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PANORAMA

OF AMATEUR FILM & VIDEO

SUR LE FILM ET VIDEO AMATEUR

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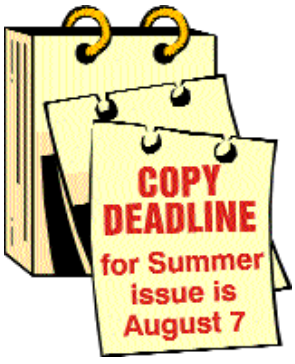

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PANORAMA

is published four times a year by the Society of Canadian Cine Amateurs, an association of video and film makers. **PANORAMA** *is devoted primarily to informing Canadian movie and video makers of the activities of society and developements in the realm of amateur motion picture making. It aims to provide information about new equipment and methods, and offers a forum for discussion of topics affecting the interests of amateur and video makers.*

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PRESIDENT'S MESSAGE

Photo by Joseph Bochsler Jr.

Fred Briggs, FSCCA

"Nostalgia"

At this time last year we were finalizing plans for the Annual General Meeting which was held in late June in connection with the Eastern Regional Meeting. This year our plans are not as far along because we have chosen a date in late October.

The Canadian International Annual Film/Video Festival will again be held early in October in Campbell River, BC, and we hope that many of our western members will make the journey to take part in the week-long celebration of video making which culminates in the Saturday Gala. Each year the Gala attracts a growing number of winners, mostly from western Canada and the U.S.A., who attend to see the public presentation of their films and to receive their awards. Many arrive a few days early and attend some of the screenings and workshops arranged by Kevin Harrison and his team of high school students, and some are even seminar guest speakers. We hope to

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CLUB NEWS

By Joseph Bochsler, F.P.P.O.

Photo by Joseph Bochsler Jr.

I have decided to go *Digital!* After 20 years of analog editing, lately with a Sony EV-S7000 Hi8 VCR as player and a Sony SLV-R1000 VCR as recorder, with a Panasonic WJ-MX30 mixer between. The VCRs are controlled with a LANC connector. I use a Videonics 3000 Titlemaker for my titles. This setup produces a master video on Super VHS tape (second generation). For further editing , I use another Sony SLV-R1000 VCR in place of the Hi8 VCR, again with a LANC connection to the recording Sony SLV-R1000 VCR. I use up to 4 Generations to produce a final tape. With *Digital* I would feed my original digital Hi8 or MiniDV tape from my digital camcorder to a computer. There are many digital camcorders on the market now. I believe that deciding on a digital camcorder will be easier than choosing a computer. So far I have looked at the iMac G4. It has a lot of good features, but then I was told by a friend to consider the Sony PCV J150. Now the supplier of most of my equipment suggests that I wait. Shortly he will have a computer that will have a short learning curve. In my eightieth year I need to make it easy for my brain. My big reason for Going *Digital* is no generation loss and being able to do all the editing and mixing on one screen. I'll let you know how I make out.

The Toronto Film and Video Club's SHOTS & ANGLES, whose editor is Sam Spence writes, "has this ever happened to you, a close family friend who is getting on in years and who we had always planned to videotape, dies. The reasons may be many why we put it off (procrastinate) these projects, but ask yourself, can you live with the consequences, or will you be mumbling, 'if only I had.' It's never easy to accept the loss of a loved one. Knowing that we may never see them again can be painful. As videographers, we have the tools necessary to preserve memories, if not for ourselves, than for our future generations."

Don Svob "the tinker" gave a demonstration at the March 15th meeting. Sam Spence says that he thinks "Don had something for everyone at this meeting. At the end of the meeting, Don asked him if Sam had a tip for him. No! He said . His tip for him now: keep on giving these types of demos. They are like a breath of fresh air. A tip from Don: always wear headphones that totally cover your ears, so you hear only what comes through the camcorder."

Buffalo Movie-Video Makers CAMERAMA, edited by John P. Weiksnar, in the May issue mentioned that they had a "Super Banquet" as he puts it. The Brantford, Hamilton, and Toronto Clubs were represented and much appreciated. The speaker at the banquet was Matt George of WGRZ, Ch2. A lively discussion period followed his video presentation and gave us a new perspective to the making of the news. "This year's Life Membership certificate

went to longtime Distinguished Member and Past President Sherwood Lasser, while newbie Kathi Tripp received a very handsome plaque for Most Distinguished Member. Contest Chairman Phil Utech later gave the results of the very first "membership judged" annual contest. The third place trophy went to new member Nicole Kennedy on her first video,"Sometimes." Cynthia Liber came second for her whimsical, "Those Crazy Squirrels." John Weiksnar took home his first ever first trophy for "330" Congratulations to all who participated.

Due to the Hamilton Film/Video Makers Annual Banquet being held on the same date (June 10th) the Installation of New Officers and Visitors Meeting will not have the Hamilton Club present.

The Brant Videomakers, BRANT CAMCORDER NEWS, edited by Laurie Ross. Frank Birch suggested that the Club invite Brantford's Town Crier, Dave McKee. "We could videotape and interview him. Some of us could ask to borrow his hat and bell and take turns playing the Town Crier."

Dan Kennaley welcomed Don Hagey to speak to us on his video project, which is about Brantford District Collegiate Institute's 90th Year Reunion. He interviewed 59 former students from various years. He said it was interesting to hear them reminisce about their past teachers and experiences.

Joan Doroshenko presented the "Critics Corner" Joan had chosen three segments from the club video library's CANUSA tapes. After each one, members discussed the merits of the video shown.

On April 25th,Don Bradley showed his video entitled "The Life and Times of J.H. Bradley. This video commemorated his family history and is a memorial to Don's Father. There is narration by Don, along with his wife, Edna providing music on the piano and organ. This is truly a jewel of a video treasured by all of the Bradley Family.

The Quinte Videography Club NEWS of Belleville, Ontario, meets each month, Sept. to June in Room P24, Pioneer Building of Loyalist College, Belleville, ON. The Editor is Ted Johnson. He can be reached by email: tjohnson@intranet.ca

There is a 3-page article in their Winter Newsletter, by Don Long, published in the Toronto Star, titled "Thinking of Buying a Camcorder?" Try emailing Ted. Perhaps he would send you a copy. He also included a Camcorder Fact Sheet.

The Vancouver Video Production Club REEL TALK, edited by Cathy Caravan. President Greg Caravan writes that the Club will be judging the entries for this year's annual Ten Best of the West (TBW) Competition. So far they have Lou Lanser, Reynold Smith, Dave and Gay Reynolds and Dave Fuller, who are willing to serve as judges. 2002 marks the 50th Anniversary of the Club, since it was founded by Lou Lanser in l952. With that in mind, they would like to honour the occasion with a gathering of Club members, past and present. This is what George McLachlan has to say about the iMovie: "I'm sure you have read about iMovie, but I came across a piece that covers all the features that is easy to understand. I have been using iMovie since last August and I was amazed what it can do for software that is FREE. Sure it doesn't have all the Zips and Zaps and all the bells and whistles, but for most of the videos that most of us produce it handles just about any features that anyone would want. With the AVIO selling for over $3000.00 for the Firewire version and many limitations, it seems that iMovie wins out. No, I don't work for Apple, but after 14 years, I guess I could say that I am a MAC Addict.☺ Check out http://www.ect.hobsons.com/editorial/features/mar01-

4.htm."

Apple Computer is going to be coming out with an update of its G4 computer this year, which apparently will be able to record onto DVD disks.

The London Videography Club 'IT'S A WRAP' edited by Thom Speechley, gives us an interesting lead: Attention Amateur Videographers: I am working on a new "hidden camera" series for NBC, titled "Spy TV", which starts in March. We are looking to buy "home Video" of people pulling "candid camera" type pranks on family and friend. The Email is spytv2001@yahoo.com The contact is Rich La Rose.

