highdef.com

highdef

VOL. 4 ISSUE 4 $5.95

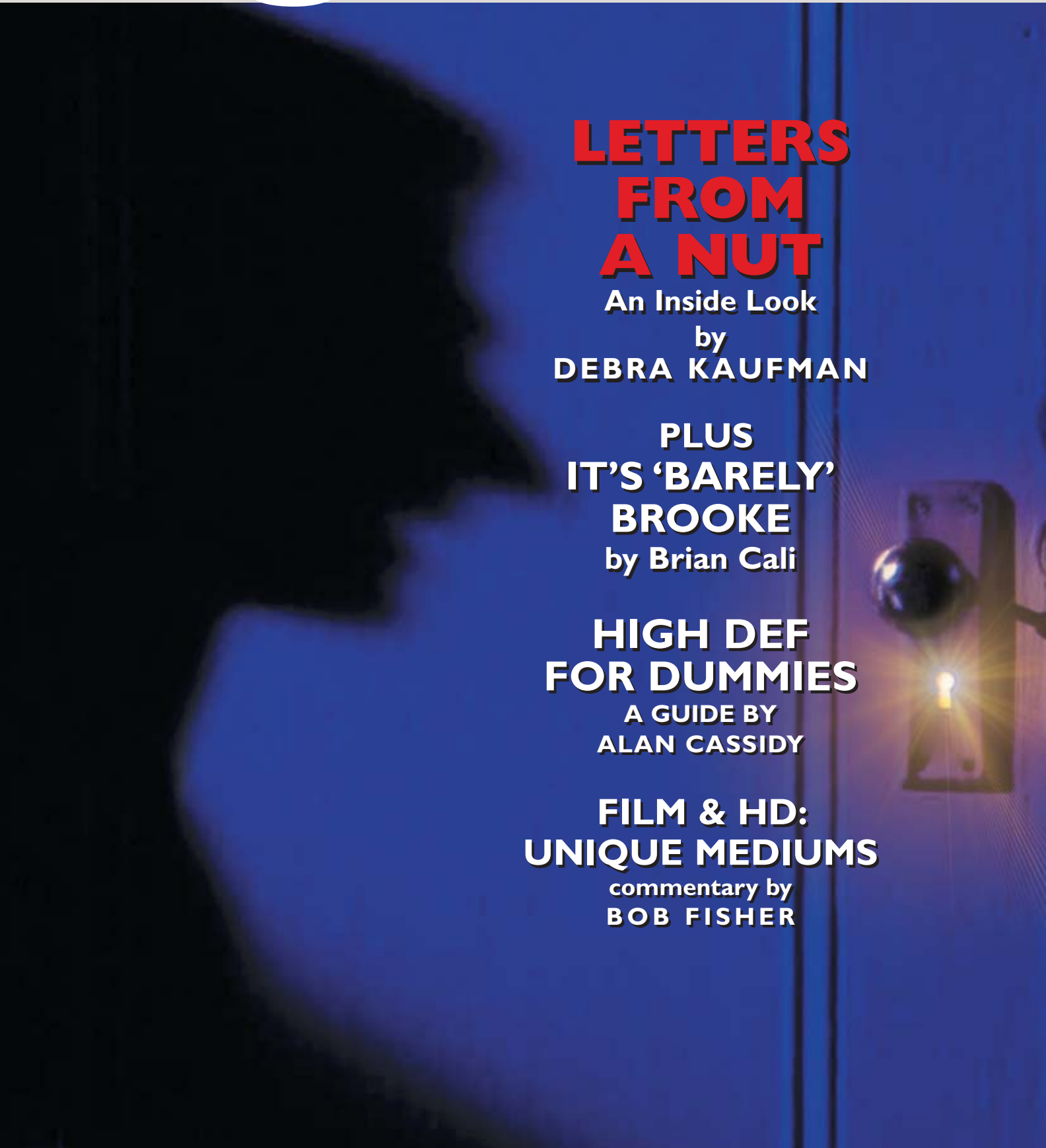
DEFINING HIGH DEFINITION

ON THE INSIDE

The Latest in HD News including Sean Fairburn's

HD TIPS

HDTV Consumer Front
BY DALE CRIPPS



LETTERS FROM A NUT

An Inside Look
by
DEBRA KAUFMAN

PLUS

IT'S 'BARELY' BROOKE

by Brian Cali

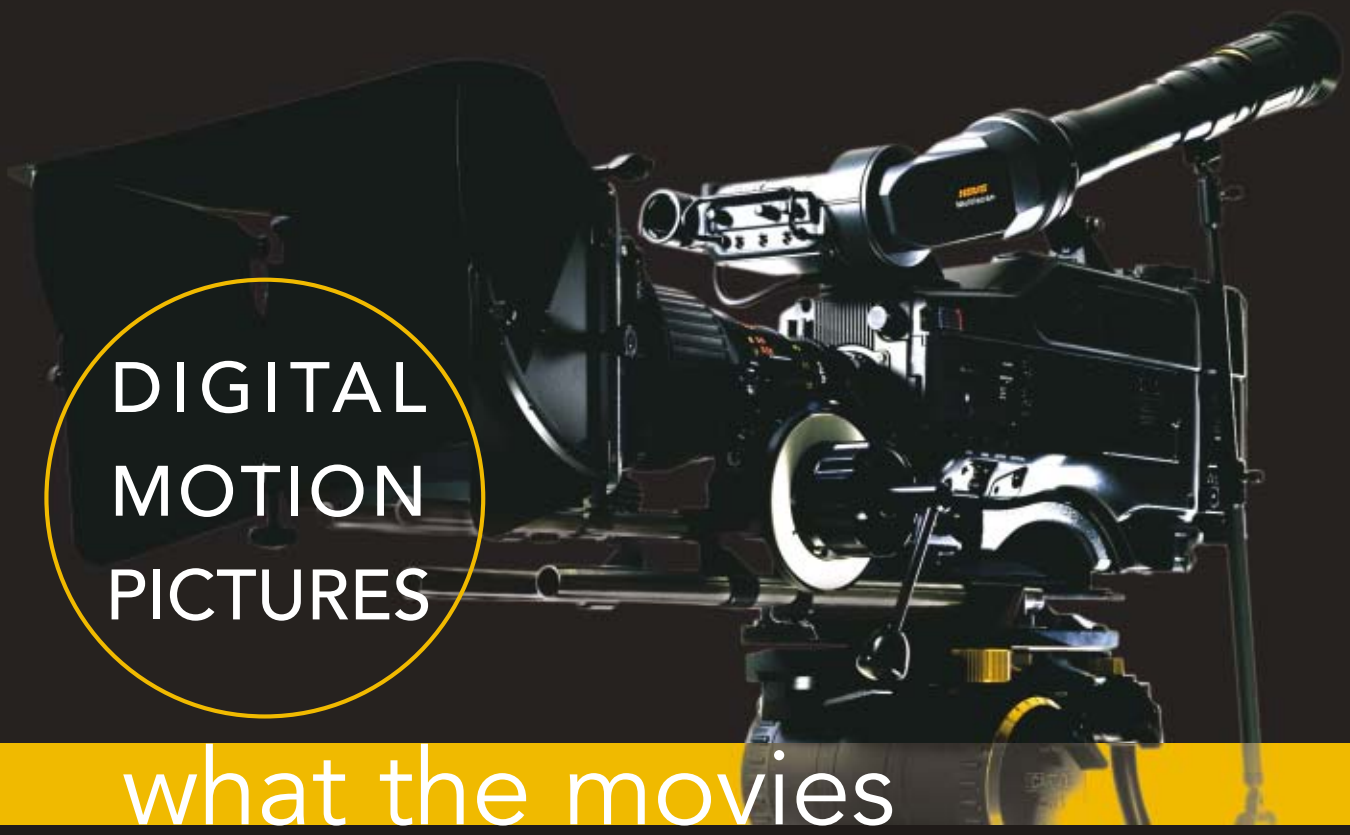
HIGH DEF FOR DUMMIES

A GUIDE BY
ALAN CASSIDY

FILM & HD: UNIQUE MEDIUMS

commentary by
BOB FISHER

SONY



DIGITAL MOTION PICTURES

what the movies are moving to.

