NEWSLETTER OF THE VIEWFINDERS DIGITAL VIDEO CLUB OF CUPERTINO

IN THIS ISSUE: MAY 2010

April 2010 Meeting

Highlight

The Making of "Through the Dark Glass"

A presentation by

Irv Webster: Director
Jack Gorham: Director of Photography
Fred Pfost: Cameraman
Milt Kostner: Video Editor

The originally scheduled program for the April meeting was to be a screening of students' movies from DeAnza and Foothill Colleges. However, as only one student responded, the Board quickly put together a panel of key crew members from Viewfinders Video productions Group (VVPG) to describe their work and experiences working on the current club movie "Through the Dark Glass".

Irv Webster; Writer and Director

Irv's story about a man taking a neighborhood walk and encountering people behaving oddly was chosen by the VVPG for the final project for 2009. Irv accepted the role of Director with some misgivings having doubts about his skills to pull it off. Skip Stevens, who is an experienced Director, offered to act as a co-director to assist Irv as needed; an offer that Irv became grateful that he accepted as Skip was frequently able to advise means to keep the story and production moving forward. Irv found that directing the movie was a marvelous 'though challenging experience. He discovered that he was faced with having to make unexpected decisions that often occur during a film shoot. His first lesson learned was that a director needs to have a well documented plan of action nailed down before the shooting begins. His sec-

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May Meeting

Annual Nimitz School Children's Movies Screened

Once again the junior movie makers and their videos will be introduced and screened by their teacher Susan Woods

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ond was to listen to advice offered by more experienced crew members but understand that in the event the onus is always on the director to call the shots, so to speak. Another directorial concern was to give considerable thought to which of the actors provided by talent coordinators Skip Stevens and Stanley Steamer fit the story's characters well. In this regard Irv is pleased that he chose a fine cast. All-in-all, Irv found that there is a lot more to directing than he had first anticipated, but is pleased that he took up the challenge.

Jack Gorham: Director of Photography

Jack explained that the role of the Director of Photography is positioned between the Director and the Crew. His is the overall responsibility for

the technical aspect of the project which needs to address the Director's concept of the story which include sound capture, lighting and camerawork. Jack's first task, on receiving the approved play script was to compile a shot list, an essential document that each crew member needs to plan their work. The shot list breaks down the screenplay into scenes and their component shots and the shot sequence. Each shot then describes camera position and angle, camera motion if any, and a brief description of the location and action. It may also include lighting and audio notes. This movie called for a number of dolly shots whereby the camera is mounted on a moving dolly or trolley - a tricky technique when the paved surface is not absolutely smooth. This gave Jack some anxiety. Continuity can be a problem if the movie is shot over several days or weeks. In this case the bulk of the movie was shot in

a single day but additional shots or re-shoots were called for. Continuity problems were avoided by shooting many digital stills of the locations, props used and actors and their costumes on the first day which provided references for the following shoots.

Fred Pfost: Cameraman

Fred has worked as cameraman on previous VVPG productions. On this one he was pleased to shoot with his own recently purchased Sony HD prosumer camera. High end cameras offer lots of control and fine tuning to capture optimum video but they need hours of practice to become familiar with them. Fred fortunately had worked with a similar quality camera previously but still had to become familiar with the placement of the new camera's controls. A major challenge came in one scene where Fred was called to shoot, from the outside of the house, an actor looking out of a window. Light reflecting from the glass caused the actor to be lost in the reflected glare. Fred solved the problem by fitting and manipulating a polarizing filter to the camera's lens. What Fred appreciates about the VVPG is the team spirit and members willingness to share expertise and knowledge with each other.

Milt Kostner: Video Editor

Nothing that Milt has edited previously compared to the length of this movie. With 69 clips shot for the movie's 6 scenes, Milt realized that he needed to set up a good organizational structure in his editor. He works with Adobe's Premiere Pro video program on a PC computer loaded with plenty of horse power. Determining which clips to use and how to use them effectively to tell the movie's story requires creative effort. How long should a clip run, where it should be cropped and cut to another clip smoothly without continuity issues sounds pretty basic but is very time consuming. Although the action happens in a single day the movie was shot over several days making color adjustments to match shots an issue. Audio has its own problems. For some reason, still not fully understood, some shots contained a low hiss on the audio capture. This is not heard unless the volume is boosted which was required in one shot. A little bit of audio trickery disguised the hiss so that it is no longer noticeable. A cable connecting the microphone and camera is suspect for the unwanted noise but it shows that even with careful sound tracking through earphones during audio recording, stuff happens.