FREE STUFF One of the real joys of a good internet connection, is all the free stuff you can download. If you have a good search engine ("Google, Copernic2000") you just type in a few key words, such as 'video editors', and you are immediately swept to a multitude of websites dealing with that subject . Naturally, most of the "hits" will be for commercial sites wanting to sell you something. Even that is beneficial, you get to compare prices. Then, add the word "free" to your search and with a little more browsing, you will identify someone, somewhere who has put together a video editing program they want to give to you for free! For instance, ABC Video Roll-full featured capture/edit in D/V. http://www.abc-tv.com/ If your creativity includes designing your own titles, one handy program lets you make animated GIF files. These can be more effective than the animation features of the average edit suite. Get one here: http://www.coffeecup.com/download/shareware.cgi?014

Video Project Considerations Member Ron Jacobs submitted the following list of checkpoints for defining your next video project.

What is the approximate desired program LENGTH?

Who is the TARGET AUDIENCE (e.g.: General public, possible clients, their families and friends?)

What is the THEME or purpose of the video?

What IMFORMATION is to be conveyed? (General information, services offered?)

What sort of EFFECT is desired? Is this the video equivalent of a brochure or pamphlet?

What sort of CONTENT is desired? (e.g. :Interviews, events, archival footage. stills, etc.?)

Will there be a SCRIPT?

Should certain events be STAGED or ENACTED?

How TECHNICAL should the information be?

Is there a NARRATOR? If so, WHO?

Will INTERVIEWS be included? If so, WHO will be interviewed and who will be the INTERVIEWER?

Who is available to PARTICIPATE?

Who will be involved in the project?

Is there the possibility of a PRE-interview?

What visuals will be used to compliment the information? (Or are TALKINGHEADS preferred?)

What LOCATIONS should be shown?

What background MUSIC can be used?

Winnipeg Amateur Moviemakers BULLETIN, edited by Ron Braun. President Al Ross mentioned his experience producing a background to project his 35mm slides to copy onto video. He has found that an 18% gray background is just a little off what he wanted, so he had his paint store modify the gray colour by 1/6th of an

f stop, (very little) This worked well for his video copy.

Tom Carrick, reminded the members, it's much less costly to leave a neutral density filter on your camcorder, to protect the lens from abrasion, finger marks and dirt, than to pay for costly repairs.

Bryan Belfont reports in the WAM, that the next format to get the Sony treatment is Digital8. There are 6 new models. But the new models are quite different, smaller, more features and less money! But that's what we come to expect. To begin with, prices start at $899.00! The new models are built on a smaller chassis and weigh about 1/2lb less. They all have LCD screens, Laser Link, Night Shot, Time Code, Fire Wire Digital Stereo and Steady Shot. This year all of the viewfinders are B & W. Sony has added Audio Dub to all models. The 2 top models have a MegaPixel CCD of 1,070K.

Start, Middle, End Video Club, Bob Wiley is the editor of the club newsletter. Points to remember for a video, (1) Make sure your music fits your story. We all have some favourite songs that we may be tempted to use but, for example, "Please Release Me" would not be appropriate for a birthday party or Christmas. (2) Instrumental music should be used most of the time. Vocals can augment a video but use them only for times like openings, closings or special themes. (3) When adding narration over music, lower the music level so the narration can be heard clearly. Do not narrate over vocals. (Don't forget Copyright Laws). (4) Stills can add to a video, if they fit into a story. Use them where needed, but keep them short and to the point. A video should be motion, for the most part, with stills for effects. (5) Sound effects can aid a video in many ways. They can change a somber mood to comedy or visa-versa. You can add sounds that were missed (timing will be important here) or even supplement the original sound track. Don't get carried away on this!

The Audio/Video Flea Market had a good turnout by both venders and buyers. Good bargains were again available at this annual event.

Victoria Video Club The BULLETIN Editor is Sheila Perkins. New-Club Video Archives. If you entered videos (particularly ones that placed 1st, 2nd or 3rd) in any of the contests held by the Club during the past year, could you please bring them to a meeting so Dave Fuller can make the DV master and a VHS for the Club.

Members were asked to bring ideas for the future of the Club and drop them in the "suggestion box". Ideas only, no names. Any member should feel free to offer a short contribution for the "Second Page" News from our Club, The Vancouver Club, North American Clubs and British Clubs, magazines etc. Here are starters: For the April meeting what's cooking? What's our program for the evening? What are our programs for the next two months? Can we make sure to show members' video at every meeting?

Hamilton Video/Film Makers REEL NEWS, edited by Fred Briggs, The latest news is that we have moved our meetings to a new hall. After the Spectator canceled our meeting place in their hall on short notice without informing us, we scrambled to find another meeting place, (we needed a room to hold about fifty). We found a place in the Stoney Creek Royal Canadian Legion, Once again we were able to offer the members coffee and doughnuts and also have a fifty-fifty draw. With donations for the refreshments and the draw we were able to pay the rent. (The hall was free at the Spectator, but lately we weren't allowed to bring food into the building). The Annual Banquet and Presentation Night will be held at the Legion Hall, thus saving the members

money. A bonus is that there is a large kitchen available. Even with the change of address we had 49 members, visitors and guests turn up for the meeting after the short notice. Joe Bochsler welcomed 9 guests (four from Toronto and three others we had not met before. How they found their way is a mystery, but speaks to their perseverance. Joan Bochsler, Librarian for the Club announced that there are some new arrivals in the Library. Some of which are London Club CANUSA 2000 Tape, Chicago/Philadelphia Club CANUSA Tape, HV/FM 1999 CANUSA Tape, Tri-City Cinema & Video Club Tape, Applied Magic Screen Play Tape and more learning tapes. Dave FitzGibbon reported on the progress of Fotovideo's six-month basic video course. Monthly Certificates were awarded at the April meeting, too many to mention here. On the program was an informal discussion on the subject of Special Event Shooting. Panelists Jon Soyka, Nestor Rosa and Fred Briggs, who together have a great deal of experience shooting a wide variety of live events with various degrees of success and failure. Each in turn took the mike to pass on some tips they had learned from experience, and questions asked from the audience elicited more remarks and opinions, and enough humour to keep most of us awake (the panel, at least) until the closing of the meeting.

The Ottawa Video Club NEWSLETTER by Doreen Higgs. Our programs have consisted of the usual members showing their videos plus 4 recent presentations. (1) Two ladies telling us about the SAW Video Co-op which regularly gives workshops on production & editing. (2) A professional in advertising showing examples of his work and how they were made. (3) A visit to the local College with an instructor showing us how computers are used to do video editing. (4) Ex President Stanley Klosevych showed 3 videos including one of his editing suite, along with a full commentary. He mentioned difficulty & expense of editing, plus the rapid outdating of equipment.

Magazine of the Society of Amateur Videomakers & Cinematographers. THE **Savac** MONITOR in their Mar.-Apr. Issue mentioned a book about amateurs, "Home Movies, A History of the American Industry 1897-1979", by Alan Kattelle, Enfield Distribution Company, Enfield, NH 2000, hardback, 410 pages, $49.95. The reviewer, Walter Haskell, says that every amateur movie maker should have a copy of this monumental work by Alan Kattelle about that unique movement. "Home Movies", which swept through the Western world until 1979. It is a fascinating story, told by Kattelle in a readable, interesting manner. The book is profusely illustrated and expertly crafted. Walter Haskell can be reached at 5929 Flores Ave., Los Angeles, CA 90056 or email wal.jan@gateway.net .

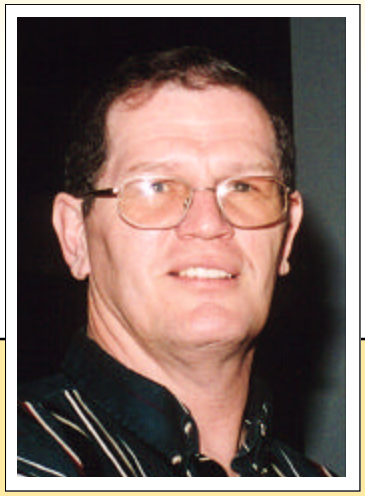
The Film & Video Institute, IAC, FILM & VIDEO MAKER. The 10th Guernsey Lily International Amateur Film & Video Festival 2001-New Venue. The Festival will take place from the 21st to 23rd of September 2001, at a different venue - the Carlton Hotel, St. Martins. The hotel's function rooms will be more suitable for viewing films. For further information contact: Joan M. Ozanne, La Geniesse, Forest, Guernsey, Channel Islands, GY8 OAQ, Tel: 01481 238147 Fax 01481 235989, email: landjoz@guernsey.net

Notice to Club News Editors.

