Chapter 10

<u>Webcams</u>

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<u>Overview</u>

I decided to leave this chapter out of the book as I did not feel it really fit in with Video Calls. This chapter covers mostly additional information about the other uses for a webcam, but is still good information so I thought I would make it available for anyone that is interested. I discussed webcams in Chapter 4 of 'Video Conferencing over IP' and focused on the basic functions of webcams as they relate to Video Calls. I did not however discuss any of the additional things you can do with webcams or various options and utilities that are available. In this bonus chapter I will discuss some of the additional things you can do with a webcam and some utilities worth looking at.

   If you want to take a look at another website that also reviews webcams, Cowboy Frank does a good job of reviewing webcams and has some good information for readers. Word of warning, read his webpage's first before sending an email with questions, a lot of what you want to know is on his webpage's, so read them first. I mention this website as Frank goes into more detail about webcam features and lighting than I do, so longer reviews if you are looking for a second opinion. I think we are basically in line that Logitech webcams are best. I do not completely agree with his reviews, but we are looking at webcams differently and so I am always good for providing a second opinion and his is a good one. For example; Frank does not care for the Logitech 5000 in bright light conditions, but I feel you can easily adjust the brightness and you are good to go. Frank does not care for the Logitech webcam controls, I feel they are fine. Remember I am focusing at Video Calls only, Frank looks at the digital camera function as well as other options for webcams, where I do not. So between our two website's I think you will get a good idea what is good and what is not.

- www.cowboyfrank.net/webcams/index.htm

<u>List of popular Webcam makers</u>

I have provided this list of the more readily available webcams. There are many models and makers and so this list is not complete for all parts of the world, rather what I know I have access to here in the US. Also many of these webcams I would not recommend. Remember, you get what you pay for when it comes to a webcam so avoid webcams under US $50. Of course you can also use any digital camera or video camcorder that connects to Windows and use WebcamDV to make you camera into a webcam which we discuss later in this chapter under software solutions.

<u>Webcams</u>

- Logitech
- Philips
- Apple
- Creative Labs

- WebCamDV (software for use with digital camera or digital camcorder)
- Sony
- Ezonics
- HP
- Compaq (HP)
- Micro Innovations (HP/Compaq)
- CP Technologies
- Offspring Technologies
- SIIG
- Labtec
- Dynex
- Aiptek
- BTC
- Micro USB
- Kinamax
- MI Micro
- Sabrent
- Global Media
- Zonet
- SolidTek
- A4Tech
- Panacer
- Link Depot
- Hiro

Internet webcams

These cameras makers have web servers built into them to allow you to connect to them from the Internet.

- DLink
- AXIS
- TrendNet
- Hawking Technologies
- Panasonic
- Sony

Wireless Internet Webcams

These cameras makers have wireless (802.11x) and also web servers built into them to allow you to connect to them from the Internet.

- DLink
- Panasonic
- Linksys
- TrendNet
- Hawking Technologies

Webcams, Internet Cams and Nanny Cams

Before I go on, I should clarify some terms I use to understand the different functions that webcams can provide. I use the term '***webcam***' to describe a basic little camera that provides video and still picture capabilities. My definition of a 'webcam' means they cannot be accessed by the Internet without an additional application. They are just dumb devices. Webcams are all I review on my websites and all I recommend for Video Calls. You will see the term 'webcam' used in almost every way and you will be totally confused unless you separate them by functions so you can understand which camera does what. '***Internet Cams***' are cameras that either have built-in web servers, so much more expensive, or software you can add to your computer in conjunction with a webcam to

make it an 'Internet Cam' and broadcast your cameras video or images to the Internet viewable by anyone and everyone. 'Internet Cams' are used for weather cams, traffic cams or any other thing you want to transmit to the masses on the Internet which includes 'adult' related content. '***Nanny Cams***' are the same as 'Internet Cams' and as the name states used to spy on your Nanny watching your children and these cameras need to be open to the Internet as well so you can view it to spy on your Nanny. Even though you usually set a password to access an Internet Cam or Nanny Cam, if you forget to set a password or use something easy to guess, anyone on the Internet could view your webcam. If you want to know how easy it is to find 'Internet Cams' on the Internet, just search Google for any of the following:

- '/view/view.shtml axis'
- 'Live view - / - AXIS'
- 'indexFrame.html axis'
- 'my webcamXP server!'

