Full HD 3D Camcorder

3D CGI Story Plans

HDSLR
Filmmaking

▪ **Still and Motion Imaging Collide**
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PLUS
▸ Close-up Lenses
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Exclusive Interview
Splice **Director Vincenzo Natali**
Directing and Writing for Science Fiction and Fantasy

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On the Cover
Tim Hardy (left) and Jason Anderson (right) doing a Canon 7D and RED comparison test at Asgard Entertainment.

Welcome to our fourth anniversary issue of *StudentFilmmakers* Magazine. The Premiere Issue of *StudentFilmmakers* Magazine launched at NAB in April of 2006. We just finished a highly successful, two-day intensive RED ONE production workshop in NYC with Jon Firestone where each attendee shot up to a 10-minute clip. See photos and get more information in the networking section online at www.studentfilmmakers.com and be sure to sign up for both the magazine and future workshop notifications. We will be announcing summer workshops covering all stages of filmmaking and new technologies including 3D, HDSLRs, Sound, RED post production and more.

This edition's exclusive Close-Up interviews are with award-winning *Splice* Director Vincenzo Natali, who shares his directing and writing techniques for sci-fi creature and world creation – and with Oliver Curtis, BSC, who shares his insights and advice on camera moves, lighting, and finding your first shot. Volume 5, No. 2 highlights topics in relation to 3D Filmmaking, DSLR Filmmaking, and HD Production. Plus – excellent educational articles in the categories of Cinematography, Directing, Editing, Audio, and Formats. In this issue's 3D Filmmaking department, check out the articles, "23 Things 3D CGI Does Really Well To Plan Your Story Around: Reach Out and Grab Your Audience in Full 3D CGI Glory," and "New AG-3DA1 Integrated Full HD 3D Camcorder," which is a preview of Panasonic's new 3D camera.

On the Cover of Volume 5, No. 2 is a production still of Tim Hardy and Jason Anderson doing a Canon 7D and RED comparison test at Asgard Entertainment. Read this issue's Cover Story, "The Two Worlds of Still and Motion Imaging Collide: Are the New Canon DSLRs the Poor Man's RED?" Written by Jon Firestone, the article includes 14 reasons why the Canon DSLRs are not the RED, 7 things that are better about the Canon DSLRs, and 7 basic accessories you'll need to turn your Canon DSLR into a cinema camera. Additionally, audio issues on the Canon DSLRs are addressed.

We look forward to seeing you at the 2010 NAB show. As you trek through the levels, halls, and show floors, make sure and pick up your complimentary copies of *StudentFilmmakers* Magazine, which will be at several distribution points and at our booth # C10106.

Enjoy this edition!

Truly,
Kim E. Welch
Publisher / Editor-in-Chief

student**filmmakers**

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greenlight yourself

shoot in 10-bit, 4:2:2 AVC-Intra quality with the new AG-HPX370

Panasonic's AG-HPX370 P2 HD camcorder moves you up to a whole new level of production quality. A new, state-of-the-art 2.2 megapixel 3-chip U.L.T imager* produces stunning HD content in a wide range of shooting conditions, with the sensitivity and signal-to-noise ratios of larger imagers. With a superior 10-bit, 4:2:2, full 1920 x 1080 resolution AVC-Intra codec, the HPX370 can record more image detail more accurately. Ready for global production, the HPX370 offers international HD and SD standards, including 1080p/i and 720p as well as industry-standard DVCPRO HD.

Start your next project with all the advantages of P2 HD's faster, file-based workflow and AVC-Intra's precise independent-frame encoding. You deserve the HPX370. For more info, visit www.panasonic.com/broadcast. For a free demo or to purchase the HPX370, e-mail us at pbtsinfo@us.panasonic.com.

Easily configure the HPX370 for studio production.

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23 Things **3D CGI** Does Really Well To Plan Your Story Around

Reach Out and Grab Your Audience in Full 3D CGI Glory

by Sherri Sheridan

Avatar is the new *Star Wars* for this generation of digital filmmakers. The visual fourth wall has just been shattered inviting the audience to now be in the film they are watching during a 3D IMAX type viewing experience. As a filmmaker and writer, you now have to consider things like Z depth, and how your story can literally reach out and grab the audience from the screen in full 3D CGI glory – every scene.

3D CGI films also make more money (if the visual story is good) and are the hot new thing studios are making. The 3D CGI experience cannot be duplicated as easily with home viewing situations, forcing movie lovers back into the 3D theaters.

Avatar is now the highest grossing film ever created and the most expensive. Independent filmmakers can still make 3D CGI films. They just need to focus on doing what 3D CGI does fast. Avoid using highly detailed photorealism visual styles that require long set up and rendering times. Pixar films

started with plastic toys, then, moved on to fish, cars and flat shaded cartoon looks for a reason.

23 Things 3D CGI Does Really Well To Plan Your Story Around:

(1) **Original 3D CGI Characters.** You can create any character you can imagine in 3D CGI. This is the biggest sell point of this very time consuming animation style. People want to see things they have not seen before, or in a drastically new way in 3D animated films.

(2) **Original 3D CGI Sets.** Any location that you can imagine, you can build in 3D CGI. What set have you always wanted to see? *Avatar* shows us a jungle utopia on a distant planet with tree gods.

Avatar hooks us visually and emotionally using 11-foot tall, blue-skinned, native catlike beings with tails and glittery skin. In this photo, Neytiri (Zoe Saldana, right) teaches Jake (Sam Worthington) the skills he'll need to survive on Pandora. Photo credit: WETA; Courtesy of Twentieth Century Fox Film Corporation.

Avatar brings to life lush alien jungles and floating tree-covered islands hovering in space. These are great for the catlike people to climb around on and do extreme parkour type POV shots across the 3D CGI terrain. In this photo, Pandora's majestic floating mountains dwarf a massive gunship. Photo credit: ILM; Courtesy of Twentieth Century Fox Film Corporation.

(3) **Image/Camera Mapping.** Most 3D CGI programs do a good job of mapping photos or DV, to simple planes or objects, which can then appear as highly detailed 3D CGI elements with lots of depth.

(4) **Adding Digital Makeup/Extra Body Parts.** 3D CGI may be used as digital makeup on actors, or blue screen characters, to add limbs, cut them in half, or have something like a worm crawl out of holes in their faces.

(5) **3D CGI Camera Movement.** Cameras in 3D CGI software programs can do almost anything, unencumbered by needing dollies or tracks for movement. They are especially good at mathematically controlled motion paths, original POV's and flying through unusual, microscopic or tight spaces.

(6) **Realistic 3D CGI Stunt Moves.** 3D CGI stunt actors never get hurt or complain. Blowing 3D CGI models up is much cheaper than destroying real cars or buildings. How could you create a 3D CGI enhanced POV stunt shot for your film that is too dangerous to do in real life?

(7) **2D Characters on 3D CGI Planes for Better Animation Controls.** The 2D animated show *South Park* is done in Maya, by mapping pictures onto flat planes the shape of the images. This allows the character animators to take advantage of the powerful animation abilities in the 3D CGI software to move the parts around more easily than using a less evolved 2D package.

(8) **2D Cell Shading for Video and 3D CGI Footage.** Some filmmakers are shooting on DV, then taking the footage into 3D Studio Max or Maya, to take advantage of the 2D shader abilities. A shader is like a filter that renders adjustable visual styles such as looking hand drawn.

(9) **Distorting Actors.** Many traditional 2D animated distortion or morphing effects can be created with an added dimension in 3D CGI.

(10) **Animated Animals or Objects.** What animals or inanimate objects could you bring to life in your film using 3D CGI?

This alien has a talking stick with a duplication of himself holding another one.

(11) **Duplication.** Once you model, texture map and animate one object or character, it is easy to make copies. Use this to your advantage by making robot armies, twins, gangs, fleets of objects or factories full of workers. How could you make simple variations of one character, to form a group of individuals, by modifying parameters such as scale, visibility, color, rotation and position on individual body parts?

Once you have one dancing alien, it is easy to duplicate and make a whole party of dancing aliens.

(12) **Flocking Systems.** Flocking is the ability to animate large groups of objects or characters in a natural looking way.

(13) **Physics.** Many 3D CGI programs allow you to assign properties to objects such as weight, material, velocity and friction. These objects then assume those properties during animations while interacting with other objects.

(14) Hair and Cloth. What kind of hairy looking characters or unique clothing could help give your film a signature look?

(15) Motion Ride Animation Paths. What kind of POV ride could you take your audience on as part of your film? 3D CGI works great for traveling through spaces in a way DV and 2D animation cannot do.

(16) Mixing Animation Styles. Real blue screen actors can be inserted into 3D worlds to save money on character animation and sets.

(17) 3D CGI Water, Fire, Smoke, Weather, Plants and Trees. 3D CGI is getting good at doing natural elements and plants. How would the plants and weather look different in your world where you control everything?

(18) Outer Space Shots. Space has low geometry (lots of space with round planets), that makes it easy to do in 3D CGI. Modeling a simple flying saucer and setting a few motion keyframes against a starry backdrop plane is relatively fast. Taking that spaceship and duplicating it a hundred times gives you a fleet of UFOs. How can you have your story take place in space? How can you create a unique version of outer space?

(19) Unusual Texture Maps. Once you have a 3D CGI model, you can place any type of texture map across the surface, which opens up a bunch of metaphorical possibilities for your stories. *Avatar* features characters with blue sparkly skin and lush jungles.

(20) 3D Scanning. 3D scanners are getting better and cheaper as the technology develops. Almost any object can be 3D scanned to save time modeling.

(21) Motion Capture. If character animating is not a thrilling way to spend your time, you could choose to use an actor in a motion capture suit to generate keyframes. There are lots of motion capture files available on the web to plug into your 3D CGI characters too.

(22) Z Depth Wow Shots. Study what works best in 3D CGI by watching *Avatar* in a 3D IMAX theatre. Thin things poking out into the audience from the middle of the screen look more 3D than big thick objects. Sets that wrap around the outside edges of the screen with 3D CGI elements extend the film world into the audience. Little firefly looking jellyfish creatures who hover in the middle of the theatre add lots of depth and pop out off the screen.

(23) Free 3D Internet Models. Google any type of model and find ones online ready to go for free.

Sherri Sheridan teaches storytelling techniques to digital filmmakers and animators with her books, classes and workshops. She's also the creative director at Minds Eye Media in San Francisco (www.mindseyemedia.com), where she directs, produces, animates, writes and designs projects for a wide range of clients. Sherri is the author of the books, "Maya 2 Character Animation" (New Riders 1999) and "Developing Digital Short Films" (New Riders / Peachpit / Pearson 2004). Recently, she created a 20 hour DV workshop based on the books called, "Writing a Great Script Fast," available at www.MyFlik.com.

Discuss this article, and post your ideas, comments, and questions in the Online Film and Video Production Forums moderated by experts at www.studentfilmmakers.com/bb.

New AG-3DA1 Integrated
Full HD 3D Camcorder

What are the features to check for?

The new AG-3DA1 is the world's first professional quality, fully-integrated Full HD 3D camcorder offering SD media card recording. At less than 6.6 pounds, the AG-3DA1 is equipped with dual lenses and two full 1920 x 1080 2.07 megapixel 3-MOS imagers to record 1080/60i, 50i, 30p, 25p and 24p (native) and 720/60p and 50p in AVCHD. It can record for up to 180 minutes on dual 32GB SD cards in Panasonic's professional AVCHD PH mode, and offers professional interfaces including dual HD-SDI out, HDMI (version 1.4), two XLR connectors, built-in stereo microphone and twin-lens camera remotes.

AG-3DA1's Major Specifications:

- Twin-lens Full HD 3D camcorder.
- Power Consumption: 16 W (main unit only).
- Weight: Under 6.6 pounds (3 kg) -- main unit only.
- Recording Media: SDHC/SD Memory Card.

The Full HD 3D camcorder will offer the following core benefits:

Easier to Use

Current 3D systems are large-scale setups in which two cameras are fitted to a rig in parallel, or vertically intersect across a half-mirror. Separate recorders are also required. In the AG-3DA1, the lenses, camera head, and a dual Memory Card recorder are integrated into a single, lightweight body. The camcorder also incorporates stereoscopic adjustment controls making it easier to use and operate.

The twin-lens system adopted in the camcorder's optical section allows the convergence point to be adjusted. Functions for automatically correcting horizontal and vertical displacement are also provided. Conventional 3D camera systems require these adjustments to be made by means of a PC or an external video processor. This new camcorder, however, will automatically recalibrate without any need for external equipment, allowing immediate 3D image capture.

More Flexible

The solid-state memory file-based recording system offers greater flexibility to produce Full HD 3D videos reliably in more challenging shooting environments. The AG-3DA1 is lighter weight and smaller than current 3D rigs, while providing the flexibility of handheld-style shooting. Setup and transportation is simplified,

making it ideal for sports, documentary and filmmaking projects.

Solid-State Reliability and Workflow

Right and Left Full HD video streams of the twin-lens 3D camcorder can be recorded and distributed as files on SDHC/SD Memory Cards, ensuring higher reliability than tape, optical disc, HDD or other mechanical-based recording systems. This solid-state, no-moving-parts design will help significantly reduce maintenance costs.

Users will enjoy a fast, highly-productive file-based workflow, with instant, random access to recorded content; easy plug-in to both Mac and PC-based platforms; and longer recording capacity.

More Affordable

Using a standardized, fully integrated design, the AG-3DA1 is being offered at a much lower price than traditional 3D rigs. Transportation expenses for this handheld unit will be less and faster setup times reduce labor costs. Using standard, re-recordable SDHC/SD Memory Cards available already everywhere, media costs become almost insignificant.

Suggested retail Prrice for main unit is $21,000, available in Fall 2010 (made to order). For more details information, visit Panasonic website:
http://pro-av.panasonic.net/en/3d.

No close-up lens is used.

Shot with a close-up lens.

Focus on:
Close-up Lenses

When you need to get up close and personal...

by Ira Tiffen

Lenses are a marvel of light control. They manage to take in the many details of the world around us, and then, project them onto a recording surface for our subsequent viewing pleasure. You can use them to define what your audience sees and what they don't see: viewing angle, depth-of-field, exposure, and much more are all managed by the exotic embodiment of optics extending outward from the front of your camera.

As capable as they can be, there will be times when they can use an assist. Filters, as we know, represent an array of assistant options that employ flat optical elements. However, even with their vast range, they can't do everything. And one of those things they can't do is help the lens to focus more closely than it was originally designed for. When getting closer is important, you need a close-up lens attachment.

To better relate to the ability of close-up lenses to add interest to your images, it might help to think of Sherlock Holmes… his deerstalker cap, the clay pipe, the ever-present magnifying glass, "Aha, Watson, it's elementary!" You can see what you'd otherwise miss when using a close-up lens, which is really a magnifying glass for your camera lens.

There are different styles of close-up lenses, although the basic one is analogous to the magnifier of Holmes' choice: a single-element lens, with at least one side convex, and of positive diopter strength. A typical example would fit within the range of +1 to +5 diopters, where 'diopter' is a unit of measurement relating to the optical strength of the lens. I won't get more detailed here, because it's rare that you need to know more. There are tables and figures and equations readily available if you need them. Just be aware that a +4

is stronger than a +2; they can be combined for added strength; while they get you up close, they also reduce depth-of-field to what may be a very narrow range. And they'll readily make a small object the center of your audience's attention.

Other types of close-up lenses improve the image quality by adding more optical elements, with a generally concurrent addition to cost. Dual-element achromats have such enhanced qualities and are what you'd seek if the standard single-element lens isn't right for you. Best way to tell is to test the single-element types first, as they are usually more readily available and more budget-friendly; if not acceptable, then go achro.

In our example images, the snail seems just another part of the landscape without the use of a close-up lens, taken at the closest distance to the subject that the un-aided camera lens will focus at.

Add the close-up lens, in this case a single-element +3 diopter, and you bring our snail to center stage – his presence is more powerful, for a snail, and this will allow you to tell

his story with much greater effect than otherwise, without the lens attachment.

We all know of the many successful conclusions that Sherlock Holmes was able to deduce with the aid of his trusty magnifier. You'll find close-up lenses can work their imaging magic for you, too.

In over 30 years of making optical filters, Ira Tiffen created the Pro-Mist, Soft/FX, Ultra Contrast, GlimmerGlass, and others, netting him both a Technical Achievement Award from the Academy of Motion Picture Arts and Sciences and a Prime-Time Emmy Award. Elected a Fellow of the SMPTE in 2002, he is also an Associate member of the ASC, and the author of the filter section of the *American Cinematographer Manual*.

Permanent Exhibit, Large Screens and a Vertical Challenge

The Museum Shoot

by Carl Filoreto

Vertical. Wow, that's not one of those frothy web 2.0 era buzzwords that are usually found circulating around heady video production meetings these days. Permanent. Hmmm, at a time when tech cycles can be measured in months and viral web strategies can play out in days or even hours, permanent is another alien concept to attach to a major video project.

Yet as I was listlessly pushing my coffee mug around the table, listening to the conference call unwind, these were the concepts in play. They were being combined with more trendy terms like pixel maximization, CGI integration and hero shots. And eventually, I learned, these disparate elements would combine and form the foundation of a large scale video project commissioned by the Chicago Museum of Science and Industry.

It's part of a major new permanent exhibit called *Science Storms*, which will be featured at the museum for many years. "We're updating the presentation of chemistry and physics through the lens of natural phenomena," summarizes Dr. Olivia Castelini, Senior Exhibit Developer for the museum. "The target age group is ten to fourteen, but the exhibit is suitable for a wide range of ages."