Please mail or email a copy of your Club Newsletter to Editor of Club News, Joseph Bochsler,

475 Caithness St. East, Caledonia, On. N3W 1E3,
or
Email river 1 @ infinity.net

Tinker's *Tips and Tricks*



About Don Svob, aka the Tinker.

Don is quite well known at video clubs in Ontario. He has been to almost all of them, bringing his bag of tricks with him. He has a down-to-earth approach, and manages to find solutions that are easy on the pocket. He knows ways to balance a video camera on a canoe; make sure a tripod doesn't spread too far using dog chains; has stuff that stops equipment from slipping, and so on.

He is working on a new gadget that lets him be in two places at once. He has a camera that swivels at the end of a boom, so he can film anywhere from ceiling to floor, in any direction. More about that, next time!

This will be the beginning of a fun time for me and, well, let's hope, an interesting time for the reader.

My tips and tricks come from playing with photo and video when there are problems that need attention. Most solutions are simple enough that anyone can use them, without having super skills. So try them out for yourself. You may even find a better way to solve the same problem.

LIGHT

Can't have video without light, can we? Well, with today's low light cameras we can take good video without large studio lights in most places but not in all of them. There are still places with low light, like dance floors or inside most buildings. Adding light will give better colour, more depth of field, and better control of textures.

Providing light takes a lot of power. The more power you have, the longer the light can be ON. Batteries for wheel chairs and special batteries for starting cars work well for long term power. Most come in 12volt with amp hours as their rating. The larger the rating the more power you will have.

The down side to batteries is their large size. Auto suppliers have a good variety of batteries for many uses, so go have a look for any 12volt battery that will do the job for you. I've used a car battery in a boat battery box, with a plug on the box for my equipment. (I also use it for fishing to run the fish finder, and the trolling motor)

The simplest way to get power is to run a power cord from the wall outlet to power your light. But to be able to move, you need a power converter. This will convert the 12-volt DC power from your battery and convert it to 110-volt AC. Then you can move as you take video.

HOMEMADE LIGHT

Parts needed: One large coffee can, 1kg size, with plastic lid.
One 12-volt light (Halogen, about $6)
Stanchions to fasten light bulb to wire
One length of lamp cord wire about 8' long.
Three wires for tying.
Cigarette lighter plug (about $4.50)
Nail or awl to put holes in the can.

This is how I did it.

Take the plastic lid off the can and set aside.
Put the can bottom side up, take the nail and make a hole in the centre.
Pass the lamp wire through the hole into the can.
Put the lamp in the can, and join it to the lamp wire.
Make three holes in the side of the can at the same height, but equal distance apart.
Use the wires and the holes to make the light hang in the centre of the can.
Fasten the plug to the other end of the lamp wire.
Plug into your battery socket and you should have light.
Point the light at your subject and you'll find that the light has a hot spot in the centre.
Put the plastic lid back on the coffee can and you'll have a soft light.

[Panorama hasn't tested these tips. So *caveat emptor!* You're on your own! Ed.]

Can a Video be Preserved Forever?

by Trevelyan Beard

Your pertinacious editor buttonholed me recently, and bending my arm firmly behind my back, asked if I would write something about conserving or preserving techniques with regard to videos. "Easy", I said, "Not worth an article - just shoot or convert everything to digital". She said "Hmmm ..." and I launched into a diatribe on what digital video was all about and why it would last 100 years. She then said "OK, write all that down, but in simpler terms so that even I can understand it". And that's how this came about.

I enjoyed the drive home, thinking about pixels both round and square, analogue, 'packets of information', colour being a wavelength, photons, luminance, brightness, Pantone, compression, codecs and the like. My mind soon wandered into the area that all videographers live in and that is "Would this make a good movie?" I thought to make a short movie, using just computer gibberish mixed with scientific gobbledygook to explain something relatively simple, like why stale eggs float or how flies walk on water or even why helium makes you talk funny. A bit Monty Pythonish. Whoops, I'm digressing!

This is going to be a gross simplification, so that you can see the wood in spite of the trees. As my background is engineering, any stuff that is wrong is 'merely a design error'. Did you ever see that famous shot of the locomotive dangling from the overpass? Just a design error. We engineers cannot bury our mistakes as undertakers do!

When the camcorder takes a picture it creates a shot every thirtieth of a second. Each shot is a frame. Let's imagine one frame and look at the screen at a small spot in the top left-hand corner. The spot is one of millions and is called a pixel. In conventional photography (analogue), it's called a grain. This old-fashioned grain or analogue pixel conveyed just a blob of colour, nothing else. Over a period of time, maybe ten, twenty or more years, the colour would start to deteriorate due to moisture, light, infra red, ultra violet, and simply chemical changes like cheese going hard. Freezing would slow things down, but that has its own problems. In the distant future that blue spot might look more like gray, if it's there at all!

A digital camcorder is totally different. It still conveys frames at thirty per second and it still makes millions of pixels in each frame, but what we see on the screen is not what we see on the tape. Let's now look at that particular pixel where it is on the tape itself. It's microscopic in size and magnetic in nature. And it's invisible. Now put on your imaginary magnetic perceiving glasses and look at that pixel. It's like a sheet of paper filled with numbers, only numbers. Its neighbour pixel is another sheet with probably most of the same numbers. All this is code. The microchips in the camcorder and in the VCR convert a visual picture into number code and back again to visual picture. What you see on the screen is a conversion of number code to visual blobs of colour.

The important point is that the tape itself does not carry anything else but number code, in the form of magnetic areas (called domains, getting fancy).

Now, you ask, is the tape capable of living forever? The answer is yes. Numbers cannot change but the magnetic domains can be damaged by proximity to magnetic fields, an easy thing to avoid. Age may embrittle the plastic tape but better formulations appear all the time. Physical scratching on the tape will hurt but is avoidable. In other words, chemical and light effects which damage analogue film and tape and are difficult to counter, will not hurt these digital tapes.

We could talk about a thing called compression i.e. so-named codecs that improve the efficiency of the camcorder and lower the price. About Pantone numbers, about colour being measured as wavelength, but we won't because it confuses the real issue which is

"Will digital last and last?"

YES.

PROFILE Series

John J. Carey, FRPS, Hon SCCA

It would take the whole of PANORAMA to describe the life and work of John J. Carey, whom we call Jack. So, instead of the thorough job that Jack himself would do (on any topic) here is a profile, which my American dictionary calls "a short sketch of character and career." This is a quick impression of one of Canada's finest citizens, plus a great photographer and film maker.

One his early interests was being a mentor to some bright high school students. Their discussions were broadcast on radio. The students went on to successful careers.

The earliest event that Jack considered important was when his sister, Dolly, gave him his first camera when he was about seven. He recalled that he used to lie in the grass with his camera, and try to sneak up on birds!

Jack went to work at Stelco, where he became Chief Service Metallurgist. He noticed that some people made their work the sole purpose of their lives. He decided that he needed an avocation as well. He commented that you can't expect to begin something completely new at 65. You need to have other interests already developed before retirement.

Jack already had his early interest in photography. His sister did a course in photography in the U.S., and they both opened a photography studio in Hamilton. This would help Jack many years later move across from Stelco to the Studio.

One of Jack's early decisions was to join amateur movie clubs-Hamilton and Toronto-in the late thirties. He is still an active member in both clubs, and in S.C.C.A. His first amateur film was called "The Distress of Daphnia." It was made in 1938, and shown to the Hamilton Amateur Film Makers.

Jack's first professional film was "The Miracle of the Bees," which he was able to sell to Carling Breweries. They weren't allowed to advertise at that time, but used to sponsor a conservation club where films were shown. His bee film was a bit outside their usual sporting films, but it became the most popular film in their library. The film was then entered in world competition in Rome, Italy, where it was judged the world's best scientific film on bees. After this it got a great deal of publicity and Encyclopedia Brittannica wanted to buy it. Carlings very kindly sold Jack back the rights (retaining their unrestricted use) for the princely sum of one dollar. As Jack said "I don't drink beer, but if I did, it would certainly be Carling's!"

