimiter. The unprotected area is white because that is the currently specified font color for unprotected fields. Field delimiters are hidden, as described in the previous section.

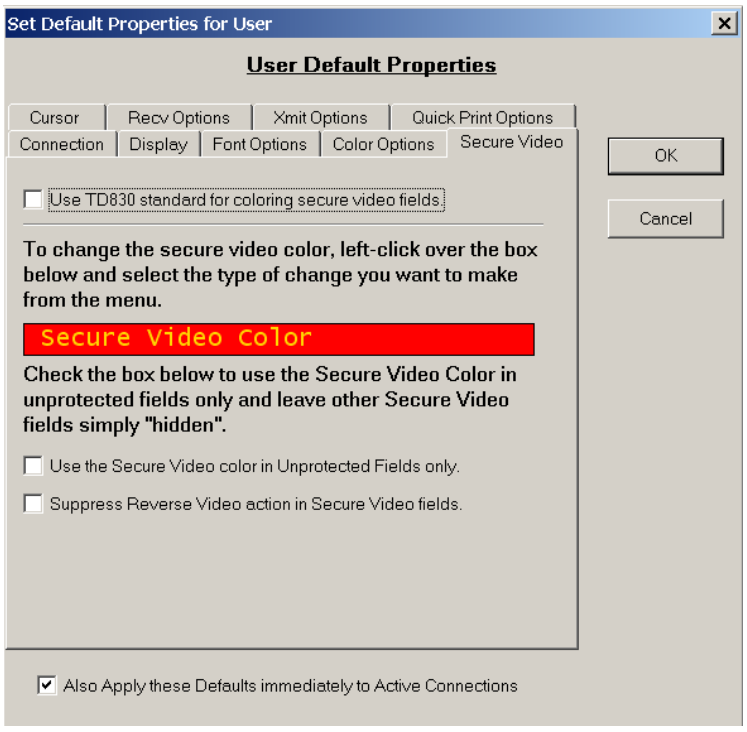
To make secure video fields more appealing, use this procedure.

1. Go to the **Default Properties** screen.
2. Select the **Secure Video** tab. The default setting looks like this:



By default the option, "Use TD830 standard for coloring secure video fields" is checked. This produces the appearance shown in the screen shot at the start of this section.

3. Un-check the option, "Use TD830 standard for coloring secure video fields." This automatically enables the other fields in the screen.



By default, your secure video color will be red. To change the secure video color:

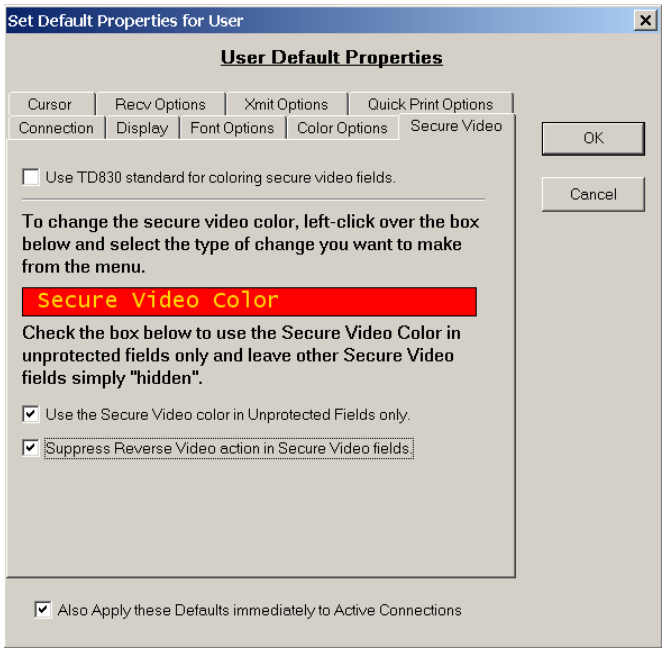
1. Left-click on the color bar that reads, "Secure Video Color" (above). This will bring up the same context menu described for the other color options.
2. Choose **Set Background Color**.
3. Select the color of your choice.
4. Click **OK** to save your setting and return to the **Secure Video** page.

You can also set the text color on the same context menu. However, the text color is *only* used on this color bar. The background color is the only color used on your screens in a secure video field. This setting makes the fields of the MARC log on screen look like this:

It also causes any secured video fields in protected areas of your forms to be colored in the same manner. To make the image a lot cleaner, you should also use the two check boxes at the bottom of the **Secure Video** page.

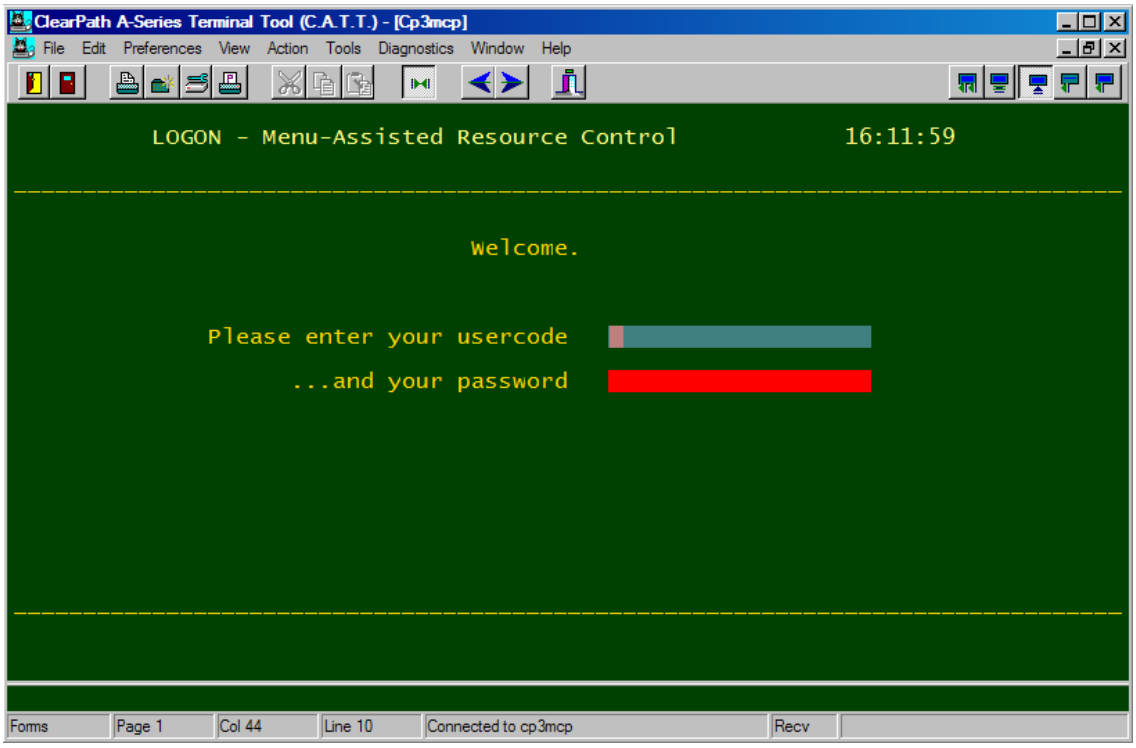
- Check the option, "Use the Secure Video color in Unprotected Fields only" to eliminate coloring of the "secure video" character and the delimiters. It also suppresses the color changes in all protected fields so that your hidden text remains hidden.
- If your programmers prefixed secure video fields with "reverse video" characters in their applications (to imitate the original TD800 behavior), also check the option, "Suppress Reverse Video action in Secure Video fields."

The settings now appear thusly:



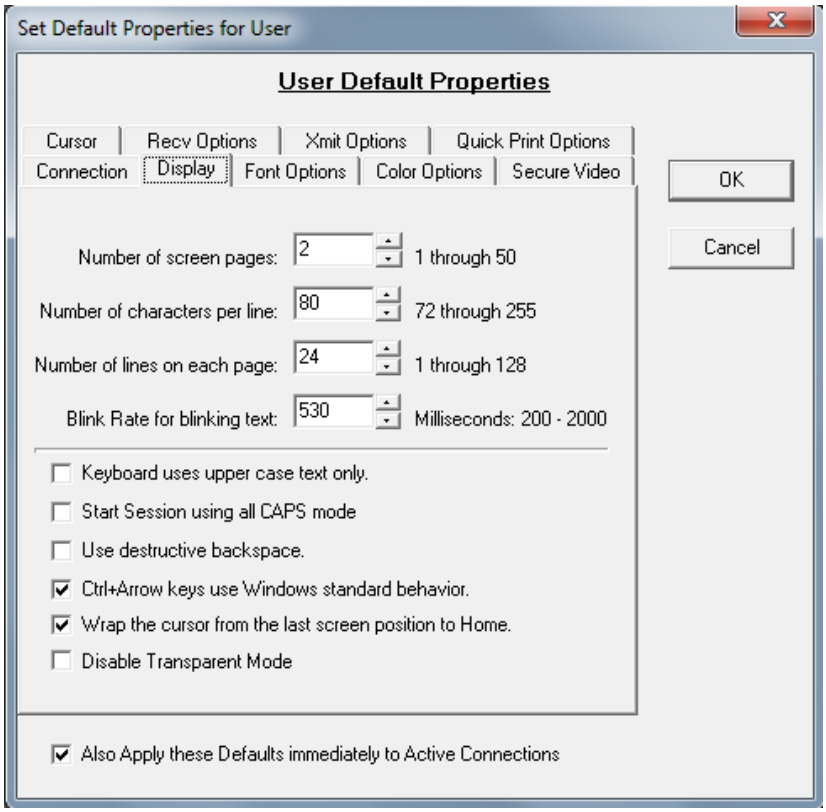
Click **OK** to save these settings. The MARC log on screen fields will now appear very clean.

Secure video fields in your forms will appear in the same manner, nicely lined up with the unprotected fields (if the forms were designed that way). Secure video fields in protected transmittable areas will be in the protected transmittable colors (chosen from the **Color Options** page). If the protected transmittable colors are the same as the "normal" background color, secure video fields in protected transmittable areas will not be visible.



1.9.3.4 Setting Display Options

The **Display Options** page also contains important options you will want to set your own defaults for. The **Display Options** page appears thusly:



The default number of screen pages is 2, but you can change that to any number between 1 and 50. If you make your selection on the **Default Properties** screen, it applies to all of your connections unless overridden.

If your users are accustomed to a destructive back space, be sure to check the option, "Use destructive backspace" on the **Display Options** page.

1.9.4 Changing Options on Several Pages

You can tab through the pages of the **Default Properties** screen and set all of the options you want. When you are completely finished, click **OK** to save them all. If you click **Cancel**, it will discard *all* of the changes you have made since opening the page. Once you click **OK**, your settings are permanently saved in the user's configuration file.

It is recommended that you check each page for settings that may be of importance to your site. Additional information regarding the various options is provided in the "C.A.T.T. Program Options" chapter.

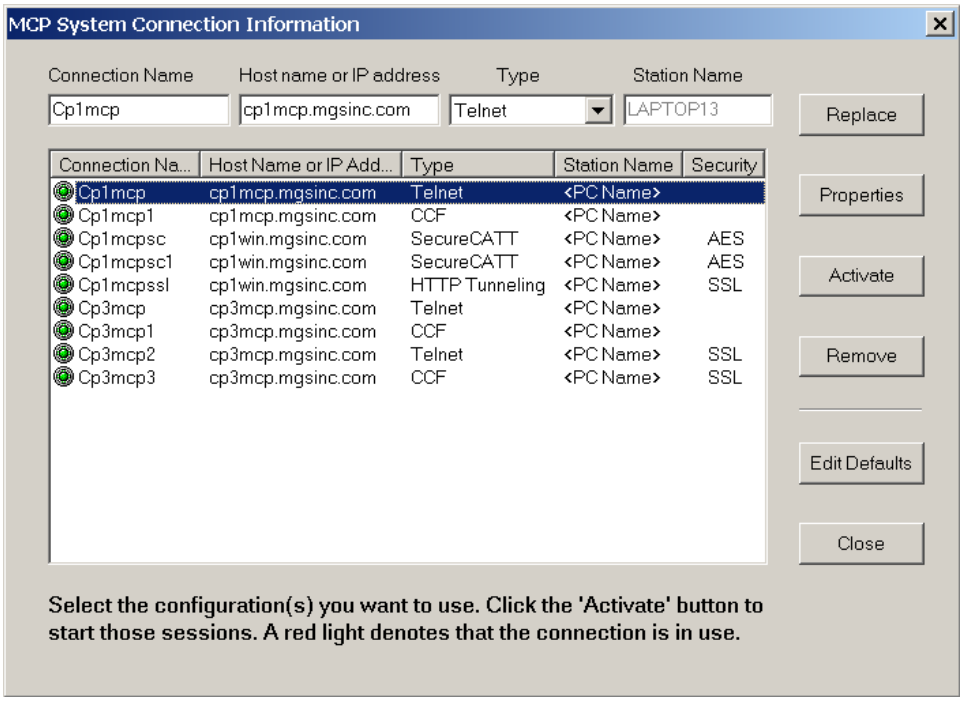
1.9.5 Setting Options at the Individual Connection Level

1.9.5.1 Accessing the Connection Properties Screen

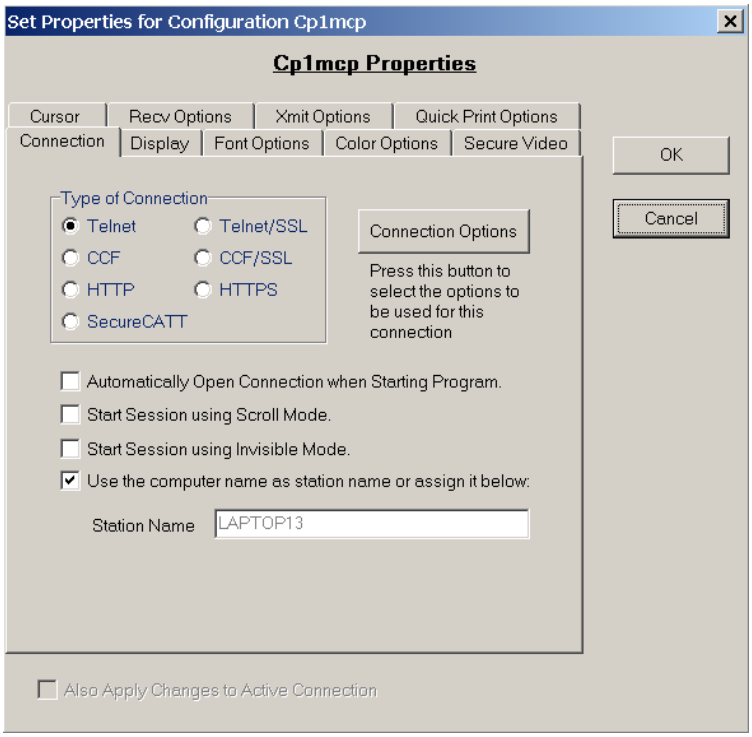
Selections you make on the **Default Properties** screen apply automatically to all of your connections. However, every option on the pages of this screen can be overridden at the individual connection level.

To set options for a particular connection, first go to the **Connection Information** screen. Click once on the connection of your choice to highlight it.

Now click the **Properties** button. This will bring up the **Properties** screen for that particular connection.



A **Connection Properties** screen has exactly the same layout as the **Default Properties** screen. You distinguish between the two by the heading on the screen. The **Default Properties** screen has a heading of "User Default Properties", as shown in previous illustrations. A **Connection Properties** screen has the heading: <connection name> Properties

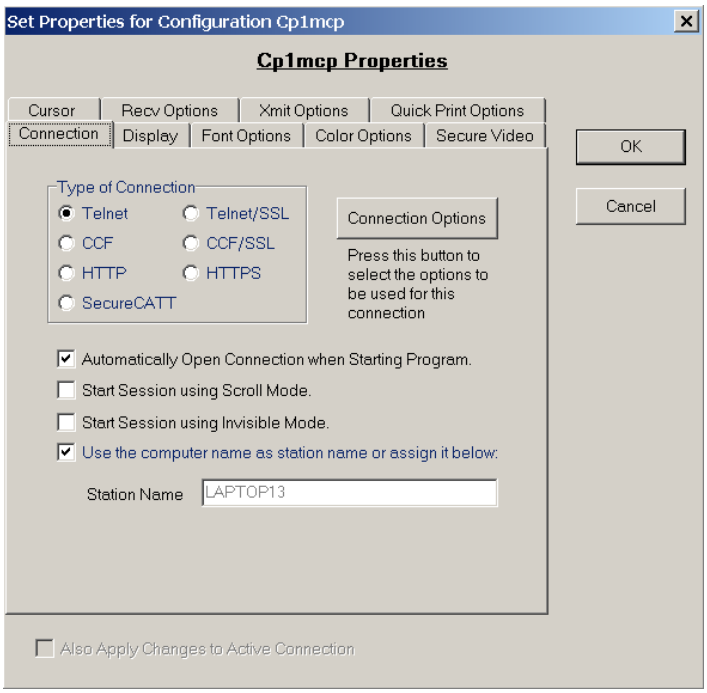


The example above is the **Connection Properties** screen for the connection named Cp1mcp. Therefore, the heading on this screen reads:

Cp1mcp Properties

Any changes you make on this screen apply only to the Cp1mcp connection. Moreover, they *override* any conflicting settings made in the **Default Properties** screen.

For example, if you would like the connection Cp1mcp to automatically start whenever you run C.A.T.T., check the box labeled, "Automatically Open Connection when Starting Program", as shown:



When you check this option, the text turns blue to denote that you've overridden a default. When you click **OK**, the setting is permanently saved. From this point forward, until you uncheck this option, C.A.T.T. will automatically attempt to open the Cp4mcp connection every time you run it.

Note. If you are using a Master Configuration File, some options cannot be overridden at the connection level. These are "grayed out" on the **Connection Properties** screen. For more information on this topic, see the section titled, "Deploying C.A.T.T. using Servers".

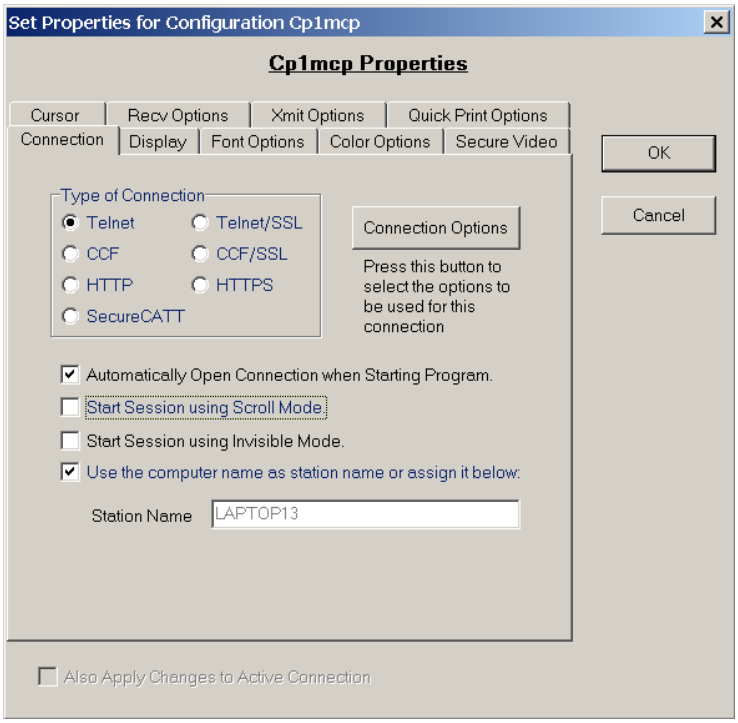
1.9.5.2 Restoring Defaults to Connection Options

When you override an option at the connection level, the change is permanently recorded in the User Configuration File. If you later go back and change that option, your latest setting still remains recorded at the connection level. The setting does not revert back to the default setting unless you explicitly instruct C.A.T.T. to do so.

Most, but not all, of the connection options appear in black text when the default setting is being used. If a setting at the connection level is being used, the option appears in blue text instead. Therefore, on the following screen, the two options, "Automatically Open Connection when Starting Program", and, "Start Session using Scroll Mode" both have settings at the connection level that override the default setting.

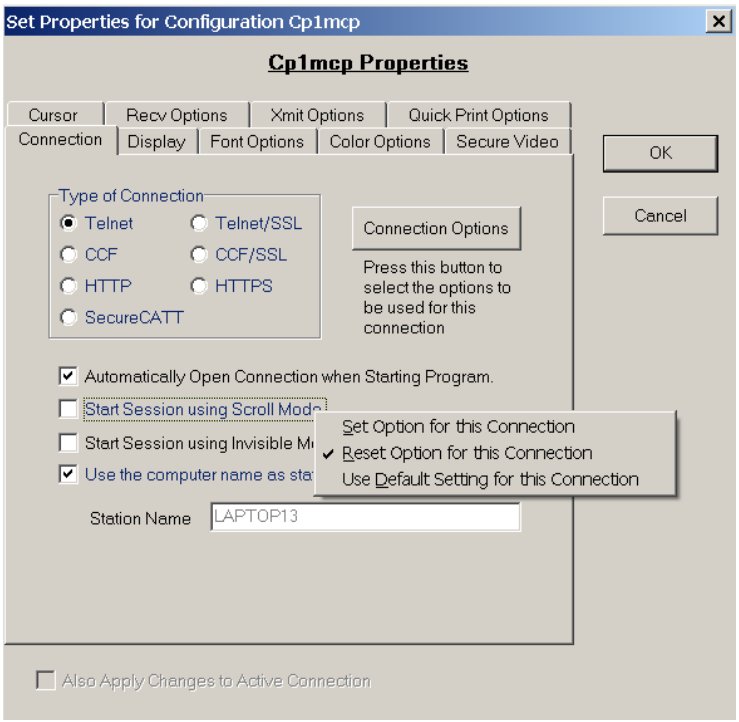
The "Start Session using Scroll Mode" option is unchecked at the connection level. The option may also be unchecked at the default level, but it doesn't matter. To appear as shown here (*i.e.*, in blue text), the option had to be checked, and the setting saved, at some previous time. Later on, the option was unchecked and the change saved again. This puts a setting into the User Configuration File that you want the option unchecked. If you later check this option on the **Default Properties** screen — intending it to apply to all

of your connections — that setting will not apply to *this* connection. It is explicitly turned off for this connection.



If you want to eliminate the setting at the connection level, you have to use the popup menu.

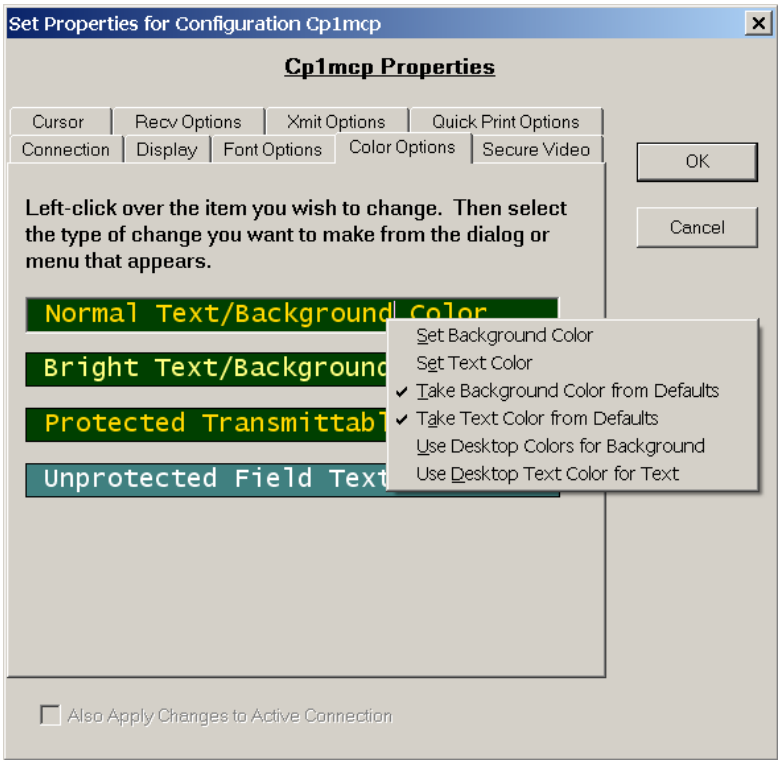
1. Position the mouse over the text of the option you want to change.
2. Right-click the mouse. This will bring up a context menu. For example:



3. Now click on the menu item, “Use Default Setting for this Connection”.

The caption for the setting will switch back to black in color. The option will be set to whatever the default setting is. If the option at the default level is checked, the box will be automatically checked. If the option at the default level is not checked, the box will not be checked.

Currently, the check boxes and the radio buttons support this feature. Items set through edit boxes, such as the number of screen pages, do not support this feature. Those items cannot be restored to “use the default” once changed at the connection level. The popup menus for the color bars all support “using the default”. You will see the selection when you left-click a color bar on the **Color Options** or **Secure Video** pages of a **Connection Properties** screen. For example:



The check marks on the popup menu indicate that the current setting is taken from the defaults. If you change the setting, the check mark(s) will move accordingly. You can always change a background color setting back to your default by checking the item, “Take Background Color form Defaults”. Similarly, you can change a font color setting back to your default by checking the menu item, “Take Text Color from Defaults”. For specific information regarding the various options, see the “C.A.T.T. Program Options” chapter.

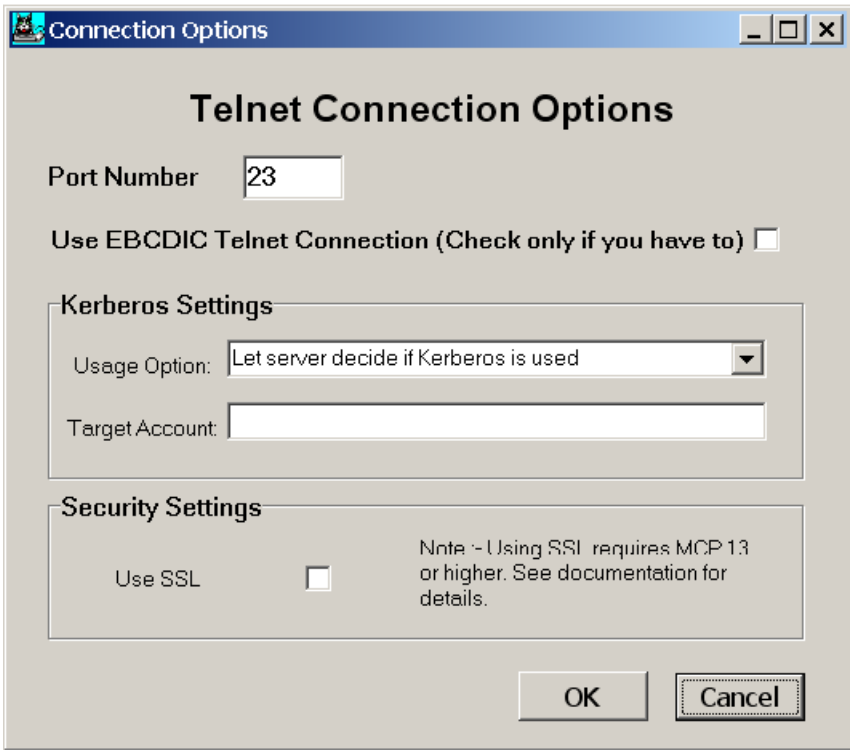
1.10 Defining Telnet Connections using Kerberos

To define a Telnet connection for Kerberos support, do the following:

1. Define your Telnet connection(s) as described above.
2. Click the Connection Options button and define your Kerberos Target Account on the Telnet Connection Options screen.

You can also set a default Kerberos Target Account for all Telnet connections on the Telnet Connection Options of the **Default Properties** screen. However, this is only useful if all of your connections go to the same MCP host.

The Telnet Connection Options screen looks like this:



To use Kerberos, the **Kerberos Target Account** field *must* be filled in, and the format must be exactly correct. The standard format for a **Kerberos Target Account** is:

host/<target machine name>@<DOMAIN NAME>

The word host is required, and the forward slash is required, even if you are coming from a *Windows* machine.

The <*target machine name*> is the host name of the MCP host you want to access. It must be the full host and domain name of the target MCP machine. It cannot be an IP address. Moreover, it must be spelled entirely using lower-case letters.

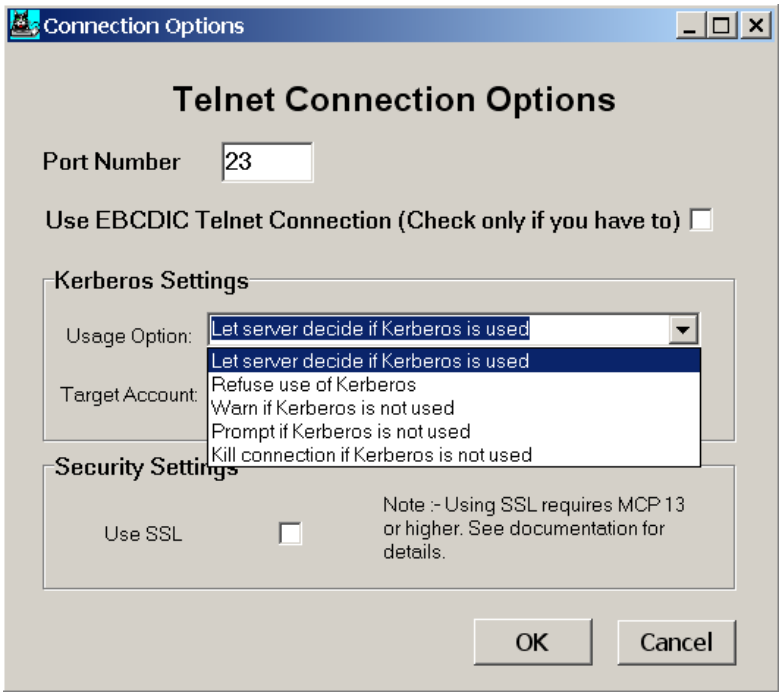
The <*DOMAIN NAME*> identifies the domain where this host resides. The <*DOMAIN NAME*> must be specified entirely in upper case letters.

An example Kerberos Target Account name for the MCP machine cp4mcp located in domain mgsinc.com is:

host/cp4mcp.mginc.com@MGSINC.COM

C.A.T.T. does not edit or examine the string you provide as the **Kerberos Target Account**. It simply passes it, as provided, to the *Windows* procedure that issues the Kerberos tickets. If the string you provide does not match an authorized MCP server at your domain, C.A.T.T. will return a connection error.

The other option for Kerberos on the **Security** tab controls how C.A.T.T. responds when Telnet prompts for Kerberos support. You must select one of the options from the drop-down list. The default is to let the host decide whether Kerberos is used or not.



The options have the following meanings:

Let server decide if Kerberos is used

This is the default selection.

If MCP Telnet prompts for Kerberos authentication, C.A.T.T. will respond that it is supported. C.A.T.T. will then attempt to perform the authentication.

If MCP Telnet does not prompt for Kerberos authentication, no special action is taken. The user receives a standard MARC “Welcome” log on screen.

Refuse use of Kerberos

If MCP Telnet prompts for Kerberos authentication, C.A.T.T. responds that it does not support Kerberos authentication. MCP Telnet can decide whether to route the user to the MARC “Welcome” screen or to break the connection. The decision is based upon the Kerberos options you’ve set on your MCP system.

Warn if Kerberos is not used

If Kerberos authentication does not succeed, and the MCP does not break the connection, C.A.T.T. warns the user that Kerberos was not used to access the MCP. The user must OK the warning.

Prompt if Kerberos is not used

If Kerberos authentication does not succeed, and the MCP does not break the connection, C.A.T.T. displays a prompt to the user. The user can choose to continue with the connection or to cancel the connection. If the user chooses to continue, he is routed to the MARC “Welcome” screen.

Kill connection if Kerberos is not used

If Kerberos authentication does not succeed, C.A.T.T. breaks the connection.

If MCP Telnet does not prompt for Kerberos authentication, C.A.T.T. also breaks the connection.

You can set this option at the connection level or at the defaults level. The value set at the default level applies to all of your connections.

1.11 Connecting to the Host over CCF

You have four choices for connecting to your MCP host using CCF. These are:

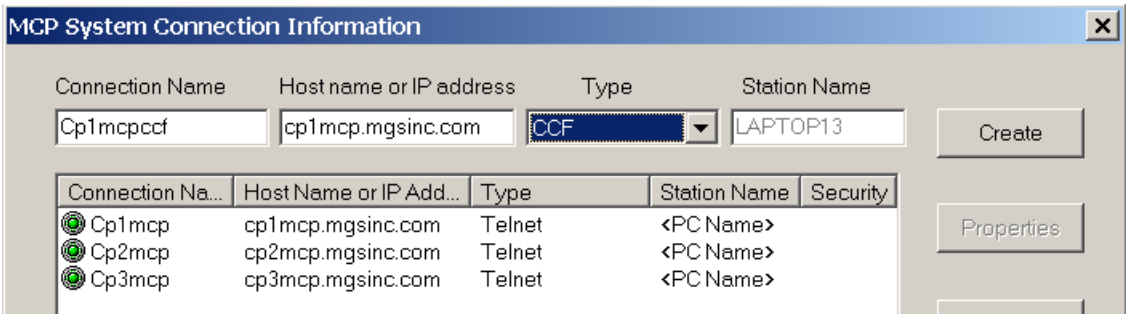
- with *Windows* networking
- using the TERMPCM without *Windows* networking
- using the TERMPCM without *Windows* networking over SSL
- directly, without using either *Windows* networking or the TERMPCM. Each option is discussed in the sections below.

1.11.1 Connecting to the Host over CCF using Windows Networking

All connections made through the *Custom Connect Facility* (CCF) require cooperation on both sides. There are settings you must provide in C.A.T.T., and there are settings you must provide in the *SYSTEM/CCF/PARAMS file on the MCP. However, if you want to use *Windows* networking to connect, you can use the *SYSTEM/CCF/PARAMS file as provided by Unisys. No changes on the MCP end are required.

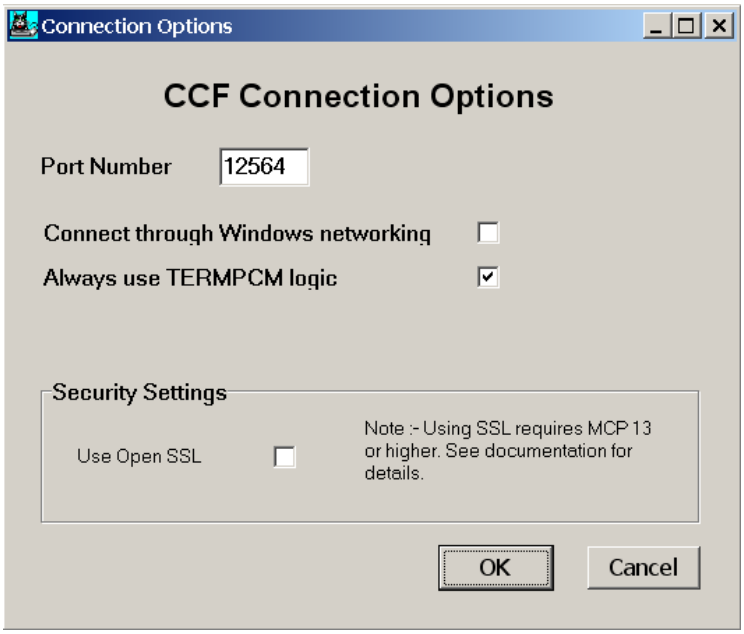
1.11.1.1 Defining CCF Connection in C.A.T.T. for Windows Networking

1. Go to the **Connection Information** screen. Create a new connection and set the **Type** to CCF.
2. Ignore the **Station Name** field on the CCF connection. The MCP host assigns the station name for these CCF connections, so anything you put here is commentary.
3. Click the **Create** button to save the connection.

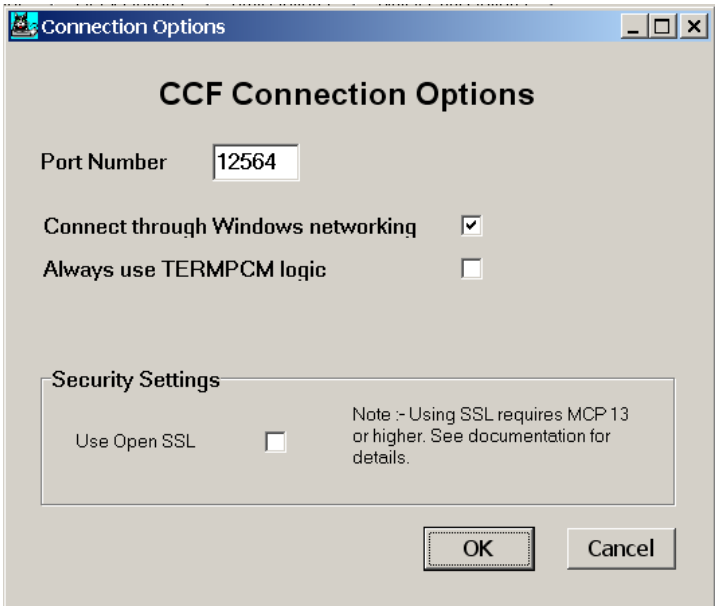


4. Now you need to set the properties for the connection that define it as a *Windows* networking connection. Click the **Properties** button.
5. Click the Connection Options button.

6. In the **Port Numbers** box, change the **CCF Port Number** to the value `12564`, as shown below:



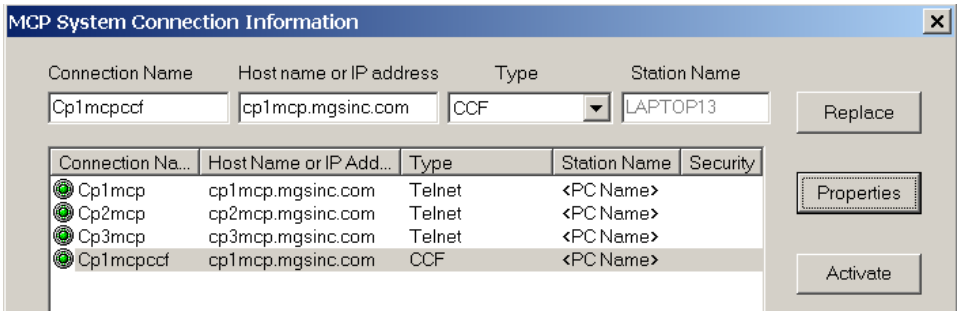
Check the option labeled, "`Connect through Windows Networking`", as shown:



7. Click **OK** to save your changes. This returns you to the **Set Properties Screen**.

8. Click **OK** to save your changes. This returns you to the **Connection Information Screen**. Your new connection is still selected.

9. Click **Activate**.



10. The screen will remain blank for several seconds. The status bar will read:

Trying <*host name*>, CCF Port 12564

If you have not connected to the MCP host using *Windows* networking before, or if you have changed your password at the MCP host, one of three things will happen:

a) If you are running *Windows 95/98/ME*, you will get a response that your password is invalid. The response will look like this:

In this case, you must connect to the MCP host using *Windows* first.[1] After successfully opening a share to the MCP from *Windows, and saving the password*, then you can attempt to reconnect using C.A.T.T.

b) If you are running *Windows 2000* or *XP*, you will receive a log in screen, which looks like this:

In the **Connect As** field, enter your *MCP usercode*. In the **Password** field, enter the password for that usercode. Then click **OK**. The log in sequence will continue.

c) If your site is using *Kerberos* for host access, and your Kerberos log in information is correct, you should automatically be logged in.

If the connection is refused, it means that *(a)* either the LOGON port is using a socket number other than 12564, or *(b)* the LOGONPCM is not enabled. You can check this by entering the ODT command:

NA CCF TCPIPPCM SHOW PORT LOGON

The response will read like this:

```
    6 LOGON Enabled
        Service = NXVIEWLOGIN
        Driver = 2686
        Input Handler = 2691
        Output Handler = 2689
        WindowSize = 32768
        Transport = TCPIP
        Socket = 12564
OffersPerCycle = 9
MaxOutput = 16000
MaxOffer = 1
Framing = Standard
CheckInterval = 5
BlockedTimeOut = 4
StationName = CCFPORT#
1Subport Awaitingoffer
```

Check the two lines that are in dark green in the above report. If the port LOGON is not enabled, use the ODT command:

NA CCF TCPIPPCM ENABLE PORT LOGON

to make the connection available. At some later time, update the file *SYSTEM/CCF/PARAMS so that the LOGON port is enabled automatically. Otherwise, you will need to manually enable the LOGON port after every halt/load.

If the socket number is different, change your settings in C.A.T.T. for the **CCF Port Number** (described above) to the same number given in the report. Then try the connection again.

If the connection times out, it means that your workstation cannot contact the MCP host. This may be due to a firewall problem, the host may be down, or your host name may not be correctly translated to the IP address of the MCP.

If the log in is successful, you will receive the MARC **Home** screen. You are now connected.

Note that during this process you never received the MARC "Welcome" screen. You were not asked to enter your MCP usercode and password to C.A.T.T. *Windows* networking took care of the entire operation.

Note also that once you complete a log on, your next connection from the same client machine will automatically log you on to the same usercode at the MCP host. You will not receive the **Enter Network Password** screen unless you *(a)* change your password at the MCP, or *(b)* tell *Windows* not to remember your password — an option not available on the **Enter Network Password** dialog.

If you want all of your CCF connections to use *Windows* networking, you can set the above options (on the **Properties** screen) at the **Edit Defaults** level. However, this means that all of your CCF connections will automatically log on with the same MCP usercode since they originate from the same *Windows* client machine. For those situations where you want to log on using a *different* MCP usercode from the same client machine, we have the two other CCF connection options. In this case connecting over CCF using TERMPCM provides the best alternative.

1.11.2 Connecting to the Host over CCF using TERMPCM Only

Connecting to your MCP Host from C.A.T.T. using the CCF TERMPCM is a two-step process. First, you must add information to the *SYSTEM/CCF/PARAMS file that defines the connection for C.A.T.T. Then you can create a CCF connection in C.A.T.T. and open a connection.