By the way, you cannot search for and find basic webcams on Google, it is just not possible and so do not concern yourself with having a webcam connected to your computer, unless of course you add software to make a webcam into an 'Internet Cam'. The first three bullets will find 'AXIS' 'Internet Cams' on the Internet and the forth bullet finds the utility called 'Webcam XP' (software added to a webcam) that are sending video over the Internet. These cameras may not be configured correctly and this is the fault of the owner, or the camera is open and public on purpose. If this were in your home, you would not want people to look inside your home, so avoid doing this unless you are absolutely sure you need and want to do this. Know that the webcams I recommend do not have this functionality built-in and cannot transmit their video or images without you specifically adding software to do so above and beyond Video Call software. The webcams I recommend are safe (computer security consultant talking) if you only use them for Video Calls and never set your video call software to 'auto-answer'. So yes, webcams are safe (computer security consultant talking) as long as you use a webcam and not an 'Internet Cam'. So yes, webcams are safe if you monitor their use with your children. Basically, do not use webcams with built-in web servers that can be controlled over the Internet or add software that adds the 'Internet Cam' function to a webcam unless you want a monitoring or surveillance solution. If you want or need to extend the length of your USB connection you will need a USB extender like those from StarTech.com that allow you to go over 100 meters or 330 feet.

Here is a chart comparing Webcam features to Internet Webcam features:

	Web Cameras	Internet Cameras
Recommended for	Video messaging, e-mailing, phoning and conferencing	Video monitoring and surveillance
View live video	Yes	Yes
Video phoning and conferencing	Most models	Some models
Video instant messaging	Yes	Some models
Video e-mailing	Most models	Some models
Record video	Most models	Yes
Still photos	Most models	Most models
Automatic recording	No	Yes
Timer recording	Some models	Yes
E-mail alerts	No	Yes
Motion sensors	Some models	Yes
Motion-activated recording	No	Yes
Heat sensors	No	Some models
Heat-activated recording	No	Some models
Automatically saves recording	No	Some models
Sensor alarm	No	Some models
Built-in mic or headset	Yes	Yes
PC connection required	Yes	No
Internet required	Yes, high speed recommended	Yes, high speed recommended
Connection	USB port	LAN Ethernet
Wireless capability	No	Some models, via 802.11g
Camera access	Local, from connected PC	Remote, from any Internet-connected PC
Remote camera control	Generally not	Yes, via PC's Web browser
Control via cell phone or PDA	No	Some models
Compatible applications	Most instant messengers (not included)	Most Web browsers (not included)
Additional software included	Yes	Yes
System requirements	See *Note below	See *Note below

*From the CompUSA website

Are Webcams Safe?

I am often asked if webcams are safe and I just gave you several statements that say "yes". Being a computer security consultant for a Fortune 500 company I am well qualified to discuss this subject and make recommendations. In recent press a child who made the news circuit started using a webcam as a part of his online chatting at age 13 and became deeply involved in the child pornography industry. Was this the fault of the webcam? I say not even close. If you look at the statistics of how children are exposed to Predators or Pedophiles using computers and the Internet, they are predominantly through Chat Rooms.

As you read in Chapter 6 and 7, I am not a fan of Chat Rooms solutions for this very reason as I have a daughter and do not want her exposed to Chat Rooms. Depending on whose statistic you believe Chat Rooms are clearly responsible for the majority of where children are initially contacted by Predators and Pedophiles, somewhere between 65%-80%. More importantly the Chat Room may be where the child gets contacted, but this too is not the main reason children are exposed to bad things. The real concern is parents letting their children use a computer with Internet access unrestricted and unmonitored and this is the real culprit. Yes, it is 100% the parents fault!