As a Stelco employee Jack was allowed to take films in the plant. He took some fiery shots at the Open Hearth. The President, Mr. Hilton, saw these and asked Jack if he could make a film for Stelco. Jack agreed quickly. He needed considerable help from Associated Screen News in Montreal, who were able to make the huge interior shots possible with some millions of candle power of light.

Jack at his photomicrography workbench.

Jack managed to complete the film which was shown to Stelco customers.

The next major venture was

making "Success Story," a film based on the premise that insects would inherit the earth, not take it over, but simply survive when all other life would be destroyed. The film lived up to its name. It won an Honourable Mention in the Canadian Film Awards, and was then accepted in the American Film Awards. That same year it was judged the top educational film at the Greater Miami International Film Awards, which was one of the top ten awards among several thousand entries. It was judged the Best Foreign Entry in the California Film Festival.

This film was bought by Encyclopedia Brittannica Educational Corporation, which distributed it all over the world. Jack followed this heady experience by doing a greatly updated honey bee film called "The Life of the Honeybee," which was also procured and distributed by E.B.E. It was these two films which Jack submitted to the Royal Photographic Society in Great Britain, that earned him the designation F.R.P.S., which he has used ever since

Another major association throughout his film career is with Mr. Ralph Ellis of Ellis Enterprises of Toronto, who has made TV productions for several different program series from his work. The first of these was on "The Audubon Wildlife Theatre Series." His favourite video made by Ralph from his footage was "Nature in Close-up," or "The Small World of Jack Carey." This was a one-hour documentary on various facets of Jack's work. That series was called "Profiles of Nature" and still appears on network TV.

Jack has travelled worldwide with his film camera. He has taken groups to India. One resulting film was "Game Sanctuaries in India." He has been to Khatmandu Nepal, the Middle East, Galapagos and Cost Rica.

The latest interest has brought him back to within twenty kilometres of his Burlington home. From small creatures in nature he has gone to even smaller creatures invisible to the human eye-invertebrates in fresh water ponds. He has spent two decades studying these through a microscope attached to his camera. This is called photomicrography. His trilogy on this subject is being sold by Boreal Laboratories Ltd. Students from Grades 6 to12 have been using these videos.

There were many papers spread on his billiard table. Jack explained that the local museum had asked him about some of his papers, and he was beginning to re-organize them. He admitted that he was impressed himself when he saw the extensive amount of information altogether. "I've had a lot of fun with it all," he said. One article said he was involved in indoor and outdoor sports. He disagreed, admitting only to having played golf, and in having some interest in watching the Toronto Blue Jays.

Jack's avocation has become his passion. He has never stopped looking and learning. Now he has had more than two decades of so-called retirement, we wonder what he will choose to do next (There may be a film about collecting things, which he also does.) As he says, he is a true amateur - he loves whatever he does.

Whatever happens next, you are still a great role model and mentor to all of us, Jack. And as anyone who has ever come to Visitors' Night, at the Hamilton Video/Film Makers Club knows, Jack also makes the best chocolates around!

By ***Joan Bochsler,*** Editor.

Jack remembering fondly his first camera, both octogenarians now.

The Wine Makers
by John J. Carey

In Portugal
I've heard it said
the wine is better than ours
so I was quite interested
in seeing the movie
except for the fact
that there weren't any girls
it was a pretty good film
all those young men
with their pants rolled up
and arms linked together
stomping the grapes
to make the wine in Portugal.
too bad about the girls
it would have been nice
to see them stomping the grapes
with their dresses held high
but the girls don't do it in Portugal -
stomp grapes, that is -
some kind of taboo I'm told
but seeing that film got me thinking
maybe their wines have more bouquet
or maybe it's just very hard to compete
when we're forced to use metric
while they're still using feet
in Portugal

Jack saw a video club film about making wine in Portugal. He wrote a poem about it. It is included here. Jack has written many poems, including Haiku. He has also written a children's book.

Video Wave

A Good Starter Edit Suite

a personal account
from Thom Speechley

"VideoWave", now in its fourth version, is manufactured by the Canadian software company, MGI. This company is also known for several versions of the popular photoprocessing program, "PhotoSuite". "VideoWave" operates on any "Pentium" class PC with at least 64MB of RAM. It handles most video formats captured either from analog or, with DV AVI files captured through a IEEE1394 ("FireWire") card. When working from an analog source, a good video card and fast EIDE (ATA) hard drive are essential for capturing and working in a maximum resolution of 320x240 (half frame) which renders out to regular VHS or MPEG1 quality. I'm sure "VW" would also work quite well with a system capable of 640x480 (S-VHS) quality but frankly such a system would justify a somewhat more sophisticated editing program.

I was introduced to "VideoWave" with version '3', and was impressed with its clean and intuitive interface. Capturing video, trimming clips, adding titles and effects can all be done without leaving the main screen. As you capture and edit your clips, they are placed in a 'library', also in plain view. Clips are then simply dragged and dropped onto the storyboard at the top of the screen. Transitions and titles are created in separate windows and dropped between clips on the storyboard. The final video is then 'produced' in any of several formats. This choice depends on the codecs you have loaded, the speed of your hardware and how you plan to use the finished production. (ie: copy to tape, send to web etc.) Saving to tape, either through IEE1394 or video card, is also simple.

That covers the best about "VWIII". There are some shortcomings. The first of these is the inherent limitations of the 'storyboard' concept. It is difficult to preview effects and transitions in real time. You have to "shift/click" each clip and transition, transfer that selection to the preview window and then play it. The unrendered transitions and title effects don't look very natural so it's hard to judge, except from experience, how they will look in the final production. Compare this with the "scrub" function offered on most timeline editors, and you appreciate this weakness. A more important shortcoming is the limited ability to edit, manipulate and synchronize audio. Five tracks, in addition to the native track, can be added. They can be faded in/out and adjusted for volume but this setting applies to the entire audio track. Sound tracks can be roughly lined up with a corresponding video track but lacking a scrub feature, timing will not be accurate enough for precise effects such as door slams or gunshots. The only effective way to do a good sound track is to prepare in another program or on different equipment and then add it as a .wav file.

When I finally installed a IEEE1394 card for use with my D8 camcorder, I decided to move on up to "VideoWave 4", after MGI made me an offer I couldn't refuse. I hoped that the "upgrade" would have better audio handling and that the few advertised extras might be useful. However, VW4 was not an upgrade, in the usual sense that it could be installed over VW3 and perform the same, only better. VW4 had to be installed from scratch and in fact VW3 had to be removed first.

Initially I kept getting error messages when I tried to capture. I e-mailed MGI and waited for an explanation. After a week without any response, I went to their website and after a long search, found a cryptic reference to "removing the Texas Instruments driver" if capturing was a problem. Before doing so I checked with the maker of my IEEE1394 card who, within 24 hours, advised that if VW4 worked with the Microsoft "DVSoft" codec, to switch to that driver. Great! Now I was in business. After capturing some video and using the "scene finder" feature, (this detects when the camera starts and stops and breaks each scene into separate clips in the library) I thought I was really going to enjoy this experience.

I then discovered that the only way I could save my work was to send it back out to my D8 camcorder. I could no longer save to a S-VHS VCR because my video card only exports when configured to 800x600 resolution, maximum. (This is a limitation of all video cards) The problem is that VW4 will operate only with your computer video display set at 1024x768! VW4 will not even load unless the screen is at the higher resolution, so it meant running another program (Media Studio Pro) opening the finished production and sending out to tape at the lower screen setting. However, it wasn't to be. VW4 had

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Don't Leave Home Without It!*

by Len Cobb

**We're talking about your video camera.*

A serious photographer or Videographer seldom does, just as they are always looking for 'THAT' picture or scene. When we "Write with Light" we seek that special something, that once in a lifetime shot or sequence, which we hope for every time we go out! Well, ask yourself a question. Go into neutral for a moment and seek the picture(s) which have stayed in your mind the longest, with the most impact, the most touching, the most funny.

