

# Enhanced CU-SeeMe™ Windows Version 2.0.2 Release Notes

Welcome to Enhanced CU-SeeMe from White Pine Software, Inc.

White Pine would like to thank you for using Enhanced CU-SeeMe. Enhanced CU-SeeMe provides point-to-point or group videoconferencing for Windows(R) and Macintosh(R) platforms. The following information will help you install and use the software.

## **Demo Versions of Enhanced CU-SeeMe**

If you are using a demo version of Enhanced CU-SeeMe, this software will expire in 30 days. See the Enhanced CU-SeeMe Web site at <http://www.cu-seeme.com> to purchase Enhanced-CU-SeeMe software and for information about future demo releases. Registered users of Enhanced CU-SeeMe are entitled to telephone and e-mail technical support from White Pine. Demo users are entitled to e-mail support only.

## **Windows System Requirements**

### **To Receive:**

- 486 DX/66 or higher processor recommended (video receive only, audio send/receive)
- Windows 95, Windows 3.1, Windows NT, or Windows for Workgroups 3.11 running in enhanced mode
- 256-color (16-bit) video with 640x480 or higher resolution
- Sound card with 8-bit sound, with microphone input (needed for sending) and speaker output
- Minimum 8 MB RAM (16 MB or more recommended).
- An IP network connection
- Windows Sockets compliant TCP/IP or PPP
- Bandwidth of 28.8kb or better

### **To Send:**

- All of the items listed above (needed to receive, plus the items listed below)
- Video capture board not using overlay technology
- Video camera with standard NTSC output (like a camcorder) and RCA cable (composite video) or S-video if supported by capture board

- Separate microphone or headset for better "phone-like" use (recommended)

## **Hostname**

You may need a hostname for your Windows computer. If you don't already have a hostname for your computer, contact your system administrator. One quick way to provide a hostname is to make an entry into the hosts file (which should be in the directory that contains your Windows Sockets network stack). The hosts file is named simply "Hosts" with no extension (i.e., not hosts.txt). An example of an entry in a hosts file is:

```
<your IP address> <name for your PC>
```

For example, you might decide to use the hostname NetServer. If your IP address is 128.32.64.88, the entry in your hosts file would be:

```
128.32.64.88 NetServer
```

## **Getting Started**

To install Enhanced CU-SeeMe, begin by double-clicking on the .exe file that you downloaded and then click on the Setup button in the dialog box. This will automatically unzip the files into a temporary directory. Follow the instructions on your screen to continue the installation process.

## **Reflector Sites**

The following reflectors are available for public use:

```
cu-seeme.com (192.233.34.5)  
goliath.wpine.com (192.233.34.20)  
reflector.cit.cornell.edu (132.236.91.204)  
isis.dccs.upenn.edu (130.91.72.36)  
hilda.ncsc.org (128.109.178.103)  
NASA (139.88.27.43)
```

## **Enhancements for Version 2.0.2**

You can use Enhanced CU-SeeMe on Windows 95 with Internet connections provided by some online services such as America Online(R), Microsoft(R) Network, and AT&T Worldnet. Using Enhanced CU-SeeMe, you can connect to a videoconference or broadcast on a reflector, and even do point-to-point connections, just as if you were connected to the Internet through an Internet service provider. However, you should note that online services typically assign IP addresses dynamically. This means that you may have a different IP address

each time you connect to your online service.

Your IP address appears in the Enhanced CU-SeeMe main application window status bar. To find the IP address of another person using Enhanced CU-SeeMe, click on the right-most button in the button bar of a remote video window. This displays data about that user's connection, including their IP address.

If you want to make a point-to-point connection, you can call another person's IP address directly. If another user wants to initiate a point-to-point connection with you, that user can connect to your IP address. However, your IP address may be different the next time you connect to your online service. If you plan to make a point-to-point connection with another user of Enhanced CU-SeeMe, you may wish to contact that other person ahead of time via e-mail, and set up a time when you will both connect to the Internet and can determine your IP addresses at that time.

Note for users of America Online:

Enhanced CU-SeeMe may not work with all America Online accounts, since America Online uses different connection methods depending on your location. To try using Enhanced CU-SeeMe with America Online, you will need to download AOL Winsock, a Windows add-on application which will allow you to run Internet applications, such as Enhanced CU-SeeMe. When you are connected to America Online, enter the Member Services area, and search for WINSOCK to find information explaining what Winsock is and how to download it. Also, note that currently you must install the 16-bit version of Enhanced CU-SeeMe if you plan to use it with America Online. Future releases of America Online should support the 32-bit version of Enhanced CU-SeeMe.