Sony has sparked a digital revolution. Our CineAlta™ 24P High Definition system is setting the pace for image quality in cinematic storytelling – and has won a technical Emmy® Award. Sony's MPEG IMX™ 25P system steals the show in indie films and documentaries. For mobile, handheld and cinema verité shooting, our DVCAM® camcorders are best-sellers. And which tape stock is co-engineered with the hardware to elicit the best from each system? Sony HDCAM®, MPEG IMX and DVCAM Master series tape.

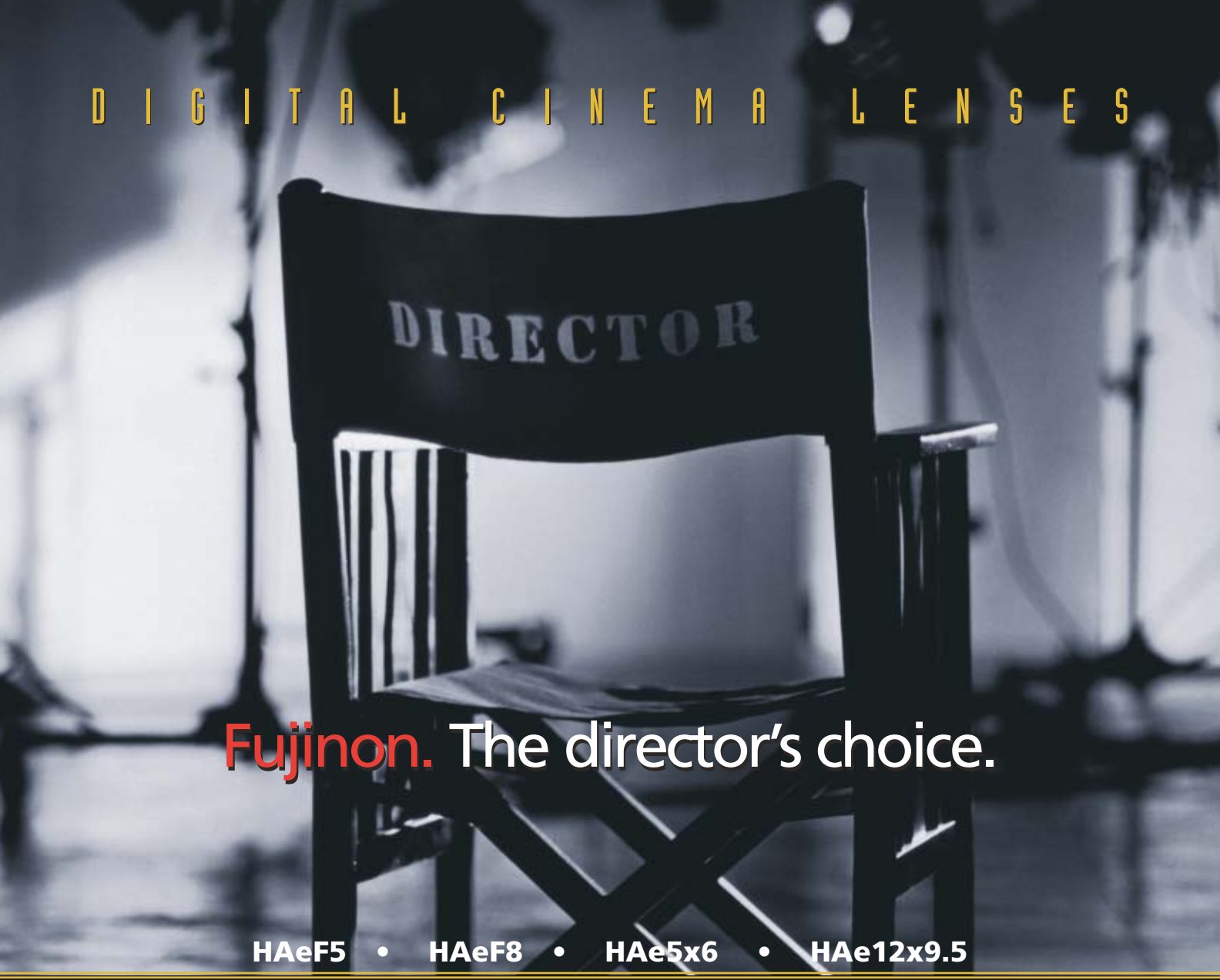
Digital Motion Pictures enable all the traditional artistry of the cinematographer with the added magic of real-time digital control. Now filmmakers are making the move.

