INHERITANCE – HISTORY IN HD

PLUS

A JOURNEY WITH MIKE SOWA

an article by
Bob Fisher

INDIE EXPERIENCES IN HD

by Jay Boekelheide
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DALLAS & ASCENT DELIVER 4K
DALSA Corporation, recently announced a collaboration with Ascent Media Group of Santa Monica, California which will enable reliable, cost effective post production of digital 4K motion picture content originating from the Dalsa Origin, the world’s first and only commercially available 4K digital cinematography camera.

SAMARITAN SHOT WITH HVX200
Star Circle Pictures (Virginia Beach, VA) recently completed production on a "micro" feature called Samaritan shot with Panasonic’s full bandwidth AG-HVX200 hand held camcorder. Reminiscent of classic Twilight Zone episodes, Samaritan tells the story of an armored robbery thwarted by a mysterious stranger. The production team includes producers Richard and Ethan Marten, Jonathan Levy, Jonathan Gruen, producer/director/screenwriter/editors Kimball Carr and Director of Photography Robert Pinman.

NASA, HDNET BROADCAST PARTNERSHIP
NASA and HDNet have formed a partnership allowing high-definition television broadcasts of all NASA space shuttle launches on the network’s HDNet channel through 2010. The agreement covers full live launch and landing broadcast coverage of NASA’s shuttle missions from the Kennedy Space Center in Florida.

OUTDOOR CHANNEL OPENS BROADCAST CENTER
The Outdoor Channel opened its new state-of-the-art broadcast center. Designed by leading Los Angeles architecture firm Studio 440, the new high-tech facility features a master control, tape-op, central equipment room, tech shop, digital edit bays, conference room, and fully-networked offices in a distinctive open design that brings the feeling of the outside indoors.

WIREIMAGE CHOOSES GY-HD100U
Wireimage.com, selected the JVC GY-HD100U ProHD camcorder as their camera of choice for the company’s video division, Wireimage Video. On the red carpet and behind-the-scenes at entertainment events throughout Los Angeles, New York and London, Wireimage Video utilizes JVC’s GY-HD100U for their A-roll interviews and B-roll footage. “Broadcasters around the world use our footage on a daily basis. And everyday, more and more broadcasters are requesting footage in HD which is why we needed a camera that shoots in HD and SD,” said Justin Kahn, co-founder and VP of Wireimage.

WDAY-TV ADDS JVC HDV
WDAY-TV in Fargo, ND, has purchased 18 GY-HD100U Pro HD cameras and 15 BR-HD100U VTRs for the station’s electronic newsgathering. “We went with the GY-HD100U because the camera can record in SD or HD. That was extremely important to us since we’re planning to upgrade the entire station to HD in the very near future,” said Jeff Nelson, news director, WDAY-TV.

HELINET HONORED WITH SBA AMERICAN SPIRIT AWARD
Alan Purwin, founder of Helinet Aviation Services of Van Nuys, California received one of fourteen SBA 2006 American Spirit Awards at a breakfast ceremony in Washington, D.C. as a part of National Small Business Week, April 9-15. The awards were given to recognize the hard work and determination of small businesses to recover quickly, and for the selfless help and assistance small businesses and other volunteers provided to their fellow Americans affected by Gulf coast hurricanes including Katrina.

CANON HDGC LENSES
As leading manufacturers introduce economical, mid-range HD cameras to support the expanding demand for affordable HD content,Canon has brought out a new line of HDgc lenses. They combine the best optical features of Canon’s lenses, including reduced chromatic aberration and high and well-controlled MTF, with digital operational tools that include Shuttle Shot, Framing preset, Speed preset, and more in a line-up that delivers HD optical quality, and other higher-end lens advancements.

1 BEYOND HD OCTOFLEX
1 Beyond’s HD Octoflex is the industry’s first 8 processor professional video workstation capable of running Windows XP applications that are widely used by editors and graphic artists. Other systems are only capable of running Windows Server 2003, which most professional video and graphics software will not support. The system is capable of handling the most powerful hungry applications such as uncompressed 2K and 4K film, multiple layers of complex uncompressed real-time effects and high resolution uncompressed HD projects.

CANOPUS SUPPORTS CANON HD CAMCORDER
Canopus’s EDIUS Pro 3 and EDIUS Broadcast now support the Canon XL1, H1, 24 fps HD camcorder along with real-time capture and processing of 1440x1080 resolution video at 24 fps, 30 fps and 60i via an IEEE-1394 interface. Canopus products are part of the Grass Valley line of production gear.

A&E TO LAUNCH A&E HD
A&E Network will launch their 24-hour high-definition network with a preview in June with the official debut at a CSI: Miami marathon over Labor Day weekend. The entire A&E Network programming will be simulcast on the HDTV format including the shows Inked, The First 48, Dallas SWAT and Driving Force and later on The Sopranos beginning in 2007.

PANASONIC HD AQUARIUM
Two Panasonic 65” high definition plasma displays are on the cutting edge of interior design in a luxury condominium lobby in Coconut Grove, Florida. Mounted behind two large portholes cut in a lobby wall of the post-completed $200 million Grovenor House, the plasma play HD underwater video so lifelike that visitors mistake it for an actual giant-tank aquarium. Colorful high definition fish swim from one porthole to another surrounded by the beautiful corals of Australia’s Great Barrier Reef.

SONIC STARTS HDAA AG
Sonic Solutions is augmenting its well-known High Definition Authoring Alliance (HDAA) with an Advisory Group (called the HDAA AG) and aligning leading computer and consumer electronic device manufacturers facilitating next-generation format playback with top-tier Hollywood content holders. The result is a multi-industry cooperative that will test and validate user interactions with the new high-definition format and help deliver reliable, consistent, and exciting viewing experiences across multiple platforms.

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Filming of the documentary, Inheritance, at the former site of the Plaszow Concentration Camp in Poland.

Photo by Don Holtz

by Sarah Regan

“I am not my father.”

