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## **Aerial America**

by David Royle

**DERECK AND BEVERLY  
JOUBERT AND THE  
P2 HD HPX3000**

by Brian Cali

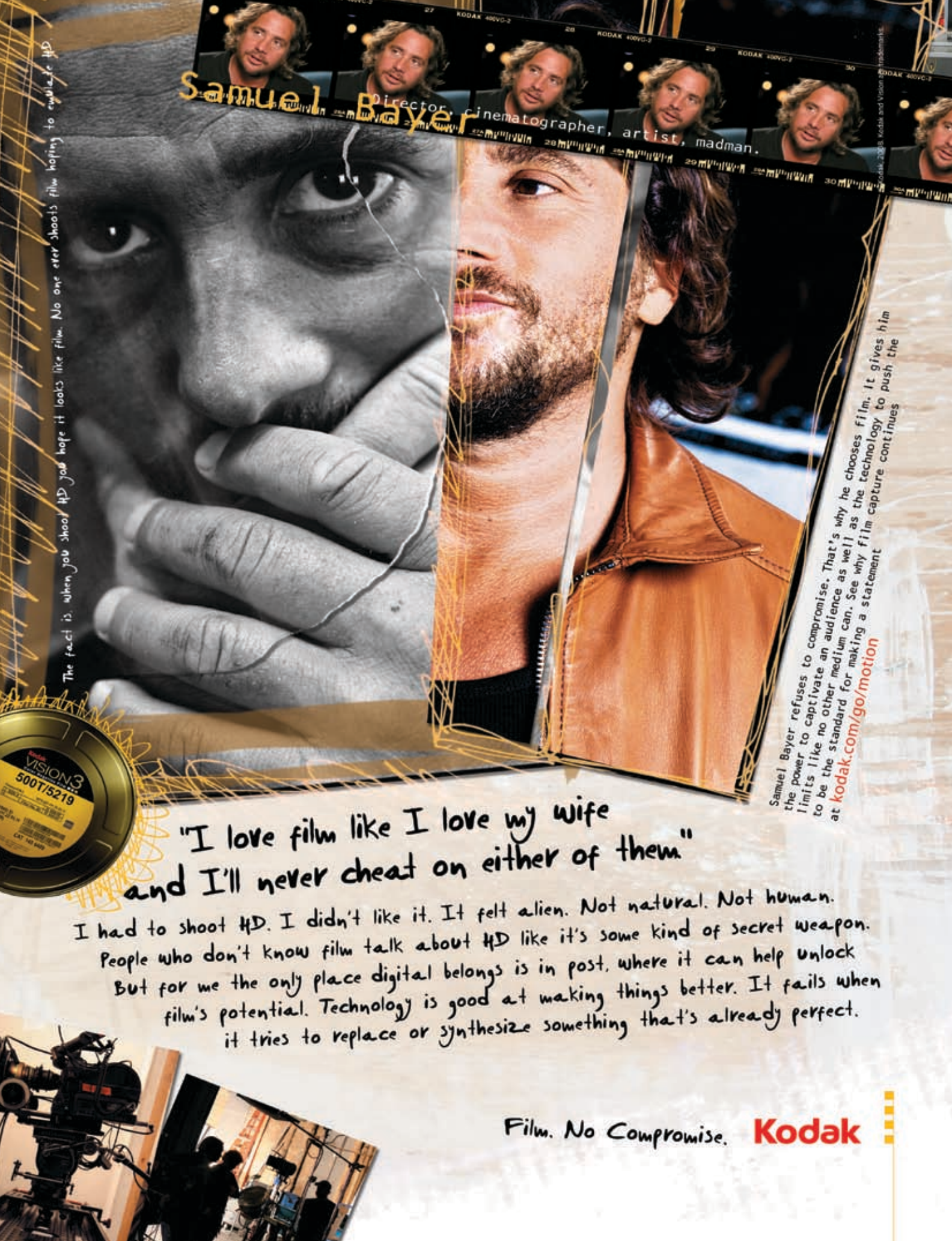
**SHOOTING  
DIRTY POLITICS**

by John McDougall

**ZSIGMOND TAKES aIM  
ON HD DAILIES**

by Bob Fisher





The fact is, when you shoot HD you hope it looks like film. No one ever shoots HD hoping to emulate HD.

Samuel Bayer Director, cinematographer, artist, madman.

Samuel Bayer refuses to compromise. That's why he chooses film. It gives him the power to captivate an audience as well as the technology to push the limits like no other medium can. See why film capture continues to be the standard for making a statement at [kodak.com/go/motion](http://kodak.com/go/motion)

"I love film like I love my wife and I'll never cheat on either of them."

I had to shoot HD. I didn't like it. It felt alien. Not natural. Not human. People who don't know film talk about HD like it's some kind of secret weapon. But for me the only place digital belongs is in post, where it can help unlock film's potential. Technology is good at making things better. It fails when it tries to replace or synthesize something that's already perfect.



Film. No Compromise. **Kodak**

# highdef

c o n t e n t s

6		<b>6</b> <b>FEATURE</b> <b>Derek and Beverly Joubert and the HPX3000</b> by Brian Cali
12		<b>12</b> <b>GlobeRiders, Indochina Expedition</b> by Sterling Noren
14		<b>14</b> <b>Beautiful Darkness in HD</b> by David Heuring
16		<b>16</b> <b>HDTV: The Consumer Front</b> by Dale Cripps
18		<b>18</b> <b>HD Tips: The Fairburn Workflow Test</b> by B. Sean Fairburn
19		<b>19</b> <b>Weird Connections</b> by Andrew Scafetta
20		<b>20</b> <b>Aerial America</b> by David Royle
22		<b>22</b> <b>Makeup Rendering in a Digital Age</b> by Bradley M. Look
23		<b>23</b> <b>Easy Money and HD</b> by Buddy Sampson
24		<b>24</b> <b>Shooting Dirty Politics</b> by John McDougall
26		<b>26</b> <b>HDTV Forum: FED: The Latest in Display</b> by Steve Sechrist
27		<b>27</b> <b>Canon XH G1 HD Guiding Light</b> by Jennie Taylor
28		<b>28</b> <b>Zsigmond Takes aIM on HD Dailies</b> by Bob Fisher
30		<b>30</b> <b>World's Toughest Fixes</b> by Licet Ariza

Front Cover: Aerial view of the Na Pali Coast on the island of Kauai. Photo by Greta Pittard, courtesy of the Smithsonian Channel.