Each movie that the VVPG has made over the last few years has brought new challenges which have contributed to the group's shared knowledge of the craft. Three years ago when it began its first movie project, in probably blissful ignorance of what it really takes to make good movies, few of them would have had any idea of how much, several projects later, we would learn. And the learning never stops. ■

All photos courtesy of Gregory Bonds, principal actor in the production.

Previous page from top to bottom:
1) A dolly shot and 2) Irv Webster directs a young actor.

This page from top to bottom:
1) Fred Pfost lines up his next shot, 2) Jack Gorham considers his options and 3) Milt Kostner gets some techie advice from soundman John Dietrich.

Setting up your Video's Audio Level

One of the re-occurring problems with a lot of amateur video on DVDs is the wide variations in sound levels at playback. It is obvious during our club meetings when we play member's videos. We usually have to adjust the volume for each video so we can both hear it and not get blown out by it.

By Bob Meacham

But there is help. And, you can do a quick system setup to ensure your video's audio level is fairly uniform. For this article we will ignore access to recording levels you might have in or on your camera. We will assume you have little control over these, based on your camera and its relative distance to the sounds you are recording.

First, there are a number of variables that we need to discuss. Most people's editing software is on their computer and they use speaker sets attached to that computer for audio playback during editing. A vast majority of these speaker sets have a different "response curve" than the speakers included on your TV or other sound system. Most computer speakers are designed for maximum mid-range response, losing a lot of any high or low frequencies. They were really designed to playback mostly in the voice range and have limited full music quality. This is OK for most computer work but a video editor should look into acquiring a decent set of speakers that includes a powered sub-woofer to be able to hear the full response of the audio in your video. They do not have to be expensive, just have enough range to allow you to hear what will be played back on your viewer's fuller response systems.

Then, there is the variable that on a computer there are typically 2 or 3 available volume controls. One that controls the full computer sound playback (including pings, clicks and mouse related noises), this one is typically embedded into the computer's task bar. The second volume control is normally available on one of the powered speakers used on most computers and it works in conjunction with the first volume control for you to set your playback levels for everything. The third is the one in your editing software, and all editing software have these controls in one form or another. They may be anything from a simple volume slider in the basic editing software (iMovie, Windows Movie Maker and other packaged intro software you get with a new tool or computer) to more sophisticated "Vue or Level Meters" in mid to upper levels software that allow you to see and adjust each audio track's level. So, you see it quickly gets complicated but can be handled.

From top:
1) Dynamic range
2) Basic editor volume control
3) Advanced editor volume control

Another variable is most editors set up the first two volume levels to a comfortable setting for all sounds played back while at the computer. In most cases you are within 3 feet of the computer's speakers and what appears loud at that distance may well be too low when you are 15 feet away from your TV.

Now, before we go any further we should discuss a little about decibels and dynamic range. Our ears hear in a non-linear response to the actual loudness of sounds. So, a sound that may be measured as twice as loud may not be heard that way by our ears. Audio levels are measured in a log scale, in decibels. Loudness is measured in decibel full scale (dBFS) and is actually measured in reverse, with 0 dB being the maximum allowable value. Anything above 0 dBFS will clip or distort. Professional recording engineers usually work at keeping -3 dB to -6dB of "head room" allowing for sudden peaks in levels. Because of this, the typical acceptable working range of sound in your editing software should be centered around -6 dBFS. Dynamic range, on the other hand, addresses the ratio of the loudest part to the quietest part. As examples, an opera may have very soft, whisper like sounds but also include high volume, glass shattering levels. This would produce what is called a high dynamic range meaning the peaks and lows are farther apart. On the other hand, a jet engine, while being very loud, may not vary much in loudness and therefore have a nar-

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rower dynamic range. A problem occurs when you try to mix the two. Like quiet natural sounds (birds, voices, street noises, etc) and a high dynamic range music piece. When you set the level for the quiet parts, the loud parts are too loud and vice versa. You should strive to work within similar dynamic ranges for the audio on your video pieces.