That was Monika Hertwig’s response when documentary filmmaker James Moll called her a few years ago to ask permission to use photographs of her father in a companion piece for the 2004 DVD release of Schindler’s List. Intrigued by this seemingly random statement, Moll began asking questions. What started as a routine rights & clearances phone call became the psychological backbone of Moll’s new feature documentary, Inheritance, the story of Monika Hertwig, a soft-spoken woman who grapples with a profound legacy left to her by a father she never really knew.

Monika’s father was Amon Goeth.

Often described as a “monster,” and “inhuman” by Holocaust survivors, Amon Goeth was the prominent Nazi leader and commandant of the Plaszow concentration camp. Utterly ruthless and sadistic, he murdered thousands of Jews and other prisoners during the war. When Schindler’s List opened in 1993, Monika watched Ralph Fiennes’ chilling portrayal of Goeth. She found the film so disturbing and violent that she left the theater more than once.

This man was her father? It’s a fact that Monika still cannot reconcile. Feeling an aching need to come to terms with this legacy of evil, Monika reached out to Helen Jonas-Rosenzweig, a survivor of The Holocaust. Helen had lived enslaved under Goeth’s roof serving as both his maid and prey for nearly two years.

Inheritance - History in HD

Photo by Don Holtz
Monika Hertwig, daughter of the infamous Amon Goeth, the man who was portrayed by Ralph Fiennes in Schindler’s List.

Sixty years after Amon Goeth’s arrest and the liberation of Plaszow, Monika and Helen meet for the first time at what was once Goeth’s luxurious villa overlooking the concentration camp. It’s a brutally honest, gut-wrenching and emotional meeting that brings both closure and new questions for these women.

“I knew the meeting between Monika and Helen would be a historic moment,” Moll says. “I realized that this footage could potentially be used as an educational tool and be of value to archives and museums. Obviously I wanted to preserve every detail to ensure that the film would look as great as it possibly could, so shooting in HD was the only option.”

HighDef, however, was not a new option for Moll’s company. Allentown Productions, based on the backlot of Universal Studios since 1994, had been shooting HD for over six years. “In 2000, HD was new and exciting. I liked the 24p because it looked a lot like film,” Moll says.

Since then, Allentown Productions has shot HD on four other documentaries. During the last election, Allentown produced the John Kerry bio film for the Democratic National Convention. In 2004, Allentown Productions filmed Epilogue of the Pacific, a documentary for the upcoming sequel to HBO’s acclaimed mini-series Band of Brothers. Most recently in 2006, Allentown produced Massacre at Mystic for The History Channel, shot on DVCPRO HD.

Each production had its challenges, but Inheritance proved to be even more demanding. Filmed in Germany, Poland, and the United States over the course of three weeks, using a very small crew with two HD cameras, it was an ambitious shoot.

One particular challenge was one nobody saw coming. Painstakingly and carefully planned, the crew flew with their camera equipment in tow to Krakow, Poland. The crew landed safely in Krakow. Their camera equipment, however, was inadvertently mis-directed to Warsaw. The historic meeting between Monika and Helen was scheduled the next morning.

“We couldn’t believe it,” says producer Christopher Pavlick. “We had to find those cameras. Shannon Dill, the associate producer, and I ended up driving around in the production van all night and basically slept at the airport waiting for our equipment. The outcome was positive, and we can laugh about it now….But back then? It was pretty stressful.”

Moll and his team filmed Inheritance on HDcam 24p, using Sony F900s. “It’s always interesting shooting a documentary with two
Helen Jonas-Rosenzweig, a Holocaust survivor, meets the daughter of Amon Goeth at a Plaszow Concentration Camp memorial.

An obvious problem became how to avoid getting a camera in the shot. Moll says that in addition to using a walkie-talkie and hand signals, he relies heavily on director of photography, Harris Done, and second opera- tor, Chad Wilson. “Things change quickly in documentary settings, so you have to be ready to switch from ‘Man to Man’ to ‘Zone’ coverage on a moment’s notice,” says Done.

“Because a big part of the film is the meeting between Monika and Helen at the former site of the concentration camp, we scouted it the day before and tried to map out ideal angles and backgrounds,” says Done. “Shooting in HD isn’t always ideal, especially in uncontrolled documentary situations. For example, shooting people in vehicles that are in the shade, while there’s bold sun outside, becomes somewhat tricky. But the important thing to remember is that HD holds the underexposure much better than film and to try to keep the overexposure to a minimum. The Sony 900 holds color and information beyond 100% – actually as high as 100% to 108%.”

“This film involved some very intense hand held shooting,” Wilson says. “I was glad to have an F900 to work with, as opposed to other video formats, because we were able to change the gamma and knee settings to make the most of the limited exposure range of the HDCam. In addition, we had Polarizer and ND grad filters to help control the skies, which are typically the hottest areas of the frame and first part of the image to blow out and lose detail.” Done added, “The monument and concentration camp site were on the top of a hill in full open sun. My camera assistant had a small bounce card to give some eyelight and fill wherever he could, but it was definitely difficult with two cameras working. We both had Fujinon 4.5mm super wide HD zooms on the F900s.”

An important scene in Inheritance occurs when Helen returns, for the first time, to Amon Goeth’s villa. For the interiors, Done decided to use Kino Flo Kambio lights that mount directly to the lens. “The Kino Flo Kambio’s have a soft, very flattering, source-less quality to them,” Wilson agreed. “The soft light source comes directly from the camera, it doesn’t cre- ate harsh shadows associated with other on-board camera lights.” Done warns about the one downside when using Kambio lights, “They eat batteries, so you need plenty of Hytrons on hand.”

“As luck would have it,” Wilson says, “right before a scene at dusk, I somehow broke the power cable to the Kamio light and found myself having to shoot Monika entering the interior of a dark museum with almost no light whatsoever. So, I pushed the gain to plus 6db and barely notice them in the view-finder. The more subtle, the bet- ter,” Wilson agrees. “Since the soft light source comes directly from the camera, it doesn’t cre- ate harsh shadows associated with other on-board camera lights.” Done warns about the one downside when using Kambio lights, “They eat batteries, so you need plenty of Hytrons on hand.”