Directors with creative stature and commercial credentials are increasingly choosing Sony equipment and tape. And not just for blockbuster movies such as *Star Wars*: Episode II *Attack of the Clones*, but also for episodic television, mini-series and Movies of the Week. Plus commercials, music videos and special venue 3D presentations.

The move is on to Digital Motion Pictures. And Sony is leading the way.

LEARN MORE ABOUT WHAT THE MOVIES ARE MOVING TO AND DISCOVER THE LATEST OFFERS AT WWW.SONY.COM/PRODUCTION.

©2002 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited. Features and specifications are subject to change without notice. Sony, CineAlta, DVCAM, HDCAM, MPEG IMX, and XPRI are trademarks of Sony. Emmy is a registered trademark of the Academy of Television Arts & Sciences and the National Academy of Television Arts & Sciences (ATAS/NATAS).


DIGITAL CINEMA LENSES

Fujinon. The director's choice.
HAeF5 • HAeF8 • HAe5x6 • HAe12x9.5

Only Fujinon delivers big-screen features.

- Focus Rotation 280 Degrees
- Fast "T" Stops
- Large Barrel for Precise Control
- No "F" Stop Ramping on Zooms
- Minimum Focus Breathing

FUJINON

Broadcast and Communications Products Division

FUJINON INC. 10 High Point Dr., Wayne NJ 07470-7434 Phone: (973) 633-5600, FAX: (973) 633-5216
FUJI PHOTO OPTICAL CO., LTD. 1-324 Uetake, Saitama City, Saitama 330-8624 Japan, Phone: 048-668-

www.fujinon.com

FUJINON HD DIGITAL

6

12

14

16

22

30

NEWS 5

FEATURE
Letters From a Nut by Debra Kaufman 6

Film & HD: Unique Mediums by Bob Fisher 12

It's "Barely" Brooke by Brian Cali 14

Prime Time HD by Derek Grover 16

The Right "Look" by Brian Cali 22

Stocking Television with HD footage by Paula Lumbard 24

High Def for Dummies by Alan Cassidy 27

Canon Lenses in the Air by John Coyle 29

Nissan Chooses 24P by William Conner 30

Vol.4, Issue 4, Highdef Magazine is published by American Press Services, 2247 15th Avenue West, Seattle, WA 98119. PUBLISHER: Conrad W. Denke EDITOR: David W. Thompson CREATIVE DIRECTOR: David Willardson/Willardson & Associates DESIGN DIRECTOR: Roger Carpenter PRODUCTION: Gina Griffin Hanzsek CONTRIBUTING WRITERS: Debra Kaufman, Dale Cripps, B. Sean Fairburn, Derek Grover, William Conner, Alan Cassidy, John Coyle, Brian Cali and Bob Fisher. For Display advertising call David Thompson at 1-888-282-1776 or e-mail David@VictoryStudios.com. Deadline for advertising confirmation and mechanicals is fifteen (15) days prior to publication date. Highdef Magazine is distributed to professionals in all areas of video and film production nationally and is also available on the web site: www.highdef.com.

ABC TO BROADCAST MAJOR SPORTING EVENTS IN HD

ABC Television Network president Alex Wallau announced that the most-watched and highest-profile sporting events of the year, including the Super Bowl, games of the National Basketball Association finals and the Stanley Cup, will be broadcast in HDTV on ABC this season. In addition ABC announced that it will broadcast the 2003-2004 season of "Monday Night Football" in HDTV.

ABC currently broadcasts the majority of its primetime schedule, including all of its scripted dramas, comedies and theatrical movies, in HDTV. The 2002-03 primetime HDTV broadcasts, sponsored by Zenith Electronics Corporation, include the new programs: "8 Simple Rules for Dating My Teenage Daughter," "Life with Bonnie," "Push, Nevada," "MDs," "That Was Then" and "Less Than Perfect." These programs join such ABC stalwarts as "NYPD Blue" and "The Practice" in Highdef, bringing the Network's total HDTV primetime broadcasts to more than 13 hours per week.

ESPN ANNOUNCES ESPN HD

ESPN President George Bodenheimer announced "a new chapter in ESPN's history and future of sports television" with plans to provide a Highdef simulcast service of its premier network ESPN to be launched in April of 2003. It will include in its first year 100 live telecasts – featuring Major League Baseball, the NBA, the NFL and the NHL – all produced in HDTV.

ZENITH AND SAMSUNG PARTNER WITH CBS FOR HD

CBS Television is offering all 18 of its primetime comedies and dramas in HD in the 2002-2003 season. This is the fourth consecutive year CBS has broadcast the majority of its primetime schedule in HD, and the second season that it has offered all of its scripted entertainment series in HD. Zenith Electronics Corporation has expanded its sponsorship presence in its second year as a CBS Primetime HD sponsor. Samsung Electronics America, which has a history of supporting HD broadcasts of movie nights and college sports, is a new CBS Primetime sponsor. Together with selected CBS Sunday Movies, weekday broadcasts of the No. 1 daytime drama, "The Young and the Restless" and CBS Sports' leading HD schedule, CBS will provide an average of nearly 27 hours of HD programming per week, more than any other broadcast network.

NEW "CARRIE" SHOT WITH PANASONIC VARICAM™ HD CAMERAS

"Carrie," based on Stephen King's classic horror novel, starring Angela Bettis in the title role, was shot this past summer on location in Vancouver with Panasonic's AJ-HDC27 VariCam™ HD Cinema cameras. The movie was telecast on Monday, November 4, 2002. Victor Goss ASC served as Director of Photography.

Five VariCams were utilized for first and second unit photography on the seven-week "Carrie" shoot. DP Goss, a veteran of television production acquisition, recently completed another high-profile project with Panasonic's VariCam, the pilot for "Oliver Beene," a half-hour comedy that was picked up for Fox Television's mid-season line-up.