1.11.2.1 Required *SYSTEM/CCF/PARAMS Changes for TERMPCM Station

You must make the following changes to your *SYSTEM/CCF/PARAMS file before attempting a TERMPCM connection (that does *not* use *Windows* networking) through C.A.T.T.

1. The following port definition should be under the TCPIPPCM section:

```
ADD PORT JAVAP3001
    CHECKINTERVAL = 5,
    FRAMING       = STANDARD,
    MAXOUTPUT     = 4000,
    SERVICE       = JAVAT1,
    SOCKET        = 3001,
    STATIONNAME   = $DSS/JAVAP3001/#,
    TRANSPORT     = TCPIP;
```

Set the SOCKET number and STATIONNAME to values appropriate for your site. (See the section titled, "CCF Customization Options", below.) To follow these examples, use the values shown above.

2. Also the statement:

```
ENABLE PORT JAVAP3001;
```

3. If required, save your changes as *SYSTEM/CCF/PARAMS.
4. If required, to cause the changes to take effect, bring CCF down and then back up. The ODT command for bringing CCF down is:

```
NA CCF –
```

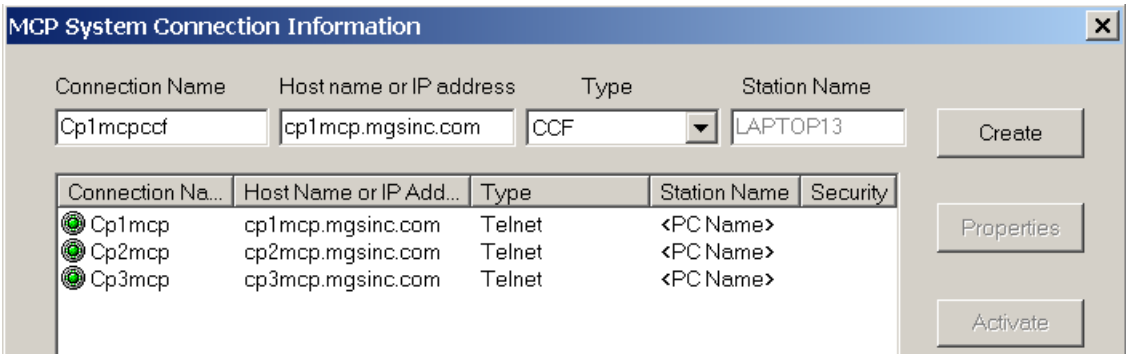
Wait several minutes for the complete CCF system to go down. *SYSTEM/CCF is the last to terminate. Once it is all down, enter the ODT command:

```
NA CCF +
```

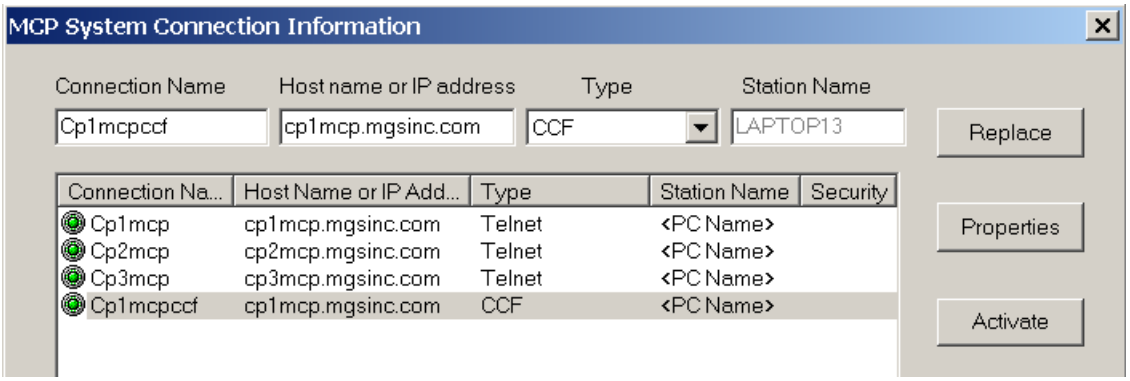
After a few seconds, CCF is back up and ready to go. Your JAVAP3001 port is now ready to accept connections.

1.11.2.2 Defining the TERMPCM Connection in C.A.T.T.

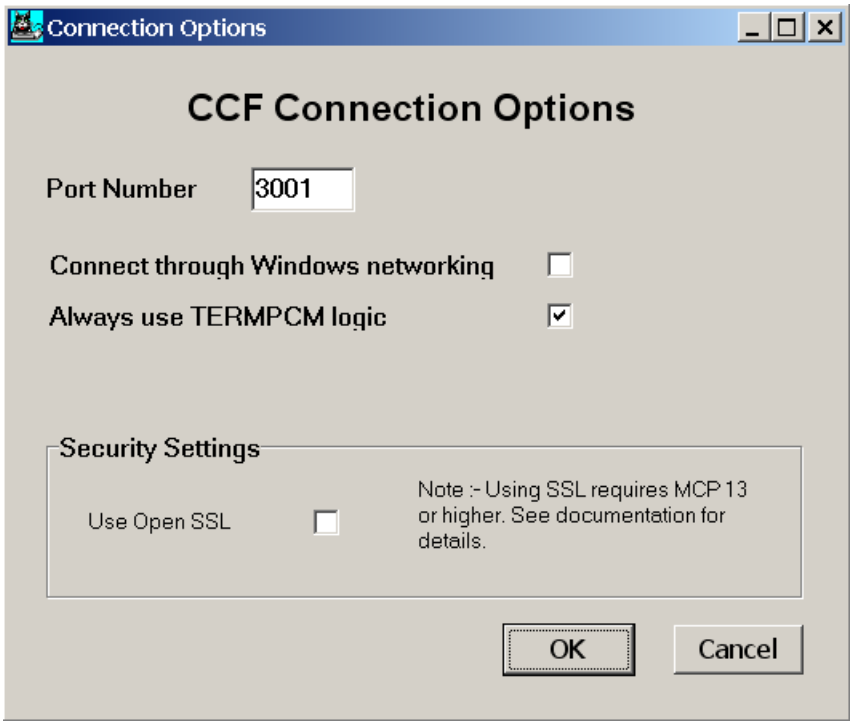
1. Goto the **Connection Information** screen.
2. Create a new connection and set the **Type** to CCF/TCPIP.
3. Ignore the **Station Name** or **Computer Name** field on the CCF connection.
4. Click the **Create** button to save the connection.



5. Now you need to set the properties for the connection that define it as a TERMPCM connection. Click the **Properties** button.



6. Click the **Connection** tab, if necessary.
7. Click the **Connection Options** button
8. In the **Port Numbers** box, change the **CCF Port Number** to match the SOCKET value specified in your JAVAP3001 port definition. In our example this is socket number 3001, so the same number must go here.



9. Make sure the option labeled, "Always use TERMPCM Logic" is checked, as shown.
10. Click **OK** to save your changes. This returns you to the **Properties** screen
11. Click **OK** to save your changes. This returns you to the **Connection Information** screen. Your new connection is still selected.

12. Click **Activate**.

13. You will see this message in the status bar:

    Trying <*host name*>, CCF Port 3001

14. If your CCF file, *SYSTEM/CCF/PARAMS, is correct, and if your socket port numbers match, you will receive a MARC log in screen. You are now connected to the MCP host.

If any information is not correct, the connection will either be refused or it will time out. If it is refused, this means that either the socket numbers do not match or the CCF port named CATT3 is not enabled. The socket number you are trying to open is not offered. Enter the following ODT command:

NA CCF TCPIPPCM SHOW PORT JAVAP3001

If the port is properly defined and enabled, the report should read thusly:

```
7 JAVAP3001 Enabled
    Service = JAVAT1
    Control Dialog = 0
    Driver = 28172
    Input Handler = 28177
    Output Handler = 28173
    WindowSize = 32768
    Transport = TCPIP
    Socket = 3001
    OffersPerCycle = 9
    MyName = 3001
    MaxOutput = 4000
    MaxOffer = 1
    MaxInput = 4000
    Framing = Standard
    CheckInterval = 5
    BlockedTimeOut = 4
    StationName = $IPAddress/JAVAP3001/#
    1 Subport Awaitingoffer
```

Check the values in the two dark green lines. If the port is not enabled, use the ODT command:

NA CCF TCPIPPCM ENABLE PORT JAVAP3001

to tell CCF to offer the port. Then modify your *SYSTEM/CCF/PARAMS file at some later time to permanently enable the port.

If the **Socket** number is incorrect, either change the CCF entry or change your **CCF Port Number** in C.A.T.T. (as described above). These numbers must match each other to establish a successful connection.

If, instead of the above, you get the report:

Port JAVAP3001 not found, scanning JAVAP3001

it means that the JAVAP3001 port is not defined to CCF. Repeat the instructions given above in the section, “Required Changes to *SYSTEM/CCF/PARAMS for a TERMPCM Station”. Then attempt the connection again.

If the problem is a timeout, it means that the MCP host cannot be reached for some reason (*e.g.,* firewall problem, host is down, the DNS name is not recognized, *etc.*)

1.11.3 Connecting to the Host over “raw” CCF

Connecting to your MCP Host from C.A.T.T. using CCF without the TERMPCM is also two-step process.

This procedure is actually more complicated, and the results are less desirable. The TERMPCM provides some features (particularly the ability to "break" streaming output) that "raw" CCF does not provide. Therefore, it is recommended that you use either the TERMPCM method or the *Windows* networking method when connecting through CCF. (The *Windows* networking method always uses the TERMPCM, even when you don't select it. It doesn't work with the "raw" connection method.)

1.11.3.1 Required Changes to *SYSTEM/CCF/PARAMS for a "raw" Connection

You must make the following changes to your *SYSTEM/CCF/PARAMS file before attempting a raw CCF connection through C.A.T.T.

1. Add the following device definition under the CUCIPCM section:

```
% Define CATTDEV for C.A.T.T. emulator users, exactly as follows.
        ADD DEVICE CATTDEV MYUSE=IO,SCREEN=TRUE,CCENABLE=TRUE,%
                                MAXINPUT=16384,MAXOUTPUT=16384,% Do not exceed.
                                MARCCAPABLE=TRUE,% NDLHEADER=TRUE,%
                                WRAPAROUND=FALSE;%
% End CATTDEV.
```

   Be sure to specify "NDLHEADER=TRUE".

2. Add the following port definition under the TCPIPPCM section:

```
% Define CATT1 exactly as shown. You can change the SOCKET
% and STATIONNAME settings to match local requirements.
        ADD PORT CATT1 TRANSPORT=TCPIP,SOCKET=47038,CHECKINTERVAL=5,
                       DEVICE=CATTDEV, SERVICE=MARC,
                       STATIONNAME=$IPADDRESS/#, FRAMING=STANDARD;
% End CATT1.
```

3. Add the statement:

```
        ENABLE PORT CATT1;
```

4. Save your changes as *SYSTEM/CCF/PARAMS.

5. To cause the changes to take effect, bring CCF down and then back up. The ODT command for bringing CCF down is:

NA CCF -

Wait several minutes for the complete CCF system to go down. *SYSTEM/CCF is the last to terminate.

Once it is all down, enter the ODT command:

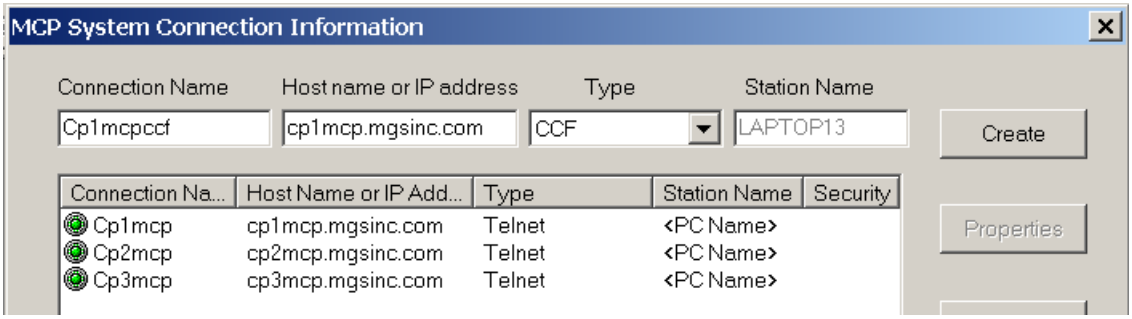
NA CCF +

After a few seconds, CCF is back up and ready to go. Your CATT1 port is now ready to accept connections.

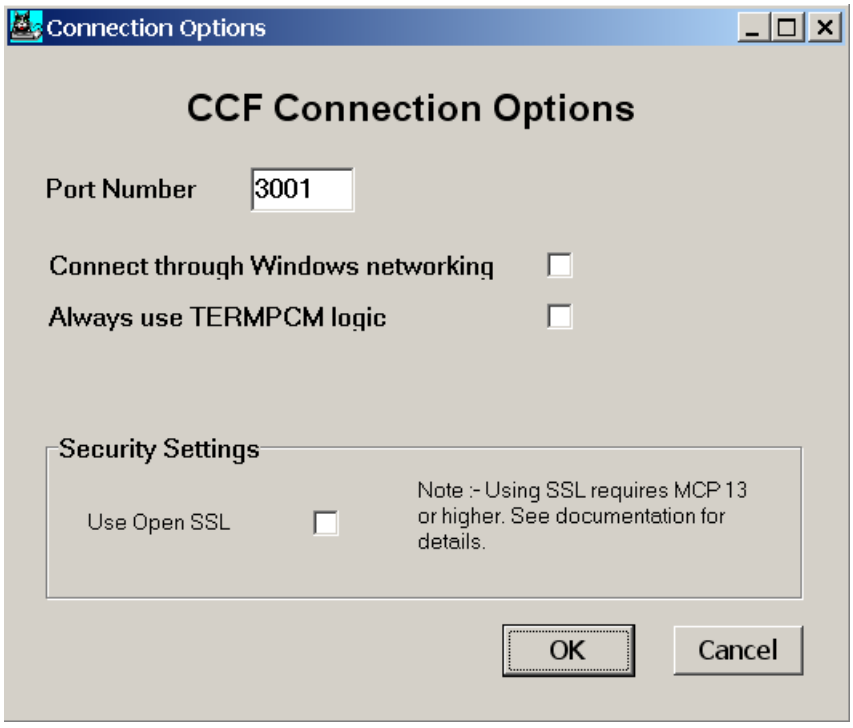
1.11.3.2 Defining the CCF Connection in C.A.T.T.

Once you have the CCF changes in place on the MCP host, define the CCF connection in C.A.T.T.

1. Go to the **Connection Information** screen.
2. Create a new connection and set the **Type** to CCF.
3. Ignore the **Station Name** field on the CCF connection.
4. Click the **Create** button to save the connection.



5. Click the **Properties** button.
6. Click the **Connection Options** button.
7. Uncheck the **Always use TERMPCM Logic** checkbox as shown:



8. Click the **OK** button. This will return you to the **Properties** screen.
9. Click the **OK** button. This will return you to the **Connection Information** screen.
10. Click the **Activate** button to open the connection.
11. You should now receive the MARC log on screen. You are connected to the host.
12. If you are unable to connect, follow the diagnostic suggestions given above for TERMPCM connections. Substitute the port name CATT1 for JAVAP3001 in those directions.

1.11.4 CCF Customization Options

As noted in the comments above, you can customize your CCF connection on the MCP host to accommodate certain site preferences. These changes must be made in the *SYSTEM/CCF/PARAMS file on the MCP host *first*. Then you can make corresponding changes in your C.A.T.T. configuration to match the CCF PARAMS file.

You can customize the port name, the port number, and the method for assigning station names.

1.11.4.1 Changing the CCF Port Name

The port names CATT1 and JAVAP3001 are purely arbitrary. You can name these ports anything you want.

1.11.4.2 Changing the CCF Port Number

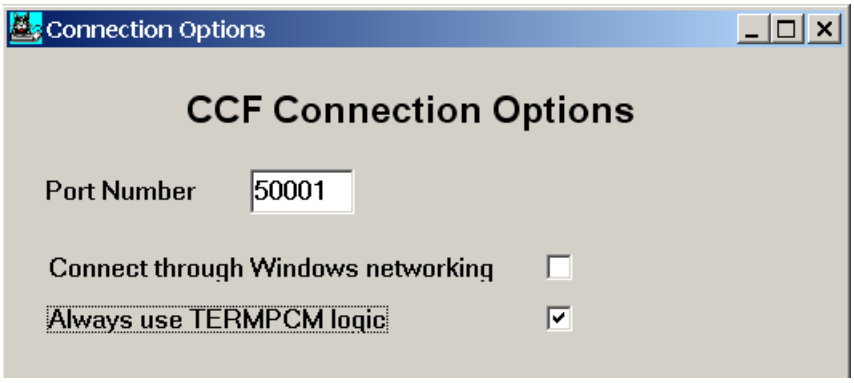
The port numbers used in C.A.T.T. must match those used by the MCP. Changing a port number is a two-step process.

1. Change the port number in the definition of the port CATT1, JAVAP3001, or LOGON on the MCP. To make the change permanent, change it in the *SYSTEM/CCF/PARAMS file. For example, to use the port number 50001 for *Windows* networking, change the entry for PORT LOGON to read thusly. (The change is in bold type.)

```
ADD PORT LOGON TRANSPORT=TCPIP,SOCKET=50001,CHECKINTERVAL=5,
               SERVICE=NXVIEWLOGIN,STATIONNAME=CCFPORT#, FRAMING=STANDARD,
               MAXOUTPUT=16000;
```

Then bring CCF down and back up for the changes to take effect.

1. Change the port number in C.A.T.T. If you want to change the port number for just the one connection, go to the **Connection Properties** screen for that connection. If you want this to be the default for all of your CCF/TCPIP connections, go to the **Default Properties** screen instead.
2. Select the **Connection** tab.
3. Click the **Connection Options** button.
4. Enter your desired port number in the field labeled CCF Port Number. In this case, enter 50001.
5. Click **OK** to save the change. You will be taken back to the **Properties** screen.
6. Click **OK** to save the change. You will return to the **Connection Information** screen.
7. On the **Connection Information** screen, click **Activate** to open your CCF connection. If both port numbers match, you will connect normally and begin a MARC session.



If you want to change the port number on the system without bouncing CCF, you can use these ODT commands:

```
NA CCF TCPIPPCM DISABLE PORT LOGON
```

This shuts down the LOGON port so you can make changes to it. The rest of CCF is not affected.
NA CCF TCPIPPCM MODIFY PORT LOGON SOCKET = 50001

This command changes the port number to 50001.

NA CCF TCPIPPCM ENABLE PORT LOGON

This re-enables the port using the new number. C.A.T.T. users can now connect using the new port number.

Changes made in this manner are lost when CCF goes to EOJ (or the system is halt/loaded). To make the changes permanent, you must edit the *SYSTEM/CCF/PARAMS file.

1.11.4.3 Changing the Method of Assigning CCF Station Names

You can use any method for assigning station names defined in the CCF documentation (supplied by Unisys). You can also set the station name through C.A.T.T. You can set the STATIONNAME attribute of your port definitions to the values desired. If you are unfamiliar with defining station names for CCF connections, see the section titled, "Control How CCF Stations Are Named" in the CCF user documentation provided by Unisys.[2]

1.11.4.4 About NDLHEADERs

For true T27 emulation on a "raw" CCF connection, the device definition for CATTDEV, described above, must include:

NDLHEADER=TRUE

If you omit this setting, C.A.T.T. will function for formatted screens, such as MARC screens. However, unless you use scroll mode, CANDE page mode editing and other functions will not operate properly. CANDE makes heavy use of the NDL header information. If the emulator does not receive this information, it does not know where to position the output on the screen. The symptoms will be that page mode outputs will appear one or more lines lower on the screen.

You can get around this problem by turning on scroll mode (?+S). The best solution, however, is to set NDLHEADER=TRUE in the device definition, as specified above.

NDLHEADER is not used with TERMPCM or *Windows* networking. In that case, C.A.T.T. gets the formatting information from the TERMPCM header instead.

1.12 Changing Connection Types

You can change a connection from Telnet to CCF by simply changing its **Type** in the **Connection Information** screen. If the connection is open, the change takes effect when you disconnect and reconnect that connection.

You can also change a connection between any of the CCF connection methods. The **CCF Port Number** determines which CCF Port entry C.A.T.T. connects to. The defaults are:

- 12564 = LOGON (*the CCF connection used with Windows networking*)
- 3001 = JAVAP3001 (*the CCF connection with TERMPCM support but not Windows networking*)
- 47038 = CATT1 (*the "raw" CCF connection*)

The options you select on the **Connect Options** screen tell C.A.T.T. what interface to expect: *Windows* networking, TERMPCM, or "raw". Your settings in C.A.T.T. must match those defined in the MCP file *SYSTEM/CCF/PARAMS. If they do not, you will not connect successfully as you intended.

If you need to connect to the MCP through *Windows* networking from *Windows 95/98/ME*, do the following:

a) Click **Start** and then **Run**.

b) In the **Open** field, type the name of a share available on your MCP system. For example:

\\cp3mcp_home_

c) *Windows* will give you the option to enter a password. Successfully completing this step will open the share. Then you will be able to access your MCP host from C.A.T.T. using the *Windows* networking option.

[2] Unisys Corporation, *Custom Connect Facility Administration and Programming Guide*, MCP Release 12.0, April 2008, document number 43103266-008 on the Unisys documentation CD.

2. C.A.T.T. Program Options

2.1 Introduction

This chapter describes all of the option and preference settings for C.A.T.T. Options that apply to an individual connection are discussed first. Those that apply to the entire program are discussed afterward.

2.2 Connection Level Options

The following is a page-by-page description of the individual connection level options. All of them are controlled through the **Properties** screen.

Options set on the **Default Properties** screen apply to all of the individual connections unless overridden.

Options set on an individual **Properties** screen apply only to that individual connection. They override any default setting. For radio boxes and check boxes, settings overriding the defaults are shown on the screen in blue type instead of black type.

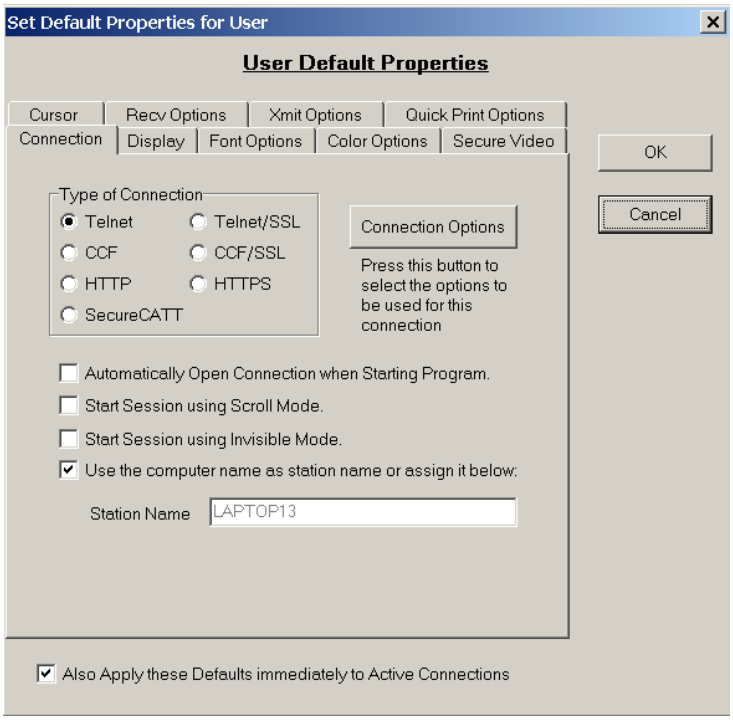
Unless explicitly noted otherwise, the **Default Properties** screen and the individual connection **Properties** screens handle the same options. The examples and discussions are based on the **Default Properties** screen since that is where you will typically make a change.

Note. Options may be added and/or moved from one page to another in different releases. If you cannot find a particular option, check the other pages on the **Properties** screen.

Instructions for accessing the **Default Properties** screen and the individual connection **Properties** screens are provided in the chapter titled, “Installing and Configuring C.A.T.T.” To access **Default Properties**, choose **Preferences** from the main menu, and then **Change Default Properties**.

> **Note.** If you are using a Master Configuration File, and it cannot be updated from your PC, some options will be unavailable. These are “grayed out” on the **Properties** screens.

2.2.1 The Connection Page



The following options are handled by selecting the **Connection** tab on a **Properties** screen:

- Type of Connection
- Auto-starting Sessions
- Starting Sessions in Scroll Mode
- Starting Sessions in Invisible Mode
- Using the computer name as the station name
- The station name

2.2.1.1 Type of Connection

This radio box duplicates the function of the **Type** column on the **Connection Information** screen. The selections are:

- **Telnet** a Telnet connection.
- **Telnet/SSL** a secure (SSL) Telnet connection (MCP13 or higher).
- **CCF** a CCF connection.
- **CCF/SSL** a secure (SSL) CCF connection (MCP13 or higher).
- **HTTP** an HTTP Tunneling (IIS) connection.
- **HTTPS** an HTTP SSL Tunneling (IIS) connection.
- **SecureCATT** a SecureCATT Server (AES) connection.

Telnet is the default choice in the program. If you select any other connection type in the **Default Properties** screen, your default for all connections will be that type instead of Telnet. If you are using anything other than standard Telnet, you must configure your MCP system as described in their individual sections in the “Installing and Configuring C.A.T.T.” chapter.

2.2.1.2 Automatically Open Connection when Starting Program

This check box is best used at the individual connection level rather than at the defaults level.

When C.A.T.T. first starts up, it checks each defined connection. If this box is checked for one or more connections, the specified connections are opened automatically.

If this box is not checked for any connection, or at the default level, no connections are automatically opened. Instead, the **Connection Information** screen is displayed and you select the connection(s) you want to open.

2.2.1.3 Start Session using Scroll Mode

Scroll mode is used predominantly in CANDE and SYSTEM/EDITOR text editing. It causes output lines to scroll upward from the bottom of the screen.

You can enter scroll mode at any time by typing the command:

?+S

You can exit scroll mode at any time by typing the command:

?-S

If you check the box, "Start Session using Scroll Mode", your connection will automatically start in scroll mode, so you won't have to enter the "?+S".

> **Note.** Scroll mode is suppressed for output that uses forms. Scroll mode is only used with plain text output.

2.2.1.4 Start Session using Invisible Mode

Invisible mode is used in formed screens, especially those generated by LINC. If your screen is in invisible mode, transmitting data does not erase the line below the transmit point. This enables the application to reuse the same screen form without repainting it. Only the data is sent in the system's response.

You can enter invisible mode at any time by typing the command:

?+I

You can exit invisible mode at any time by typing the command:

?-I

If you check the box, "Start Session using Invisible Mode", your connection will automatically start in invisible mode, so you won't have to enter the "?+I".

2.2.1.5 Use the Computer Name as the Station Name

See the discussion for **Station Name**, below, for details on using this option.

2.2.1.6 Station Name

COMS requires that each user station have a unique <*station name*>. In a CCF connection, the station names can be generated by a formula specified in the *SYSTEM/CCF/PARAMS configuration file, but can also send the station name to the host. In the case of Telnet, the client program must send a station name to the host. MCP Telnet then uses that station name according to various options set at the host. This station name is passed on to COMS.

Using a default Telnet configuration, the <*station name*> passed to COMS will be:

IP<your IP address using underscores>/<station name>

For example, if your IP address is 192.168.31.1 and the station name you supply in the **Station Name** field of the **Properties** screen is WXCIC1, then the default station name passed to COMS by MCP Telnet is:

IP192_168_31_1/WXCIC1

It is extremely critical that you do not give COMS a duplicate station name. If anyone tries to open a new connection using a station name that is already in use, either that connection will be denied, or the active one will be broken and the new one allowed. COMS will not permit two identical station names to be active. To account for this, when using the computer name as the station name, C.A.T.T. will append an underscore followed by a unique number to the name, starting with the second connection to the same host. So using the computer name as the station name will not cause a conflict on the host.
The **Station Name** field in C.A.T.T. enables you to select specific station names for your connections. This field and the check box above it — "Use Computer Name as the Station Name" — work together in the following manner.

Station Name Option #1: Use the PC Name as the Default

• Check the box, "Use Computer Name as the Station Name", at the default level.

C.A.T.T. constructs a default "PC name" by taking the PC's name and reducing it to just letters, numbers, and underscores. This becomes the default <*station name*> for all connections.

The **Station Name** field is not accessible when this option is checked. In addition, the **Station Name** column on the **Connection Information Screen** is also inaccessible when this option is checked.

This is the program default action. This option is recommended if you are deploying C.A.T.T. from servers and you have the following Telnet option set on your MCP host:

```
NA TELNET CONFIG STATIONNAME SHORTNAMES = TRUE
```

Station Name Option #2: Define a Default Station Name

• Uncheck the box, "Use Computer Name as the Station Name", at the default level.

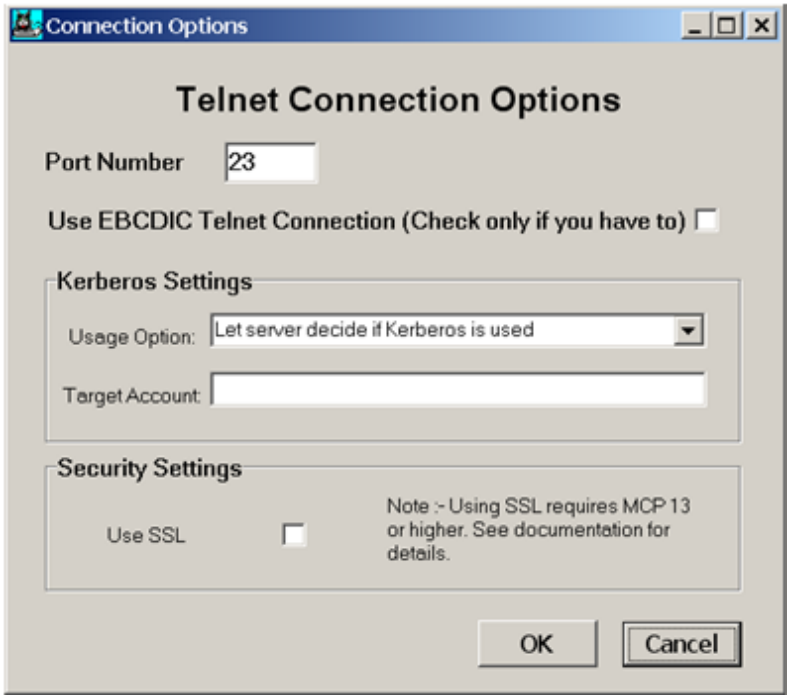
When "Use Computer Name as the Station Name" is not checked, the **Station Name** field is accessible. It is set to a default name derived from your PC's name. Change this name to anything you like that is composed of letters, digits, underscores, and slashes. Your entry will become the default **Station Name** for all of your connections. The **Station Name** column on the **Connection Information** screen will read "<default name>" for each connection that uses the station name you've specified at the default level.

When "Use Computer Name as the Station Name" is not checked, the **Station Name** field on the **Connection Information** screen is also accessible. You can use that to define unique names for your different connections, as needed.

Do not use this option when deploying C.A.T.T. from servers if you are also using the SHORTNAMES option in Telnet on your MCP host. \

2.2.2 The Connection Options Pages

2.2.2.1 Telnet Connection Options



The **Port Number** tells C.A.T.T. which port to use when opening a connection. This must match the port number used on the MCP. If not, your connection attempt will fail with a "timeout" error.

- **Note** - The standard port number for Telnet is `23` and for Secure Telnet is `992`. By default, the MCP offers access to Telnet on port `23`, but must be configured to use Secure Telnet. You can change to another port number. Instructions for configuring your MCP host system to use a different port number are provided in the article, "Changing the Port on the *new* Telnet".[1] *After* you change the port number on your MCP system, choose the same number in C.A.T.T.'s **Telnet Port Number** field in order to establish a connection.

The **Use EBCDIC Telnet Connection** option provides backward compatibility for old systems.

If you are using a pre-SSR 44.2 system, or if you are still using the `DSSSUPPORT` version of Telnet, the data is sent in EBCDIC instead of ASCII. When you connect using standard defaults, you'll receive "garbage text" on your screen instead of a MARC log on screen. When this is the case, check this option.

If you are using current software (SSR 44.2 and later), *and* you are using the `TELNETSUPPORT` version of Telnet (highly recommended), do *not* check this option. The MCP is sending you data in ASCII.

If all of your hosts are using old software, you can check this option at the default level. Otherwise, only check it for the individual connections that require it.

The **Kerberos Usage Option** controls how C.A.T.T. responds when Telnet prompts for Kerberos support. You must select one of the options from the drop-down list. The default is to let the host decide whether Kerberos is used or not.

The options have the following meanings:

Let server decide if Kerberos is used

This is the default selection.

If MCP Telnet prompts for Kerberos authentication, C.A.T.T. will respond that it is supported. C.A.T.T. will then attempt to perform the authentication.

If MCP Telnet does not prompt for Kerberos authentication, no special action is taken. The user receives a standard MARC "Welcome" log on screen.

Refuse use of Kerberos

If MCP Telnet prompts for Kerberos authentication, C.A.T.T. responds that it does not support Kerberos authentication. MCP Telnet can decide whether to route the user to the MARC "Welcome" screen or to break the connection. The decision is based upon the Kerberos options you've set on your MCP system.

Warn if Kerberos is not used

If Kerberos authentication does not succeed, and the MCP does not break the connection, C.A.T.T. warns the user that Kerberos was not used to access the MCP. The user must OK the warning.

Prompt if Kerberos is not used

If Kerberos authentication does not succeed, and the MCP does not break the connection, C.A.T.T. displays a prompt to the user. The user can choose to continue with the connection or to cancel the connection. If the user chooses to continue, he is routed to the MARC "Welcome" screen.

Kill connection if Kerberos is not used

If Kerberos authentication does not succeed, C.A.T.T. breaks the connection. If MCP Telnet does not prompt for Kerberos authentication, C.A.T.T. also breaks the connection.

You can set this option at the connection level or at the defaults level. The value set at the default level applies to all of your connections.

The **Kerberos Target Account** field *must* be filled in to use Kerberos, and the format must be exactly correct. The standard format for a **Kerberos Target Account** is:

host/<target machine name>@<DOMAIN NAME>

The word host is required, and the forward slash is required, even if you are coming from a *Windows* machine.

The <*target machine name*> is the host name of the MCP host you want to access. It must have the full host and domain name of the target MCP machine. It cannot be an IP address. Moreover, it must be spelled entirely using lower-case letters.

The <*DOMAIN NAME*> identifies the domain where this host resides. The <*DOMAIN NAME*> must be specified entirely in upper case letters.

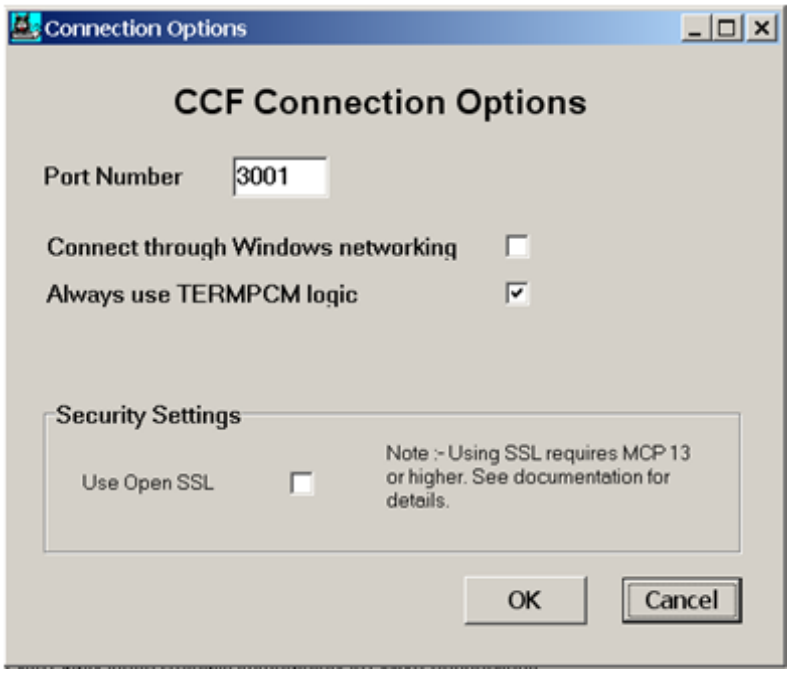
An example Kerberos Target Account name for the MCP machine cp2mcp located in domain mgsinc.com is:

host/cp2mcp.mgsinc.com@MGSINC.COM

C.A.T.T. does not edit or examine the string you provide as the **Kerberos Target Account**. It simply passes it, as provided, to the *Windows* procedure that issues the Kerberos tickets. If the string you provide does not match an authorized MCP server at your domain, C.A.T.T. will return a connection error.

The **Use SSL** checkbox tells C.A.T.T. to use SSL encryption when establishing the connection. The MCP system must be configured to use this encryption. It is also not available on pre-MCP 13 release levels.

2.2.2.2 CCF Connection Options



The **Port Number** tells C.A.T.T. which port to use when opening a connection. This must match the port number used on the MCP. If not, your connection attempt will fail with a "timeout" error.

- There is no standard port number for CCF. The program default is 3001, which is in the default CCF param file. To choose your own default, update the *SYSTEM/CCF/PARAMS file on your MCP host as described in the section titled, "Changing the CCF Port Number" in the "Installing and Configuring C.A.T.T." chapter. Then enter the same number in the **CCF Port Number** field here. Set it on the **Default Properties** screen if you want it to apply to all of your CCF connections by default. Set it on a particular connection's **Properties** screen if you only want it to apply to a single connection.

The **Connect through Windows Networking** option instructs C.A.T.T. to validate the credentials of the user through *Windows* networking. If the action is successful, the MARC log on sequence is avoided, and the user goes directly to a MARC Home page. If the action is unsuccessful, the user receives a network error message box and cannot access the MCP host.

For details regarding this option, see the section titled, "Connecting to the Host over CCF using *Windows* Networking" in the "Installing and Configuring C.A.T.T." chapter.

The **Always use TERMPCM Logic** option provides the best alternative CCF connection if you choose to *not* use *Windows* networking. It provides standard access to the MCP host through the MARC log on screen.

For details regarding this option, see the section titled, "Connecting to the Host over CCF using TERMPCM Only" in the "Installing and Configuring C.A.T.T." chapter.

Note. The "Always use TERMPCM Logic" option is only relevant when the "Connect through Windows Networking" option is *not* checked. If "Connect through Windows Networking" is checked, TERMPCM logic is always used (because the *Windows* networking option does not work without it!).

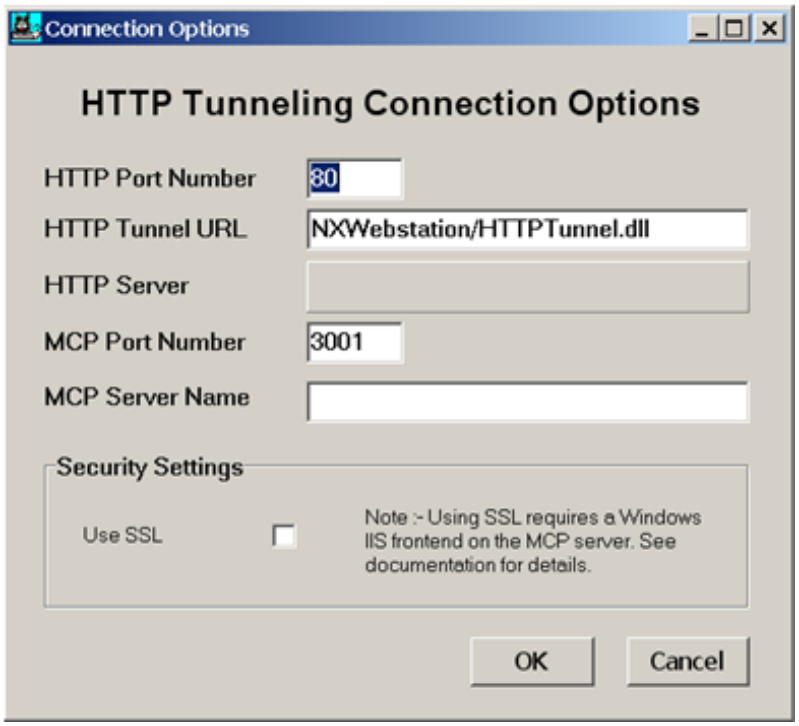
The **Use Open SSL** checkbox tells C.A.T.T. to use SSL encryption when establishing the connection.

Note - As of MCP 13, Unisys has implemented Open SSL for CCF connections. When checked, this option allows all communication, both to and from C.A.T.T., to use Open SSL encryption. To set up the Unisys CCF product to use Open SSL, see the Unisys Custom Connect Facility Administration and Programming Guide. The following is an example of how to set up a CCF connection for Open SSL:

```
ADD PORT SSL3002
      CHECKINTERVAL   = 5,
      FRAMING         = STANDARD,
      MINOFFER        = 2,
      MAXOFFER        = 5,
      MAXOUTPUT       = 16000,
      SERVICE         = JAVAT1,
      SOCKET          = 3002,
      SSLSECUREMODE   = TRUE,
      SSLKEYCONTAINER = CCF_PORT3002,
      STATIONNAME     = $DSS/SSL3002/#,
      TRANSPORT       = TCPIP;
ENABLE PORT SSL3002;
```

The “SSLKEYCONTAINER” attribute is the name of the SSL certificate that has been generated for this purpose. See the Unisys Security Administration Guide for more information.

2.2.2.3 HTTP Tunneling Connection Options



The **HTTP Port Number** tells C.A.T.T. which port to use when opening a connection. This must match the port number used on the IIS server. If not, your connection attempt will fail with a "timeout" error. Port 80 is the default port offered by the IIS server.

The **HTTP Tunnel URL** tells C.A.T.T. the name and directory of the tunneling DLL on the IIS server. This must match the location on the IIS server. **NXWebstation/HTTPTunnel.dll** is the default location when installing the standard Unisys tunneling software on the IIS server.