The museum chose seven of the most compelling natural phenomena for the exhibit including fire, lightning, tornados and tsunamis. Each "science storm" is demonstrated with a large physical element like a 40-foot tornado, or a Tesla coil creating lightning storms. And each physical element is accompanied by a large video screen.

Did I just say large screen? You bet. Let's try 28 feet by 8 feet for avalanches, 16 feet by 9 feet for lightning, or 12 feet by 21 feet for tornados. Oh wait, did I really mean 12x21? For the video practitioner, that's an odd dimension. It's, well, let's see, uh, vertical. And, yes, we'd shoot the screens natively, meaning that the video would be shot vertically in the field. It was one of the interesting challenges I faced as the DP for the video side of the project.

"The video pieces move toward the spirit and heart of *Science Storms*, to learn about the scientists, their motivations and their passion," Castelini explains. "The videos create a human face for the exhibit." Each video loops on its screen, and they run between four and seven minutes in length.

"We were diligent about presenting science in an understandable and inspirational way. It's not about technological facts but really, how much cool stuff can we show about what scientists around the world are doing. It's a balance between art and science," explains Stephen Platenberg, Director of Production for Cortina Productions of McLean, Virginia. Cortina Productions is a media design, production and management company with a focus on large scale exhibits. It's their job to develop the video material for *Science Storms*, which includes both the screens and interactive games.

"Everything about the exhibit is big, which led us down the path choosing hardware using a 1920x1080 imager for the best picture quality," relates Platenberg. "Our aim was to capture the highest resolution in the field." And in this case the field was massive. The production contingent traveled to over twenty different sites around the United States over a period of seven months. To capture the highest video quality and maintain the portability needed in the field, the Sony F900 Cine Alta HDCam became the choice as the tool for video acquisition. Editing was accomplished through the use of Final Cut Pro and After Effects.

Field production concentrated on telling the scientists' stories. Captivating storytelling is the art form that's the underpinning of a large percentage of successful video undertakings. And this venture would follow that model. Of course time and budget are always nagging but unavoidable considerations. With highly unpredictable and difficult to capture events like tsunamis and avalanches forming a dramatic video core of the story, Cortina Productions decided to use stock footage of the various wild natural phenomena to illustrate the focus of the scientists' work.

In the field, there were two production constants. First, in depth interviews with each scientist were conducted in a green screen setting. As the DP, I supplied the camera, a 17-inch LCD monitor and a portable 8-inch LCD monitor, tripod, matte box, and various

and sundry video widgets. I tried to keep my case count to about four or five to save on excess baggage fees. Grips were hired in each location to supply lighting gear and their individual expertise. A 12x24 foot green muslin background was used as our faithful green screen.

Audio was handled on a situational basis. Most of the primary audio was acquired during the interviews, but at times the scientists delivered lines to camera on location. If the location dialogue was limited, I would engage in a more and more familiar production undertaking these days, multitasking. Since we had grips handling the lighting, I had time to handle the audio chores. For the green screen interviews, I'd provide a four channel field mixer and capture audio with a Schoeps capsule mic hung from a boom and backed up by a lavalier mic worn by the scientist. I also used an MP3 recorder with a time code adapter to create transcript files that I posted on an FTP site for easy downloading.

The second production mandate was to create visually compelling "hero" shots of the scientists. "We wanted to portray scientists in a different light, to make them appear more like movie stars or athletes," Stephen Platenberg adds. "We wanted to change how they're perceived by the casual onlooker". So think NFL pre-game introductions or profiles of Olympic athletes. The head turn and stare into the camera were being merged into the world of physicists and chemists.

My job was to help create situations and looks that would make the scientists appear larger than life. Stephen and I quickly agreed that motion was a key element in our visual palette. So in keeping with the fluid nature of these

shoots, and to remain as portable as possible, we used a fixed jib arm and a Hollywood Microdolly to provide mobile motion platforms for our work. We were able to maneuver the jib arm onto an Oregon beach to shoot quickly moving facial close-ups of a tsunami scientist with the crashing surf serving as the background, and lugged it to the top of a lightning gathering platform in northeast Florida to illustrate the work of a scientist studying that phenomenon. At N.Y.U. we were able to combine painstaking lighting with the motion of the dolly to craft dramatic shots of an incredible laser research apparatus complete with its scientific creator, and to create a dramatic environment for a laser physicist at a lab in Berkeley, California.

As I mentioned earlier, another quirky element came into play on these shoots. "For the exhibits on fire and tornados, we decided to use a vertical screen in order to match the subject matter," added Platenberg. "We've shot in a vertical manner before, but we've never really pushed it like we did for this project. We wanted to shoot vertically so that the video could be represented at a 1:1 pixel ratio. We didn't want to have to expand the images to fit the screen," he concluded. My reaction was akin to the refrain in a familiar "Saturday Night Live" skit, "Vertical? Really?"

Yes, really. And this veteran of several decades in the production business was about to learn a new trick. As I found out, the key to making vertical images lies in the camera mount. Charlie Kendall of Moon Bounce Media (which often works with Cortina Productions on different projects) has invented a handy device called the Ringo Head camera mount. It's an L-shaped bracket that

allows the camera to lie on its side and still be securely supported on a tripod. After some experimentation, sound guru and generally great support guy Tom Levy and I got the F900 on its side with the viewfinder at the top. The bracket allows access to the tape transport, so we were able to easily load and unload tapes without dismantling the entire mechanism.

There was still an issue though. When I looked into the viewfinder, I was looking at what was essentially a sideways image. And if the tripod was low to the ground, it was awesomely inconvenient to kneel and twist my head around to look into the viewfinder and make sense of what I was seeing. It became immediately apparent that this was not a situation conducive to creating great images. But the long held video axiom, "It always works, we can make it happen," came into play. Our solution was to attach an eight-inch LCD monitor (powered by a battery) to the camera, and then, spin it so that it was mounted vertically. First, we tried an articulating arm but it proved to be a bit weak, and it refused to reliably hold the monitor in place. Then Tom got the idea to use a combination of a Cardellini Clamp and a knuckle to attach the monitor to the handle of the camera. The knuckle allowed us to both place the monitor in a vertical position, and to easily adjust as the situation dictated. *Voila*, welcome to the realm of vertical video.

Immediately, though, we realized it was an understatement to say that the combination of a fairly heavy camera, a tripod, and a monitor with its mounting hardware attached was a bit unwieldy. We certainly weren't going to move anywhere in a hurry. And, since one of our primary shooting opportunities was

with the always roaming, fast moving, nomadic tornado chasing scientists of the Vortex 2 project, we realized we needed another option. So we decided to use a smaller format camera, a Sony EX-3, to provide a more mobile option. It produced a nice quality image that matched our 1080i 30p frame rate, and packaged files in an easy to use XDCam file wrapper. As it was fairly easy to use, Stephen or another producer could shoot b-roll while Tom and I maneuvered the rigged F900 to essentially get master shots of the activity.

It's exciting to delve into something new in the production world, and looking at the world through a vertical lens was a creatively interesting proposition. The familiar became new again, and a creative spark was ignited.

Carl Filoreto is an award-winning DP, and his company is Elk Run Productions, Inc. (www.elkruntv.com), which has a roster of clients that spans corporations, production houses, crewing agencies, and broadcast and cable networks, including Dateline NBC, The Food Network, and The Travel Channel. Prior to starting his business, Carl won seven regional Emmy awards, numerous national and regional National Press Photographers awards, and multiple awards from Colorado Ski Country and the National Snowsports Journalists Association, while working at KMGH-TV in Denver, WTNH in New Haven, and WGGB in Springfield, Massachusetts.

Exclusive Interview with Award-Winning
Splice Director Vincenzo Natali

Directing and Writing Techniques for Sci-Fi Creature and World Creation

StudentFilmmakers Magazine catches up with director Vincenzo Natali, whose film *Splice*, debuted with critical and audience acclaim at the 2010 Sundance Film Festival, picked up a nominations for Best Film and Best Special Effects at the 42nd Sitges Film Festival and won Best Special Effects. The film stars Academy Award® winner Adrien Brody (*The Pianist*, *Hollywoodland*, *King Kong*); Sarah Polley (*Dawn of the Dead*, *The Secret Life of Words*), who is also an Oscar® nominee for Best Screenplay for *Away From Her*. Warner Bros. Pictures will release the film this summer. Vincenzo Natali's grotesquely brilliant creature-feature *Splice* will hit theaters on June 4th, 2010.

You storyboarded for *Ginger Snaps*, *Johnny Mnemonic*, the TV series, *Beetlejuice*, and many other films and shows. When you worked as a storyboard artist, did you begin your career initially wanting to be a storyboard artist first?

Vincenzo Natali: I really started as somebody who wanted to be a film director. And then when I left my first film school I went to, it was either becoming a storyboard artist or becoming a waiter. [Working as a storyboard artist] was a wonderful educational process because I got to work with a lot of different directors. And it was a very

great insight in seeing how they would block a scene and how they would put together a shot list. I eventually ended up at an animation studio in Toronto called Nelvana, and I worked for about five years doing storyboards for Saturday morning cartoons.

As a board artist on animation, it's a great comprehensive kind of role because you're literally drawing not only the angles, but you're blocking the action, and you're editing the film in the essence of paper because it's animation – so you're coverage is animation, you draw the material as opposed to being shot. But I did that under the offices of the director. So, I would get a script, essentially go away for three weeks, and then, come back with 15 minutes of film time worth of storyboard. And then the director would make revisions to that. So it was a wonderful process because we were given a lot of creative freedoms and in the end it was done under the offices of somebody who was very experienced. That was almost like another kind of film school for me.

When did you first begin to explore filmmaking?

Vincenzo Natali: I really come from that generation that grew up with Super 8 film cameras. It started there. I have very dear friends that still work with me who I made those films with when I was in my late childhood, early teens. And very little has changed actually. (Laughs) Basically, the process is the same as it was when I was 12 years old. And probably my subject matter is more or less the same, I don't think I've matured that much.

I always co-write. I'm never in there alone. It's a tough, lonely business, writing.

Did you do storyboards for *Splice*?

Vincenzo Natali: Oh yeah, I always storyboard my own films. That's part of the process for me actually, just to get inside the film is to start drawing it. Actually, the most exciting part of the process is, I have to hold back. I don't start drawing it until I feel I like I've got the final draft of the script done. It's like saving the best for last. It's like the cherry on top of a cake.

I've learned over the years to do the boards in a way where I'm prepared to throw them away. They're very much a step in the process rather than an end to the process. They're really there to help me develop a visual formula for the film and help explain to people I'm working with what I want to shoot. But when I actually get on the set, I'm always ready to throw them away. Because when you enter from the kind of virtual world of storyboards to the real world, you realize it's a very different thing. (Laughs) I've been in situations in the past where in the pursuit of shooting my storyboards, I actually did a worse job as a director than I would have had I been more available to what was right in front of my face.

But having said that I think I'm a great believer in prep. I think a lot of preparation allows you to be more improvisational when you're shooting.

What is your process for writing screenplays?

Vincenzo Natali: It's a slow process. (Laughs) Years and years. So I don't recommend it, if anyone can find a quicker route...

I'm very concept driven. So, somebody could start with a character. My tendency is generally to start with an idea, and then, the characters kind of divulge from there.

What was your process like for writing *Splice*?

Vincenzo Natali: When I came up with *Splice*, I was inspired by a real life scientific experiment where scientists took a lab mouse and they essentially added what looks like a human ear to its back. Very strange image. I think what they were doing was developing a kind of cartilage that could be grafted into human beings. It was such a bizarre and powerful image, almost like something from a Salvador Dali painting, that I just knew there was a movie in that.

So it started with the mouse, and I came up with the notion of essentially telling a story where the scientists become more monstrous than the monster they create. It began as a short film, and I wrote it with somebody who

was at the Canadian Film Centre – which is where I went to school – Antoinette Terry. After writing the short, we really felt that it should become a feature, too. When we began writing the feature, I think it was 1997. (Laughs) And here we are, 2010, and the film is coming out.

So it was a very slow process – in which, actually, I brought another writer in, kind of in the latter stages, a gentleman named Doug Taylor.

But it's always an interesting concept to me because I find that I usually end up ending the writing process where I started. I'll start with the script, and it's never quite what I want it to be. And then, I go through a very long, kind of searching process where I try all kinds of avenues, and I always find that in the end, I sort of end up where I started, except somehow in that exploratory process, I found or re-found solutions to some initial problems we had. But, it never happens quickly. The initial writing of each draft happens very quickly, but the process of getting from the first draft to the one we actually shoot inevitably takes years.

How did your collaboration with Antoinette Terry begin?

Vincenzo Natali: I wanted to write with Antoinette because the story was

going to be about a man and a woman, and I wanted her perspective, and especially because in a way, *Splice* is kind of a bizarre love triangle. I felt that having a feminine point of view is important to telling stories in a fully rounded way. And I knew Antoinette was very good with characters. And even though this was going to be a creature film, it was also going to be a relationship story.

What was your mission for *Splice* and why did you make the film?

Vincenzo Natali: I really wanted to make a creature film where the characters fall in love with the creature. I really wanted to make a movie where the relationship between the creature and creators was at the core of the story, and where that really pushed the boundaries of that relationship as far as they could possibly go. So it's a very taboo, strange kind of landscape that we explore. And frankly, I just haven't seen that. I think it's been done in an exploitive way, but not in a devotional way. That was really our mandate. That was our prime directive with this film. And that's what made it hard to finance. I definitely found that from the point of view from the people that put up the money, when it comes to genre, they don't like to step outside the genre. They want to play it safe. They're actually pretty conservative.

I just wanted to do something really different with this film. I wanted to go into a place that was on a new terrain.

How did you cast *Splice*'s main characters Elsa and Clive, played by Sarah Polley and Adrien Brody?

Vincenzo Natali: First of all, once you realize you have to cast who will

be believable as young geneticists, you realize that you're working with a very limited group. There just aren't a lot of people that essentially pull that off. Sarah Polley and Adrien Brody were at the top of my list, and by some miracle I got them. They were by far the most rewarding and easiest elements of the filmmaking process. To me that's the greatest special effect to watch actors like that. And it adds so much to the believability to a film like this. We're trying to sell some ideas, notions that are in the realm of science fiction. And also in making visual effects believable I think a performer's reaction to the effects is almost as important as the effects itself.

Could you describe how you worked with the actors? Did you do rehearsals with Sarah and Adrien before shooting?

Vincenzo Natali: I did limited rehearsals with them. I spent time with them in real labs. My main goal was just to make them understand who the characters are and to understand a little bit about how the real technology worked and to feel comfortable with it. And then I felt in terms of specifics of the scenes, they're very simple, actually the movie's very simple, [the scenes are] very intimate. As much as possible I tried to let the actors lead the action. In the past, my films have been much more formal in the concerns for that, and I guess a little more specific in terms of how I wanted it to be blocked. This time I felt that the strength of the movie was believing that these are real people, and so I just felt that the actors should follow their instincts. So we did a little bit of rehearsal, but I tried not to over-rehearse. And they just did a lot of research and preparation. And that

Writing for Science Fiction and Fantasy

Metaphor as Core

"Have as little exposition as possible. Talk to the audience without explanation, and let them discover through the narrative and the action of the story rather than stopping the action to explain.

"Great science fiction or fantasy of any kind is always a metaphor. Know your metaphor. That's what will make your science fiction film transcend the genre.

"Have great characters because that's what we connect to and what makes movies exciting to watch."

~ Vincenzo Natali

was really it. I'm definitely a believer that casting is 80% of the process. If you have the right people, then most of your work is done for you. And I definitely got the right people.

At any point did you have Sarah or Adrien in mind during stages of writing the script?

Vincenzo Natali: No, I didn't have anyone specifically in mind when I wrote the script. It's interesting because it took so long to write the script, it was such an extended period of time, nearly a decade, that different actors came to mind at different times. I was very keen with the characters Clive and Elsa to write characters who while they were scientists you would still relate to as regular people because you have scientists who are actually like normal people. The tendency especially in science fiction films is to make scientists kind of robotic. I know scientists that are quite the opposite. In fact, they're really a lot more like artists. In fact, my whole approach to writing those characters

was to treat them like that. They're very passioned. They are on the vanguard of what they do. So they're really rebellions and courageous. I think that my approach in writing geneticists was like how I would approach writing painters or musicians or anything like that. And in some respects it's how I treated the casting too, so I wanted to get attractive, young but highly intelligent people to play those parts.

You worked with the cinematographer Derek Rogers for *Cypher* and *Cube*, which are also sci-fi thriller films, and then worked with a different cinematographer for *Splice*. Could you tell us how you came to work with Tetsuo Nagata for *Splice*?

Vincenzo Natali: Oh, absolutely. And I should point out that I love Derek, I'm sure I'll work with him again. So this was a France-Canadian film production, and it required that certain members of our crew be from France. And so on *Splice* I worked with Tetsuo Nagata. He's Japanese, but he lives in France, he works in Paris. And I had done a short film as part of an omnibus movie called *Paris, Je T'aime*, and Tetsuo, who shot that, did a fantastic job, is one of France's most highly regarded cinematographers. He won two César Awards, they're an equivalent of an Academy Award. He's one of the more poetic cinematographers out there. And I felt with [*Splice*] even though it was a horror movie, it had to have an elegance to it and a kind of poetry and beauty to it. And he definitely gave me that.

How long did it take to shoot and edit *Splice*?

