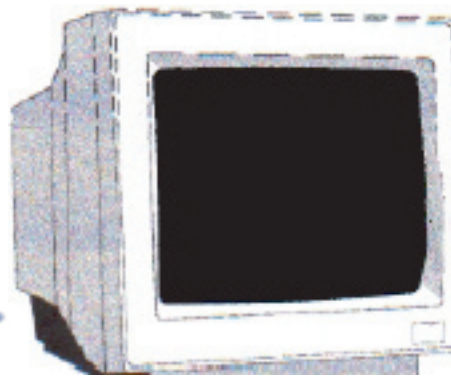


CVAUG Monitor



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A Word from the President

We had a fun time last month at the joint picnic/yard sale with the Frederick Apple Core. There were a lot of interesting Apple items up for sale at really tempting prices. Food and fun were had by all. This past month saw the newly designed iMacs and iPhone updates.

This Month:
**Demo: Akvis
Noise Buster**

A 15 Gbps Wireless System

by Wayne Younkins

At the Georgia Electronic Design Center at Georgia Institute of Technology they have achieved a mind boggling 15 Gbps data rates. That's like 10,000 T1 data lines, or 300 802.11g WiFi links. They used a 60 GHz transmitter to do it, and that's the problem. At that high of a frequency it can only do 15 Gbps at a distance of 1 meter, 10 Gbps at 2 meters, and 5 Gbps at 5 meters. Not gonna work for the latest software updates from Cupertino, but you could really give the printer beside you a workout.

To read the article click here:
<http://gtresearchnews.gatech.edu/newsrelease/multi-gigabit.htm>

New iMacs introduced

by Gregg McFarland

On August 7th 2007 Apple released its new line of iMac computers. Taking a design hint from the very successful iPhone the new iMac has a black and stainless steel and Glass look that is a refreshing change from the all white design of the last few years (since the iMac screens went flat panel back in 2002.

There are now only two screen sizes, 20" and 24". There are also two speeds,

2GHz and 2.4GHz using Intel Core 2 Duo processors. Other features include Firewire 400 & 800, Gigabit Ethernet. Three USB 2.0 ports on the computer (and two more on the wired keyboard).

All models include a slot loading SuperDrive for CD and DVD burning. Each model can support up to 4GB of RAM. The 20-inch iMac now starts at just \$1,199, \$300 less than the previous 20-inch model, and the 24-inch iMac starts at just \$1,799, \$200 less than the previous 24-inch model.



iMovie and Camcorders with Hard Drives

-The Good, The Bad, and The Ugly

By Wayne Younkins

Note: To get the total experience of this article click here to have something to listen to while reading: http://spaghettiwesterns.1g.fi/music/Ennio_Morricone_-_The_Good_the_Bad_and_the_Ugly.mp3.

You know how you playback the tape at normal speed from your camcorder through the FireWire cable and it is imported into iMovie. You know how as soon as you know how to work an electronic gadget then somebody goes and changes it all and that may not be good. Well, JVC was the first to market with a camcorder with a built in hard drive (actually it's a palmcorder because it is so small that it fits in your palm). The current model, the Everio GZ-MG555, has a 30 GB hard drive which will record between 7 and 37 hours (yes HOURS) of video depending upon the resolution you choose and it only weighs about one pound. If 37 hours of record time seems a bit excessive consider that unlike tape you cannot change the hard drive so someday you may need the extra record time until you get a chance to burn your DVD's and get it off of the hard drive. Given the small size, light weight, and the hard drive that some things changed for

the good compared to tape camcorders. But wait! Where's the FireWire? Apparently there was no room for the FireWire (Note 1) connection on the camera. It does have a USB connection right on the camcorder. But iMovie does not import with USB. Now you see my point, things have changed for the bad. So this left me wondering how I would import to iMovie?

Then I thought this may not be all bad. If the 37 hours of video you shot is on a hard drive then it must be in a file (Note 2), and you can transfer a 30 GB file using USB in a lot less time than 37 hours. This should be faster than playing back the video in realtime through FireWire. Once the file is sitting on my desktop I could just drag and drop it into iMovie clips. That would be good, right? There's just one problem with this idea. The files on some hard drive camcorders are MPEG-2 PS (extension .MOD) format and iMovie cannot use it. iMovie will take MPEG-4 (simple profile), DV, or QuickTime files but not MPEG-2. Now things are getting ugly. MPEG (Motion Picture Experts Group) created a group of standards for video compression. Some standards are better suited to recording. Some are better at editing. It turns out that no one standard was best for every application. Digital compression is a nuisance when editing no matter what application you are using, but the reason it is used

is that a purely digital recording of video would make the file size about 20 times larger and so would the camcorder, so digital compression was invented.