The **HTTP Server** is a display only field to indicate the IIS server name you entered on the **Connection Information** screen.

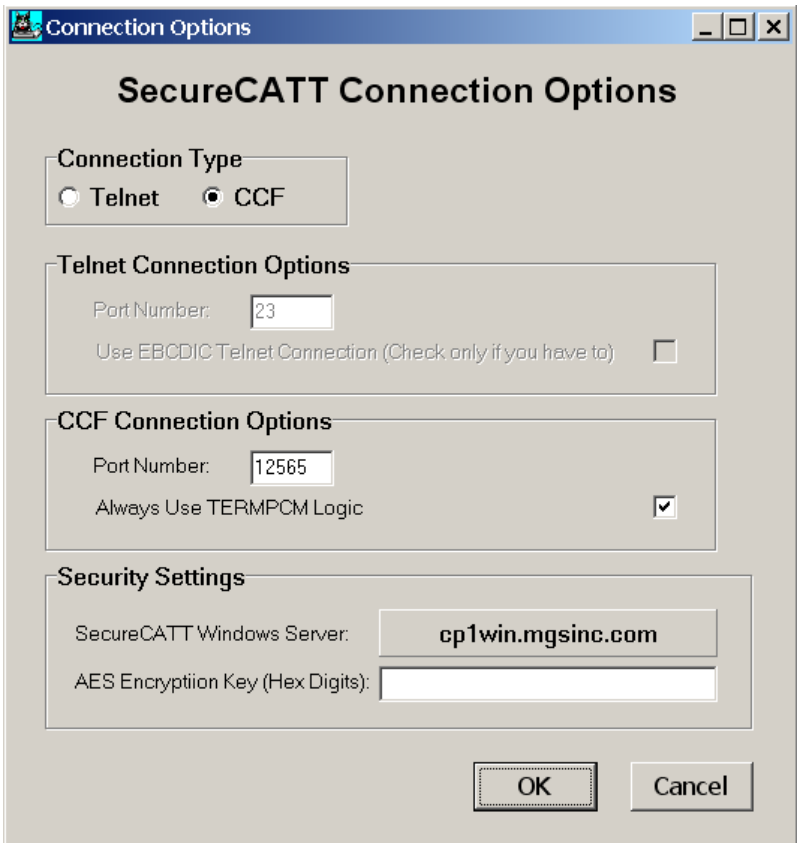
The **MCP Port Number** tells C.A.T.T. which CCF port to use when opening a connection. This must match the port number configured on the Widows system that hosts the IIS server to which you are connecting. Port 3001 is the default port used.

The **MCP Server Name** tells C.A.T.T. which MCP server to use when opening a connection. This must match the server name exactly as configured on the Widows system that hosts the IIS server to which you are connecting.

The **Use SSL** checkbox tells C.A.T.T. to use SSL encryption when establishing the connection.

> **Note** that an IIS server can be provisioned to handle multiple **MCP Port Number** and **MCP Server Name** combinations. The specification-pair configured into C.A.T.T. must match exactly what is configured on the IIS Server. Use **START | SETTINGS | CONTROL PANEL | HTTP WEB ENABLER** on the IIS server to configure these Port/Name pairs.

2.2.2.4 SecureCATT Connection Options



The **Connection Type** tells C.A.T.T. the type of connection to use when connecting to the SecureDATT Server. This also determines the type of connection to the destination MCP host. The only choices are Telnet and CCF.

The **Telnet Port Number** tells C.A.T.T. which port to use when opening a Telnet connection. This must match the port number used on the SecureCATT server. Port 23 is the default port offered by the SecureCATT server.

The **Use EBCDIC Telnet Connection** option provides backward compatibility for older systems.

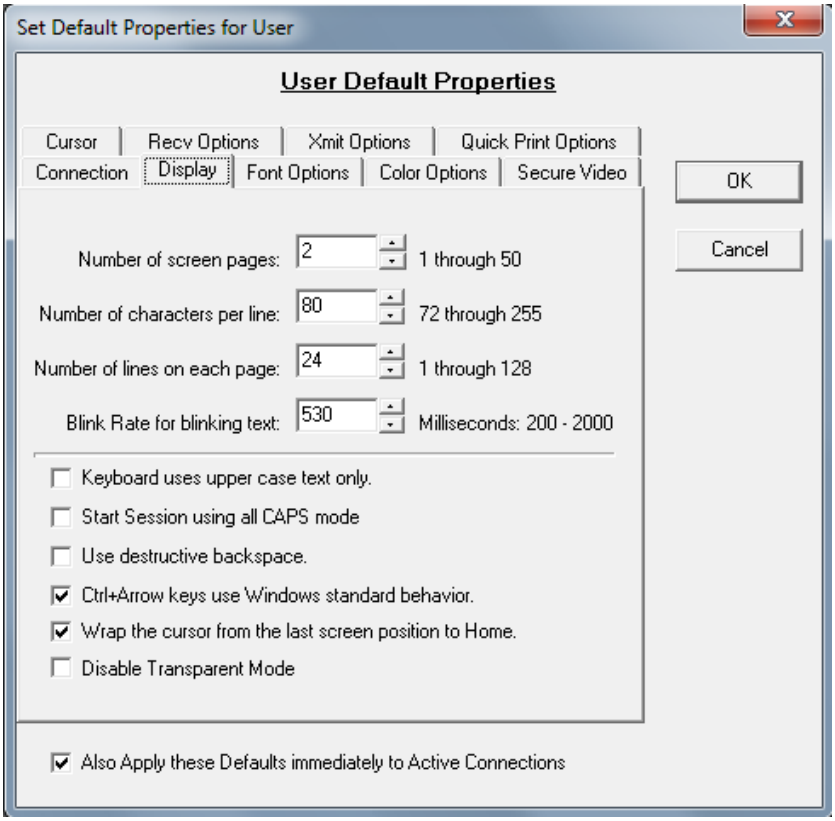
The **CCF Port Number** tells C.A.T.T. which port to use when opening a CCF connection. This must match the port number used on the SecureCATT server. Port 12565 is the default port offered by the SecureCATT server.

The **Always use TERMPCM Logic** option provides standard access to the MCP host through the MARC log on screen.

The **SecureCATT Windows Server** text box is a display only field to indicate what SecureCATT server was selected on the Connection Information screen.

The **AES Encryption Key** is the text box where you enter the encryption key. If this field is left blank, SecureCATT will use a default encryption key that is hard-coded into both C.A.T.T. and the SecureCATT Server programs.

2.2.3 The Display Options Page



The following options are handled by selecting the **Display Options** tab on a **Properties** screen:

- Number of screen pages
- Number of characters per line
- Number of lines per page
- Blink Rate for blinking text
- Upper case only option
- Start Session using all CAPS mode
- Destructive backspace option
- Behavior of the **{ctrl}+{arrow}** keys
- Wraparound option (from the end of the screen to **Home**)
- Disable Transparent Mode

The screen image above shows the defaults for these options as delivered in the program. Every option on this page can be changed at any time, either at the default level or at the individual connection level. The changes take effect *immediately*, even on active connections!

2.2.3.1 Number of Screen Pages

This number determines the number of screen pages available. The default is set at 2 pages because that is the traditional standard. You can have up to 50 screen pages per connection.

You can change the number of screen pages for a connection at any time, even on an active connection. If you increase the number, additional blank pages are inserted. The pages are always numbered, and the

numbers are fixed. So if you have 20 pages and increase that to 30, the blank pages will appear after page 20 and before page 1.

If you decrease the number of pages, the screen pages with the highest numbers *will be discarded*. **The data on those pages will be lost.**

If you have the **Property Bar** displayed on your screen (**View | Property Bar** on the main menu), you can change the number of screen pages on the current session without going to the **Properties** screen. Edit the number in the **Max Pages** field.

2.2.3.2 Number of characters per line

This number specifies the number of columns in a screen image. It can range from 72 through 255. The default is the standard of 80 columns. You can change the value at any time, even on an active session. Changes take effect immediately.

If you are working in CANDE, you should use the TERM command to set the "line width" of your CANDE session to match your number of columns per line. For example, suppose you want to view a 132-column printer backup file without continuation lines. You can do this in two steps:

1. Change the **Number of characters per line** on your active connection to 132.
2. Enter the CANDE command:

```
TERM LINE 132
```

Now list the 132-column file, and you will see true 132-column lines. To switch back to 80-column viewing and editing, repeat the above two steps entering values of 80.

If you have the **Property Bar** displayed on your screen (**View | Property Bar** on the main menu), you can change the number of columns per line on the current session without going to the **Properties** screen. Edit the number in the **Line Width** field.

If the number of columns chosen cannot fit on the physical screen using the font selected, the page window is scrolled horizontally.

2.2.3.3 Number of lines on each page

This number specifies the number of lines in a logical screen page. It can range from 1 through 128. The default is the traditional standard of 24 lines. You can change the value at any time, even on an active session. Changes take effect immediately.

If you are working in CANDE, you should use the TERM command to set the page size of your CANDE session to match your number of lines setting. For example, if you want to view 60 lines of a file in a single screen, you can do this in two steps:

1. Change the **Number of lines on each page** on your active connection to 60.
2. Enter the CANDE command:

```
TERM PAGE 60
```

Now when you list a file, you will see 60 lines per logical page of output. Repeat these steps entering the number 24 to switch back to normal viewing.

If you have the **Property Bar** displayed on your screen (**View | Property Bar** on the main menu), you

can change the number of lines per page on the current session without going to the **Properties** screen. Edit the number in the **Lines/Page** field.

If the number of lines specified cannot fit on the physical screen using the font selected, the page window is scrolled vertically.

2.2.3.4 Blink Rate for blinking text

This number specifies the frequency at which blinking text blinks on your screen. The value is used for blinking fields, the blinking cursor (if used), and blinking messages in the status bar. The default is once every 500 milliseconds (½ second).

You can speed up the rate to once every 200 milliseconds or slow it down to once every 2 seconds.

2.2.3.5 Keyboard uses upper case text only

This option is provided for very old applications that do not accept user input in lower case.

Check the box to limit keyboard input to upper case text only. If the user types lower case text, it is automatically upcased and appears so in the display. Text received from the host is unaffected.

2.2.3.6 Start Session using all CAPS mode

This option is provided for users who want the default text to be all uppercase.

Check the box to default keyboard input to uppercase text only. However, if the user wants to type lowercase, pressing the shift key will change the letter to lowercase. Text received from the host is unaffected. Note that the "Caps Lock" key is ignored completely.

2.2.3.7 Use destructive backspace

Through this option you specify the behavior of the backspace key.

Check this box if you want "destructive backspace". This means that each time you backspace *using the backspace key*, the character under the cursor is automatically erased.

Uncheck this box if you do not want a destructive backspace. In this case, the backspace key functions like the back arrow key. It moves the cursor back one space, but the character under the cursor remains unchanged.

2.2.3.8 Ctrl+Arrow keys use Windows standard behavior

In many *Windows* applications, the combination keystroke **{Ctrl}+{Right Arrow}** moves the cursor to the start of the next "word" on the screen. Similarly, **{Ctrl}+{Left Arrow}** moves the cursor to the start of the previous "word" on the screen. In both cases, a "word" is a token that begins with a letter or a digit.

In the T27 environment, these two key combinations have a different function. **{Ctrl}+{Right Arrow}** advances to the next screen page. **{Ctrl}+{Left Arrow}** goes to the previous screen page.

The page advance/backup feature is provided in C.A.T.T. through the **{Page Up}** and **{Page Down}** keys on the keyboard. Therefore, duplicating this behavior using the **{Ctrl**} and arrow keys is redundant. For anyone who does a lot of editing in *Microsoft Word*, it is far more habitual to expect the **{Ctrl}**+arrow keys to move the cursor to the next or previous word instead.

Checking this option enables the *Microsoft Word*-like behavior. The **{Ctrl}**+arrow key combinations jump from word to word on the screen. This is the default behavior.

Unchecking this option enables the standard T27 behavior of moving from one screen page to another.

2.2.3.9 Wrap the cursor from the last screen position to Home

This option controls what happens when the cursor gets to the top or bottom of the screen and needs to move another line in the same direction.

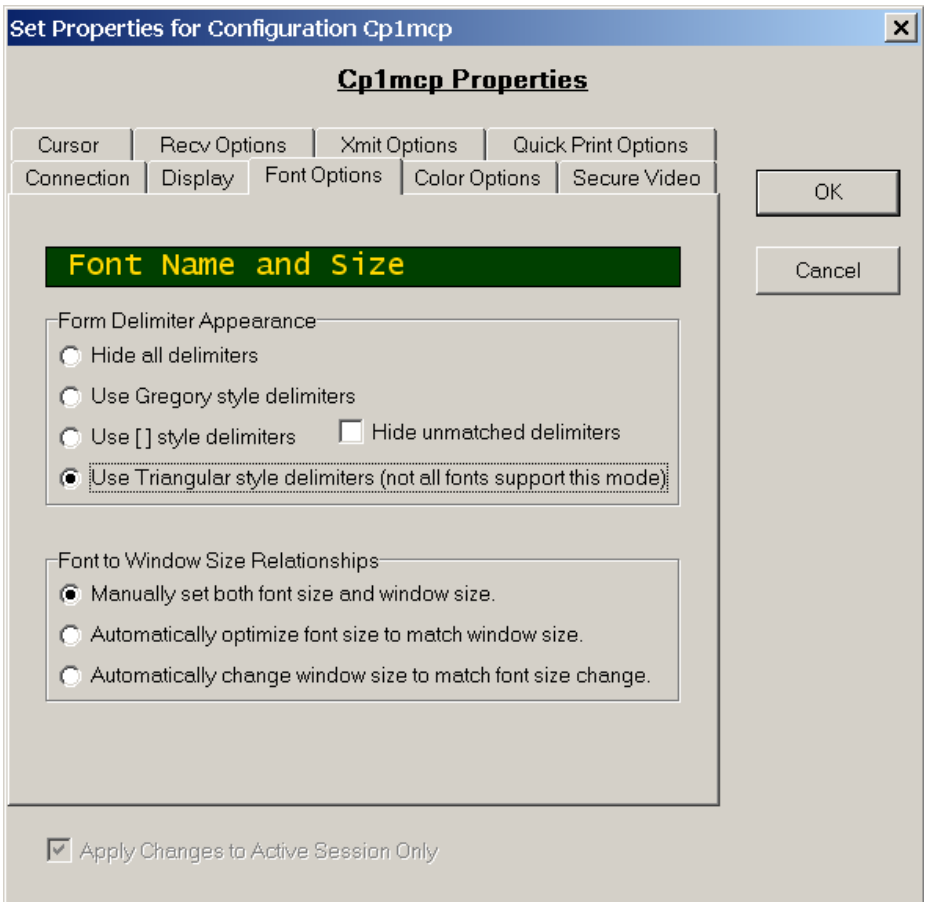
If checked, the cursor will automatically wrap from the bottom of the page to the home position (and vice versa).

If not checked, the cursor will not move if the action would cause it to wrap from the bottom line to the top or from the top line to the bottom one.

2.2.3.10 Disable Transparent Mode

This option was added to correct a problem when in invisible mode where CATT was adding a line feed on transmit. Do ***not*** check this box unless you have this same symptom.

2.2.4 The Font Options Page



The following options are handled by selecting the **Font Options** tab on a **Properties** screen:

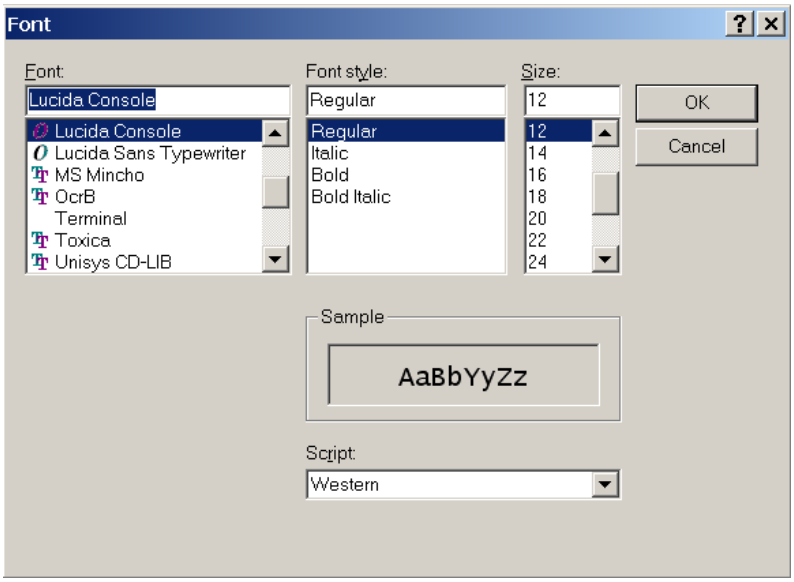
- Screen font
- Forms delimiter appearance
- Sizing preference

Every option on this page can be changed at any time, either at the default level or at the individual connection level. The changes take effect *immediately*, even on active connections.

2.2.4.1 Font Name and Size

At the top of the page is the *font bar*. This shows how the currently selected font appears using the current font color and background color selections.

To change the font selection, left-click on the font bar. This brings up the **Font Dialog**.



Make your selections on this dialog and click OK to save them.

The selection in this dialog is limited to the fixed-pitch fonts available on your PC.

The default font is Lucida Console. This is one of the few TrueType® fixed-pitch fonts. T27 formed screens require fixed-pitch fonts — i.e., fonts where all of the characters are the same width. However, your best screen appearance comes when the font is scalable — i.e., you can adjust the font to any size you want. Most fixed-pitch fonts are only available in a few pre-determined sizes. Lucida Console, on the other hand, will scale to any size you want. If you have Windows 98 or later, Lucida Console should be in the list presented in this dialog.

The font color is set on the Color Options page (below).

2.2.4.2 Form Delimiter Appearance

Form delimiters are the special characters that appear to the left and right of every unprotected field. You have four options available for deciding how these characters appear.

2.2.4.2.1 Hide all delimiters

This setting is recommended for production users when you want the screens to have an uncluttered appearance. The form delimiters are not shown. The data entry fields of a form are in a different color than the rest of the screen, so they are still easily recognized.

2.2.4.2.2 Use Gregory style delimiters

This setting is recommended for developers who are composing forms on the screen. In this case you want to see the delimiters.

The delimiter characters are taken from the character set of the font. If you are using the Lucida Console font, the delimiters used:

introduces a left-justified, unprotected field;

introduces a right-justified, unprotected field;
introduces a protected-transmittable field;
terminates a field or ends a highlight.

You can also use this option if you just like seeing the delimiters on your forms. In that case, though, you might also want to check the "Hide unmatched delimiters" box described below.

2.2.4.2.3 Use [] style delimiters

This setting is helpful if you want to print or copy the screen using characters that are entirely in the first 127 positions of the ASCII character set. The field delimiters in this case are:

[introduces a left-justified, unprotected field;

^ introduces a right-justified, unprotected field;

< introduces a protected-transmittable field;

] terminates a field or ends a highlight.

2.2.4.2.4 Use Triangular style delimiters (not all fonts support this mode)

This option provides delimiters that appear as the standard TD830 presentation of delimiters.

The reason not all font sets will support this feature is because some of the older fonts were developed when only 8 bits were used for a character. This limits the possible number of unique characters to 128. Modern fonts now use 16 bits per character, allowing a possible 65,536 characters. These newer fonts usually contain a number of graphic type characters including the "triangular" characters once used by the TD830. If you are using a font that uses 8 bit characters, these "triangular" characters will most likely not be supported by the font itself.

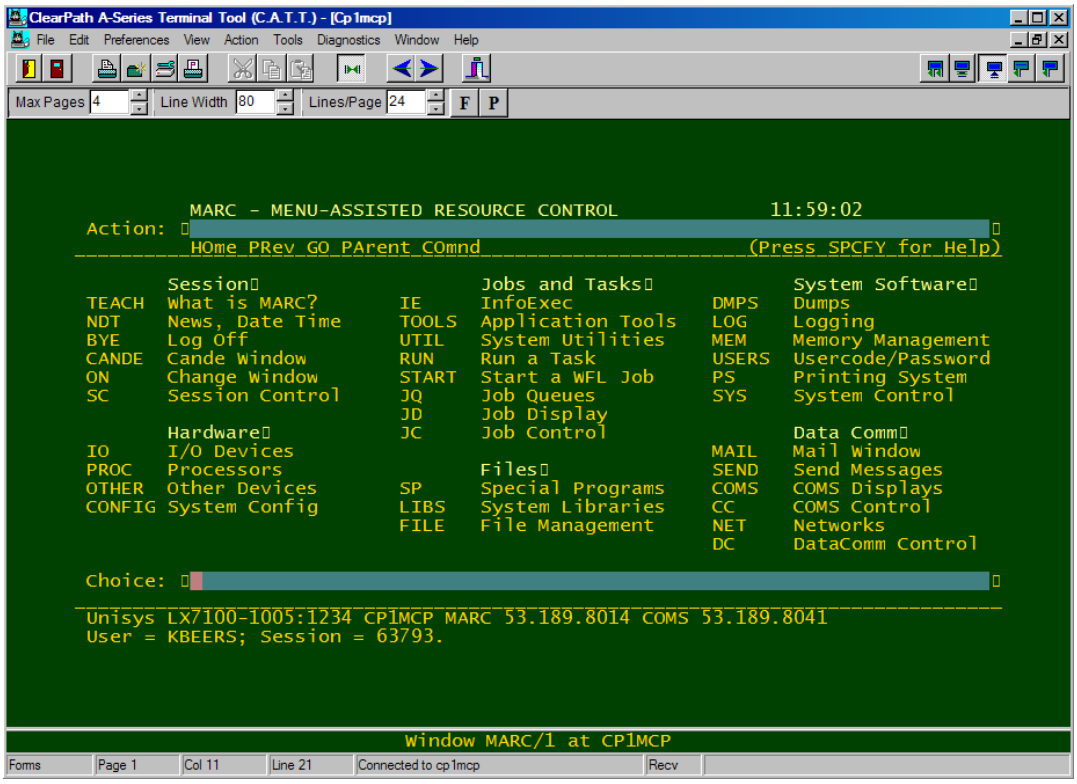
2.2.4.2.5 Hide unmatched delimiters

If you select “Use standard delimiters” or “Use [] style delimiters”, the “Hide unmatched delimiters” option becomes available. Check this box to suppress delimiters when one appears without a match.

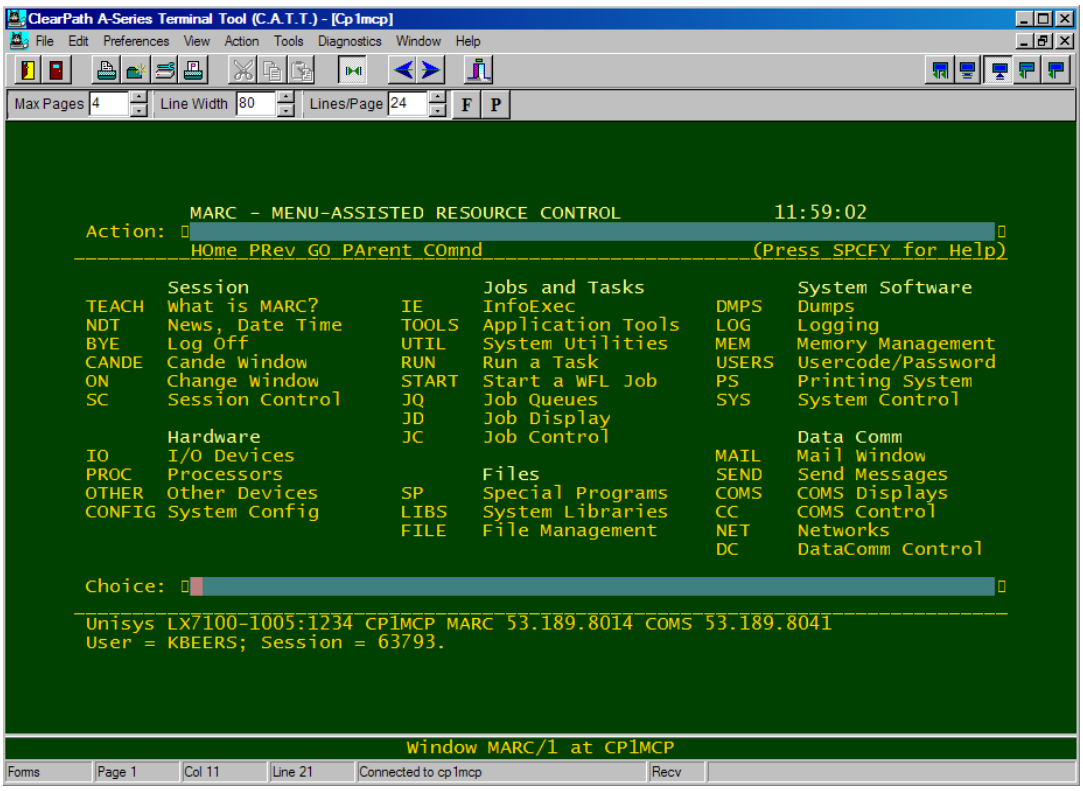
This option is useful if you want to see the delimiters and you are not composing forms on the screen. Its chief purpose is to suppress the “end highlights” delimiter that appears when a feature such as “bright” or “blinking” text is shown.

When you are using standard delimiters and showing all of the delimiters, a MARC HOME screen will look like this:

Note the rectangular character following the headings, “Session”, “Jobs and Tasks”, and so forth. These denote where the bright text ends.



If you check the "Hide unmatched delimiters" box, the same screen will appear thusly:



The extraneous highlight characters have been suppressed, so the screen has a cleaner appearance.

2.2.4.3 Font to Window Size Relationships

You can select how your font and window size are set: manually or interdependently. There are three choices.

2.2.4.3.1 Manually set both font size and window size

If you select this setting, the font size and the window size are independent of each other. You set the font size through the "Font Name and Size" bar described previously. You set the window size by dragging the borders of the program's outermost window. You can also set the window size by selecting **Window** and then **Resize Window to Match Font Size** on the main menu. This provides a quick and easy way of optimally sizing the screen to just fit the text area.

When using this option, full scrolling is automatically enabled. If the font size is too large to display an entire line, a scroll bar appears on the bottom of the screen and text is scrolled horizontally. If the font size is too large to display an entire page, a vertical scroll bar appears, and text is scrolled vertically.

This setting is recommended for the greatest amount of flexibility in most situations. It is also the default selection.

2.2.4.3.2 Automatically optimize font size to match window size

If you select this setting, the size of the font is automatically increased or decreased so that a complete line *and* a complete page fit on the screen area without scrolling. For a wide page, such as 132 columns, this can mean that you get a font with extremely tiny letters.

If the needed font size is not available, C.A.T.T. will choose the size that fits most closely. Scrolling will still be used if an entire line or an entire page cannot fit in the window at the size chosen.

When using this option, you cannot change the size of the font through the "Font Name and Size" bar. Any selection you make will be overridden by the program when you go back to the session window. To set the font size manually, you must use a different setting for this option.

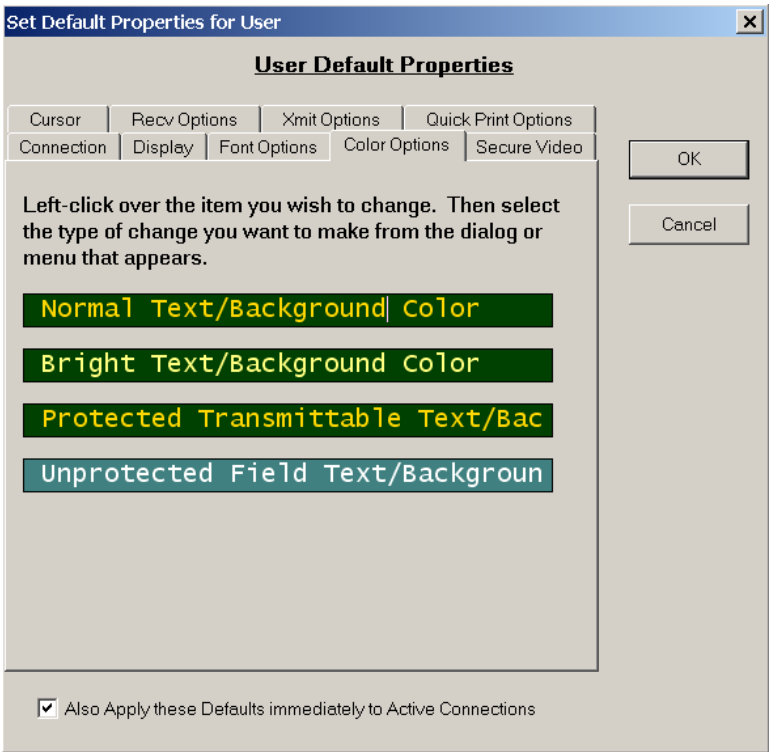
Note. *This option does not support Large Fonts. You must be configured to use Small Fonts in Windows.*

2.2.4.3.3 Automatically change window size to match font size change

If you select this setting, the size of the window automatically increases or decreases when you change the font size. You change the font size through the "Font Name and Size" bar. When you **OK** the change, the program window is automatically enlarged or shrunk to optimally match the font size.

The automatic sizing only takes place immediately after you make a font selection or when you first open the session. It *does not* happen when you manually resize the window. When you manually resize the window, the screen image is centered on the new window (if the window is larger) or scroll bars appear (if the window is made smaller).

2.2.5 The Color Options Page



The **Color Options** tab on the **Properties** screen allows you to change:

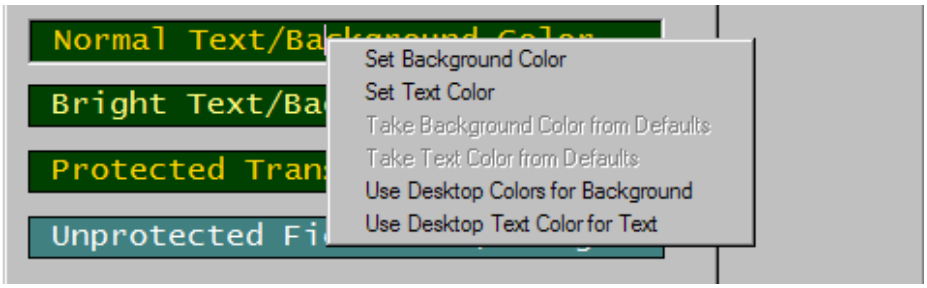
- The font and background colors for "normal" text
- The font and background colors for "bright" text
- The font and background colors for "protected transmittable" text
- The font and background colors for "unprotected" text There is no option for blinking text because C.A.T.T. actually blinks blinking text. Color settings for secured video text are handled on the **Secure Video** tab instead. You can change screen colors at any time, either at the default level or at the individual connection level.

The changes take effect *immediately*, even on active connections!

2.2.5.1 Normal Text/Background Color

The color bar labeled, "Normal Text/Background Color", enables you to change the background color and the font color of "normal" text. *Normal text* is text that is not highlighted in some way: it is not bright, in a protected transmittable field, in an unprotected field, or in a secure video field. The "normal text" colors are used for blinking text.

To change a color, left-click on the color bar. This brings up the following popup menu (shown on a partial screen image):



On the **Default Properties** screen, this menu shows four available options:

Set Background Color

Click this command to select the background color for normal text.

Set Text Color

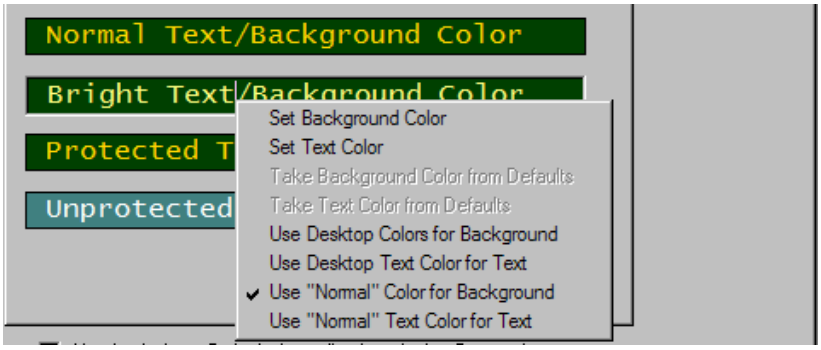
Click this command to select the color of your font.

Use Desktop Colors for Background

If you would like C.A.T.T. to use the same background color as your other desktop applications, click this command.

Use Desktop Text Color for Text

If you want C.A.T.T. to use the same text color as your other desktop applications, click this command.



2.2.5.2 Bright Text/Background Color

The color bar labeled, "Bright Text/Background Color", enables you to change the background color and the font color of text that is highlighted by the "bright" escape code. To change a color, left-click on the color bar. This brings up a popup menu similar to the one described above.

Now, on the **Default Properties** screen, you have six selections available:

Set Background Color
Use this command to give bright text a different background color than normal text.

Set Text Color
Use this command to give bright text a different font color than normal text.

Use Desktop Colors for Background
If you would like C.A.T.T. to use the same background color for bright text as your other desktop applications, click this command.

Use Desktop Text Color for Text
If you want C.A.T.T. to use the same text color for bright text as your other desktop applications, click this command.

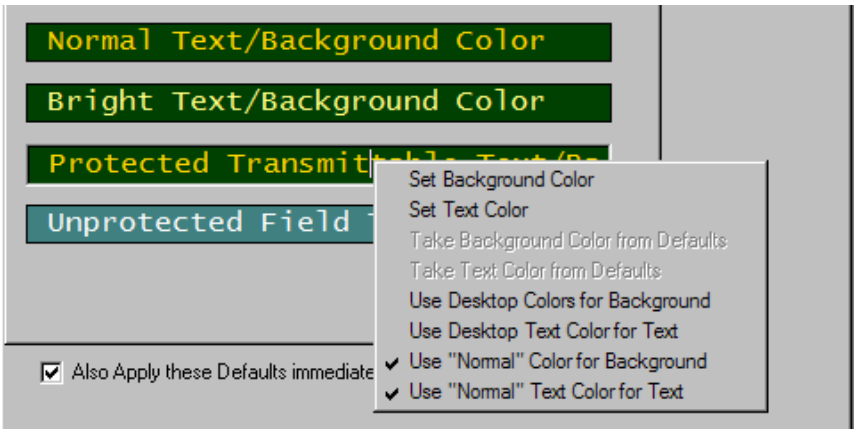
Use "Normal" Color for Background
Check this command if you want bright and normal text to have the same background color. The color would be set using the "Set Background Color" command from the "Normal Text/Background Color" color bar.

Use "Normal" Text Color for Text
Check this command if you want bright and normal text to have the same font color. The color would be set using the "Set Text Color" command from the "Normal Text/Background Color" color bar.

To simulate an actual T27, you want to use the "normal" color for the background color and select a font color that is brighter than the normal font color. This is the default setting in the program.

2.2.5.3 Protected Transmittable Text/Background Color

The color bar labeled, "Protected Transmittable Text/Background Color", enables you to change the background color and the font color of text that is in a protected transmittable field. To change a color, left-click on the color bar. This brings up the same popup menu as described for bright text.



You have six choices available on the **Default Properties** screen.

Set Background Color
Use this command to give protected transmittable text a different background color than normal text.

Set Text Color
Use this command to give protected transmittable text a different font color than normal text.

Use Desktop Colors for Background
If you would like C.A.T.T. to use the same background color for protected transmittable text as your other desktop applications, click this command.

Use Desktop Text Color for Text

If you want C.A.T.T. to use the same text color for protected transmittable text as your other desktop applications, click this command.

Use "Normal" Color for Background
Check this command if you want protected transmittable and normal text to have the same background color. The color would be set using the "Set Background Color" command from the "Normal Text/Background Color" color bar.

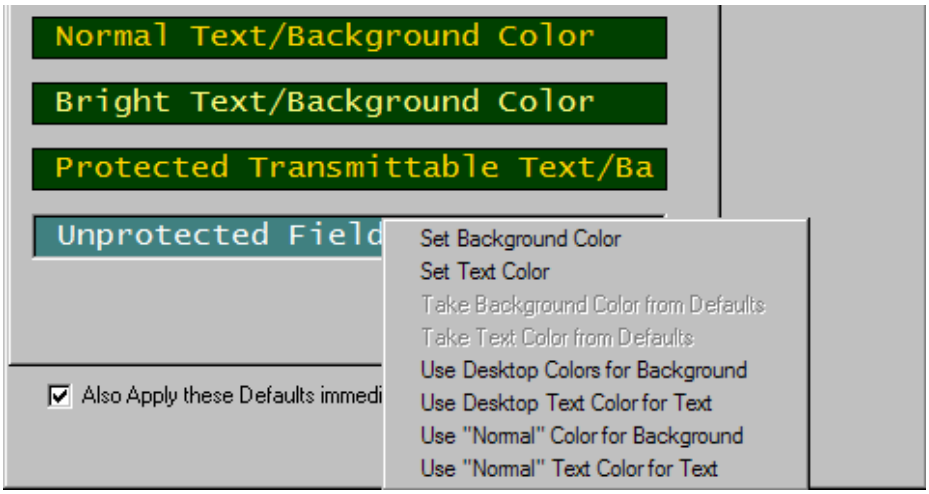
Use "Normal" Text Color for Text
Check this command if you want protected transmittable and normal text to have the same font color. The color would be set using the "Set Text Color" command from the "Normal Text/Background Color" color bar.

Best presentation results are achieved when you hide all delimiters and make the protected transmittable text the same color as the normal text (both font and background). The ability to change the color of these fields is useful when developing an application so you can see where the protected transmittable text is positioned on the screen.

2.2.5.4 Unprotected Field Text/Background Color

The color bar labeled, "Unprotected Field Text/Background Color", enables you to change the background color and the font color of text in an unprotected field. This is a feature that is completely unique to C.A.T.T. It is the key component in making T27-style forms readable when hiding the field delimiters.

To select a color, left-click on the color bar. This brings up the same popup menu as described for bright text.



You have six choices available on the **Default Properties** screen.

Set Background Color
Use this command to give each unprotected field a different background color than the protected areas.

Set Text Color
Use this command to give each unprotected field a different font color than the protected areas.

Use Desktop Colors for Background
If you would like C.A.T.T. to use the same background color for the unprotected fields as your other desktop applications, click this command.

Use Desktop Text Color for Text
If you want C.A.T.T. to use the same text color for the text of unprotected fields as your other desktop applications, click this command.

Use "Normal" Color for Background

Check this command if you want each unprotected field to have the same background color as the protected areas. The color would be set using the "Set Background Color" command from the "Normal Text/Background Color" color bar.

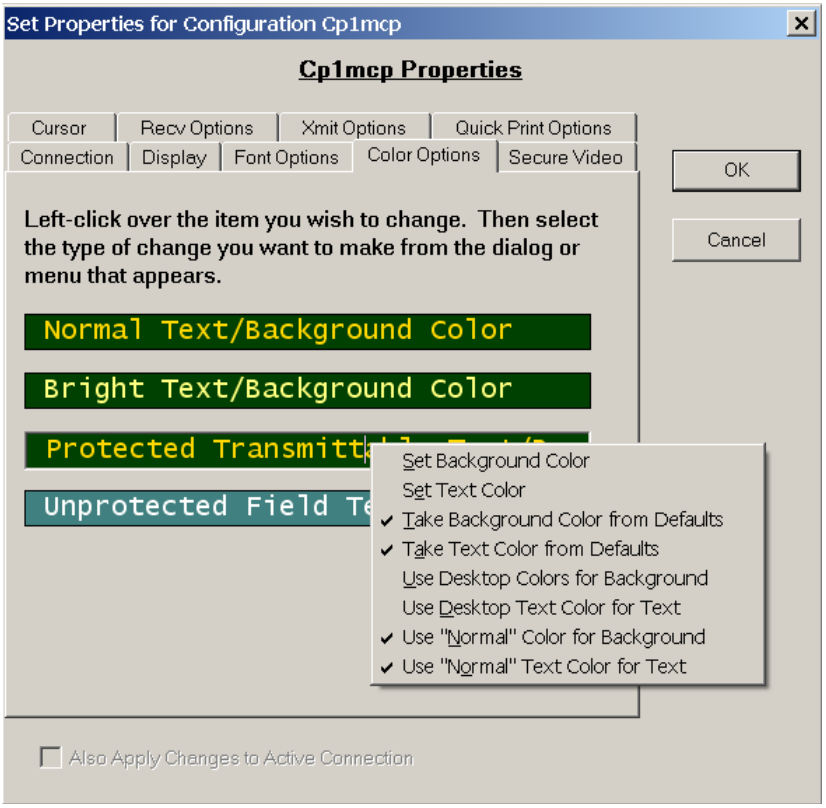
Use "Normal" Text Color for Text
Check this command if you want each unprotected field to use the same font color as the protected areas. The color would be set using the "Set Text Color" command from the "Normal Text/Background Color" color bar.

If you want the screen to look like a T27 terminal, check the "Use Normal..." options for both background and text color. In this case, you *must not* hide the screen delimiters; otherwise, the unprotected fields will be completely invisible to the user.

The default is to use a different color for both the background and the text of each unprotected field. The default colors are white text on a turquoise background. This aids in making the forms easier to read and enables you to hide the field delimiters.

2.2.5.5 Color Bar Menus at the Individual Connection Level

When you left click on a color bar in the **Default Properties** screen, you get the popup menu shown above. When you left click on a color bar for an individual connection's **Properties** screen, you get this popup menu instead:



The menu contains two more commands.