### SCRIPPS HOWARD TO HD WITH OVER 100 FUJINON LENSES

Scripps Howard Broadcasting Company recently purchased an extensive complement of Fujinon HTs18X4.2 BERM lenses with 2X extenders. The more than 100 lenses are being used to outfit Scripps 10 broadcast TV stations, including six ABC-affiliated stations, three NBC affiliates and one independent. The lenses were designed for use with JVC GY-HD250 cameras.



### PANASONIC'S NEW AG-HPX170

The Panasonic AG-HPX170 is a fully solid-state P2 HD handheld camcorder which will list for \$5,695. It includes a 16GB P2 card in the box along with The HVX and HPX Book by Barry Green. Fully solid-state, the two-slot HPX170 is an ultra-mobile HD/SD camcorder that offers the compelling advantages of P2 technology and the ability to operate in harsh environments with resistance to temperature extremes, shock and vibration. Providing exceptional, independent-frame compression in 20 HD and SD formats, the HPX170 records in a variety of 1080i/1080p and 720p formats in DVCPRO HD, 480i in DVCPRO50 and DVCPRO, and 480i in DV. It is switchable between 16:9/4:3 aspect ratios.

### SNELL & WILCOX MACH HD STANDARDS CONVERTER

Snell & Wilcox introduced the Mach HD, a compact HD/SD motion-compensated standards converter equipped with up/down/crossconversion and synchronization capabilities. The Mach HD packages Snell & Wilcox's state-of-the-art motion-compensated standards conversion

in an entry-level solution that enables broadcasters to make a smooth and cost-effective transition to HD transmission. With the addition of the Mach HD to its product line, Snell & Wilcox now addresses broadcasters' full range of HD conversion requirements with solutions ranging from the Alchemist Ph.C - HD, which represents the gold standard in conversion technology, to the compact and cost-effective HD CVR700 linear frame-rate converter.



### CANON HD LENSES FOR BEIJING

Canon U.S.A.'s Broadcast & Communications division was the exclusive provider of HD lenses to NBC Olympics for its coverage of the Games of the XXIX Olympiad. NBC used the Canobeam DT-150 HD Free Space Optics video transceiver system for transmitting "beauty shots" of Beijing back to NBC's Olympic broadcast facility. Canon also provided on-site technical support for NBC Olympics throughout the duration of the 2008 Olympic Games. "It was our seventh consecutive Olympics where NBC entrusted Canon to be our exclusive lens provider," stated Dave Mazza, senior vice president, engineering, NBC Olympics. The Canobeam DT-150 HD video transceiver provides bi-directional, uncompressed 1.5 Gbps transmission of embedded digital HD video, audio, and camera-control signals on a single HD-SDI stream with no delay.

### HISTORY SERIES & SONY'S XDCAM HD SYSTEM

In season two of *Ice Road Truckers*, the show heads to the town of Inuvik, more than 100 miles north of the Arctic Circle, where the challenge is getting equipment and supplies to natural gas exploration sites and remote villages in and around the area. "Tape-based systems would not be practical for us at all," Gavin Brennan, the series' director of photography said. "Tape can get too brittle in the extreme cold and clog up the heads. The more moving parts you have, the more problems you can run into. The XDCAM system

gives us no problems related to the weather or the conditions." During the production, the XDCAM HD camcorders are encased in protective rubberized tape and still continue to perform flawlessly, shot to shot, he said.



### PANASONIC'S NEW AG-HMC150 AVCCAM

Panasonic's new AG-HMC150 professional handheld AVCCAM camcorder is based on the proven design and advanced functionality of the highly popular DVX100. This new camcorder will offer both 1080 and 720 HD recording with solid-state SD memory card recording. It also provides the flexibility of high-quality 1080/720 AVCHD recording at bit rates up to 24Mbps and a simple, solid-state SD memory card workflow. AVCHD, the industry's new MPEG-4 / AVC Hi Profile compression format, provides a near doubling of bandwidth efficiency with improved video performance over the older MPEG-2 compression used in HDV formats.



### CENTURY ACCESSORIES FOR SONY HVR-Z7U

Schneider Optics introduces a full array of professional Century HD lens accessories to complement Sony's HVR-Z7U and HVR-S2700U camcorders. These 72mm lightweight optical attachments provide high resolution image clarity, while enabling the camera to go wider, reach further, and move in closer than the lens alone will allow. New Century accessories for the HVR-Z7U include the .6X HD Wide Angle Adapter (#HD-06WA-Z7U), Fisheye HD Adapter MKII (#HD-FEAD-Z7U), .3X HD Ultra Fisheye Adapter (#HD-FE3X-Z7U), and 1.6X HD Tele-Converter (#HD-16TC-Z7U). U.S. MSRP starts at \$490.00. **HD**



## Media that makes HD happen.


Whether you shoot high definition tape, optical, hard disk or flash, Sony Professional Media makes HD happen. Only Sony media is co-engineered for optimal performance with Sony camcorders, so you get bit-for-bit data integrity for those once-in-a-lifetime shots. Sony's hybrid recording options with fast file transfers and instant access make HD more efficient than SD. Sony LTO™ and AIT™ data cartridges can back up your file-based operations. And Sony supports you with trained media specialists, unique recovery services and the Rewarding Recording® loyalty program. The choice for HD is Sony Professional Media. The #1 brand in professional media.

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# Dereck and Beverly Joubert and the HPX3000

by Brian Cali

Photo © Beverly Joubert. All rights reserved

International wildlife cinematographer Dereck Joubert and his producer wife Beverly Joubert, are currently in production shooting a feature film on lions in the wilds of Botswana. The (as-yet-untitled) feature film, slated for theatrical release early next year, is being shot with AJ-HPX3000 native 1080p one-piece Panasonic P2 HD camcorders.

The Jouberts are acclaimed (Emmy, Jackson Hole Festival, Jules Verne Festival honors, among scores of accolades) filmmakers, photographers, writers and conservationists. Working with National Geographic and based out of Botswana, the Jouberts have influenced policy and people's perceptions of the wild for more than 25 years.

Through their films, largely on the big cats of Africa - including *Living with Big Cats* and *Eye of the Leopard*, which both aired on the National Geographic Channel - they show a side of the natural world that is often hidden and explore the relevance of the natural world to humanity. The upcoming feature is a joint production of National Geographic Films and the Jouberts' company, Wildlife Films.