Now, on to the editing setup. In order to produce a consistent level for your productions you should first set the computer's volume (# 1 mentioned above) to around 50-60% on the slider. Next, set the volume control built into your speakers (if you have one) to about the same 50-60% of the adjustable range. Test this out with several audio functions (mouse clicks, etc) to make sure it is comfortable for you. Remember, these two adjustments will not affect the recorded audio levels in your DVDs but only how you hear them during playback on the computer (which is important while editing). If you hear them too loud or too soft the natural tendency is to overcompensate for it in your editing settings.

Lastly we need to set the levels in your editing software. Most software defaults to a standard setting of 0 dBFS for all audio tracks. Open a video you are editing and look at the Level Meters or Slider you have available. If you only have a slider adjustment again use the 60% scale (+/- as you test your DVDs when output) to set the output level of your video. If you have Level Meters in your software (some only have a left and right channel Master level meters, others have a meter for each audio track) move each level slider down to around the -6dB marker. Make sure you do this as well for the Master which is a combination of the audio in all tracks. Now, run the video and listen for peaks or lows where audio drops out or distorts and those that create a dynamic range issue. If you have the individual track meters you can make some balancing adjustments (increase or decrease that track) for different recording levels to produce a flatter master output. If you find the playback during editing is too low or too high for you, adjust the computer or speaker volume before you adjust the editing software levels. It may simply be a playback issue on that system. With level meters your the last adjustment should be the Master track level to increase or decrease the entire video's audio levels.

The final thing to do is test these setting by burning the video (and even maybe several videos) to a DVD and play them back on your TV or surround sound system. Set the loudness/volume level prior to playing the DVD, to a normal playback level for your system. If your DVD playback requires no or little volume adjustment compared to the normal things you listen to, then the settings in your computer and editor are fine. If they are low or high, adjust the level accordingly only in your editing software (probably Master levels) and do not touch the computer or speaker levels. Make a note (write it down) of the level settings you settle on in your editing software and use that on every video you edit.

Once you do this you will find the audio in your videos is at a good listening level for almost any playback system, if that system is set for some normal listening level. ■

The Center for Home Movies • Home Movie Day

At the April club meeting **Bernie wood** brought us to the attention of an organization that collects and preserves old home movies. Named "The Center for Home Movies" (CHM) it was founded by a group of film archivists who were concerned about the fate of so many family movies that may be discarded, lost, or left to deteriorate but can be a marvelous resource for understanding our culture and peoples. The CHM collects and preserves the movies and, in partnership with local history societies and other like groups, arrange screenings that enrich our understanding of who we were and now are. The group is actively working towards finding a permanent audio visual facility to house them and where they may invite the public to attend regularly scheduled movie programs and lectures.

The CHM also sponsors "Home Movie Day", an annual localized event where families and individuals gather to screen their movies for the entertainment and education of others in their community. Since its beginning in 2003 this popular event have grown considerably in attendance and spread to other countries around the world.

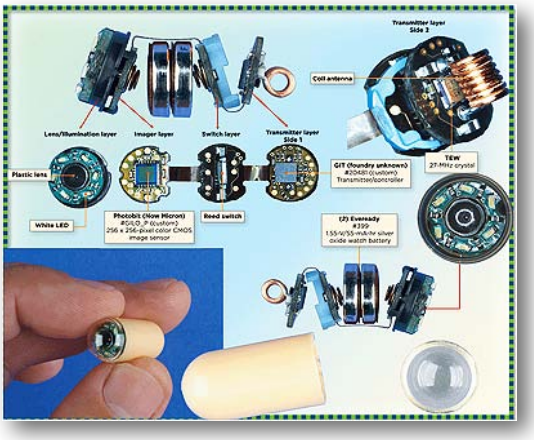
"Home Movie Day" occurs at two locations in Bay Area. One in Berkeley at The Pacific Archives and the other in San Francisco at the San Francisco Media Archive. For further information about the "Center for Home Movies" log on to **www.centerforhomemovies.org** and for details about "Home Movie Day" check out **www.homemovieday.com**

PRESIDENT'S MESSAGE

An Amazing Small Camera

It is amazing how small they can make a camera today. My son in law's 99 year old mother recently had a bleeding problem and the doctors could not determine where the bleeding was coming from. The physicians were able to view her digestive path by using a PillCam, an ingestible diagnostic tool that provides images of the small intestine without invasive surgery or probes.