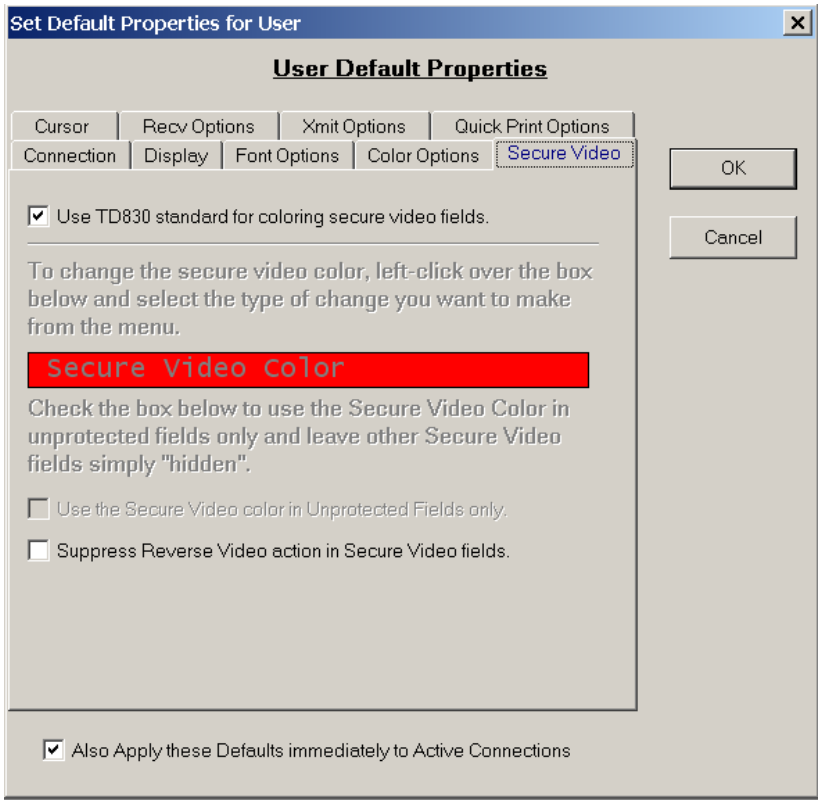
Take Background Color from Defaults
Check this option for an individual connection to inherit the specified background color from the one assigned on the **Default Properties** screen.

Take Text Color from Defaults
Check this option for an individual connection to inherit the specified font color from the one assigned on

the **Default Properties** screen.

These settings are assumed by default when a connection is newly defined. If all of your connections use these two options, all will have the same color scheme. By selecting the other popup menu commands at the individual connection level, you can assign different color schemes to different connection definitions.

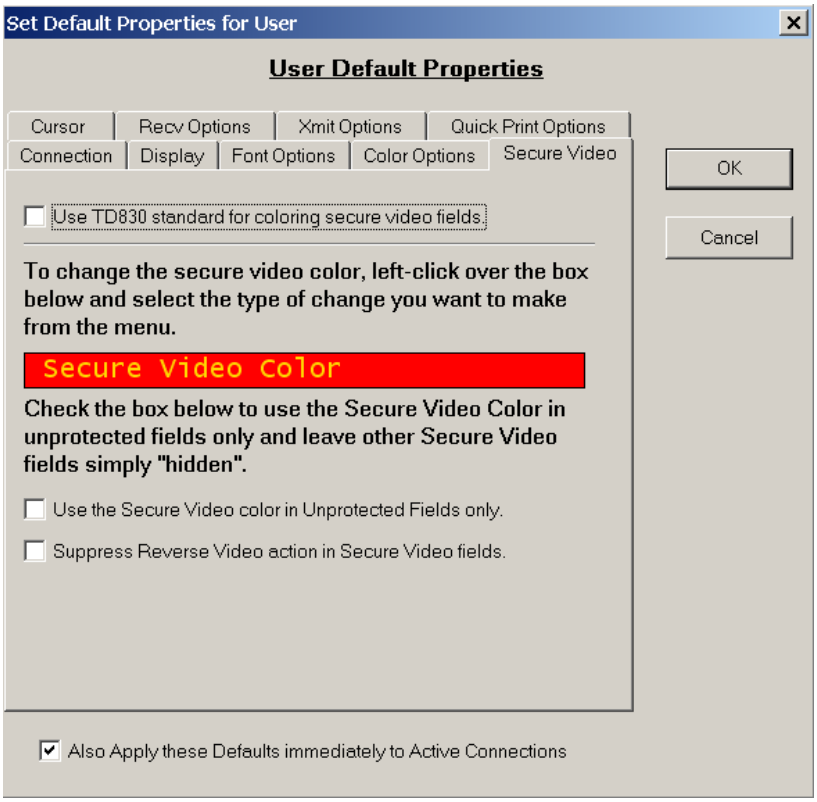
2.2.6 The Secure Video Page



The **Secure Video** tab enables you to specify how secure video fields are handled on the screen. This page functions at two levels. If you are using the TD830 default for secure video fields, the page looks like the above.

The option, "Use TD830 standard for coloring secure video fields" is checked. This disables most of the remainder of the page. When TD830 standard coloring is chosen, secure video fields are displayed in "reverse video". Both the font color and the background color are set to the "normal" text font color, resulting in an unreadable field.

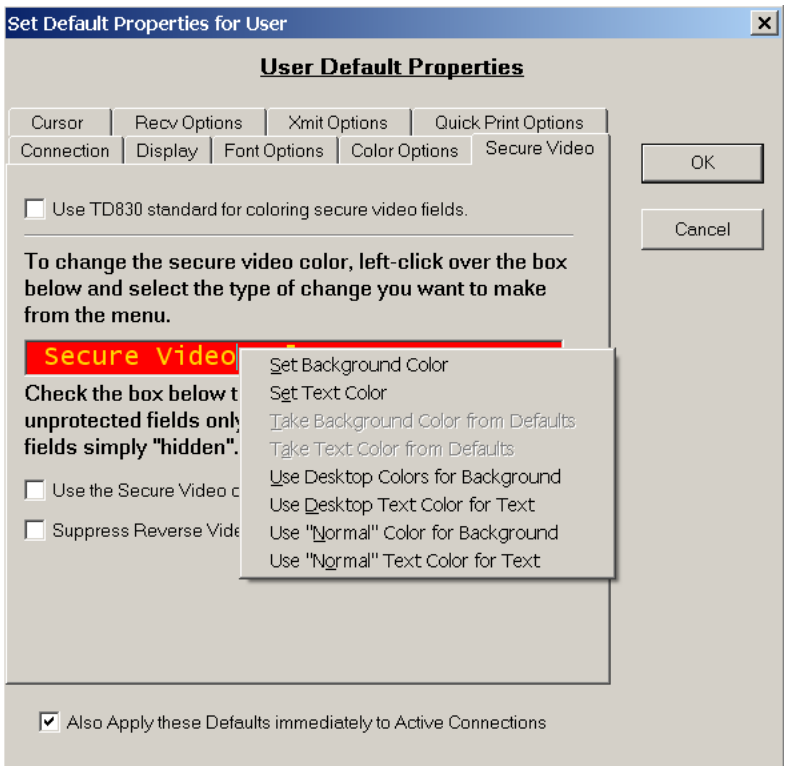
If you uncheck, “Use TD830 standard for coloring secure video fields”, you get this page:



Now you can choose a unique color for secure video fields. You can further tweak the appearance of a secure video field through two additional checkbox options.

2.2.6.1 Secure Video Color

The color bar labeled, "Secure Video Color", enables you to change the color of each secure video field on a screen. To change a color, left-click on the color bar. This brings up the following popup menu:



The color you select for the *background* color becomes the color of the secure video field. If you choose a text color, it only appears in the color bar. The text color is not used in an actual secure video field.

Each command has the following effect:

Set Background Color
Use this command to set the main color of each secure video field.

Set Text Color
Use this command to set the color of the text in the Secure Video color bar on this screen. It has no effect upon the actual secure video fields of a user screen.

Use Desktop Colors for Background
Use this command to set the secure video fields of the screen to match your desktop's background color.

Use Desktop Text Color for Text
Use this command to set the color of the text in the Secure Video color bar on this screen. The text will match the text color of your desktop. This selection has no effect upon the actual secure video fields of a user screen.

Use "Normal" Color for Background
Use this command to completely hide all secure video fields. If delimiters are hidden, the secure video fields will be completely invisible. Users can still find them by tabbing into them, but they cannot see them on the screen. Use of this setting is *not recommended* unless the field delimiters are visible.

Use "Normal" Text Color for Text

Use this command if you want the color of the text in the Secure Video color bar to match the default font color. It has no effect upon the actual secure video fields.

Like the other color bars, if you select the **Secure Video** tab on an individual connection's **Properties** screen, you get to additional menu selections:

Take Background Color from Defaults

Check this option for an individual connection to inherit the specified secure video color from the one assigned on the **Default Properties** screen.

Take Text Color from Defaults

Check this option for an individual connection to inherit the specified text color for the Secure Video color bar from the one assigned on the **Default Properties** screen.

These settings are assumed by default when a connection is newly defined.

2.2.6.2 Use the Secure Video color in Unprotected Fields only

This option is part of the "forms beautification" package.

Check this box to limit the visibility of secure video fields to "unprotected secure video" fields only. This means that the user will be able to see secure video fields that he is supposed to enter data into. But he does not see secure video fields that are in protected areas. The user also does not see the extra characters that occurs from the delimiters of a secured, unprotected field.

Uncheck this box to see all secure video fields: those in protected areas as well as those in unprotected areas. The user still cannot read the text in those fields (unless he takes the screen out of forms mode and deletes the secure video escape character), but he will know where the fields are.

Checking this option is highly recommended, especially if you are also hiding the delimiters.

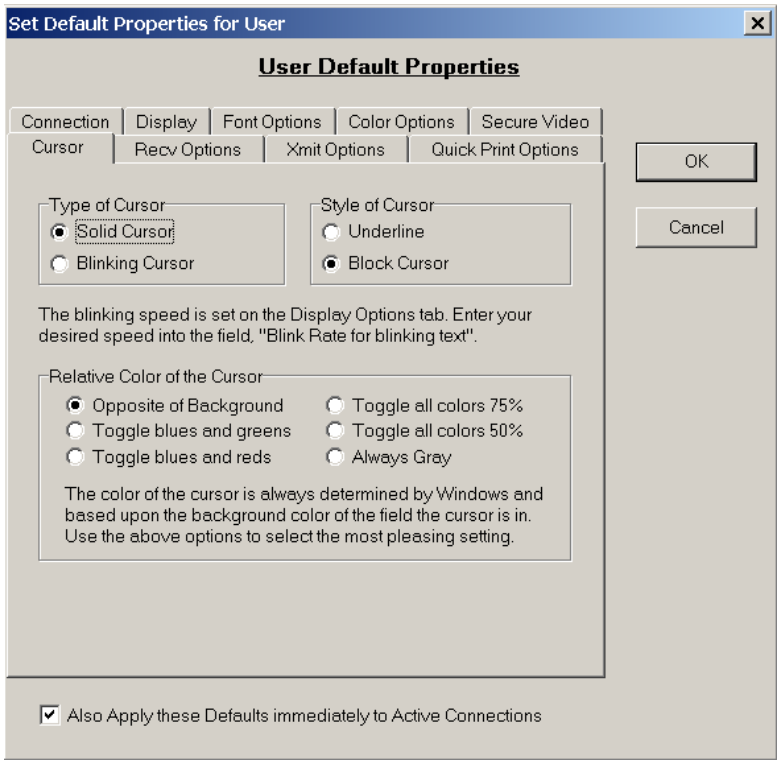
2.2.6.3 Suppress Reverse Video action in Secure Video fields

This option is also part of the "forms beautification" package.

If you have any forms where a user tried to hide a protected-transmittable secure video field using a reverse video escape character, this option will clean up that screen's appearance. Default T27 action causes a single space in reverse video to appear where the reverse video escape character sits. If that precedes a secure video field, you end up with a single, garbage space preceding your secure video field. Checking this option will eliminate that garbage space.

It is recommend that this option always be checked. It won't hurt anything, and it makes the screens easier to read.

2.2.7 The Cursor Page



The **Cursor** page enables you to define the type and color of the screen cursor.

2.2.7.1 Type of Cursor

Choose either a solid or blinking cursor. Solid is the default and the easiest to see.

If you choose blinking, you can set the blink rate on the **Display Options** page in the field labeled, "Blink Rate for blinking text".

2.2.7.2 Style of Cursor

Choose either an underline or a block cursor. Block is the default.

2.2.7.3 Relative Color of the Cursor

The cursor requires rather unique handling. You can't simply assign it a color because it becomes invisible if its color matches the background color. You can't assign it the opposite color, because selections are highlighted using the opposite colors.[3] The color of the cursor is completely dependent upon the underlying colors of the screen area it is over: both the background color and the font color. To make the cursor visible all of the time, C.A.T.T. allows you to select which portions of the colors are toggled in order to define a "cursor color". You may need to experiment with different combinations to obtain the result that works best for you.

The color selections can be any of the following:

Opposite of Background
This is useful on all backgrounds but does not always give a bright cursor. This is the default for C.A.T.T.

Toggle blues and greens
This is useful for backgrounds that do not have an RGB mix of 128 blue, 128 green, and 0 red (a mild blue-green).

Toggle blues and reds
This is useful for backgrounds that do not have an RGB mix of 128 red, 0 green, and 128 blue (a mild violet).

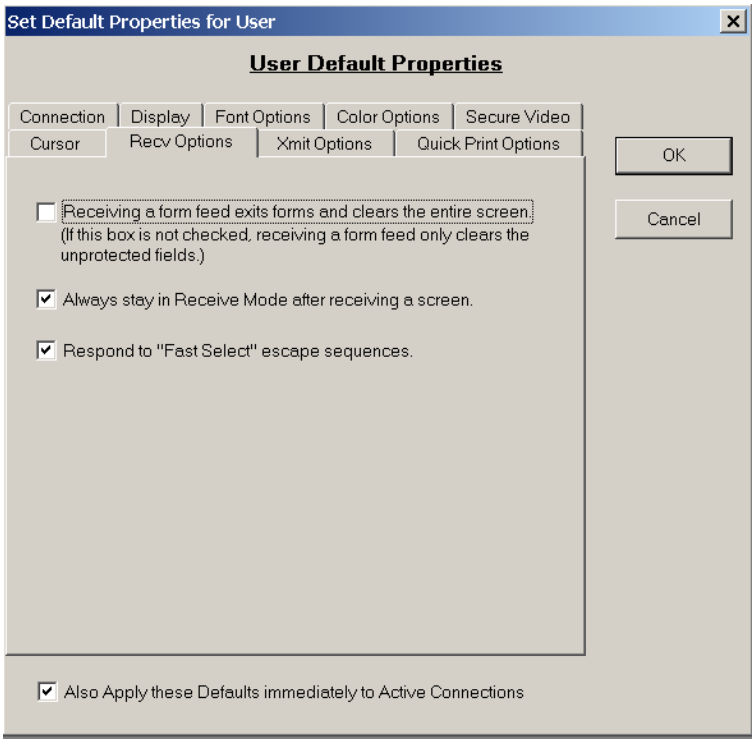
Toggle all colors 75%
This seems to give a brighter color difference on most backgrounds.

Toggle all colors 50%
This gives a slightly dimmer color difference on most backgrounds.

Always Gray
This hides any text that is under the cursor.

2.2.8 The Recv Options Page

The **Receive Options** page provides a set of options that control how C.A.T.T. behaves when data is received from the host.



2.2.8.1 Receiving a form feed exits forms and clears the entire screen

Check this box if a form feed character (`hex 0c`) is supposed to cancel forms mode and then clear the screen, erasing the entire form.

Uncheck this box if a form feed character is only supposed to clear the unprotected areas of a form if received while in forms mode.

The box is not checked by default, which is the most common usage.

2.2.8.2 Always stay in Receive Mode after receiving a screen

Check this box if C.A.T.T. is to stay in receive mode after receiving a data transmission. Uncheck this box

if C.A.T.T. is to go into local mode after receiving a data transmission. This box is checked by default.

CANDE and several other Unisys utilities require that this option be checked.

2.2.8.3 Respond to “Fast Select” escape sequences

Check this box if C.A.T.T. is to take the screen out of local mode and immediately display a message when that message is received with a “fast select” prefix.

Uncheck this box to prevent that behavior.

The “fast select” escape sequence is either:[4]

<cr> [<esc>K] [<dc1>] [<etx>]

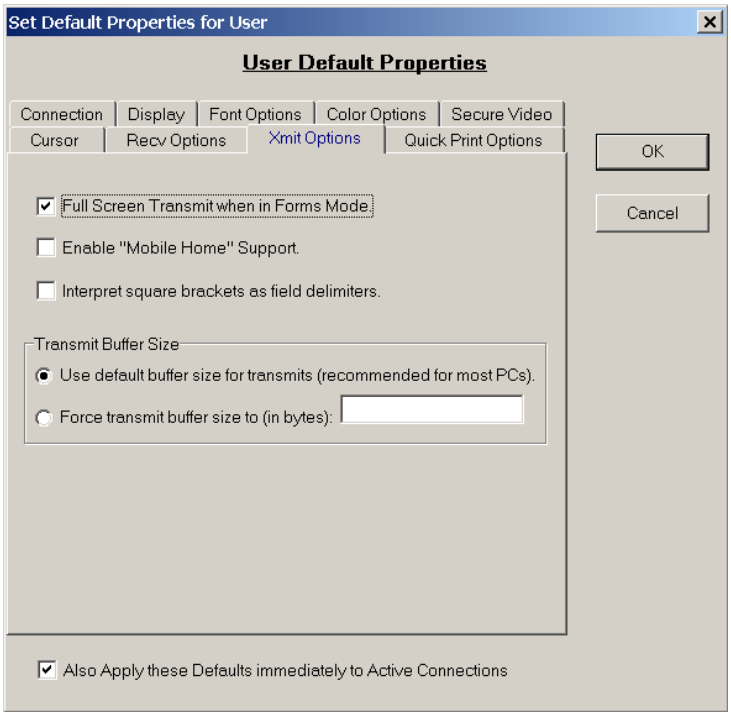
or:

{multiple <cr>} {multiple <esc>S} <dc4> <esc>K [<dc1>] [<etx>]

This option is checked by default. However, it incurs extra overhead since each incoming message must be checked for these escape sequences. It is recommend that you uncheck it unless you are using it.

2.2.9 The Xmit Options Page

The **Xmit Options** page determines how C.A.T.T. handles data transmissions to the MCP host.



2.2.9.1 Full Screen Transmit when in Forms Mode

This option determines what data is sent to the host when the **{transmit}** key is pressed.

If checked, the contents of all unprotected and protected transmittable fields are sent when **{transmit}** is pressed. The location of the cursor is immaterial.

If unchecked, the contents of the unprotected and protected transmittable fields that appear between Home and the location of the cursor are sent; data after the cursor is not sent. If the cursor is in the first data position of the screen, the contents of all unprotected and protected transmittable fields are sent.

Note. The “first data position” is the first unprotected *or* protected transmittable position on the screen. If that is in a protected transmittable field, the user cannot put the cursor in the first data position.

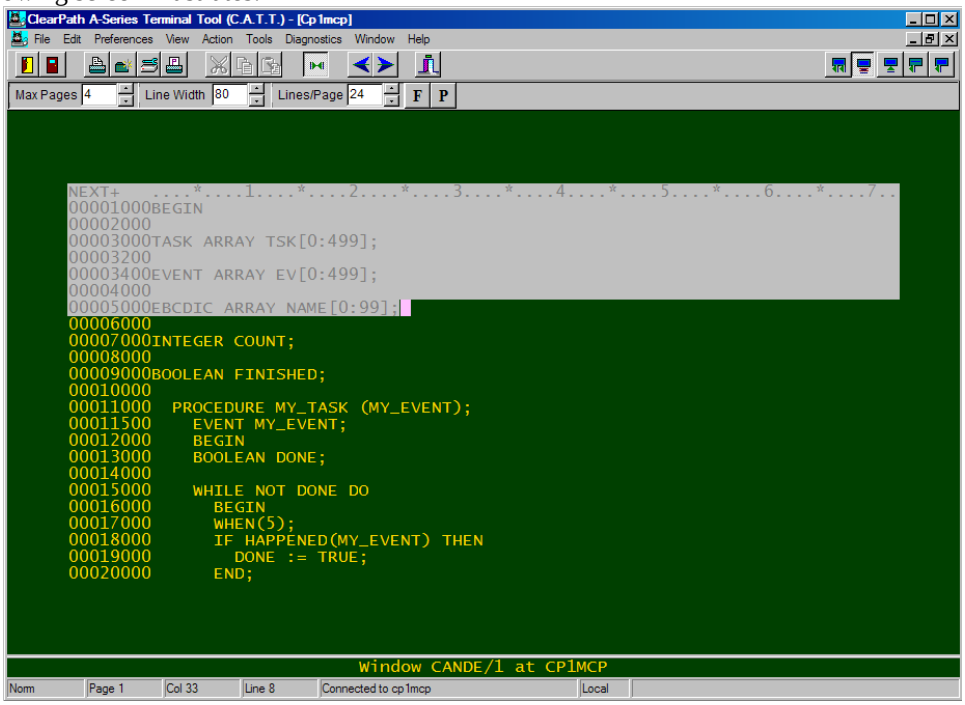
2.2.9.2 Enable "Mobile Home" Support

Mobile home *moves* the Home position on the screen. When this feature is enabled, all you have to do to move the Home position is press **{ctrl}** and then **{home}** on the keyboard. It is extremely easy to do accidentally. Once done, most emulators provide no clue that this has happened.

When you transmit data, it starts at the new Home position, so your results are unexpected. When this happens, most users conclude that the program is broken, exit the program, and rerun it.[5]

If you do this in C.A.T.T., the display area between physical Home and the new logical Home position is painted using the desktop’s “inactive area” colors. This provides a visual indication that the Home position has moved.

The following screen illustrates:



This is what happens if you press **{ctrl}** and then **{home}** when the cursor is at column 33 of line 8. The start-of-transmission point is moved to that location.

If you have accidentally moved the Home position, use this procedure to restore home to line 1, column 1:

1. Use the arrow keys to move the cursor to line 1, column 1.
2. Press **{ctrl}** and then **{home}**. The inactive color will disappear, indicating that the screen is back to normal.

Check the “Enable "Mobile Home" Support” box to enable this feature. Uncheck it to disable this feature. This feature is only implemented because some applications require it. Do not enable it unless you must.

2.2.9.3 Interpret square brackets as field delimiters

Check this option if you want the character “[” to denote the start of an unprotected field, and the character “]” to denote the end of an unprotected field. When these characters are received in the input data stream,

they are translated to the left and right delimiter characters.

Uncheck this option to treat square brackets as regular data characters. This is the default.

2.2.9.4 Transmit Buffer Size

The *buffer size* determines the number of characters that can be sent or received between the MCP host and your PC in a single I/O operation. This is one layer above the packet size used by the TCP/IP protocol itself. It is the number of characters *Windows* will transfer, without loss of data, in a single logical data packet.

Windows has a fixed maximum buffer size for *Winsock* connections of 8192 bytes. If you exceed this number in a single I/O operation, data is lost. Therefore, C.A.T.T. also uses a maximum setting of 8192 bytes per I/O by default. Selecting the option:

Use default buffer size for transmits

selects this optimal buffer size. This option should be selected unless you have reason to choose a *smaller* number. You cannot choose a larger number.

When C.A.T.T. starts running, it queries *Windows* for the true buffer size being used. If the number is smaller than 8192, that number is automatically used instead. Thus, selecting the "Use default buffer size..." option will give you optimum results in most situations.

The size of the buffer can be forced smaller than 8192. This may be required if you are running on a VPN client over an AT&T cable connection. These connections do not correctly report to the program their true buffer size. But if an outgoing I/O exceeds their buffer size, they terminate the connection! To get around this problem, select the option:

Force transmit buffer size to...

and enter the desired byte count value into the field which follows. This may be any value from 500 through 8192.

To determine the optimal value, create a message trace (from **Diagnostics** | **Message Trace**) and start editing a file in CANDE page mode. Save the trace, and then look for length information under the header "RAW INPUT". If CANDE is sending output to you in blocks smaller than 1456 bytes, you may want to reduce your transmit buffer size to the same number. On an AT&T cable connection, the number seems to be 1350 bytes.

Also note that if your MCP system is running with the option USERFCMTU set, your software is limited to 536 bytes per I/O. You should reset this option and take the measurement again. Normal TCP/IP segment size through a Cisco router will generate 1456-byte data blocks from CANDE. Normal operations under *Windows* want an 8192 transmit buffer size. Message Trace will tell you what buffer size is being used if it is on before you connect to the host.

Changes to the **Transmit Buffer Size** option take effect at connection open time. If you change the value on an open connection, it will not change the setting until you close and then open the connection.

2.2.10 The Quick Print Options Page

There are two methods of capturing “screen prints” in C.A.T.T.:

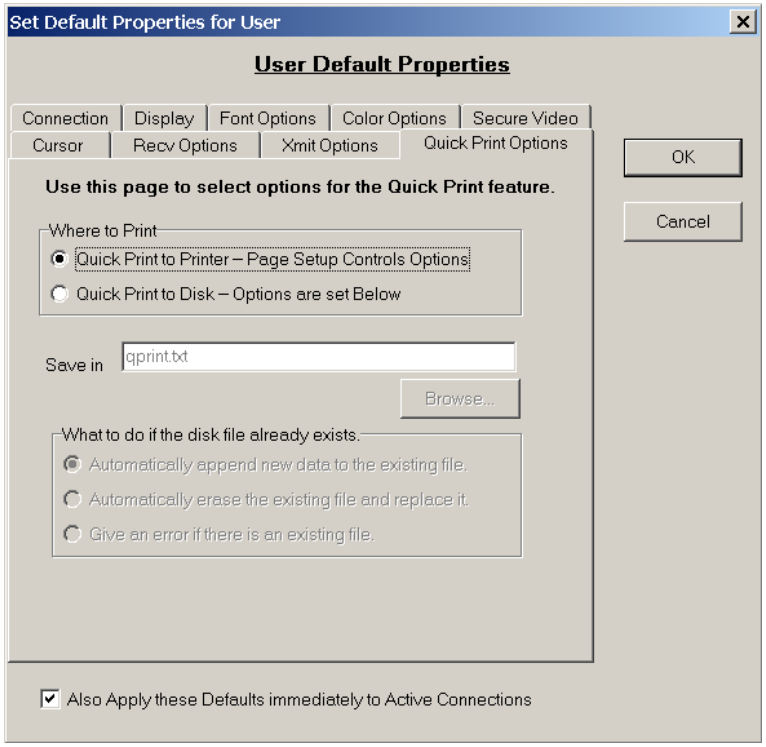
- The normal screen print command.
- The “quick print” command.
- The “print to cursor” command

The difference between the first two is purely in the prompts. A “normal print” takes you through the **Print** dialog and a **Font** dialog so you can select how you want the output to appear. A “quick print” uses settings you have saved through the **Quick Print Options** page. Quick print does not post any dialogs. **Print to cursor** is an option to print up to the cursor.

A normal print is initiated through the main menu commands **File** and then **Print Screen...**. It is also started by clicking once on the **Print Screen** button on the **Speed Bar** of the main screen.

A quick print is initiated through the main menu commands **File** and then **Quick Print Screen**. It is also started by clicking once on the **Quick Print** button (a camera) on the **Speed Bar**.

The **Quick Print Options** page of the **Properties** screen appears thusly:

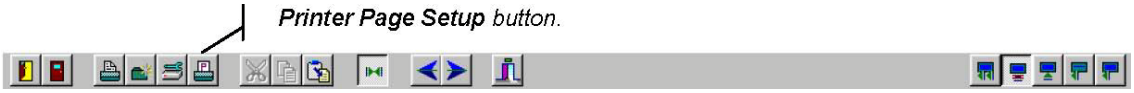


The default is **Quick Print to Printer**. When this is selected, the other fields are disabled. The picture shows **Quick Print to Disk** selected so the other fields can be seen.

2.2.10.1 Where to Print

Use the radio button to select your preference. Choose "Quick Print to Printer" if you want "quick print" outputs to go directly to a printer attached to your PC. You must have previously selected the printer and its properties through the **Printer Setup** command in the **File** menu *or* through the **Printer Setup** button on the **Speed Bar**.

You may also pre-select page layout instructions and a different font for your printed outputs. You can do this either through the **Printer Page Setup** command in the **Preferences** (or **File**) menu or through the **Printer Page Setup** button on the **Speed Bar**.



These settings control how the output appears when printed through the **Quick Print** speed button.

Choose "Quick Print to Disk" if you want the text on the screen to be saved in a disk file on your PC. When you choose "Quick Print to Disk", two other options become available, which are described below.

2.2.10.2 Save in

If you are using "Quick Print to Disk", enter the name you want assigned to the disk file when the screen text is captured. The default name is qprint.txt under the **User's Working Directory** that you defined previously on the **File Locations** screen. If you are not sure which directory will be used, click the **Browse...** button underneath the field.

2.2.10.3 What to do if the disk file already exists

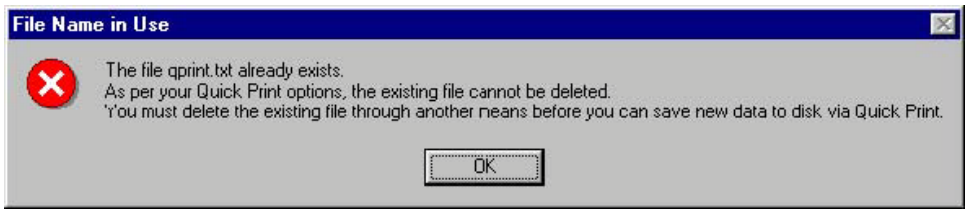
This option exists because the specification for **Quick Print** was that the user never be prompted. Therefore, all decisions have to be made ahead of time through option settings.

Use this option to specify the action to take if C.A.T.T. attempts to save a screen capture and a file with the same name already exists. The choices are self-explanatory:

- Automatically append new data to the existing file.
- Automatically erase the existing file and replace it.
- Give an error if there is an existing file.

The third option generates the following message if you attempt to overwrite an existing file:

You must delete the file yourself through another program (such as *Windows Explorer*) before making another screen capture.



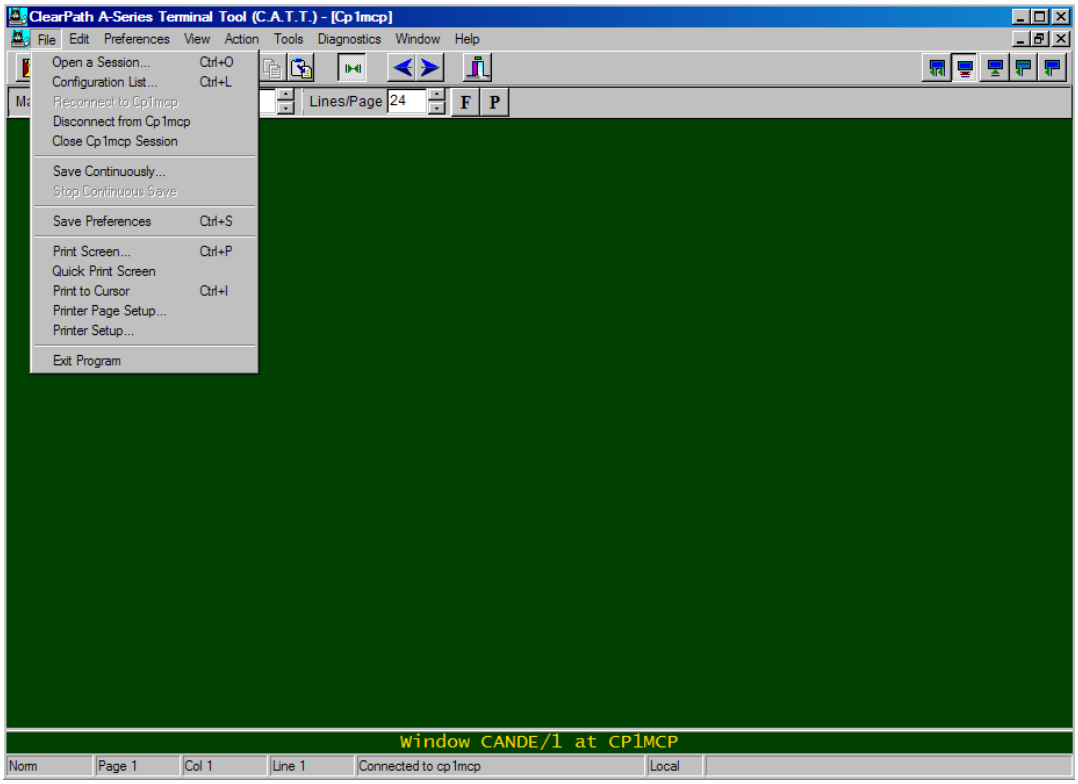
2.3 Program Level Options

Options that apply to the entire program are set through various commands on the main menu. These commands are described in this section. Note that only menu commands relating to program options are presented here. A general description of the menu commands is given in the "Using C.A.T.T." chapter.

Program level options can be found in the **File**, **Edit**, and **Preferences** commands.

The remaining options are on the menu where you would expect to find program options: the **Preferences** menu.

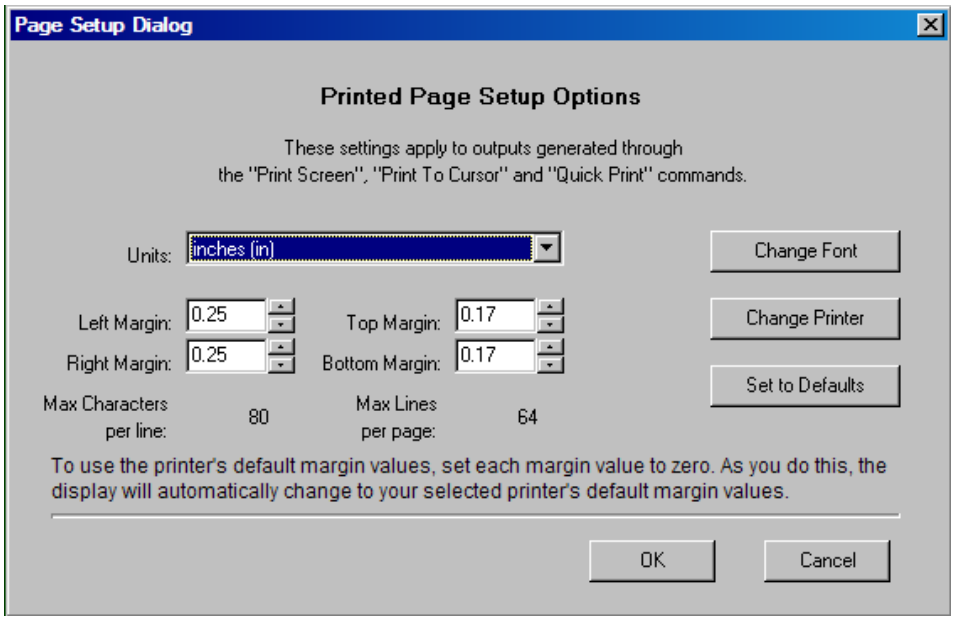
2.3.1 Options in the File Menu



The two options on the **File** menu are

- Printer Page Setup
- Printer Setup

2.3.1.1 Printer Page Setup



The **Printer Page Setup** menu item brings up the form used to define the logical page layout of pages printed by C.A.T.T. Page printing is limited to screen captures invoked through the **Print Screen...** and **Quick Print Screen** commands found on this same menu.

Units The **Units** selection lets you specify whether the margin measurements are in inches or centimeters. The default is inches.

Left and Right Margins These two settings determine the left and right margins on the printed page. Each value represents the distance from the edge of the paper. If the printer has an “unprintable” region, and your margin is smaller than the size of this region, text will be lost in the output.

If you enter zero (0) for a margin value, C.A.T.T. automatically substitutes the minimum margin required as determined by the “unprintable” region. In the example above, if the selected printer is an HP LaserJet IV, entering zero in either the left or right margin fields automatically sets the margin to ¼ inch.

The left and right margin values, in combination with the currently selected printer font, the currently selected printer, and the orientation of the paper (portrait or landscape) determine the maximum number of characters that can be printed on an output line. This value is reported on the screen beneath your margin values. In the example above, the current settings permit a maximum of 80 characters per line of print. If more than 80 characters per line are written, the excess on the right-hand end will be discarded.

Top and Bottom Margins These two settings determine the top and bottom margins on the printed page. Each value represents the distance from the edge of the paper. If the printer has an “unprintable” region, and your margin is smaller than the size of this region, text will be lost in the output.

If you enter zero (0) for a margin value, C.A.T.T. automatically substitutes the minimum margin required as determined by the “unprintable” region. In the example above, if the selected printer is an HP LaserJet IV, entering zero in either the top or bottom margin fields automatically sets the margin to ¼ inch.

The top and bottom margin values, in combination with the currently selected printer font, the currently selected printer, and the orientation of the paper (portrait or landscape) determine the maximum number of lines that can be printed on an output page. This value is reported on the screen beneath your margin values. In the example above, the current settings permit a maximum of 63 lines per printed page. After 63 lines, the page will be ejected and the remainder of the screen will continue on the next sheet of paper.

Change Font Click this button to view or select the font you want to use for printing. This brings up a font dialog showing the fonts available on the selected printer.

Change Printer Click this button to view or select the printer where you want the screen prints to go. You can also choose the page orientation (portrait or landscape) on this dialog.

The default selection is the "default printer" you have chosen for your workstation under the *Windows* **Start** menu. C.A.T.T. resets to this default printer each time you exit and rerun the program.

Set to Defaults Click this button to set your margins all to zero. C.A.T.T. will then automatically update the screen to the margins required by the printer to avoid the "unprintable" regions. (This information is obtained through *Windows* system calls.) Clicking this button also sets the default printer font to 12-point Courier.

OK or Cancel Click **OK** to permanently save your margin and font selections. If you click **Cancel**, none of the changes you've made on this instance of the **Printer Page Setup** screen will be saved.

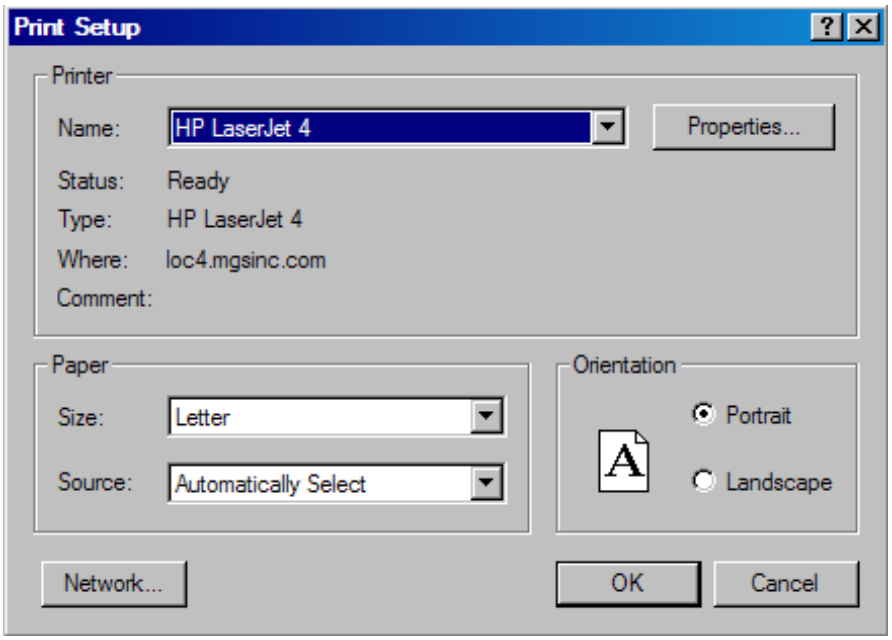
Note. The margin and font selections are saved in your user configuration file for future use.

In keeping with *Windows* standards, your printer selection is *not* permanently stored. It automatically re-verts to your *Windows* default printer when you exit and rerun C.A.T.T.

An administrator can set defaults for this screen in the Master Configuration file. However, any changes made by the local user override those defaults.

The standard **Print Screen...** command routes you through first the **Printer Setup** screen and then this **Printer Page Setup** screen before beginning the actual screen print. Changes you make on these screens are retained and apply to future **Quick Print** screen prints.

2.3.1.2 Printer Setup



The **Printer Setup** command loads the standard *Windows* **Printer Setup Dialog** for configuring a printer. Select the printer you want to use and its properties using this screen.

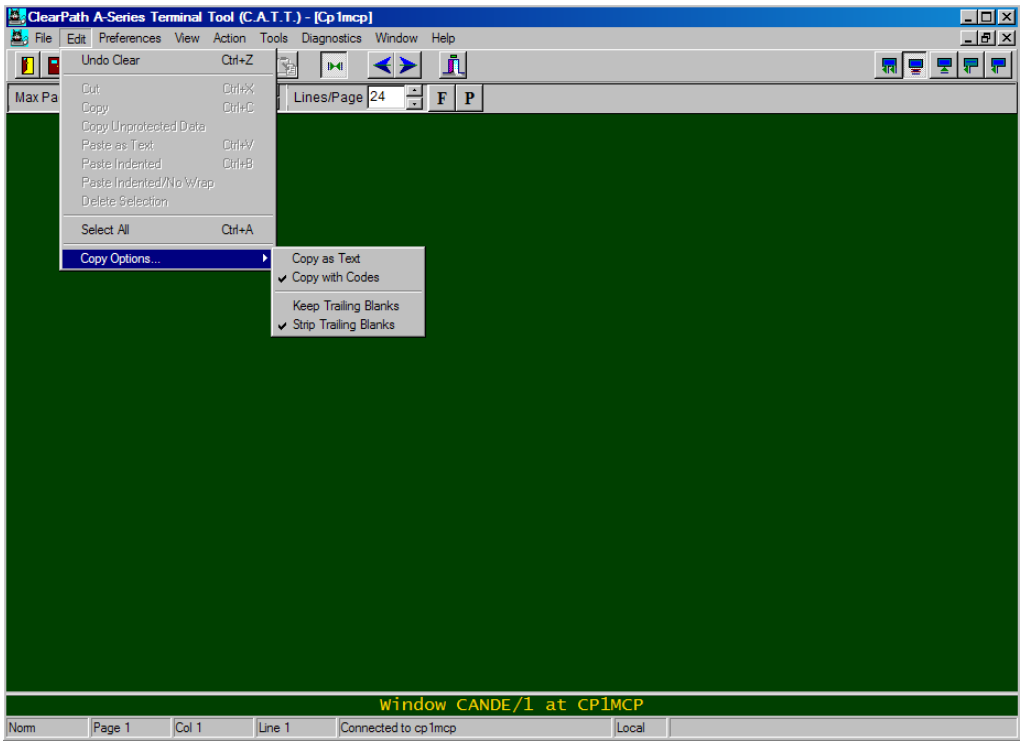
Settings made on this screen are automatically applied to **Quick Print** requests. However, the changes only apply during the run of the C.A.T.T. program. If you shut the program down and restart it, the changes are not saved. (This behavior is consistent with other *Windows* applications.)