As an HPX3000 owner, Joubert chose to shoot in AVC-Intra 100, the industry's most advanced compression technology that delivers master-quality, 10-bit intra-frame encoding and full 10-bit, at full 1920 x 1080 4:2:2 video quality. He is shooting in run-and-gun style with two of

An avid Panasonic VariCam user, Dereck Joubert chose to shoot in high-quality AVC-Intra with the solid-state AJ-HPX3000 P2 HD camcorder.





Photo © Beverly Joubert. All rights reserved

Filmmaking duo Derek and Beverly Joubert shooting upcoming National Geographic Film feature in Botswana.

Page 10: Based in Botswana, the Jouberts are renowned for their work as filmmakers, photographers, writers and conservationists.

the HPX3000 shoulder-mounts on location in Botswana's Duba Plains.

"We believe our project will show lions for the first time as they truly are, probably as you will never be allowed to see them on television. It is raw and gritty and wild," he said. "We are following one pride of lions and showing their conflict with one herd of about 1,000 buffalo. But this war doesn't always go the expected way."

A fan of the Panasonic VariCam HD Cinema camera, Joubert recalled his search for the right camera for this project. "I searched long and hard through my various camera options for our current shoot. And given my experience with the VariCam in considering a 1080 choice for the larger screen, I first looked at what Panasonic could offer."

"I tested all the cameras I could get my hands on and decided on the HPX3000 for its quality, which is breathtaking, and its ease of use, which even improves upon the VariCam," Joubert said.

"We have worked in terrible conditions

with the cameras," Joubert said. "At the onset, it rained solidly for two months while we were following lions, getting bogged in, getting drenched, and generally fighting the elements. This is an electronic camera, and yet I have felt more confident with it, not less, because of its tapeless mechanics. The fewer moving parts to take on moisture the better. When it isn't raining, it is 120 degrees in the shade. If any camera really and truly wanted a test, these would be the conditions to do that in. The HPX3000s have held up very well."

"As a veteran film cameraman, with every HD camera I use, I try to set it up as much like a film camera as possible," Joubert explained. "In my mind, the HPX3000 is an electronic film camera: I expose for the highlights and mostly let the dark areas take care of themselves, because in film terms the camera's latitude can handle it."

"I am finding a tolerance, latitude or dynamic range of around 13 stops out here. The HPX3000 has a far better light handling feature than other HD cameras I have used



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Photo by Mark Thiessen ©2008 National Geographic

**DERECK & BEVERLY JOUBERT**  
**Filmmakers, Photographers and Writers**

**Relentless Enemies\*** (2006)  
 Jeremy Irons, Narrator

**Whispers: An Elephant's Tale\*** (2000)  
 Voices provided by: Angela Bassett, Joanna Lumley, Anne Archer, Betty White, Joan Rivers and others

**Reflections on Elephants\*\*** (1994)  
 Stacy Keach, Narrator

**"National Geographic Specials"**  
**Eternal Enemies: Lions and Hyenas** (1992)  
 Powers Boothe, Narrator

**Zebras: Patterns in the Grass** (1991)  
 Brian Dennehy, Narrator

\*Directed by Dereck Joubert

\*\*Emmy award winner, Outstanding Individual Achievement - Informational Programming

so far, and on the white balance settings, with Tungsten light simulation, I can get exactly what I am seeing with the naked eye. In some cases I may want to vary that, but now I want a perfect rendition of what I am seeing because I am not sure exactly what look we will end up with; I want it neutral for now."

"I add a minimal amount of black stretch but I do like higher contrast settings to give me that full light," Joubert continued. "At one point, I had a male lion on a mound at 6 p.m. front lit against a sold dark blue/grey stormy sky. It was heart stopping. I checked the image as I was exposing, again for the highlights, and the images I finally made were as beautiful. I wouldn't want to mess with that. I find that with these cameras, you really don't want to overexpose. I find that the HPX3000's ability to go into the menus and lift any underexposed shadow gives me the freedom to work in a film philosophy realm."

For this shoot, the HPX3000s are equipped with Fujinon 44x, and 25 x 16.4 HD zoom lenses. "The HPX3000s fit right into our established production milieu," Joubert said. "All the mounts work, the cases that I use in camera cars fit, the Steadicam doesn't change, and the jibs and cranes all keep the same balance."

In terms of location workflow, Joubert said he downloads the AVC-Intra files and mirrors them on two 1TB RAID hard drives. "If there is something I want to review, I do it from the P2 card either before or after transferring to the hard drive and before reformatting," he noted.

The feature will be edited in Final Cut Pro and finished on an Avid system for digital intermediates.

"The HPX3000 bridges the divide between film and video partisans," Joubert said. "I expose the same way as with film, I use short depths of field because I think we see in shorter depths of field, and movie audiences expect that."

"I need a camera that allows me to create my images the way I want them, not a creative 'partner' in the process, so I enjoy that honest and uncomplicated relationship I have with the HPX3000," he added. "I have tended to shoot it all clean or neutral and add grades or NDs on the lens, just as I would in film. So, in the end, what I have is a video camera that performs exactly like a film camera and that looks as good or arguably better than film. And I achieve all that without sweating over the techno details."

"I would suggest that the HPX3000 is the best-quality 1080 HD camera for both theatrical and TV that is still in a moveable (camcorder) configuration," Joubert added. "Certainly, from an image capture, quality, and workflow standpoint, this camera is as good as it gets, and takes the serious cinematographer into account. In fact, the images we can make with the HPX3000 give us converted films guys something new to be snobbish about." **HD**

even **twins** have their own **personalities.**



**the beauty of P2 HD in two new handhelds**

Like twins, Panasonic's new AG-HPX170 and AG-HVX200A full production quality P2 HD handheld camcorders are as alike as they are different. They both offer a 13X Leica Dicomar zoom lens; 1080i/p and 720p and 4:2:2 independent-frame recording; variable frame rates; a new, advanced 3-CCD progressive imager with spectacular quality; and the reliability and flexibility of a fast, file-based workflow.

Why might you prefer one over the other? The HVX200A features a DV tape drive in addition to two P2 card slots, allowing you to move easily from SD to HD and from tape to solid-state. If you have already transitioned to a solid-state file-based workflow, the two-slot HPX170 offers additional high-end features, including HD-SDI, metadata input, Dynamic Range Stretch and a 5-year limited warranty (upon product registration).