I can still see the picture in a book called "The Family of Man". If you have never seen it, seek a copy. If you own one, look at page 151 at the right bottom picture. The despair on a mother's face, the hopelessness. A story in one stark shot.

Not much fun when we can record fun things, but it does show the impact our story telling pictures can have. Just think what we can achieve with our story telling tool.

Let me count the ways.

1. A sequence of a road crossing, its danger to young and old. What might the reaction be to those who could change it?

2. Several shots of different people, all looking at themselves in a mirror or reflection in a window.

3. At a set of lights and how many run the light, then compare with…

4. In Burlington on the Lakeshore near the beginning of Oakville, a crossing for Canada Geese. They cross, hold up the traffic, stop part way and take a look around, some drivers get impatient and blow their horns, to no effect.

5. People shopping in a grocery store, examining the produce and pulling faces. The line up at the pay-out, watch the expressions.

6. Children at play in various circumstances… expressions, reactions etc. Need I go on?

All of course having a common denominator…PEOPLE! Scenery can be marvelous, racing cars exciting, sail boats pleasant. BUT, as a Scottish friend of ours says, "There's nothing stranger than folk." Or funnier, or more fascinating. We love to see ourselves and then complain when we do. We love to join in, to participate, then either criticize or suggest. We love to watch and make comments, because we see the things we do not like about ourselves.

Come to think about it, there used to be a series of short movies, called "Pete Smith Specials" They were among some of the funniest shorts ever, and really quite simple, yet all on people. We were really laughing at ourselves, and heaven knows we do need some laughs these days. We can't afford to blow up cars or buildings, certainly not go shooting up the town, BUT we could just use our cameras and a slice of imagination. Then find a friend with a sense of humour, even a bit crazy, and go to work.

Years ago when I was in retail a man came in to buy a movie camera. He stated that he knew nothing about photography or movies but wanted to do something for his family. I spent some time with him and sold him a camera; then away he went. Some weeks later he came in for something and wanted to show me a movie he had made. It was very simple and just a few minutes long, but it was fun-fun-fun. He lived in a cul de sac, a dead end street, shaped like the bottom of a thermometer. He set up his camera on a tripod and had his wife trip the shutter. How? Why? Because he sat on the curb at one side and she did stop action as he moved a few inches at a time around the curving side walk curb. The result was him sitting and sliding around the curb on his bottom. The next scene was him skating around the road on dry pavement with no skates! Pretty clever for a first attempt and he didn't mind looking like a chump to his neighbors, but he did amuse his family, and us! The KISS principle.

Well then, 'What will we do? The fact is, even with the best of equipment, experience or skills, it is nothing without an imagination and the guts to try something different. Has everything been done already? I don't think so, especially with people; serious or funny, the field is open. Slapstick is still alive and well. The simplest, most basic act we perform each day can become a hoot. Shaving - Watering the lawn - Arranging flowers - Making a telephone call and not remembering the number! Come on try it, and let's all have a laugh!

'What shall we do? Try it, and soon, please! I need a good laugh, just as long as you let me see it and enjoy it. ■

Len Cobb
(back behind the camera!)

THE VIDEOGRAPHER IN SPRING

by Jeanette Robertson

Cloistered in the basement nook, sits the videographer surrounded by unedited film, miles of cables and an assortment of electronic equipment. Outside, spring has sprung, the sun shines and Mother Earth is beginning to strut her stuff and shake loose the mantle of winter's silence.

The spouse is full of enthusiasm, and is busy filling the job jar with notes for yard work, painting and household repairs. Not to mention, ideas for the annual family vacation.

The videographer is growing despondent, or should I say desperate. The procrastinator bug

hits full force, as the videographer grabs a scrap of paper and the stub of a pencil. Let's see, he thinks. Six films require editing, three need a story line, four should have music, several should have titles. Hmmm, ... the monitor needs dusting, the VCRs require cleaning, the camcorder needs batteries. Batteries?? Two are dead. Should have got new ones when they were on sale. A tangled mess of cables is picked up from the floor. Drat!! Some of these require repair or replacing. Thought I had marked them!

The videographer sighs, frustration grows and he stomps up the stairs. A clatter arises out of the hall closet and heavy footsteps follow. As the front door slams shut, the parting shot is..."Honey, if anyone calls, I've gone golfing!" ■

President's Message continued from page 2

provide more details in future issues of PANORAMA so many of you can attend.

For a few years now we have been incrementally working towards an alternative CIAFF presentation of videos and awards in the East, to accommodate those who simply can't make it across the continent to Vancouver Island. We have been cooperating with the Barrie Film Festival, feeling our way gingerly, because we don't want to jeopardize a very good thing in Campbell River, by providing a few videos each year to the organizers of the BFF. That festival, closely supported by the Barrie Art Gallery (not the right name, but most of us wouldn't know it by its proper name) presents all week in a downtown a mixture of films, mostly professional and including a full range from shorts by independents to Hollywood's best efforts. The group of volunteers which selects the films and makes all the arrangements has been providing some of the many judges required for the CIAFF, and has recently formed a video making cooperative which has joined the SCCA.

This year we have been working on a plan which we hope will strengthen both the SCCA and the Barrie Film Festival. We're moving toward a three-day SCCA convention in Barrie at the end of October, which would include our attendance at the BFF on Friday evening, and perhaps Saturday evening also. On Sunday we might take part in an invitational program in the morning, or possibly visit a nearby tourist attraction for an off-season opportunity to use our camcorders.

Their program will probably finish with the Sunday Matinee, but we hope to combine our numbers, and add some of the public, for a CIAFF Awards Presentation in the evening, perhaps in the new theatre which will be incorporated into the new Art Gallery. Perhaps the most unusual part of the convention will be the Saturday program held in a fantastic theatre complex built into a family's home (which brings a new dimension to the term "home theatre") in the little tourist town of Kinmount. Throughout the cottage season (up to Thanksgiving), the operator shows first-run Hollywood films in the five theatres he has built, each in the style of a different era, with the complex also housing a museum consisting of his extensive collection of professional and amateur movie equipment. Here we plan to hold our AGM, hear a speaker or two, and have a guided tour by the owner. Shunning computers for this one, we have adopted the theme of "Nostalgia".

Unfortunately, you don't just throw things together in a pot and get Synergy! We're still working on this with the Barrie people, and we hope to be able to firm up the arrangements in time to announce more details in the next issue. Meanwhile, please keep October 26 - 28 open. ■

***Fred Briggs** FSCCA*

SCANNING THE SCANNING SCENE

PART 2

In Part 1 in the last issue we explored some of the features and characteristics of flat bed scanners and provided some guidance on choosing a competent scanner at an affordable price. Now that you've had an opportunity to purchase and install the scanner of your choice, you'll most likely have found that there are a number of things about getting the best from your scanner that you don't know and you can't find in the laughable instructions. If so, welcome to the ranks of scanner owners, most of whom share your confusion.

As promised in Part 1, Part 2 will try to provide some answers to two key questions: "At what resolution should I scan my pictures?" and "In which format should I save them to my hard drive?" However, I didn't promise any easy answers, as both questions beg another: "What do you want to do with the scans?"

Speaking very broadly, there are three main reasons for scanning photographs.

The most common use is to share pictures with the world on a web page, or to email them to friends. Some people have no other reason to scan, and most of us want to post our work on the internet at least occasionally.

Many people want to print their pictures, either on their own photorealistic ink jet printer, or by taking their pictures to a professional printing house for publication. Very few of us are engaged in publishing a newsletter for an organization big enough to justify professional printing (as opposed to black and white photocopying). Yet most books (and some web sites) about squeezing the maximum quality from a scanner are addressed to this group, and to professional commercial artists.

Many more users plan to print their pictures at home, but I suspect that many of them give it up after some experience with the high cost of photorealistic paper, the rapid consumption of costly coloured ink cartridges, and the tedium of waiting for all those copies that your friends have requested (because it's free!) to print. Even so, those people too have a special need, even though they will usually be less demanding than the professional printers and their clients.

Thirdly, there is that highly specialized group to which we belong; those who make videos for production to tape, and sometimes wish to include still photographs from various sources.