Vincenzo Natali: I think we had 42 days of production, which wasn't a

tremendous amount for a lot of visual effects. And the post production is a little weird because for a movie like this we cut for a certain period of time and then we put editorial on hiatus while the visual effects were being finished. And then after we had that break when we had most of the effects work done we started editorial up again and we inserted a lot of that material. And that's actually a great way to work. I've had that scenario on all of my movies because they've all had a lot of effects work in them. What it allows me to do is just gain some perspective on what I've cut, which is always the hardest to do. And usually in the sensation of the ending especially in a smaller film or even a large film it happens really fast. The editing process is a lot faster now than it used to be, say 20 or 30 years ago before they had Avid. And actually I think that hurts movies a lot because you need time – it's like writing a book. You don't write the thing in one draft, but you have to write it, put it in the drawer, take a break from it, and then, revisit it with fresh eyes. So that's what it allowed me to do. The

entire post production process was about 14 months. It was quite long.

***Splice* is a new film releasing in June 2010. What other projects are in the project pipeline?**

Vincenzo Natali: In this day and age you can't do one thing at a time. (Laughs) And you never can, especially now. You have to do six films or eight projects at a time. I know somebody who has like 35, so (laughs). I don't know what the next thing's going to be for me, but I've been working for a number of years on an adaptation of a J.G. Ballard novel called, *High Rise*. It's similar to *Splice* in so much it's a science fiction film that definitely goes into some taboo terrain that transgresses in fun and crazy (laughs). It's about a giant high rise wherein the film is like that new building in Dubai called the Burj. It's a like vertical city, in a way kind of an enclosed, self-contained society. Ballard's book is about how that society collapses. So, that could be the next thing. We'll see.

Vincenzo Natali on the set of *Splice*.

A Conversation with Oliver Curtis, BSC

Camera Moves, Lighting, and Finding Your First Shot

Interview by Jody Michelle Solis

Oliver Curtis, BSC's work consists of an eclectic filmography with feature films such as *Death at a Funeral*, *Owning Mahowny*, *The Wisdom of Crocodiles*, and many other films ranging from comedy to drama to documentary. Most recently he completed work on the comedy movie, *Virgin on Bourbon St.* directed by Clare Kilner and starring Rob Schneider and Jenna Dewan. In this candid interview, Oliver Curtis, BSC shares his insights, talks about filmmaking, and shares tips related to camera moves, lighting, and finding your first shot.

When did you discover your interest in cinematography and begin to explore cinematography?

Oliver Curtis, BSC: I originally studied still photography. I've always had still cameras ever since I was about five years old. I had a Box Brownie. So way back I've always been doing photography, I never really thought about it. It was just always

there. I went to Kodak Instamatic and then Zenit-E. I've always been taking photographs.

And then I studied photography at 'A' level, had a Foundation course, like an arts foundation course, and I just majored in photography. And it was from that I really got a good understanding of film stocks and exposure and so on. From there, I then applied to film school in London. It was a college called the London College of Printing at the time. It's changed its name, but it was a very high on film theory rather than practice. And as a consequence, I ended up shooting everyone else's films, because I knew how to use a light meter [laughs], and I knew my way around a film camera. So, I had a lot of practice whilst I was at college, although the college itself was not very geared up for technical tuition. So through that and then after I left college I was still very much sort of

winging it and just finding my way through my mistakes really. No one really ever taught me how to light.

After that, I got into documentaries. Shot a lot of documentaries for the BBC and Channel 4. Shot mostly on film at this time, which is like the early to mid-80s. Documentaries were a fantastic education in terms of learning to think on your feet. Working with natural light, available light. Shooting hand-held, composition, working quickly. It's a great film school in itself. But it came a point when the sort of work I was being offered in fiction was getting more and more demanding. And there was a point at which I got offered my first feature film, having shot a number of short films. And I realized that I couldn't do this part-time, you know. It's too difficult, it's too complicated. So I decided to just really focus my efforts towards being a cinematographer.

But because of that route in through film school and then through documentaries, I never assisted, I was never a first AC or focus puller, I was never a loader. So I've never really seen anybody else work or anybody else light. So, you know, I'm still teaching myself to this day. [laughs] Not really had the benefit of anybody else's tutelage.

So it's not a path or career path I could necessarily recommend to any student. It just happened to be the way I got into the business.

A popular question among startup filmmakers is 'how do you get your foot in the door?'

Oliver Curtis, BSC: It's not very helpful to say it, but I don't think there's any hard or fast rules. Because some people work their way through a film crew, some people just make a short film and blast their way in through sheer force of talent. Other people become sort of protégés. I couldn't say that there is one way. Certainly, I couldn't say that mine was a prescribable way of getting into the business. It's just what happened to me really. What you have to be armed with, whichever way you go, is an enthusiasm, a passion for the medium that is broadly photography and cinematography. To know film history, to know films, to understand how they developed, to understand how the aesthetic of films has evolved. So that when you meet people in the business who are more established than yourself who might be able to offer up opportunities, so that they see you have that glint in your eye and that passion and that energy. But also to be practicing it however in whatever capacity. Do your own stills, do your own films, do your own videos. Show
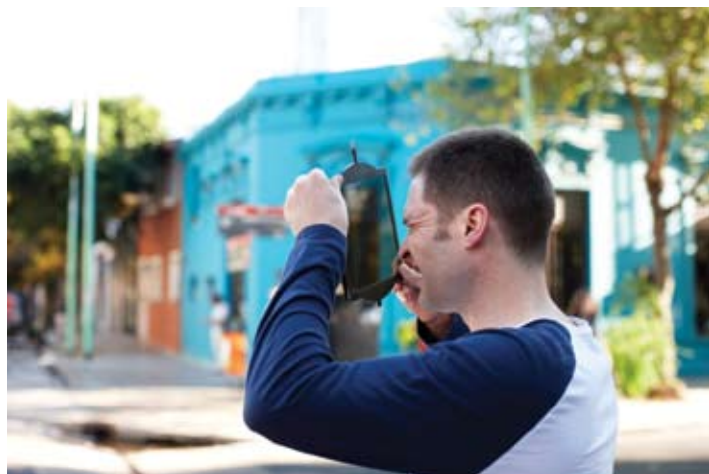
that you have a hunger to do it. Setting aside 'low budget', setting aside amateurish production values. What people want to see is a passion I think.

Speaking of amateurish production values, what would you say are things that startup filmmakers should avoid?

Oliver Curtis, BSC: That's a difficult one because, you know, you've gotta make your mistakes. I wouldn't call it amateurish. What you want to do is avoid convention. Less convention is what's being asked of you. And that can be something in terms of the way you light a face, or the way you frame somebody, or if you are a director as well, sort of the clichéd, hackneyed plotlines. The thing to avoid is the obvious. That's what I think. Whether it's in cinematography or direction or writing, people have a hunger for originality. That's the key. So I think it's less about making mistakes and avoiding making mistakes, because you can't. And it's more about just having a blind faith, if you will, about just going forward and just trying to push the envelope a little bit. At the same time, establishing a really solid technical knowledge is very important – as a producer said to me very early on, it's easy to show you're talented but much harder to prove you're competent!

When did you begin working with director Clare Kilner?

Oliver Curtis, BSC: I met Clare when she was looking for a DOP for *The Wedding Date*. And to be frank, my agent at the time said, 'You know, Oliver, you've done enough art house... Hey, let's do some box office." [laughs] I'd never done a romantic comedy, and if you've looked at my work up until that time, it's pretty sort of left field. So, I thought, 'Well, okay. I'm open to it. I'm interested in every form of storytelling.'

Anyway, I just met Clare, and we just hit it off. It was a sort of kindred spirit. We had a blast on *The Wedding Date*, and we remained friends and collaborated ever since. We just last year did this, best described as a 'college, frat house comedy', *Virgin on Bourbon St*. Very, very low budget. Quite silly and playful. A genre piece. Which, again. I've never done anything like that and was curious to know what it would be like to shoot it incredible quickly, incredibly low budget, but to try and produce something that was very much part of that sort of 'college American campus' college comedy. And basically, because Clare was directing it, I'm there.

When you build a relationship with a director, you're willing virtually through hell and high water to keep working with them because it's such fun. Once you get to know a director, you've got a shorthand there. And I love it when directors come back for more because you've got a shorthand, you can work more quickly, you know what they like, you know the personalities. And, it's a very rewarding experience.

Clare and I, she's back in London, we're hoping to do another film, an adaptation of "The Secret Diary of Adrian Mole," which is a successful book from the early 1980s in Britain.

By the way, I really liked your movie, *The Wedding Date*.

Oliver Curtis, BSC: So, it was your cup of tea then. If you look at my features list on my website, it's a pretty schizophrenic bunch, you know. To be a cinematographer, I think, is to be able to apply yourself in different ways to different scripts and have different solutions for different scenarios. I've always found it could be a double-edge sword. Sometimes people want a cinematographer who lights softly, or another cinematographer who's great at hard light, or very in-your-face, stylized work. And we can name many, many different cinematographers who you can put into those different brackets.

I dunno. I seem to have quite an array of styles to a point at which, I suppose, you found I don't have a style. I just approach a movie in a way I think is the right way to do it for that director with their vision in mind.

You said that *Virgin on Bourbon St*. is a low budget film. What do you mean by low budget?

Oliver Curtis, BSC: That's a good question because low-budget – it's a moveable feast, isn't it? It's relative to what you're trying to achieve. Because half a million dollars or a million dollars is very low budget for an action adventure film, but it's a lot of money for an art house film set in one room.

So, it was low budget for what we were trying to achieve, which was a film that transcended the budget.

One of the things that I agreed with Clare and the producers was that I wanted to shoot something that looked like it cost $4 million rather than whatever it did, which must have been a good half of that. So I made sure we had framed it a certain way. I tried to light it in a certain way, to give it that sort of polish. I didn't want it to *feel* low budget. And inevitably, circumstances whether schedule, speed of shooting, loads of different influences will seep through those best intentions and leave their imprint. So I don't think I'm kidding anybody saying that it is a multi-million dollar production, it's certainly not. But, it's good to be able to have that mindset when you need to be able to think about the budget as a flexible thing, not a fixed, given immovable object.

I did a movie four years ago in Italy called *Unrelated*. It was for a friend of mine. She had no money. It was an ensemble piece about a group of English people on holiday in Siena, Tuscany. She said, 'Look, it's more of a workshop piece, do you want to come and stay in Tuscany for three months free of charge and have some fun.' I said, 'Of course, sounds great.' I wanted to get away, so I took a Sony Z1, which was the best little camera that was around at the time. So we shot this little movie. I controlled the light where I could with grad filters; I used mirrors to punch sunlight in through windows. I shot interiors in the middle of the day and let the windows and doorways burn out when I was outside and tried to shoot the beginning in the end of the day. And yeah, it was fun to do. You just work with the limitations of the budget, the schedule, and the technology. I didn't expect to ever see that film, but in the end it won the Fipresci Prize of the London Film Festival, it won *The Guardian* newspaper 'Film of the Year' [laughs]. It's been a huge success for this director. I have to gulp quite

hard when I see it projected 30-foot across in every cinema in London because we shot on a Sony Z1, which is an interlaced system, and it's a tiny chip and fixed lenses.

So, it shows you that an interesting film, a film that people will want to see is not dependent upon necessarily lots of lighting, lots of production value, lots of money. It's about the story. It's about the performances. And it's about how it's told. So, you really need a director who understands that and can achieve a lot.

Was it only one camera that you used for *Unrelated*?

Oliver Curtis, BSC: Two Sony Z1's, sometimes we double barreled on set because the acting was very much improvised. So I sort of set up a wide shot and then had a longer lens on the other camera. It was useful because the tapes could run half-an-hour, whatever, and let it evolve. Let the scene evolve in front of our eyes. It was an interesting piece.

If you could share three camera movement tips to new filmmakers around the world, what would they be?

Oliver Curtis, BSC: Learn to occasionally open your other eye when you're looking through the viewfinder.

You should be able to use your peripheral vision, not just close your eye and look through the viewfinder. It's very important to get that glance away from the camera. I learned that from documentary work. You've gotta be able to use both eyes, even though you've got one eye glued to the viewfinder.

If you operate as well as light, a good grip will help you with this, but when you're doing a complicated dolly move, learn to make sure you're comfortable at the end of the move. When you rehearse it, you want to be comfortable in the end. Uncomfortable in the beginning is fine. 'Comfortable at the end' because that's when you're usually going to have to hold the frame. So just rehearse it so that once you've done your move, your feet are solid, you're comfortable, you can hold the frame.

When you're working with directors and actors who don't really like to put down marks, they don't know where they're going to stand, or they're basically missing their marks – and that happens a lot – some very good focus pullers can do this: if you're shooting some actors and you're shooting across the room – say you've got a wall behind camera – if the focus puller goes to the wall either left or right, they're at tangent to where you are, they can then spot with their 2nd AC marks on the wall across from them. And then they can see, therefore, where the actors are in relation to the marks on the back wall. They can pull focus by seeing where the actor's head is in relation to the marks they've put off-camera on a wall on a piece of show card or whatever is on the wall out of shot on the left or right of camera. Camera, 90 degrees, focus puller, subject to the middle, so it's like a little triangle. The focus puller is no longer by the camera, they're actually across the room. It's quite a skill and takes some practice, but it's a phenomenally useful thing to be able to do.

If you could share three lighting tips to new filmmakers around the world, what would they be?

Oliver Curtis, BSC: Don't be afraid of hard light. Not everything has to be soft. One of the most beautiful light sources can be a single hard source. I use that a lot on beauty commercials and shampoo commercials.

By all means, use a light meter, but think of a light meter's reading as a point of departure. It's not the Bible. If you know your film stock, you can take the light reading as a reference. I often come away from having taken a light reading near a subject or wall and my meter is saying whatever it is. The meter tells you one thing. It's what the relative values are at the scene – if the brightness of that scene at that spot in relation to banded exposure, being 18 percent reflectivity, the exposure doesn't have to be placed there. It's up to you to decide where you want to place the exposure and how you want to treat the characteristic curve of that film, that particular film stock. So, don't feel that, 'that's what a meter says, that's what you have to do.' It's not always the way to go. Over- and under- exposure are fantastic tools to feel free with.

Another tip is, when you read the script and the dialogue, and you've got actors come into the room – Actor A comes into room, followed by Actor B. So many times we're blocking a scene with the actors and director, and the biggest instinct of all is to find your first shot where door opens, the frame shows them coming in through the door, dialogue begins, camera pans or covers them [coverage] and the people are on camera. They're in shot from the first moment of that scene just because that's where the dialogue starts. Well, one of the most interesting ways of beginning a scene is perhaps with the actors 'out of shot'. Think about whether it's necessary to have that dialogue on camera. It's very much a director's call, but a lot of directors forget this. They are concentrating on the actors' faces. And it might just be that you can say, 'Well, actually, let's just hold on this kitchen sink, or these pictures on the wall, or this view. And then, maybe let's dolly back. Maybe let's just gently pan away, and we *hear* the dialogue, we hear the actors come into the room, and then they come into frame for the particular beat or moment.' And I think that's a really good skill because it just means that you get into a more cinematic storytelling. You're giving *more* information because they can *hear* what's being said, and maybe you don't need to see the actors' expressions at that time. You can be then looking at other things that could help establish a scene. Foreground things of importance whether it's a McGuffin, or whether it's a view, or whether it's a color or texture. It's an interesting thing to do that. You look at a scene, and think, 'I don't have to have the actors on camera all the time.' You don't have to cover every bit of dialogue on camera.

The Two Worlds of
Still and **Motion Imaging** Collide

Are the New Canon DSLRs the Poor Man's RED?

by Jon Firestone

The RED camera has found itself in the hands of still photographers in recent months and has been used to shoot several high profile magazine covers. Having the ability to shoot up to 30 frames a second in 4K resolutions continuously for long durations has made it very appealing for some photographers. The next generations of RED cameras are being designed to be even more friendly as still cameras and are part of their new DSMC (Digital Still and Motion Camera) philosophy. They are designed to be both still and motion cameras and can be configured in much smaller profiles similar to that of a large DSLR. I've often noted that the RED camera has more in common with a DSLR than a video camera, so it's not surprising that we are now seeing these two worlds collide. But while RED is encroaching on the still photography territory primarily dominated by Nikon and Canon, these DSLR companies are improving the video side of their still cameras and might just take a bite out of RED's market.

