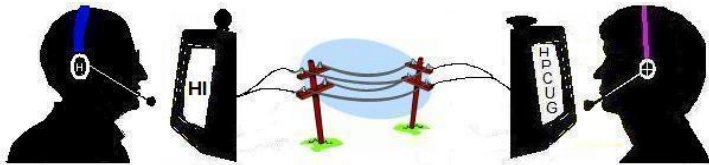


Notes from Presentation on Low Cost Video Conferencing

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Do you need to communicate with another PCUG? A vendor or guest speaker? An absent board member? If so, a low cost video contact may be your answer. I moved out of state and my old PCUG and I wanted to maintain contact as I had been their Internet/Windows SIG leader. Video/audio seemed to be the answer.

This need started a journey of investigating low cost or free video conferencing programs. We immediately discovered that we were chasing a moving target in terminology. There's not only video conferencing, there's web conferencing, webinar, webcasting, cyber conferencing, etc., all under the general title of E-conferencing. See:

http://www.conferzone.com/services/notes_cz504.html .

What would be needed? Surely the Internet, a video camera (webcam), microphone, sound system ... but what else? The "what else" required some research into the video programs available.

There is a wide variety of webcams, ranging in price from \$5 to several hundred. Our choice was the Intel Pro PC camera, which is no longer made but is available on Ebay for about \$30 and up. The quality is excellent and it has an RCA phono-type connection that allows a standard analog/digital camcorder to also be used. With a camcorder, you can zoom in on members of the audience or even a projection screen. A Creative Wide Angle webcam was also evaluated. An ideal selection would be a 30 fps and 640x480 resolution and capable of tripod mounting. See a review of webcams at:

<http://cowboyfrank.net/webcams> .

The ideal microphone is wireless so it can be passed around among members. We used a Radio Shack wireless system and fed the audio into the line-in connection of the computer's sound card.

Software Name	Cost	Pros	Cons (If Any)
Skype vs. 2.0 Beta with Video	Free	Good audio, good variable size video, fun add-ons planned.	
NetVidea, use with Skype A nanoCorp product	Free	Best Video of all, smooth. Has feature to show portions of the desktop	No audio, must use Skype or Google Talk
Festoon video & Skype audio www.Skype.com	Free	Good video, many users at once. Fun features, too. Can show desktop.	
Festoon video & Google Talk www.google.com/talk	Free	Good video, many users at once. Fun features, too. Can show desktop.	
MSN IM http://mesenger.msn.com	Free	Good video, easy install. Full screen mode.	Two-way video only, no multi-users
Yahoo IM http://messenger.yahoo.com	Free	Can have multiple people in a conference. Variable screen-size	Jerky video, difficult to multi conference.
AOL IM http://www.aim.com	Free	Seems reliable, smooth video. audio	Small size video screen
ICUII Chat http://www.icuii.com	\$40/y	Easy to use. Multi-users. Needs to have specific ports opened.	Video fair. Not free
iSpQ (Eye Speak) Video Chat www.ispq.com	\$29/y	Good video, multiple users, chat rooms. Need to open router ports.	Not free.
Dwyco CDC32 http://www.dwyco.com	Free	Multiple user. Zap Mail.	Jerky video
Zoom Chat http://snipurl.com/zoomchat	Free	Easy to use, reliable, one on one. Rated 5-stars by Download.com.	One on one, no multi-user.
YakForFree http://www.yakforfree.com/	Free	Good smooth video, good audio. Multi-user with limitation of smaller picture.	Slightly smaller video window,

We also had success with a cell phone with speakerphone capability when only one person was monitoring the session broadcast. Any electronics store will have a vast array of types. The audio from a camcorder was also found to be OK.

Below is a spread sheet of video programs that we tested. (The live talk at the Jan. 2006 APCUG conference had screen shots and video clips of these programs.) Streaming video snapshots may be ok for some applications where you may only need face shots every few seconds. For a free program see, <http://www.VisionGS.com>. We have tested this program with good results. It is multi-user.

Other Requirements to Consider

Quality Camera and Adequate Lighting

GIGO...Good Input, Good Output. A camera with USB 2 or Firewire may give smoother movement. Use 30 fps. Use lighting behind the camera if possible.

Bandwidth

Use system with good bandwidth. Your video will probably go two ways, to and from the server (rather than direct.) 384Kbps, per direction, per stream. A good intermediate level is between 128Kbps and 256Kbps.

Memory

Use no less than 256MB of RAM. Avoid having to use virtual memory (the hard disk). Avoid having lots of other applications or activity.

Audio

A full duplex audio card is desirable. Older sound cards may sound scratchy or break up.

Remote Desktop Control

We also wanted to allow a remote user to fully conduct a meeting. This would include a video of the person talking plus his controlling the desktop, running programs, downloading files.... just as if the presenter were there at the meeting. We found the free program, LogMeIn, to fill the requirement. A successful program was held in which a remote member downloaded a program, installed it, demonstrated it and solicited comments from the audience of members at the SIG meeting. See LogMeIn at <http://www.LogMeIn.com> It won't transfer files to and from your remote PC or do remote printing, but it's nearly as slick and as fast as GoToMyPC, and if you need to transfer files, you can do so by remote-controlling e-mail. Remote viewing of

a desktop is available through Festoon described in the table above.

Suggestions

- 1) Use good feedback-free non-echo sound.
- 2) Allow sufficient time to get setup before your program.
- 3) Train several people to use equipment.
- 4) Ensure good communication between users as to when, where, how the audio/video system is set up. Where are the projector, cables, cameras?
- 5) Have the ability to communicate off-line with each other. Suggest using cell phones with headset to talk to the cameraman. Use cordless speaker phones for audience audio.
- 6) Use BIG fonts in slide shows and browser. Fill the screen! Shows up better on video.
- 7) Dropouts of voice and/or video during live sessions. Monitor closely and re-establish the connection.
- 8) Strive for no-feedback no-echo sound.

Suggested Hardware

Camera, Buy from Ebay the Intel Pro PC Model 430 which has an RCA connector for a composite camera.

Camcorder, An older analog camera for zooming in on screen and people.

Headset, Logitech Model Premium Stereo

The PowerPoint slide show presented at the APCUG conference on Jan. 4, 2006 can be found at:

<http://snipurl.com/RodsNotes1>

Size is 4.0 MB. No motion is included in the graphics, unlike the live presentation which had video.

(Including Video would have made an 80 MB file.)



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