To permanently assign a printer and set of options, you must select a default printer through the **Printers** command in *Windows* and choose the options you want there.

The standard **Print Screen...** command routes you to this screen first, and then to the **Printer Page Setup** screen, before printing the screen. To make temporary changes to the destination of your screen prints, use the **Print Screen...** command instead of **Quick Print**. Use **Quick Print** when printing to your default printer.

The **Change Printer** button on the **Printer Page Setup** screen, described previously, also brings up this same screen for selecting your printer and page orientation.

2.3.2 Options in the Edit Menu



As the diagram above shows, the **Edit** menu contains an item called **Copy Options...**, found at the bottom of the list. Positioning the mouse over this item brings up a submenu containing four options. These options determine how text is copied to the *Windows* clipboard when you perform a **Cut** or **Copy** operation.

2.3.2.1 Copy as Text / Copy with Codes

Choose one of these options to determine how text is formatted when copied to the clipboard. To choose an option, left-click on it once. The option will be immediately selected, and the menu will disappear.

A check mark appears to the left of the option that is currently selected.

If you check **Copy as Text**, the data copied is that which is visible on the screen. Form field delimiters, even if visible, are *not* copied. However, if you have selected the option, "Use [] style delimiters" in the **Font Options** tab of the **Properties** screen, the square brackets *will* be copied as well. This option is useful if you are copying data from C.A.T.T. screens for pasting into other documents where the field delimiters do not copy correctly.

If you check **Copy with Codes**, all of the escape codes present on the screen image are copied along with the screen text. In this case, if you have a formed screen displayed, you can make an identical copy of it using these steps:

1. Take the screen out of forms mode.
2. On the main menu, choose **Edit** and then **Select All.**
3. Choose **Edit** and then **Copy**.
4. Switch to a different screen page and position the cursor in the Home position.
5. Choose **Edit** and then **Paste**.
6. If desired, put the copy into forms mode.

This will copy the screen to a new page, preserving all of the escape codes. When you put the page into forms mode, you will see the original fields.

2.3.2.2 Keep Trailing Blanks / Skip Trailing Blanks

These options determine whether text lines copied to the clipboard include trailing blanks. To choose an option, left-click on it once. The option will be immediately selected, and the menu will disappear.

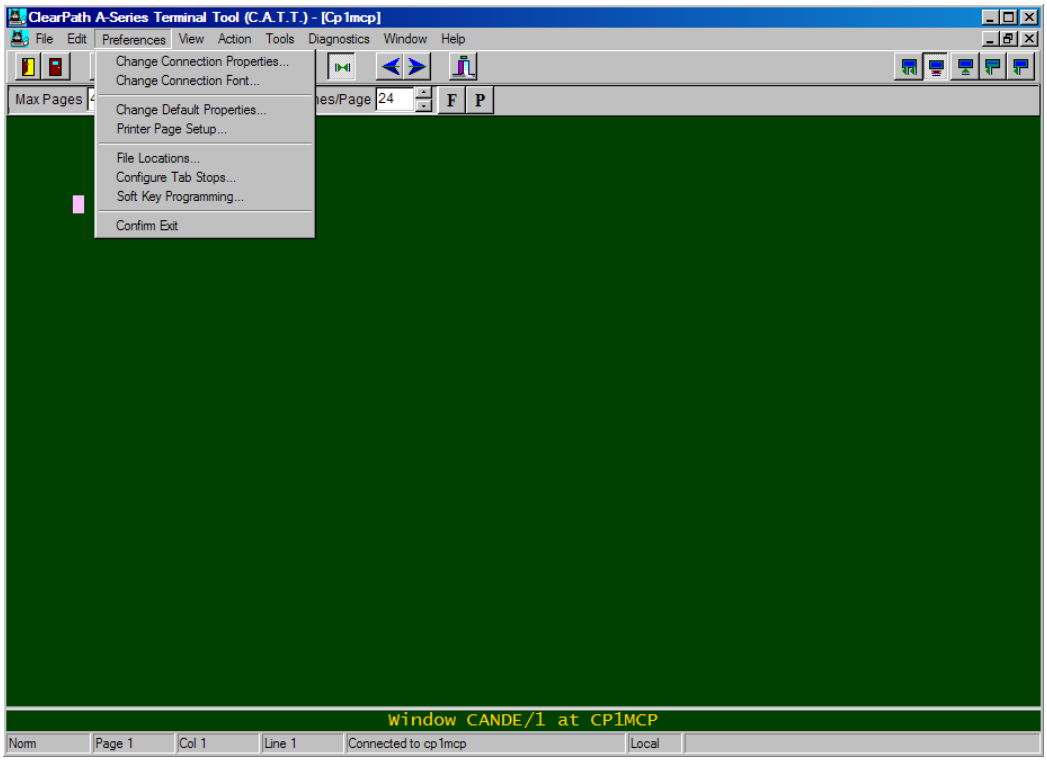
A check mark appears to the left of the option that is currently selected.

If you choose **Keep Trailing Blanks**, all blanks in each selected line are retained in the copy. The line delimiter (carriage return/line feed pair) is inserted after the last character (blank or non-blank) on each line of the screen.

If you choose **Strip Trailing Blanks**, blanks on the righthand end of each line are removed, and a line delimiter (carriage return/line feed pair) is inserted immediately after the last non-blank character of each line.

Strip Trailing Blanks is very useful when copying text from a C.A.T.T. screen to another application, such as *Notepad* or *Word*. Each line is cleanly terminated without the unnecessary extra blank characters.

2.3.3 Options in the Preferences Menu



Most of the options provided by C.A.T.T. are accessible through the **Preferences** menu. The current list is shown in the picture above.

2.3.3.1 Change Connection Properties

Click this menu item to bring up the **Properties** screen for the connection currently displayed. To save them, you must use **File** and then **Save Preferences** or when exiting the C.A.T.T. session or program, you will be prompted to save them if desired.

2.3.3.2 Change Connection Font

Click this menu item to go directly to the **Font Dialog** for the connection currently displayed.

2.3.3.3 Change Default Properties

Click this menu item to bring up the **Default Properties** screen.

2.3.3.4 Printer Page Setup

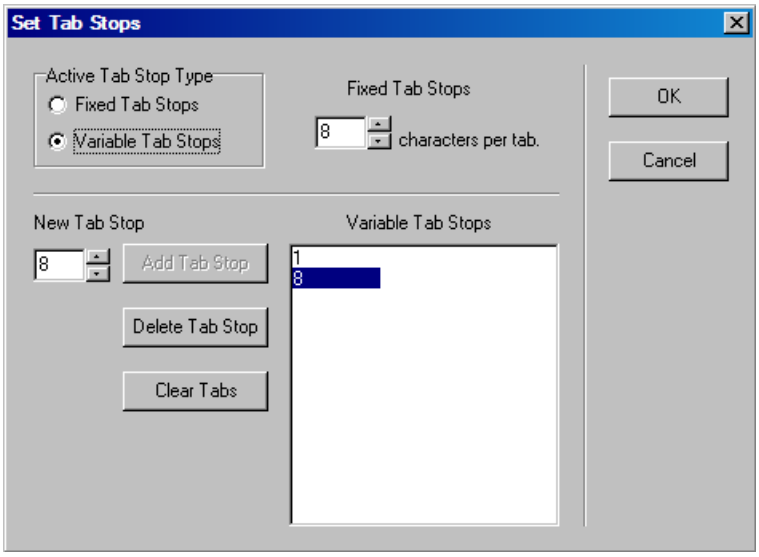
Click this menu item to bring up the **Printer Page Setup** screen described previously. This selection is used for both **Print Screen...** and **Quick Print** screen printing.

2.3.3.5 File Locations

Click this menu item to bring up the **File Locations** screen. The elements of this screen are described in the “Installing and Configuring C.A.T.T.” chapter. This screen is not available if your site has secured it.

2.3.3.6 Configure Tab Stops

Click this menu item to configure your tab stop. This brings up the following screen:



In the box labeled **Active Tab Stop Type**, select the radio button that corresponds to the type of tab stops desired.

For fixed tab stops, select "Fixed Tab Stops". Then insert the length of each tab stop in the **Fixed Tab Stops** edit box. The default is 8. The first fixed tab stop is always column 1. 8-column spacing puts the tab stops in columns 1, 9, 17, 25, 33, and so forth. These are good settings for ALGOL style CANDE files.

For variable tab stops, select "Variable Tab Stops" as your active tab stop type. Then enter your tab stop locations in the **New Tab Stop** edit box (below the **Active Tab Stop Type** box).

As you type a tab stop number, the **Add Tab Stop** button will be enabled. Click it to add the tab stop specified in the **New Tab Stop** edit box. You can define up to 100 tab stops. Column numbers must be in the range 1 through 255, inclusive. The leftmost column on the screen is column 1.

To delete a tab stop, select it in the **Variable Tab Stops** list. Then click the **Delete Tab Stop** button.

To clear all of the tab stops, click the **Clear Tabs** button.

There are no defaults for **Variable Tab Stops**. Only the numbers shown in the **Variable Tab Stops** list are used as tab stops. If you want a tab stop in column 1, you must include a 1 in the list.

2.3.3.7 Soft Key Programming

Click this menu item to configure your keyboard programming. Details for doing this are described in the "Soft Key Programming" chapter.

2.3.3.8 Confirm Exit

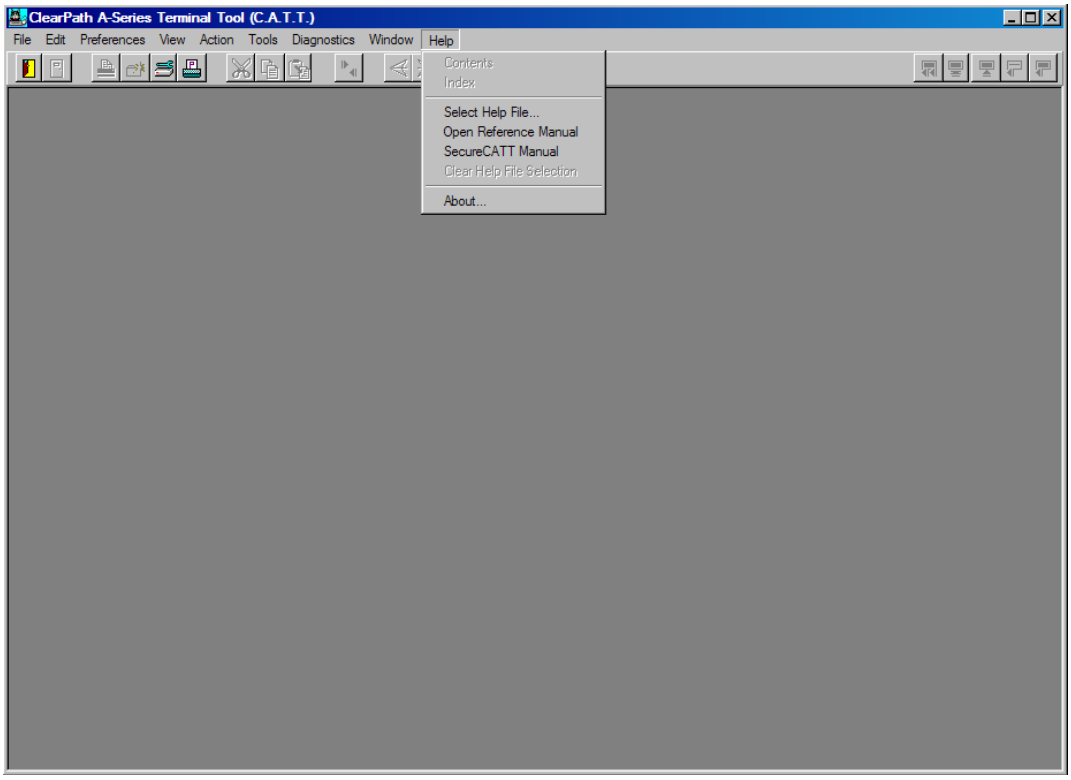
The **Confirm Exit** option determines if you are prompted for confirmation when terminating the program.

Click this menu item to toggle its value. If the option is checked (as shown in the picture), it is enabled. This means that you will receive this prompt if you have any open connections when exiting the program:

This helps you avoid accidentally shutting down the program by clicking the wrong key.

If the option is not checked, it is disabled. If you quit the program, it immediately terminates. Any opened connections are immediately closed. The option is enabled by default.

Regardless of the setting, the program will quit without a prompt if it is running when you shut down *Windows*.



2.4 Defining Customized Help

To use this feature, first someone must create your customized help file and save it with the extension .hlp. Store the file in any convenient directory.

Before using the help file for the first time, you must select it. Do this through the menu selection **Help** and then **Select Help File...**. This presents a standard file open dialog through which you can locate and open your customized help file.

Once the file is selected, the other menu items will be active. Select **Contents** to access the file by table of contents, or select **Index** to access it by the index file. If neither of these is available, the first page of the help file is displayed instead.

You can change the help file selection at any time by using **Help | Select Help File...** again. To clear the help file selection completely, select **Help** and then **Clear Help File Selection**.

Your help file selection is permanently saved in your configuration file and automatically reloaded each time you run the emulator. If you only have one file, you can load it once and it will always be available on future runs.

2.4.1 Open Reference Manual

The option “Open Reference Manual” opens this manual in Acrobat.

2.4.2 SecureCATT Manual

The option “SecureCATT Manual” opens the SecureCATT reference manual.

3. Using C.A.T.T.

Relative to version 2.1G and later of C.A.T.T.

3.1 The Default Keyboard Layout

3.1.1 Keyboard Action Keys

The default keyboard layout is as follows:

Keystroke	Function
Tab	If in forms mode, tab forward to the next field. If not in forms mode, tab forward to the next tab stop, as defined in **Preferences | Configure Tab Stops**.
Shift+Tab	If in forms mode, tab to the start of the previous field. If not in forms mode, tab back to the start of the previous tab stop.
Insert	Toggles insert character by line mode. Characters inserted push text to the right on the current line, but data does not wrap from one line to the next.
Shift+Insert	Inserts a blank line, moving all lines below it down one line. The last line on the screen is discarded.
Ctrl+Insert	Toggles insert character by page mode. Characters inserted push text to the right all the way down the page. A character moved to the right of the last column moves to column 1 of the line below it. The bottom right character on the page is discarded.
Delete	Deletes a single character on the line. The remainder of the text on that line moves one space to the left.
Shift+Delete	Deletes a line from the screen. Lines below the target line move up one position. The bottom line on the screen is set to a blank line.
Ctrl+Delete	Deletes a single character “by page”. All of the text on the screen to the right of or below the target character moves one position to the left. Data shifted left of column 1 moves to the last column of the line above it.
Home	If in forms mode, moves the cursor to the first edit field on the screen. If not in forms mode, moves the cursor to the logical Home position. Normally, this is column 1 of line 1 on the screen. If mobile home has been activated, this may be a different position.
Shift+Home	If in forms mode, clears the data in all of the unprotected areas and moves the cursor to the first unprotected position on the screen. If not in forms mode, clears the screen and moves the cursor to the logical Home position.
Ctrl+Home	If the mobile home option is enabled, moves the logical Home position to the current location of the cursor.
End	If in forms mode, moves the cursor to the end of the text in the field the cursor is currently positioned in. If the last position in that field is not blank, moves the cursor to the rightmost position in the field. If not in forms mode, moves the cursor to the space following the last text character on the current line. If the last character is not a blank, moves the cursor to the last position on the line.
Shift+End	If in forms mode, erases all of the data in the current field from the cursor’s position to the end of that field. The remainder of the screen is untouched. If not in forms mode, erases the screen from the cursor’s position to the end of the line.
Ctrl+End	If in forms mode, erases all of the data in all unprotected fields from the cursor’s position to the end of the screen. If not in forms mode, erases all text from the cursor’s position to the end of the screen.
Page Up	Changes the display back one page (e.g., from page 2 to page 1).
Shift+Page Up	Changes the display to the previous active connection environment.
Ctrl+Page Up	Same as Page Up.
Page Down	Changes the display forward one page (e.g., from page 1 to page 2).

Keystroke	Function
Shift+Page Down	Changes the display to the next active connection environment.
Ctrl+Page Down	Same as Page Down.
Arrow keys	Standard function.
Shift+Arrow Key	Initiate or continue a selection in the direction of the arrow key.
Ctrl+Left Arrow	If using standard Windows behavior, moves the cursor to the start of the word preceding the cursor's current location. If using standard T27 behavior, same action as Page Up. (See note at the end of this table regarding "arrow key behavior".)
Ctrl+Right Arrow	If using standard Windows behavior, moves the cursor to the start of the next word following the cursor's current location. If using standard T27 behavior, same action as Page Down.
Ctrl+Up Arrow	If using standard Windows behavior, moves the cursor up one line. If using standard T27 behavior, scrolls the screen up one line. The top line of data is lost, and the bottom line is cleared to blanks.
Ctrl+Down Arrow	If using standard Windows behavior, moves the cursor down one line. If using standard T27 behavior, scrolls the screen down one line. The bottom line of data is lost, and the top line is cleared to blanks.
Num Pad "+"	Transmits the page. If in forms mode, the transmission may be the transmittable fields from home to cursor or for the entire page. The choice is controlled through the **Xmit Options** settings on the **Properties** screen. If not in forms mode, sends all of the data from the logical Home position to the cursor. If the cursor is in the logical Home position, all of the text on the screen following the logical Home position is sent.
Ctrl+ Num Pad "+"	Transmits a line of text. Transmits from the left margin to the cursor position. If the cursor is in the first column of the line, the entire line is sent. This keystroke is not supported in forms mode.
Num Pad "-"	Puts the screen into receive mode.
Num Pad "*"	Puts the screen into local mode.
Shift+ Num Pad "*"	Puts the screen into local mode and clears the status line.
Num Pad "/"	Performs the action of the T27 **{Specify}** key. Transmits the coordinates of the cursor to the host.

3.1.2 Insert Mode Notes

The **{Insert}** and **{Ctrl}+{Insert}** keys toggle *insert mode*.

Once you place the screen into insert mode, it remains in that mode until you either press the **{Insert}** key again or transmit. While in insert mode, the cursor is a thin vertical line. While in overtype mode, the cursor is either a solid square or an underline, depending upon your selection on the **Cursor** tab of the **Properties** screen.

3.1.3 Arrow Key Behavior

The behavior of the **{Ctrl}+{Left Arrow}** and **{Ctrl}+{Right Arrow}** key combinations is controlled by the option, "Ctrl+Arrow keys use Windows standard behavior". If this option is checked, these combinations act like variable tab keys, moving the cursor to the beginning of the previous or next word on the page, respectively. If this option is not checked, these key combinations perform page up and page down actions, respectively. The option is found on the **Display Options** tab of the **Properties** screen.

Shift+Num pad "*" Local + clear status line.

Num pad "/" Specify.

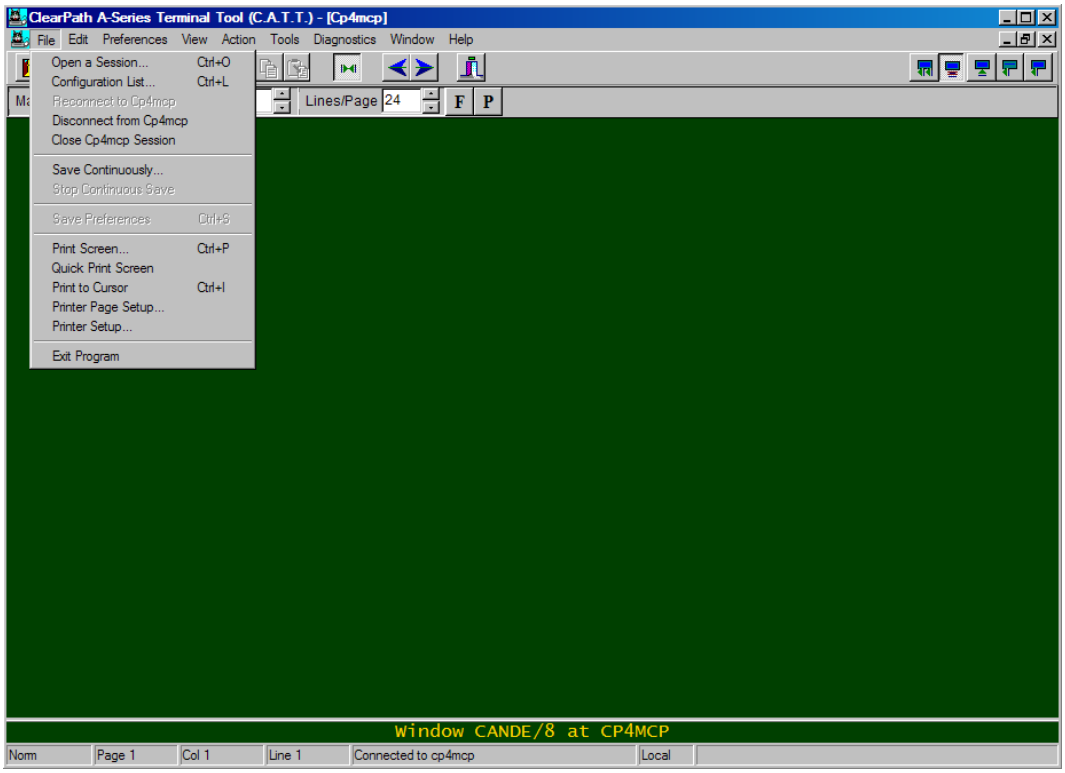
3.1.4 Ctrl Key Combinations

Various **{Ctrl}+<letter>** combinations are predefined by the T27 specification. To use these sequences, you must *press and then release* the **{Ctrl}** key *once*. Then press the desired letter key. If the **{Ctrl}** key is not released first, you will invoke the keyboard shortcut for a menu item (if defined) instead of the desired T27 function in this list.

Keystroke	Function
Ctrl+digit+digit+ Num Pad "+"	Sends <escape><digit><digit> to the host. This is used in applications such as SYSTEM/EDITOR.
Ctrl+B	Exchange current line with line below.
Ctrl+H+.	Start reverse video. Inserts a hex "0E" (S0) on the screen.
Ctrl+H+/	Start underline. Inserts a hex "0F" (S1) on the screen.
Ctrl+H+#	Insert end of text. Inserts a hex "03" (ETX) on the screen. (Displayed as Þ)
Ctrl+H+7	End of Highlights. Inserts a hex "17" (ETB) on the screen.
Ctrl+H+8	Start blinking text. Inserts a hex "18" (CAN) on the screen.
Ctrl+H+9	Start secure video. Inserts a hex "19" (EM) on the screen.
Ctrl+H+:	Start bright video. Inserts a hex "1A" (SUB) on the screen.
Ctrl+H+<	Start protected transmittable field. Inserts a hex "1C" (FS) on the screen. (Displayed as ¤)
Ctrl+H+=	Start right-justified field. Inserts a hex "1D" (GS) on the screen. (Displayed as »)
Ctrl+H+>	Insert end-highlights character. Terminate any field or highlight. Inserts a hex "1E" (RS) on the screen. (Displayed as «)
Ctrl+H+?	Start unprotected field. Inserts a hex "1F" (US) on the screen. (Displayed as »)
Ctrl+I	Negative video off.
Ctrl+J	Toggle "write transparent" mode.
Ctrl+M	Roll screen down.
Ctrm+N	Roll screen up.
Ctrl+Q	Take screen out of forms mode.
Ctrl+U	Negative video on.
Ctrl+V	Exchange current line with line above.
Ctrl+W	Put the screen into forms mode, if there is at least one editable field on the screen.

3.2 Menu Activities

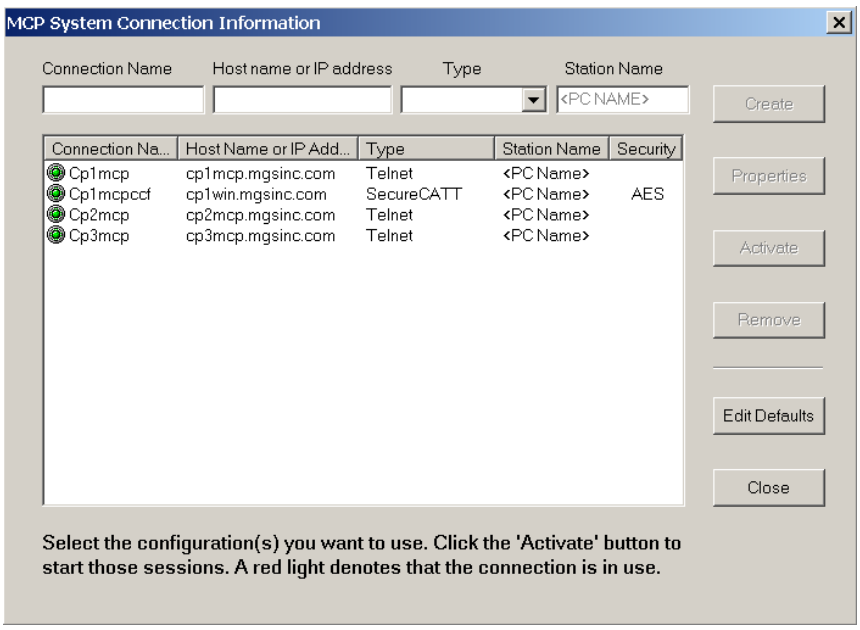
This section describes the purpose of the various menu commands provided in C.A.T.T.



3.2.1 File Menu

3.2.1.1 Open a Session... Configuration List...

These two commands perform the same function. They bring up the **Connection Information** screen. You can use these commands to access this screen/open a session.



3.2.1.2 Reconnect to <*configuration name* >

This item becomes available if you disconnect a connection but do not close its associated screen. Clicking on this item instructs C.A.T.T. to attempt to reopen the connection.

3.2.1.3 Disconnect from <*configuration name*>

This item is available when you are actively connected to a host. Clicking on this item breaks the connection to that host but does not close the connection screen.

3.2.1.4 Close <*configuration name*> Session

This item disconnects the connection if one is active. It then closes the connection's screen.

If you have another connection screen open, the display will automatically switch to that screen. Otherwise, the screen area will go gray, denoting that there are no currently active connections.

3.2.1.5 Save Continuously...

Save Continuously is intended for those situations where you want to keep a copy of the input and output of a text session. Each line you transmit and each response from the system is written to a disk file. This is ideal for recording CANDE sessions and other applications where TD form characters are not involved. The feature will record all inputs and outputs, even those with form characters. When you examine the file, you will find the form characters in the original ASCII encoding.

When you click **Save Continuously**, you are prompted for a file name. The disk file is saved by default in your User Working Directory. If you change the directory in this dialog, that change is remembered permanently.

You must click **Stop Continuous Save** (below) to close the disk file so that other programs can access it.

3.2.1.6 Stop Continuous Save

After you click **Save Continuously** and select a file title, the **Stop Continuous Save** menu item becomes available on the **File** menu. Click this item to stop recording your inputs and outputs and close the disk file. The file is now available for other programs.

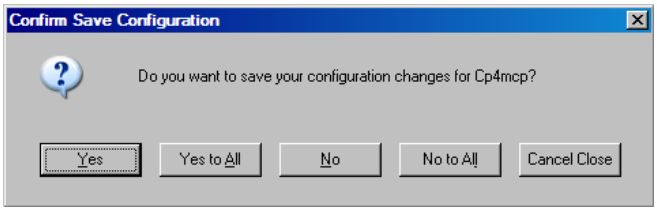
3.2.1.7 Save Preferences

If you change the configuration options of an active session through the **Preferences | Change Connection Properties** command, these changes are *temporary*.

If you have made any temporary configuration changes to the session in the currently active window, the **Save Preferences** item becomes available on the **File** menu. You can click this at any time to make these temporary changes permanent.

If temporary changes have not been saved by the time you close the session, or exit the program, C.A.T.T. will remind you with this prompt:

Answering **Yes** to this prompt is the same as clicking on **Save Preferences**. The temporary changes you've made are permanently saved in your configuration file for future sessions.



3.2.1.8 Print Screen...

Click the **Print Screen** item to initiate a screen capture. This command takes you through two additional dialogs before the capture is made. You are prompted to select a printer on the first dialog. You are then prompted for page layout information on the second screen. After **OK**-ing both dialogs, your C.A.T.T. screen image is either printed or saved to a disk file.

If you are capturing a formed screen, the form delimiters are automatically replaced by square brackets for readability purposes.

3.2.1.9 Quick Print Screen

Click **Quick Print Screen** to capture the current screen without stepping through the two additional dialogs. **Quick Print Screen** uses printer settings you previously selected via the **Quick Print Options** tab on the **Properties** screen. It also uses the printer you previously selected through either the **Print Screen** command or the **Printer Setup** command. For page layout instructions, it uses any instructions you previously supplied through either the **Print Screen** command or the **Printer Page Setup** command.

The output generated by **Quick Print Screen** is the same as that generated by **Print Screen**.

3.2.1.10 Print to Cursor

Everything from the home position at line 1, column 1 up to but not including the cursor position is printed.

3.2.1.11 Printer Page Setup

This command enables you to supply options regarding the page layout for screens printed through the **Print Screen** and **Quick Print Screen** commands. Settings entered here are saved permanently for future sessions. Settings apply to all sessions.

For more information, see the section describing the **Printer Page Setup** screen in the "C.A.T.T. Program Options" chapter.

3.2.1.12 Printer Setup

This command enables you to temporarily change the printer used for printing screen captures. You can also temporarily change the properties of the printer.

The **Print Screen** command steps you through this dialog before printing the screen. The **Quick Print Screen** command uses the information entered through this command automatically.

To be consistent with other *Windows* applications, this information is not permanently stored. Each time you restart C.A.T.T., you start with your default printer configuration. You can change your default printer, and its properties, through the **Printers** command on the *Windows* **Start** menu or on the *Windows* **Control Panel**. That will permanently save your printer configuration.

3.2.1.13 Exit Program

Click this item to close all of your active sessions and exit C.A.T.T.

If **Preferences | Confirm Exit** is checked (which is the default), C.A.T.T. will prompt to confirm that you want to exit. You will see this screen:

If you click **Yes**, the program will automatically close all of your open connections. The program will then terminate. If you click **No**, the program will go back to normal operation.

If **Preferences | Confirm Exit** is *not* checked, C.A.T.T. will terminate without prompting. However, if you have temporary configuration changes still outstanding (as described above under the heading, "Save Preferences"), you will still be prompted to save those before the program will quit.

3.2.2 Edit Menu Selection

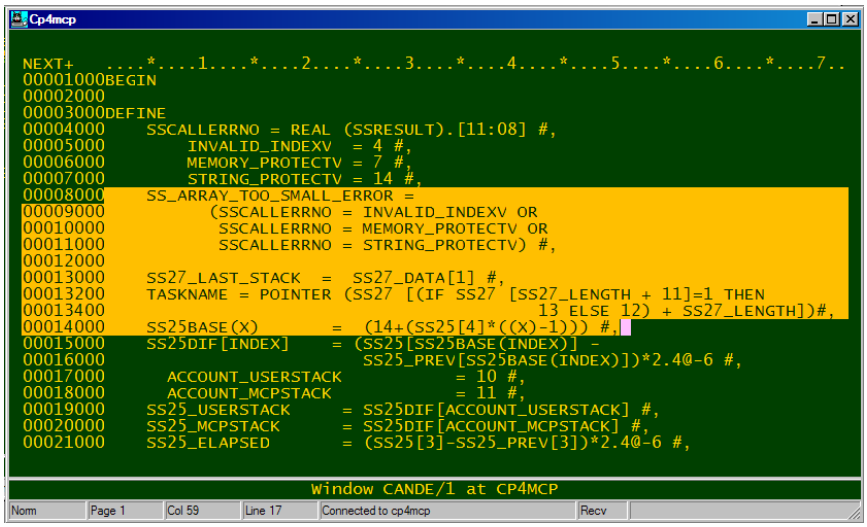
3.2.2.1 Making a Selection

The items on the **Edit** menu deal primarily with editing operations applied to the screen image. Before discussing these, it is important to know how to make a selection on a C.A.T.T. screen. A selection must first be made before using the **Cut**, **Copy**, and **Delete** commands.

Selections can be made in two ways: using the mouse or using the keyboard.

3.2.2.1.1 The Standard Selection

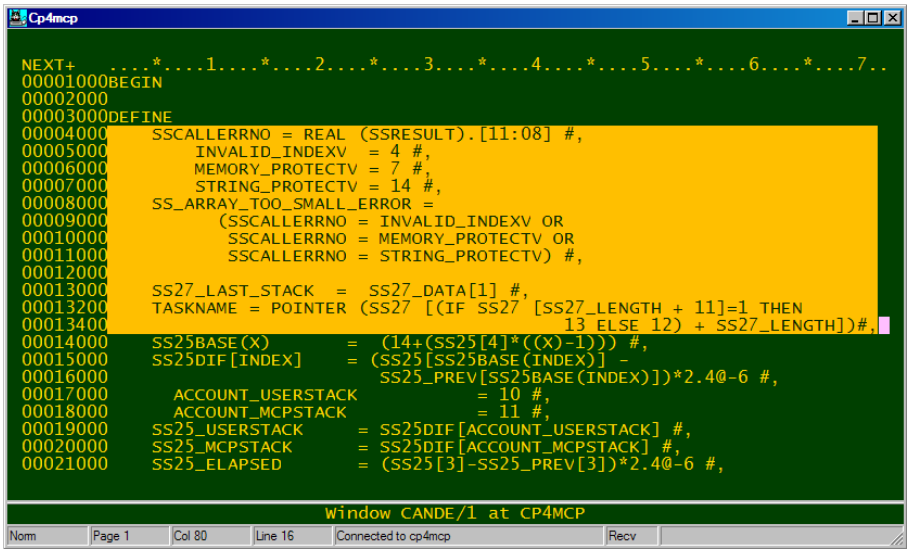
To make a standard selection with the mouse, press down and hold the left mouse button. This marks the starting point of the selection. Then drag the mouse, with the left button held down, in the desired direction on the screen: up, down, left, right, or some combination thereof. When the desired text is highlighted, release the left mouse button. The highlight shows the selection. For example:



This is a *standard selection*. It can begin and end at any place on the screen. The selection always includes entire lines between the start and end points.

3.2.2.1.2 The Block Selection

To make a block selection, first press *and hold* the **{Alt}** key on the keyboard. Then hold down the left mouse button and drag the mouse as described above. This will create a rectangle of highlighted text on the screen. For example: This is a *block selection*. It can begin and end at any place on the screen. Lines occurring between the start and end points are included in the selection, but only the same columns that are selected in the first and last lines. As the example illustrates, you can use a block selection to select text on a CANDE page mode screen without including the sequence numbers.



3.2.2.1.3 Making Selections entirely with the Keyboard

To make a standard selection without using the mouse, do the following:

1. Press and hold the **{Shift}** key.
2. Use the arrow keys to define your selection.

To make a block selection without using the mouse, use this procedure:

1. Press and hold the **{Alt}** key *first*.
2. Then press and hold the **{Shift}** key.
3. Now use the arrow keys to define your block.

3.2.2.1.4 Altering a Selection

If you have made a selection but want to change it, follow these steps:

1. Press and hold the **{Shift}** key.
2. If using the mouse, left click and hold anywhere on the screen. The selection will immediately change to match the mouse's position. Drag the mouse to create the desired selection.
3. If using the keyboard, use the arrow keys to refine your selection.
4. When finished, release the **{Shift}** key.

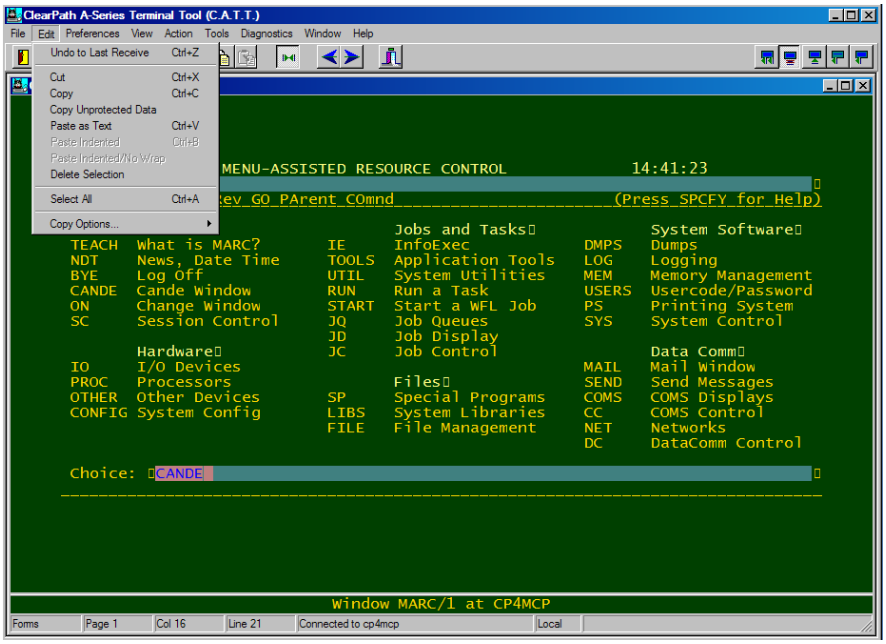
You cannot change the type of a selection once it is started. If the selection is a standard selection, pressing the **{Alt}** key will not make it into a block selection. Similarly, if the selection is a block selection, not pressing the **{Alt}** key will not cause it to become a standard selection. To change the type of selection, you must cancel the selection and start over.

3.2.2.1.5 Canceling a Selection

To cancel any selection, either left click (and release) the mouse, or press any arrow key. Either action will cancel the current selection providing the **{Shift}** key is *not* depressed. Most typing will also cancel a selection. However, some keyboard actions include an implicit "cut". For the safest results, use the mouse or an arrow key to cancel a selection.

3.2.2.2 Edit Menu Contents

The **Edit Menu** provides commands for inserting, rearranging, and deleting blocks of text from the screen image.



3.2.2.3 Undo

The **Undo** command enables you to undo all changes since the program's last "checkpoint". Checkpoints your screen image every time you do a major operation. Clearing the screen, deleting a selection, pasting a selection, and other operations that affect a large portion of the screen cause C.A.T.T. to take a checkpoint first. Receiving a screen from the host also causes C.A.T.T. to take a checkpoint. Conversely, small editing operations, such as typing a character, do not cause a checkpoint to be taken. provides one level of "undo". In the example above, the most recent operation was the receiving of a screen. If you click **Undo**, C.A.T.T. will erase all of the typing done on the screen since this screen was received.

If you clear the screen from the keyboard, that sets a new checkpoint. You can click **Undo** to "un-clear" the screen — *i.e.*, restore the text that was on it immediately before you cleared the screen. However, if you type any characters, the next checkpoint is the cleared screen itself. Once you make any change to a cleared screen, you cannot back up prior to the time when the screen was cleared. **Undo** is extremely useful in two situations:

- You accidentally press **{Shift}+{Home}** when you meant something else (such as **{Shift}+{End}**).
- You pasted a chunk of text in the wrong format.

Pasting text on the screen sets a new checkpoint. Immediately after a paste, you can use **Undo** to undo the paste operation. Then repeat it using the correct options.

3.2.2.4 Cut

Cut deletes text from the screen and copies it to the *Windows* clipboard. The resulting appearance of the screen depends upon whether the screen is in insert or overtype mode.

If you are in overtype mode, or if the screen is in forms mode, the deleted text is replaced by spaces. If you are in insert-by-line mode, and not in forms mode, text to the right of the selection is moved to the left to fill in the space. Blanks fill out each line on the right. No text is wrapped from one line to the next.

If you are in insert-by-page mode, and not in forms mode, text to the right of the selection is moved left and wrapped to the start of the selection. Text below that is wrapped upward through the end of the page. You can cut text from protected or unprotected fields when in forms mode.

3.2.2.5 Copy

Copy copies the selection to the *Windows* clipboard. It does not affect the appearance of the screen.

If the screen is in forms mode, **Copy** copies both unprotected and protected data — whatever is in the selection.

3.2.2.6 Copy Unprotected Data

Copy Unprotected Data is only available when the screen is in forms mode. This command searches the selection and copies only data that is found in an unprotected field. You can use this command to copy data from one form to another quite simply:

1. Select all of the unprotected fields you want to copy. The selection will appear to include both unprotected and protected data.
2. Click **Edit** and then **Copy Unprotected Data**.
3. Change the screen page to the form you want to paste the data into.
4. Position the cursor at the same starting point that you used when you made the copy.
5. Click **Paste as Text**. That will fill in the fields with the copied data.

If you paste text copied with this command into other applications, such as *Notepad*, you will see that only the data in unprotected fields is copied. No delimiters or other flags are copied with the text. So if the form you paste the data into is not identical in spacing to the one you copied it from, the data will not properly line up in the fields.

3.2.2.7 Paste as Text

Paste as Text performs the standard “paste” function common in other *Windows* applications. The text is copied onto the screen image starting at the cursor position. The resulting appearance of the screen depends upon whether the screen is in insert or overtype mode.

If you are in overtype mode, the pasted text overwrites existing text on the screen.

If you are in insert mode (either by line or by page), text to the right of the cursor is shifted downward to make room for the pasted text. For example, if you are pasting 4 full lines of text, the existing text is shifted down 4 lines, and the new text is inserted above those 4 lines.

If the last line of text is not a complete line, it is merged with the first line of text that was shifted downward. In this case, the distinction between insert-by-line and insert-by-page comes into play. If you are in insert-by-line mode, the text that was to the right of the insertion point is tacked onto the end of the text being pasted. If the merged line exceeds the line width, data on the right is discarded. However, if you are in insert-by-page mode,
data that exceeds the line width is wrapped to the next line instead. In that case, remaining text on the screen is shifted down, and data which exceeds the last screen line is discarded.