It wasn't Canon that was first to bat with a video-enabled DSLR, but it was Canon's newest line of Digital SLRs that really became contenders as digital cinema cameras. The first of these was the Canon 5D Mark II with a full frame 35mm sensor and 1080P video. While
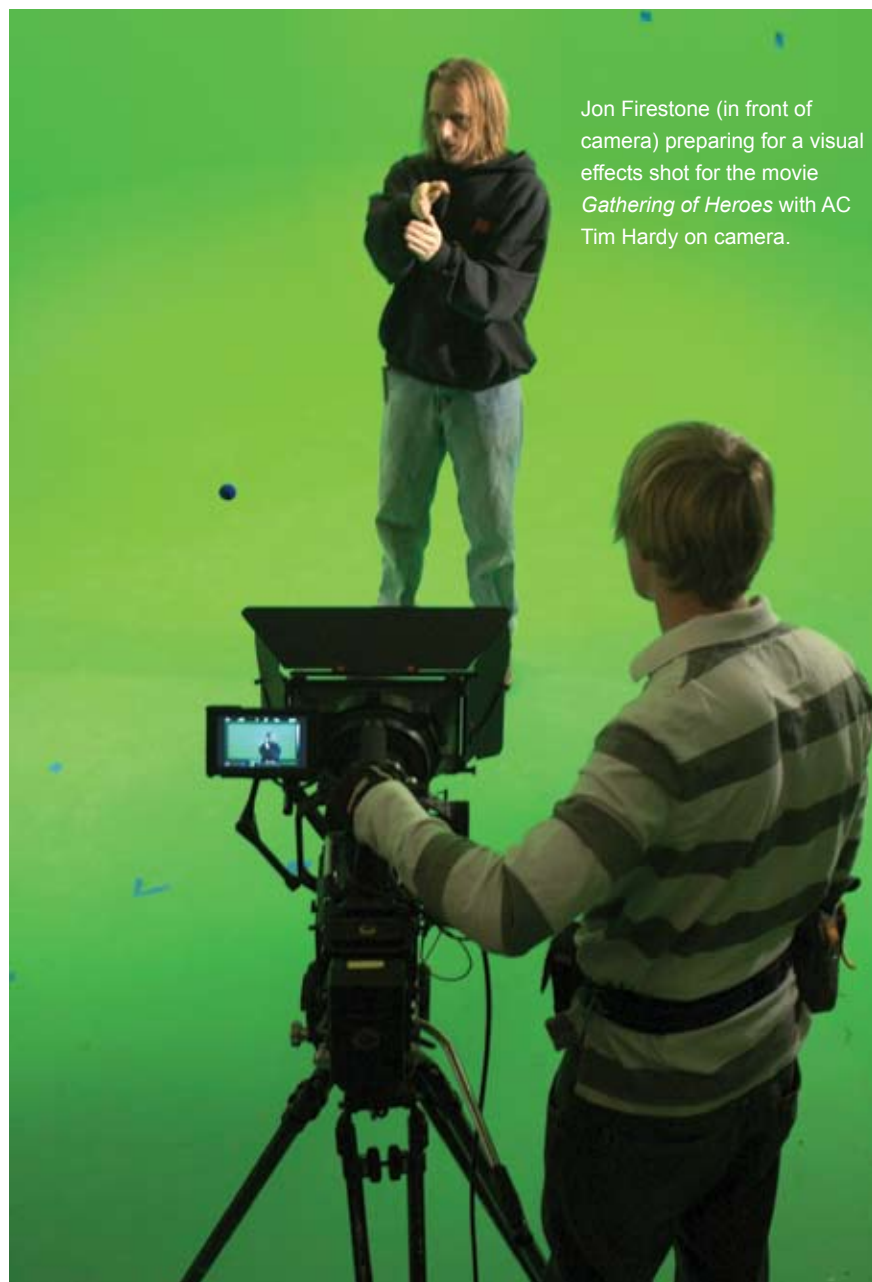
Jon Firestone (in front of camera) preparing for a visual effects shot for the movie *Gathering of Heroes* with AC Tim Hardy on camera.

the 5D Mark II was the first to really make waves, Canon's new 7D made an even bigger impact. While its sensor is smaller than the 5D's, it is still roughly the size of Super 35 film and similar in size to the RED camera's sensor. More importantly though, it featured another important quality that was crucial to a camera's acceptance as a digital cinema camera and that is the ability to shoot at 24 frames per second giving the video the motion that we are familiar with in motion pictures. This, along with the camera's lower price of about $1600, has made it extremely popular.

Digital Cinema Camera

What makes and puts the Canon DSLRs in the same discussion as the RED ONE camera is that they both could be classified as digital cinema cameras. There are several attributes that I recognize to be important in classifying a camera as a digital cinema camera.

Peter Wigand and a Canon 7D camera shooting *Breakaway*. Photo courtesy of Jason Anderson

(1.) Sensor Size

(2.) Frame Rate

(3.) High Resolution

With all of RED's innovations, one of its most significant features that set the RED apart was that its large sensor matched the size of 35mm film and gave it a very cinematic look. Other digital cameras with large sensors were extremely expensive. Smaller sensor cameras can only emulate the large sensor look by using lens adapters which project the image onto a surface and record that image, but these suffer from generally being clunky, sometimes difficult to use, and they lose light and quality going through the extra optics. The RED ONE had a large sensor and was much more affordable than the other options. The Canon DSLRs provide large sensors and their prices are a small fraction of the cost of a RED ONE.

When talking about the "film look" one of the first things that comes to mind is 24P. In order to seriously be considered a cinematic camera it must shoot at the standard film rate or 24 frames per second. There are some tricks to get to 24P from other frame rates, but it should be an option on any camera that wants to be in this category. It was the inclusion of 24P that made the 7D more appealing as a cinema camera to me over the 5D Mark II. Fortunately, the 5D Mark II will be firmware upgradeable to have 24P.

Resolution also has a lot to do with being considered a cinema camera to me. These days it should be HD resolution or greater, 720P is acceptable, but 1080P is much better. The extra resolution helps when projecting on a large screen. The Canon DSLRs shoot at up to 1080P.

The RED shoots significantly higher resolution at up to 4.5K.

When the RED camera was announced a few years ago, they claimed that it would be the camera that anyone could afford. And while they delivered an amazing camera for an amazing price, it was still out of the price range of many people. It has, without a doubt, changed the industry and none more so than the independent film scene. But there was definitely a demand for an even more inexpensive camera with a large sensor. The Canon DSLRs deliver this.

Why It's Not a RED

(1.) 1080P vs. 4K. While many projects shot on RED will ultimately end up at 1080P, 4K is over 4 times the resolution of 1080P. This can seem like overkill when the final output is 1080P. However, there are several advantages to the greater resolution especially when doing compositing, and the resolution gives greater flexibility in post because the extra resolution can allow for pushing in on the image in post.

(2.) Line Skipping. This is to some people the greatest limitation with the Canon DSLRs. In order to produce a 1080 image from the sensor, instead of capturing an 18 megapixel image, and then, downconverting, they opt to skip lines instead. This form of down-resing has the advantage of reducing the amount of processing significantly, but can cause serious aliasing issues

The Canon 7D with a Nikon lens adapter and cinema setup on the set of *Breakaway*. Photo courtesy of Jason Anderson.

compared to other cameras. Most subjects will look fine, but there can be very bad aliasing and moiré issues especially on highly detailed patterns.

(3.) No Raw in Video Mode. RAW is great, and to me, one of the greatest things about the RED ONE. RAW gives me the ability to have a specific look on set, while maintaining a clean image that allows for more flexibility in color correction in post. I can push a RAW image much further than I can ordinary footage. While not a deal breaker for some, it is something significant that the RED does that the Canon DSLRs don't.

(4.) No Timecode Input. Along with the other Audio issues, not having Timecode input means more tedious workarounds

when working with Audio on the Canon DSLRs.

(5.) Bad Audio Inputs. With AGC, unbalanced inputs, no phantom power, no time code, etc., the Canon DSLRs are very weak in terms of their audio capabilities.

(6.) Inferior Monitoring Options. The Canon DSLRs offer standard definition output and HDMI outputs for HD. Most professional cameras offer HD-SDI outputs, which use BNC connectors which are more field ready connectors. The cable is lighter and can run longer distances as well.

(7.) No PL Mount. Aside from a couple modified camera bodies, there are no PL mounts on the Canon DSLRs. The primary standard for 35mm cinema lenses, (non-Panavision) is the

On the set of Inferno Film's *The Highwayman*.

Arri PL mount. The RED comes with this as the default mount, and that makes the camera capable of using most of the cinema lenses that the rental houses carry. While the Canon DSLRs can use still glass, cinema lenses are generally much more suited for motion picture work than still lenses. They generally have a consistent F or T stop throughout the zoom range. The focus barrel generally must rotate much more from close focus to infinity for more precise control, whereas still lenses generally want to be able to focus quickly rather than smoothly. Cinema lenses are also less likely to breathe as much, meaning that the image will be less likely to change size significantly due to changing the focus. Cinema lenses also generally don't have hard

stops for the iris, unlike still lenses. This means that you can smoothly rack the iris during a shot if necessary. Cinema lenses are also generally fast lenses, meaning they don't require as much light. Since most films are shot with a 180 degree shutter or 1/48th of a second shutter, they need a fair amount of light so cinema lenses are usually designed to be among the fastest lenses out there. While still lenses can work fine for some projects and can deliver great images, having the ability to rent or buy any of the standard cinema lenses that the DPs are used to is very helpful especially on larger projects.

(8.) More Skewing. Skew is a currently a problem with all CMOS-based image sensors, which are the sensors that

are becoming the standard on cameras. There are two major problems with skew. The first is when the camera is panned quickly, upright vertical lines will become slanted due to the way the image sensor is refreshed. There is a time delay from the top to bottom of the sensor, and this delay causes some artifacting including slanted lines. The other problem has to do with short-lived bursts of light such as flashes and strobes which often times only expose part of the image, such as the top third. It can look strange and can be very obvious. I've tested the RED ONE and the Sony EX1 cameras and found their skew to be similar, whereas the 7D that I tested had much bigger problems with skew. It's not necessarily unusable, but definitely worth being aware of.

(9.) 12-Minute Record Times. As is stands right now, the Canon DSLRs can only record for roughly 12 minutes continuously before stopping. This has to do with a 4 gig file size limitation for each clip. They can be restarted immediately, but this limitation can cause problems in some situations.

(10.) Inferior Shutter Options. Currently, the Canon DSLRs' shutter speeds leave something to be desired. We generally shoot at 1/48th of a second shutter speed when shooting 24P. This is a familiar look, and it also gives us the advantage of reducing the flicker potential of

some lights such as magnetic ballast HMIs and some fluorescent lights. With the RED, we have a great deal of control over the shutter speeds to achieve specific looks as well as sync to different sources. The Canon DSLRs currently give shutter adjustments for 24P video in much larger increments including 1/30th, 1/40th, 1/50th, 1/60th, etc. Once again, not necessarily a deal breaker, but it is still a little annoying, and we would expect more from a true digital cinema camera.

(11.) Inferior Frame Rate Options. The Canon DSLRs can record at 24P, 25P, and 30P at 1080P resolution and 50P or 60P for 720P. The RED can shoot from time-lapse speeds up to 120fps in 2K in 1 frame increments.

(12.) Inferior Cinema Form Factor. The Canon DSLRs are traditional SLR form factor, which is great for still shooting, but in my opinion, is not a good form factor for shooting video. When hand-holding these cameras, they tend to be too short and pivot in the hands in a way to pitch forward and backwards easily. They do much better when mounted to a set of rails with hand grips.

(13.) More Audio Issues. With no headphone output, no audio meters (besides AGC would make meters pointless), no phantom power and no professional audio inputs, the

Canon DSLRs are very crippled for any professional on board audio recording.

(14.) No Live Histogram. The histogram is very important to getting proper exposure.

What Is Better About Canon DSLRs

(1.) Price. The price of these cameras opens up a whole new market of people to large sensor digital video. Students and hobbyists can afford these cameras that can create very cinematic images.

(2.) 5D Mark II Has Larger Sensor. The 5D's full frame sensor is even larger than the RED's sensor. Sensor sizes are growing, RED's future Monstro sensors will be full frame and

some will even be medium format sizes.

(3.) Smaller. The size of these cameras allows them to mount on smaller tripods and other support gear which can also save a lot of money.

(4.) Lighter. It's much easier to carry one of these cameras with you than a RED.

(5.) Low Light Performance. The Canon DSLRs can shoot at surprisingly high ISOs with an acceptable image, however, RED's new Mysterium X sensors are also very low noise.

(6.) More Traditional SLR Format for Still Photography. Most people will still shoot still photos with these cameras, and they are great at that.

(7.) Boots Faster. The long boot times of the RED can be annoying

when swapping batteries or trying to grab a quick impromptu shot. The Canon DSLRs boot almost instantly. Fortunately, so do RED's next generation cameras.

Making Your Canon DSLR into a Cinema Camera

While the base price of a 5D Mark II is about $2500, the 7D about $1600, and the 550D will be about $800, turning one of these cameras into a more usable cinema camera can add significant costs to the setup. You can easily spend more money on the accessories than you did on the camera.

If you want to turn your DSLR into a cinema camera, you'll probably want the following accessories.

(1.) Rod System
(2.) Follow Focus

(3.) Hand Grips
(4.) Monitor
(5.) Shoulder Pad
(6.) Audio Mixer
(7.) Magic Lantern (Firmware)

Magic Lantern Firmware

magiclantern.wikia.com

Magic Lantern is a firmware that can be loaded onto the Canon 5D Mark II, and work is being done to make a version that works with the 7D as well. It is not a Canon product and was designed my Trammell Hudson to solve many of the problems people were having with the Canon 5D Mark II when using the camera as a cinema camera. Many of the features have to do with the audio side of the camera. Magic Lantern allows you to disable the AGC. It also provides audio meters in the viewfinder, and it provides a headphone output via the AV jacks. On the video side of things, it

includes features such as a histogram, zebras, and custom crop marks.

The Future of 7D, Magic Lantern, and 5D Mark II with 24P

As of the writing of this article, the 5D Mark II does not do 24P. There will be an update shortly that will enable this frame rate. Also, as of now, Magic Lantern does not work on the 7D. So until the 5D Mark II firmware update comes out, or Magic Lantern for the 7D is released, neither camera is ideal as a digital cinema camera.

Problems with Audio on the Canon DSLRs

The Canon DSLR cameras have built-in microphones and headphone-style stereo input jack, however, there are no audio meters, and there are no audio level adjustment and no headphone jacks for monitoring audio. They employ AGC or Automatic Gain Control where the camera automatically adjusts the volume. The problem is that when there is silence, the AGC cranks the volume which boosts the noise. When someone talks again it drops down again. The constant adjustment of volume causes an inconsistent background noise and awkward volume adjustment during speaking. Unfortunately, you can't turn AGC off in the camera, so even with a good field mixer hooked up, AGC will be negatively affecting the audio entering the camera. The camera also does not have timecode in or out, and is unable to sync with a secondary audio system.

Jon Firestone on *Gathering of Heroes*.

On the set of the short film *Breakaway* shot on a Canon 7D.
Photo courtesy of Jason Anderson.

Traditional slating techniques can be used, but manually syncing every clip in post can be annoying. There are plugins that look at the audio waveforms from the onboard audio and sync to a secondary audio though that can help automate the process. Even if the cameras did not have AGC, they still lack professional audio inputs and quality pre-amps. So, it is likely that for professional quality audio, you will need to use a secondary audio solution and deal with syncing audio in post.

Jon Firestone on *Gathering of Heroes*.

Conclusion

The new Canon DLSRs have large sensors, 24P video and use 35mm lenses. They can create beautiful, cinematic images in the right hands. And, yes, they can be used to shoot feature films. In a sense they are the poor man's RED, but they are not a replacement for the RED cameras by any stretch of the imagination. The RED ONE camera was designed as a digital cinema camera, the Canon DSLRs were not. Canon wanted to give photo journalists the ability to shoot some video with their still cameras which is why they lack many of the features we would expect from a cinema camera. The RED is a professional cinema camera with all the options I'd expect from a professional camera including professional audio options, timecode, professional video outputs, and a cinema lens mount. To me, what makes the RED the RED is not only its sensor size, but the RAW capability, quality codec, flexibility, resolution and professional features. These SLRs will put large sensor video recording into a lot more hands, and that is great. But they are a far stretch from a RED camera in functionality and image quality as a digital cinema camera.

Jon Firestone is co-owner of Asgard Entertainment and works as a freelance cinematographer and visual effects supervisor. He is currently in post production on the action/fantasy film, *Gathering of Heroes*, which he Co-Directed. He was one of the first 150 RED camera owners and has been working with the camera both in the field and in post production for over two years. He is an avid early adopter of technology and enjoys developing workflows. He also developed and taught the 3D animation program at the Colorado Film School.

Discuss this article, and post your ideas, comments, and questions in the Online Film and Video Production Forums moderated by experts at www.studentfilmmakers.com/bb.

Actor Gary Sirchia on the set of *Gathering of Heroes* with AC Tim Hardy next to the camera.

Peter Wigand and a Canon 7D camera shooting *Breakaway*. Photo courtesy of Jason Anderson.

HDSLR Audio

Challenges and Solutions

by David Kaminski, with Eric Perez

There are reasons to fall in love with the HDSLR cameras, but audio is not one of them. It shouldn't stop you from using one, but knowing a few things about what you are getting into first will make for a better long-term relationship with this gear.

Double System

The Challenges

Let's start with the premise that you might use the camera's audio as a reference only. It's a time-tested solution to record the audio independently and to synch it later. Most professional sound people would recommend this option and would tell you that it is the best solution.

In general terms, depending on the make, model, and age of your camera, you might find that the audio of your camera may or may not be using SMPTE timecode. (*At the time of writing this article, none of the HDSLR cameras have it.*) If you are trying to synch two dissimilar sets of audio – one SMPTE standard and one not, your efforts to synch up your audio later could be very difficult. At that point, it may become a truly professional task, one suited only to the most patient or the most skilled – likely a pro audio person.

The ideal solution for people who will want this as an option – to record audio independently – is to make sure that the camera records in a SMPTE standard like your pro audio gear. *(If it doesn't, and likely that is the case, look for software solutions, or look at how to use the camera's audio with external gear.)*

Getting Complicated

Some people using a double system are looking to be highly mobile, since the camera affords that option. Small recording units are excellent choices for their size and fidelity (there are about a half dozen on the market). One drawback may be that they do not use SMPTE timecode, or cannot accept a timecode input. Scrutinize this option and consider whether it is right for you.

Software Solutions

If you opt against using a SMPTE timecode for your own purposes or it is not an option – manufacturers' limitations, cost, versatility of movement, ease of use – then, you may want to look into software solutions to be able to synch your camera's sound and your recorder's sound. One viable software solution to synch sound is PluralEyes by Singular Software, which offers plug-ins for a number of editing programs.

Another software, Magic Lantern, is an open platform that allows for "on-screen audio meters," "manual gain control with no AGC," and a number of other helpful features for video. Updates also continue to be released.

Utilizing the HDSLR's Audio

There are a lot of reasons to want to record the best possible audio along with your original footage. The merits of that are obvious. Unless you have tried to do it with your HDSLR camera.

