



General Educational Technology

Video Conferencing over a Network - iVisit

iVisit is a simple, free-for-download program that serves as a connection interface for video conferencing. It is not materially different from Microsoft's NetMeeting or CUSeeMe (also free), with one very notable exception: it uses a video compression CODEC to greatly decrease transmission size and improve quality. This is crucial, since most schools barely have enough bandwidth to handle the Internet traffic they now have, and video conferencing uses the same pipe (see [Things effecting quality of the video and sound](#) below for hints).

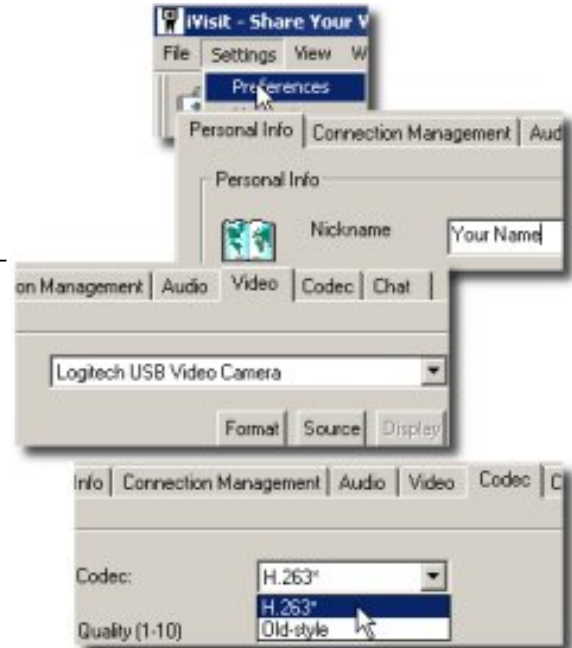


Here's how it works:

Hardware	One computer with a QuickCam or similar, plugged into a network drop. If you're in a low-connection-speed elementary or middle school, it is helpful for this network drop to be switched out of the school (if you don't know what that means, ask for technical assistance from your STC). <i>Install the QuickCam before you install iVisit.</i>
Software	iVisit, free for download from http://www.िवisit.com - the software is timed shareware, which means it will "time out" after two months. When that happens (you'll get a notice and the software won't work), just go back to the iVisit website and download and install the newer version right over the top of the old.
Set-up	Your computer must have a fixed IP address (simply discovering your DHCP-assigned IP won't work). If you don't know what this means, then you'll need technical help, since there are a half-dozen settings that go along with this. If you wish to video-conference with anyone outside of the FCPS district WAN, you'll need that fixed IP to be <i>public</i> (again, ask if you don't know). <i>Make sure you obtain that IP address if you aren't the one to enter it.</i>
Installation	The software install is brainless, just use all of the defaults (hit <Enter> when it asks something). When you first start the software after installation, you'll be asked some questions. Again, use the defaults, though you'll want to give "yourself" (your computer's iVisit name) a meaningful name for the task you'll be doing - the name of your class, etc. Make sure after the startup that iVisit shows a video window with your QuickCam video showing in it.

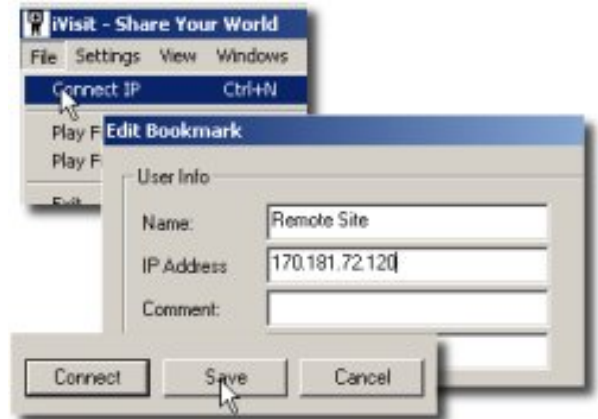
Configuration

Go to **Settings/Properties**. Check to make sure your chosen name made it into "Personal Info," and that, under "Video" your QuickCam is selected (if you don't have one, you can still do a sound-only conference). Make sure under the "Codec" tab that "H.263" is checked. **Make sure whoever you intend to conference with has this setting as well.** The "Video" tab allows you to set screen size and quality - it's best to select high quality and a medium screen size to start with. iVisit will allow you to adjust that mid-conference if things aren't going well.

**Connect**

It's a good idea to have phone contact with your remote site until you're confident things are going well - nothing like good-ol' Ma Bell to get things going!