If you use **Paste as Text** when the screen is in forms mode, text is only pasted into unprotected fields. In the case, the action is similar to what would happen if you typed the data into the fields. The cursor must be in an unprotected field to start with. If the data you paste exceeds the width of the unprotected field, the cursor automatically tabs to the next field and continues pasting. If the data you paste exceeds the sum total of space in the unprotected fields, the cursor wraps to the beginning of the screen and continues pasting.

The insert/overtype condition of the screen only applies to data in the last field. Data in all fields but the last is overwritten; it is not moved to another field. If the data in the last field does not fully fill the field, the results are as follows:

- If the screen is in overtype mode, the pasted data overwrites as much of the field as it needs, and the remainder of the field is left intact.
- If the screen is in insert mode (either by line or by page), data already in the field is shifted to the right to make room for the segment to the pasted. If data exceeds the width of the field, it is discarded. The new data is then pasted into the field, starting at the left. (The rules are reversed for right-justified fields.)

3.2.2.8 Paste Indented Paste Indented/No Wrap

When the screen is not in forms mode, you have three **Paste** commands available:

- **Paste as Text**, described above
- **Paste Indented**
- **Paste Indented/No Wrap**

If you choose **Paste Indented**, data on the clipboard is pasted such that each new line begins in the same column position. If the cursor is in column 9 when a **Paste Indented** is done, all lines will start in column 9. However, if the text of a line does not fit on that line, it is wrapped to column 1 of the next line. If a line does not fill the entire screen line, the remainder of that screen line is erased to blanks.

If you choose **Paste Indented/No Wrap**, data on the clipboard is pasted such that each new line begins in the same column position, as in **Paste Indented**. In this case, however, if the text of a line does not fit on that line, the excess is discarded. If a line does not fill the entire screen line, the previous characters on that screen line remain.

Paste Indented/No Wrap is most useful when doing CANDE page mode editing.

Note that the selection need *not* be taken as a block in order to use the **Paste Indented...** commands. **Paste Indented** works with all clipboard text data. Carriage return/line feed pairs are used to determine the end of each line. Therefore, if the lines are of varying lengths, and all of the lines are smaller than the space remaining on each line, you will typically want to paste using **Paste Indented**. This will automatically erase any remaining text on each line. If all of the lines are the same length, you will most likely want to use **Paste Indented/No Wrap**.

For best results, the screen should be in overtype mode when using **Paste Indented** and **Paste Indented/No Wrap**. If it is in insert mode, *all* of the old text is moved down the screen to make room for the new lines, including data to that is outside the range of the columns where you are pasting.

If the results of a paste are not what you expect, use **Edit | Undo** *immediately* to back up. You can then retry the paste by either using a different paste command or by toggling the overtype/insert mode of the screen.

3.2.2.9 Delete Selection

Delete Selection clears the selection from the screen in the same manner as the **Cut** command, described above. **Delete Selection** does not copy the selection to the clipboard.

When a selection has been made on the screen, the **{Delete}** key performs the same function as **Edit | Delete Selection**.

3.2.2.10 Select All

This command selects all of the data on the current screen page. The screen can be in forms mode or not in forms mode.

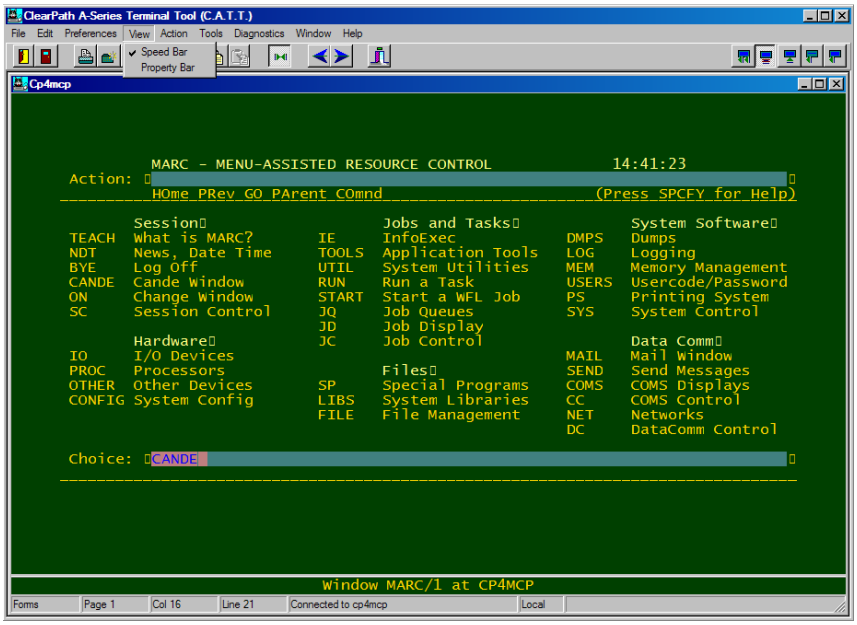
3.2.2.11 Copy Options...

The **Copy Options** affect how the **Cut** and **Copy** commands operate. Details regarding the copy options are provided in the section titled, “Options in the Edit Menu”, in the “C.A.T.T. Program Options” chapter.

3.2.3 Properties Menu

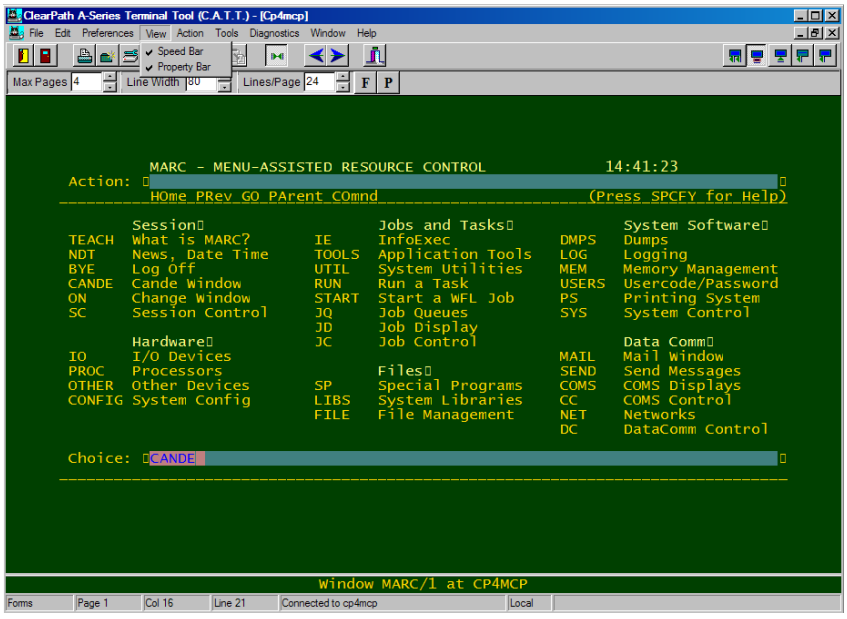
The items on the **Preferences Menu** are fully described in the section titled, “Options in the Preferences Menu”, in the “C.A.T.T. Program Options” chapter.

3.2.4 View Menu



The **View** menu allows you to select the toolbars that are displayed on the screen. Currently there are two toolbars: the **Speed Bar** and the **Property Bar**.

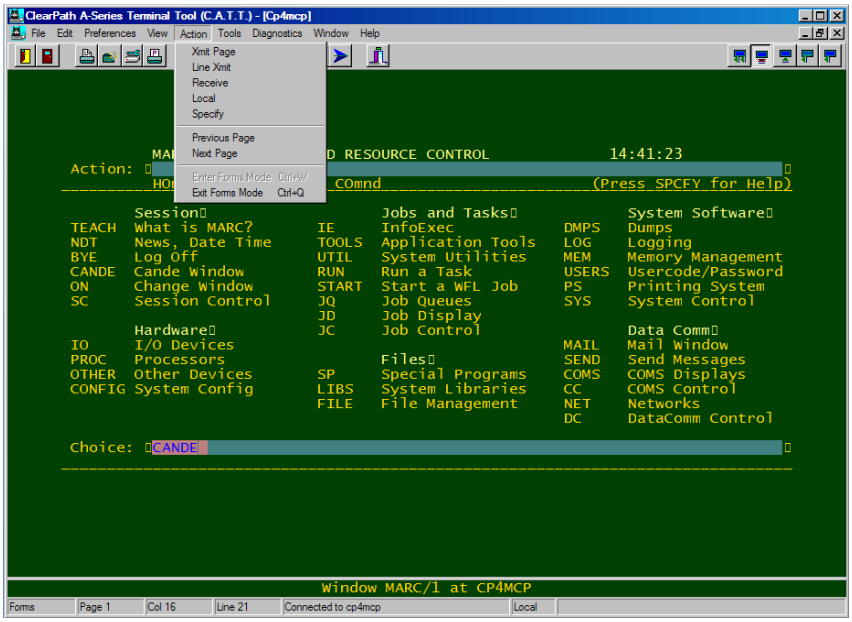
When an item is checked, that toolbar is currently shown on the screen. The example above shows the speed bar at the top of the screen, just below the menu line. The example below shows both the speed bar and the property bar.



Toolbars take up space on the screen. If you have the text tightly fit in the window when you add a toolbar, scroll bars will appear around your session screen since the text no longer fits in the window. To adjust the window for a tight fit without scrolling (if possible), select **Window** and then **Resize Window to Match Font Size**. This will resize the screen to optimally display your session window.

3.2.5 Action Menu

The items on the **Action** menu duplicate some of the functions performed by the keyboard.



3.2.5.1 Xmit Page

Transmits a page of data following the same rules as those described for the “transmit key” previously. The “transmit key” is the **{+}** key on the keyboard.

3.2.5.2 Line Xmit

Transmits a line or partial line of text following the same rules as described for a “line xmit” previously. The “line xmit” key is **{Ctrl}+{+}** using the plus key on the numpad keyboard.

3.2.5.3 Receive

Puts the screen into receive mode.

3.2.5.4 Local

Puts the screen into local mode.

3.2.5.5 Specify

Transmits a “specify” sequence to the host.

3.2.5.6 Previous Page

Backs up one page to the preceding screen page.

3.2.5.7 Next Page

Steps forward one page to the next screen page.

3.2.5.8 Enter Forms Mode

This menu item is available if there is at least one unprotected field on the screen and the screen is not in forms mode. Clicking it puts the screen into forms mode.

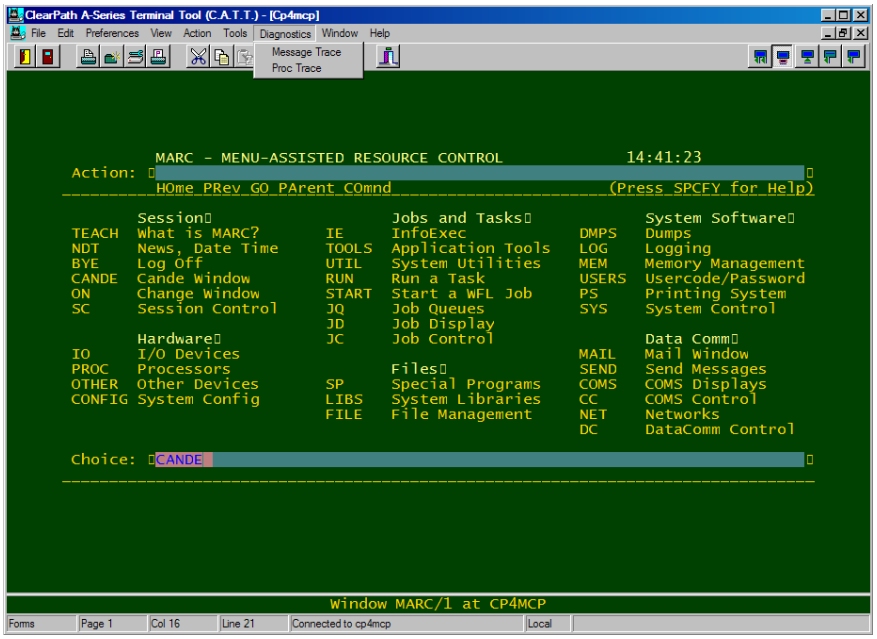
3.2.5.9 Exit Forms Mode

This menu item is available if the screen is currently in forms mode. Clicking it takes the screen out of forms mode.

3.2.6 Tools Menu

This is reserved for future use.

3.2.7 Diagnostics Menu



Items on the **Diagnostics** menu are used to help solve problems in the software. Both items work in the same manner:

- Click once to turn on the item. A check mark will appear next to the item while it is active.
- Click again to turn off the item. No check mark appears when the item is not active.

You can turn tracing on and off at any time. Tracing applies to *all* sessions you currently have open. It also applies to any sessions that you open while tracing is active. In other words, if you have tracing on, and open a new connection, a new trace file will be automatically created for that connection and tracing will take place that includes all of the initial connection steps.

Each session's trace is written to a different disk file. These files are stored in your **Trace Directory**, which is set on the **File Locations** screen.

3.2.7.1 Message Trace

A message trace logs all of the data transferred between the session and the host.

3.2.7.2 Proc Trace

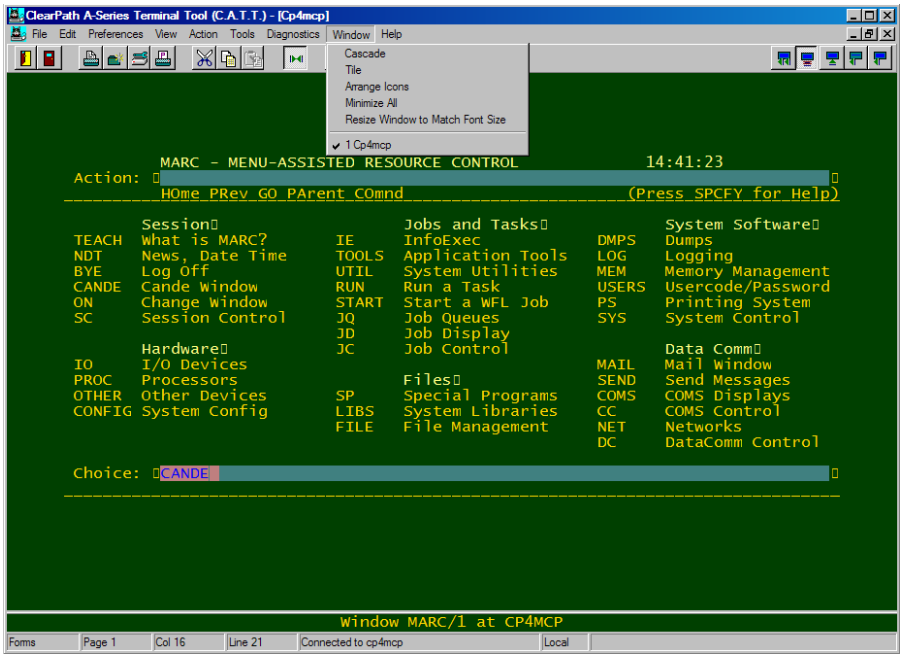
A proc trace logs additional information regarding the procedures C.A.T.T. steps through while processing the data.

If you select **Proc Trace**, then **Message Trace** is automatically enabled. The data from a **Message Trace** is required in order to evaluate a **Proc Trace**.

Traces are primarily for use when communicating software problems to MGS, Inc.

3.2.8 Window Menu

The **Windows** menu manages the different windows in C.A.T.T.

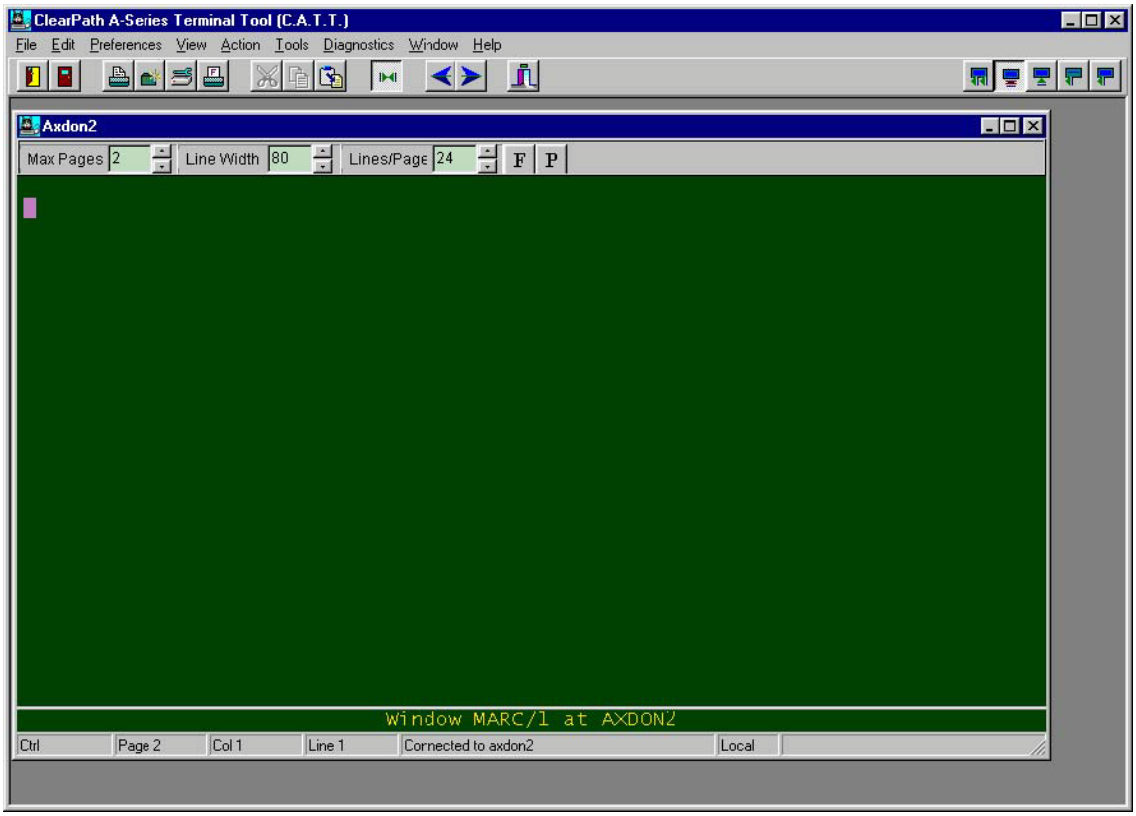


Each connection you open becomes a separate child window of the main application. If you have several connections open, you can **Cascade** them. This makes all of the windows visible with one child window on top and the others piled underneath in an angular fashion. You can also **Tile** them. This creates a table of your child windows so that each window is visible within your main window. **Minimize All** shrinks all of your child windows to just their title bars and places them at the bottom of the main window.

3.2.8.1 Resize Window to Match Font Size

This command changes the size of the window so that it optimally surrounds your font, line width, and page height sizes. It attempts to do so without any scrolling. However, if the physical screen is too small to hold a complete screen page, the parts that do not fit on the screen are scrolled.

If the current child window is maximized, so that it is the only window displayed, this command resizes the main application window as well as the child window.

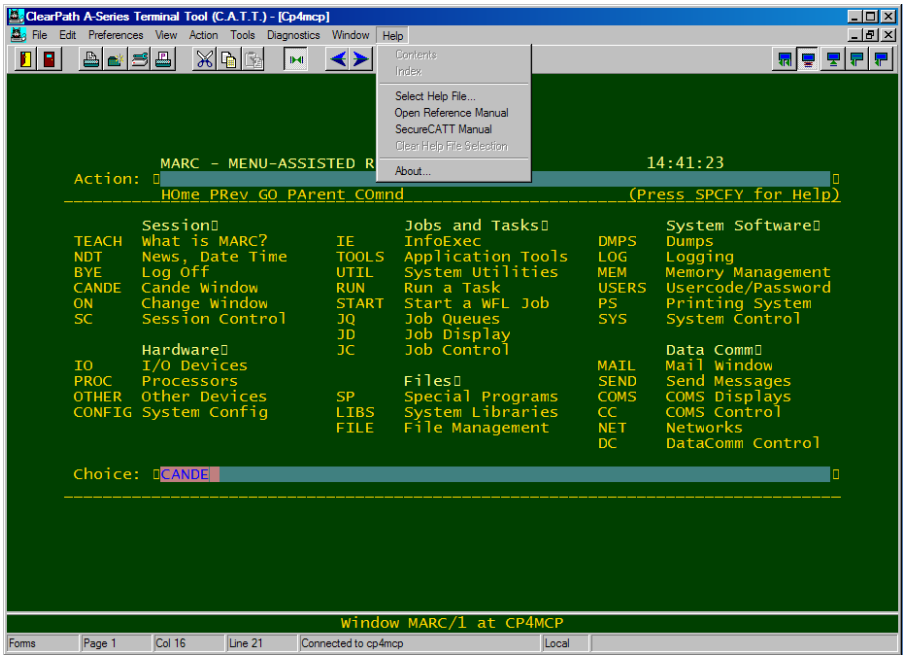


If the current child window is not maximized, this command only affects the child window. Consider the following screen image:

This was obtained by first un-maximizing the child window. The font size was set to 12-point Lucida Console, and line width to 80 columns, and the page length to 24 lines (as shown on the Property Bar attached to the child window). Selecting **Window | Resize Window to Match Font Size** then sized this child window to the size optimal for this font/line width/page size combination, but it left the parent window unchanged.

Resize Window to Match Font Size is not available if you have the option, "Automatically optimize font size to match window size" selected on the **Font Options** tab of the **Properties** screen. The font size must be fixed in order to resize the window to match it.

3.2.9 Help Menu



3.2.9.1 Select Help File

The Select Help File option is provided so that you can attach a locally customized help file to the program. You can use this to provide local documentation regarding applications that your users are accessing through C.A.T.T. Details for using this feature are described in the section titled, “Defining Customized Help” in the “C.A.T.T. Program Options” chapter.

3.2.9.2 Open Reference Manual

This option opens this manual for easy reference.

3.2.9.3 SecureCATT Manual

This option opens the SecureCATT manual.

3.2.9.4 About

The **About** item returns program version and license information about C.A.T.T. You can also use this screen to change your registration information as described in the section, “The License Screen” in the chapter, “Installing and Configuring C.A.T.T.”

3.3 Context Menu

You can right-click the mouse on any child window to bring up a context menu. The context menu contains the following commands:

Xmit Page
Line Xmit
Receive
Local
Specify

Previous Page
Next Page

Open a Session
End Program

Undo
Cut
Copy
Copy Unprotected
Paste
Paste Indented
Paste Indented/No Wrap
Delete
Select All

Change Properties
Change Font
Tab Stops
Key Programming

The commands on the context menu perform the same functions as their counterparts on the main menu.

3.4 Tool Bars

C.A.T.T. currently supports two toolbars: the speed bar and the property bar.

3.4.1 Speed Bar

The speed bar provides quick access to several of the menu functions. The buttons perform the following functions, on a left-to-right basis:

- The open door brings up the **Connection Information** screen so that you can edit a connection's properties or open a new session.
- The closed door disconnects and closes the current session.
- The printer performs a **Print Screen** operation on the current child window.
- The camera performs a **Quick Print** operation on the current child window.
- The wrench invokes the **Printer Setup** dialog.
- The printer with the red "P" invokes the **Printer Page Setup** dialog.
- The scissors cut the current selection.
- The double sheets copy the current selection.
- The double sheets with the arrow perform a **Paste as Text** operation.
- The green opposing arrows when indented (as shown) disconnect the current session. If the button is out, the arrows will be separated. In that case, clicking on the button initiates a connection.
- The blue arrow pointing left moves back one screen page.
- The blue arrow pointing right moves forward one screen page.
- The purple and blue door with the green exit sign above it exits the program. On the right-hand side of the speed bar, continuing from left to right, we have the following:
- The screen with a double arrow pointing left acts as a **Specify** key.
- The screen with the flat lines below it puts the screen into local mode.
- The screen with the arrow pointing up beneath it puts the screen into receive mode.
- The screen with a single dark line on it and a single arrow pointing left performs a line transmit.

- The screen with a dark page on it and a single arrow pointing left performs a page transmit.

Each button on the speed bar has a brief “help” message associated with it. Position the mouse pointer over any button to view its function.

3.4.2 Property Bar

Whereas there is only a single speed bar, and it applies to the entire program, there is one property bar for each child window. The items are on the property bar refer to the session said property bar belongs to. Changes made on the property bar only affect the current session.

The first field in the property bar provides quick access to the number of screen pages. You can set this field to any number between 1 and 50, inclusive, up or down, at any time. The change takes effect immediately.
The second field provides quick access to the number of columns in a line. This can be set to any number between 72 and 255, inclusive. Changes take effect immediately.

The third field provides quick access to the number of lines per screen page. This can be set to any number between 1 and 128, inclusive. Changes take effect immediately.

You can use the second and third fields to temporarily reformat your screen for larger outputs. For example, if you typically work with CANDE files using an 80-column line, the line width will read 80. If you want to view a 132-column printer backup file, you can change the line width to 132. Then enter on CANDE:

TERM LINE 132

Now run BACKUPPROCESSOR (using the BACK command in CANDE), and the output lines are a full 132 columns without any wrapping. This also works if you want to view the system log entries or any other report that is 132 columns in length. When finished, change the line width back to 80.

The **F** button on the property bar provides quick access to the font selection dialog. Changes made here apply only to the current session.

The **P** button provides quick access to the **Properties** screen for the current session.

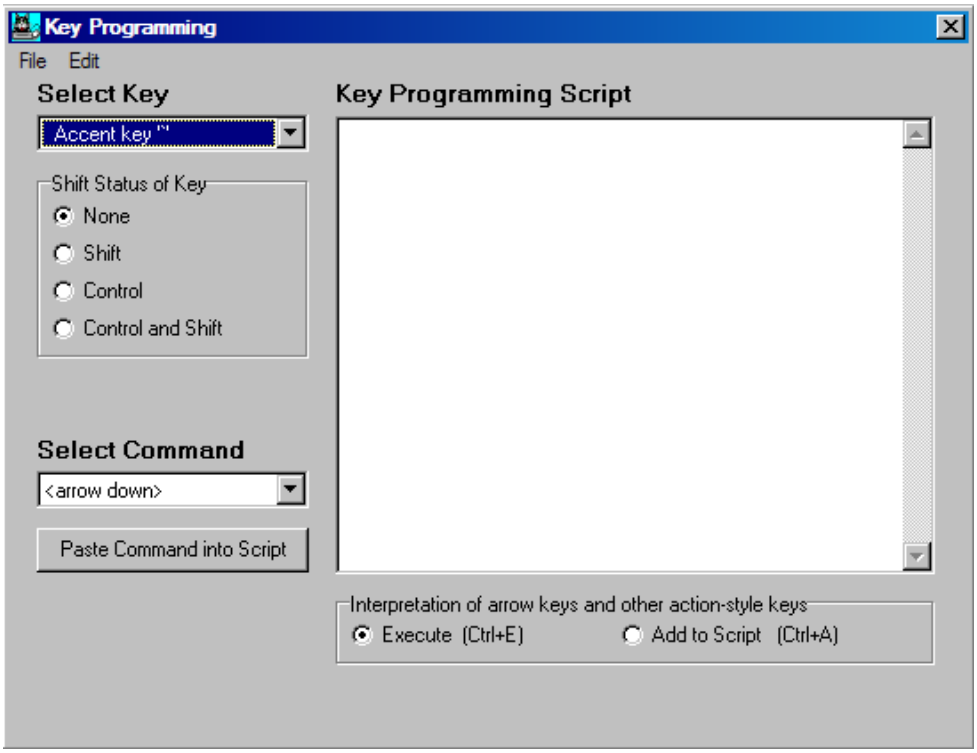
All changes made through the property bar are temporary. To make them permanent, you need to use **File** and then **Save Preferences**. If you do not save the changes by the time you close the connection, you will be prompted then to either save or discard your changes.

3.5 Soft Key Programming

3.5.1 Screen Components

Soft key programming is accessed through the menu commands **Preferences** and then **Soft Key Programming...**. Selecting **Soft Key Programming** returns the **Key Programming** window.

The screen consists of five parts:



Select Key Use this drop-down box to select the key you want to program. Because the keys are sorted alphabetically, the default key is the Accent key, as shown.

Shift Status of Key Use this radio box to select any additional keys that must be pressed when the *select key* is pressed. Your choices are:

- None — The *select key* alone performs the function.
- Shift — The key combination is the **{Shift}** key plus the *select key*.
- Control — The key combination is the **{Ctrl}** key plus the *select key*.
- Control and Shift — The user must press **{Ctrl} + {Shift} +** *the select key* to invoke the script.

Key Programming Script This window shows the script that will be performed when the *select key* combination is pressed.

You can type directly into this window to enter text. You can also paste text into this window from the *Windows* clipboard. However, you must use the **Select Command** box or the **Interpretation of...** radio box to enter commands (such as **<home>**, **<transmit>**, and so forth).

Select Command

Use the drop-down box to select a command. Then either drag the command into the script using the mouse, or click the button below it, Paste Command into Script, to add the command into the **Key Programming Script** window.

Interpretation of arrow keys and other action-style keys - This radio box allows you to toggle the effect of the action keys on the keyboard when they are used inside the **Key Programming Script** window. By default, the action keys perform their defined functions. The left arrow key moves the cursor back one character or instruction. The right arrow key moves the cursor right one character or instruction. This is the result obtained when the radio item:

Execute

is chosen.

You can also use the action keys to insert instructions into the script itself. To do this, change the radio box to select the item:

Add to Script

Now when you type an arrow key or any other action key, that key's action will be added to the script instead.

If you are currently working in the **Key Programming Script** window, you can use the keyboard shortcuts to toggle the **Interpretation of...** radio box. Pressing **{Ctrl}+E** will put the action keys into Execute mode. Pressing **{Ctrl}+A** will put the action keys into **Add to Script** mode.

3.5.2 Example

The following sequence defines the **{F2}** key so that it will move the cursor to the Home position, type the command, "?M", and transmit it.

1. Click **Preferences** and then **Soft Key Programming...** to bring up the **Key Programming** window.
2. In the **Select Key** box, select the item labeled, "Function key F2".
3. In the **Shift Status of Key** radio box, select, "None".
4. In the **Interpretation of arrow keys and other action-style keys** radio box, select, "Add to Script".
5. Click anywhere in the **Key Programming Script** window.
6. Press the **{Home}** key. You will see the meta-token **<home>** appear in the script.
7. Type: ?M
8. Press the **{Transmit}** key (the plus key on the num pad of the keyboard). You will see the meta-token **<transmit>** added to the script.
9. Your script is now done. To save it, click **File** and then **Save Changes** on the menu bar of the **Key Programming** window.

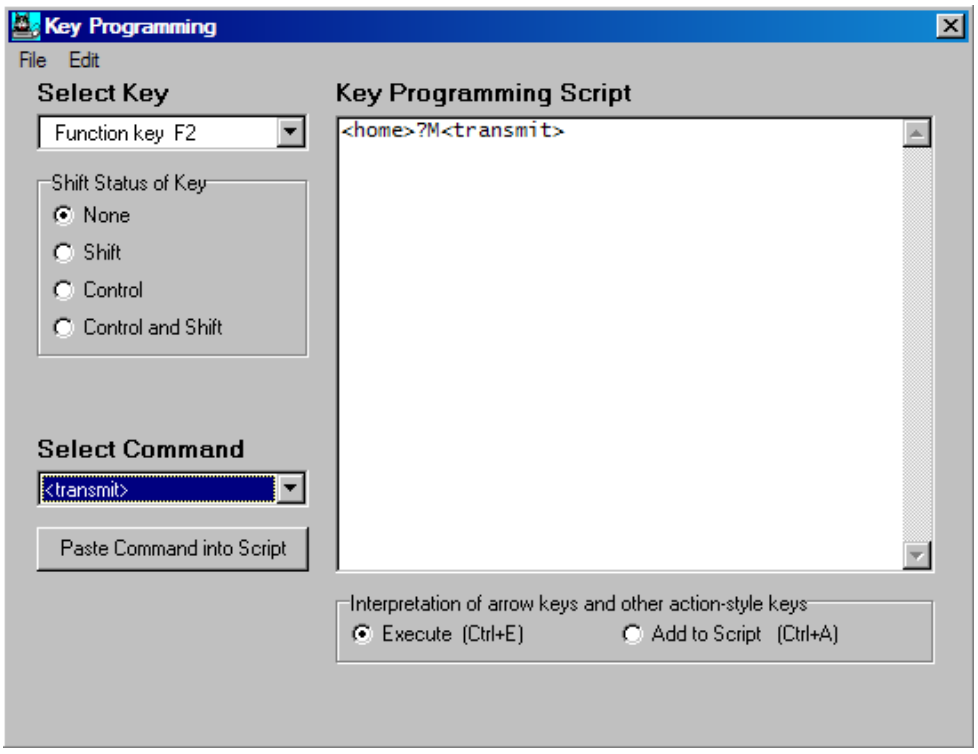
Note that as long as your keyboard interpretation is Add to Script, any action key you type gets added to the script. If you make a mistake and want to back up, you must first change the **Interpretation of...** radio box to the Execute option. You can easily do this by pressing **{Ctrl}+E** or using the mouse to select the option. Then use the arrow, backspace, and other action keys normally to edit your existing script text. If you want to add more action key instructions into the script, you can toggle back to Add to Script mode using either the mouse or **{Ctrl}+A**.

You can also select your **<home>** and other instructions through the **Select Command** list. To make the same script in this manner, do the following:

1. If not already there, go to the **Key Programming** window.
2. In the **Select Key** box, select the item labeled, "Function key F2".
3. In the **Shift Status of Key** radio box, select, "None".
4. In the **Interpretation of arrow keys and other action-style keys** radio box, select, "Execute" (if not already selected).
5. In the **Select Command** box, choose <home>. (Click on the item once and then release it.)
6. Either press the button labeled **Paste Command into Script**, or left-click on the item in the **Select Command** box and drag it into the **Key Programming Script** window.
7. Type: ?M

The text will appear in the **Key Programming Script** window.

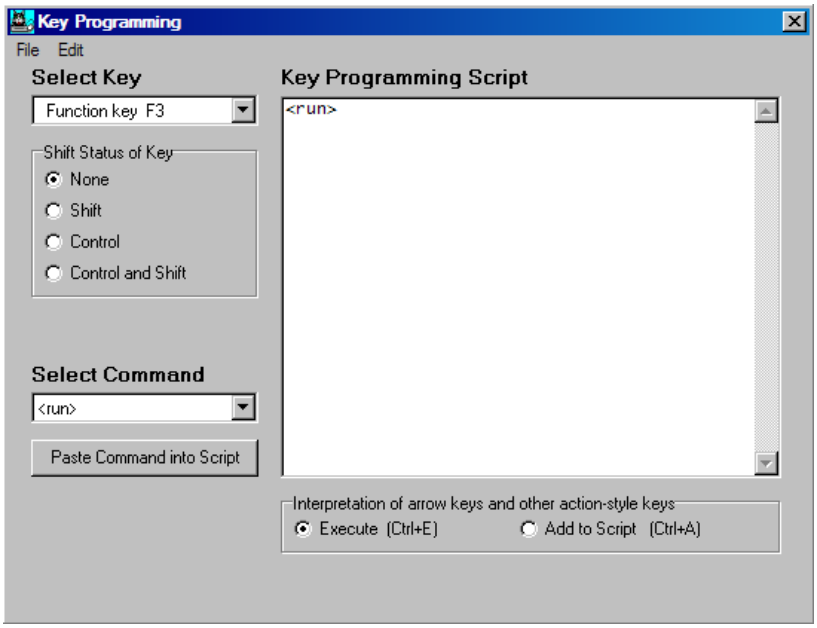
8. In the **Select Command** box, choose <transmit>.
9. Either press the button labeled **Paste Command into Script**, or left-click on the item in the **Select Command** box and drag it into the **Key Programming Script** window.



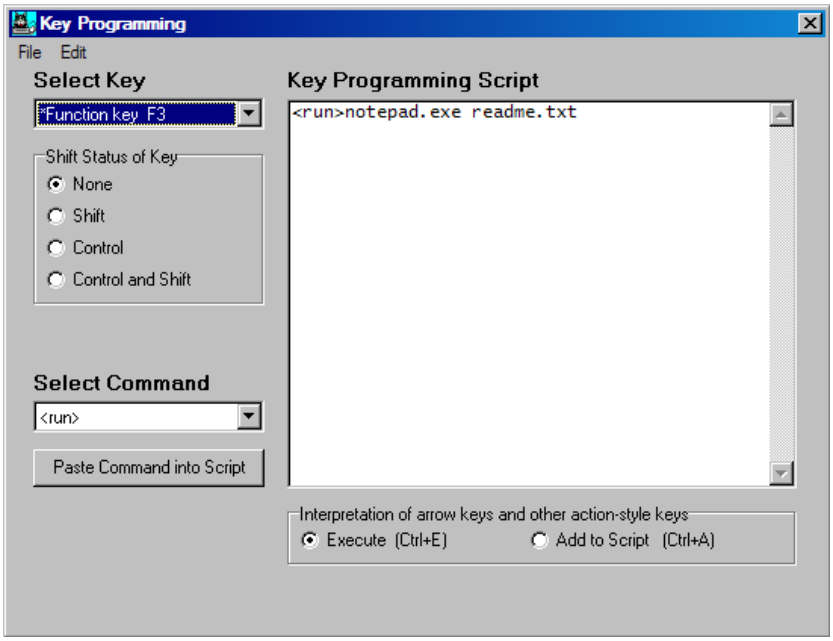
10. Your script is now done. To save it, click **File** and then **Save Changes** on the menu bar of the **Key Programming** window.

3.5.3 Running a Windows Program from a Function Key

You can program a C.A.T.T. keyboard key to run most *Windows* programs. If the program can be run from the **Run** command on the **Start** menu, you can run it through the C.A.T.T. soft key programming feature.



1. To start with, select **<run>** from the **Select Command** dropdown box. Then paste that command into your script.
2. Follow the **<run>** token with the name of the *Windows* program you want to run and any optional parameter values you want to include. For example, to run *Notepad* and automatically open the file `readme.txt`, set up your script thusly:



If you save this program just as shown, and then press the **{F3}** function key, C.A.T.T. will initiate the *Note-pad* program, and *Notepad* will attempt to open the file `readme.txt`.

3.5.4 Embedding the Run of a Windows Program as Part of a Script

You can include other soft key instructions in your script when it contains a **<run>** token. C.A.T.T. takes the text between the **<run>** token and the **<end run>** token in the script as the complete command to *Windows*.

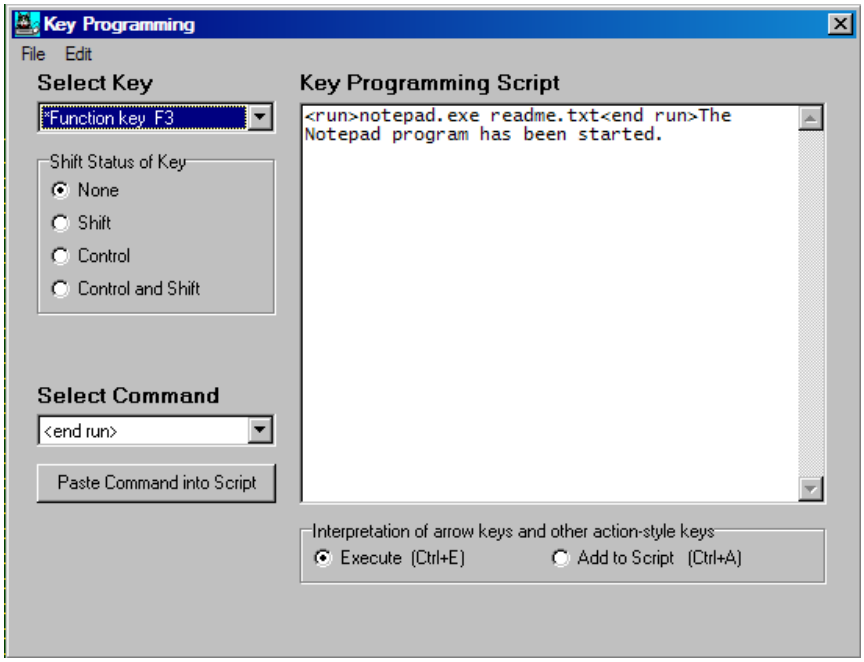
For example, if your script consists of:

<run>notepad readme.txt**<end run><home>**

your script will run *Notepad* with the parameter readme.txt and then home the cursor on your current C.A.T.T. screen.

When composing a script, the Key Programming Script Editor will automatically insert an **<end run>** instruction when you use the **Paste Command into Script** button to add a command. If you paste the command from another source, you can select the **<end run>** command from the command list and paste it in yourself. The script editor will automatically reinterpret all text following an **<end run>** command and update the display accordingly.

If the commands following your **<run>** command are text, you must insert the **<end run>** token yourself into your script so that C.A.T.T. knows where the *Windows* command ends. Consider:



Here the programming script reads:

<run>notepad readme.txt**<end run>**The Notepad program has been started.