The tailor must cut the cloth to fit the coat.

INTERNET

Let's look first at internet use, as that's where most people will want to start.

Pictures scanned for the internet differ slightly depending again on the particular internet end use, but they have much in common. Almost everybody will advise you to scan at 72 dpi for the internet, but now I'm going to explain why this is bunk!

While I've seen statements to the effect that computer monitors can only display 72 dpi, I have never seen it backed up with any math. Apparently there once was an early Macintosh monitor which was advertised at 72 dpi, when screen dimensions were fixed. Currently, VGA computer monitors are capable of displaying 640 X 480 pixels, and SVGA monitors can display 800 X 600, 1024 X 768, or even 1280 X 1024 and higher, and those "resolutions" are irrespective of the physical size of the monitor. A 15-inch monitor with a 10.6-inch horizontal screen displaying 800 X 600 pixels will be showing 75 pixels per inch, but a 19-inch screen with a 14.4-inch width, at 1024 X 768, would have 71 dpi. However, a 21-inch screen with a 15.9 inch horizontal measurement would only have 40 ppi resolution at 640 X 480 (for the near blind, perhaps?) while a 14 inch monitor (9.7 inch wide) will display 165 ppi at 1600 X 1200 (for the soon-to-be blind!). You pay your money and take your choice.

The higher screen resolutions do not produce noticeably sharper pictures. Instead, they are like zooming back from a scene, taking in more area but making everything appear smaller than at lower screen resolutions. As a result, a higher scanning resolution doesn't produce more resolution on the screen: it produces a bigger picture.

If we scan a 6" X 4" photograph at 100 dpi the scan would contain 240,000 pixels at 600 pixels by 400 pixels. (We normally call this a 4" X 6" photograph, with the height given first, but I'm reversing it here to coincide with the normal width-first expression of computer resolutions - nothing's easy, is it!) If this 600 X 400 pixel scan is displayed on a 640 X 480-resolution screen, it will almost fill the screen. But on a 1280 X 1024 resolution screen, it will be less than half the screen width and half the height, and you could display four such pictures simultaneously. Of course, if the original picture was smaller than 6" X 4", and is scanned at 100 dpi, the output will be proportionately smaller. If it started out larger, it could easily become too large to display all of it on the screen at one time, and horizontal panning and vertical scrolling would be necessary to view it.

The scanning resolution you would choose then, would depend on the resolution of the screen on which it is to be displayed, the size of the original picture, and the size of the picture as

you would like to have it displayed (as a percentage of the screen). It's easy enough to do the math (really only arithmetic) for your own screen: most of us know the resolution of our screen and how to change it, but if you don't know, be assured that it's quite simple, even though I won't take space to explain it here.

However, if you are sending a photo to your sister by email, do you know the resolution of her screen? Probably not, but does it really matter? If you want to show her your new baby, or your cat, the subject is much more important than the size at which it's displayed, and neither of you will care much about the size. (If your sister is computer savvy she could save the picture to her hard drive and open it in a photo-editing program where she could resize the picture to display at any size she wants (preferably smaller, because bigger is bad news).

It should be pointed out now that if you're emailing scans as attachments to someone else for any reason other than simply showing the pictures, it shouldn't be considered "scanning for the internet". It's important to ask how the pictures will be applied and the resolution and file format that should be employed, so the scan can be made consistent with its eventual use as detailed below. The internet should be considered as a means of delivery here, and not as an end use.

If instead you're going to publish the picture on a web page, the size is very important, as is the size of everything else on your page. You'll rarely want the photo to fill the screen, and you certainly won't want it to be larger. If you already have a web site and understand HTML programming, you'll already be familiar with the reasons for this, and if not, you probably don't feel the need to know. But for the record, there are two theories about the optimum size of elements on web pages.

The first strategy is to be certain that your page will display completely (in width) on any computer, and plan your page, and thus your picture scans, for the lowest resolution screens, 640 X 480.

The second strategy is to take note that most people surfing the internet are using an 800 X 600 resolution, and plan your page for the majority. (e.g. On the S-C-C-A.ca site 68.3% of visitors are using 800 X 600, 19.2% use 1024 X 768, and only 6.3% are using 640 X 480. On the CIAFF.org site the percentages are 52.3%, 27.4%, and 9.6% respectively.) Those using 640 X 480 will just have to pan horizontally.

So where does the famous 72 dpi come into the equation? Here.

With email there is an incentive to keep your image file small to speed up downloads, and because some Internet Service Providers (ISP's) limit the size of attachments. With the internet, the file size problem (for all the HTML, including the pictures) is even more acute because of the download time required for those with slow telephone modems, and the ever-decreasing patience of the television and computer generations. There are two main file formats designed for graphic files on the internet, which reduce file size very effectively, at some cost to image quality. When saving a graphic in these formats, some software will convert the resolution to 72 dpi (and simultaneously resize the picture to compensate), and some digital cameras save still photographs as JPEG at 72 dpi. These formats will be discussed below.

PRINTING

As I said above, most of the published (print and internet) advice regarding the choice of scanning resolution is intended for commercial artists who will be submitting their work to a printing house for publication. As I expect that very few of our readers are included in that category, I'm going to pass over most of this except for a few quick observations. Original and final sizes are considerations or course, but resolution is very important here. (Have you ever seen a printer inspecting work with a loupe? What satisfies you and I seldom satisfies a professional printer, and we should trust him, because he knows his business better than we do.) The printer will use a halftone screen which will depend on the final quality required, the paper which will be used, and the press on which it will be printed. The standard rule of thumb is that the image resolution (after resizing and resampling to the desired size) should be twice the lines-per-inch (lpi) of the halftone screen, but the ratio could vary anywhere from 1:1 to 3:1 depending on the subject matter of the photograph. Consult your printer before scanning the picture. (Of course, a good strategy is to scan at an arbitrary resolution as an experiment (and prepare the picture, gaining experience), and show the mockup to the printer. Then start over again with the benefit of his advice.)

For those whose interest in scanning is for printing photos on home printers, the field is constantly changing, with the capabilities of ink jet or bubble jet printers increasing about as fast as for flatbed scanners. Mention was made above of halftone screens. Commercial printing uses halftone dots in regular patterns and varies the size of the dots for various shades of gray or colour. Ink jets use same-size dots and vary the spacing between the dots. There are a variety of schemes for "dithering", generally characterized as different combinations of ordered or irregular, and clustered or dispersed dots. There really isn't any need to go into the details here, but those who are incurably curious can learn more at http://dgrwww.epfl.ch/PHOT/workshop/wks96/art_4_2.html#dither. The important point is that while printer resolutions are now astonishing, they refer to the size of the individual tiny dots that can be placed on the paper to make up the "cells" or small dot-clusters. Several tiny dots are required to represent the various shades of gray, and even more to represent the nuances of colour. If the printer is presented with a dpi resolution equal to its advertised resolution, and therefore greater than the size of the cells that it must use to represent the shades of gray or colour, it must discard much of the data. As the

choice of which pixels to lose is not as intelligent as the strategies for grouping those which remain, it's counterproductive to provide a bubble jet printer with an overload of data as that results in a softening of the image. If scanning resolution was too high, the reduction of resolution (resampling) is better left to a more capable program, such as a good photo editing software like Adobe Photoshop, than to the printer.

This leads to the recommend-ation that colour photos should best be scanned at about one third the resolution of the printer, and black and white (grayscale) pictures should be scanned at about half the printer resolution. Of course, I'm speaking here, as always, about the resolution of the scanned picture at the size that it will be printed. A 4 X 5 inch photo which will be printed at 8 X 10 inches on a 600 dpi printer should be scanned by setting the output size to 8 X 10 inches and the resolution to 300 dpi (ppi) for a monochrome photograph, or to 200 dpi for a colour shot.

This corresponds well with another rule of thumb: *Colour Prints photographically printed from a 35 mm. negative should never be scanned at more than 200 dpi on the print size, because that's all the resolution that is present in the print! There will be more inherent detail in grayscale prints, particularly in old prints which were often made by contact printing from a large negative, and higher resolutions may be used to advantage then.* **Exception for both Commercial Printing or Home Printing:** *For line art, scan with the printing resolution, as there is no halftoning*.