The PillCam is about 1 inch long and 1/2 inch wide, weighing 4 grams and contains all image-capture, illumination, activation, transmission and control circuits within a twopiece plastic capsule. An opaque lower shell surrounds most of the electronics, while a clear dome is fused to the lower shell to provide a view-through window for the camera lens located inside. The clear dome also allows a set of 6 miniature white LEDs surrounding the lens to illuminate the GI tract as the pill moves through it.



Below the lens is the imager layer, home to a 256 x 256-pixel CMOS color image sensor. Behind the image layer is a pair of silver oxide watch batteries. A switch layer behind the batteries provides the means to preserve precious battery energy before the PillCam is ingested. The final strata is the transmitter layer, an integrated circuit which provides system control and radio transmission. The image capture, switch and transmitter layers are all fabricated on a single printed circuit board.

The 8 hour PillCam provides up to 57,000 images at a 2-frame/second rates, with the LEDs flashing only during image capture. Bringing all these pieces together to create an ingestible camera is an amazing benchmark in technical progress. It certainly brings new meaning to the phrase "internal medicine".

Jack Gorham

V.P.'S MESSAGE

My Two Cents

In last month's Viewfinders meeting I made a presentation on Celtx, a free Open Source application for organizing, preplanning and controlling any project beyond a go out and point and shoot a pack of fun. Following the meeting, for the first time in three presentations to VF, I got a chance to review your eight Reviews of my effort. I'd like to share these with you and discuss a little philosophy or insight we might get from them.

Let's get the easy ones behind us. Three were complementary. Thanks. Three complained about the inability to clearly see the scene, either in size or clarity. Unfortunately I do not have any professional method of enlarging a portion of a real time application screen, as the demonstrators from commercial companies use. But necessity is the mother of invention and I will try to use the Windows Magnifier on the next presentation I attempt. Blowing up even a Blu-ray image to the size of our screen leads to fuzziness.

One review suggested an improvement of maintaining voice level. In past offerings I have used the hand mike and my voice level varied as I turned away to see the screen. This time I asked for a lapel mike in hopes of doing better. Additional improvement is needed. Two reviews asked for better pacing and focus and more polish. It would be easy for me to reply, "Get up here and let's see how you do", but that is not what I should get out of this. These suggestions will goad me to be better prepared for my next presentations.
Lastly, one reviewer stated, "Avoid being over technical with presentations. Figure your grandma should understand it." After thinking about this, I came to the conclusion that there are several different types of Viewfinders meeting attendees. Some come to the meetings as a social event. Some come to be entertained. Some come to show off their skills. Some come to improve their knowledge. One, at least, I have managed to put to sleep on three occasions. I confess that I fall into the show and learn sectors. If my grandma could *always* understand it, I probably would find another club.

But it takes all kinds. Grandma would like the grade school presentations we arrange to have and most of the movie presentations. At the same time, we plan several contests to test skills and we will attempt to jump in once in a while with a technical subject. Let's continue to stir the pot for a good Club stew.

Milt Kostner

TECH TIPS

SHOOTING TIPS FOR THE AMATEUR VIDEOGRAPHER: Part 4

The Four Basic Fundamentals of Video Recording.

by Frank Swanson

Errors often occur at a very basic level and the beauty is that they are also the easiest to overcome. Simply remember ***T.W.I.F.*** *whenever you begin a video shoot.*

1. Tripod: Unless there's a good reason to video hand-held, *always* shoot with your camcorder mounted securely to a tripod. It may seems like a hassle, but hand-held video will likely be shaky and distract the viewer. The time and effort getting the tripod out of the car and carrying it to the shooting scene are well worth the trouble.

2. White Balance: Camcorders see light at different color temperatures so they must be white balanced to record colors accurately. Cameras with only automatic white balance work quite well outdoors but generally not so well indoors under artificial light so you will have to cross your fingers and hope for the best. If you can manually white balance your camcorder be sure to do so each time you set up your camera in a new lighting situation. To do this, fill your viewfinder with a white object such as a sheet of white paper, etc. Some camcorders have several manual settings: incandescent lighting, fluorescent lighting, and white-reference adjustment. Although color correction is possible during post-production editing, you can avoid having to fix it later by remembering to white balance your camera often. On your next camcorder purchase, get one with manual white balance.