The HVX200A and HPX170. Distinctly different, yet uniquely alike. Learn more at [www.panasonic.com/p2hd](http://www.panasonic.com/p2hd).



**AG-HVX200A**

- 11 variable frame rates
- 4.2mm – 55mm
- Lightweight – 5.5 lbs
- 3.5" flip-out LCD
- 21 HD and SD formats

**AG-HPX170**

- 20 variable frame rates
- 3.9mm – 51mm
- Lightweight – 4.2 lbs
- Waveform/Vectorscope
- 3 focus assist functions



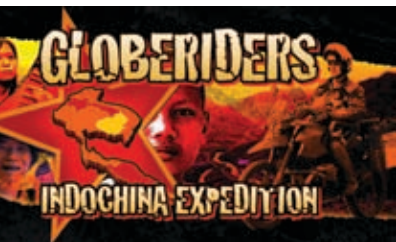


Photo courtesy Helge Pedersen, GlobeRiders

# GlobeRiders

## Indochina Expedition

by Sterling Noren



Riding during the rainy season in Cambodia requires waterproof gear for both riders and camera equipment.

I started producing films for a Seattle based motorcycle touring company called GlobeRiders in 2001. Since then, we've covered thousands of miles in dozens of countries and produced a growing series of programs about motorcycle adventure touring.

I made the leap into highdef in 2005 when I shot the Silk Road Adventure, a four hour travel series that has since been picked up for international broadcast.

Our latest project was the Indochina Expedition, a 70-day, 8000-mile trip from Saigon to Singapore that took us on a back road adventure through Vietnam, Laos, Cambodia, Thailand and Malaysia. My partners in this project were Helge Pedersen, the founder of GlobeRiders and Chris Poland, a pharmacist from Seattle. We filmed the trip last fall and we are currently wrapping up the postproduction. The result will be a six-hour HD series available for broadcast along with a shorter version on DVD.

Like all GlobeRiders projects the Indochina Expedition is a blend of motorcy-

cling adventure and cultural exploration – a documentary series that follows motorcyclists traveling around the world and interacting with local people in far away places. Filming from the back of a motorcycle is the most dramatic part of the job but the best material comes from interacting with ordinary people in far away places.

Being able to shoot a motorcycle documentary in HD is an incredible opportunity that requires careful planning. Its a significant challenge to come up with a kit that gets the job done right but is still small enough to pack onto a motorcycle, a feat that's now possible thanks to the affordability of small, lightweight cameras and production gear available in today's market.

In the end, the real challenge becomes telling the story of the adventure - the highlights and hardships, and the people and places that are encountered along the way. **HD**

*Sterling Noren is a Seattle based filmmaker and the owner of Wide World HD Productions. [www.wideworldhd.com](http://www.wideworldhd.com)*

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Photo courtesy of Oscar Oboza and Dave Sweet of Pixel Farm.

# Beautiful Darkness in HD

by David Heuring

A scene from the Carhartt spot shot by Jeff Stonehouse.

On a recent series of commercials for the clothing manufacturer Carhartt, Jeff Stonehouse, a veteran of more than 100 national television spots, encountered a lighting situation like none he had ever faced. The spots portray a series of tough guys at work. Stonehouse and director Andrew Walton of Good Films, Inc. found themselves a mile and a half underground in a West Virginia coal mine. The remote, cramped spaces and black mine walls made lighting difficult.

"It was important to capture some detail in order to place the miners in this environment," says Stonehouse. "If I had lost that detail, it would just be a face in the blackness." The mine was a perfect place to test the new KODAK VISION3 500T 7219 film. "In spite of most of the images being three stops underexposed, the film rendered the mid-tones beautifully, and I couldn't believe the grain-free detail I was getting out of the black coal."

The HD transfer was done on an URSA telecine at Pixel Farm in Minneapolis. The dailies timer was Oscar Oboza. "In the mine, we had to move fast, so I wasn't able to react to what I was getting all that much, but what I found in the dailies was a lot of beauty that I hadn't counted on," says Stonehouse. "The flesh tones of the miners' faces had a gorgeous, creamy, pastel quality that I thought was beautiful. I expected to see just teeth and eyes, given the extremely low-light levels. But the results completely exceeded my expectations."

He scoffs at the antiquated notion that Super 16 is inadequate for HD display. "That is a myth," he says. "Two years ago I shot a Super 16 spot with Martin Granger from Moxie Pictures for Combos snacks, and it's won just about every award you can win in advertising. These Carhartt spots are finished and aired in HD, and the image quality is fantastic." **HD**

Whatever the camera, wherever the shoot, whatever the format – the Anton/Bauer standard for performance and reliability leads the way.



from MINI...

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to CINE

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The all new CINE -VCLX/2 is a 280 wh model 1/2 the size and weight of the VCLX. This box has all the same features in a smaller size that is perfect for more mobile requirements and lower draws of film cameras, HMI ballasts and lighting panels.

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# hd tv

THE  
CONSUMER  
FRONT

by DALE CRIPPS

## For a Clearer Future



It's been argued for years that consumers of television don't watch technology; they watch programs. This debate is often punctuated with other weak excuses for not shouldering the cost of producing in HDTV. From the first hours of HDTV Magazine (ten years ago) the readers' feedback channel made it clear to us that when a program is available

in both HDTV and the old standard, the viewers will watch the HDTV version every time.

This anecdotal

observation is given some sea legs in a newly published survey from CTAM, the cable industry's marketing arm. The report left little doubt that HDTV viewers are loyal to their HDTV viewing experience. The 1200

respondents from around the nation revealed that forty one percent of highdef owners subscribe to an HDTV programming service. Some 45 percent said they make a point of watching a high-def program "most



Photo courtesy © Warner Bros. Pictures

Dale Cripps is the publisher of HDTV Magazine, the first publication in the world dedicated to the consumer of High Definition programming and hardware, and the founder and president of the High Definition Television Association of America. [hdtvmagazine@ilovehdtv.com](mailto:hdtvmagazine@ilovehdtv.com)

Will Smith (Robert Neville) in *I Am Legend*.

of the time" when they do watch TV.

A Debate Still Playing at A Studio Near You: Does a program have to be in HD for a high-def owner to watch it?