“If you’re shooting a dark, very atmospheric scene,” Done warned, “you have to be careful not to play them too bright. I like to dim them down until you can barely notice them in the view-finder. The more subtle, the bet- ter.”

“Shooting Inheritance was certainly technically challenging, but the crew never lost sight of the historical significance of the meeting between Monika and Helen. “I learned a valuable les- son in making this film,” says Moll. “The Nazis destroyed the lives of millions of Jews and committed acts that we will never be able to even wrap our brains around. But, they also destroyed the lives of their own families. And Monika is a living testament to that. Examining the stories of the children of perpe- trators is a critical next step in understanding the impact of The Holocaust – perhaps even a next step toward healing.”

For screening information about Inheritance, please visit allentownproductions.com.

Sarah Regan is a freelance produc- tion associate, writer and illustrator.

James Moll is an Oscar and Emmy winning filmmaker who has spent the last eleven years working with Steven Spielberg as a director and producer of documentary films and series. In 1999, Moll received the Academy Award for directing and editing The Last Days and has been the recipient of various other awards including the Edward R. Murrow, an Emmy win and nomination, and the prestigious George Foster Peabody award.

Moll has directed and/or produced documentaries for NBC, HBO, A&E, The History Channel, CNN, VH1, and others, on topics ranging from Native American culture to pop rock stars.

In addition to his work as a filmmak- er, Moll established and operated The Shoah Foundation with Steven Spielberg for the purpose of videotaping Holocaust survivor testimonies around the world, resulting in more than 50,000 testimonies in 57 countries.

Six years after filming The Last Days, Moll will soon release Inheritance, the next chapter in examining and under- standing the profound impact of The Holocaust.

Moll recently joined forces with producing team George Tillman, Jr. and Robert Teitel (Men of Honor, Soul Food, Barbershop, Roll-Bounce!) to direct his first non-documentary film, Emmett Till. Based on Mamie Till-Mobley’s autobiog- raphy Death of Innocence: The Story of the Hate Crime That Changed America, Moll is scheduled to begin shooting this summer.

The next big decision for Moll: shooting on film or shooting in HD.
MorningStar Entertainment of Burbank, California has produced a three-part series for the National Geographic Channel and National Geographic International that examined the lesser-known origins of Christianity. Virtually all of National Geographic Channel’s (NGC) current program production is being captured in High Definition for simultaneous airing on their new HD network – NGC HD. MorningStar President Gary Tarpinian notes, “Our biggest challenge was not in shooting and editing in HD, but rather, in creating HD resolution Matte Paintings, CGI and Green Screens composite shots.” Over sixty HD visual effects shots were produced for the series including some very sophisticated shots that took three to four weeks to produce. “Viewers expect quality visuals when they hear the name ‘National Geographic’, explained Michael Cascio, NGC’s Senior Vice President of Production. “So it’s essential that visual effects shots look totally believable, especially within the more exacting HD format.” MorningStar’s goal was to make their effects shots and recreations look like those found in a feature film. Executive Producer Paninee Theeranuntawat says, “HD offers the flexibility of video, with the visual quality of 35mm film, especially if you..."
When I started my feature project, *Family*, I was coming off a visual effects binge and was pretty high on technology, so I really wanted to make a film with a totally unique look and feel, utilizing consumer-available technology. With so many DV-originated films being released in theatres these days, I knew that there must be a logical way to up-convert DV to HD without it looking like total garbage. A lengthy search led me to a company in Montreal called Algolith that had a beta version of a plug-in for After Effects called “Algosuite.” It claimed to be a solution for not only scaling, but also anti-aliasing, interpolating, de-noising and chroma smoothing DV rez footage to pretty much any scale that you wanted. Cool.

I started with Panasonic’s DVX-100A, as in my opinion it has the best and cleanest looking image I’ve yet come across, and its true 24p feature gives the most natural, filmic motion that is offered in any other camera in its class. After a few tests under a variety of conditions, I determined that this process would suit my film very well. The up-conversion resulted in a picture that removed some tell-tale signs of DV, but also came with some interesting artifacts. It got rid of the diagonal compression that so often plagues DV. It smoothed out chunky color compression and overall lent an almost 70's feel in the way the chroma blended together. The only problem was that it didn’t do it evenly and while the stills looked amazing, once they were moving, the inconsistencies showed up brilliantly, especially in areas with gradual color gradients, like blue skies and skin tones. The solution came from additional tests in which I added another layer of film grain over the whole image that blended everything back together into one cohesive moving image.

It ended up with a very dirty, nostalgic, grainy organic feel that totally belied its humble origins in DV. After shooting our gritty desert thriller, I edited the movie in Final Cut Pro at DV rez in reels and then output uncompressed DV movies to start the uprezzing process. I basically did every bit of work in post on my G5 Powermac from concept to finished product all with off-the-shelf software and the advice from a number of people a lot smarter than me. Once I finished the uprez, I built an HD project in Final Cut, imported the reels, output to HDCam at Plaster City Digital Post, and then to New Wave Entertainment for color timing on a DaVinci 2K (the only pro post part of this process). I don’t think I will ever use this process again to make a film, and now that the wheel of technology has turned once again and brought us the HVX-200 – which is a stunning piece of equipment – I don’t think anyone will actually need to. But *Family* can be a good marker for what can be achieved in your office with just a little thought and creativity, the true core of independent film making. You don’t need to wait for fancy equipment or a huge budget to make a great looking movie. You just need to look around and put the pieces together – now more than ever it’s all at your fingertips.
One hundred years ago, powerful seismic waves roared across the prosperous city of San Francisco. By the end of the first day, the “City by the Bay” would suffer 26 aftershocks, and succumb to a raging inferno that showed no mercy to its bewildered citizens for 74 hours. National Geographic Channel (NGC) premiered The Great Quake (www.thegreatquake.com) to mark the 100 year anniversary. The 1906 disaster was such an important event in history that network executives were eager to showcase it in Highdef. A 2005 national survey by Beta Research found NGC to be the #1 network consumers wanted to see in HD. It seemed clear that reliving America’s most catastrophic earthquake was a perfect opportunity for NGC to showcase the benefits that HD offers. “Shooting The Great Quake in HD was extremely exciting,” commented Ulla Streib, head of operations for Darlow Smithson Productions. “It allowed us to get a very dramatic look and quality in the drama sequences. The pyrotechnic scenes, in particular, really show the scale and clarity that HD offers.” But shooting in High Definition also brought new challenges to the production companies. “We had to make sure that we lit and set the drama sequences to the standard that HD requires,” continued Streib. “HD is not as forgiving as Beta or Super 16mm, so you need to make sure that every little detail is right.”