3. Iris: Also called the aperture. it controls the size of the lens' opening to govern the amount of light admitted to the CCD sensor(s). Most camcorders provide manual control and you should practice to become comfortable with it. Allowing the camera to automatically adjust the iris can give you those herky-jerky bright-to-dark shifts as you pan and/or zoom your camera. It is especially useful when controlling depth of field (e.g. when you want the foreground subject in focus, but you want the background scene out of focus) or when the light intensity fluctuates (e.g. someone with bright colored clothes walks into a dimly lit scene). Taking control of your iris will give your productions a more professional look.

4. Focus: The perfect shot may last only a moment and there's nothing more frustrating than recording it out of focus. If you're shooting a subject at a fixed distance, zoom in tight, set the focus, zoom out and you should be OK throughout the whole shoot whether in close or far back. Automatic focus adjusts the lens to focus on whatever appears in the center portion of the frame. This can be problematic because auto focus can drift as closer objects pass before the lens. Use manual focus when the subject is less than 50% of the frame area or not centered; auto-focus will tend to search between foreground/background images, resulting in poor footage.

It's often basis things that mess up video productions so don't get so wrapped up in the big issues that you forget the fundamentals of good video shooting. **T.W.I.F.** – Tripod, White balance, Iris and Focus.

Camcorders sure do have a lot of buttons, dials and menu functions which can overwhelm new shooters. What follows is a simple guide to the most common ones.

Shutter: The shutter is an electronic control that governs the amount of time that light is allowed to accumulate charge on a CCD chip. Shutter speeds typically range from 1/60th to 1/10,000th of a second. Adjusting the shutter speed is especially useful when recording very fast motion such as race cars going by, or soccer players running around.

Digital Zoom: This feature electronically enlarges the central portion of the image beyond the limits of the zoom lens' glass elements (aka optical zoom). As the zoom ratio increases it represents a smaller part of the image formed at the CCD chip, progressively lowering resolution, exaggerating pixels, losing detail and coarsening the picture. ***Recommendation***: never use digital zoom – disable this feature in your menu options.

Image Stabilization: This feature attempts to compensate camera shake. Electronic Image Stabilization [EIS] works at the chip level to cancel out camera movement. More expensive Optical Image Stabilization [OIS] moves actual lens elements, directing incoming light through a movable prism that tilts to re-center the image. OIS generally produces better quality recording than EIS, but neither method is good for action scenes where it will fight the action's natural motion. ***Recommendation***: if you're using a tripod, turn off image stabilization.

Microphone Jack: This jack lets you substitute a standalone microphone for the camcorder's built-in mic. A stand alone

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mic will record better audio and is less likely to pick up camera motor noise. Plugging the mic into this jack automatically disables the internal microphone. ***Recommendation***: if you have a choice, use a standalone mic.

Headphone Jack: This jack lets you monitor the sound, through ear phones, recorded by the camcorder. ***Recommendation***: always use headphones when recording from an external microphone whether hardwired or wireless to ensure that things are working properly.

Backlight: This function can improve exposure when dark subjects are shot against brighter backgrounds. Simple backlight controls increase exposure by a preset amount. More sophisticated versions can be fine-tuned manually.

Digital Effects/Picture Effects: These may include transitional effects like fades and wipes for use between video sequences or visual effects like black and white, sepia tone or crystallize. If you add an in-camera effect to your original camera tape, you cannot change or remove it later in the editing process. ***Recommendation***: avoid use these effects when recording (except perhaps when you're shooting-to-show).

Well, now you know what to avoid and what to practice before you go out on your next shoot. As an old videographer once said, "An ounce of preparation is worth a pound of editing". Next month I'll talk about "Shoot-to-Show or Shoot-to-Edit?" and "The Seven Deadly Camcorder Sins".