Note for users of Microsoft Network:

To use Enhanced CU-SeeMe with Microsoft Network, follow these steps:

1. Start Microsoft Network.
2. Quit Microsoft Network.
3. When you are presented with options to Stay Connected or Disconnect, choose Stay Connected.
4. Now you can launch the Enhanced CU-SeeMe application.

**Problems Fixed Since Version 2.0.1**

- Problems with Connectix Color QuickCam(tm) have been addressed. Enhanced CU-SeeMe should no longer crash when setting the capture depth of the Color QuickCam.
- The Fonts listing in the WhitePineBoard(tm) now lists the correct fonts on Kanji

systems.

- Button text on Preferences now displays the correct English text on Kanji systems.
- Last visible grayscale remote video window to disappear during a conference no longer prevents new color windows from appearing.
- Several fixes relating to entering and validating serial numbers.
- Canceling out of an installation using a DEMO serial number will no longer invalidate that serial number.
- The file CTL3D32.DLL is now put in the System directory instead of the Windows directory.
- With the Listener running as a separate application in the background, you can now start Enhanced CU-SeeMe and complete outgoing connections.
- Problems with the FTP OnNet 32-bit TCP/IP stack have been fixed.
- Enhanced CU-SeeMe now tests that the previously saved capture device is working before it is selected for use.
- Some users reported having problems with the DLL CTL3D32.DLL on Windows 95. When invoking Enhanced CU-SeeMe, it was reported that the previously mentioned DLL was designed for Windows NT. Some other application, we are still not sure which one, is installing the wrong version of this file in the system directory. Previously, Enhanced CU-SeeMe installed the correct version of CTL3D32.DLL in the wrong place, so a reinstall would not fix this problem. Installing Version 2.0.2 now fixes this problem.

### **Known Problems in Version 2.0.2**

Known problems will be addressed and corrected as soon as possible in future releases of Enhanced CU-SeeMe.

In the list below, a "video codec" refers to a component of Enhanced CU-SeeMe which provides software compression and decompression of video images for transmission across a LAN, WAN, or Internet connection. Version 2.0.2 supports two codecs. One codec produces grayscale images compatible with the current freeware CU-SeeMe applications offered by Cornell University and the Enhanced CU-SeeMe application from White Pine Software. The other codec produces color or grayscale images and can only be viewed by other users of Enhanced CU-SeeMe from White Pine Software. Group (reflector-based) conferencing with the latter requires the use of a White Pine Reflector(tm), or a

recent version of the Cornell freeware reflector, for all parties to be visible to each other. See the Video section below for more details.

### **General:**

- When connected to a reflector via a modem, be sure to set the receive rate in the Conference preference tab to the speed of your modem.
- The installer may indicate that it cannot find one or more installed dynamic link libraries (dlls). If this occurs, continue the installation
- The transmit/receive data displayed by clicking the button at the bottom of a video window may not always be accurate. The "Send" data is displayed as double dashes ("--") for group (reflector-based) conferences.
- If you unsuccessfully try to connect to a reflector repeatedly, you may need to click the disconnect button or wait a few minutes before establishing the next connection.
- The Participant Window icon is incorrectly sized, and may appear very large when it is moved.
- The Listener may incorrectly indicate that it has received calls from conference participants.
- The Listener may appear to receive multiple calls from senders using Version 2.0 of Enhanced CU-SeeMe for Windows when only one call was placed by the sender.
- When remote video windows are set to open automatically, sometimes fewer windows will be opened than the maximum specified in the Conferencing preferences. If this occurs, select "Show All" under the Window menu to show the maximum number of windows, or select additional windows to show by clicking on Hidden windows in the Participant Window.
- If you are using the standalone Listener, accept a connection, and eventually exit Enhanced CU-SeeMe, subsequent invocations of Enhanced CU-SeeMe may automatically attempt to connect to the previous conference target.

### **Network:**

- If using a 16-bit stack under Windows 95, the 16-bit version of the executable must be used.
- Enhanced CU-SeeMe may not work well with version 2.1 of the Trumpet PPP stack.