HDNET BROADCASTS SHIFTER KART RACES IN HD

HDNet broadcast live coverage of the world's largest shifter kart race, the 6th annual SKUSA SuperNationals. The shifter karts are a form of motor sports challenging drivers at speeds of up to 135 MPH while only 1" off the ground. The event is being produced in coordination with Superkarts! USA, a 10-year old motor sports sanctioning body that is dedicated and limited to shifter kart racing. HDNet coverage is available on channel 199 on DIRECTV.

PANASONIC RECEIVES TECHNICAL EMMY FOR VARICAM

Matsushita Electric Industrial (Panasonic) has received a Technical EMMY Award from the National Academy of Television Arts and Sciences (NATAS) for its development of the AJ-HDC27 Varicam HD Cinema Camera. The variable –frame rate progressive scan video camera emulates film's under- and over-cranking techniques, producing film-like images with the convenience and cost of digital video.

AUSTRALIAN HD PROGRAM WINS GERMAN AWARD

Highdef Magazine contributor Larry Zetlin has won a special prize by the Jury of the NaturVision 2002 Film Festival in Bavaria, Germany. The award was given for his production "Bilby Brothers: The Men Who Killed the Easter Bunny." The documentary tells the story of two extraordinary Australians and their life's work to save the endangered little marsupial, the Bilby.

FUJINON INTRODUCES HD CINE LENSES FOR LOWER BUDGETS

Fujinon is now shipping its fourth generation of Cine Style Prime lenses, eight lenses all designed specifically for digital cinema applications in the independent film and commercial television markets. The lenses are available in 5mm, 8mm, 12mm, 16mm, 20mm, 34mm, 40mm and 54mm focal lengths.

FLETCHER AND AMPHIBICO TAKE HD UNDERWATER

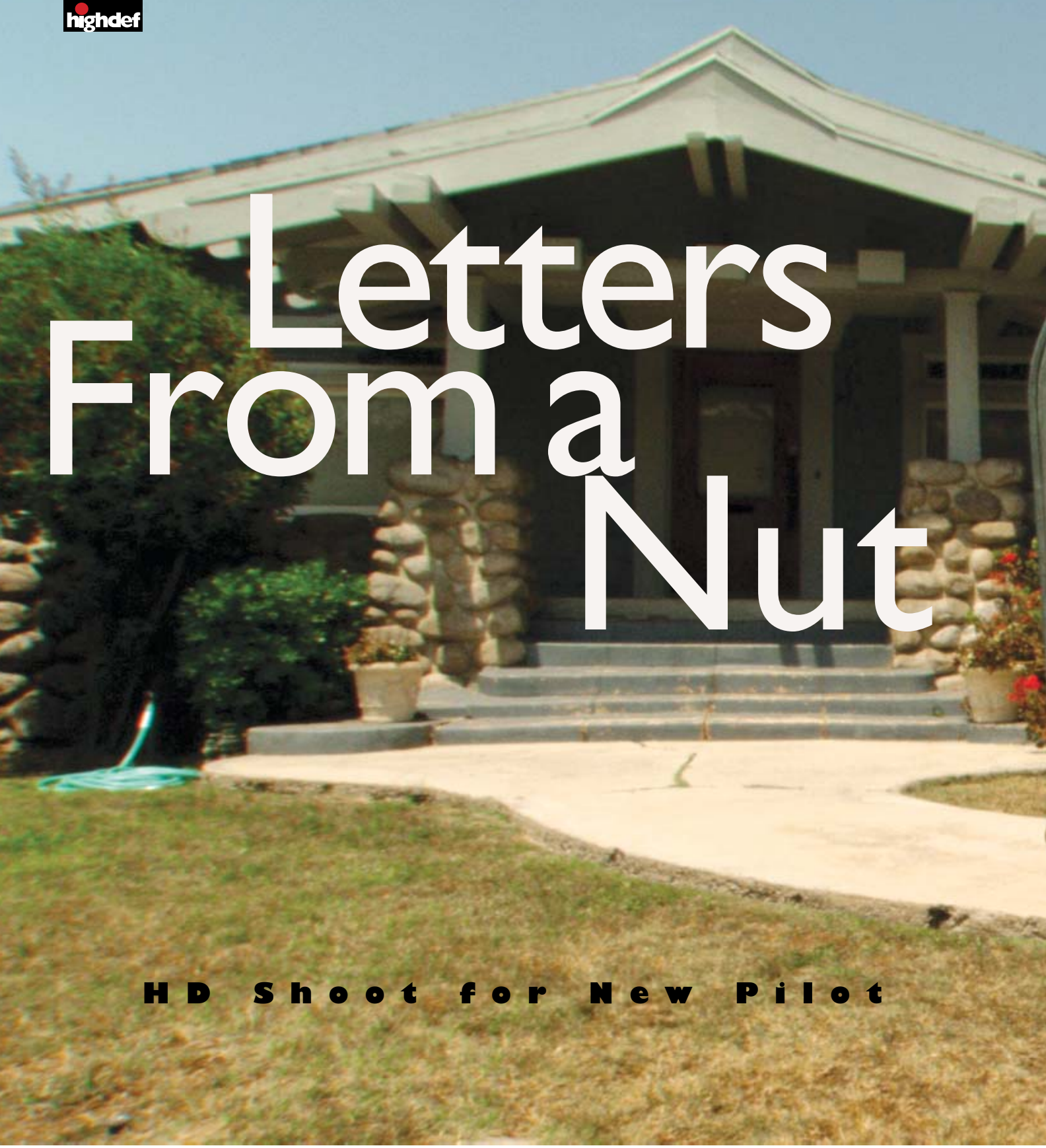
Montreal-based Amphibico, Inc., the industry leader in underwater broadcast imaging technology recently chose Fletcher Chicago, widely respected and internationally known HD equipment and information resource, to serve as the premier international distributors of their latest and most advanced underwater housing, "HDAmphibicam." The housing uses technologically innovative software that communicates effortlessly with the heart of the camera. For underwater DP's, this means complete access to all camera and lens controls, zero distortion, a neutrally buoyant and perfectly balanced ergonomic design, and nearly an hour of underwater recording time.