VIDEO

"Scanning for video" means different things to different people. There are articles on the internet that purport to talk about scanning photos for presentation on video, but alas, most of them are using "video" to mean the computer monitor. We have already dealt with much of that above, under "scanning for the internet". Similarly, "video production" also means different things to different people: to some it means the production of short videos for presentation on the internet, or for distribution over the internet to those who want to view the videos on their computers. They use programs like Quicktime, Real Video, and Windows Media Player and Movie Maker, and are satisfied with 320 X 240 and 15 fps. For most of us, however, it usually means the production of videos which can be recorded on video tape in a variety of formats and presented, full screen, on a typical NTSC television set, or projected on a large projection screen by an NTSC video projector. (Some of us may also be interested in modifying our videos for distribution and presentation over the internet, or even the distribution of our videos as DVD disks, but those applications are secondary to the video tape application for most of us.)

Differences between TV and computers? Computer monitors are "progressive scan", vary in resolution, and operate at a variety of Bandwidths (Mhz), Hsync. (Khz), and Vsync. (Hz), while NTSC television is interlaced, 525 horizontal scan lines (regardless of the source - VHS, laserdisc, DVD), and 60 Hz (almost!). Wow! These are two different beasts.

Similarities? Of the NTSC television's 525 horizontal scan lines, 43 are used in various ways (carrying test and monitoring signals, closed captioning text, etc.) or lost during the flyback from the end of the bottom scan line to the beginning of the top scan line in the next field. That leaves 482 maximum vertical resolution for the picture! Horizontal Resolution is even more interesting. In computers it's expressed as the number of pixels across the entire width of the picture, but in commercial NTSC television, it's the number of pixels along a horizontal line with a length equal to the height of the picture. This is so we can more easily compare horizontal resolution to vertical resolution, which is just what we want, isn't it? (Is it? Why?) Since the aspect ratio of the screen is 4:3, or 1.333:1, the 220 horizontal resolution of VHS, the 330 of Broadcast TV, the 400 of laserdisc, and the 480 hor. res for DVD, should all be bumped up by 1/3 to get the maximum number of horizontal pixels in a television screen. That brings DVD up to 640 lines horizontal resolution. (By the way, did you know that when referring to photography and camera lenses, resolving power is expressed in "lines per inch", or more properly "line pairs per inch", with an alternating black line and white line counted as one line pair. In television/video, the black line and white line are each counted as a line, thereby doubling the apparent resolution of video to the uninitiated for a less embarrassing comparison with film.)

Even without getting into a discussion of overscan you can see why most digital editing programs provide a format of 640 X 480 pixels for NTSC, and many also allow 720 X 480 for editing in DV format, even though most television sets can't display more than 600 vertical lines horizontally.

As the leading consumer video editing systems support maximum resolutions of 640 X 480 or 720 X 480, it should be clear from all that we have said above that any picture scanned at a resolution which produces a larger picture will not be completely displayed on your screen. It's possible that occasionally you will want a smaller picture, for any one of a number of reasons. Most often you will probably want the picture, or as much of it as possible, depending on the aspect ratio of the picture, to just fill the screen, in which case you will set the resolution of the scanner to 480 vertical and check that the horizontal version is at least 640 (or 720) pixels. If not, you will set the horizontal resolution to 640 (or 720) and let the height exceed 480 pixels. Alternatively, you could scan at a standard rate depending on the size of the photograph, and then crop it to include the portion you want, and then resize (and resample) the resulting picture to the size needed to fill the screen.

However, there is a very good reason to scan the image at a much higher resolution. Adobe Premiere, and very probably some of the other high-end programs, can be programmed to scan across a still picture from side to side, tilt up or down, or zoom in or out. I intend to make considerable use of this feature on a project for which I am still

collecting pictures, and early experiments have produced a boat sailing from one edge of the frame to the other, with the waves apparently rolling along with it, and appearing to have been shot from another boat.

This brings us to another reason for scanning at a higher resolution: building an archive! I'm engaged in a very large project for which I have been collecting photographs from a variety of sources over several years, and it will certainly be at least another year before I will have finished all the research, interviews, principle photography, and scanning, and be ready to start to put it all together. It's certainly too early to know how (or even whether) I will use each photograph. Some will be cropped heavily, some will be animated, and some will be used in more than one place, and I may want them to look a little different each time. I'm scanning 8 X 10 and larger photos at 300 dpi, smaller sizes at 600 dpi, and 35 mm. slides at 2400. Some particularly choice pictures with very fine detail are scanned at even higher resolutions. There aren't many slides in a history project, by if I came across any which I want to crop extensively, I use up to 4800 dpi for them. I can always resample down to a lower resolution and smaller size, but I don't ever want to have to resample up after the pictures have been returned to their owners or museums! This is a good strategy if you are archiving pictures for any reason, especially if you aren't sure how you might want to use them.

FILE FORMATS

There are a great number of file formats, and many of them are for graphics. Some, however, are used primarily for "vector" graphics, in programs you would use to draw from scratch such as Corel Draw or Adobe Illustrator. Others are designed for computer animation, like PIXAR's PIXAR format. Some are specific to particular computers, like Interleaved Bitmap (ILBM) used on the Amiga, and PICT format for the Macintosh, or RAW format which is used for transferring graphics across computer platforms. Amiga's Interchange File Format (IFF) is used with the Video Toaster and the Amiga but is also used on IBM compatibles with Electronic Arts' Deluxe Paint which was originally written for Amiga. Still others like Photoshop's PSD and Scitex's CT format, are proprietary formats used in photo-retouching programs and scanning. Finally, there were graphic file formats for computers which are now extinct. We will confine our discussion to those which are most generally useful and commonly encountered.

The main difference between the various file formats you will be using most often is the size of the files. Some files support various types of compression, some of which are lossless, and others are quite "lossy". Among the most common compression schemes are Run Length Encoding (RLE) and Lemple-Zif-Welch (LZW) which are both lossless, and JPEG which varies from slightly to extremely lossy. Less often used are CCITT, a lossless encoding only for black-and-white Portable Document Format (PDF) and Postscript Language file formats, and ZIP, which is supported by PDF as well as used extensively in a great number of nongraphic files.

Bitmap (BMP) is the standard raster graphics Windows format on DOS and Windows-compatible computers, as created by Windows Paint and other software. While these are typically 8 bit files (256 colours), there is support for up to 24 bit deep palettes. BMP supports grayscale, RGB, indexed colour, but not alpha channels. There is also an OS/2 version of the format. While RLE compression may be available for 8 bit images, 24 bit files are as large as they come (except for formats like RAW).

Portable Document Format (PDF) is used by Adobe Acrobat and should be familiar to most of us. It's a very powerful format which can simultaneously handle both bitmap and vector graphics, as well as searchable text, and almost everything else except alpha channels. File size can be reduced with JPEG and ZIP compression, but file creation requires Adobe Acrobat. (Only the free Reader is needed to read the files after they have been encoded.)

For the internet, where file size is so important, there are three main graphic formats.

Portable Network Graphics (PNG) was invented as a patent-free substitute for GIF. PNG compresses images without loss, supports Bitmap and indexed-colour without alpha channel and RGB modes with a single alpha channel, and 24-bit images and background transparency without jagged edges. There are a variety of compression options, including an "intelligent" filter which will choose the best parameters for the particular picture. The big hitch is that it isn't supported by older browsers, so some surfers won't see the graphics!

Graphics Interchange Format (GIF), a very common file format, was introduced by CompuServe to display indexed-colour graphics on the web. Maximum color depth is 8 bit, which therefore displays only 256 colors. There are two varieties, GIF '87, and GIF '89, which added support for color cycling, background transparency, and animation, among other things of little use except on the internet.

GIF files are best suited for simple graphics, like logos, containing solid areas in few colors, and is very good with sharp edges. Converting your scanned image to 256 colour mode for GIF results in a loss of colour fidelity, but thereafter the LZW compression is lossless, so you can read a GIF file into your retouching program and write it again without any further loss.