At least 20 percent of HDTV owners identified in the CTAM study said they make a point of watching a highdef show "every time" they watch any TV. Not all industry executives care to believe this 'vital statistic': "It may not matter if the show is in HD -- if it's a quality program", argues NBC CEO Jeff Zucker. HDTV owners shake their heads in disbelief at such claims.

The survey also touched on the new digital front and showed that a scant 14 percent of TV viewers watch TV via desktop computers and only nine percent watch on laptops. Just six percent catch their TV clips on mobile phones and five percent do so using portable video players. Viewers said they preferred shorter content when they do watch TV online. Movie trailers ranked first among this hand-held crowd (53 percent) with user-generated videos close behind at 45 percent. An immediate second to user-generated videos are music videos and news, scoring 37 percent.

So, my question to you is this: "What program would you want to produce that you don't want to be seen by the HDTV loyalists?" Oh yes, and this just in: Dish has announced its first 1080p channel and invites you to "Watch the box office smash *I Am Legend* in 1080p HD for only \$2.99." The future is clear and getting clearer. **HD**

## A Winning Combination

Star  
power



Sony F23 CineAlta™ camera docked to SRW-1 HDCAM SR™ recorder, shown with Canon ACV-235 Anamorphic Converter and Canon HD-EC Cine Prime Lens.

### Sony's F23 CineAlta Camera and Canon's HD-EC Lenses

Sony's 2/3-inch F23 CineAlta camera outfitted with one of Canon's cost-effective HD-EC Prime or Zoom lenses provides DP's with a winning combination. The F23 was specifically developed for cinematographers seeking superior digital image origination. Canon has a long history in making motion-picture lenses, and the very high MTF, excellent relative light distribution, and superb black reproduction

of its HD-EC Prime and Zoom lenses ensure full exploitation of the F23's extraordinary exposure latitude, sharpness, and tonal and color reproduction attributes. Focus breathing on these lenses is remarkably low. Canon's ACV-235 Anamorphic Converter, meanwhile, fully utilizes the F23's 16:9 imagers to capture overall spatial resolution that carries through to final 2.35:1 35mm film-out.

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# Tips HD

by B. SEAN FAIRBURN SOC

## The Fairburn Workflow Test



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323-460-4767

**With new cameras and recording mediums** now available and gaining ground in the market, let me make a simple suggestion that often unveils a myriad of woe in a project's workflow and will help you correct it before the actual shoot.

Any format and camera and edit workflow will be greatly enhanced by this simple exercise: Shoot ten numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 out of order. Record those numbers (Audio) also in a random order. On Camera, Off Camera or both along with timecode. This can be done with a dry erase board or post-its or flash cards or a slate. It doesn't matter. I prefer a resolution and framing chart with exact aspect ratio and numbers in the middle. This lets me also see where I am losing picture and resolution along the way.

If you are considering frame rates for slow motion or interlace vs. progressive or mixing formats, shoot every option you think you will use and test them to insure they will work. Then use whatever means of recording you intend to employ on the shoot: all cameras you intend to use and

the tape format, hard drive, DVD, film, whatever medium and record these simple numbers out of order.

Go through the entire process of digitizing, upconverting, or downconverting, transferring, cloning, dubbing, whatever the footage will do along with every department and person that will touch your footage and audio.

Ask for it back edited in proper numeric order in a finished form just as you would a final deliverable and every form along the way, including dailies in whatever form you require and elements to hand to VFX in proper format and medium.

The editor with his new

whizbang program should be able to handle the job in 5 minutes and make an output to finished, polished HD Master and film-out should you need to go that far.

I can't tell you how valuable this simple exercise is in determining the facts of what WILL work from the mythology of what someone says will work. Any camera rental house and post house worth their salt and your business should be happy to perform this test for you.

Call it the "Fairburn Workflow Test". Most know my reputation for extensive testing. "It's better to insure success than to hope for it." **HD**



Photo courtesy of Getty Images

## Weird Connections

by Andrew Scafetta

Science uses logic and order to explain the world around us. It is the fundamental basis for some of the greatest discoveries in human history – earth's round shape, gravity,  $E=MC^2$ , the speed of light, etc.

But other truly innovative scientific moments – unexpected discoveries that will have a profound effect on human life 10, 50 or 100 years from now – happen strictly by accident, coincidence or plain chance. On *Weird Connections*, Science Channel examines the experiments that lead to those moments. It's a world where, in the name of science, researchers trip old ladies so that skyscrapers do not topple; or use gravity-defying frogs to help mankind colonize Mars; or where locusts help to develop safer cars.

Knowing that locusts fly in swarms of thousands but never manage to collide, University of Newcastle biologist Claire Rind unlocked the creatures' amazing ability to avoid mid-air collisions. The outcome of her

research inspired other scientists to replicate the bug's anti-collision abilities in computers and robots. What resulted is the future of automobile technology – a computer powered collision warning system where cars are automatically guided by a sixth sense or "locust sense." The system could prevent 6.5 million car accidents and save thousands of lives in the United States each year.

To capture these and other seemingly peculiar experiments, the filmmakers primarily used the Sony XDCam HD camera. The camera allowed producers to see shots prior to edit, and record in slow motion and play back at slow motion speed without sometimes costly and lengthy tape transfers. The filmmakers also used Canon EOS digital SLR stills cameras to shoot a number of scene-setting time-lapses.

What resulted is a series that magnificently encapsulates the possibility and uniqueness of research featured in *Weird Connections*. **HD**

Golden Mantella frog  
perching on a leaf.





Photo courtesy of the Smithsonian Channel

# Aerial America

by David Royle

The downhill seventh hole of the famous Pebble Beach golf course. At only 106 yards it's one of the course's shortest holes, but also one of the most difficult, with fierce ocean winds and bunkers all around.

When audiences viewed the landmark series, *Planet Earth*, they were wowed by the richness of the visual experience and especially by the astonishing aerial sequences. It was a series that really delivered on the promise of HD.

Now an ambitious new project is underway to film *America* on a scale and from a perspective that has never been achieved before. Using the same camera rigging as *Planet Earth*, an elite camera and helicopter team will criss-cross America over the next nine months, filming every state from the air. Their goal: to capture the wonders of the continent – both natural and man-made – in extraordinary detail and to tell the story of America from a bird's eye view.