I discussed in Chapter 2 and 4 that a parent has the obligation and responsibility to monitor and control a child's access to the Internet. If parents did the simple task of Parental Controls and Monitoring, as we do with television and movies, your children would not be exposed to Chat Rooms and you would know what your child is doing on the Internet and could intervene if necessary. You could just as easily send digital pictures from a camera as you could using a webcam. Also, webcams can easily be unplugged and put away until supervised use can happen, so it is 100% in the control of a parent. SO they are 100% safe for your children if you practice parenting 101.

Can someone turn on my webcam to spy on me?

As far as having a webcam just connected to a computer would allow anyone on the Internet to just turn the webcam on over the Internet and spy on you, well that is just plain fantasy and not reality. Not unless you do not maintain your operating system patches, do not have a software firewall and do not have a DSL/Cable router like I discussed in Chapter 3 and 4. Even without the recommendations I made to protect your computer, it would still be hard to do and only a handful of people could attempt to control your webcam, it is just not that easy.

You would have to enable your software to 'auto-answer', which is off by default in all Video Call solutions. Or you would have to use a camera with a built-in server or install on purpose a webcam utility to transmit your webcam video or images to the open Internet where anyone can use a browser to view it, making it an 'Internet Cam' as I already discussed. I do NOT recommend 'Internet Cams' unless you are absolutely sure this is what you want to do. Also, never show the interior of your home if you plan to transmit your webcam to the Internet, another bad thing to do. 'Internet Cams' can be useful to show weather, traffic conditions and various other interesting things, but not for showing your home unless you want to do surveillance. I list several solutions in this chapter to do just that, but remember to lower the lens cover or turn the webcam away from the living space when you get home, or better yet, just unplug the camera.

Webcam utilities

A webcam is a great tool to improve and enhance communications by adding video to an audio call. Webcams also have the ability to d many other things, like be a digital camera, also a good thing to have. There are several utilities you can install to expand what your webcam can do. I must admit that I left out a 'must have' utility for the MAC that everyone should have and install and I thank Neil for pointing this out to me. So if you have a MAC, add 'iGlasses' to your MAC if you use an iSight webcam as it gives you all the controls for the iSight that you will need. There are many other utilities for Windows and the MAC that I have listed below for your consideration. If you use and like a certain utility, send me your comments. I know for example that my friend Jason likes 'SplitCam' so he can send video to two video call apps at once on his single webcam. Add-on utilities will be of personal preference and I discussed how I like the new Logitech avitars for use with children, but there are utilities to add this function to any webcam I listed in this chapter.

Webcam utilities for Windows

There are many webcam utilities for Windows systems to add fun features to surveillance capabilities and of course the ability to transmit your webcam to the public and to your website. I provided these utilities for your reference and so you know there are other things your webcam can do.

Fake Webcam

Stream or Play videos and movies on AIM, MSN, Skype and YIM messengers instead of your actual webcam images. Fake Webcam stream videos and movies on your messenger just like an actual webcam. You do not need to have a webcam to use Fake Webcam.

Key Features:
- play pre-recorded videos without even having a physical webcam
- have a virtual personality
- keep your privacy by pretending to be some one else

Categories:
- **Utility**

Price:
- US $19.95

- www.fakewebcam.com/demo.asp

CamTrack 2

CamTrack adds animations to your video calls. CamTrack adds additional features to your webcam to make it more fun and give you some features you would not have unless you use a Logitech webcam.

Key Features:
- Webcam Animations
- Text Overlay Animations
- Picture Overlay Animations
- Face Tracking
- Video Noise Reduction

Categories:
- **Utility**

Price:
- US $9.95

- www.digitalpeers.com/

VirtualCamera

VirtualCamera is a virtual software camera. It needs no hardware. It can use your pictures, video clips, flash files etc. as its sources, and let your application use it as a real camera. When you want share some pictures with your friends or you want to play your movies for them, you can use VirtualCamera.