A Little History

Early models of the cameras had audio…as an afterthought. They are photo cameras. Or were, at least. You might hear a company rep telling you that they never thought the camera would be used by filmmakers. Maybe a few, but not in the numbers that are now flocking to it as a solution. Therefore, it is common to have older models of cameras with 44.1kHz

(industry standard for CDs) instead of 48kHz which is standard for video.

Since it is often debated about what the real difference for filmmakers is between 44.1kHz and 48kHz, it is worth talking to a person who does the post-production work on films.

As a person whose experience spans over 30 years in the entertainment industry with roles ranging from composer to supervising sound editor, Joe Carroll, founder and president of Manhattan Producers Alliance says, "No one can hear the difference between the same audio recorded at these two sample rates no matter what they claim. Pros can, however, hear the difference between 44.1kHz CONVERTED to 48kHz in post, [as opposed to audio originally recorded at 48kHz]. This is the reason it is preferable to start in 48kHz if you are going to end up at 48kHz."

The Obstacles

Mini, Sub Mini, and ACG

Filmmakers are now approaching the audio of the HDSRLs with some of the right tools, but it is still a bit complicated since the cameras use a stereo mini or stereo sub-mini connector for their audio input. Trying to get your pro audio equipment to interface with it is a challenge. And then there is the automatic gain control. AGC. Three letters you don't want to hear if you are making a film.

Adapters

If you are using phantom power mics, XLR connectors, and other pro gear, you will need either an adapter like the Beachtek DXA-5D which has meters, supplies phantom power, and fits snugly under the HDSLRs. Or you can use a juicedLink adapter, which is rated as having very good pre-amps and is perhaps the best choice. An additional component to add to the juicedLink is the DN101. It is an extra box that allows you to disable the camera's AGC. Another bonus is that it has meters and a headphone jack. Together, the units can be a bit awkward on the rig, but the sound quality and overall solution is a very good one.

Mixers and "Load"

Filmmakers can also use a two-channel mixer along with their HDSLRs. The trick of the trade is to use a custom cable to take your output from the mixer's XLRs (left and right) and go into the stereo mini or stereo sub-mini. It requires using a "load," or electrical current, to trigger the AGC of the camera to turn off.

Making this solution work well and reliably securing everything requires some professional skill and drilling into the chassis of the units.

Further Advice

There are numerous user sites, user groups, and sub-groups devoted to the HDSLR cameras. Every month is a new surprise from manufacturers and from third-parties who are working to create fixes. Finding advice there and staying current will help you as you make your decisions and start your film.

David Kaminski is an educator, writer, producer, and consultant. His students' videos have won more than 60 awards (among them twelve Telly Awards and two CINE Golden Eagle Awards) and have screened more than 200 times nationally and internationally.

Eric Perez is the Sales Manager at Professional Sound Services in NYC. In addition to all of his other work, he has put together and helped design audio set-ups for about 15-20 HDSLR rigs.

WHERE DOES FILM STAND?

"We now have to be familiar with 2K, 4K, RAW, log, linear, CCD, CMOS, LUT, and various workflow options."

by William Donaruma

We shot a little fantasy, children's sequence based upon a short film idea we had while testing various film stocks.

from the top:

1. Director William Donaruma helps cinematographer John Klein out with a dolly move shooting a scene on Super 16mm.

2. John Klein frames up a shot while William Donaruma directs Leanna DeJong.

3. William Donaruma directs Andrew Taylor while providing some fill light for John Klein on camera.

Digital production has made such leaps in the last few years that it has become a mindset amongst students and studio executives alike. In fact, we can no longer simply refer to it as video or HD, because the variances in terminology and the expanded resolutions have gone beyond such terms. We now have to be familiar with 2K, 4K, RAW, log, linear, CCD, CMOS, LUT, and various workflow options. The lobbying back and forth by Kodak, cinematographers, and the various camera manufacturers have been in full swing for years and now camera comparison tests have been Olympic events of sorts as filmmakers, studios, executives and manufacturers try to sort out what the "best" option is right now. However, figure skating is not speed skating and film is not digital. There are perceptions about each format and an apparent revolution is taking place that has put film on its heels, while also being able to perch atop the mountain as the standard bearer of quality. But, has top quality been forsaken for being good enough in an economy that increasingly puts budgets above artistic merit?

Economics has certainly had its hand in the production arena as it has affected many industries and lives. Touching off the digital era in television was not the economic downturn, but the 2007 writers' strike. With the looming actors' strike to follow, studios operated under AFTRA contracts for the pilot season, which allows for video or digital productions. All of Fox Television pilots were digital and the number of them dropped dramatically that year. Increasingly, the very idea of a digitally based production caused executives and producers to latch on to it as a budget saver. Granted, the advancements of camera systems by Sony, Arri and Red in the last couple of years has created an efficiency in the fast-paced television pipeline without a major sacrifice in quality for HD exhibition in homes. Producers can immediately see dailies from distant locations and editing can begin right away. This, however, has not been a factor producing a distant show like *Lost*, and one can argue that it had not been a factor prior to the shift. So, did it make it better, faster or significantly cheaper and are audiences any wiser to the change? Can you tell the distinctive differences between film shows like *Lost* and *24* and their digital counterparts like *Rescue Me* and *The Good Wife?*

The growth of digital capture on motion pictures has been slower, but it has had a high profile group of advocates adding to the publicity for a digital revolution. The George Lucas push with the burgeoning format on the last three *Star Wars* movies kicked off the discussion, but since then, Francis Ford Coppola, James Cameron and the Red touting Steven Soderbergh have made the push more prevalent. Budget constraints for these heavy hitters didn't seem to be a factor in their transition so much as efficiency, immediacy and a new way of creation, because the sacrifice in quality wasn't so much of an issue anymore as sensors became larger, more light sensitive, and allowed for better lens choices. A recent on set conversation between a producer and DP stated they preferred the Red for efficiency, but the F35 "looked more like film," thus digital always finds itself in the shadow of film. It is ironic that the most expensive movie this past year was digital (*Avatar*), and one of the least expensive was Super 16mm film (*The Hurt Locker*), yet both competed in the same categories of awards. It is with the latter that film, as a medium, can and should tout itself as alive and well. This and the fact that artistic merits in cinematography largely go to actual film-based productions.

Educational institutions have been embracing digital as an economic and practical alternative, thus doing away with film for production programs. Even graduate programs, where you would have to attend for a chance at shooting 35mm film, have been moving away from the costs of film production. Adam Kane, ASC, recently told me he could foresee a day when DPs coming into the industry will have never shot a frame of 35mm film. The benefit of this change is that one such school allows anyone to direct a thesis "film" on a Red One versus choosing a smaller number from the class to shoot on film. This is also where Red has had a tremendous affect on the industry as a whole. Not only are individuals able to buy into cinema quality production tools, but educational institutions, mine included, are able to offer professional level filmmaking without the costs of film stock, processing and transfers. Universities are barely able to stay ahead of the curve on new

This was another test sequence comparing S16 film (Arri SR2 HS) with HD on a Panasonic HVX200.

William Donaruma confers with John Klein over a shot.

William Donaruma and John Klein shooting a boxing sequence comparing Super 16mm film stocks with DVCPro HD. Mark Weber works the speed bag in the background.

Boxer Mark Weber performs sit ups while John Klein frames up another shot with an HXV.

technologies having to upgrade cameras every two to three years to make the program attractive and viable, and they are certainly not going to offer the Sony F35 and the new Arri Alexa any time soon. The economics of independent and educational production such as this has an advantage, but there is a caveat to this situation. Are we to throw away 100-plus years of proven filmmaking technique for the latest developments?

No one has looked back since audio left tape on the Nagra to digital recording. Of course, there are varying opinions on the subject, but in a recent list of postings on Cinematography Mailing List regarding "Kodak to the new generation," it has been noted that this new generation can be seen as "its good enough film makers" (Jim Matlosz) and that taking short cuts or the easy way out is a mindset when comparing film to their newest digital camera. One of the best examples stated about the new generation is that producers, directors and crew have become "'frightened' of shooting film, because they 'can't see' what they are

shooting." (Anna Carrington). This is, of course, a false notion, because the viewfinder students are monitoring is not calibrated, and they have no sense of how a digital image needs to be handled and the ramifications of varying camera systems in a professional world. On the other hand, once you learn how a film stock reacts to light, you know what you are going to get and how much flexibility you are going to have in post.

From my position, as filmmaker and professor, who teaches and uses both film and a variety of digital formats, I can attest to the various perspectives regarding these issues. One student was glad she got to use film at least once because it would soon be a dead medium. Some find it easier to shoot more (not better) when they shot with a DVX100, which is no comparison. I can easily show how an Arri SR2 is actually less complicated to use than an HD HVX200. Many others have proclaimed film far more "satisfying," despite their initial fears, because of their appreciation for the image. When I exit poll certain classes, most everyone proclaims it to be important that everyone take the film class before moving on to upper level

digital production in order to better understand what they are doing. It is in these moments that I really feel I have done my job!

What you also find is that students who study film history and critical analysis, and then, take film production will see it in a whole new way. I have students who start telling me how they notice how beautiful *Inglourious Basterds* looks compared to other films, which is, of course, on film. I should also say that my stance is such that I believe that the image is a vital part of telling the story. So, when someone says you don't need to shoot actual film to teach, or learn, filmmaking as storytelling, I do agree with that to an extent because the story should help dictate the format just as filmmakers have chosen to shoot anamorphic, varying film stocks or use various processing techniques versus choosing an F35 over the Red. However, when you can shoot film, you can have the confidence and knowledge to make images digitally with respect to the master format. First AC Sean O'Shea (Local 600/LA) told me that in his experience of working in both formats extensively that while HD is

certainly here to stay, "Cinematography is the perfect mix of science and art in my opinion. Not teaching its principles would rob any budding filmmaker." Perhaps the best perspective I have seen lately, after swirling through the sea of technical comparisons, color space bit numbers and dizzying array of charts was from David Mullen, ASC, who said, "Let's judge tools by their quality, practicality, and their effectiveness in achieving artistic goals – not by their newness or level of technological advancement." I thanked him personally and went back to teaching the beauty of film stocks and exposures.

William Donaruma has years of production experience having worked for Universal Studios as well as a variety of production companies and major television networks in film and video production. Returning to Notre Dame to teach production courses, he has won the Kaneb Teaching Award and was granted a fellowship at the Academy of Television Arts and Sciences. His website is www.williamdonaruma.com.
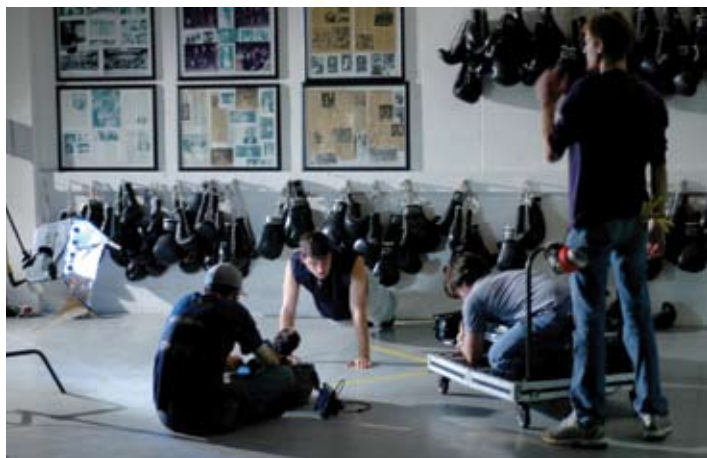
John Klein shoots HD and William Donaruma runs the Arri SR2 while Mark Weber does a set of pushups. Grip, Ian Cooney, assists.

Director/Producer of *Strong Bodies Fight*, William Donaruma, captures a sun set time lapse in the upper Northeast region of Bangladesh in India. Shot with an HVX200.

A Look Back at One of the First Creative Uses of
an Experimental Version of Hi Def

Stay True to the Story and Get the 'Money Sequences'

by Myrl A. Schreibman

High definition, 24p, 3D, the Red, the Scarlet, digital dailies, and digital intermediate are the words of today's technologies, and filmmakers are using the technologies to tell their stories. In 1980, I was at Paramount Studios producing a movie for television titled, *The Girl, the Gold Watch and Everything*. My first "studio" project. It was based on a John D. MacDonald novel of the same name and is the story of a man who inherits a pocket watch from his crazy, eccentric billionaire uncle that allows the holder of the watch to stop time. The project was being made for the "new network" which was called, Operation Prime Time, and later became the Fox Television Network. This was before we ever heard of CGI. Before we ever heard of high definition, everything narrative on television was shot on film. The film had a cut negative, and the negative was transferred to one-inch tape for airing on television. Pretty prehistoric to what we do today.

The budget of the movie was $1.6 million dollars, which was the exact licensing fee given by the network for a two-hour movie, and I was faced with making a movie that was going to air during sweep week that spring. I wanted to be somewhat true to the novel and show scenes where our hero Kirby Winter (played by Robert Hays) or our heroine Bonny Lee (played by Pam Dawber) could stop time and move and do things with people frozen in time both in interior and exterior locations.

The story had effects sequences that involved images like floating Charla O'Rourke (played by Jill Ireland) out of a yacht onto a marina dock and into the back of an open truck full of sailors; and Bob jumping out of the truck and starting time again as it drove away. Pam being frozen in time just as she is about to punch out actor Ed Nelson; and floating off the yacht to the safety of a bench on shore. Pam stopping a beach volleyball game and untying the top of a bikini of one of the female players and starting time again so it fell on the sand to everyone's surprise. And Bob stopping a bullet in mid-flight

and redirecting it to hit the wall of a stateroom. All sequences that people had not seen before in a movie made for television.

The studio "experts" told me that the script had to be rewritten because their budgeting department broke the script down and determined it would cost $2.2 million dollars. They said the effects alone would cost $500,000, and they were not going to deficit the project. They wanted the script rewritten so everything could take place on a soundstage and could be shot like the series *Bewitched* using a locked off camera. I didn't want to do that. I wanted to be true to the story.

Now a budget for a studio picture must be signed off by the producer before it can be made. In other words, the producer is warranting that the project can be made for that amount of money, and the producer has the responsibility to keep it within that budget – regardless of who prepares the budget. So, ultimately, I had to know what the picture would cost if we were going to shoot the script that the network bought. I broke down and boarded the same script and did my own budget. A budget for $1.6 million dollars. The Executive Producers believed in me and the project, and after assuring them it could be made for that budget, they ran interference with the studio suits. That's all the money I had, so I needed to find a way to do the picture for that amount of money without changing the screenplay. I needed to find a way to do the "money sequence," which was the stopping of time and the characters moving within it.

Being a producer/director who worked both in film and tape in those days, I knew that my friends Leon Silverman and Emory Cohen at Compact Video in Burbank, California, (they later left to form Lazer-Pacific Video) were experimenting with a new form of video recording in which the image would record at 655 lines (as opposed to NTSC standards of 525 lines) at 24 fps (as opposed to 30 fps). This was the beginning of what later became high definition television. With the storyboards of the effects sequences hanging on the wall, I invited Leon and

Emory to my office along with Bob Ringer of Image Transform. After a nice cup of coffee and a few bagels, I said to them, "Gentlemen, how do we do what you see on that wall and keep it in line with the budget? Can those sequences cost somewhere in the neighborhood of $30,000?"

It was that day in January 1980 that gave birth to the first film project to ever do shots in scenes using video tape (655/24), transfer it to film and intercut the negative of that film with original picture negative of other shots in the scenes. That day we figured out which shots needed to have the marriage of live action with frozen action in the background or foreground and which shots did not. It was that day the studio said what I was going to do had never been done before and I was crazy to do it. And it was that day I decided to take a gamble and told the disbelieving studio suits not to pay me my salary until I delivered the project. I believed in the creativity of my friends, and they believed in my vision. *Because it hadn't been done before didn't mean it couldn't be done.*

And this is how we did it. We shot the background/foreground plates for each of the shots in film. We then transferred the film to video using the, then, new technology of 655 lines at 24 fps keeping the electronic focus off and selecting the exact frame we wanted to freeze in the action. Then we went to a blue screen stage with a Compact Video truck and its 655/24 camera and video deck systems, and the director of photography Jacques Haitkin determined the match of the depth of field of the television lens to the depth of field of the film lens that was used to shoot the background plate. Once that was determined, using electronic chromakey out of the truck, we married the frozen frame of the background/foreground plate with the live action of the blue screen elements. Only the blue screen image was being recorded in 655/24 with the electronic focus off as well. By staging each shot we allowed the actors to watch the married images on the floor monitor so they could improvise and add character story traits to their performance. Once we had the final married image electronically in 655/24, we then transferred back to film putting the electronic focus back on at that phase of the process. The negative from that image was then intercut with the original picture negative, and because the world in stopped time needed to have a different feel, we chemically color timed the picture red in the film laboratory which neutralized any inconsistencies that might have appeared. It was sort of like putting a red filter over the sequence. I allowed only foley to be played over the scene and added the ticking of a pocket watch to enhance the reality of that world.

The screening room was packed the day I showed the answer print to the suits. The lights went out in the theater. The movie played through. At the end of the screening, I stood at the exit saying nothing as the suits left the theater. They each passed by and shook my hand. Gary Nardino, President of Paramount Television, was the last to leave. "Come and get your check," he said with a smile.

That was 1980. Today whenever Leon Silverman and I get together, we speak about that day in January and how we would do it differently today!

By the way, *The Girl, the Gold Watch and Everything* aired in prime time and was the highest rated show the week it was on the air.

Myrl A. Schreibman is a Producer/Director, professor at UCLA Film School, and author of the books, "The Film Director Prepares, A Practical Guide for Directing Film and Television" and "The Indie Producers Handbook: Creative Producing From A to Z." His website is www.indieproducing.com.