The Smithsonian Network's 50 part series, entitled *Aerial America* is already underway, and the results from shooting California and Hawaii are stunning. Director Eric Cochran

is an L.A. cameraman who has directed and shot everything from life on board an aircraft carrier for Smithsonian to Extreme Makeover Home Edition for ABC to crocodiles in Costa Rica for National Geographic. "For this show we used the Cineflex to get the rock solid focal lengths in order to get sequences, close ups, mediums etc."

Sudden changes in weather always make aerial cinematography tricky. Yet Eric says that wasn't the most difficult hurdle: "The biggest challenge with aerials and HD is simply keeping the lens clean from bugs and ocean spray!"

Like all good directors, Eric knows that planning and preparation is key to success. But then you need a little luck as well...such as a volcano erupting. "The live volcano shots on the big island are extraordinary. And we were right on top of it and nearly in it."

In just five days, Eric and his team flew



Photo by Greta Pittard, courtesy of the Smithsonian Channel

over five of the Hawaiian islands, filming everything from big wave surfers to pineapple pickers, from cascading waterfalls to the solemnity of Pearl Harbor. "Shooting in HD," says Smithsonian field producer Greta Pittard, "allowed us to fly longer distances and shoot longer sequences without constantly having to reload the mags, which would have been nigh impossible, given the few flat surfaces and the remoteness of the islands of Hawaii."

The next stage of this epic journey will start in Arkansas and move northeast in time to capture the fall foliage in New England. British aerial director and cinematographer Richard Mervyn will be leading this part of the expedition. He is one of the most experienced aerial filmmakers in the world. "My first flight was with Marc Wooff, an American pilot who had flown in Vietnam. As soon as I went into the air, I knew that was what I wanted to do."

Mervyn says that he disagrees with

people who say it's harder to work with HD. Although he says that HD allows no tolerance for soft focus, he likes the latitude it allows for exposure. "I had a shot of a sunset on Vesuvius. All Vesuvius was black. I said to the editor 'it's kind of black but the sky looks great.' He just raised the chroma and there it was. In SD, you'd have so much gain in it."

Mervyn's company, Skyworks, has shot HD aerials all over the world. But he says the opportunity to shoot the Smithsonian Networks' series across America is a dream he's had for thirty years. "Flying is much easier in this country. It's just wonderful. It's a society that welcomes helicopters. People wave at you here, whereas they make rude remarks elsewhere. The challenge is the enormity, to really find what makes each state tick. We're going to offer people views they've never seen before." **HD**

Eric Cochran (*Aerial America: Hawaii Director*) and Tom Miller (*photographer*) taking a break with the chopper.



# Makeup Rendering in a Digital Age

by Bradley M. Look

Not too long ago, the time honored way to show a director your concept for a character makeup was with the use of a pencil and a drawing tablet. It was called, rendering. Some makeup artists would even use acetate overlays taped to an actor's headshot to show what they had in mind in an effort to help the director visualize.

But with the advent of the personal computer and software like the widely used Adobe Photoshop, makeup artists now have a powerful tool that makes the old presentation look downright antiquated. Perhaps the biggest shortcoming with the old rendering method was the director's problem of translating the drawing to that of the actor's face. They would squint their eyes while looking at

the sketch and tried to picture it on the actor. It's the very same problem we makeup artists have when showing a director a life cast with sculpted features in gray clay. Invariably, they will touch the sculpture and say, "The finished makeup won't be that color and the prosthetic will be softer?" Of course the answer we patently respond back is "yes" to both.

While working on *Enterprise*, Michael Westmore asked me what a zombie Vulcan would look like, as we had an episode that centered on just that. I went home and within three hours had a Photoshop rendering complete. The next day, Michael took that photo to the executive producer and we got the go ahead. **HD**



When asked what a zombie Vulcan would look like for an up-coming episode of *Star Trek: Enterprise*, Brad started with a photo of a makeup he did earlier on the series. This was the basis for the Photoshop rendering.



Using the Adobe Photoshop program, Brad was able to generate a makeup concept. Later this was shown to the executive producer, Rick Berman, for an approval so that the makeup department could proceed with the prosthetic construction.



## Easy Money and HD

by Buddy Sampson

Lauren Marie Pena, an up-and-coming producer, director and actress, created a short film *Easy Money*, a funny, entertaining and bizarre piece that is capturing a lot of attention. Recognized as Best Female Director for a Student Short for *Easy Money* by the Cinema City International Film Festival (CCIFF), Lauren also was the Grand Prize Winner for the Project Breakout Filmmaker Competition for her short film *Christmas Confessional*. "If your film gets accepted into the first round of the competition, then you have to submit another film within two weeks," said Lauren of how *Christmas Confessional* was originated. "So I had to come up with an idea, cast the actors, shoot, edit and get it ready in time." Her grand prize earned a trip to the United Kingdom to participate in a one-week internship with Academy Award Winner David Parfitt and the Trademark Films Production.

All of Lauren's projects are now shot in HD. With the advent of the Panasonic AG-HVX 200, shooting in high quality with a high degree of flexibility has become the norm. "Because of HD technology, you can go out and shoot a decent short on a weekend. Being able to turn an idea into something real in a short time is now a possibility. All I have to do is call up my friend with the camera and we'll shoot it." HD enables producers with low budgets the ability to go out with a camera and produce a quality project. "A lot of film festivals now are accepting HD formats," Lauren explained. "You're seeing better stories being filmed. Talented people that previously didn't have the resources, now have the ability to create wonderful stories with incredibly low budgets with quality that holds up on the big screen. These new cameras have created a new world of production possibility." **HD**

The true moment where this film becomes a 'coming-of-age story'. Jaylin lies down and questions her own conscience and innocence.



# Shooting *Dirty Politics*

by John McDougall

Billy (Judd Nelson)  
talking to campagin  
manager in hotel bar.

In the summer of '07 my long-time friend and filmmaking partner Steve Esteb, approached me to do a small budget feature with him. He pitched me this incredibly funny concept about a lovable but very flawed presidential candidate from Louisiana who has the misfortune of having a dead girl in his hotel suite just as he is entering the primaries with a 20-point lead.

The key to pulling off this production was designing the script and locations around the dollar limitations. Steve's script was so strong that we attracted the attention of Judd Nelson, Melissa Peterman (of the *Reba* show), Beau Bridges and Howard Hesseman to star in the film.

