

## Hey Buddy, Can You Spare A Megabit?

I logged onto Yahoo this weekend, and on the cover page was a link to a live stream of a John Mayer concert. I clicked onto the link, and was instantaneously transported live to his concert, in real time. It looked and sounded fabulous. And it was free.

Welcome to the age of IPTV.

I take the technology we use everyday for granted. I've been in the tech industry all my life. I forget how special this experience was, or how long it took for the products to evolve, that made it possible to stream a concert live onto the cover page of a web site, in high definition no less. This technology is less than 10 years old, and has been technically and financially viable really in the last two or three.

The real magic of this is actually how simple and low cost this technology is. And that's what is so special about it.

### All You Need Is Bandwidth

In reality, if you have a cell phone and a broadband connection, you have everything you need to stream live video. Anything else you use is an add-on. Here are the basic elements of IPTV.

- 1) A camera. You can go as simple as a cell phone or tablet camera. Or, you can use a consumer camera, or even a broadcast camera. The choice depends on how important the picture quality is, and if you want things like zoom, color and lighting adjustment and variable focal length. If you want to have more than one camera angle, you will need to add a broadcast switcher. Marshall has a line of mini HD cameras with interchangeable fixed lenses. These are easily concealed on a broadcast set, and deliver a stunning picture.
- 2) An audio source. Unless you want to stream silent movies, you will need to add sound. That means at least one mic, and more if you want to cover a large area. If you use multiple mics, you will need a mic mixer. Taking the audio from the mixer is the best solution.
- 3) An encoder and decoder. You will need to turn your signal into a digital signal that will be compressed and fed over the internet. You can go point to point, with this solution. If you choose to make your program available to a large number of people, you will need a content delivery network. The encoder/decoder can be standard definition or full HD.
- 4) An IP address. IPTV is basically programming playing on a web page, instead of a cable channel. Instead of a cable box, the viewer tunes in on their computer. Traffic is driven to your channel through various SEO and SEM methods.
- 5) Bandwidth. Ideally, a hardwired broadband connection would be used, as it is the most dependable method. Wireless can be used, as can a cell network. The wireless connections may have trouble depending on the depth of your program, versus the capability of the network. The quality of the stream out will depend on

the network you are on. If you are sharing a connection with a lot of people, you may have trouble with the bandwidth, which will affect the picture. It can be grainy, or choppy.

#### Total Cost

The hardware can cost as little as \$1000. The cost of the broadband connection through your cable provider, or DSL provider is about \$50 per month. A cellular connection device is about \$50, with a monthly charge of \$75 to \$150 for unlimited bandwidth. As you can see, the investment is quite a bit less than licensing a TV channel frequency, and buy all of the equipment to start of a TV station,. Of course, you can spend a lot more, depending on the equipment you do decide you need, and how elaborate you want the programming to be.

The point here is that now, just about anyone can afford to have their own TV show, and channel. With a CDN, you can have your live program inserted into your web site, and build graphics around it. By using your main URL, you are driving traffic to the same web site that your potential viewers are already visiting. You can set up your show as free, or Pay Per View. Another delivery method is You Tube Live.

Just as You Tube has spawned a generation of new talent, IPTV will do the same. There is no need anymore for an expensive and nearly impossible-to-get FCC broadcast license. The freedom of an IPTV channel will allow anyone with an idea to have their own TV channel. I predict that eventually broadcast TV as we know it will not exist, and all of our TV will be delivered through the internet. There will be millions of channels to choose from, just as there are millions of You Tube videos now.

Imagine the creativity that will have an outlet. And the technology is here today. Andy Warhol was more right about everyone being famous for 15 minutes than he could have ever imagined.