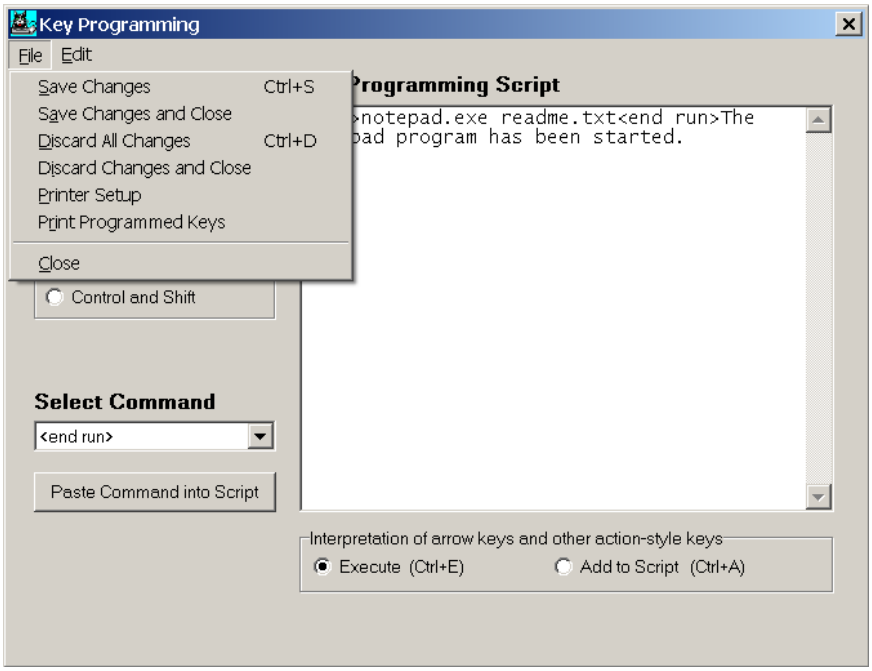
The text, "notepad readme.txt" is passed to *Windows*. The text following the **<end run>** token is written onto the current C.A.T.T. screen, starting at the current location of the cursor.

3.5.5 Entering Extended Characters into a <run> Command

You can use characters with hex values in the range 0x81 through 0xff between a **<run>** and **<end run>** command. These are passed to *Windows* as part of your **<run>** command. To enter a character in this range, use the keyboard sequence **<alt>+<digit>+<digit>+<digit>** while entering text into the Key Programming Script.

Character values from 0x80 through 0xff represent keyboard commands outside of a **<run><end run>** pair. If you insert or delete an **<end run>** instruction, the script editor automatically updates the display to match the change. Character values that do not correspond to a command show as **<unknown>** in the script. These are ignored when the key program is executed.

3.5.6 File Menu Commands



The menu on the **Key**

Programming window has two parts: a **File** menu and an **Edit** menu. The commands available on the **File** menu are as follows.

3.5.6.1 Save Changes

This command permanently saves the contents of the **Key Programming Script** into your soft key programming file. The script is associated with the selected key. Any previous script assigned to that key is automatically discarded. You can continue with additional editing on the key's script, or you can select another key for programming.

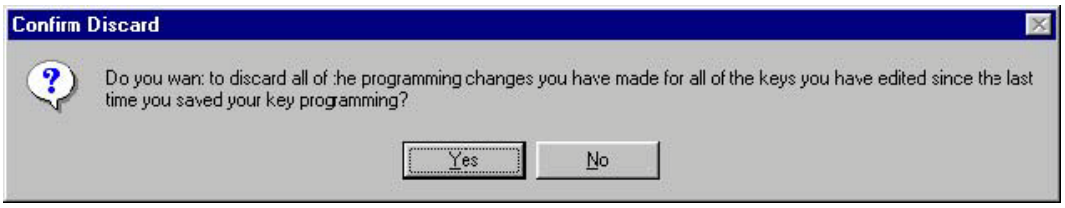
If you have programmed several keys, all changes made up to this point are saved.

3.5.6.2 Save Changes and Close

This command permanently saves the contents of the **Key Programming Script** into your soft key programming file. The script is associated with the selected key. Any previous script assigned to that key is automatically discarded. The **Key Programming** window is closed, and control returns to the main program. If you had a session open, control returns to that session.

If you have programmed several keys, all changes made up to this point are saved.

3.5.6.3 Discard All Changes



This command discards all key programming changes you have made since the last time you executed a **Save Changes** command. You are first prompted with the question:

If you select **Yes**, your changes are discarded. This applies to *all changes to all keys made since the last time you saved the changes!* The **Key Programming Script** will revert to any previous script assigned to the selected key. However, all of the keys you've changed since the most recent "save" are changed back to their previous scripts.

3.5.6.4 Discard Changes and Close

This performs the same function as **Discard Changes**. It also closes the **Key Programming** window and returns control to the main program.

3.5.6.5 Printer Setup

This allows setting up a printer for the purpose of printing a list of the programmed keys.

3.5.6.6 Print Programmed Keys

This prints a list of all programmed keys and their programming.

3.5.6.7 Close

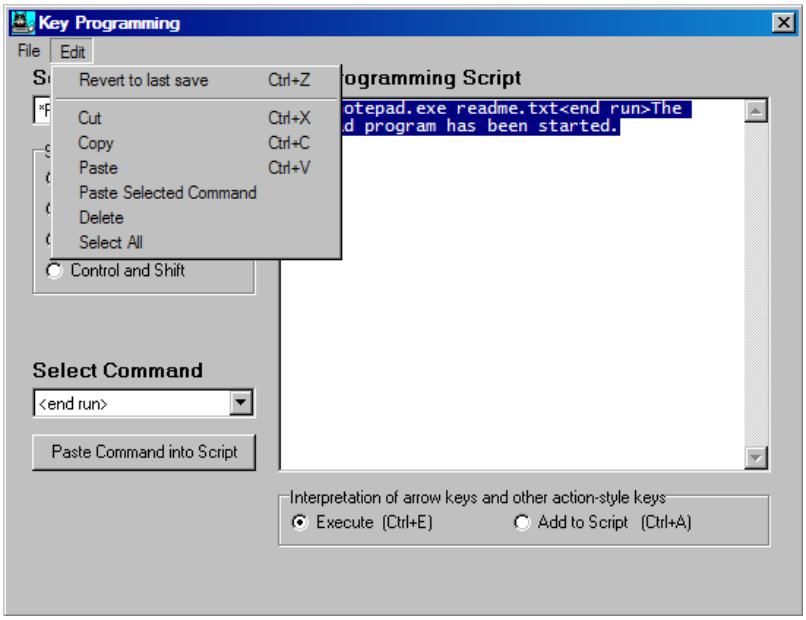
This closes the **Key Programming** window and returns control to the main program.

If you have not saved or discarded your changes to the key programming script(s), you are prompted with the question:

Select **Yes** to save your script changes, **No** to discard them, and **Cancel** to go back to key programming.

3.5.7 Edit Menu Commands

The items in the **Edit** menu give you editing capabilities within the **Key Programming Script** window.



You can make a *standard selection* (as defined previously) in the **Key Programming Script** window through the usual means. Left-click the mouse and hold; then drag the mouse to highlight your selection. The **Key Programming Script** window supports standard selections but not block selections.

3.5.7.1 Revert to last save

This command discards all changes made to the selected key's script and restores the script to its condition at the time you last saved your changes. Unlike the **File** menu's **Discard All Changes** command, this command only applies to the changes made to the single key you have currently selected in the **Select Key** drop-down box.

3.5.7.2 Cut

Use this command to cut the selection from the **Key Programming Script** box and copy it to the *Windows* clipboard.

3.5.7.3 Copy

Use this command to copy the selection from the **Key Programming Script** box to the *Windows* clipboard.

3.5.7.4 Paste

Use this command to paste text from the *Windows* clipboard to the **Key Programming Script** window. You can only cut, copy, and paste text between the **Key Programming Script** window and other windows (such as session screens or other *Windows* applications). The codes for commands such as **<home>** and **<transmit>** are specially encoded in the **Key Programming Script** and do not translate to other environments. You *can*, however, cut or copy action codes from the **Key Programming Script** window and paste them into the same or another **Key Programming Script** window.

3.5.7.5 Paste Selected Command

This command performs the same function as the **Paste Command into Script** button does. The command selected in the **Select Command** drop-down box is pasted into the **Key Programming Script** at the location of the cursor.

3.5.7.6 Delete

Deletes the current selection from the **Key Programming Script**.

3.5.7.7 Select All

Selects the entire contents of the **Key Programming Script** window.

3.5.8 Popup Menu Commands

You can right-click the mouse on the **Key Programming Script** window to bring up a context menu. This menu contains the following commands:

Cut	**Paste Selected Command**	**Save Changes**
Copy	**Delete**	**Discard Changes**
Paste	**Select All**	

3.6 Sending Data to C.A.T.T. from a Program

3.6.1 Standard Escape Code Support

C.A.T.T. accepts most T27 escape sequences as documented in the Unisys reference manual.[1] It works with software generated by LINC and XGEN. It is fully qualified for SYSTEM/EDITOR. These are the most demanding T27-based applications.

3.6.2 Using Scratchpad Memory

Application access to the T27 scratchpad memory is supported by C.A.T.T. The application program can use the following escape sequences to alter the contents of the scratchpad memory. (Note: The spaces are for readability. Do not include them in your escape sequences.)

<escape> RA hhhh kk <ascii text>
Alters the scratchpad contents starting at address hhhh and ending at address hhhh+kk-1. The <*ascii text*> is stored in the specified location.

<escape> RH hhhh kk <hex text>
Alters the scratchpad contents starting at address hhhh and ending at hhhh+kk-1 using the <*hex text*>.

<escape> RCXXXX
Update the session properties to match changes made to the scratchpad memory. Discard the changes when the session is closed.

<escape> RPXXXX
Update the session properties to match changes made to the scratchpad memory, and save them permanently in the user configuration file.

<escape> RT hhhh kk
Reads the contents of the scratchpad starting at address hhhh and ending at address hhhh+kk-1.

In all of the above commands, hhhh is a 4-digit hex address and kk is a 2-digit hex length. These values must be sent as ASCII string values, but they represent hex values. For example:

REPLACE PBUF:BUF BY 48"27" "RT008031";

sends a request to read the scratchpad starting at hex address 0080 for length 31h or 49 bytes.

If you are using <*escape*>RA or <*escape*>RH to write to the status line, the hhhh value must be either "0310" or "030E". (You can also use <*escape*>RS to write to the status line, which doesn't require an address.)

If you are writing to the scratchpad memory, the hhhh value cannot be lower than "0080". Moreover, the sum of the starting address and the length of the string cannot exceed 00C0 (0080 + 64h).

If you are reading from the scratchpad memory, the hhhh value cannot be lower than "0080", and the sum of the starting address and the length of the string cannot exceed 00C0 (0080 + 64).

The following values can be accessed or set programmatically through the scratchpad memory:

Memory Address (Hex)	Function	Supported Access
0080, bit 4	0 = Transmit to cursor in forms 1 = Transmit full page in forms	read/write
0080, bit 3	1 = DC1 means stay in receive	read only
0084	Lines per page - 1	read/write
0085	Characters per line - 1	read/write
0086	Escape code for starting an unprotected field	read only (always 0x1f)
0087	Escape code for field end	read only (always 0x1e)
0092, bit 6	0 = Lower case enabled 1 = Upper case only	read/write
0096, bit 3	0 = Form feed clears all 1 = Form feed clears only unprotected data in forms	read/write
0096, bit 7	0 = No cursor wrap at EOP 1 = Wrap cursor at EOP	read/write
009B, bit 3	0 = Screen to local after receiving a message 1 = Screen stays in receive after receiving a message	read/write

Unisys Corporation, *T27 Programming Reference Manual*, form #1196904, August 1987, Section 3.

4. Deploying C.A.T.T. using Servers

Relative to version 2.1F and later of C.A.T.T.

This document is intended for System Administrators who desire to manage their C.A.T.T. user base from one or more servers.

4.1 Configuring C.A.T.T. on a Server

4.1.1 Overview

You can configure C.A.T.T. so that users share a common set of connection definitions and/or soft key definitions. You can set up the program so that the .exe file is stored only on a few Servers and only icons are deployed to the users. These various configurations are collectively known as, "Running C.A.T.T. in *System Administrator's Dream Mode*."

4.1.2 Components

The components of C.A.T.T. consist of the following files and directories:

catt.exe — This is the executable file for C.A.T.T. which provides full updating capabilities for the configuration files. Using this file you can access the File Locations screen, create, delete, or change connection information, and perform other administrative tasks.

cattdc.exe — This is the executable file for C.A.T.T. D'Claud. This file should be distributed to users who are not permitted to update or change their connection information. This program does not permit access to the File Locations screen. It also does not permit the user to modify connection information.

floc.cfg — This file contains the list of configuration file names which catt.exe and cattdc.exe will use to determine connection information, user options, and so forth.

This file *must be stored* under the <*working directory*> of the C.A.T.T. executable.

All of the other files are identified through the floc.cfg file. The floc.cfg file is configured and maintained through the **File Locations** screen in catt.exe.

Master Configuration File — This file contains all of the connection information used by catt.exe and cattdc.exe. It lists each connection name, related host name or IP address, TCP/IP port number, and COMS station name. It contains a few other administrative option values. It also holds default settings for the user options. These settings are automatically inherited by each user that is using the same floc.cfg file.

To use C.A.T.T. in *System Administrator's Dream Mode*, you must define a Master Configuration File. If you wish to deploy C.A.T.T. D'Claud, you must also define a Master Configuration File. The cattdc.exe program will not run if it cannot find a Master Configuration File.

> If you want to run C.A.T.T. in single user mode (one copy on each PC where the user controls the connection definitions), you do not use a Master Configuration File. In that case, all of the connection information is stored in the User Configuration File, and the user can update it directly.

User Configuration File — This file contains the user's personal option settings. The settings in this file, if any, override the default option settings of the Master Configuration File. There must be one User Configuration File for each C.A.T.T. user. If not found, the file is automatically created by both catt.exe and cattdc.exe.

Soft Key Programming File — This file holds all of the soft key programming for the user. A single Soft Key Programming File may be defined as shared by all users. This file may be marked as read-only to prevent users from changing their soft key programming.

Alternatively, each user may be assigned his own Soft Key Programming file. If the user has read/write access to the file, he can change his key programming.

User's Working Directory — This is the directory under which files created by the user through C.A.T.T. will be stored by default. It is the default directory for the **Save Continuously** and print to file commands the first time these commands are used.

This directory is local to each user's PC, and the user must have create/read/write/delete access to it. If no directory is specified, the user's TEMP or TMP settings are used for the directory.

Trace Directory — This directory holds any C.A.T.T. trace files (*.trc) the user might generate. Each user must have create/read/write/delete privileges on this directory.

The names for all of the files, except for floc.cfg, are set by the C.A.T.T. Administrator through the **File**

File	Default Name
Master Configuration File	none
User Configuration File	[see note 1]
Soft Key Programming File	<*working directory*>\KBData.cfg [see note 2]
User's Working Directory	TEMP or TMP directory on user's PC
Trace Directory	same as User's Working Directory

Table 1 - Default Names for the C.A.T.T. Configuration Files

Locations screen in the main C.A.T.T. program (catt.exe). The default names for the various files are shown in Table 1.

Note 1:

If no floc.cfg file can be found when C.A.T.T. begins running, C.A.T.T. will take the following steps in an attempt to locate a User Configuration File:

1. If the file <*user directory*>\T27Config.cfg exists that is used.
2. If the file <*user directory*>\T27Config.cfg does not exist, <*appdata directory*>\T27Config.cfg is used.
3. If <*appdata directory*>\T27Config.cfg does not exist, <*user directory*>\TDEmul.ini is used.
4. If < *user directory* >\TDEmul.ini does not exist, <*Windows directory*>\TDEmul.ini is used.
5. If no file is found, <*appdata directory*>\T27Config.cfg is automatically created.

This procedure is followed to ensure backward compatibility for users of previous C.A.T.T. releases. However, it is intended only for users running in single user mode (i.e., no Master Configuration File). Since multiple users cannot share the same User Configuration File, the C.A.T.T. Administrator must change this default value when configuring C.A.T.T. for any sort of shared use.

Note 2:

The <*working directory*> in the above table is the working directory assigned by the C.A.T.T. Administrator through the icon that each user uses to run C.A.T.T. The KBData.cfg file can optionally reside on the user's PC, giving the user the ability to program his own keys. If it resides on the server, users will not have the ability to change the programming of their keys.

4.1.3 Preparing the Environment

The C.A.T.T. Administrator configures the C.A.T.T. Server through the main C.A.T.T. program. In order to do this, the Administrator must have read/write/create/delete permissions on all directories of the Server(s) that house C.A.T.T. files.

At minimum, the C.A.T.T. Administrator must have full privileges on the C.A.T.T <*working directory*>. This is where he will create and maintain the floc.cfg file. The Master Configuration File and, optionally, the Soft Key Programming File is also put into this directory, or they can be stored in other Server directories. Wherever they are stored, the C.A.T.T. Administrator must have full privileges.

4.1.4 Installing C.A.T.T. for the Administrator

The first step in configuring C.A.T.T. for *System Administrator's Dream Mode* is to install the software on a *Windows* computer. This can be the Server itself, or it can be another PC which can access the Server.

4.1.4.1 Installing the Software

For the purposes of these instructions, we will install the software on a client PC (named desktop1) and configure it to run from a Server (named server2).

1. If you have any prior version of C.A.T.T. already installed, uninstall it first. This will remove the old menu items from your *Windows* **Start** menu.
2. Back up the entire contents of your previous C.A.T.T. directory.
3. Remove the files named tdemul.ini and floc.cfg from this directory. You may also want to remove or hide kbdata.cfg (the soft key programming file).
4. Check under your *Windows* directory (\windows or \winnt) for a file named tdemul.ini. If it is found, back it up and remove it. Now you have a completely clean environment with no previous configuration information. You are ready to install the new software.
5. Open the C.A.T.T. CD-ROM or open the C.A.T.T. zip file.
6. Double-click SETUP.EXE

Follow the directions as prompted.

MGS Installer will install catt.exe to the directory you specify. By default, *MGS Installer* will use the directory c:\program files\gregpub\catt\.

4.1.4.2 Map a Logical Drive Letter to your Server

Obtain the name of the directory on your Server that will be the C.A.T.T. <*working directory*>.

1. Map a logical drive letter on your PC to this directory. Choose the drive letter carefully. If you want to have a single icon that you deploy to all of your users, you must choose the same logical drive letter on all of your users' machines. For example purposes here, we will use the logical drive letter: z: which maps to \\server2\catt\

If you want to run C.A.T.T. from your Server, copy catt.exe to your new logical drive (z:).

Note: You can always run your copy from your own PC while users are required to run theirs from the Server. It all depends on how you set up the icons. The location of the catt.exe file is immaterial as far as permitting you to configure the program for Server use.

4.1.4.3 Create a Shortcut Icon for C.A.T.T.

Now create a shortcut icon for your own use in the usual manner.

1. Right-click in an open area on the Server's desktop.
2. Select **New** and then **Shortcut**.
3. Enter the location and name of the catt.exe file in the **Command Line** field (*a.k.a,* "**Type the location of the item**" in *Windows 2000*).

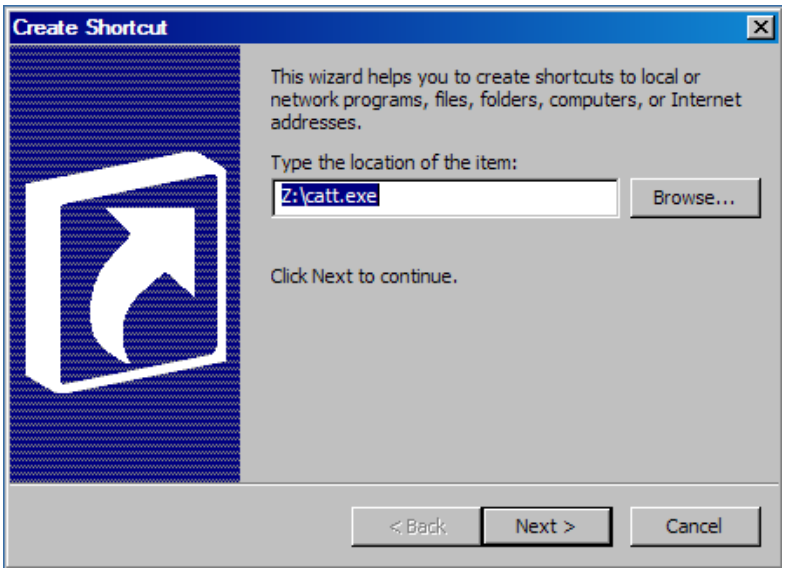
If you want to run the program from your Server, use your logical drive letter; *e.g.:*

z:\catt.exe

If you want to run the program from your PC, use that path information instead; *e.g.,*

c:\program files\gregpub\catt\catt.exe

The figure below illustrates running C.A.T.T. from our Server:



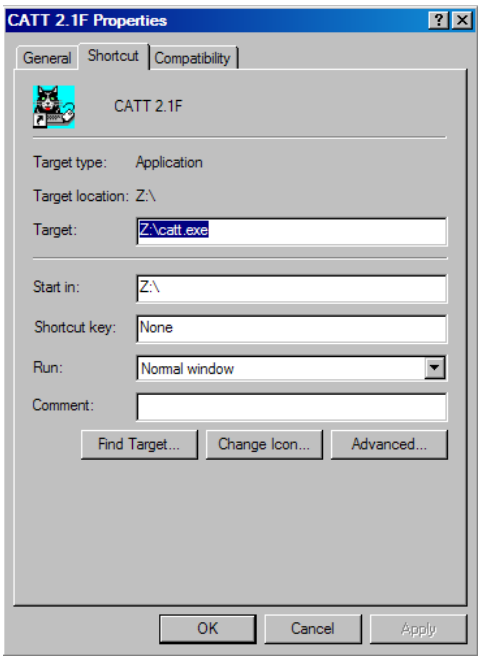
4. Click **Next**.
5. Fill in a name for the shortcut, such as "CATT".
6. Click **Finish**.

You will see a new icon which looks like this:

You now need to set the default <*working directory*> for C.A.T.T. This will be the location where you store the floc.cfg file.

1. Right-click the icon you created above, and select **Properties**.
2. Change the **Start in** field to the logical drive that points to your Server.

3. Click **OK**. From this point on, always use the shortcut icon to run C.A.T.T.



4.1.5 Defining C.A.T.T. File Locations

4.1.5.1 Getting to the File Locations Screen

The first step in configuring C.A.T.T. is to define the locations of its three configuration files and two user directories. To do this, you need to get to the **File Locations** screen. To find this screen, proceed as follows:

1. Run C.A.T.T. by double-clicking the icon that you created in the last section.

2. When you run C.A.T.T., the program will search its <*working directory*> for its location file — floc.cfg. If you are using the shortcut described above, C.A.T.T. will look for the file under the name:

z:\floc.cfg

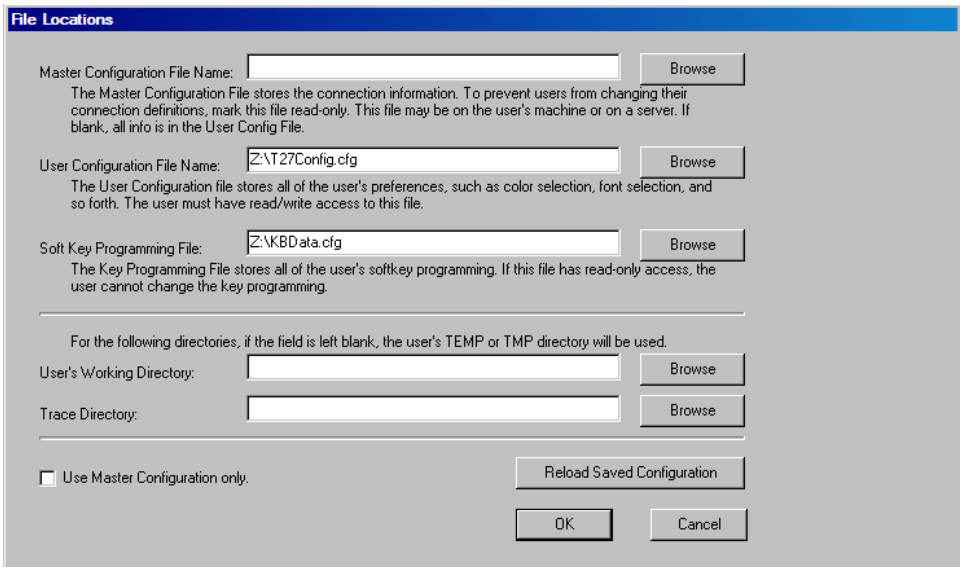
   which, in our case, maps to \\server2\catt\floc.cfg.

3. If C.A.T.T. does *not* find a floc.cfg file under its <*working directory*> upon startup, it will generate a series of defaults for your file locations (as shown in Table 1, above). It will then automatically display the **File Locations** screen so you can enter and OK your file location information. This will normally happen only the very first time you run C.A.T.T. It will not happen after that unless you change the program's <*working directory*>, remove the generated floc.cfg file, or edit the floc.cfg file with an editor and delete the ConfigFile entry.

4. If C.A.T.T. *does* find an floc.cfg file under its <*working directory*> upon startup, it will begin "normally" (which means that the **File Locations** screen will not be automatically displayed). In this case, first close any modal C.A.T.T. dialogs (such as the **Connection Information** screen) so you can use the menu on the main screen. Then, on the main menu, click **Preferences** and then **File Locations** to bring up the **File Locations** screen.

   When configuring C.A.T.T. to run from a Server, you need to set up the **File Locations** for access by your users. The defaults will not be acceptable. Therefore, if the **File Locations** screen does not appear immediately upon startup, you need to bring it up through the **Preferences** menu item.

5. The **File Locations** screen looks like this:



If you do *not* currently have an floc.cfg file under the C.A.T.T. <*working directory*> at startup, you will see the above screen. If you *do* have an floc.cfg file available, the fields of the screen will be filled in with your current file location information.

6. If the screen comes up with all of the fields disabled, it means that you have read-only access to the floc.cfg file. In this case you must **Cancel** the screen and exit C.A.T.T. Change the attributes on floc.cfg so that you have read/write access to the file. Then rerun C.A.T.T. and bring up the screen again.
7. After loading the **File Locations** screen in read/write mode, perform the activities you need as described in the sections which follow.

4.1.5.2 Configuring Files

C.A.T.T. looks for information in three configuration files. These are:

1. the Master Configuration File
2. the User Configuration File
3. the Soft Key Programming File

The names for each of these are supplied on the **File Locations** screen. The general syntax for entering any of these file names is as follows:

The various prefix tokens in this diagram are defined as follows:

<*unc path*> — A Universal Naming Convention (UNC) prefix which identifies the Server and the drive letter or disk volume of that Server where the file can be found. This prefix may be appropriate for files that are shared, such as the Master Configuration File. For example, if the file is found on drive C: of the *Windows* host server2, the <*unc path*> would be:

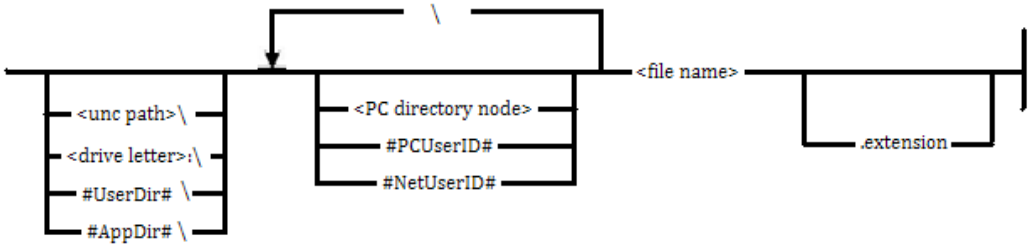
\\server2\c\

This path would work from all hosts on the network, including the host server2 itself.

<*drive letter*> — The PC drive letter on which the file resides.

Use caution with this option. It is ideal for private files, such as the User Configuration File, where each user must have his own copy. If used with a shared file, such as the Master Configuration File, the same drive letter must have the same meaning on all of the users' PCs.

#UserDir#\



This meta-token stands for the User's Working Directory (also defined on the **File Locations** screen). If used, the file is stored under the User's Working Directory. In that case, the User's Working Directory entry should not be blank; otherwise, the file will be stored in the user's "temp" directory.

#AppDir#\

This meta-token stands for the user's application data directory. This follows the convention of not storing user files in the program files folder. It also allows each user of the PC to have their own copy of the file.

> If no prefix is used for the file name, C.A.T.T. assumes that the file is stored under its <*working directory*> — the directory specified by the shortcut icon used to run C.A.T.T.

The other tokens in this diagram are:

<*PC directory node*> — Any legal directory node name according to *Windows* syntax.

> #PCUserID# — The user id the user logged onto his PC with.
>
> #NetUserID# — The user id the user logged onto your Server with. If the user is not logged onto the Server through the network, the PC User ID is used instead.

<*file name*> — A legal file name node according to *Windows* syntax.

.<*extension*> — A legal file name extension according to *Windows* syntax.

> Note that the meta-tokens #UserDir#, #AppDir, #PCUserID#, and #NetUserID# are all *case sensitive*, and the pound signs (#) are required. No spaces are permitted inside these meta-tokens. If they are not spelled exactly as shown, using the letter case exactly as shown, they will not be recognized as meta-tokens. Instead, they will be simply included, however you misspell them, as nodes in the file name.

4.1.5.3 Configuring Directories

C.A.T.T. also requires two working directories. These are:

- the User's Working Directory
- the Trace Directory

The names for these are also supplied on the **File Locations** screen.

Detailed information and recommendations for configuring each specific file and directory follow in the sections below.

4.1.5.4 Assigning the Master Configuration File

The first step in configuring C.A.T.T. for Server use is to define a Master Configuration File. This file holds the connection definitions. It also holds the default settings you want for all of the user options.

To create a new Master Configuration File, or load an existing Master Configuration file, proceed thusly:

1. In the **Master Configuration File Name** field enter the name of your Master Configuration File.

The name you choose must follow a syntax that maps to the same file name for all of your users that are using this particular Master Configuration File. In most situations, you will want to have a single Master Configuration File used by the bulk of your users. There are three ways to do this:

• Omit the file name prefix.

In this case, the C.A.T.T. <*working directory*> is assumed. The C.A.T.T. <*working directory*> is defined in the icon that the user uses to run C.A.T.T. For example:

MasterConfig.cfg

would refer to the file <working directory>\MasterConfig.cfg using the <working directory> defined for C.A.T.T. in the shortcut icon that was used to run C.A.T.T.

This is the recommended choice.

• Use a <*unc path*> for the prefix. This removes all doubt as to where the Master Configuration File is located. For example:

\\server2\c\CATT\MasterConfig.cfg

unconditionally directs C.A.T.T. to look for the file named MasterConfig.cfg under the directory \CATT on drive c: of the *Windows* host server2. The user must have previously logged onto this path in order for this to work.

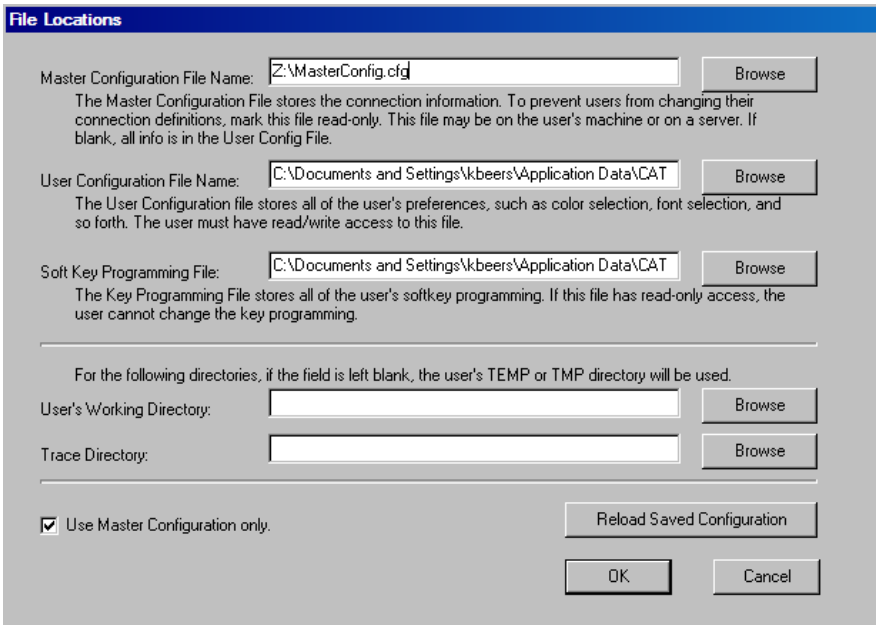
• Use a mapped logical drive letter for the prefix:

If you are using the same drive letter as that for the C.A.T.T. <*working directory*>, you should just omit the prefix (since the <*working directory*> is then assumed). This option is really only useful if you are mapping two drives: one for the C.A.T.T.
<*working directory*> and another one for the shared configuration file(s).

2. The **User Configuration File Name** field must have an entry, and it should not be the default. Fill this field in with a file name on your local PC. C.A.T.T. will automatically create this file.

3. In order to edit the Master Configuration File directly, check the box which reads, **Use Master Configuration Only**. You ***must*** do this if you want to edit the global default properties for your users.

The screen should appear as follows:



The remaining fields can be blank or have entries.

4. Click **OK**.

5. If the Master Configuration File you specified does not exist, you will be prompted to create the file:

6. If your Master Configuration File does not contain a copy of your C.A.T.T. license key, you will be prompted to enter that now. You will see this screen:

Confirm that the file name in this message is correct. If it is not, click **No**, and you will go back to the **File Locations** screen where you can make your corrections.

If the file name is correct, click **Yes**. C.A.T.T. will create an empty Master Configuration File.

7. If your Master Configuration File does not contain a copy of your C.A.T.T. license key, you will be prompted to enter that now. You will see this screen:

To enter your license key information, click **Change** and fill in the registration form.

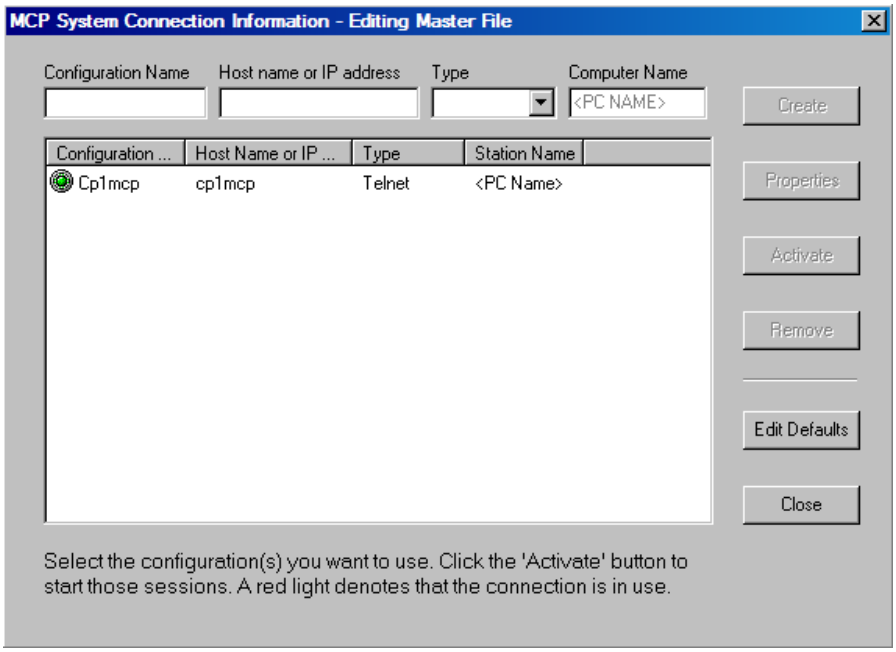
When a Master Configuration File is used, C.A.T.T. always looks for the registration information in the Master File. There is no need to copy the registration number to each user's PC.

Note: A valid registration key must be entered before you can use C.A.T.T. D'Claud (cattdc.exe). The
C.A.T.T. D'Claud program will not run under "DEMO" mode.

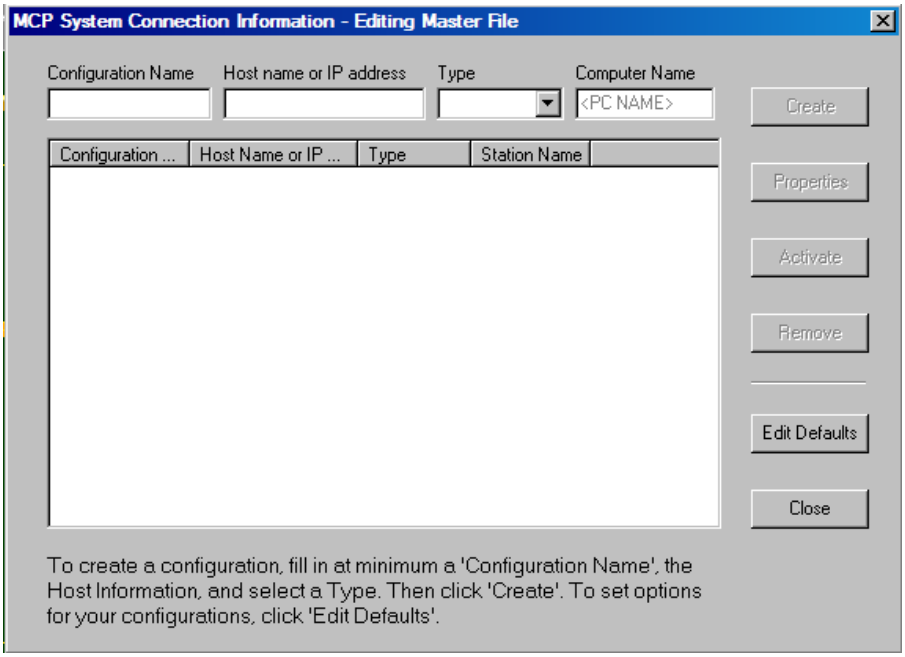
8. After you complete the registration form, click **OK** on the above form to continue the configuration process.

9. You will next get the **Connection Information** screen.

If you already have one or more connections defined, the screen will appear like this:



If your Master Configuration File is empty, the screen will appear thusly:

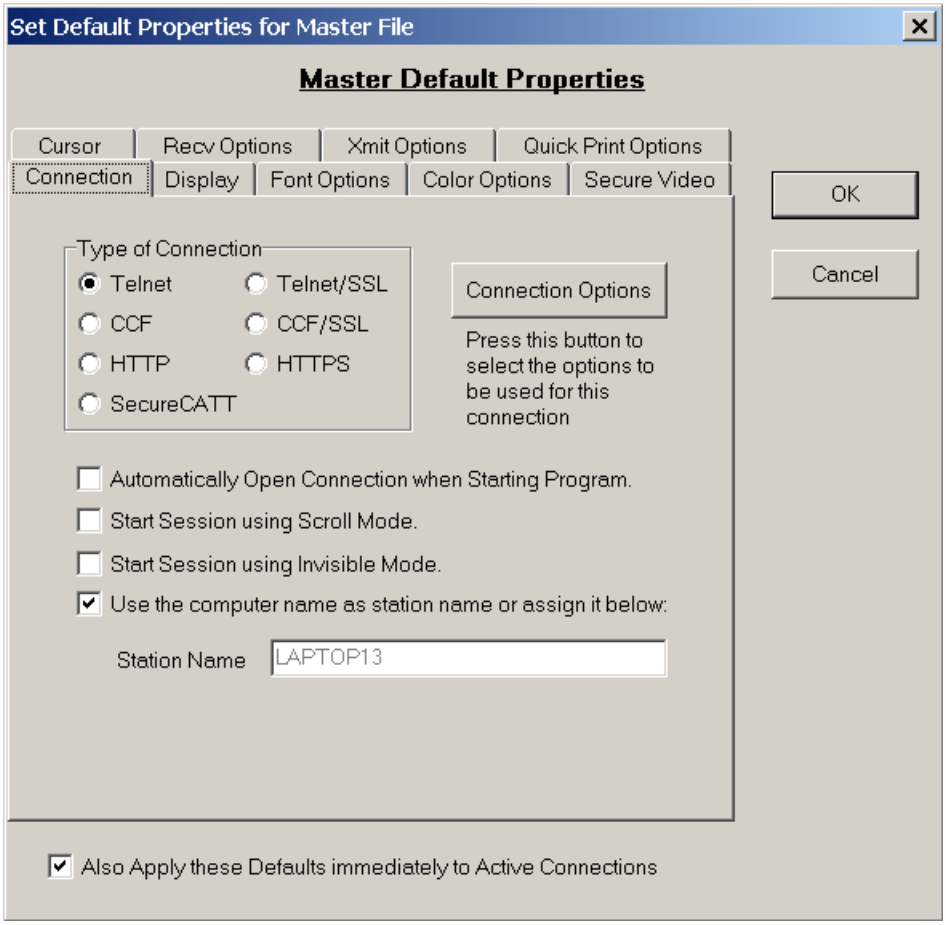


Confirm that the title bar reads (as shown above):

MCP System Connection Information - Editing Master File

10. If you want to define connections using the current default settings, go to step 18, below. I recommend that you set your default options before defining any connections. To do this, click the **Edit Defaults** button.

11. You will now be at the **Master Default Properties** screen, which looks like this:



12. Click the **Connection** tab (far left), if not already chosen. This will bring up the default connection properties screen shown above.

13. By default, the option

Use Computer Name as the Station Name

is checked. When this option is checked, it means that the user's workstation name will also be used as his Station Name when logging on to COMS. This option should be set if you are running MCP Telnet with the option:

NA TELNET CONFIG STATION_NAME SHORTNAMES TRUE

If you would rather use a different station name, do the following:

- Uncheck the **Use Computer Name as the Station Name** option.
- Fill in the station name you would like used as the default for all of your users. This name will be used as a constant value unless you override it on each connection definition. When you run with a constant Station Name, be sure that MCP Telnet is configured with:

NA TELNET CONFIG STATION_NAME SHORTNAMES FALSE

When MCP Telnet's SHORTNAMES option is FALSE, Telnet assigns each user a station name by taking the Station Name value you enter here and prefixing it with the user's IP address. Thus, if you enter CATTUSER as your Station Name, and your user runs from IP address 192.168.16.37, your user's actual station name (as seen by COMS) will be:

IP192_168_16_37/CATTUSER

However, if you run with the Telnet option SHORTNAMES set TRUE, the Station Name you enter on this screen will be used as your A-Series Station Name. Regardless of the IP address of the user, if you are using a constant value of CATTUSER as your Station Name in C.A.T.T., all of your users will default to the same COMS station name:

CATTUSER

The MCP does not permit two concurrent users to have the same Station Name. Therefore, if you are using SHORTNAMES TRUE on your MCP, you will most likely want to check the C.A.T.T. option **Use Computer Name as the Station Name** and let C.A.T.T. derive each user's Station Name from his workstation name.