Steve, having seen my footage from a small urban feature I shot earlier in the year, felt strongly to support this going to HD. I had already worked with the JVC HDGY250U on the other production and felt I could push

the format further with the right lenses and equipment.

We would be shooting two timecode synced 250s running Ziess speed primes mounted via the JVC PL-mount adapter. We knew that in all situations we would not be able to shoot with the primes, so the lens we leaned on to handle the other shots was the Fuji Th13x3x.513BRMU wide-angle zoom. There was a lot of movement and focal length changes in some of the scenes and relying on the zooms saved us time.

Although we were low budget, we decided to shoot all the hotel scenes on a sound stage instead of an actual hotel. This proved to be a huge time saver. We shot as many as 11 pages in a day and that's saying a lot based upon the amount of dialog in this film. The set photographed beautifully and played as the real deal on film. Sandra McDougall was our art director and set designer and her



skills and design influence brought a high level of production design to this film. The set was built at Hooperwood Studios in Baton Rouge where we ended up basing all our production offices and equipment.

When it came to shooting, we had two cameras running at all times and we were getting a massive amount of coverage on the actors (establishing, two shots and singles). We were concerned how to handle this in the edit to be able to see all the great performances. Steve solved this in a truly creative manner by isolating the singles within their own frames and using multiple images at one time.

We maximized the use of the JVC cameras to deliver the highest quality image. A lot of our shots took place in low light and with a great deal of movement by the talent.

I ran Tiffen antique suedes for filtration much of the time and I also reset all the internal settings for gamma and color to a more desaturated look. The cameras were also affixed with Cavision follow focus units and matte boxes and much of the time we ran the DR-HD100 on camera hard drives along side tape.

For anyone who is considering 720P HD on a budget, and can afford to work with the JVC 250U camera body, it should prove to be a strong format to shoot on. The key as with any production lies more in the skills of the DP and your lighting crew. The camera can deliver an amazing image, but lens selection is as critical as exposure. **HD**

John McDougall is a Louisiana based filmmaker (Producer/Director/DP) and he and Steve Esteb premiered *Dirty Politics* August 16<sup>th</sup>.

Campaign scene of Jimmy Breaux (Johnny Valdetero) being escorted by Security Agent. Steadicam operator is Blake Palmentier.



# Forum hdtv

by STEVE SECHRIST

## FED: The Latest in Display

From the ash that's settling over the news of the demise of one LCD market up-start, then holiday sales leader Syntax-Brilliant and its Olivia brand LCD-TV, comes yet another display technology resurrection FED (field emission displays). We are told that Pioneer is to sell its PDP Plant to the Sony Spin-off, Field Emission Technologies Inc. (FET) for production of that technology for the price of \$200M. According to reports, the plant will begin to manufacture 26-inch FED panels.

Back in October 2007 we got a good look at the Field Emission Technologies FED panel at the CEATEC show in Japan. There the company showed its nano- (FED) display, a 20-inch prototype high definition FED panel that draws as little as five watts in dark scenes, and less than most LCD screens in the brightest scenes. The company said that in addition to energy efficiency, the slim display features CRT-like color phosphors, and renders 240 frames per second - possibly the fastest flat panel speed of any video display type.

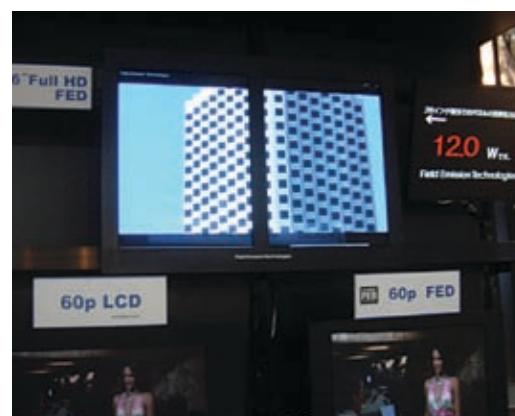
At the show, FET had a darkened room with an original Sony broadcast quality CRT monitor in a side-by-side shoot-out with their new panel. Even the FET engineer inside was a former Sony CRT production manager. Both images were stunning, and viewers were hard-pressed to discern the flat screen over the benchmark CRT display.

More recently, at NAB this past Spring, FET had an exhibit at the broadcast industry show with a similar set up to CEATEC. Our

analyst Aldo Cugnini said of that display demo "...there was no difference discernable between the FED and CRT monitors. Of course, this is to be expected, as the FED display utilizes phosphor-based light generation from the emission devices."

FET said they plan to produce a line of full-HD monitors that target the high-end broadcast market, medical and other niche markets as replacements for broadcast quality CRTs.

The company is a spin-off of Sony who first invested then purchased Candescant Technologies in the late 1990's. They have been working on high-voltage field emission display technology as a replacement to CRTs and may have a slight edge over LED backlit LCD-TVs with their contrast and image lag advantages. **HD**



Steve Sechrist is an editor/analyst at Insight Media, a technology based media firm specializing in large format and micro display and related industries.



Photo © George De Sota/pistudios.com

## Canon XH G1 HD *Guiding Light*

by Jennie Taylor

**G**uiding Light, the longest-running scripted series in broadcast history, strategically enhanced its "look" earlier this year by becoming the first series of its kind to be filmed exclusively with small, hand-held, highly portable digital camcorders, which enable the show to be shot inside actual homes and offices, or on location practically anywhere. The camcorder chosen for this new production model was Canon's XH G1, which is engineered with the technology, features, and durability necessary for producing five daily one-hour shows each and every week for an audience of millions of dedicated viewers.

The key to *Guiding Light's* new production model of exclusively using compact, hand-held Canon camcorders is what Janet Morrison, the producer of the show's digital department, described as "Four walls and a ceiling." "No one else does that," she elaborated. "Its purpose is to make the show more intimate for the viewer and to really bring them into Springfield, so they can be a part

of these characters' lives in a way they haven't been before." Springfield, *Guiding Light's* fictional locale, is portrayed by a suburban New Jersey town several miles west of the series' Manhattan studios.