Tell an Authentic Story and Shoot It with Great Heart

"Jitensha" Films in Tokyo with the Bare Minimum HD Tools

by Dean Yamada

There's a quote that I love from Francis Ford Coppola in which he talks about the prevalence of video cameras and how it opens up the possibility for a little fat girl in Ohio to pick up her father's camcorder and become the next Mozart. Her brilliance breaks down the whole professionalism of moviemaking and returns cinema to an art form.

With the boom of affordable HD cameras, this is now happening around the world. Ten years ago, I believe it would have been nearly impossible for a digitally shot short film to compete for slots at the biggest film festivals around the world. Now it is commonplace.

I teach film at a little school in Southern California called Biola University, and one of the benefits of teaching at this school is that I get to bring a class of students to Tokyo every two years to make a short film. Our latest venture is called *Jitensha*, which means "bicycle" in Japanese. It's the story of a lonely man whose bicycle gets stolen piece by piece; when only the bell is left, he receives a letter in the mail with a list of addresses where he can retrieve the parts of his bike. It's a redemptive tale of how a man pieces his life back together.

A Japanese writer named Yu Shibuya penned the script and a small production company called Studio Re: collaborated with us on the production. Our lead actor, Yugo Saso, starred alongside Kiefer Sutherland in the 2001 indie film, *To End All Wars*, which was produced by the chair of our film department.

Apart from a couple of C-stands, we shot *Jitensha* using only equipment we could carry with us on the plane. This included a Panasonic HVX-200A, a Letus adapter, a 35mm lens package, a Steadicam, an Arri light kit, sound equipment and a few other small items.

Here's why and how we used the bare minimum HD filmmaking tools to tell the story, increase production value, and achieve our objectives.

The Look and Feel of the Film, "Jitensha"

The first half of *Jitensha* has a cooler color palette and uses a lot of flat space. As the protagonist sets off on a journey of self-discovery in the second half, the colors become warmer and more saturated, the space becomes deeper, and we begin to use a lot of vertical lines.

Capturing the Look

To attain the look we were going for, we needed to be aware of our surroundings and what they had to offer visually. The film is a mix of deep and flat space, warm and cool colors, and uses strong vertical lines. When we arrived at each location, we had to look at the linear motif inherent to the surroundings and what kind of space we could achieve.

Using the example of vertical lines, when we'd compose a shot, we had to be conscious of how to maximize this visual component. If there were only vertical lines on one side of the building, this is where we would place the actor. The whole film was shot on location, so it wasn't a matter of production design, rather where we place the camera.

Camera Selection

Panasonic HVX-200A

Our department owns 2 HVX-200As and 1 RED. For traveling overseas, the HVX is much more portable. The image quality looks good, the lenses can be changed, and we shoot with P2 cards so the workflow is easy.

Lens and Lens Adapter Selection

35mm Lens Package and Letus Adapter

To tell a story in the best possible way, a filmmaker needs to know how long and short focal lengths affect each composition. Extremely long focal lengths tend to compress the space in a shot, but have a shallow depth of field, which can look visually appealing. Extremely short focal lengths expand the space, often making it look more dynamic.

Camera crew in background, actor Yugo Saso in foreground. Photo by Kyle White.

On the set of *Jitensha*. Andrew Harmon, Nathan Mielke, Daniel McNutt, Dean Yamada, Allan Bagge, and Christian Young. Photo by Kyle White.

Daniel McNutt and Yugo Saso on the set of *Jitensha*. Photo by Kyle White.

The Letus adapter was the most accessible lens adapter. This was an absolute must because we needed to be able to switch out the lenses so that we could control the look of the film. Being able to switch out the lenses allowed us to achieve different looks, such as using a longer lens to attain a shallow depth of field. For some shots, a shallower depth of field can have more of a filmic quality. We used focal lengths to control our shots and give us the look that was appropriate for the scene.

Without the lens adapter and the 35mm lens package, the film would have lacked texture. We wouldn't have been able to achieve a look that would make people forget that this film was shot on video and not film.

Camera Support Systems

Steadicam

Because we were shooting a film about a bicycle, we knew we were going to have moving shots. We wanted these shots to look fluid, whether we were tracking with the bicycle in a car or following the protagonist on his journey. We also wanted to keep the film dynamic by moving the camera. With that said, we didn't use tracking shots just for the sake of moving the camera; they had to be organic and work with the story.

We used the Steadicam inside of a car while we were tracking with the bicycle. The last shot of the film was shot guerilla with the hatch of a mini-van open and the camera op shooting from the back as the actor followed us on his bicycle. All of our tracking shots were done with the Steadicam, which freed us of having to use a dolly, thus saving more time.

The Steadicam is a substantial weight to be carrying around all day. It helped us to have two camera operators, who would switch off to lighten the load. To use a Steadicam well, one has to learn how to balance it and control it. It's not easy to get fluid moves, so our camera ops made sure to practice with it before leaving for Japan.

Arri Light Kit

The Arri light kit was the only portable light kit that we felt we could check onto an airplane. It contains three small lights that we used to shoot most of the interiors. We made this decision because it was easier to bring our own lights on the plane than to rent in Japan.

One Arri light kit is not enough to fully light a scene well, so that was the biggest disadvantage with not having bigger lights. However, it was small enough for us to use surreptitiously when we had to light a couple of outdoor scenes.

Audio Gear and Setup

We recorded our sound directly into ProTools using a MacBook Pro.

We used a boom most of the time along with ProTools. Having the sound recorded digitally gave us good sound quality and allowed us to easily sync it to the picture in Final Cut Pro.

Would it surprise you if I told you that this little film, created by a fledgling film program, shot with limited resources, premiered internationally at the oldest film festival in the world, the 66th Venice Film Festival? How about if I told you that it screened in competition at the Clermont-Ferrand Short Film Festival, the most important event for short films in the world?

This proves to me that the playing field has officially been leveled. For films to screen on some of the largest stages in the world, they do not need to come out of the big name film schools, nor do they need to be shot on film stock.

For *Jitensha,* all of the necessary elements fell into place – an original, unique story; a great actor who filled in the gaps; strong aesthetic choices that dictated the look of the film; and lastly, an affordable shooting format that would allow us to make a beautiful film on a shoestring budget.

Apart from me being the director/professor, I wanted to try to erase the hierarchy of the crew. Each student had a job to fulfill, whether as the producer or best boy. Just as in the human body each part serves a purpose and is no less important than any other part, so it was on our shoot. If the 1st AD does just as much work as the producer, why should the producer be seen as any more important? This is just a Hollywood convention that exists only because of money. On our films, money does not dictate the importance of the position.

My students poured their hearts into this film and brought their A-Games to the set. This made all the difference as we set out to tell this story in the best way we knew how.

Anyone can pick up a camera nowadays and make a great film without

Yugo Saso with Daniel McNutt on Steadicam. Photo by Kyle White.

following Hollywood rules. One has only to tell an authentic story and shoot it with great heart. At the end of the day, it is the emotional resonance of the film that will connect with audiences around the world.

Dean Yamada received his MFA from USC and is an associate professor at Biola University, where he specializes in production and post-production classes. *Jitensha* (www.jitenshamovie.com) also won best short film at the Heartland Film Festival and the Best of Fest award at the Broadcast Educators Association Festival of Media Arts. Next up, Dean will be bringing a class of students to Berlin to shoot another short film.

The New Paradigm

A glance into visionary films and filmmakers who have paved the way for everything that is possible today.

by David Worth

The phrase, "new paradigm," seems to be everywhere today in post production, in capture, in delivery, even in distribution. Exactly what is a paradigm? The dictionary defines it this way:

paradigm
noun
… a typical example or pattern of something; a model : There is a new paradigm for public art in this country. See note at **model** *… a system or thing used as an example to follow or imitate…*

So a "new paradigm" is simply an example or model for a way of working, and as filmmakers we can see new models all around us everyday as we: capture using cutting-edge lightweight hand-held HD cameras; light using available light or the advanced palm-sized lighting panels, download our memory chips directly to the hard drive of our non-linear editing program; and edit – add titles, sound effects and mix on our laptop computer before we burn our own DVDs… That's what we have as of today, but exactly where did it all start?

Many of today's young filmmakers love to "run and gun and improvise," and the same held true in the past, where each generation's young Turks have been at the forefront in creating new paradigms. You can trace the roots of today's independent filmmakers all the way back to the Italian Neo-Realists who began breaking the rules way back in 1945. Their country, their cities, their studios and their economy were all in ruins after World War II, so they were forced to go into the streets. They used natural locations, available light, non-actors and organic, episodic stories, in order to continue to make films and their films became a revelation that captured film audiences around the world with their bold and startling, new "Neo" realism.

Roberto Rossellini's *Rome, Open City*, Luchino Visconti's *La Terra Trema*, and especially, Vittorio De Sica's *Bicycle Thieves* were at the time new paradigms that by the late 1950's had influenced both The French New Wave, Francois Truffaut's *The 400 Blows* and Jean-Luc Godard's *Breathless*, as well as John Cassavetes' *Shadows*, which became the first film of the American Independent film movement.

In *Breathless*, Jean-Luc Godard used an American star Jean Seberg and still shot without a formal script, without lights, without makeup and without sound. For a dolly, he actually pushed his Director of Photography, Raoul Coutard around the streets of Paris in a wheelchair. The film was an art house and film festival sensation.

In 1964, Beatle-mania took over the world and the films that helped to promote the Fab Four, *A Hard Day's Night* and *Help!* were made by the young British commercial director, Richard Lester and contained the world's first music videos… Editing to music opened up thousands of new non-linear possibilities, and by 1981, when MTV came online 24 hours a day there were literally hundreds of filmmakers from all over the world telling visual stories while promoting the latest pop or rock stars and using every possible experimental technique that they could imagine to grab the attention of their young audiences.

They used 8mm, 16mm, 35mm, black and white, and color film stock that they overexposed and underexposed, pushed and pulled, filtered and cross processed, strobe lit, candle lit, spot light lit and available lit, and all of these elements were often used in only one music video. The resulting popularity of these experiments in new paradigm filmmaking soon found their way into the world of TV commercials where they would often spend much more money on launching a new car or product than many an independent filmmaker used in making an entire feature film.

Ten years later in 1991, many of those MTV and commercial innovations finally made their way into an important big studio, big budget film, when the brilliant director Oliver Stone incorporated them into the production of *JFK*, his expose on the conspiracy behind the political assassination of John F. Kennedy. He and his Director of Photography, Robert Richardson used 8mm, 16mm, 35mm, black and white, color, videotape – often employing several formats all covering a scene at the same time in order to present all of the fact, fiction and cover-ups surrounding that treasonous event.

JFK was the beginning of today's new paradigm in theatrical motion pictures and paved the way for a host of young independent filmmakers like Robert Rodriguez, Kevin Smith and Thomas Vinterberg of the Danish Dogme 95 movement. Then, by the end of the century, in 1999 a little film exploded onto the scene. It broke all of the rules of filmmaking, broke new ground by advertising and building a fan base on the Internet and broke box office records wherever it played. Of course, I'm referring to: *The Blair Witch Project*, directed by Daniel Myrick and Eduardo Sanchez.

What was so startling about this production was the fact that the two directors, chose *not* to direct. Instead they started another entirely new paradigm by removing the director and the crew from the daily process of making the film. The actors, decided what the location, the dialogue, the framing and shooting would be for each scene and opened the door for all of the "reality television" that we are seeing today.

If *The Blair Witch Project* did away with the director and the crew, in 2000, the director Mike Figgis, took another bold step with *Timecode*, by shooting the entire film in one 90-minute take with four camera crews, and then, doing away with the editing. The film was shot 15 times over the period of several weeks on natural locations with minimal lighting and with the actors improvising their characters each time. Finally, one of the takes was selected and presented on a four-part split screen with a jazz score, as Mr. Figgis did his final mix on the fly at each screening.

In 2002, the one-shot-take film achieved its pinnacle when the Russian director, Alexander Sokurov used the Hermitage Museum in Saint Petersburg, over 800 costumed and made up extras and several orchestras to shoot *Russian Ark*. This astounding undertaking traced over 300 years of the famed Winter Palace's history while following a "narrator" as he gives the audience a tour of the fabled characters, grand halls and ball rooms. It must be mentioned, however, that the real hero of that production was the cinematographer Tilman Büttner who managed to perform the amazing marathon-like, one-shot, 90-minute steady-cam take.

A great year for the new paradigm was 2002, since it also produced Danny Boyle's remarkable, *28 Days Later*. The "must see" element of that scary film was the totally deserted streets of London. This feat could only be achieved by being able to hold the incessant traffic for only a matter of minutes. Since multiple 35mm cameras could not be set up in such a short amount of time, the entire film was shot on half a dozen Cannon XL1 **home video** cameras, by the extraordinary Danish Director of Photography, Anthony Dod Mantle. The sheer audacity of using **home video** on an over ten million dollar horror film that went on to gross over eighty million dollars. New paradigm indeed!

There are many more recent examples that are now happening on a world-wide basis and that are even insinuating themselves into the main stream with features like *Once* and *Slumdog Millionaire* garnering Academy Awards.

Now the ball is in your court. Thank you for taking the time to look back at some of the visionary films and filmmakers who have paved the way for everything that is possible today. Now, it's up to you. You are the next generation of young Turks, of innovators, of new genre-imagining, young filmmakers who can do away with the old and usher in the new.

I look forward to the bold and startling films that you will surprise the world with… *Make Movies, Not War!*

David Worth has a resume of over thirty feature films as a Director of Photography and Director and has worked with talents like Clint Eastwood, Jean-Claude Van Damme, Shelly Winters, Roy Scheider, Dennis Hopper, Sondra Locke and Bruce Campbell. He has taught filmmaking at Chapman University, USC and at Chapman Singapore where he also lectured at the NYU Tisch Asia campus. He is presently teaching at his Alma Mater, UCLA. His first textbook, *The Citizen Kane Crash Course in Cinematography*, was published in 2008 and is available at www.amazon.com. David's website is www.davidworthfilm.com.

Short Form Documentary Editing: The Map

Get to the Point Fast, While Using Cultural Shorthand to Simplify the Message

by Melissa Ulto

Editing compelling short form pieces is in high demand now. This rise of the webisode, YouTube, and other online video portals is the ultimate culmination of MTV culture. Time is short, attention is hard to hold, distraction and competition are everywhere. Basically, get to the point fast, while using cultural shorthand to simplify the message.

What Is the Point, Key Emotion and Goal of the Piece?

This must be defined before anything else, or there is no point. The piece needs to have a point to make about an issue, a person or a brand. The whole idea is to *say* something significant and interesting people will want to stop and listen, especially if they disagree. The point need not be so serious, and often, juxtaposing the goal with an absurd question to support selling of that goal helps to define the irony or comedy.

Using the example of a fictional weight loss clinic, Thinimax, the point may be: "Hey Fatty, is your couch sagging and your love life lagging? Thinimax can get you buff and boned!" Here, we use an aggressively absurd approach to sell getting in shape with this company.

A point can be more subtle, Thinimax may decide the pitch this way: "Getting in shape is a gift you give to yourself, and your family. Thinimax is here to support you, day by day, pound by pound."

Both evoke immediate emotional responses. The first – humor, shock, anger, or offense. The second – nurturing, safety, love, or hope. And in this statement, you've also stated the goal: to sell the viewer on the brand Thinimax.

Those are commercial examples. For short form documentary, the goal may be to highlight an issue or introduce a person to their audience: "Malaria causes X number of deaths worldwide, while millions have been collected for mosquito nets." Here the goal is not directly stated, yet the viewer is left to ask the question, "Where has the money gone?" on their own.

A biographical piece may begin with something like, "The hills of Appalachia seem an unlikely place to breed pilots, with its rolling hills and deep poverty, but one family has been crop dusting, fire fighting and trick flying for over 40 years. The Winkles – mom Jane, dad Dick, with daughters Suzy and Sally, and son Wally – are all licensed pilots who run Winkle Air, a true blue grass institution." In that statement, we've set the location while creating the tension between the juxtaposition of poverty and the expensive freedom of flight, we meet the interviewees and feel inspired by their range of talents and legacy of service.

Limit Yourself to Simplified Information

A 12-year-old must be able to fully understand what the piece is saying. If the language can't be clear, direct, simple and to the point, attention will immediately fade. Here, the skill is in taking those large ideas and fifty cent words, and simplifying them down to the very basics of what a piece is saying about a topic, issue or brand.

What are the key things the viewer needs to know, and in what order? How can that information be condensed into 3 to 5 points? This is the road map, the frame, of the piece. Simple, easy to connect one point to the next, precise and relatable: *Communicating a message well is more impressive than showing off intelligence or technical techniques.*

Cultural Shorthand

We all use cultural shorthand, whether we realize it or not. Any time a popular person, place or thing is quoted as being similar to something, or a generalization is made about a situation based on our culture experience, that's cultural shorthand. Symbols with national or international meanings make it easier to explain to a wider audience what the piece is about. Think of it as visual metaphor – borrowing meaning, using archetypes that many people recognize.

For sexy, we recognize the shorthand of full lips, big eyes, curves and cleavage. The shorthand way to illustrate that is with an image of Marilyn Monroe, who epitomizes a particular kind of sexy. Another way to relate that same sexy is to have a "Marilyn type" use a product suggestively while demonstrating its purpose: seductively eating yogurt, rolling around on furs, etc.

For power, we recognize sweat on muscles, chiseled features, aggressive behavior, and emotional remoteness. Steve McQueen might represent that image, but so may a galloping race horse, or a revving car.

