There are two different ways of streaming video. You can:

1. Stream with a PC (software / video capture card) based encoder
2. Stream with a hardware based encoder

There are a number of components needed to accomplish a live video stream. Those are:

1. Solid connection to the Internet
    A. The connection must be a Broadband Internet connection and must have guaranteed bandwidth. The up and down speed should be twice the bit rate you are streaming. For example if you are streaming at 350k, your connection speed needs to be 700k or higher up and down. If you are simultaneously streaming Windows Media and Flash, you need a guaranteed up and down speed four times the bit rate you're streaming.
2. Encoding Device
    A. The device can be either a PC based encoder (a PC with the use of a video capture card)
    B. Or, a hardware encoding product such as the Niagra-type encoding product
3. ClickStreamTV Publishing Point
4. ClickStreamTV Interface (video player)

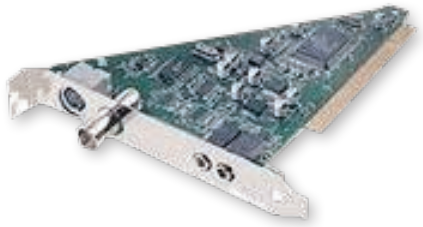
To accomplish a live stream with a PC based encoder you will need:

1. PC - This should be a desktop model. The minimum requirements for this are:
    A. PC built to Microsoft Media Encoder specs - see the Microsoft site. (http://www.microsoft.com/windows/windowsmedia/forpros/encoder/sysreq.aspx)
    B. Microsoft operating system
    C. Minimum of 2 GB of RAM
        i. This is a minimum. If it is within your budget to add more RAM that would be advantageous. The more RAM the better.
    D. Hard Drive
        i. Just like with RAM, the bigger and faster the hard drive the better. Most new computers come with a sufficient hard drive size and speed. We recommend having a SATA 7200 in your computer. If you have an older model, you can purchase a new hard drive with more space and have it installed.

Recent pricing at Best Buy (May, 2009) showed that there are computers in all price ranges. Pricing reflects tower, keyboard, mouse and operating system components only. Monitor is not included in price.

- The most economical option is the ACER model E2220 – a desktop model with Intel Pentium Dual-Core processor. This unit priced out at $480.
- A middle of the road choice would be the HP - Pavilion Desktop with Intel® Pentium® Dual-Core Processor E5200 – model #a6814y. This model was priced at $550.
- Another excellent choice (that would ultimately provide a much better stream) is the HP Model m9500y - Pavilion Elite Desktop with AMD Phenom x4 9750 Quad Core processor. This model was priced at $840.

Capture Video to a PC



In order to stream, you must bring your video into the PC. This is done with a 'video capture card.' A variety of these are made and are either Analog or Digital, with analog tending to be the most inexpensive. We recommend the Osprey 210 or the Osprey 230 made by Viewcast for cameras with an analog output.

When researching where to make this purchase, Graphics Distribution Inc. (GDI) has a special discount for ClickStreamTV customers. GDI is the master distributor for the Osprey line of video capture cards and hardware. You can log onto GDI's site at www.GDIUS.com or call them at (877) 715-0535.

Software

- Flash Media
- Windows Media

You will need to download and install free encoding software to your computer. The ClickStreamTV system is capable of streaming both Flash and Windows Media simultaneously or independently. Download the following:

Flash Media Live Encoder (http://www.adobe.com/cfusion/entitlement/index.cfm?e=fmle3)

Windows Media Encoder (http://www.microsoft.com/windows/windowsmedia/forpors/encoder/default.mspx)

When it comes to live encoding, we suggest Windows Media. Windows Media has a slightly better video quality and Flash occasionally has issues with the audio feed. While Flash Media allows you to stream to any computer (PC or Mac) the majority of computers are PC's and use Internet Explorer as their browser.

ClickStreamTV is capable of streaming both Windows Media and Flash simultaneously. If this is something you are interested in, call ClickStreamTV support at (877) 982-5425 for more information.

Now your computer is ready to stream live.

Connect Video Source

You can basically use any video camera you desire

NOTE: If you bought the digital video capture card, be sure that your video camera has a firewire output.

Here are a few cameras that we have used and like

Canon FS100
(retails for approximately $359)

Canon GL2

Sony Z1U

Canon XL2

Encoding Software – Running and Setting Up

Running

Once you have finished connecting your camera to your computer, start up your encoding software. We will supply you with the Publishing Point along with a username and password. If you require additional help with setup, contact our Technical Support at (708) 460-1414 or email support@clickstreamtv.com.