Streib is convinced of the new technology’s advantages. “The earthquake scenes we shot for The Great Quake convey a great sense of suspense, reality and visual impact that would have been difficult to achieve on standard Beta. At the end of the day, the HD format allows us to have more choice in the post production process with outstanding picture quality.”

For additional program information go to www.thegreatquake.com. Consumers can call 1-877-77-NGCHD to find out if they receive NGC-HD or to request service from their operator.

Clairmont Camera president Denny Clairmont knows cinematography. His company, which he founded in 1980, has grown into one of North America’s largest rental facilities. Denny also knows outstanding quality, and counts Canon’s HD-EC Zoom Lenses among his favorites. From our newest 8x Zoom (HJ8X5.5B KLL-SC) to our HJ11x4.7B KLL-SC and HJ21x7.5B KLL-SC, Canon responds to the creative and budgetary requirements of cinematographers everywhere with optical performance and mechanical and tactile imperatives that satisfy critical standards. Canon’s innovation and engineering excellence is also apparent in our unique ACV-235 Anamorphic Converter, which can be used to record a CinemaScope-size image with an HD-EC camera, as well as our full line of Prime Lenses. Industry leaders like Denny Clairmont are impressed with Canon. Whether you’re shooting episodic TV, commercial production, or major motion pictures, take a closer look at us.

“Canon’s HD-EC zoom lenses continue to impress me with optical performance on the highest level.”

--Denny Clairmont, President, Clairmont Camera (Hollywood, Toronto, and Vancouver)
A Journey with Mike Sowa

by Bob Fisher

Mike Sowa started out as an art major at California State University at Northridge. His stepfather was a sound editor. Mike took some editing classes and intended to follow that career path. In 1984 when Sowa was entering the workforce, Emory Cohen, one of the founders and first president of LaserPacific, proffered an evangelistic view of the future: “We believe that by providing a gateway that bridges the film and video worlds, we can preserve and extend the creative intentions of the artists and simultaneously improve the efficiency of postproduction.” Much of that bridge would involve the art of color timing.

Sowa joined LaserPacific and within months was assisting in one of their first telecine suites. He began timing TV dailies in 1987, and his talent was so extraordinary in that arena that by 1991 he was the colorist for hit shows Baywatch, Matlock and Jake and the Fatman.

As the technology advanced, Mike began to explore the new frontier in feature films as a senior colorist on digital intermediate (DI) projects. He noted that the basic concepts were the same, but there were differences in timing films for cinema, on HD and other video screens. “When you time a feature for release in DVD and other home video formats, you have to make adjustments in the digital master for differences in color space, the white point and contrast densities for optimum display on High Definition monitors,” he says.

Most recently Sowa timed the HD digital master of Brokeback Mountain in collaboration with cinematographer Rodrigo Prieto, ASC, AMC. There was no DI on that project. Lee had opted for traditional optical timing. LaserPacific scanned the edited negative with a 2K Spirit DataCine and converted it to a D-5 HD digital video file. Sowa timed the HD master in an interactive process with both Lee and Prieto present during two 12-hour days. “We had clear ideas about matching the HD version to the moviegoing experience,” Prieto says, “but sometimes we decided to darken or brighten a shot, or make other subtle changes because perception is different when you are looking at images on an HD screen. Mike has a great eye, a good attitude and he understands color space.”

Sowa recently timed the 35 mm film-out of a D-5HD digital master of the HBO movie Walkout in collaboration with cinematographer Donald M. Morgan, ASC. The film was shot in Super 16 at practical locations in Los Angeles. Morgan timed the HD master with Kevin O’Connor, his long-time collaborator at GEP in Sherman Oaks, California. It aired in HD format. In addition, HBO and director Edward James Olmos wanted a 35 mm film-out for screenings for critics and other audiences. GEP provided Mike with a copy of the D-5HD master.

“I did a trim pass using our LUTs (look up tables), and made some adjustments in density, color and brightness,” Sowa says. “Then, Don and I watched it in our theater environment. There were some shots where we pulled a little red out of skin tones, and other scenes that Don wanted a little bit warmer. There was also a firelight scene that he wanted to cool off a bit. In some darker scenes, information was being lost in the shadows, so we went into that part of the frame and fixed it for him. The entire session lasted about four hours.”

“Most people would assume it was produced in 35 mm,” Sowa concludes. “The advances made in film and digital postproduction technologies have made the Super 16 format a viable option for both HD and cinema screens, but it has to start with the cinematographer. Don did an artful job of creating perfectly exposed images.”

Photo by Kimberly French

(L-R) DP Kees Van Oostrum and colorist Mike Sowa at LaserPacific.

Photo courtesy of Bill Dow / CCS PR Inc.