Joseph Campbell was a leader in understanding the power of myth and archetype in storytelling within all cultures, particularly in his work, "The Power of Myth." On the more immediate spectrum, Joel McHale on "The Soup" uses cultural shorthand in comedy to illustrated the absurdity of pop culture.

In short form documentary, using shorthand to liken the seriousness or impact of an issue by relating it to a similar, more universally recognized issue helps to quickly define the focus of the piece. Relating a local chemical spill to Three Mile Island immediately reminds viewers of the history – visual and factual – around a well-remembered disaster. Again, it is borrowing the cultural value of shared cultural information to make an immediate and dramatic impact.

In short form biographies, however, you will want to avoid cultural comparisons because they are hard to back up and will often be challenged.

Meaning Before Action

You must have meaning before you write, shoot, or edit. You cannot freestyle good content with consistent results. It is necessary and fun to improvise within the framework of a piece's structure, but without a map, it's very easy to meander and waste tape. Knowing your meaning and goal before any action will speed up your production process and save you, your client and your crew time and frustration.

As a filmmaker, Melissa Ulto produces, directs, writes, shoots and edits documentaries and experimental films. Melissa has shot and edited over 400 pieces of webisode content for a variety of new .tv sites, including Broadway.tv. Melissa edited the film, *The Art of Love & Struggle*; served as DP for the documentary, *Art & Apathy*, on location in Israel; and edited the documentaries *Death Before Dishonor*, and *The Mighty Humble Blueberry*. The film, *Mandatory Service*, for which Melissa was the director of photography, won best short at the Tribeca Film Festival. www.multo.com

filmfestivalpost.com

The Use of SMPTE Timecode

in Conjunction with Audio Recorders

by Fred Ginsburg, C.A.S., Ph.D., MBKS

Over the past several years, it has become ever increasingly common to record production tracks with a SMPTE timecode reference instead of the traditional 60 Hz sync pulse. This article is intended as an introduction and overview of the use of SMPTE timecode in conjunction with audio recorders.

Types of Timecode

Non-Drop vs. Drop

The original timecode system is known as non-drop frame, since it assigns a progressive number to every video frame (0-29). This is an accurate way of tracking individual frames, but caused a problem for video editors when they compared elapsed "real time" to "videotape time". Due to the fact that video actually runs at 29.97 frames per second and NOT 30 frames, editors discovered that they could be off by 3.6 seconds at the end of a one hour show.

In order to "synchronize" the clocks on the wall with the elapsed time counters in the edit system, video engineers developed drop-frame timecode, which works sorts of like a leap year in reverse. Two frame numbers are dropped or skipped every minute, except when the number of the minute ends in zero, such as minutes 00, 10, 20, 30, etc.

It is important to realize that the video frames themselves are not deleted. Only their numerical labels are affected.

Frame Rates

The standard timecode frame rate for video is 29.97 fps. So called 24 fps (video) is actually 23.976 fps, NOT actual 24 fps. However, video shot with the intent of converting to film could actually be 24 fps.

Other rate options for film cameras include 24, 25, and 30 fps.

So Which Frame Rate and Mode to Use?

If you are recording for a video shoot, then use whatever mode (drop or non-drop) that the videotape recorder is using. Usually, video intended for television broadcast prefers to use the drop-frame mode, for the (real time clock) reasons discussed above. But always check with the engineer or camera operator just to be sure.

Video records at 29.97 fps, so that would be the correct timecode speed for your audio recorder: match the settings of the master video recorder both in terms of 29.97 and whether or not to use drop frame or non-drop frame timecode.

If you are recording audio for a film shoot, the settings are different.

Film style editors generally (but not always) prefer to use non-drop timecode for ease of keeping track of frames, since it eliminates confusion during post-production if dealing with complex special effects or when converting from edited video back to film. So unless otherwise instructed, use non-drop timecode on film shoots.

The normal frame rate for recording audio that will be sync'd to film cameras is 30 fps, irregardless of whether the film camera is running at 24fps or 30fps! The reason for this is that the audio does not have to correspond to the film speed but rather to the video speed, since the editing is being done in video!

When the film is transferred to video (for editing), it is slowed down by one tenth of one percent. Video runs at 29.97. You cannot easily change a whole number such as 24 into a fractional number such as 29.97, unless you alter the speed by a fraction (0.1%).

Film shot at 24fps is slowed down so that it ends up at the equivalent film speed of 23.97, which is then converted in real time to 29.97 for video. The process involves what is known as a 3:2 pull-down, in which 12 half-frames (aka video fields) are created and added to the 23.97 frames, thus making a total of 29.97 frames. Every other picture frame is scanned or digitized with one extra field. Adding the 12 fields does not alter the running speed of the picture, since it is only slicing the same size bread into smaller slices, so to speak.

It goes something like this: 1,1,1, 2,2, 3,3,3, 4,4, 5,5,5, 6,6, 7,7,7, 8,8, 9,9,9, 10,10, 11,11,11, 12,12, 13,13,13, 14,14, 15,15,15, 16,16, 17,17,17, 18,18, 19,19,19, 20,20, 21,21,21, 22,22, 23,23,23, 24,24. If you count the extra fields, there are 12. So, two fields equate one frame; 24 frames plus 12 extra fields gives us our needed frame count to pad 24 into 30. (Actually, 23.97 becomes 29.97)

Film shot at 30fps film speed would end up at 29.97 film speed in video.

Back to the nuts and bolts. The picture shot in our film camera is slowed down during transfer to video. For audio to remain in sync, it must be slowed down by the same percentage. So if we record audio on the set at 30fps timecode, and then transfer it into the edit system at 29.97 fps (which also happens to be video sync) — the audio will end up in perfect sync with the picture.

When the editing is completed, the audio will be speeded up from 29.97 to 30 in order to match back up with the actual film for creating release prints. But that is not your concern as a Production Mixer. The post production people and the film labs deal with that issue.

Therefore, unless instructed otherwise, the industry standard for production sound (film shoot) is to set the timecode in your audio recorder to 30fps Non-Drop.

If anyone tells you to use a different setting, make sure that you get it in writing and witnessed! That way you cannot be held accountable for problems that may be encountered by the production company later on.

Believe me, in today's world of video cameras running at 29.97, or 23.976, or true 24 fps – there is a lot of room for mistakes. Ask, ask again, and get it in writing!

If they tell you over the phone, put someone else on the line to witness what they instructed you to do.

Running Modes

There are five different running modes for generating timecode.

The most basic setting is Free Run / Time of Day. That means that the internal timecode generator is like a clock, denoting the actual time of day. The clock runs continuously, whether the tape is recording or not. This is convenient setting to use, since anyone who needs to note the timecode numbers only has to gaze at his or her own wristwatch. Timecode errors between the slate and the recorders are obvious and easy to detect.

(It is interesting to note that some studios and producers object to time of day timecode because it is a permanent record substantiating overtime claims by the crew.)

The next most common setting is Free Run / User Set. This is similar to the above setting, except that the starting time for the TC generator is chosen by the user and does not correlate to actual time of day.

Commonly, the Hours digits are used to signify sound roll number. Spare wristwatches can be reset to match the timecode generator, if you have people on the set who need to keep track of the code.

Record Run timecode means that the generator stops when the tape does. Numbers increment during the Record mode, but remain frozen in time during pause or stop. The elapsed timecode is sort of like a tape counter, and is an indication of how many minutes have been recorded. Users often use the Hours digits to indicate reel number, rather than an "hour" of the day.

The difficulty in using Record Run is that all of the timecode generators (i.e. camcorder, audio recorder, timecode slate) would need to be physically connected to each other at the start of every take. This would necessitate a lot of cabling, or a complex set of wireless transmitters and receivers. Not for the impatient nor the faint of heart.

The last two "modes" are External and Jam-Sync.

External refers to continuously reading timecode from an External source and re-generating it onto the tape. If the External code should stop or be intermittant, the code being recorded would also be in error. (Many recorders are programmed with a self-protection that would automatically jam-sync to the last good code and begin generating new code in the absense of the External code.)

Jam-Sync (a.k.a. Set from External) means that the recorder synchronizes its internal timecode generator to match the starting numbers from an External source. When the connection to External is released, the internal code will keep in step with the external timecode source for a few hours or longer, depending on the accuracy of the timecode generators in question (recorder and source). Of course, Jam-Sync only makes sense in the Free-Run timecode modes.

Timecode Slating

There's not much point in recording timecode onto the audio if there is no timecode reference on the picture.

In the case of video, timecode is normally recorded onto the video signal even if audio is recorded double-system (i.e. onto a separate audio recorder). Jam-sync all of the timecodes, and that will take care of basic sync (video word sync is another matter, but engineers take care of that on the big shoots).

In addition to jam-sync, use either a traditional or timecode clapstick just for protection.

If there is no timecode being recorded onto the video (i.e. prosumer camcorders), or the timecode in the camera cannot be accessed -- then you should use a timecode slate so that the editor can line up the picture with the audio.

When shooting in film, a timecode slate should be used for matching up picture with audio.

The standard of the industry is the timecode slate manufactured by Denecke, Inc. Older versions of these slates were "dumb" slates and could only display the timecode being fed into them via a cable. Early on, mixers began using Comtek transmitters and receivers (similar to a radio mic) to send the timecode from the recorder to the slate, thus eliminating the awkward cable.

Soon after, Mike Denecke came out with his portable sync box, which was a timecode generator that could be attached to the back of the slate. The addition of a self-contained timecode generator makes a slate into a "smart slate".

The sync box could be easily jam-sync'd to the recorder, and could hold sync for half a day. Of course, since re-jamming the timecode is so simple, mixers seldom wait that long.

The latest version of the Denecke slate has a sync box built-in.

Obviously, when you are jam-syncing a smart slate to the recorder, you must use a form of Free-Run timecode, since the slate would have no way of knowing when you are in Record or Pause.

When doing sync playback, as in a music video, the timecode slate needs to display the code of the soundtrack being played back. Therefore, the slate must function as a dumb slate and receive a timecode feed from the recorder (playback source). This feed could come via a connecting cable (awkward!!!) or from a Comtek transmitter system (which is how it is normally done).

Make sure that you are familiar with how to use and set-up your timecode slate. Make sure that the internal settings for the slate's timecode generator are set to match your audio settings in terms of frame rate and drop/non-drop.

If your camera will be using 24 fps (video rate), make sure you find out if it is actually just 23.976 or a true 24. Most of the time, it will be just 23.976.

Some cameras, such as the RED, can cross-generate a 29.97 timecode for output to the slate and/or audio recorder. (It is possible, but can be tricky to the untrained.)

Otherwise, You would need what is known as a tri-level sync box to convert the 23.976 code into 29.97. Usually, tri-level sync is only an issue of really big, multi-camera shoots. In those instances, a video engineer in a white labcoat will make sure that everything is set up correctly.

However, most production houses are not that exacting. Set your slate and audio recorder for 29.97, and just make sure that the camera sees a few frames of the slate. Back in post, the editor can match the start of the audio to the timecode slate numbers, and let the editing computer deal with the housekeeping.

Timecode and Sampling Rates

The Nagra IV-STC stereo timecode recorder is an analog reel to reel machine. The tape runs at 7 1/2 inches per second while a timecode track is recorded down the center of the tape. During sync playback, a device known as a sync stripper isolates a sync pulse from out of the timecode signal and sends that signal to the resolver unit, which controls the precise speed of the tape by comparing that signal to a reference signal. Changing the setting (rate) of the timecode will cause a change in the playback speed. For instance, a tape recorded at 30 fps in the field can be resolved at 29.97 fps to slow it down in order to sync with a film-to-video transfer.

But digital recorders work differently. For example, audio is sampled at a precise speed of 48,000 times per second. That is what the 48k setting refers to. Audio is then played back at 48,000 times per second. To change the speed of the audio is not the simple matter of turning the tape reels slightly faster or slower, as in the case of the Nagra. Instead, complex electronic circuitry must be capable of re-sampling the digital audio at a different rate, a task much more complicated than it sounds.

Timecode recorded in digital tends to be cosmetic in nature, and is not used to control the sampling rate of the machine. It is possible in digital to even change the output timecode of a pre-recorded track without changing the speed nor the original timecode of that track!

In order to change both the playback speed of the tape as well as the timecode, two tasks must occur. The recorder must alter the sampling rate, and a new timecode must be generated, based on the sub-code of the tape. Merely re-setting the sampling rate (on those machines capable) or re-setting the timecode by itself may not achieve both tasks. Each problem needs to be adressed individually in the machine set-up. Not so much of an issue for live recording, but it does come into play if you are doing a sync playback or music video.

Final Caution

Timecode recording techniques are simple in theory, but can get tricky in practice. Do not attempt to take on a timecode recording assignment on your own without spending a few hours being checked out by an expert on the idiosyncracies of the specific hardware package you are planning to use.

Fred Ginsburg, C.A.S., Ph.D., MBKS is a specialist in production sound recording for motion pictures and video. His background includes nearly two decades as a sound mixer on feature films, episodic television, commercials, as well as corporate and government. Author of over one hundred technical articles and one textbook, Fred has lectured and instructed workshops about location sound recording at universities, studios, law enforcement, and production facilities across the United States and internationally.

Micro Foley

Create Sounds with Very Small-Sized Tools to Get the Job Done

by Bryant Falk

Michele Alfonso creates hair brush effect using micro foley technique. Photo by Bryant Falk.

When making any type of video or film it is quite common to add sounds that either may have been missed during shooting or are needed to create a more interesting moment. This is often referred to as Foley work. Micro Foley is a term I coined where you create sounds by using only very small tools to get the job done. This style of Foley became necessary, as my recording space wasn't large enough to accommodate all the tools a regular Foley artist might use. It's amazing how limitations can lead to creativity. Another great strength about Foley is how you can satisfy the ear's belief with audio that is not directly related to that object. This allows a lot of room for creativity. Don't forget all the basic tools you should always have handy when creating Foley.

(1)   Pitch Change

(2)   Reversing (Play audio backwards)

(3)   Reverb

(4)   Delay

(5)   Equalizer

One example is when I needed to create a lot of creepy effects for a "haunted house" style project. I needed lots of ghosts and goblins to be floating around here and there, not scene but heard. One good way to create creepy movement sounds is with a paint brush. Using different softness and sizes I would slowly drag the brush over different material. From small wood blocks and the back of a frying pan! Pitch shifting them down would add the mass I was looking for. The best part is I could fit it all in the sound booth.

Below is a list of "small" or Micro Foley tools you can use to get lots of interesting sounds. In brackets is one application of the tool being used. Keep in mind that with pitch changes and composting of sounds, (adding many sounds together) you can get many more audio treats for your film!

(1)   Thumb Tacks and Wood (Shoes Walking)

(2)   Retractable Pen (Clock Ticking)

(3)   Two Keys, (Rub the Notched Section Together [Just cool])

(4)   Rubiks Style Cube Puzzle (Springs Pitched Down to Sound Like Machinery)

(5)   Paint Brush and Foam, (Combing Someone's Hair)

(6)   Duffle Bag, One 5lb. hand weight and Clothing, (Drop for Body Fall Sound, [Watch Your Feet!])

Now this is just a small sampling. The rule is there is no rule! Well, if it's Micro Foley, it's a small object being used. Having an actual car door you can open and close in a studio is regular Foley. Taking a Zippo lighter and making it sound like you've flipped open the hatch of a nuclear sub is Micro Foley!

Bryant Falk has been a producer and engineer for over 12 years working with such clients as The Ricki Lake Show, Coca-Cola, Sports Illustrated, Valley National Bank, and MTV's The Shop. His company Abacus Audio (www.abacusaudio.com) handles many aspects of the audio production field from creative and production to mixing and final output.

Call for Entries   Featured Film Festivals and Video Contests

The 2010 DC Shorts Film Festival
www.dcshorts.com
DC Shorts turns the spotlight on truly independent short films, created by new and established filmmakers in an era when the art of filmmaking is opening to all. Panel discussions, city tours, free housing and meals, incredible parties, and cash prizes are just a few of the reasons DC Shorts has become a filmmakers' favorite. DC Shorts selects films from every genre for the festival's competition screenings, with a special focus on films created by metropolitan Washington, DC-based directors and writers. The festival reviews films under 20 minutes in all genres and programs screenings so audiences see as many different types of films as possible.

MOFILM's 'Make an Ad' Video Competition at Tribeca 2010
www.mofilm.com
MOFILM is accepting entries for their first competition being held at New York's Tribeca Film Festival, in co-operation with Major Global brands. Winners who enter into MOFILM's 'Make An Ad' competition will be flown to The Big Apple to experience a red carpet treatment at the Tribeca Film Festival. The 'Make An Ad' competition highlights these big brands: Best Buy, Chex Mix, Lamisil, Nature Valley, Nokia, Seven Bar Foundation, and Voltaren. MOFILM's mission is to allow creative people from anywhere in the world and with any background to 'Get Creative - Get Noticed and Get Famous!' using the MOFILM platform as a base to run 'Make and Ad' and film competitions to showcase talent.

DOCUTAH International Documentary Film Festival
www.docutah.com
Have you ever seen a film that made you laugh? Cry? Taught you something about yourself? Or about the world around you? Documentary films are important in the way we communicate with one another. DOCUTAH is a documentary only festival in Southern Utah. By blending the breathtaking attractions of this area with a love of documentaries, the documentary film festival hopes professional and student film makers embrace what DOCUTAH has to offer. Being one of the few college-based festivals, Dixie State College of Utah will provide a wide array of master class seminars taught by industry professionals. Brace yourselves because DOCUTAH has arrived—now and for the future; 2010 is just the beginning.