"In our old production model [using pedestal-style cameras to shoot actors performing in traditional three-sided sets] our two studios in Manhattan had room for seven sets at a time." Morrison added. Now, however, using the Canon XH G1 HD Camcorders, producers of *Guiding Light* can shoot in as many locations as they wish. "This has opened up our 'canvas' in ways we weren't able to imagine before. Our writers have so many more places where scenes can happen. They can write people in the park, or at the municipal building, or using cars that actually drive, as opposed to cars that just sit on a studio floor. This new production model has completely changed the way the show looks and the way stories can be told." **HD**

Gina Tognoni as Dinah Marler of *Guiding Light* on location in Peapack, NJ.



# Zsigmond Takes aIM on HD Dailies

by Bob Fisher

Vilmos Zsigmond, ASC, explored a new frontier during the production of *Bolden!* by pioneering the use of the accurateIMAGE™ (aIM) system developed by LaserPacific in Hollywood. The system utilizes proprietary Kodak image science, the American Society of Cinematographers (ASC) Color Decision List, and calibrated HD monitors and projectors to ensure that everyone sees the same subtleties in images from beginning to end.

Zsigmond began working on the independent feature on the 50<sup>th</sup> anniversary of his arrival in the United States as a political refugee from communist Hungary in 1957. He has earned an Oscar for *Close Encounters of the Third Kind* and nominations for *The Deer Hunter*, *The River* and *The Black Dahlia*, as well as an Emmy for *Stalin* while compiling some 80 film credits.

*Bolden!* is an original story set in New Orleans during the 1890s. It revolves around Buddy Bolden, a clarinet player during the dawn of the jazz age. First-time director Dan Pritzker also wrote the story and co-authored the script. He and Zsigmond envisioned desaturating colors to create “nearly black-and-white images” that look and feel right for the story, time and place.

Zsigmond saw a demonstration of the aIM system during the early stages of pre-production planning in Wilmington, North Carolina. He envisioned the possibilities for leveraging that technology to ensure that everyone on the production and postproduction team was on the same page from beginning to end.

Produced in Super 35 film format, Zsigmond used a range of KODAK VISION2 color negative on *Bolden!* depending on

the lighting environment. However, he lit as though it were a black-and-white movie. Peter Sorel, the still photographer on the crew, is Zsigmond’s longtime friend and collaborator. He took digital stills documenting every scene. “Peter and I used a laptop computer calibrated for the aIM system to desaturate the images as a visual reference for Bruce Goodman, the dailies timer at LaserPacific,” Zsigmond says. “We emailed those stills to Bruce every evening. He did a great job of matching dailies to those looks.”

Glenn Kennel, LaserPacific vice president and general manager of Feature Film Services, explains that the aIM system is based on more than a year of research and development and a year of production testing. “aIM gives filmmakers pictures that look like the final film product from the first dailies, to the digital intermediate, and through to all the deliverables to allow filmmakers to carry their creative vision from preproduction to delivery.”

An aIM DailiesPlayer was used to project HD images on a large screen in a hotel room on location. Pritzker and members of the crew watched dailies with Zsigmond. The aIM system enabled Zsigmond to manipulate colors and contrast to show the director what shots and scenes looked like if the images were brighter or darker with more or less contrast, and more or less saturated colors. “It was wonderful for everyone to be able to see dailies that accurately represented our intentions,” Zsigmond says. “We also knew that the editor and everyone else watched the same images with calibrated viewing devices.”

Kennel emphasizes that the aIM system is the first full end-to-end, color-calibrated process for film production. “We burn the film LUTs (look-up tables) into the editorial and video dailies,” he explains. “aIM ensures that what you see on the set, in dailies and in previews, and in D.I. will match the film and digital cinema releases. Starting on day one, what you see is what you will get. And even more importantly, what you see is what everyone else sees, too.”

Zsigmond gets the final word: “I think it’s fantastic. The director, producer, production designer, and even the actors said they have never seen dailies like this. I think it’s a miracle.” **HD**



Photos courtesy of Kodak

Writer-director Dan Pritzker (far left) and DP Vilmos Zsigmond, ASC (center) prepare to shoot a scene for *Bolden!*



Photo by Jon Comick, courtesy of Kodak

DP Vilmos Zsigmond, ASC shows the before-and-after look when using LaserPacific’s accurateIMAGE™ (aIM) system with a scene from *Bolden!*, during a slide presentation at Plus Camerimage International Festival of the Art of Cinematography in Lodz, Poland.





Photo courtesy © Elizabeth Kanter / NGT

# World's Toughest Fixes

by Licet Ariza



Above: Sean Riley checks out the inside of a cooling tower at Susquehanna Nuclear Power Plant.

Top: Sean Riley dwarfed by the new Siemens high pressure (HP) rotor being installed at Susquehanna Nuclear Power Plant.

When big industry breaks down, the results can be costly and the fixes dangerous: rigging a 9-ton digital television antenna onto a 2,000-foot tower; replacing a 75-ton nuclear power plant turbine; repairing live 500,000-volt lines from a platform mounted outside a helicopter. The new National Geographic Channel (NGC) series *World's Toughest Fixes* takes you inside some of the most daunting repair jobs imaginable. Each one-hour episode follows engineering enthusiast Sean Riley as he pushes himself to the limit while working with some of the world's top mechanics.

"These are real multi-million-dollar problems that need to be fixed," according to series producer Rob

Kerr. "National Geographic was able to secure rare and at times exclusive access to places the audience has probably never seen before. We selected specific crews for each episode depending on the specialty needed, for example underwater or heli-cam photography. We used Panasonic Varicam and P2 cameras. We also had a stills camera and used time-lapse photography."

In one extremely creative example of on-the-job guerilla filmmaking, Riley rigged up his own camera MacGyver-style. "I used an Oregon Scientific ATC2K Action Camera. It's small, waterproof and very durable. To slow the descent and maintain the desired orientation, I devised a mini-parachute for the cam-

era built of bubble wrap and dental floss, and gaffer's tape to build a harness. Then I climbed the 2,000-foot tower and tossed it! The result is a two-minute shot with a great ground rush in the last 10 seconds as the camera crashes directly into a cornfield." According to Riley, the camera came through the ordeal just fine and is still in service today.

**HD**

The two sneak-peek episodes premiering Sunday, September 28, are Nuclear Turbine at 9 p.m. ET/PT and Boeing 767 at 10 p.m. ET/PT. Then, beginning October 1, the series will air regularly on Wednesday nights at 10 p.m. ET/PT. Episodes will include Power Lines, 38-Ton Engine, Telescope, Cruise Ship Engine, Quick Bridge Fix and Television Tower Antenna.



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