WB NETWORK LAUNCHES HDTV

The WB Television Network and Tribune Broadcasting are providing five hours a week of Highdef digital programming. WB targets the 12-34 demographic, which it sees as the age group of early adopters of new technology, including HDTV. The HDTV lineup which started on Sept. 12, includes "Family Affair," "Everwood," "Reba," and "Smallville."

SONY'S XPRI SYSTEM PLAYS GUARDIAN'S ANGEL

Guardian Entertainment, a leading independent digital production company added Sony's XPRI HD 24P non-linear editing system to its Sony CineAlta 24P Highdef acquisition system. The company recently completed a low-budget thriller, "Out of Darkness," on the system. Very happy with the results and the cost savings, Guardian is now using the XPRI on its next project, Need for Speed, a big-budget action film.



Letters From a Nut

HD Shoot for New Pilot

by Debra Kaufman

"Letters from a Nut," an unusual blend of reality TV, drama and comedy directed by Tim O'Donnell, was not intended to be an HD production. When executive producers Rob Lee and Barry Marder (also writer of the program), and co-executive producer Jim Coane approached bringing "Letters from a Nut" to pilot for ABC, the concept was to shoot a combination of Beta SP video for the reality TV sequences and 16mm film for the scripted segments.

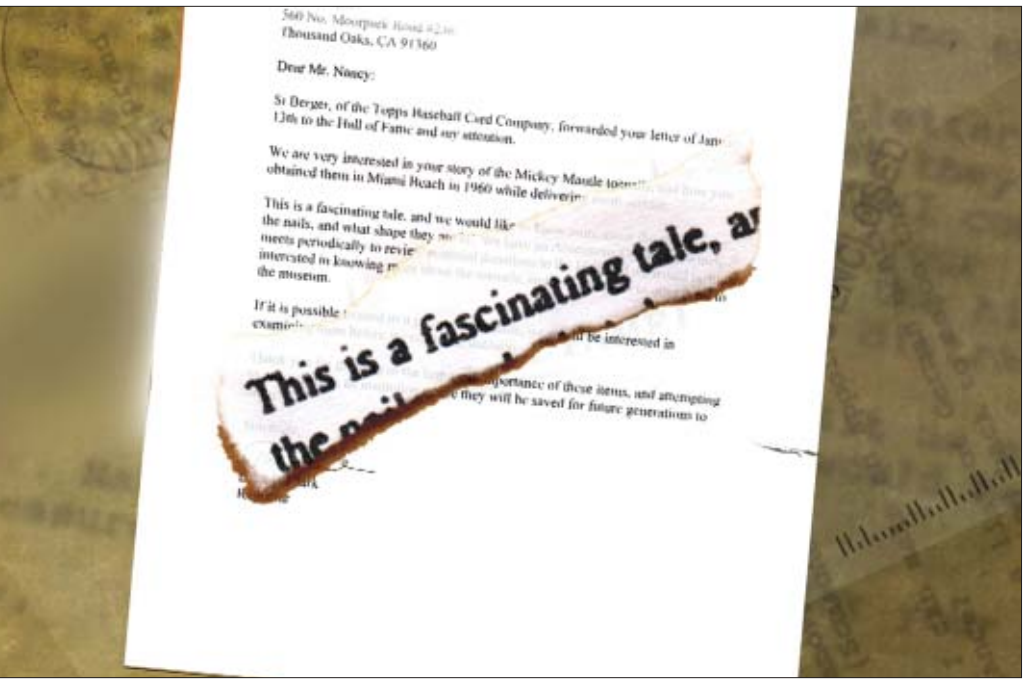
But director O'Donnell had an idea that HD might be able to work for the entire production, a

project so unusual that supervising producer Stev Stephens says the creative Guilds didn't know how to categorize it. O'Donnell's suggestion that HD might work was not an instant hit with the show's producers. "I've looked at HD from a distance, fearful of the cost associated with the whole process as well as an entirely new learning curve," admits Stephens. "I wasn't real comfortable with it."

That was before Stephens brought cinematographer B. Sean Fairburn onto the project. Having worked together on numerous shows, Stephens knew that Fairburn had a strong command of cameras

and lighting. At the same time Stephens was recommending Fairburn to O'Donnell, Wayne Kennan, ASC — the long-time cinematographer on "The Seinfeld Show" called him to recommend Fairburn as an accomplished HD cinematographer. (Fairburn's HD credits include "Nicolas," "Day in the Dirt," Discovery Channel's "Rides," and "Enduring Freedom" for the U.S. Marine Corps.)

Fairburn's HD expertise coincided perfectly with O'Donnell's interest in shooting in that format. In addition to being impressed by the look of the HD images, Coane was bowled over by the budget Fairburn compiled for the cost of cameras, tape and post production, including color correction at the Victory Studios in North Hollywood. "Though this was my first up-close-and-personal encounter with HD, I had no misgivings, because the cameraman gave us confidence," explains Coane. "He had a great eye and he knew the format. And we made what I thought was a very reasonable deal, with all the HD vendors. HD is certainly less expensive than it was a few years ago."



"HD was going to be our last ditch effort, because we were concerned about the cost," adds Stephens. "It turned out that the cost of shooting on film was actually higher than going to HD. And we knew the network would want us to deliver on HD as well." More importantly, HD didn't compromise the goal of delivering a "rich" look to the pilot. "I love film, and shoot film and tape — but I do like the look of HD," Coane says. "It looks textural, less electronic than normal Beta. It looks more like film to me. HD was an obvious choice."

Fairburn rented a Sony HDW-F900 camera from Wexler Video, as well as Fujinon 10x and 20x HD ENG lenses. For day exteriors, he filtered with an N6 grad and, often, a polarizer, to knock down highlights and control the ratio. Stephens' fears about the learning curve of shooting in HD were immediately assuaged by the Victory Studios/L.A., a boutique devoted to HD post production, where their HD team helped them to navigate the new format. "There were a lot of ways to save money by having a good engineer or a DP who was also an engineer," explains Stephens. "It wasn't just getting a great rate - they told us how to bring it to them engineered properly so we'd have a minimum of color correction."