Categories:
- **Utility**

Price:
- US $29.95

- www.soundmorning.com/index.php

SplitCam

SplitCamera connects several applications to a single video capture source, usually a webcam or video camera connected to your computer. The Split Camera driver allows you to easily multiply your webcam (any models),

video cameras in video call software like AIM, MSN, Skype, SightSpeed, YIM, etc. and to broadcast it to several users at a time. With SplitCam you can connect up to 64 clients to a single video source. In a few words: Split Cam does just what its name says: it splits the video stream coming from the video source and tunnels it to numerous other client applications.

Features:
- Use your PAL or NTSC DV Camcorder for all Webcam Software
- Allows Zooming, Night Vision, Digital Stabilization, Auto Focus & much more!

Categories:
- **Utility**

Price:
- Free

- www.splitcamera.com/

WebCamDV

I am asked about this option a lot and though I tend to say don't bother, it is entirely possible. If you own a DV camcorder you can use WebCamDV to make your CV camcorder into a webcam. The reason I say "Don't bother" is the fact webcams are cheap and more importantly they are designed to mount on your monitor. Cancorders can only sit on you desk and point directly forward and so it is hard to have them point the correct direction where webcams are specifically designed for this. But if you have another need other than video calls, then this is a utility you should consider. WebCamDV lets your digital video camera with all its expensive features, act like a webcam! Imagine, a webcam with 600X zoom, auto focus, stereo sound, auto stabilizing, night vision, high quality optics, and more, depending on your camcorder. You can film or record a video call on your DV camera, edit it, then archive it back on your DV camera or to your computer. By using webcam broadcasting software such as WebcamXP with your DV camcorder (acting as a webcam) can broadcast your prerecorded (or live) video via the Internet to your friends or business partners.

Features:
- Use your PAL or NTSC DV Camcorder for all Webcam Software
- Allows Zooming, Night Vision, Digital Stabilization, Auto Focus & much more!
- Record and Webcast Simultaneously, or Pre-record, Edit and Webcast
- Send the WebCamDV remote application to a friend or family member and over the Internet they will be able to "Play," "Stop," "Rewind", "Fast Forward", "Record" to your DV camcorder tape and even Zoom* or Focus* your DV camcorder.
- Pass both audio and video thru the FireWire cable to your favorite webcam application.
- Works with Windows XP SP2/DirectX 9, MSN Messenger, Yahoo Messenger, AIM, Skype & many others (see compatibility list on the website).

* Remote zoom and focus is only available on DV camcorders that support control of these features through software

Categories:
- **Utility**

Price:
- US $20.00

- www.orangeware.com/endusers/webcamdv.html

Active Webcam

Active WebCam captures images up to 30 frames per second from any video device including USB, analog cameras, TV-boards, camcorders, and from network IP cameras. The program performs simultaneous recording and broadcasting from unlimited number of cameras. You can broadcast live audio and video.

Categories:
- **Broadcast**
- **Surveillance**

Price:
- US $29.00

- www.pysoft.com/ActiveWebCamMainpage.htm

Biromsoft WebCam Software 4.0

Biromsoft WebCam is a surveillance software solution for home and business use. The software package features instant picture web server capability which enables you to start your live streaming as soon as you give your IP address to your friends. This software can be used to keep an eye on your kids or pets, or simply to make sure your home is safe when you are gone. Biromsoft WebCam allows you to either keep the surveillance images private or to make them available for everybody on the Internet.

Categories:
- **Surveillance**

Price:
- US $29.95

- www.biromsoft.com/webcam/

Cam Commander

Cam Commander is simple web cam application intended for users that have a "hard" web connection such as DSL or a Cable Modem. Cam Commander will snap pictures periodically from the webcam and upload it to your website. Cam Commander hides in the system tray and can be disabled if needed.

Categories:
- **Publish to websites**
- **Recording**

Price:
- Free

- www.exxcalibur.com/camcom.asp

CamShot

Webcam transmitting solution.

Categories:
- **Publish to websites**
- **Surveillance**

Price:
- Free

- http://broadgun.com/camshot/index.htm

Video Capturix

Video Capturix lets you capture movies (in AVI format) from any Video for Windows or Windows Driver Model (Version 2005 or higher) video source.