Digital compression throws out picture information that it thinks you will not notice is missing in order to save recording space or internet bandwidth. No doubt in this camcorder MPEG-2 was chosen to maximize the recording time and also so it can go directly to DVD without time consuming conversion and that's good. So why can't iMovie use MPEG-2? It interleaves the audio bits into the video bits. This was done because separate video and audio stream packets can get out of order and lost when they are transported. Especially since it takes longer to encode and decode the video than the audio. To avoid this from happening MPEG-2 was developed as a "transport stream". This limits what you can do with MPEG-2 to playback, simple edits, crude wipes, and straight to DVD burning, you cannot do the editing tricks and effects with video and audio in iMovie that you have come to know and love and that's bad.

For a Few Dollars More (I could not resist the movie reference) you can get a dock for the Everio which uses a special data buss from the camcorder and gives you all kinds of plugs including FireWire. So will the dock enable you to import to

iMovie with FireWire as before? That would be good. Well of course not. What in your experience with computers would lead you to believe that anything you hook to a computer would be that simple. The FireWire does nothing to change the MPEG-2 file to DV format, it would just transfer the files through FireWire just like USB and that's just as bad. So the dock would be a waste of a Fistful of Dollars. So where does all this get us? At this point neither FireWire nor USB is working with iMovie. The JVC Everio comes with free software from Pixela (Note 3) that will work on a Mac and that's good (Note 4). The application that comes with the camcorder is Captv MPEG Edit EX and is a \$50 value. Although the editor is nothing like iMovie and will only do cuts, splices, and trims in MPEG-2 format, it will also convert MPEG-2 to Quicktime, DV, or MPEG-4 (Note 5). iMovie can use these and that's good, DV may be the best choice. But conversion takes a while and that's bad. You will wish you had gotten the extra RAM when you bought your Mac after

one of these. It took me a half an hour to convert a 6 minute piece of video to MPEG-4 with 256 Meg of RAM, the minimum that this will run on. The Activity Monitor showed the RAM maxing out quite a bit. So if you don't mind the time involved you can get a hard drive camcorder with a 37 hour recording time, you can use the USB on the camcorder and you can transfer the MPEG-2 file to your desktop, use Captv software to convert it to a DV file format that iMovie can use and while that is happening you can leave and come back in a week, drag the file into the iMovie clips and now you can finally edit. It's getting ugly again. Then again, you probably don't want to keep all of the 37 hours or recording for posterity. You could pick and choose what needs to be imported to iMovie. The longest thing we ever had to record was The Nutcracker which was about two hours and our daughter was only in five minutes of that. The files are limited to 4 GB size so you could pick and choose which 3 hour and 12 minute file you want to give the iMovie

treatment from the 37 hours on the hard drive. But I can see that if you vacationed in Hawaii you might want to convert all 37 hours of record time. Ah... vacationing in Hawaii would be good, too.

Note 1: FireWire is a communications standard initiated by Apple to take the place of SCSI. The standard it is based on is also known as IEEE 1394, DV, and if you are dealing with Sony it is called i.Link. It comes in 6 pin and 4 pin versions (the 4 pin does not use the power wires), some cables will have a 4 pin and a 6 pin at each end.

Note 2: The camcorder will start a new file when a file is 4GB in size.

Note 3: Pixela makes several applications for the Mac. For their web site click here: <http://pixela.co.jp/en/index.html>.

Note 4: When purchasing camcorders it would be nice to check for Mac compatibility. For Apple partners click here: <http://www.apple.com/macosx/upgrade/devices.html>

Note 5: Apple's QuickTime format was the basis for the MPEG-4 standard.

“You watch television to turn your brain off and you work on your computer when you want to turn your brain on.”

-- Steve Jobs, co-founder of Apple Computer and Pixar, in Macworld Magazine, February 2004