The Victory Studios/L.A. also helped to educate the production crew — above and beyond what Stephens expected. "They gave us an HD 101 factsheet to help us understand everything we needed to do," he says. "I asked a lot of questions, time and again, to make sure I understood. It became a simplified process because Victory gave us a really great education. They made it as painless as possible. In the end, we didn't have to learn on our own dime."

The filmmakers were also concerned that HD's higher resolution could reveal flaws in make-up, costuming and sets. "We were aware of that, and paid attention to it," reports Coane. "We certainly looked at everyone in make-up through the lens. What we discovered is that they looked pretty good. I don't remember having to make any special arrangements to accommodate HD."

One change did occur. The crew had to make sure that anything in the background - such as papers on a bulletin board — didn't show any recognizable logos. "Every detail you take for granted springs to life and becomes a big player with HD," says Stephens, who reports that the show's legal advisors are screening the footage with an eagle eye towards any offending logos.

But the production itself, say Coane and Stephens, was surprisingly uneventful. Shooting over a four-week period, Coane recalls no downtime with the camera and great coverage with the

Ph: 1-905-335-3700
Fx: 1-905-335-3573
www.evertz.com

Model F9-2410MD
HDCAM HDSDI
Monitoring Downconverter

See Us At SMPTE2002
Booth #301 & #303

Other HDTV Products

- Panasonic HD Camera Monitoring Downconverter (A-2410MD)
- Tri-level Sync Generator (7750SRG-HD)
- HD SDI 4x1 Router (X-HD9504)
- HD Progressive Format Translator (7732PFT-HD)
- HD Production Afterburner (HD9155)
- HD Audio De-embedders & Embedders (7720AD-HD, 7720AE-HD)
- HD Upconverter & Downconverters (HD9510UC, 7710MD)
- HD Electrical to Optical Converters (7705EO-HD)
- HD Optical to Electrical Converters (7705OE-HD)
- HD Optical to Optical Wavelength Converters (7705OO-HD)
- HD Broadcast Quality Converter (7711HDC)
- HD D to A Converter (2430DAC-HD)

.....and more

HD monitors on set. "I was pleased with the look from the very beginning," he notes. "It was actually just as if we were shooting on Beta SP," agrees Stephens. "We shot both interiors and exteriors, and I didn't see a difference in what I needed in terms of crew. With the exception of an HD engineer — but we were lucky enough to have a DP who was also an engineer."

A pleasant surprise was the ability to create pre-set looks in prep, prior to shooting. Cinematographer Fairburn reports he created four pre-sets which he then modified on the set, to create a dozen more looks. "Multiple vignettes [in the show] allowed us to create unique looks, quite distinct from one another," he says. Stephens was also impressed with the time it took to set up each shot. "The shots went quicker than if we were lighting for film," he says. On the days they shot the scripted sequences, says Stephens, the set was lit and dressed for depth, as if it were a movie. "We gave it a full cinematic treatment," he says, "And that's where HD was really a winner."

Another surprise was the ability to color correct shots to dramatically change the look.

The business of making pilots for television has been compared to crystal ball gazing like this scene from "Letters From a Nut."

Stephens reports that he thought the show's opening intro was too dark. O'Donnell and Fairburn assured him the light could be brought up in color correction. "Sure enough, when we sent Victory Studios the show opening so they could demonstrate how much light they could bring to it, the result was very impressive," Stephens enthuses. "It looks beautiful....it really looks like film."

From Fairburn's point of view, the real thrill in the production came from collaborating with O'Donnell. "He's a very creative man who can previsualize how a scene will be cut and then allow me to capture that scene creatively and efficiently," says Fairburn. "I want to credit and applaud Jim Coane, Rob Lee and Barry Marder for taking the chance on HD."

The "Letters from a Nut" team couldn't be happier with their first-time experience shooting in HD. From Coane's point of view, it's a format whose time has come. "When the story is that there isn't a story," concludes Coane, referring to the smooth production and absence of bad news, "Then HD has fundamentally become the format of choice." HD

mediums

FILM & HD: UNIQUE

by Bob Fisher

The recent WideScreen Film Festival, held October 2-5 and sponsored by the cinema department at California State Long Beach, featured an array of motion pictures selected by Steven Spielberg. The program included Amblin, the short film that helped launch the director's career. It was followed by a commentary with the movie's cinematographer Allen Daviau, ASC. The audience included more than a hundred students who were enthralled by Daviau's painterly use of light in the short feature that had no dialogue.

Daviau also conducted an art of lighting seminar using the Panavision version of the Sony 24P HD camera. He orchestrated nuances in the color, density and placement of light, which altered the sense of time and place and amplified moods and performances. "Look at how beautifully the light describes her face," he said. "Don't believe people who tell you it isn't necessary to light with digital. The truth is that you have to light more carefully, because HD doesn't have the same dynamic range as film."

Daviau acquired real world HD experience on a test for Panavision, a Kraft commercial, the "Dreams" demo directed by Bob Giraldi, and recently on a U.S. Army recruiting commercial for the Leo Burnett agency. "One of the interesting things I did