- On certain stacks, Connect To Self will not work. To use self-connect to test video, use the Address dialog to specify your own IP address or hostname.

### **Audio:**

- To use the Voxware or Rockwell(tm) audio codecs, the quality of your Windows Audio Playback may need to be set to CD Quality, not to Radio Quality.

- The 16-bit version of Enhanced CU-SeeMe can only decode Voxware 2.4K audio.

- Computers with 486 class processors may have difficulty encoding and/or decoding Voxware and Rockwell audio streams in real time.

- The Voxware and Rockwell codecs use a different data encoding method than the delta-mod and Intel(R)/DVI codecs. If two different audio streams with different encodings are received simultaneously, one stream will not play.

- You may experience audio problems using the Roland(R) Rap10 audio card with Enhanced CU-SeeMe.

- Audio should normally be transmitted using Push To Talk Mode. Continuous mode transmission is available, however, for situations which may require it. Continuous mode transmission can be initiated by holding down the control key while clicking the transmit button in the Audio Window. The transmit button will lock in the down position, and audio will be transmitted continuously until the button is clicked again and released. Audio squelch was not implemented in this release, so that silent periods are not suppressed in continuous mode. Thus, audio continuously transmits regardless of whether sound is occurring, consuming network bandwidth. Therefore, White Pine recommends using Push To Talk mode except where Continuous mode is absolutely necessary.

### **Video:**

- If you switch video codecs from White Pine Color to CU-SeeMe Gray when using the Connectix Color QuickCam, Enhanced CU-SeeMe will display video windows with no images, or it may crash. Connectix will be releasing an update to the Color QuickCam that will allow users to produce grayscale images compatible with the CU-SeeMe Gray video codec. For the latest Color QuickCam driver releases, visit the Connectix web site at:

[www.connectix.com](http://www.connectix.com)

- If you use the Connectix Color QuickCam, do not use the Thousands (VIDEC) setting. It may cause Enhanced CU-SeeMe to crash.

- If you are using the Connectix Color QuickCam with Windows for Workgroups or Windows 3.11, and your monitor is set to 65K colors and you capture in Thousands (uncompressed), your local video window may appear white.
- If you are using more than one capture device with the Connectix Color QuickCam and are switching from a capture device which is set to 24-bit capture to the QuickCam, Enhanced CU-SeeMe may crash. Contact Connectix to make sure you have the latest drivers.
- When using the Connectix Color QuickCam in a 32-bit environment while utilizing the 16-bit build of Enhanced CU-SeeMe, you may crash.
- When using the Connectix Color QuickCam and the Color setting is set to Millions and the sharpness setting is set too high, there will be performance problems with your system. White Pine recommends that your color setting be set to Thousands (uncompressed) and your sharpness setting be set to medium for better results.
- Color video displayed in the local video window may not exactly match the image sent to other conference participants. Use Connect To Self to preview how your video will appear to other participants, and to see the effects of any configuration changes you make to the White Pine Color codec.
- Windows 3.x computers may display local color video very slowly. If this occurs, configure your (digitizer) capture depth using the Format or Source button in the Video Preferences so that the capture depth matches your graphics card and display settings. If your display is set to 256 colors, for example, configure your digitizer to capture 8-bit images (256 colors).
- Enhanced CU-SeeMe supports (digitizer) capture formats of 8-, 16-, or 24-bit RGB, as well as Intel (YVU9) in color mode. It also supports all of these formats, as well as 4- and 6-bit RGB, in grayscale mode. If your video capture card does not work well with Enhanced CU-SeeMe, use the Format, Source, or Display buttons in the Video Preference tab to check and adjust the (digitizer) capture format.
- With some video drivers (such as the Winnov Videum(TM) driver), if you are using Windows 3.1 and your monitor is set to 65K colors and you capture in RGBH (16-bit), then the local video window may display an interference pattern of vertical lines. This pattern may also appear in remote color video windows. If you capture in RGBT, then your local video window may appear correct, but remote color video windows may still have interference patterns.
- To use reflector-based color conferencing, the White Pine Reflector or a recent version of the Cornell freeware reflector is required. Color video can only be sent

and received by users of Enhanced CU-SeeMe from White Pine, and cannot be decoded by users of the freeware version of CU-SeeMe from Cornell. If video windows appear as solid gray or blue and video is never updated, you are most likely connected to an older reflector which is not color-capable.