(L-R) Actors Jake Gyllenhaal and Heath Ledger in a scene from Brokeback Mountain, shot by DP Rodrigo Prieto, ASC, AMC.
While simple in theory, much goes into the planning and creation of Discovery HD Theater’s Sunrise Earth, the daily series featuring real-time sunrises from locations across the world. Recently, the network spent time in Central America preparing a new slate of morning offerings that promise to maximize the visual imagery, and provide an audible experience that will send viewers eagerly reaching for the volume knobs on their surround sound systems.

“Our trip through Central America really signified an evolution for Sunrise Earth,” said Shana Jacobus, manager of production and development for Discovery HD Theater. “In addition to the stunning visuals and incredible sounds you’ll hear, we are looking to do a deeper dive into the areas we are visiting to illustrate to viewers how the sun has shaped and impacted a culture, and how it continues to do so today. Central America provided a great setting to document this because of its rich history of ancient civilization and the incredible flora and fauna in the jungles.”

In Guatemala, our crew visited the Tikal Ruin, the site of an ancient Mayan civilization that developed a spiritual relationship with the sun and its cycles. For our filming, we actually carted our HD equipment to the top of El Mundo Perdido (The Lost World) Temple, a spot that provided the unique opportunity to offer a sweeping shot across the entire city of Tikal, from above the jungle canopy. Added Jacobus, “You’ve never experienced anything like the cacophony of sound that is the jungle coming to life.”

In addition to Central America, Discovery HD Theater will be offering two specials on the total solar eclipse that occurred March 29th, 2006. The specials will offer viewers two very different perspectives, one from Natal, Brazil (for the beginning of the eclipse) and Antalya, Turkey (the mid-point of the eclipse). Again, of particular interest is the observable impact the eclipse has on wildlife...before, during, and after.

Patrick Younge is GM, Discovery HD Theater

Sunrise Earth Expands its Focus

by Patrick Younge
If Vince Pace is involved in a project, you can be sure that things won’t be ordinary. A triple threat cinematographer–inventor–explorer, he’s always coming up with new ways and new tools to make the cinema experience exciting. It all started with a few underwater lights for James Cameron’s The Abyss and has continued with groundbreaking projects such as Aliens of the Deep and Bismarck (2003 Emmy nomination). “Jim’s vision of a shot often centers around a tremendous amount of complex equipment operating in a fashion that seems easy,” Pace says. Equipment like Pace Technologies Fusion System, which is an HD 3D camera utilizing a nine-channel motion controller to mimic human eyesight. “The original Fusion was designed for side-by-side applications with a 69mm interocular,” Pace explains. “We added beam splitters, with a single camera shooting straight and the second camera shooting down at a right angle into a mirror.”

Next came Pace’s Advantage HD camera system. “We’ve thinned down the system to look and feel like an Arri 235. Instead of bulky add-ons and a wrist-thick engineering umbilical, we have a pencil-thin fiber optic bridge that handles all the signal integrity needed for a 4:4:4 image. To build this new system, I had to ‘modify’ a Sony F950. When I went to my long-time friends and suppliers, Band Pro, there was no ‘touch it and you’ll void the warranty’ from Jeff Cree and Michael Bravin. They just wanted to help. That’s what an inventor like me wants to hear.”

Recently, Pace modified another new tool – a 3D beam splitter system. “We’re pairing the Sony 950T-Cams with Zeiss DigiPrime lenses, making our ‘hero’ system lighter and more compact allowing for more intimate shots. One of the drawbacks of shooting through a mirror is loss of stop,” he adds. “Because the Zeiss DigiPrimes perform so well wide open, that will never be a problem.”

The new beam splitter and the updated Fusion system are going to be key ingredients when Vince Pace and James Cameron start on their next two projects, Avatar and Battle Angel.

Photo by Joel Lipton
50% Plasma Price Drop by 2007

Add fuel to the already hot flat panel display market. Matsushita announced they are targeting the coveted 5000 yen / inch price mark (around $43) a full one year earlier than previously expected. That would put the price of a 50-inch PDP from the number one Japanese vendor at a cool $2150 in retail, a price that could only fetch an equally sized rear projection display just one year ago.

The Matsushita announcement promises to place high demand flat panel TVs well within reach of a majority of new buyers.

Fueling demand for HDTVs is a combination of growing HDTV content, sports broadcast mega events like the World Cup and the looming analog cut-off date.

Lower prices are being enabled by reduced costs in materials and components, but also by major expansions in manufacturing scale. At the Flat Panel Investment Conference in New York, Displaybank VP Kenny Kim told attendees that the market research firm has now increased the expected sales of PDPs to 30M in 2010, up a whopping 10M from its forecast six months ago.

Matsushita (Panasonic) is one of the three PDP tigers who, along with Korea’s LGE and Samsung control 87% of the global market - cranking out an astounding 200K panels per month each, with further expansion plans in full swing. The planned expansion by the three would boost PDP output totals to over 11M units in 2007.

This news is sure to rattle the likes of major LCD suppliers like Sharp, Sony, Samsung and LG Philips LCD who all committed to the higher profit 37 to 50-inch market. Case in point - Samsung and Sharp both announced investments of $2.5B each for Gen 8 manufacturing facilities that optimize production of large size 40-50 inch displays.

This move by Matsushita can be seen as a direct challenge to the LCD industry, facing a more complex manufacturing process that requires heavy capital investment to gain economies of scale production to keep up.

Matsushita may also be betting the odds as higher manufacturing complexity and/or a potential strain on the delicate LCD supply chain also can mean higher risk for LCD manufacturers, where even a slight drop in production yield can make the difference between profit and loss for the manufacturer.

But beyond the big players, the new price cuts could also push some already weakened PDP suppliers over the edge. Both Pioneer and FHP have been hurt by past increased price pressures, watching market share dwindle to just 12.7% in 2005, being unable to match the efficiencies of the big three PDP suppliers. Meanwhile CPT, Formosa Display and Orion PDP all chose to exit the market rather than make the required investment to stay in the running.

The Matsushita announcement leaves little doubt that PDP will not cede the large display TV space without a knockdown drag-out fight, perhaps to the finish of the smaller players.