It is possible to connect through iVisit's server, but it's preferable not to - like NetMeeting, it opens up your iVisit session to outsiders. If you're initiating the session, go to **File/Connect IP**. You must know the remote computer's IP address (or you must have given them your IP address in advance). If you've forgotten yours...



- Windows 9X: **right-click** on "Network Neighborhood," select "Properties," click on "TCP/IP" and click "Properties."
- Windows 2000: **right-click** on "My Network Places," select "Properties," **right-click** on "Local Area Connection," click on properties, click on "TCP/IP" and click "Properties."

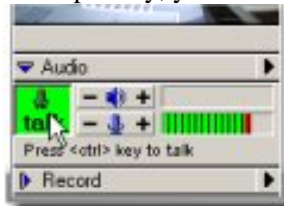
You have no ability to discover the remote computer's IP - if you're initiating the session, you must simply have it. Enter the name of your remote site, and the IP address. Click "Save" if you wish to be able to save this for later use. Then click "Connect." It is then up to the remote site to agree to the session.

If the remote site initiates the session, you'll get a window asking if you wish to accept.

The Conference

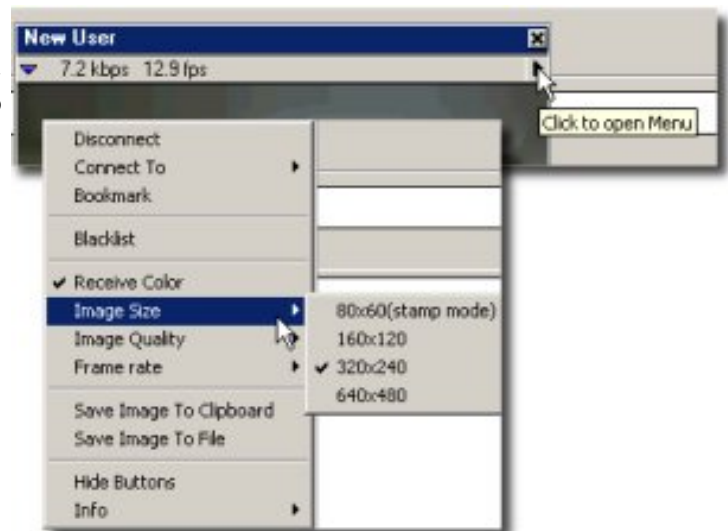


Here's what you should have. The video frame rate will adjust depending on the available bandwidth (displayed on the top of the remote window), which might make things jerky. Since iVisit is by default sound-priority, you should be able to hear even when the video isn't doing that well. If the remote sound



is garbled or distorted, ask them to adjust their sound (and vice-versa, of course) - look to see if things are going into the red - and larger adjustments (allowing direct control of your sound card) is available through the **Settings/Preferences** option under "Audio" tab. If the sound is so poor that you cannot make it out at all, and adjusting doesn't help, use the chat window for text. Sound is *not* "full duplex" (going both directions at once) by default - you have to "push to talk," much like a walkie-talkie. Either click the "Talk" icon, or just push the <Ctrl> key to talk. Make sure you're sitting near the microphone (usually the one embedded in the QuickCam), and keep ambient room noise (talking, AC noise, etc.) to an absolute minimum.

Complete access to settings is available by clicking on the little arrow at the top right of the display window. Make sure you appear at the other end - it's easy to forget! Look at the "What they see" window. To end the conference, select the "Disconnect" option from this menu. Either party can end the conference.



***Things effecting
quality of the
video and sound***

Bandwidth, bandwidth, bandwidth! If you don't know what bandwidth is by now, you'll be an expert after this! Here's the possible restrictions:

- **Your school connection speed:** If you have a 128 kbps line (many elementary schools do), you'll struggle. If you can get permission, have your STC shut down your proxy server (effectively ending all Internet traffic) for the duration of the session, so you can have the pipe to yourself!
- **The remote site connection speed:** Same story there - you could have all the bandwidth in the world, and if the remote site is slow, the session will not go well.
- **The KDE Backbone:** All IP traffic (including your iVisit session) that leaves the cozy Fayette County environment must go through a gateway to the KDE Internet backbone. That gateway is typically maxed out (running at 100% of capacity) from 9:30 to 2:30 every day. It does not mean that your session won't work, it just might encounter problems. If you can schedule around this bottleneck (early morning or later afternoon), you're in better shape. This does *not* effect conferences inside of FCPS.