- Video capture cards which capture in "overlay" mode only are not currently supported.

- Some versions of drivers for the Creative Labs Video Blaster (TM) SE100 video capture card may not work reliably with 8-bit, 256 color displays. If you experience system crashes while using the Creative Labs SE100 video capture card with the 32-bit version of Enhanced CU-SeeMe, try the following modifications: First, change the display settings. If you still experience problems, then change the capture depth.

- Version 1.0 of the Logitech(R) Movie Man video card or driver may not work with Enhanced CU-SeeMe. Version 1.1 does work. Logitech no longer supports this product.

- Some versions of the Intel Smart DTR may not operate correctly with Enhanced CU-SeeMe.

- When using the Logitech Movie Man or Winnov Videum(TM) capture cards, it is recommended that the capture format be set to 24-bit True Color. Use the Format dialog from the Video Preference tab to change the capture format. Selecting a 16-bit capture format may cause flashing in the local video window, but will appear undistorted to remote receivers. Selecting 8-bit capture may result in distorted colors.

- If video codec files are not properly installed in your Windows system folder by the installer, or if these files are removed from the system folder, Enhanced CU-SeeMe cannot send or receive video. If you suspect these files were removed, reinstall Enhanced CU-SeeMe. The 32-bit codecs are named wpsg32.dll and sfmc32.dll. The 16-bit codecs are named wpsgicm.dll and sfmicm.dll.

- If both the 16-bit version and the 32-bit version of Enhanced CU-SeeMe are installed on the same computer running Windows 95, you must install these two versions in separate directories. Also, caution must be taken so that the 16-bit version and the 32-bit version do not use each other's video codecs. This problem can be avoided as follows:

\*When running the 32-bit version, comment out the VIDC.SFMC and VIDC.WPSG entries in the [drivers] section of your system.ini file by placing a semicolon ( ; ) at the start of each entry if similar entries appear in the [drivers32]



section of system.ini.

\*When running the 16-bit version, comment out the VIDC.SFMC and VIDC.WPSG entries in the [drivers32] section if similar entries appear in the [drivers] section.

\*If switching between the 16- and 32-bit versions, you may need to remove the sfmc.cfg files from your install directory if you encounter problems with your video codec.

- Certain revisions of the Digital Vision RT card will flicker with Enhanced CU-SeeMe. The vendor recommends use of the Digital Vision 1024 card instead.
- The Matrox(R) Millenium MGA video card may not work properly with Enhanced CU-SeeMe. If you have this video card installed in your computer, try changing your capture format or your system display depth.
- Display of video windows on systems set to display only 16 colors (4 bits) may be distorted.
- Using the 16-bit version of Enhanced CU-SeeMe on 8-bit (256 color) displays, remote video windows for senders using the White Pine Color codec in grayscale mode may appear distorted. One or more shades of gray may be displayed incorrectly, or in color. This can be fixed by changing the display depth, if possible.
- The display depth should be set to 256 colors (8-bits) on systems with limited memory.
- When using a black and white QuickCam camera from Connectix, use the CU-SeeMe Gray codec. The black and white QuickCam camera will not work with the WhitePine Color codec. The Enhanced CU-SeeMe installer will automatically configure this correctly.
- The Video Preference tab options to invert the gray table and to invert the image have no effect when using a Connectix QuickCam, or when using the White Pine Color codec.
- For point-to-point conferences using the White Pine Color codec, White Pine recommends setting the smeared 'I' frame rate to zero using the codec configuration option in the Video Preference tab. This will result in less bandwidth being used to transmit color images. White Pine does not recommend this setting for reflector-based conferencing, as it will result in a long delay for images

to appear on remote systems.

- When making changes in the Video Preference dialog box, be aware of the following configuration issue: If you select the lossless options, increase the smeared 'I' frame rate, or lower the ME Search Radius, then you increase the amount of data you are sending. Sending more data requires additional bandwidth. If bandwidth is not available, then the result is that the frame/second rate decreases.

- If you use generic VGA and/or Super VGA drivers instead of drivers designed specifically for your display adapter you may see poor performance.

- If you have more than one Video capture card installed, some vendors drivers add entries to the registry which seem to confuse Video for Windows when CU-SeeMe and/or the Enhanced CU-SeeMe installer attempt to enumerate the available video capture devices. Searching the registry for the installed video capture drivers and deleting the entries under the keys for MSVIDEO and MSVIDEOOn will fix this problem.