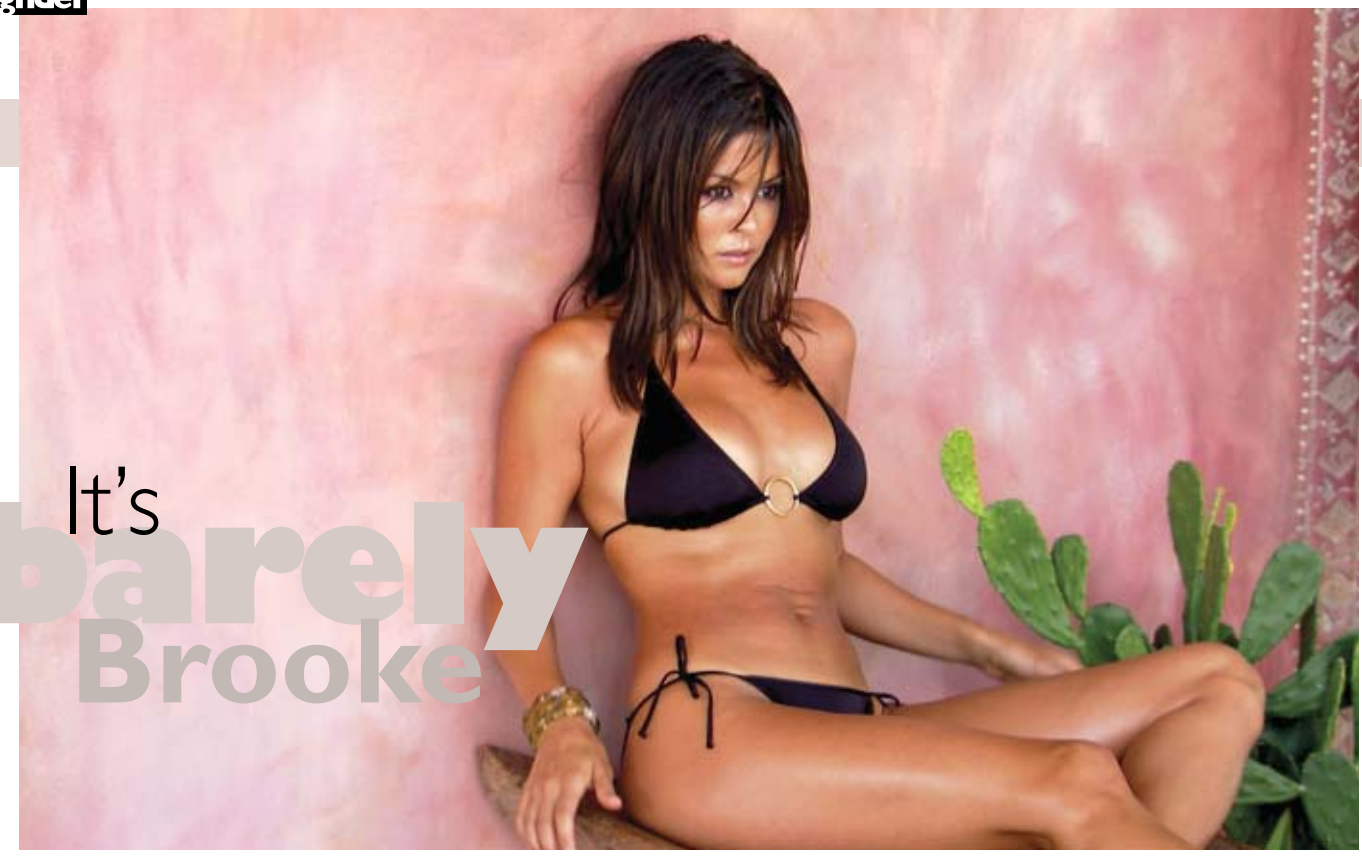
Allen Daviau, ASC has earned Oscar nominations for E.T. The Extra-Terrestrial, The Color Purple, Empire of the Sun, Avalon and Bugsy. His other credits include The Falcon and the Snowman, Twilight Zone: The Movie and Fearless.

with Bob (Giraldi) was experiment with stretching the blacks, opening them up to reveal a little more shadow detail for available light night scenes at ground zero, something our HD technical supervisor, Keith Collea, did for us," he said. "It was like opening the blacks up with film in telecine. On the recruiting spot, we had the Panavision HD camera in a helicopter shooting air-to-ground and air-to-air. It was also mounted on a speedboat. We were careful at both ends of the gray scale not to fry the highlights or crush the blacks."

Daviau explained that film and HD are essentially unique mediums that render different looks, but both require the same artistic instincts and skill in lighting.

He is enthusiastic about the possibilities of HD as a postproduction tool and for home viewing. "Today, when you remaster film for DVD and HD release, the post work is almost always done in high-definition," he says.

"We did the first high-definition transfer of E.T. in 1996, and it was very good, but we did it again with Lou Levinson using the new Rank C-Reality telecine at Post Logic this year, and it was much better. There are details on the film, which have never been seen before on TV screens. That's an advantage of film. It will play even better in the future than it does today." HD



It's barely Brooke

By
Brian Cali

An amazing Brooke Burke takes a break from her 2003 swimsuit calendar documentary HD shoot (above).

For the shooting of "Barely Brooke," an imaginative, behind-the-scenes documentary for E! Entertainment Television about the making of Brooke Burke's 2003 swimsuit calendar, visionary director/writer/producer Zalman King ("9 1/2 Weeks", "Wild Orchid," and "The Red Shoe Diaries") teamed with Director of Photography Ethan Phillips.

The E! channel's fastest rising star, Burke was until recently the host of E!'s popular travel series "Wild On" before moving on to present the network's new show, "Rank." The 60-minute special, shot on location in Belize and Miami last June, began airing on E! in October. "Barely Brooke's" executive producer Patrick Davenport said, "Given the sheer amount of footage we shot, the production would have been infinitely more expensive with film. The 46-minute (DVCPRO HD) tapes were great for Zalman, as he was trying to catch every nuance of the still photography shoot. And the quality of the imagery is extraordinary!"

DP Phillips added, "I've worked with HD in the past, and suggested to Zalman that we test the Panasonic AJ-HDC27 VariCam™ HD Cinema Camera — I was eager to use it. The image quality excited us. Zalman likes to let the camera roll, especially on a candid shoot such as this, and we concluded that we'd be able to shoot a lot of footage with the VariCam, which was certainly borne out.

"Also, my initial assessment of the camera was that it was more user-friendly and rugged than other HD cameras. The latter was a particular concern as I knew I'd be shooting in high heat and humidity, and standing in salt water often. I was pretty impressed. Even with blazing sun, 100% humidity and all that salt water, the camera didn't hiccough once. It's very hearty."

He added, "The color was superior to anything I've ever seen from an electronic camera — absolutely amazing. You get high color saturation and color contrast, e.g., bright blue and red in a frame. I lit for that. In general, I prefer to control light in every part of the frame. With the VariCam, I tended to light a little flatter, less dramatically. The transfer guys like it flatter, so that they can crush the blacks and deal with the different colors. That's the main difference I found in shooting HD — I needed to be conscious of every aspect of the frame. It required a little more attention."