By Phil Bates

A rtbeats’ quest to capture real lightning effects in HD led us to kVA Effects, an operator of the world’s largest Tesla coils (a machine capable of discharging high-voltage sparks, aka lightning). With earplugs in place and the cameras rolling, the huge Tesla coil machine came to life with a deafening roar discharging 15-ft long bolts of electricity. As the pristine imagery on my HD monitor was suddenly replaced with a storm of interference, I was concerned we might have just fried a $100K camera – but the Sony F900 camera was safe, and the protective enclosure. I decided not to set the expensive prototype NAC camera in the cage and limit our capture to the F900 and film.

We expected and achieved pristine HD imagery with both 35mm and the F900. However, both formats had challenges. The 35mm showed excessive grain in the black which was solved with grain reduction software. The F900 did better in the black, but showed artifacts and chromatic aberration around bright electrical arcs. Overall, the high contrast nature of electrical arcs was more suitable for film.

Phil Bates is founder and president of Artbeats.
Tips

by B. Sean Fairburn SOC

Camera Creed

By B. Sean Fairburn

This is my camera. There are many like it, but this one is mine. My camera is my best friend. It is my life. I must master it as I must master my life. My camera, without me, is useless. Without my camera, I am useless. I must shoot with my camera true.

I must shoot straighter than my enemy who is trying to kill me. I must shoot him before he shoots me.

My camera and myself know that what counts on this set is not the footage we roll, the great composition, nor the smooth crane moves. We know that it is the circle takes that count. One Shot, one Circle Take.

My camera is human, even as I, because it is my life. Thus, I will learn it as a brother. I will learn its weaknesses, its strength, its parts, its accessories, its adjustments and its lenses. I will ever guard it against the ravages of weather and damage as I will ever guard my legs, my arms, my eyes and my heart against damage. I will keep my camera clean and ready to roll. We will become part of each other.

Before God, I swear this creed. My camera and myself are the image harvesters of the set. We are the masters of pixel wrangling. We create the celluloid illusions of motion.

So be it, until their is no more script to shoot and the last insert is in the can, then we achieve Wrap!

Paraphrased by B. Sean Fairburn SOC from the “Rifle Creed” by Major General William H. Rupertus (USMC, Ret.)

CWO2 B. Sean Fairburn SOC Marine Combat Camera Officer has retired from the military after a Combat Tour in the Gulf War in ’91 and his second Combat tour in ’03 during Operation Iraqi Freedom. Now back to being a civilian full time Sean Fairburn is working as a DP and Camera Op on TV Shows and Features shooting HD and Film.

“It was an Honor to serve with you all. Carry on Marines, Semper Fi Gunner Fairburn out.” This will be a Final Goodbye to two decades of service.
In the summer and fall of 2005 an independent feature, The Valley of the Heart’s Delight, was shot in the San Francisco Bay Area. The script for this historical drama, set in 1933, called for more than half the material to be shot at night, often lit with streetlamps, flashlights, car headlights or even a single match.

The first question the principals asked was: What format best meets the needs of this film? The producers, director and cinematographer looked at comparable footage in 35mm, Super 16 and HD. They chose HDCam, 1080p/23.98, shot with a Sony 900 as the best match for the script, the budget and the locations. As Hiro Narita, the DP put it: “The technology made a big leap recently and I am not sure an average person can tell the difference between film and a digital image.” Tim Boxell, the director, said: “The cost vs. image quality we saw in the side by side demo at Monaco was pretty persuasive. Highdef always was right up there in image quality and comparatively way down there in cost.”

I came on board as the editor and had to organize the post production workflow in this new (to me) HD environment. My first choice was Final Cut Pro, so I consulted with a group of people at Apple. Their initial advice was to use the tried and true methodology of making down-res’d mini DV or DVCam from the original HDCam. I wanted to try something different. We were shooting not only HD, but 24p, and I wanted to work in an environment in which there would be a one to one relationship between every down res’d frame I looked at or cut and every frame of the original. We decided on the following, as Eric Hanson, head of Spy Post put it: “They delivered tapes to us each day to be transferred to a custom offline format based on Apple’s DV codec at 23.98. We delivered the media back to them the next morning on FireWire drives with source time code.” This process involved putting the output of HDCam playback through a Kona 2 card into Final Cut Pro to create a QuickTime movie file in DVCam format. Each piece of tape from timecode break to timecode break was a new QuickTime movie file with code which linked directly back to the HDCam.

Nelson Stoll and Brian Copenhagen handled the sound by sending it from their mixer simultaneously to the HDCam tape, to a continuous streaming recording in a WAV format on a hard drive, and to a removable docking station, an HHB, also in a WAV format. Each day’s recording came to me pre-synched in 16 bit as part of the QuickTime movies, and as 24 bit sound files on a removable hard drive.

The twenty-six day shoot went as smoothly as any low budget shoot ever does. The part that HD played was virtually trouble-free. As Tim Boxell put it: “Highdef is a liberating medium freeing one from constant concern about cost of film stock and reducing time lost to magazine changes. I like to have the freedom to roll camera and get the actors working and everything just right to let takes run beyond the obvious cut points.” Hiro Narita adds: “You do have to put the same amount of care as any film shoot. With the night exterior shooting, however, you can shoot with wide open aperture, let’s say T1.8, and still get equivalent of T2.8 depth of field. That is a tremendous advantage. Also you can play with density in HD, meaning what might turn murky in film because of lack of exposure can be adjusted with density and the gain control.”

For most of the crew that made The Valley of the Heart’s Delight this was a first step into the world of Highdef, but it certainly won’t be the last.

Jay Boekelheide is picture editor and supervising sound editor/sound designer on The Valley of the Heart’s Delight. Jay won the Academy Award in 1984 for Sound Effects Editing on The Right Stuff.