Joint Photographic Experts Group (JPEG) format was designed for photographs with continuous tones rather than for sharp edges, so it's rather weak with text and thin lines. JPEG files are suitable, and very popular, for both web pages and email because they can produce an extremely small file. But JPEG compression is very lossy and JPEG is not suitable for quality printing, full-screen NTSC video, or master copies of images and archival storage, even though small amounts of compression

may appear OK on your low-resolution computer monitor which disguises the damage. When files are saved with JPEG compression, a variety of quality settings are available, with the greatest file size reductions corresponding to the biggest quality loss. But even at modest compression, data is discarded, and it won't be possible to read back the same image that was saved. Furthermore, each time the image is read back (for editing, cropping, etc.) and resaved, there will be another loss of data, though minimal if the same quality setting is reused. This is visible even on the computer monitor. Web graphics are a compromise between quality and file size, and each picture scanned is first saved without compression, corrected, adjusted, cropped, and sharpened, saved again under another name without compression, and then saved as a JPEG file with modest compression. Then the uncompressed file is reopened and saved as a new JPEG file with a little more compression. The process is repeated several times and then the resulting files are compared to find the smallest file which doesn't display any objectionable artifacts on a monitor. That's the file which is uploaded to the server hosting the web page. It isn't practical to print the results of a test series here because of the shortage of space and the complicating losses due to printing with a halftone screen, especially without colour, so I invite you to repeat the experiment described for yourself. Some illustrations can be seen at: http://www.scantips.com/files.html http://pages.prodigy.net/rhorii/scanner.htm#scan resolution

Tagged Image File Format (TIFF) is used on several different computer platforms for high resolution image storage, and is supported by almost all image-editing, page-layout, and paint programs, and essentially every scanner can save images in TIFF format. This makes it an ideal format for exchanging graphic files between IBM PC and Macintosh computers.

Some application programs allow non-lossy LZW compression, but not all programs which can read TIFF can also decode the LZW encoding, so if you are going to provide a TIFF file to someone else, find out first if they can handle the LZW format. There are also additional extensions which are supported by some applications but not by others. Some programs, Adobe Photoshop among them, (in the words of the Photoshop Help File), "support the information standard developed by the Newspaper Association of America (NAA) and the International Press Telecommunications Council (IPTC) to identify transmitted text and images. This standard includes entries for captions, keywords, categories, credits and origins. The captions and keyword entries can also be searched by some third-party image browsers."

If there is a better file format for storing graphic files in an archive, I haven't found it.

Targa Graphic (TGA) file format was designed for systems using the Truevision video board, and is supported by many IBM PC programs. The Targa format supports indexed-colour, grayscale, 16-bit and 24-bit RGB files without alpha channels, and interestingly, 32-bit RGB files with a single alpha channel. (Remember the 32-bit speed trick explained in Part 1?)

Personally, I would probably have no use for this format except that I use the Matrox RT2000 video editing hardware with Adobe Premiere. Premiere can use a dozen different graphic formats, including TIFF, for stills to be included in a video, but with the RT2000, graphics in the TARGA format can be incorporated into the video in Real Time, without any rendering. I wish I knew all the details about all the other video editing hardware and software combinations, but I have enough problems just learning to use one system.

I've learned a lot working on these articles about scanning but I have a long way to go yet. I've come across a lot of conflicting information, some wrong, some right, and maybe all right in particular circumstances. I've tried hard to sort it all out for this series, working as usual against a deadline, but the search for the truth is eternal.

Don't wait for me. Use the above as a general guide to be tested and refined. Use it as a starting point, read the manual for your software, experiment, and find out the best ways to scan and the best file formats for graphic stills with your system.

Part 1 and Part 2 of this series have been longer than I would have liked, but I felt it necessary to fully explore the topics covered in just two sessions so all the information is available together for consideration, and reconsideration. In upcoming issues I plan to deal with a number of scanner related topics which now can be presented against this background, and since they are varied and not so interrelated, I can take them in smaller bites on fewer pages. I intend to touch on many problems, from colour, exposure and gamma correction and halftone descreening, to enhancements like sharpening images, and suggest solutions for handling slides, negatives, and oversized prints. I would be pleased to hear from anyone who has corrections, questions, problems, or solutions, and hope that this series can become a forum on scanning in which we can all help each other.

http://www.scantips.com/basics1c.html

http://www.scanhelp.com/288int/scontent/needres.html

http://www.mustek.com/Imaging/support/helpdocs/doc2050.htm

http://graphicssoft.miningco.com/compute/graphicssoft/library/weekly/aa111799p4.htm

http://dgrwww.epfl.ch/PHOT/workshop/wks96/art_4_2.html

http://www.hometheaterhifi.com/volume_6_3/essay-video-resolution-july-99.html

http://www2.ncsu.edu/cc/pub/multimed/web/graphics.html#anchor48228

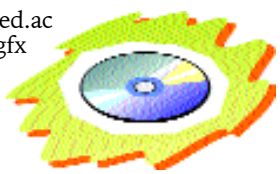
http://www.scantips.com/basics09.html

http://www.hp.com/cgi-bin/cposupport/get_doc.pl?SNI=hpscanjet67119&LC=scanners&Tfile=bps02861

http://www.berkana.com/ei/formats.html

http://seurat.art.udel.edu/Site/InfoDocs/GIFToot/GifTips.HTML

http://www.dcs.ed.ac.uk/home/mxr/gfx/2d-hi.html



Fred Briggs

Creativity CORNER

Len Cobb is back from a trip across the pond. He spurs us on to making great videos. See page 13.

Connections

Dave FitzGibbon of Fotovideo says the introductory course for new camcorder owners is doing well. Jack Carey will be speaking at one meeting soon.

Other News

Plans are under way for the AGM and possibly a convention later in the fall. We expect all details to be in the Summer issue. Meanwhile, save your air miles!

Video Wave continued from page 12

so monopolized my media resources that the other program would no longer start. It had run fine with VW3, but no more.

I thought I might get some help from MGI but I was not hopeful because they still hadn't replied to my first message. Then I discovered to my horror, that the e-mail address for tech support had been removed from their webpage. It was still possible to phone a 905 number and pay for the call. Instead I e-mailed their customer service number and requested instructions for returning the product. After 1½ months with no reply, I phoned customer service and was given approval to return the VW4 (and a DVD program which was also of no use to me).

At some point during this stressful period I found a website chat group of disgruntled "VW" users. (videowave@yahoogroups.com) And I thought I had problems. These poor people, many somewhat computer naïve, were still wrestling with capture. One major problem, which I hadn't discovered because I hadn't made any long productions, is that audio sync is lost if you combine clips, each being longer than ten minutes. Some writers said four minutes! I have since discovered that the problem exists on VW3 also.

So I got my money back. And I intend to continue using "VideoWaveIII" because of its user friendly capture and trim features. However, I will be producing with "Media Studio Pro 6", which came with my "Pyro" IEEE1394 card. This is a 'poor man's' "Premiere" with time line functions which work perfectly on my system. I will even recommend "VideoWaveIV" as a good entry level editor. I'm more enthusiastic about it for Digital than for analog sources but it does provide a non-intimidating interface for the first time video maker. ■

The Last Word...

We've started a series on the outstanding people in the Film and Video field. Our first choice is John J Carey, better known round these parts as Jack. We would appreciate your suggestions for other names in this series. Remember I am the Joanie-Come-Lately in this field. I need all the help I can get to give you the best Panorama possible.

Which brings me to Trevelyan Beard. His word "pertinaceous" sent me scurrying to my Oxford dictionary. Yes, he was probably right! But after reading his piece "Can a video be preserved forever?" once, or maybe twice, I realized that "Digital puts the recipes not the results on tape!" See, Trev, I've put it in one sentence! (Yea! I got the last word!)

Don Svob had me scrambling as well. Hope you find his down-to-earth problem solving intriguing and encouraging.

Len Cobb has written more encouragement in "Don't leave home without it" Welcome back to Canada, and to Panorama, Len.

Partner Joe has been up to his ears in Club newsletters, and has been at the computer so much I've had to write this and some other stuff by hand! Luckily, it will be typed before you see it!

Enjoy your summer! ■

Joan Bochsler, *Editor.*