Categories:
- **Recording**

Price:
- US $35.00

- www.capturix.com

Capturix VideoSpy

Capturix allows you to record all video activity with a programmed schedule, insert data in picture, work as a motion detector, record sound, have events trigger program alerts (example: suppose the motion detector detects a movement, an email can be sent).

Categories:
- **Surveillance**

Price:
- Varies by amount of cameras used

- www.capturix.com

ChillCam

Webcam streaming utility.

Categories:
- **Broadcast**
- **Publish to websites**

Price:
- US $25.00 for single Cam
- US $50.00 for multi-Cam

- www.chillcam.com/

CoffeeCup Webcam

With CoffeeCup WebCam you can hook up your webcam, start the WebCam software, and put live images online in minutes! You can even have multiple cameras and multiple Websites. CoffeeCup WebCam will upload images from any camera, to any website on your list, on any schedule you set. With the Security Cam feature you can have your WebCam keep an eye on things for you. Have it watch your home, your office, your baby, or anything else. It alerts you when something moves in the picture

Categories:
- **Broadcast**
- **Publish to websites**

Price:
- US $34.00

- www.coffeecup.com/webcam/

Crime Catcher

Webcam software for surveillance, security, and remote video monitoring.

Categories:
- **Surveillance**

Price:
- US $25.00 for single Cam
- US $49.00 for multi-Cam

- www.crime-catcher.com/

Digi-Watcher

Webcam Software for Video Surveillance, Broadcast and more.

Categories:
- **Surveillance**

Price:

- US $39.00

- www.digi-watcher.com/

EyeSpyFX Webcam

This webcam broadcasting software allows you to create your own webcam monitoring service. You do not need a website or access to FTP. You can view your webcam using a web browser via mobile phone. EyeSpyFX also makes a solution for transmitting to supported cell phones called 'Phone StreamFX' and monitoring solutions for specific webcams with motor controls;

- Logitech Orbit
- Creative Motion
- Plustek Opticam

Categories:
- **Surveillance**

Price:
- Euro €35

- www.eyespyfx.com/mobile.asp

EyeCU

Webcam Software for Video Surveillance, Broadcast and more.

Categories:
- **Surveillance**

Price:
- US $29.95

- www.jpcsoftware.com/products/eyecu2/eyecu2_main.htm

go1984

go1984 was designed for professional and problem-free video surveillance and recording.

Categories:
- **Surveillance**

Price:
- Depends on version

- www.jpcsoftware.com/products/eyecu2/eyecu2_main.htm

ICUALL Webcam

Publish your webcam to a website. Comes with ICUII Video Call software.

Categories:
- **Publish to websites**

Price:
- US $49.95

- www.icuall.com/

Stealth Big Brother

Webcam Software for Video Surveillance.

Categories:
- **Surveillance**

Price:

- Depends on version

- www.stealthbigbrother.com/

Supervision Cam

Webcam Software for Video Surveillance.

Categories:
- **Surveillance**

Price:
- Free

- www.supervisioncam.com/index.html

Webcam and Screen Recorder

This utility Records selected windows (including webcams displayed on your screen), full screen or part of the screen to a video file such as AVI and WMV. You can also record sound with the video.
Use it to capture webcam sessions or video calls with your buddies and save them. Use 'Fake Webcam' to play back recorded videos on your video calls.

Key Features:
- Record Webcams
- Record activity on full or part of screen
- Create "How to ..." demos

Categories:
- **Recording**

Price:
- US $19.95

- www.fakewebcam.com/demoWCSR.asp

WebCam32

Webcam32, makes it easy to capture live streaming video and broadcast it on your web page. Viewers do not need a plug-in or any additional software to view your live streaming video from their web browser.

Categories:
- **Surveillance**

Price:
- US $39.95

- www.webcam32.com/

WebCamXP

webcamXP lets you broadcast and manage your video sources or secure your location with up to 10 video sources per computer. The software supports all video for windows / WDM sources and most file-based or IP based sources (providing JPG stream).