The 3-Minute Film Fest in Santa Fe
www.3mff.com
For more than a decade the 3-Minute Film Fest in Santa Fe has been challenging amateur and professional filmmakers to create very short films. The 3-Minute Film Fest is proud to announce their call for entries for the 2010 edition, seeking films 3 minutes long or shorter in any genre. This year's festival will take place on May 22 at Santa Fe's premiere movie palace, the Lensic Theater located near their famed Plaza. Prizes from local merchants will be awarded after the screening to the best films in the following categories: Comedy, Documentary, Performance, Animation and Best Overall Film.

Environmental Defense Action Fund's Climate Video Action Week
www.edf.org
The Environmental Defense Action Fund's Climate Video Action Week is a new video campaign designed to connect Americans directly to their congressmen. "We keep finding that congressmen want to hear more from their constituents," said Rebecca Rasch, the initiative's coordinator, "and this is a simple, easy way for Americans to communicate to Congress that climate is a priority for them." Through the program, individuals from across the US are encouraged to make 30 second videos expressing why strong climate legislation with a real cap on carbon is important to them. The best videos will be featured in EDAF's upcoming online campaign.

Chicago International Film Festival's CineYouth Festival
www.cinemachicago.org/cineyouth
Young visionaries let their voices be heard at the Chicago International Film Festival's CineYouth Festival. Celebrating its sixth year in 2010, the CineYouth Festival showcases and celebrates filmmakers 20 years old and younger. This year's Festival will be a two-day event held May 6-8th, at the Columbia College Chicago campus in Chicago, IL. Film screenings, workshops and other events are free and open to the general public. The CineYouth Festival with conclude with an Awards Ceremony highlighting the winners from each category along with a "Best of the Festival" film selection. "Best of" films are screened at the Chicago International Film Festival in October, 2010.

On Campus

The International Academy of Film and Television (IAFT)

Located in the heart of Asia on Mactan Island in Cebu, Philippines, The International Academy of Film and Television's tropical campus has state of the art facilities for filming and post-production as well as housing. IAFT offers short-term and long-term programs, revolving enrollment in Filmmaking, Sound Design and Acting. IAFT's mission is to nurture the creativity of young talent, giving all filmmakers an opportunity to explore and create in a tropical and exotic backdrop. IAFT is an academy for global filmmakers who wish to work within an international community alongside peers from all over the world.

Visit IAFT's official website at: http://filmschool.ph.

How Vacuum Mounting Equipment Helps You Take It to the Edge

Save Time, Expand Your Abilities, and Indulge Your Creativity

by David Peters

One of the often overlooked elements in both high-budget and low-budget filmmaking is the power of a vacuum. No, not the type of vacuum the maid uses to clean your hotel room while you're not there, but rather the sophisticated employment of vacuum principals and specialized, vacuum mounting cups that take advantage of this simple law of physics.

WHAT TO LOOK FOR

While evaluating vacuum mounting cups and accessories, common sense is your best friend. Make sure that you have high-quality equipment that will perform the job without exposing your expensive equipment to unnecessary abuse or damage. OEM manufacturers and industry suppliers integrate these cups with other components to create dependable and reliable mounting solutions. The ability to monitor and sustain the vacuum holding the cup in place is crucial in order to protect your valuable equipment. High-quality vacuum cups, such as those manufactured by Wood's Powr-Grip® (made in USA), are the foundation of many vacuum equipment mounting products. Powr-Grip vacuum cups come with a red-line indicator that warns of any vacuum loss and a check valve that allows re-pumping without the loss of remaining vacuum.

TAKE IT TO THE STREET

The Scenario: It's a budget shoot…you've got one DVCPRO HD camera as your main ax, and a couple of Mini-DV cams for B-roll. You want to shoot the scene in as few takes as possible to keep it consistent, and to get it done before you lose the light.

The Scene: Your main character is driving down the street in his neighborhood, making a short trip to the convenience store to get ice cream and pickles for his pregnant wife. Moments after he enters the convenience store, two masked men with hand guns enter to rob the store.

Take One: Using a 10" vacuum cup with an adjustable plate mount, or an adjustable mount plate supported by articulating rods and

www.alangordon.com/s_tripods_supergrip.html

multiple vacuum cups, let's mount the DVCPRO slightly off-center of the hood on the passenger side of the vehicle. We'll use this to get a close-up of the driver's face while he is driving.

Next, on the driver's side of the hood, let's use a 4½" vacuum cup with a ¼-20 threaded post to mount a 12"x18" white reflector to remove unwanted shadows from the driver's face.

Now, let's take a 6" vacuum cup equipped with a camera mounting head and place it on the driver's side door of the vehicle, mount up one of our mini-DV cams and focus on the front wheel and fender. This will give us some great B-roll to cut to so we can add a little depth and texture to our drive.

We'll complete the narrative with another 6" vacuum cup equipped with a camera mounting head attached to the back window outside the vehicle on the driver's side. Mount up the second mini-DV cam and focus it on the speedometer. Again… great B-roll to add to an otherwise lack-luster adventure.

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Take Two (they're small): Here we go to sticks with our DVCPRO so the camera operator can follow the action as the driver gets out of the car and proceeds to the entrance of the convenience store.

Let's grab our 6" cup with mounting head again and mount one of our mini-DV cams on the window next to the door of the convenience store. We will point it down to catch the height chart next to the door and the entrance of our driver into the convenience store.

We'll use another 6" cup with mounting head to mount the other mini-DV cam inside the store above the checkout stand, set at extreme wide angle, pointed down, to give the impression of being an interior security camera, laying in wait… enter the bad guys…

Voila…we have a beginning for our movie!

DON'T LIVE LIFE IN A VACUUM

As with any professional gear, there are certain things you must be aware of when using vacuum mounting equipment. The following is not a comprehensive list, but it will give you some idea of the most common things you should know. Always know your gear, and follow the manufacturer's guidelines carefully.

- Vacuum cups will only work effectively on smooth, nonporous surfaces.
- Always be certain that the surface you are mounting the vacuum cup to is clean and dry.
- Examine the surface of all vacuum pads to ensure that they are free of dirt, dust and debris and verify that the rubber pads are not slit or otherwise damaged.
- After placing a vacuum cup on a mounting surface, pump the plunger down until the red-line vacuum indicator is not visible. Monitor the cup for the reappearance of the red line. If the red line appears, pump the plunger again until the red line is not visible. If the problem persists, find out why.
- Do not exceed the manufacturer's suggested weight capabilities of the equipment.
- Always use tethers to your equipment. In the unlikely event of vacuum failure, it's nice to know that your expensive equipment isn't going to bounce off the pavement.
- Use vacuum cups only as a temporary mounting device. Attaching vacuum cups to car windows for extended periods could cause permanent damage to windows or tints.

IT'S A WRAP

Vacuum mounting equipment is a great tool used in the film and video industries. Attach your gear to the mount, pump the plunger a couple of times, and you're ready to go. Vacuum mounts save time, they can be purchased at reasonable prices, and they help to expand your abilities and indulge your creativity. To get the most unique shots possible, look into the void and explore the possibilities with vacuum mounting equipment.

For more photos, recommended suppliers, and additional information, read the featured online article at:
www.studentfilmmakers.com/news/how-to/vacuummounts.

www.alangordon.com/s_tripods_supergrip.html

mDistribute.com:
Where Short Films Matter (And Sell)

Should Marketplaces and Mobile Devices Be Thought of as Part of Distribution Deals?

With the recent explosion of iPhones and other high end mobile phones, content buyers in the mobile industry are reportedly looking to aggressively license short films. Unlike the web or broadcast, where feature films dominate, the mobile movie watcher wants short and high quality film content from 5 to 30 minutes in length. As a result, a well known mobile firm recently launched mDistribute.com to connect makers of short films with the mobile industry:

"Starting around mid-2009, we have been absolutely inundated with clients looking to license short form film and animation content for mobile distribution," says Ryan Austine, Lead Content Buyer at Golive! Mobile, the Denver-based mobile firm who created mDistribute.com this year. Golive! represents hundreds of clients in the mobile content industry, many of whom are now aggressively acquiring short film licenses on mDistribute.com.

According to filmmaker Jubin Joseph, whose award-winning short film *73 Virgins* has been distributed on mobile in Europe since 2006, the market in the U.S is white hot but still in its infancy. Jubin says he has "sold over $15,000 in U.S licenses during the 3 months of the mDistribute.com beta test, which is much more than the past 3 years combined in Europe."

For makers of short films in the U.S and abroad, mDistribute.com seems to be worth a shot. It's free to register and upload your films, and you never know – you may get some buyers in the mobile industry interested in licensing your short film.

Q&A with Ryan Austine, Content Director, mDistribute.com

Is your service something that works with the new Apple iPad, and other hand held reading devices?

Ryan Austine: Yes.

Where do you see the future of mobile media going?

Ryan Austine: As wireless carriers roll out the 4G network, video content will drive the mobile media market for some time. That said, we believe consumers will continue to demand shorter form, 'snackable' video content on their mobile phones due to the natural constraints of watching long form content on a mobile device.

Should marketplaces, such as mDistribute.com, and mobile devices, such as the iPhone, Android, and Blackberry phones, be thought of and negotiated as part of distribution deals?

Ryan Austine: Filmmakers should definitely learn from the mistakes of musicians, who in many cases didn't include mobile ringtone sales in their distribution deals and paid a steep price. It's extremely important for filmmakers to address this explosive market.

What kind of upgrades are you planning for mDistribute.com?

Ryan Austine: The major upgrade we plan in the near-term is support for rights-managed licensing, as opposed to just royalty-free. We have been waiting for Flash and HTML5 to pervasively hit mobile phone browsers before rolling this out, since we would need the ability to host and stream the content to control the rights managed licenses.

What was the launch date of mDistribute, and how are numbers looking now?

Ryan Austine: mDistribute came out of private beta in late January, and the numbers are looking quite strong. We had over $40,000 in licensing sales on our platform in February, broken up amongst a wide variety of film genres and filmmakers.

Tekmedia Group, a Service and Repair Center for Apple, Canon, JVC, Panasonic, and Sony Broadcast Equipment Repair and Maintenance Services

Tekmedia Group, a service and repair center for Apple, Canon, JVC, Panasonic, and Sony, has been providing repair services since 1992 in Burbank, California. "Our technicians have more than 20 years of experience and will get the job done right the first time. Repairs take no more than 2 to 3 working days." The company stocks original manufacturer repair parts and offers same day, pickup, delivery and rush services, and is an authorized Apple and JVC warranty service center, Tekmedia Group specializes in repairing all broadcast and professional equipment such as HD DVcams, cameras, camera lenses, editing equipment, decks, plasmas, LCDs, picture tubes, and Apple equipment. Visit the official website at www.tekmg.com, and call 1-800-255-5045.

Movie Outline 3.1 Screenwriting Software Released

Movie Outline® Software (www.movieoutline.com) launches a comprehensive free upgrade to its popular script and story development package which offers even more powerful features. Movie Outline announces that although the new version includes over 100 new features and improvements and is much more extensive than a regular update, it was pleased to offer this release as a free upgrade to existing users of Version 3. Movie Outline 3 is ideal for startup writers and students learning the craft of screenwriting because of its intuitive and structured approach to story development. Read Featured Q&A at www.studentfilmmakers.com/interviews/QA-Dan-Bronzite.

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Join the 3-Minute Film Fest in Santa Fe. Seeking films 3 minutes long or shorter in any genre. www.3mff.com

Submit your documentary films to the DOCUTAH International Documentary Film Festival today. www.docutah.com

Visit the Environmental Defense Action Fund "Climate Video Action Week" official site at www.edf.org

Join CineYouth Festival, May 6-8th. Watch "Best Of" films at Chicago International Film Festival, www.cinemachicago.org/cineyouth.

Acer Video Contest: View winning video and entries at www.acer8hourcontest.com/entries.

Digital Nomad Video Contest: Check out the entries and winning video at www.nomadesk.com/digitalnomad.

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Randy Pugh

Profile: rpugh
Job: Cinematographer, Camera Operator
Location: Ohio, United States
http://networking.studentfilmmakers.com/rpugh

Work: Creating training videos, music videos, and commercials. "I've entered some contests to beef up my skills with camera, editing, color, story, etc. I am a part of Cutthroat Entertainment located in Columbus, OH."

Challenge Experienced on the Set: "A partly sunny day with no light meter or modifiers. Sun goes behind the clouds then comes back out always at the wrong time."

Solution for the Challenge: "Best guess at light level change. Calculating exposure in your head on the fly and knowing your camera and quickly adjusting."

Cinematography: "There's always a lot of discussion about this, but I think that shooting 24fps really does give a video more of a film look. I've read forums where this has been argued. Simply put, I don't like a video that moves like a soap opera. There's a clear difference in quality of a video that's shot at 24fps."

Camerawork: "There's been a 'fad' in camerawork in which there's a lot of intentional shake. I think this has been overdone in several films, including the latest film *District 9*."

Favorite Tool: "Apple Color. It really makes my stuff look good."
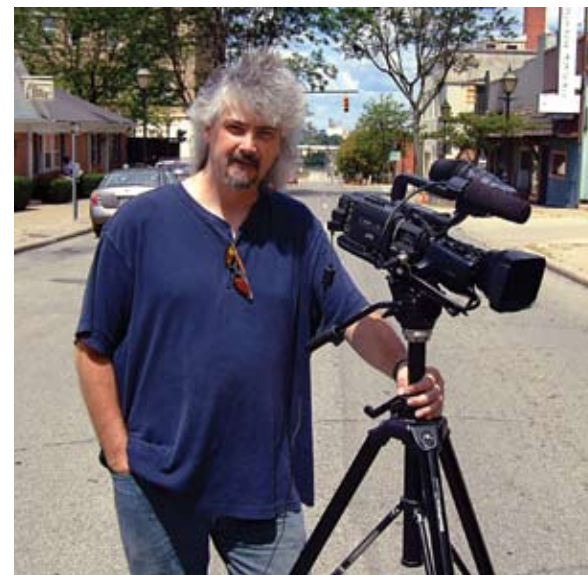
Mark Haas

Profile: markhaasmusic
Job: Composer, Musician
Location: West Virginia, United States
http://networking.studentfilmmakers.com/markhaasmusic

Work: "My music is very 'new' in the sense that it combines the sounds of Midi sampling with that of Acoustic sounds and instruments. I like to provide a musical sound that enhances the visual project in which it is attributing. My grouping of instruments can range from small delicate ensembles, to large orchestras and big bands."

Inspiration: "I find my inspiration in all music. I believe a composer can learn from all genres and time periods of music. When writing for film, the visual source becomes most of the inspiration. In the end, whatever the director wants, the director gets."

Challenge Experienced in the Studio: "Trying to interpret a musical language into a common language that could be understood by any director or producer."

Solution for the Challenge: "When working with musicians, certain terminology is thrown around such as 'crescendo,' 'diminuendo,' 'fortissimo,' 'pianissimo.' [When working with] directors or producers, [you can use words like] 'louder,' 'softer,' etc. Basically, I use simple terms. Just like they do for me when it comes to cameras, resolution, etc."

Favorite Tools: "Aside from the piano, which is where all of my music originates, I would say my Macintosh computer. It's where all my work comes together. I use Midi controllers, Samples, Sequencers, recording software, and it is where I see the actual video or image."

Favorite Techniques: "Spotting cues. Sitting with the director and discussing the potential for the music in a film."

Joren Winge

Profile: mpc2001
Job: Director, Writer, Musician
Location: California, United States
http://networking.studentfilmmakers.com/mpc2001

Work: "Originally in film school I made experimental music videos with a lot of turntablism mixed in. I was heavy into the turntablist scene and have released break records [for turntablists] including *Hee Haw Breaks 2*, and *Pin Up Breaks*. I took a break for awhile and then started working for Skates on Haight, Inc. where I met Greg Schneider who is my DP and Cinematographer. We were hired to make a bunch of promotional films for www.startfitness.com. From there we made other promotional videos for profit and fun, but we started making them way too cinematic and flashy. Our best work was for Skateshoe USA and Akagi Golf USA. Most of our work so far has been commercial, but we have an official studio space now, and we are working on making our first narrative feature."

Inspiration: "In the actors we work with, bringing their personality out on the screen. Also when we create a really successful beat and it works, and it's really funny or creepy."

Challenge Experienced on the Set: "Getting up really early to shoot all day. I remember clinging to my coffee. Coordinating people. We shot a video for this product called Skorpion Skates, and we had like five skaters and like five locations and two days to shoot. They all wanted to go to different places, and they weren't professional so they kept getting impatient between scenes. Also, I had to work with a skater who was really difficult. She seemed really happy on camera but in between takes she [was being difficult] about everything, and I had to do everything in my power to keep her happy."

Solution for the Challenge: "We had to tell the skaters, 'Look you're just a skater, you can be replaced,' basically, people management. We had to learn to be tough..."

Favorite Tools: "A poor man's steady cam, a skateboard for dolly shots, HDD 3CCD, Sony HDR-SR1. We've also started using Flip HD cameras as b-roll cameras and for continuity or for POV shots."

Favorite Technique: "A lot of quick action cutting and cutting on music, really low shots, a lot of camera movement, since we mostly shoot in DV we like to do anything to change up the feel, like switch to B&W for one shot or use distortion. We like switching the speed to create a feel, really slow, or sped up. You can see a lot of that in our Akagi video. We want to be funny and entertaining while making the viewer feel like they are part of the scene. We also really like to use music to tell the story; though that may be partly a crutch."

Carl Filoreto

Jon Firestone

Sherri Sheridan

Ira Tiffen

William Donaruma

David Worth

Dean Yamada

Bryant Falk

Myrl A. Schreibman

Melissa Ulto

David Kaminski

Fred Ginsburg, C.A.S., Ph.D.

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