- When switching video codecs from CU-SeeMe gray to White Pine Color the format the video capture depth is set to match your display depth. This may capture lower quality video than you intended. Set capture depth higher if you want to send higher quality color video.

- Notes for Winnov video capture cards:

\* If you are using CU-SeeMe Gray and you use the Format... settings for the capture card, the local video window will display in color. Enhanced CU-SeeMe will still capture to send gray until you change the video compression codec to White Pine Color.

\* If there is a video capture setting for rgb8 capture, it may not work. Please use another format.

### **WhitePineBoard:**

- If you are using a beta version of Enhanced CU-SeeMe (earlier than Version 2.0), you should be aware that you cannot use the WhitePineBoard with users of Version 2.0 (or later) software. The Enhanced CU-SeeMe Version 2.0 (or later) WhitePineBoard will not work with software earlier than Version 2.0.

- The location of the WhitePineBoard and the cuseeme.ini entry used to specify this location have changed from Version 2.0. If you had previously customized the WhitePineBoard location by changing its cuseeme.ini value, you must reapply your change to the 2.0.2 cuseeme.ini file.

- On heavily loaded reflectors, the WhitePineBoard may not transmit or receive data, or it may disconnect you from an active whiteboard conference. If you experience connection or disconnection problems, exit the WhitePineBoard and restart it.
- WhitePineBoard sessions with several users may experience connection problems or dropout.
- WhitePineBoard will function best when used in a point-to-point connection over a LAN. When connected to a reflector, the response time will be slower.
- 486/33 systems or systems with limited memory may experience connection or timeout problems with the WhitePineBoard.
- Sometimes the "Exit" choice under the "File" menu must be selected twice to take effect.

### **Web and File Launch Facility Information**

Below is an example of the configuration options available in a launch file or script file. This example is what you would want to bring up Enhanced CU-SeeMe and connect you to the client or reflector with just the main toolbar window and WhitePineBoard connected. Launching capabilities for Microsoft(R) Explorer have been added.

----- Beginning of file -----

Ip address  
Conference ID

Audio Window Open automatically: yes or no  
 WhitePine board Open (launched) automatically: yes or no  
 Max and Min Video Send rate control  
 Local Video window Open automatically: yes or no  
 Participants Window Open automatically: yes or no  
 Chat (Text) Window Open automatically: yes or no  
 PhoneBook Window Open automatically: yes or no  
 Settings for Automatically opening remote videos on connect: yes or no  
 Connect Options for automatically sending receiving Audio and video

[Audio Position]  
Open=no

[WhitePINEBoard]  
Open=yes

[Flow Control]  
MaxCap=29  
MinCap=9

[Local Position]  
Open=no

[Participants Position]  
Open=no

[Chat Position]  
Open=no

[PhoneBook Position]  
Open=no

[Settings]  
AutoOpen=no

[Connect Options]  
IWillSendVideo=no  
IWillRecvVideo=no  
IWillSendAudio=no  
IWillRecvAudio=no

----- End of file -----

## **PPP Stack**

White Pine provides Core PPP for use with Enhanced CU-SeeMe.

## **Master Licensee for Enhanced CU-SeeMe**

White Pine Software has been selected by Cornell Research Foundation as master licensee of Cornell's CU-SeeMe desktop videoconferencing technology. Under this exclusive agreement, White Pine and Cornell researchers will make low-cost, commercially enhanced and supported versions of CU-SeeMe available to Internet users worldwide -- bringing the advent of everyday video communications one step closer. Royalties generated from the direct sale, distribution, and sublicense of commercially enhanced versions of CU-SeeMe will help ensure the continued advancement of this exciting new technology.

## **Contact Information**

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## **Technical Support**

To request technical support, complete the Technical Support Request form on the World Wide Web at <http://goliath.wpine.com/cusupport.htm> or send e-mail to [cusupport@wpine.com](mailto:cusupport@wpine.com).

## **Enhanced CU-SeeMe Mailing List**

If you are interested in product upgrades, special offers, or following developments in Enhanced CU-SeeMe or its use, you will want your name on our mailing list. You should send blank e-mail to: [cuseeme@wpine.com](mailto:cuseeme@wpine.com). You will receive an electronic registration form for our broadcast list server, which will add your name to our mailing list.

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