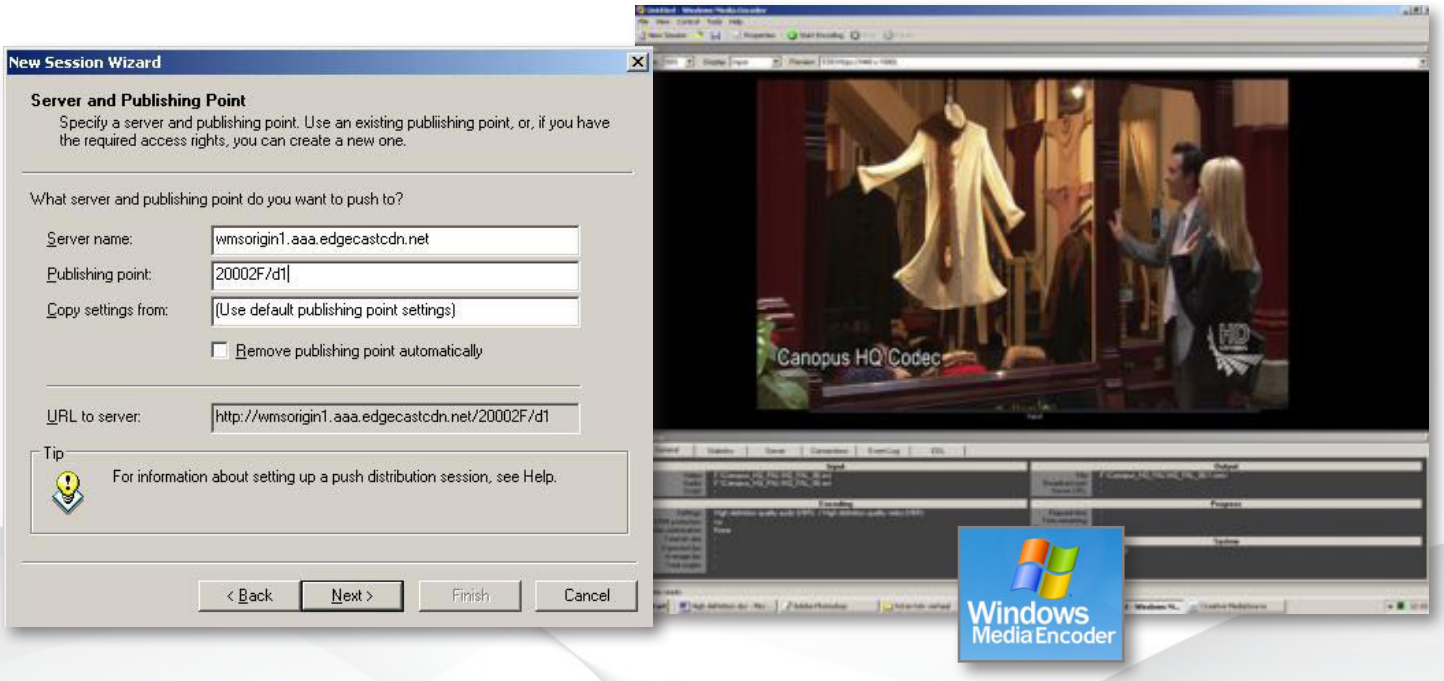
Setting Up

Windows Media Streams Only

Next you will want to set up your encoding software to save the file so you can replay your video for your On Demand viewers at a later time. This is done when setting up your encoding software. It will give you two options - 1) stream live and 2) save to file. Be sure to enable both options. This will enable you to stream the video live as well as save the file to the computers hard drive, allowing you to upload it again later for On Demand viewing.

Flash Streams:

Flash encoded streams will be automatically archived on the CDN server. (Do not click "Save to File" for flash streams)



You can now start recording. As the video filters through the encoding software, your event is now streaming live and being broadcast to your audience.

ClickStreamTV

The complete solution for video on the web

Live Video Streaming Solutions

Acquire / Capture Video

Encode Video

Internet

edgecast

ChinaCache

Content Delivery Network

Internet

3G/4G Network

PC or Mac

iPhone

android

Windows Mobile

BlackBerry

Mobile

iPad