Valley of the Heart’s Delight is an independent feature based on a lynching that occurred in San Jose, CA, in the 1930’s and is currently in post production. For more information visit valleyoftheheartsdelight.com
At this year’s Real Screen Summit in February, Scripps Networks surprised producers and programmers by announcing plans to launch two new HDTV channels in 2006, HGTV-HD and Food Network-HD. This trumped last year’s announcement to launch one compilation HD service drawing upon HGTV, Food Network, Fine Living and DIY (Do It Yourself).

The rollout began with the launch of HGTV HD April 10, at the 2006 National Cable Show, with World’s Most Extreme Homes, an HGTV favorite. Small Space-Big Style, Design ReMix, and Decorating Cents are other HGTV shows being produced in HD, while DIY’s Barkitecture and FINE LIVING’s The Wandering Golfer will also appear on HGTV-HD.

HGTV-HD will deliver a full time schedule of HD programming right from launch, rather than looping several hour programming blocks as other HD channels have done to start. “We’ve been planning this for over two years and have 300+ hours of original HGTV HD shows to work with this year, without upconverting any shows from HGTV, even if they’re in widescreen. Our viewers insist that they don’t simply like HGTV, but that they actually “love it.” We also want them to love HGTV-HD, so we’re keeping the bar high,” said Michael Dingley, SVP, Program Development at HGTV.

To attain their Highdef goals, Scripps execs began commissioning selected series and specials in HD two years ago. The early start allowed Scripps programmers and new producers time for a learning curve. “One thing we learned is that you have to be more careful with handheld shots and slower with camera moves. HD is a more cinematic experience, and viewers are less tolerant of fast or jerky camera moves, and shots need to last a bit longer than for standard TV. Overall, HD is a bit slower and smoother,” Dingley said.

Together, HGTV-HD and Food Network-HD, should have a pool of 700+ hours of lifestyle content in 2006. HGTV-HD alone anticipates having 450+ hours of HD shows to work with in ‘07.

Carl Mrozek is a videographer/writer/producer/owner of Eagle Eye Media HD and is reachable at eagleeye@localnet.com.
Hollywood and HD DVD

Just around the corner is the long-awaited launch of the HD DVD, one of two competing High Definition formats for the DVD optical disk. The stakes could not be higher for the movie business, less so for the manufacturer, and a hair pulling nightmare for the one asked to finally pay for it all - the consumers.

The movie business needs a smashing success using a new distribution format to restore expansion and youthful vigor to all parts of the business. They are presently plagued (in good economic times too) by sagging box office returns and a flat-to-declining packaged goods business.

The “collapse” of the box office over the last three years appears more than just a low ebb in a business cycle. Those explaining it away claim with fawning conviction that even with these declines there is nothing fundamentally wrong with the business. People still love movies just as much as they ever have and the sky is not falling. It is only a matter of getting back in sync with the public’s mood. But “sorry celluloid” has plagued the big screen before in the post-TV era without sending the box office so steeply into decline. Why now? For one ... it’s getting old.

The film business recently celebrated its 100th birthday. While it papers its walls with the 100th birthday. While it papers its walls with its dynamic founders with their strong personalites, pretty young things, it is no longer moved by the movie business now is a digital world dedicated to domains of creativity. And foremost in mind, well above the ethereal fisted, well-calculated disciplines of Corporate siveness. It is managed today by the tight risk-taking capacities, and legendary decretations, creative zeal, penetrating insight, pettiness with an online passport to the world?

While acknowledged as an important element in the next evolutionary chapter of Hollywood, the Highdef DVD has tough sledding ahead before benefits can accrue. The biggest hurdle is the growing consumer reaction to Highdef DVD studio policy. A backlash turning into an out-and-out resentment is festering, first, and most widely, over the fact that two Highdef DVD formats are being rolled out at about the same time. “Why introduce TWO at the same time? Are you crazy?”

The second is the copy protection measures mandated by the studios. Those measures, or at least what the public thinks those measures are, have enraged the community. Groups are sounding as if they are ready to march on Washington and picket and lobby anyone and everyone against the “draconian” digital rights management measures incorporated in the AACS specification.

“But how in the world could it fail?,” you ask. We all love HDTV. So what’s behind this question? We’ll explore this further in the next issue of Highdef Magazine.

Epic Battles of The Mexican-American War

Historians often bemoan the fact that The Mexican-American War (1846-1848) is the “forgotten war,” sandwiched chronologically between the Battle of the Alamo and The Spanish-American War. That oversight is to be righted with The History Channel’s upcoming broadcast of a two-hour documentary, The Mexican-American War. The sprawling documentary, hosted by boxing legend Oscar De La Hoya, is being produced by Jim Lindsay Productions, Inc., with Lindsay as producer/director and Kevin O’Brien as Director of Photography.

AE®TN Networks contracted with Lindsay to produce the program in HD for airing on The History Channel and History en Español, its sister network broadcasting in Spanish. DP O’Brien purchased Panasonic’s AJ-HDC27 VariCam® HD Cinema camera expressly to use as the “A” camera on the project, while Lindsay bought two AG-HVX200s, Panasonic’s affordable, full bandwidth AG-HVX200 HD hand held camcorder, for use as “B” cameras.

In the Mexican-American War, the U.S. defeated the Republic of Mexico and acquired over 500,000 square miles of new territory that today comprises much of the nation’s Southwest. American military forces took up several major campaigns in the course of the war, with engagements extending from Texas to California to several sites in Mexico. These were the battles that Lindsay recreated and shot with the HVX200s (operated by second-unit cameramen Andrew Parke and Jerry Massime).

“Reenactments are very expensive to produce, and you need as much coverage as possible,” Lindsay explained. “I love the VariCam—it would always be my choice as “A” camera on a project such as this—but it would have been prohibitively pricey to rent two more to use as “B” cameras. I wanted to put the budget up on the screen—more can...
nons, more guns, more soldiers, a marquee-name host—not behind-the-scenes."