CORRECTIONs TO APRIL'S TECH-TIPS YouTube ARTICLE

One of our newsletter readers from the AMPS organization, Dave Watterson, sent the following updates to our Tech-Tips article about YouTube's video posting service:

1. YouTube's file size limit is now up to 2GB, not 100MB.
2. YouTube recommends using the resolution of your original video – even HD at 1920 x 1080.
3. YouTube prefers H.264 or MPEG-2 codecs, and FLV, MPEG-2 and MPEG-4 containers.
4. For sound MP3 or AAC codes and containers of FLV, MPEG-2 and MPEG-4 at a sampling rate 44.1kHz and in stereo.
5. While the "director" account remains, it no longer allows longer videos. If you want to post high quality and/or long videos up to 20 minutes, use **vimeo.com** or **dailymotion.com** services.

Club Audio System News

by Fred Pfost

We've enjoyed a beautiful venue for our meeting place for many years now but since the latest upgrade of the presentation equipment we have had a very inconvenient remote control system. The equipment is controlled with line-of-sight infrared devices. This has meant that to control the sound volume or change a DVD chapter or get a menu from the projector someone had to be on the stage behind the projection screen with the remote controller, pointing it at the various devices. From now on we will have the DVD player and the volume control located right by the speaker rostrum for convenient access.
Thanks to a little effort by Fred, no more running up to the stage each time a new volume level is required or a new disc is to be placed into the player.

CLUB MEETINGS REFRESHMENTS VOLUNTEERS

The club thanks those who will or have provided refreshments

Jan 13th	*Fred & Joann Pfrost*	June 9th	Linda Grodt
Feb 10th	*Bernie & Nancy Wood*	July 13th	Bob Meacham
March 10th	*Brian Lucas*	Aug 11th	Open
April 14th	*Richard Brownlie*	Sept 7th	Stan Smith
		Oct 13th	Frank Yap
May 12th	Irv & Mary Webster	Nov 10th	Janet Holl

TREASURER'S REPORT FOR APRIL 2010

Bank Account Beginning 4/1/10		$1756.11
Income Subtotal:		$40.00
Membership Dues (2) $35		
DVD Sales (1) $5		
Expenses Subtotal:	$0.00	
Bank Account Ending 4/30/10		$1796.11

JOIN/RENEW THE VIEWFINDERS CLUB FOR 2010 NOW!

The renewal dues for members this year is $30 for individuals and $35 for families. The membership dues for new members is pro-rated and now $22 for individuals, $26 for families and $5 for full-time students. Bring your check or cash to our May 12th meeting. Make your checks payable to the "Viewfinders Club".

CREDITS
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Viewfinder Newsletter is published during the fourth week of each month for Viewfinders Digital Video Club of Cupertino members.
Please send announcements and articles for submission to the publisher during the two weeks previous to the following monthly issue.
Send address and email corrections to the publisher.

MONTHLY CLUB MEETINGS
Held in the Cupertino Room, Quinlan Center. 10185 N. Stelling Road, Cupertino, California.
Watch the calendar for programs updates.
Guest admission is free.

MEMBERSHIP DUES
$30 for individuals
$35 for families
$5 for full-time students

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CLUB MEETING EVENTS 2010

January 13th, Wednesday

Fred Heiman movie maker: Presentation and Opera San Jose, & wildlife documentary videos screened

Tech-Tips: Frank Swanson

Feb 10th, Wednesday

2009 Contest winners movies screened by Frank Swanson

March 10th, Wednesday

Celtx pre-production software demonstrated by Milt Kostner

Tech-Tips: Frank Swanson

April 14th, Wednesday

De Anza student's movies screened and discussion

"Theme Challenge" announced for June screening

May 12th, Wednesday

Nimitz Grade School movies screened and presented by teacher Susan Woods

August "Creative Editing" contest announced by Fred Pfost

June 9th, Wednesday

"Theme Challenge" movies screened

Tech-Tips: Frank Swanson

July 13th, Tuesday

Adobe Representative Presentation: Photoshop and Premier elements

Tech-Tips: Frank Swanson

August 11th, Wednesday

Members "Creative Editing" clips screened

Tech-Tips: Frank Swanson

September 7th, Tuesday

Movie maker Amy Do screens her movie "Rabbit Fever"

Tech-Tips: Frank Swanson

October 13th, Wednesday

Annual Member Video Contest videos screened and judged

Tech-Tips: Frank Swanson

November 10th, Wednesday

Meeting: Awards presented to member video contest winners, board election and social

DECEMBER

No meeting this month