Categories:
- **Broadcast**
- **Surveillance**

Price:
- US $39.95 for Private
- US $79.95 for Pro

- www.webcamxp.com/

Webcam utilities for the MAC

If you are looking for add-ons for the iSight webcam, be sure to check 'www.MacUpdate.com' and search for 'iSight' and you will find a long list of utilities. Also be sure to search for 'iChat' as you will find add-ons for iChat AV as well.

Here are some lighting tips for iSight and iChat AV users;

- Use halogen bulbs, florescent lights, and natural sunlight. Regular bulbs give off a yellow light and not best for video.
- Diffused lighting works best so face the lights off walls or ceilings.
- Use iGlasses to adjust your lighting and use iSight's Auto White Balance feature.
- You want lighting equal to a well lit office of 300 lx or more.

Boinx iVeZeen

Use your iSight webcam to easily record high quality movie clips in various formats.

Categories:

- **Recording**

Price:

- US $14.95

- www.ivezeen.com/

Boinx iVeZeen

Use your iSight webcam to easily record high quality movie clips in various formats.

Categories:

- **Recording**

Price:

- US $14.95

- www.ivezeen.com/

Boinx iStopMotion

iStopMotion is the tool of choice for Stop Motion Animation (aka. Claymation) and Time Lapse Recording.

Categories:

- **Recording**

Price:

- Varies

- www.istopmotion.com/

ChatFX

ChatFX provides visual effects to iChat using QuickTime, Quartz and Quartz Composer.

Categories:

- **Utility**

Price:

- US $20.00

- www.scriptsoftware.com/chatfx

CLI iSight Capture Utility

If you are looking for a command line utility to grab iSight images, check this out.

Categories:

- **Recording**

Price:

- Free

- www.intergalactic.de/hacks.html

Conference Recorder

Record your iChat AV video calls.

Categories:

- **Recording**

Price:

- US $14.95

- www.ecamm.com/mac/conferencerecorder/

iCamShare

Record video and images with your iSight webcam.

Categories:

- **Recording**

Price:

- US $14.95

- www.macupdate.com/info.php/id/15175

iChatter

iChatter adds voices to iChat.

Categories:

- **Talking**

Price:

- US $8.00

- www.ecamm.com/mac/ichatter/

iChatUSBCam

Driver to allow USB webcams to work with MAC OS 10.2 and greater.

Categories:

- **Utility**

Price:

- US $9.95

- www.macupdate.com/info.php/id/12294
- www.ecamm.com/mac/ichatusbcam/

iGlasses

Adds video controls to your iSight webcam. This is a must have utility for MAC video call and iSight users.

Categories:

- **Utility**

Price:

- US $8.00

- www.macupdate.com/info.php/id/16105
- www.ecamm.com/mac/iglasses/

iPatch

Cover for built in iSight webcams in MAC iBook laptops.

> **Categories:**
> - **Utility**
>
> **Price:**
> - US $9.99
>
> - www.theipatch.com/

iTwist

Utility that allows you to answer and hang up your video calls with your iSight webcam's lens by twisting the cover open or close.

> **Categories:**
> - **Utility**
>
> **Price:**
> - US $19.99
>
> - www.itwistngo.com/

PowerBoost

Add multi-party video calls to iChat AV 3 for MAC G4 and MAC OS 10.4 or higher.

> **Categories:**
> - **Utility**
>
> **Price:**
> - US $8.00
>
> - www.macupdate.com/info.php/id/19750
> - www.ecamm.com/mac/powerboost/

ShowMacster

Show QuickTime movies and images during a video call.

> **Categories:**
> - **Stream movies and images**
>
> **Price:**
> - US $19.00
>
> - www.macupdate.com/info.php/id/17656

Summary

In this chapter we discussed webcams and the options that you can use a webcam for and what utilities you can add to webcams to expand their use. Webcams are safe as long as you practice common sense and do not let your children use the Internet unattended and unmonitored.