He continued, “In ‘pre-handheld HD’ days, I shot with Panasonic’s DVX100 series camera—I love the 24p look. On the strength of DVX100 performance and the incredible potential of the HVX200, I ordered two shortly after NAB 2005. Here’s what sold me: 100 mbps DVCPRO HD and VariCam-style shoot- ing, moderately priced; tape-less with P2; 4:2:2 color space for vivid colors; incredible versatility in terms of formats and off-speed effects; and 720p recording, which I consider the perfect format, economical in every aspect and the basis of a terrific editing work flow.”

The AG-HVX200 offers production quality HD with independent intra-frame encoding, 4:2:2 color sampling, and less compression, making HD content easier and faster to edit and more able to stand up to image compos- iting versus long GOP MPEG-2 systems.

The shoots involved dozen of soldiers, photographers, weapons experts, makeup artists and horse wranglers. “We had all three cameras working continuously,” the filmmaker recalled. “The VariCam was always on the ‘hero’ shot, while the HVX200s were either shooting different angles of the same scene or different battle scenarios at another site on the same location. By using the HVX200s we were able to get massive amounts of foot- age we could not have done logistically with multiple VariCams. The cameras seemed to handle the contrast of full sun pretty well, and color matched well after tweaking to blend in with the VariCam footage.”

O’Brien added, “The most useful feature of the camera was its ability to shoot 24 or 60 frames for any particular shot. Having 60 frames to use as a slow motion shot in a 24 frame timeline was the closest I’ve come to the days of 16mm, where you could dial up to 72 frames for slow motion. The 60-fps shots can be easily converted in Final Cut Pro to 24-fps if we decide not to use the shot as slow motion.

In the field, they had two 4GB cards in each camera, with three others on reserve (Lindsay had purchased a total of ten 4GB cards.) Jim worked out a system with the cards and the rubber caps that cover the connectors. In white permanent marker he wrote FULL on one side and EMPTY on the other. When a card was full, it was ejected and the cap was put on with the FULL side up. Also, the copy protection tab was flipped to protect against accidental erasure. Then the cards were brought to the download station where a tech would slide the P2 card into the PCMCIA slot and copy the footage to one of several bus-powered portable Firewire drives. After the contents of the card were copied over, the card was then erased and the rubber cap put back on it with the EMPTY side up. By the end of the two-day shoot, there were three full 80GB drives with all the footage on them. Jim took the information from the smaller drives and copied them onto the 1TB G-RAID.

We did receive delivery of a P2 Store (60GB hard drive) unit halfway through our shoot and were able to try that out as well. It’s quite a fantastic little device which facilitates very easy card downloads in environments where a laptop might not be a viable choice, (bad weather, shooting on the move, etc.) The unit is very small, takes the same batter-
by Rolf Hartley

A decade after the launch of DVD-Video, the home video industry is once again on the verge of transformative change. This time, the promise of high definition picture has been the driver for technical innovation, leading to the development of two new formats that offer consumers breathtaking resolution and image quality. But greater picture and audio quality is only part of what Blu-ray Disc (BD) and HD DVD have to offer. The combination of interactivity, connectivity, and dynamic content integration from the set-top media player is what enables these next-generation formats to deliver consumers an entertainment experience unlike anything they have experienced before.

Requirements redefined

The best starting point for understanding the requirements of the new formats is a quick recap of what’s involved in making top-tier Hollywood movie titles today, which commonly feature bonus material whose accessibility via PC playback is enabled by Sonic’s InteXtual technology. Encoding and authoring are only part of the picture. A content list, structure, and navigational design (menu flow) must be developed, graphic artists must design the look and feel and special features must be created by film and video production and post teams. In addition, bonus content for PC playback (games, website creation, synchronized storyboard or screenplay presentations, etc.) must be executed.

The new formats’ advanced interactivity means that the distinction between menu space and presentation space may be all but eliminated with composite contextual menus that allow viewers to select scene navigation, change audio settings, and turn on annotations without interrupting video playback. Special features will no longer exist in their own separate corner, but will be directly accessible while playing the main feature. The result is that much of the bonus content that was restricted to a separate playback environment (the PC) will now be fully integrated.

Another major change involves built-in support for connectivity. In a true fusion of on-disc and online delivery, BD and HD DVD both provide a context for integrated playback of non-disc or refreshable material, allowing up-to-date trailers, links that unlock online bonus content, and time-dependent and contextual promotional offers for purchase of related merchandise. The idea that a title is “finished” when the master ships to the replication plant will become a thing of the past.

Realizing the Potential

What will it take to realize the true potential of High Definition? Not a radical revolution in approach, but rather building on the techniques, workflows, and tools that have proven themselves for standard-DVD while expanding them to address the additional capabilities of High Definition formats.

The production process for a full-featured DVD is already complex, but the new formats will demand even more skillful project management to handle the much greater coordination required by interdependent content. The new formats will also require the development of new skills, particularly in the area of programming. The advanced capabilities of HD DVD are enabled by a markup language named iHD which will be familiar to Web professionals versed in languages such as HTML, SMIL, and XML. BD, on the other hand, gets its interactive power from BD-J, which is based on the Java programming language. A full-service facility will need to be able to draw on expertise in both languages.

Facilities that want to enter the market for HD DVD and BD services will also be dealing with an abundance of raw data, and that may require some investment in faster processors, higher RAM, and lots more hard disk storage. Sonic has taken a leading role in enabling the authoring community to prepare for their role in filling the launch pipelines with content.

We’ve joined with the world’s top authoring facilities to create the High Definition Authoring Alliance, which provides its members with vital information, training, pre-release systems allowing a head start on title production, and the opportunity to shape tools and new workflows based on real-world needs. While no format transition is ever achieved without risk, the potential benefits of preparing now for BD and HD DVD are clear.

Rolf Hartley, senior VP and general manager of the Professional Products Group at Sonic Solutions, looks at the changes Blu-ray Disc and HD DVD are likely to bring to today’s DVD-centric authoring facilities. hdaa_info@sonic.com
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