Note: CCF stations are assigned names at the host through the instructions in the CCF Parameters file. The settings on this page of the **Master Default Properties** screen do not affect CCF stations.

14. If your MCP host is using the DSSSUPPORT version of Telnet, or you are running on a software release older than SSR 46.1, check the option labeled **Use EBCDIC Telnet Connection**. If you are using the TELNETSUPPORT version of Telnet, SSR 46.1 or later, do **not** check this option. This option does not apply to CCF connections.

15. If you want all of your CCF connections to default to the *Windows* networking log on method, check the option, **Connect through Windows Networking**. If you check this box, be sure your **CCF Port Number** matches the MCP's value for the LOGON port. (The default port number is 12564.)

16. If you want your CCF connections to log on through a standard MARC log on screen, and prefer the fully functional TERMPCM protocol, check the option, **Always use TERMPCM Logic**. In this case, you also need to configure your *SYSTEM/CCF/PARAMS file along the guidelines given in the section titled, "Connecting to the Host over CCF using TERMPCM Only" in the "Installing and Configuring C.A.T.T." chapter.

    Note that if both **Connect through Windows Networking** and **Always use TERMPCM Logic** are checked, **Connect through Windows Networking** overrides. You may want to check both options in the Master Configuration File if you are planning to define connections that use both methods.

17. Step through the other tabs on this same screen and check the option settings. Whatever values appear here will be your site-wide default values. Recommended changes are:

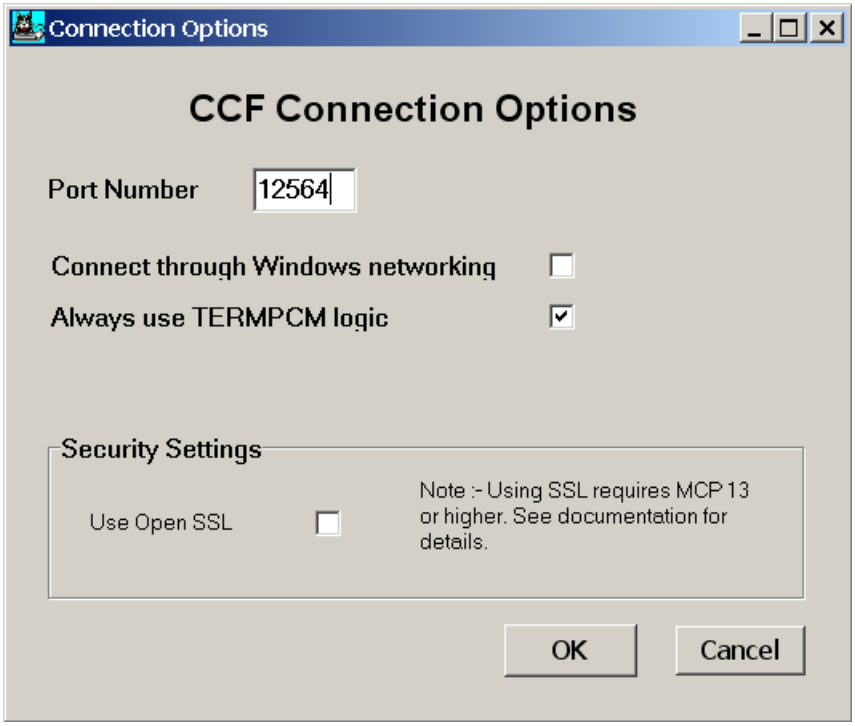
    - Under the **Display Options** tab, set the **Number of screen pages** to your site-wide default and check **Use destructive backspace.**
    - Under the **Font** tab, set your site-wide default font. I recommend Lucida Console as the default font if you have it available.
    - Under the **Cursor** tab choose the default color you want for the cursor.
    - If you are using the LINC form generator software, or any other software that requires the "mobile home" feature, go to the **Xmit Options** tab and check the option **Enable "Mobile Home" Support**.

      If you would like to eliminate the field delimiters from your default display (which makes a more
      appealing screen image), do the following:

- Under the **Font** tab, check **Hide All Delimiters**.
- Under the **Secure Video** tab, uncheck **Use TD830 standard for coloring secure video fields**. Then left-click on the "Secure Video Color" color bar and set the Background Color to the color of your choice. (Red is a good one.) Also check **Use the Secure Video color in unprotected fields only**.

Additional details for configuring your defaults can be found in the "C.A.T.T. Program Options" chapter. All options available as defaults on a single user installation are also available in the Master Configuration File.

If you want everyone's default CCF connection to use the LOGON port — so that they use *Windows* networking to connect to the MCP, set the **CCF Port Number** to 12564.



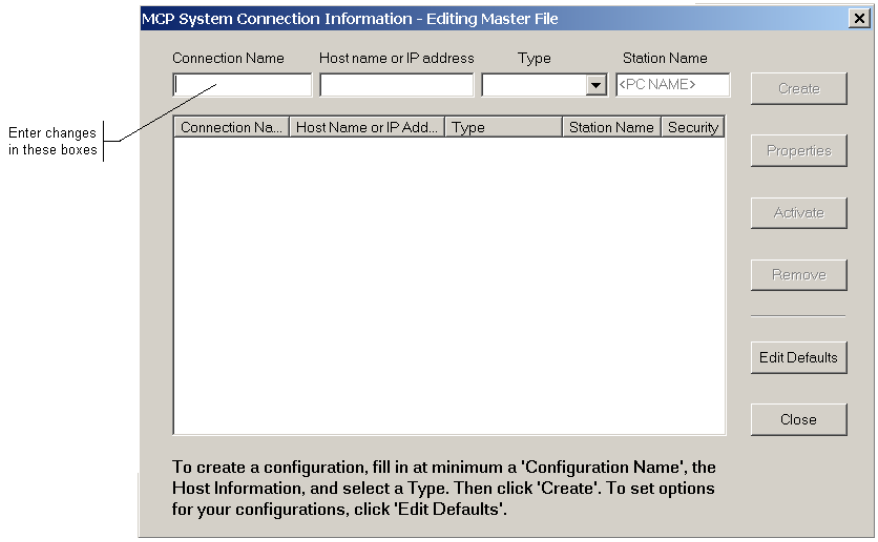
18. Now click the **Connection Options** button.

19. The **CCF Port Number** is set to 3001, which is an arbitrary default provided by C.A.T.T. Set this port number to the number you are using locally as described in the chapter, "Installing and Configuring C.A.T.T."

    You can always return and edit the Master Configuration File later to change these global defaults.

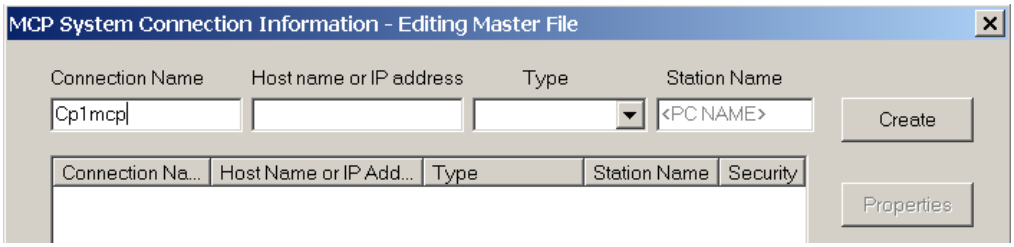
20. When you are satisfied with your default settings, click **OK**. This will return you to an empty **Connection Information** screen.

21. At this point you need to define your connections. You must have at least one connection defined in order to use the product. Type all of your connection entry information into the edit boxes near the top of the form. Detailed instructions follow below.

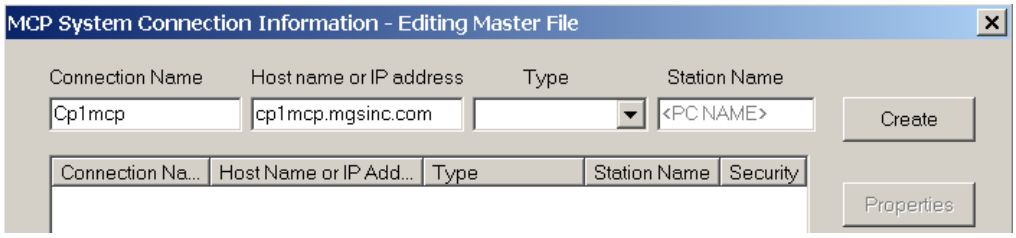


22. Enter a name of your choice in the **Connection Name** box. This name may be composed of letters and digits only. The first letter will be automatically capitalized, and the others set to lower case. The name can be anything that your users will recognize. It need not be a host name.

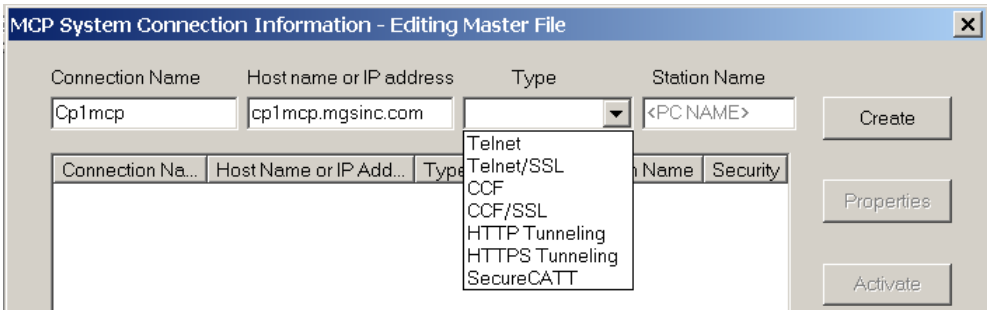
    Note that as soon as the **Connection Name** is filled in, the **Create** button lights up.



23. Enter the host name or IP address that identifies your target MCP host in the box labeled **Host name or IP Address**.



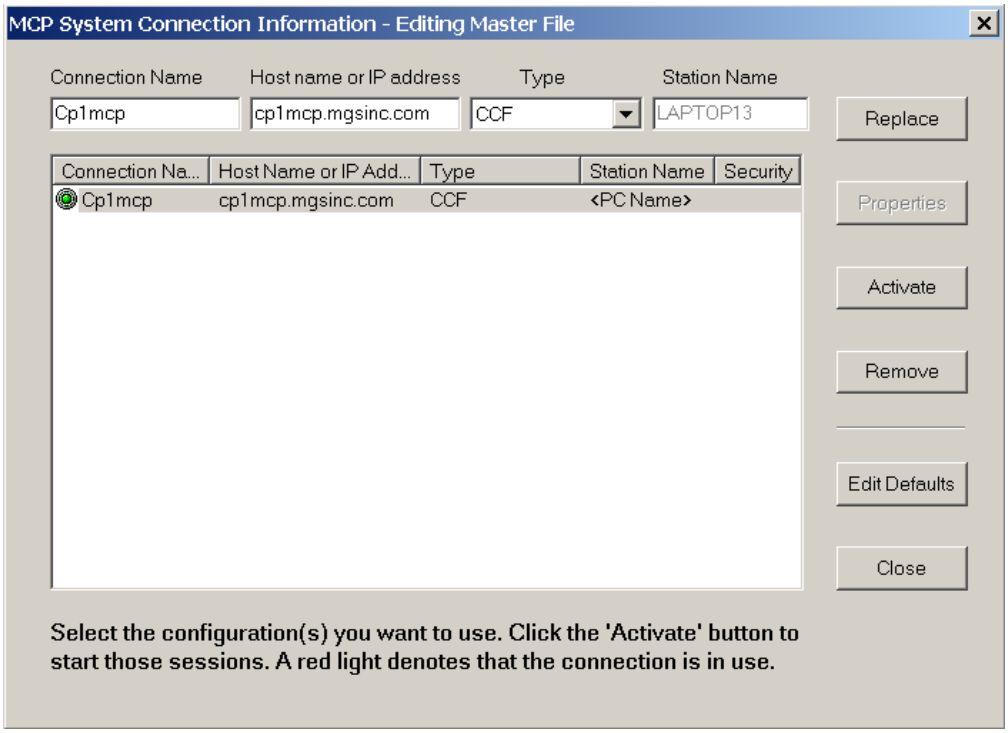
24. Select the connection type from the drop-down box labeled **Type**. You can choose either **Telnet** or **CCF/TCPIP**. You must choose one of these.



25. The **Station Name/Computer Name** field is automatically set to your default setting. If you want a different value for this particular connection definition, enter it now. Note that if the option

Use Computer Name as the Station Name was previously checked, you will not be able to enter anything into the **Station Name** field. You must go change the option first on the **Default Properties** screen or the **Properties** screen for this individual connection.

26. Click the **Create** button. This will enter the connection definition into the Master Configuration File. The connection will now appear in the main window, automatically selected.



27. If you would like to test the connection, click the **Activate** button. This will close the **Connection Information** screen and then attempt to open a session to the host name (or IP address) and port number you have specified. If the operation is successful, you will receive a MARC log on screen. (If you are connecting via *Windows* networking, and the operation is successful, you will receive a MARC **Home** screen.)

If you've closed the **Connection Information** screen, you can return to it from the main screen through the menu commands **File | Open a Session...** or **File | Configuration List...**. You can also return to it by clicking the open door in the speed bar.

If you do not want to test the connection, proceed to the next step. You will remain on the **Connection Information** screen until you exit it either by clicking the **Activate** button or by clicking the **Close** button.

28. Using the **Connection Information** screen, create all of the connections you intend to publish to your users. Repeat steps 21 through 24, above, for each connection you wish to add to the list.

29. The display in the window lists all of the connections that are saved in the Master Configuration File. When you are satisfied with the connection list, close the **Connection Information** screen. You can do this either by activating one or more connections or by clicking the **Close** button.

30. Click **File** and then **Printer Page Setup**. This brings up the **Printer Page Setup** screen.

31. Fill in the screen with your preferred site-wide defaults for printing. You can set default margins and select a default font. (The printer selection is not retained.) If you are in a country that uses the Metric system, choose **centimeters** for your measurement units instead of **inches**.

32. When finished, click **OK** to save your settings in the Master Configuration File.

33. Your Master Configuration File is now set up. You need to stop editing the Master file directly. There are two ways to do this:

    a. Exit C.A.T.T. By terminating the program, you automatically go back to a normal user mode. When you restart the program, you will be running in the normal fashion.

    b. If you do not want to exit the program, you can turn off Master editing mode through these steps:

On the main screen, click **Preferences** and then **File Locations**.

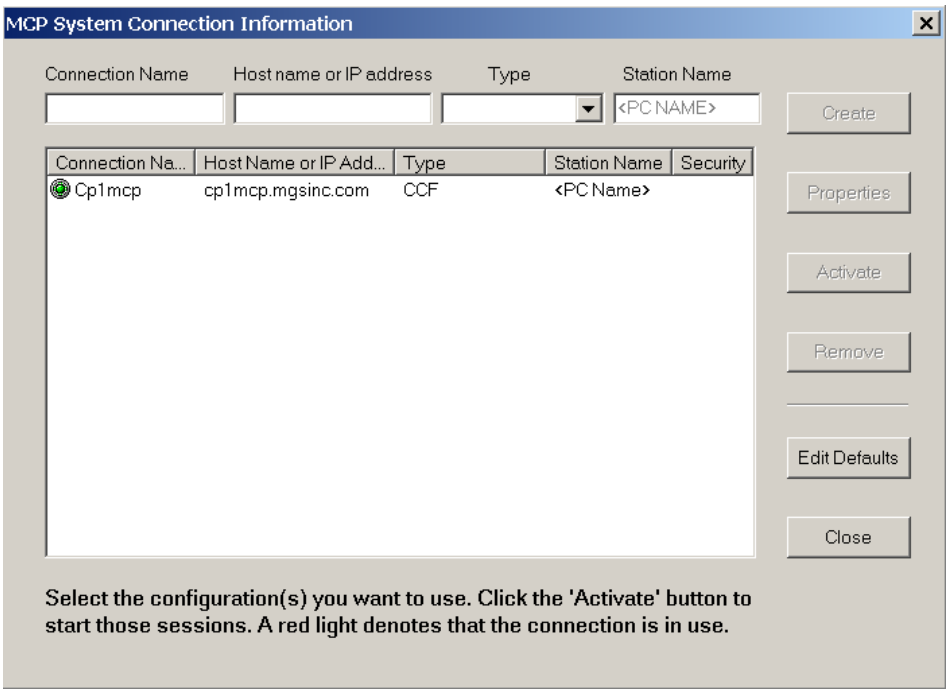
On the File Locations screen, un-check the box labeled Use Master Configuration only.

Click **OK**.

The program will put you back into normal mode. You will be automatically routed to the **Connection Information** screen. The caption on the screen will now read:

MCP System Connection Information

without any reference to the "Master File". For example:



4.1.5.5 Protecting the Master Configuration File

After you have created the Master Configuration File, anyone with read/write access to the file can edit it through C.A.T.T. You do not need to be running C.A.T.T. from the Server. If the user has read/write access to the file, and is running the full version of C.A.T.T. (catt.exe), he can change anything in it.

To prevent users from changing your Master Configuration File, mark the Master Configuration File as read-only. Set up security on your server so that the file is read-only to all users except for those whom you want to have edit capabilities.

Alternatively, you can set the "read only" attribute on the file to true. If you do this, be sure to change it back to read/write whenever *you* want to edit the file!

A third option is to deploy only C.A.T.T. D'Claud (cattdc.exe) to your users. This program does not have the ability to edit the Master Configuration File or the File Locations screen.

When C.A.T.T. is using a Master Configuration File, and that file cannot be updated by users, the standard user is prevented from making the following changes:

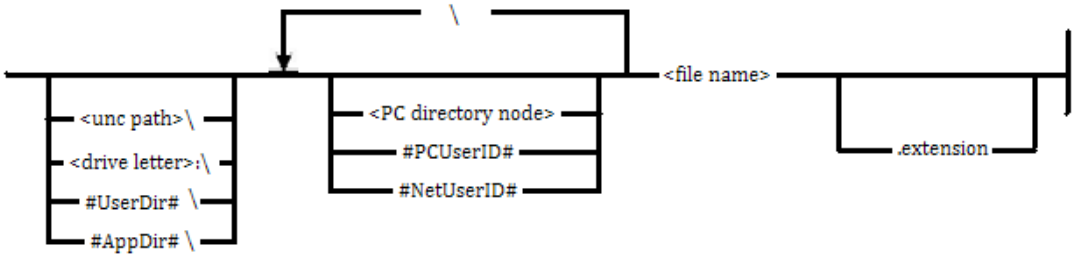
1. The user cannot create or delete connections.
2. The user cannot change the host name, IP address, connection type, or station name for a connection.
3. The user cannot change or read the software license key.
4. The user cannot change the following options:
    a. **Use Computer Name as the Location (or Station) Name**
    b. **Use EBCDIC Telnet Connection** (on the **Connection** tab)

4.1.5.6 Assigning the User Configuration File

The User Configuration File contains the local option settings for each user. There must be a separate copy of the User Configuration File for each C.A.T.T. user. Two users must not share the same configuration file. Each user must have read/write access to his User Configuration File.

Specify the name of the User Configuration File on the **File Locations** screen in the **User Configuration Name** field.

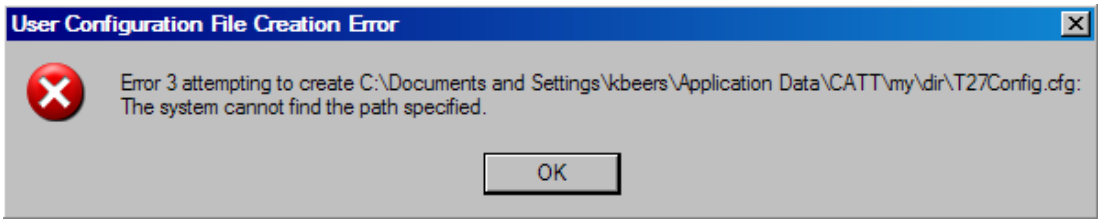
The file name must follow this syntax:



When you click **OK** on the **File Locations** screen, C.A.T.T. will immediately look for the file. If a file matching your specified name is found, it is immediately opened and used. (If you previously had a User Configuration File opened, it is closed, and all of the user information is loaded from the newly selected file.)

If the file cannot be found, C.A.T.T. will attempt to create it. If necessary, C.A.T.T. will also automatically create *one* directory level, but not more than that, above the name. If the creation attempt is successful, C.A.T.T. will initialize the file using the defaults specified in the Master Configuration File. The program will then use this file.

If the User Configuration File cannot be created, C.A.T.T. will report an error message such as this:



The actual text of the message will vary depending upon the cause of the error. Therefore, when entering the name, be sure it is a name that will work for both you and your users.

Here are some suggestions on how to name the User Configuration file:

Option 1: Use a local drive and directory on each user's PC.

The **User Configuration Name** in this case would follow the syntax:

<*drive letter*>:\<*PC directory node*>\<*file name*>.<*extension*>

For example:
c:\cattlair\T27config.cfg

This means that C.A.T.T. will always look for the file T27config.cfg on the PC user's local c: drive under his local directory cattlair. If the directory cattlair does not exist, C.A.T.T. will automatically create it.

Putting the user configuration file on each user's PC will optimize the use of the file. C.A.T.T. won't need to go through the network each time the user changes an option or changes C.A.T.T.'s screen size. This is also a good choice if you are storing the catt.exe or cattdc.exe program on each user's PC as well.

As mentioned above, C.A.T.T. will automatically attempt to create the file if it does not exist. C.A.T.T. will also attempt to create *one* directory level up if it needs to. So if you use a name with multiple directories, such as:

c:\cattlair\config\T27Config.cfg

and the directory cattlair does not exist, C.A.T.T. will not be able to create the file.

Option 2: Store the file on the Server, under C.A.T.T.'s <working directory>, in a subdirectory unique to the user.

The **User Configuration Name** in this case would follow the syntax:

#NetUserID#\<*file name*>.<*extension*>

For example:

#NetUserID#\T27Config.cfg

- will translate the token "#NetUserID#" into the user's network log on id. It will then look for the file T27Config.cfg under the subdirectory name matching the user's log on id, which must be under the <*working directory*>. For example, if the <*working directory*> is z: and the user's network log on is joe,
- will look for the file named:

z:\joe\T27Config.cfg

If the subdirectory does not exist, C.A.T.T. will create it (since it is only one level up). If the file does not exist, C.A.T.T. will also create that.

This format stores all of your users' configuration files on your Server. This may be of benefit for management purposes, but it will increase your network traffic. Each option change a user makes will require transmission through the network.

Option 3: Use the user's application data directory.

The syntax for this option would be:

#AppDir#\T27Config.cfg

This means that the user's configuration file will be located in a folder which conforms to the standard of putting all data files for an application in the application data directory folder for this application.

Option 4: Use the user's Working Directory.

The **User Configuration Name** in this case would follow the syntax:

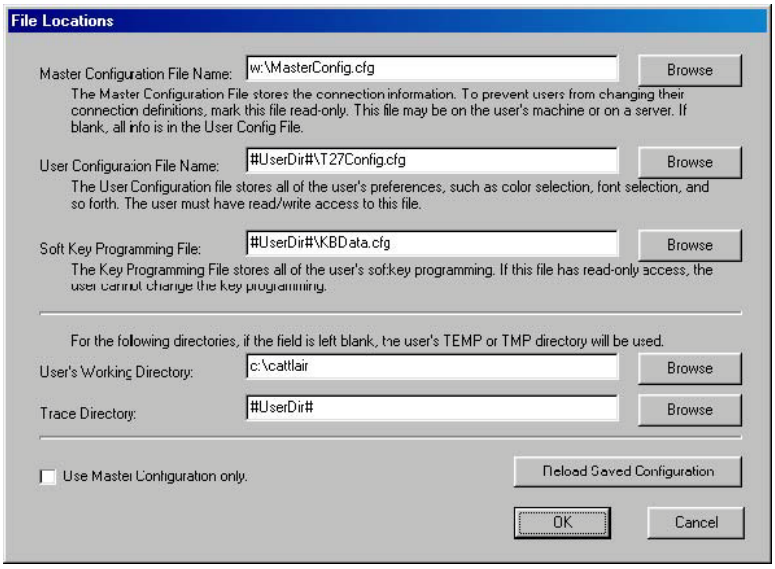
#UserDir#\optional <PC directory node>\<file name>.<extension>

For example:

#UserDir#\T27Config.cfg

This means that C.A.T.T. will store the User Configuration File under the directory specified as the **User's Working Directory** on the **File Locations** screen. This directory must exist and be local to each user PC.

This option is particularly useful if you want to store all of the user's C.A.T.T. files under the same directory on his PC. For example, if the **File Locations** screen is configured thusly:



then you can move all of the user's files — the User Configuration File, the Soft Key Programming File, and the user's Trace Directory — by making a single change to the User's Working Directory.

Important Note. If you are storing the User Configuration File there, make sure that the directory is not one that is periodically erased. You should not put the User Configuration File under the #UserDir# directory if the **User's Working Directory** is not specified. If the **User's Working Directory** is blank, C.A.T.T. assumes the TEMP or TMP (in that order) directory on the user's PC. You do not want to put the User Configuration File under the user's "temp" directory; otherwise, the user's personal settings will all be lost every time the "temp" directory is cleared.

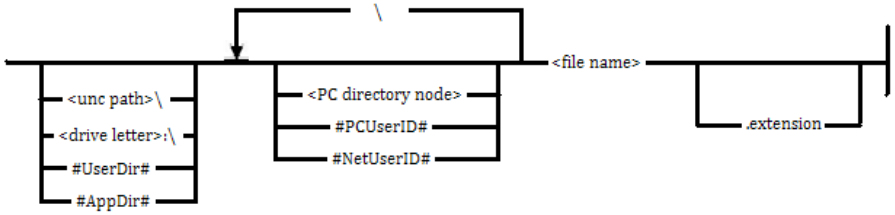
After you change the name of either the Master Configuration File or the User Configuration File, and click **OK** on the **File Locations** screen, you will be routed immediately to the **Connection Information** screen. There you can review the connection information and program defaults you have loaded before proceeding. If you have open sessions when you change these files, the open sessions will still be active. However, once you close an open session, it must appear in the new **Connection Information** list in order to be reopened.

4.1.5.7 Assigning the Soft Key Programming File

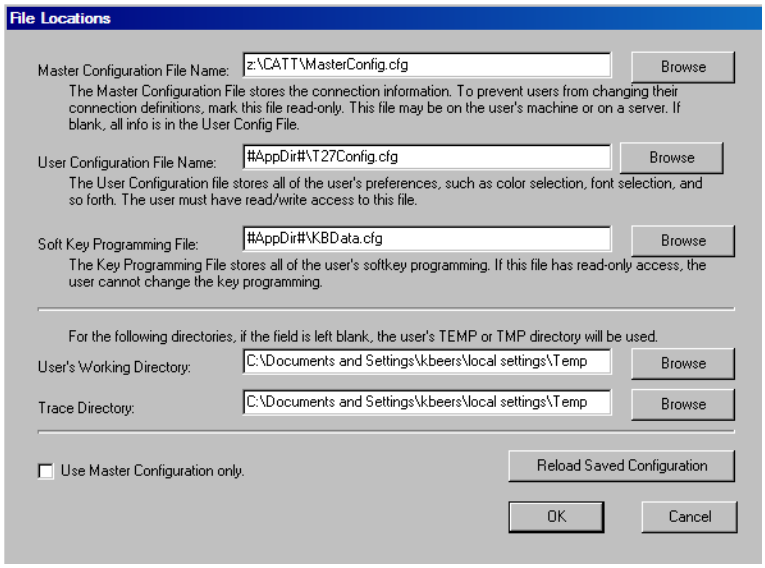
The Soft Key Programming File holds all of the key programming for the user.

Specify the name of the Soft Key Programming File on the **File Locations** screen. The file name must

follow this syntax:

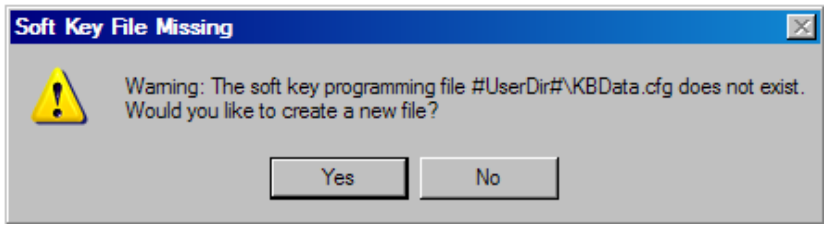


For example:



When you click **OK** on the **File Locations** screen, C.A.T.T. will immediately look for the file. If a file matching your specified name is found, it is immediately loaded. The keys on your keyboard *are immediately reprogrammed* according to the data in the Soft Key Programming File.

If the file cannot be found, C.A.T.T. will prompt you with the option to create it.



If you choose **Yes**, the file is created, and you can add soft key programming into the file.

If you choose **No**, key programming is disabled. You will not be able to access the soft key programming form (**Preferences | Soft Key Programming**) until you first go back to the **File Locations** screen and either select an existing Soft Key Programming File or create a new one.

If you make a mistake in entering the Soft Key Programming file name, click **No** in response to the above prompt. Then go back to the **File Locations** screen (**Preferences | File Locations**) and re-enter the information.

When defining the Soft Key Programming File, you have several choices:

Option 1. Define a single global file that all of your users use.

You can put the Soft Key Programming File on your Server and direct all of your users to that single file. In that case, assign security to the file so that only administrators can update the file. Users' keyboards will be automatically programmed when they start C.A.T.T. according to the specifications in this file.

If you want to do this, the best choice is to put the file under your C.A.T.T. <*working directory*>. The name, in this case, would be simply:

KBData.cfg

Option 2: Direct users to their own soft key programming files.

You can put the Soft Key Programming File on each user's PC. Then the user will be able to edit the programming as desired.

If you want to do this, use a name that references the user's unique PC, such as:

#AppDir#\KBData.cfg

Or

#UserDir#\KBData.cfg

Option 3: Disable soft key programming completely.

If you blank the **Soft Key Programming File** field on the **File Locations** screen, C.A.T.T. disables all soft key programming. You are not prompted to create a file. Access to the key programming editor is disabled. No one can use the **Soft Key Programming** item on the **Preferences** menu.

When you run C.A.T.T. for the first time, and create a new floc.cfg file, C.A.T.T. will automatically assign the Soft Key Programming File the name KBData.cfg. This is for backward compatibility with previous releases of C.A.T.T. Therefore, by default, C.A.T.T. will look for the Soft Key Programming File under its <*working directory*> with the name KBData.cfg.

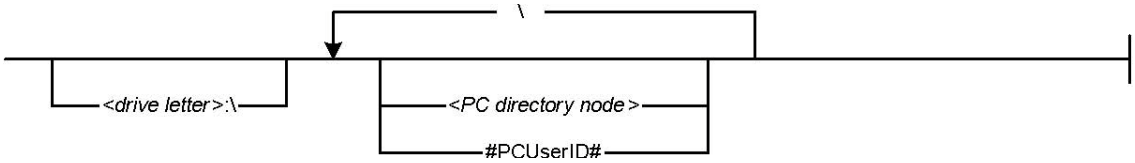
C.A.T.T. will open and process the software key file *(a)* each time you start it running, and *(b)* whenever you change the file name on the **File Locations** screen. If the file is acceptable, the keyboard will be automatically programmed to match the file. If the file is unacceptable, C.A.T.T. will report that the file is corrupt. Key entries prior to the corruption, if any, will be loaded, but those following will not.

Soft Key Programming Files are easy to deploy. You can use C.A.T.T. to create a master file for yourself. You can then deploy copies of it to your users. All they have to do is name the file according to your **File Locations** entry, and your key programming will be activated the next time each user runs C.A.T.T.

4.1.5.8 Assigning the User's Working Directory

The User's Working Directory provides a default local directory for each C.A.T.T. user. C.A.T.T. will use this directory as a place in which to store files generated by various "save to disk" commands. For example, the first time you use the menu item **Save Continuously**, C.A.T.T. will default to the User's Working Directory as a place in which to save the file. The other "save to disk" commands work in a similar fashion.

C.A.T.T. also uses the User's Working Directory wherever the token "#UserDir#" is found in a file name that is entered on the **File Locations** screen.



Specify the name of the User's Working Directory on the **File Locations** screen. The directory name

must follow this syntax:

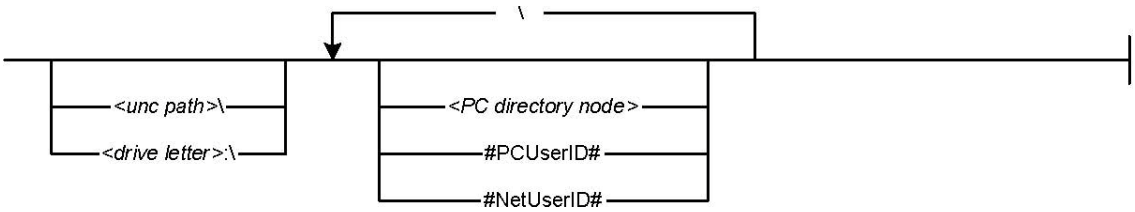
C.A.T.T. will validate that it has read/write access to the directory both when you assign the directory and each time the user runs C.A.T.T. If necessary, C.A.T.T. will attempt to create the directory. However, if nodes preceding the last do not already exist, C.A.T.T. will abort the attempt and report an error.

As the syntax diagram shows, you can leave the User's Working Directory blank. If this is done, C.A.T.T. assumes the user's temporary directory. If the local PC has a TEMP environment variable defined, this is used. If it has no TEMP variable, but a TMP variable is defined, TMP is used. If neither environment variables are defined, you must define a User's Working Directory.

4.1.5.9 Assigning the Trace Directory

The Trace Directory is the location where program trace files are written. This directory may be on your server or on the user's PC. However, the user must have read/write access to the directory.

The Trace Directory is assigned on the **File Locations** form. The name must follow this syntax:



C.A.T.T. validates that the user has read/write access to the trace directory at initialization, when a change is made on the **File Locations** screen, and whenever a trace is requested. (Traces are requested through the **Diagnostics** item on the main menu.)

If you leave the **Trace Directory** entry blank, the User's Working Directory is assumed for the Trace Directory.

4.1.6 Final Configuration Steps

To finish the configuration process, proceed as follows:

1. After you have configured your floc.cfg file through the **File Locations** screen, exit the C.A.T.T. program.
2. Assign security to the floc.cfg file so that it is read-only to your users. You will need to retain read/write access for administrative purposes.

4.2 Deploying to Users

4.2.1 Deployment Options

Before deploying C.A.T.T. to users, do the following on each user's PC:

1. Uninstall any old version of C.A.T.T.
2. Delete any local files named floc.cfg or tdemul.ini.

Note that tdprint.ini must remain on the user's PC if the user is using the C.A.T.T. Print Program.

To deploy C.A.T.T. to your users after you've configured it for Server use, it is not necessary to perform a full installation on each PC. Instead, all you need to do is deploy the particular items you want to have stored locally on each user's PC.

Option 1: Deploy just the program icon.

If you want your users to run the program from your Server, all you need to do is deploy the icon you made for running C.A.T.T. Proceed as follows:

1. Check the **Properties** of the icon to verify that the **Target** name references catt.exe on your mapped logical drive. If your logical drive is z:, the **Target** should read:

z:\catt.exe

2. Locate the icon file itself.

The name of the file will be <*icon caption name*>.lnk, where the <*icon caption name*> is the name that appears on your desktop. In the example given at the start of this document, the <*icon caption name*> is CATT 2.1F. Therefore, the shortcut name will be "CATT 2.1F".lnk. The file is stored in your desktop directory. The location will vary depending upon what operating system you are using. For a *Windows 2000* machine, you can find it under:

c:\"Documents and Settings"\<*user id*>\Desktop*

where the <*user id*> is the user id you are using on the Server. For a *Windows 98* machine, you will find it under:

c:\windows\desktop*

3. Copy this file to the desktop directory of each user PC.

Alternatively, you can have each user create their own icon by using the procedure described at the start of this document.

The advantage of this method is that whenever you receive an update to the catt.exe file, you can upgrade everyone at once by simply replacing the file on your Server. There is no need to install or uninstall anything when making an upgrade.

The disadvantage of this method is that your users will download a temporary copy of the .exe file each time they run it. This may increase your network traffic.

Option 2: Deploy the program icon and its .exe file.

To do this, copy both the icon (as described for Option 1, above) and the catt.exe file to the user's PC.

The advantage with this method is that users will not put a load on your network when running the program.

The disadvantage is that you will have to recopy the catt.exe file to each user each time you get an update to the program. Note, though, that is *not* necessary to perform a formal "install" on each user's PC. You only need to copy the catt.exe file.

In addition, the following support files need to be present on the user's PC in the same directory as catt.exe:

ChilkatSocket.dll
ChilkatCert.dll
PadLock.ico
Catconn2.ico

C.A.T.T. will register the dll components with Windows after being run under an administrator user name for the first time.

4.2.2 General Notes about Deployment

The floc.cfg file is the only file that must be stored under C.A.T.T.'s <*working directory*>. Through the **File Locations** screen, you can direct all of the other configuration files anywhere you like.

The files are also, as a rule, interchangeable amongst users. For example, you can create one master Soft Key Programming File and copy that file to each user's PC. That would give each user a common starting point, but each would still be able to further customize the file.

You can also create an floc.cfg file in your private workspace and, when the file location information is as you desire, copy that floc.cfg file in place of your public one.

If a user's local options are lost or incorrect, you can easily restore that user to your default settings. Just delete his User Configuration File from his PC (when he is *not* running C.A.T.T.!). The next time he runs C.A.T.T., the program will automatically create a new file using your default settings.

4.2.3 Using C.A.T.T. D'Claud

C.A.T.T. D'Claud is the "safe" version of C.A.T.T. You should deploy this version to all of your users who are not permitted to change connection information.

The codefile for C.A.T.T. D'Claud is cattdc.exe. It is included on the standard C.A.T.T. distribution CD. Except for the restrictions on modifying connection information, cattdc.exe is identical to catt.exe. Therefore, for "safe" deployment, have all of your users' icons point to cattdc.exe instead of catt.exe.

4.3 Supported Servers

The C.A.T.T. program itself must be run from a *Windows* machine. However, all of its configuration files can be stored on any Server that is compatible with a *Windows* program. So long as you can map a logical drive to the Server from your users' PCs, and the Server responds to certain basic commands that C.A.T.T. uses, it will work.

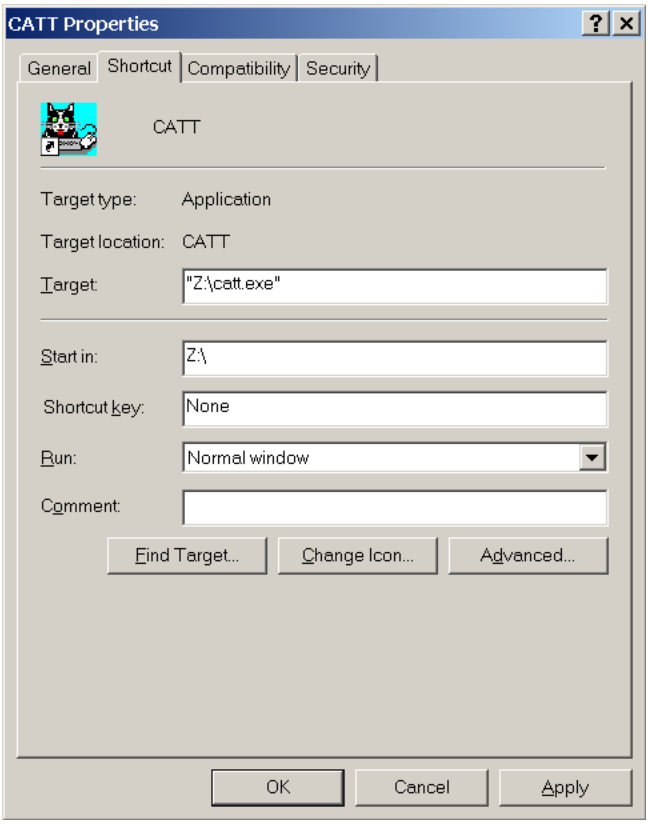
For example, here's a procedure to enable C.A.T.T. to run from an MCP share.

Define the MCP share. Map a drive letter to this disk share. *You must use the same drive letter that all of your users would use for this purpose.*

1. Create a shortcut for C.A.T.T. on the PC where you've installed it with the following information:

The target is the copy of catt.exe installed on your local PC.

The critical item is that the **Start in** directory is the disk drive letter that you've mapped to your MCP share. In this case, we're using the drive letter Z:.



2. Use this shortcut to start the program.
3. Proceed to configure the **File Locations** screen as described in the section titled, "Defining C.A.T.T. File Locations", previously in this document.

When configuring C.A.T.T. on an MCP Server, it is recommended to do the following:

a. Do *not* use periods in file names that are stored on the MCP machine (except for floc.cfg). Doing so forces the name into quotes, and the MCP does not create the file using the same letter case as you might use in the **File Locations** screen. However, the MCP will insist on the correct letter case when opening the file. This will lead to spurious "file not found" errors. If you use names composed only of letters, digits, hyphens, and underscores for your MCP names, letter case will be irrelevant.

b. Only store the floc.cfg and the Master Configuration File on the MCP Server. Store the User Configuration File and the Soft Key Programming File on the user's PC.

c. Be sure to set the security of floc.cfg and your Master Configuration File to PUBLIC IN so that non-privileged users can see it but not change its contents.

After defining your **File Locations**, deploy the catt.exe file (or cattdc.exe file) as described in the previous section, "Deploying to Users". If you are storing the catt.exe file in your MCP share, be sure to use a binary transfer to get it there. I recommend deploying the catt.exe file to each PC for fastest execution. When doing this it isn't necessary to install C.A.T.T. on each PC; just copy the catt.exe file and your icon (with the correct drive letter and directory settings) to each user's PC.