The "Barely Brooke" special was edited on an Avid at the Zalman King Company, with the on-line edit and color correction completed using Smoke at Pixel Blues in Burbank.

AVID|DS HD *Flypacks*

Set Up As Easy As 1 • 2 • 3

HIGH DEFINITION EDITING

In One Simple, Versatile Digital Studio System

Editing/Finishing
- Offline/Online
- CG
- Graphics
- Audio (up to 8.1)
- Compositing
- 3D DVE

Mastering For
- Commercials
- Station Promos
- Independent Films
- High End Corporate Work
- Event Videos
- TV Programs

Multi-Format
- 1080 24p
- 1080 60i
- 720 60p
- 720 24p
- NTSC
- PAL

Training Sessions (Beginning & Advanced) offered at Fletcher.
For more information logon to www.fletch.com

The Highest Standard in Equipment Solutions • Sales & Rentals • 800.635.3824 • fletch.com

FLETCHER

PRIME TIME

by Derek Grover

It was less than a year ago when Tony Askins, Director of Photography for "According to Jim" got a call from the show's producers explaining that they wanted to convert the hit multi-camera sit-com from its current film format to 24P. As a veteran DP whose experience includes such television classics as "Love Boat," "The Colbys" and "Hotel," and now currently as a back-to-back Emmy award winner for "Will & Grace," Tony approached the transition with cautious optimism.

In the middle of the primetime season Askins was being requested to use digital cameras on which he had no hands-on experience, not to mention very little information except for rumors, press releases and a couple of industry seminars. Even the peers who were shooting 24P at the time had little more than a few weeks of experience with the format and were still experimenting themselves. "I didn't know what to expect, I was concerned about the production process, how the cameras imaged and how this new format would perform. As a DP I have a very diverse responsibility. I must photographically present the talent in the most flattering way possible and also be efficient and cost effective at the same time," said Tony.

The production process is a balancing act for the DP and throwing a new medium (24P) into the mix has caught many experienced cameramen on one foot. At the time, Tony was in a very unique and tenuous position having shot the first nine episodes of the season on film and now facing the remaining twelve to be produced on 24P, with only a week in between to figure it all out. "I started the season using a 500 ASA 16mm film stock, lit at a 4.0 and over exposed slightly to help eliminate some of the grain. This was something I learned from my years of experience in film. When we switched to HD I had no hard facts, but evaluated the camera at a 250 - 320 ASA and through the advice of a friend, I dropped my light levels to a 2.0 t stop

to limit the depth of field. But this was all guess work at the time."

Askins' guess work proved fruitful, but limiting depth of field was only a small portion of what Tony had to deal with. After evaluating the imagery of the four Panavision F-900 cameras, he was startled at the clarity of the pictures. "When I was shooting the show on 16mm, I had to manipulate the film stock by over exposing to limit the grain, or noise. Now I was working with a medium that was virtually grain-less. This posed a new set of concerns. When I shot the tests with the HD cameras and took the footage to post, I wanted to immediately "degrade" the image to match the film appearance I was used to seeing. Since then, however, I am learning to manipulate the images with filtration and lighting techniques that are much more pleasing to me once down-converted to NTSC and broadcast."

For the Director of Photography, experimentation and manipulation is turning out to be one of the key factors in the acceptance and understanding of the format. For the studios, however, cost savings are the driving force. Tony comments, "Aside from the savings in film stock and processing, our lighting and grip costs have been reduced by nearly 50%, where we used to utilize juniors we now use babies and so on down the line. I still need the same number of instruments to light a scene artistically, but now with 24P, I

use smaller heads that I can hang on set walls, which also reduces the amount of pipe and chain we have to use. Also, the smaller wattage lights require smaller cables and dimmers, so the cost reduction is realized throughout the whole lighting process." Although Mr. Askins continues to be a staunch supporter of film, he has embraced HD as a viable photographic format and looks forward to future versions of the camera. HD

Derek Grover is a veteran cameraman and engineer for network and syndicated TV production. During the past few years he has played a key role in the adoption of 24P as the format of choice for multi-camera episodic television.

hd tips

by B. SEAN FAIRBURN SOC

Sean Fairburn is a veteran of many years of cinematography. He was one of the first to embrace High Definition as a viable alternative to film. His extensive knowledge and experience has made the journey easier for many would-be pioneers.

As promised last time, here are some tips about sound. For some people, sound is the area that causes them the most problems when shooting in HD. If you follow the guidelines below, you can save yourself a lot of grief later on in post.

SOUND DEPARTMENT GUIDELINES

1) Record master sound in the HD Camera. This will create a permanent synced source of CD quality sound for down-converts, offline & online.
   And, whenever practical always record sound separately in addition to the camera tracks.
2) Use a 5 pin XLR for discrete Channel 1 and Channel 2 return so you can hear the sound coming from the HD deck.
3) Whatever you chose to record on for double system sound: Nagra, DAT, DA88 or DEVA, use 29.97 NDF (Non Drop Frame) time code.
   This will match back to the picture 23.98 time code exactly in post.
4) Use a timecode slate with your audio TC, not the camera's TC.
   In addition, have the 2nd AC clap the sticks as always.
5) As an extra precaution, feed sound TC into an available channel of audio on the camera with an SB2 from Deneke. The SB2 is wireless and provides a permanent source of sync for the external sound recording device and doesn't affect the camera master TC.

One recurring issue is often the question of free running TC vs. record run TC. Free run forces you to record 10 seconds of pre-roll before every shot. Free run is broken

code whenever the camera stops because the code keeps going even though the camera is not recording. It does, however, keep the same code for audio and camera, but that is not necessarily an advantage. Record run is continuous TC which allows shorter pre-rolls, but it won't match the external sound device exactly because of differing start times. In spite of that problem, broken TC is a bigger problem than having different TC on the original camera tape and the separate sound recorder. It creates a myriad group of problems in post.

Locket boxes and or free running TC are great for live concerts when the tape will run until the end and match all the other cameras. It's also helpful on 4-camera sitcoms in some cases. However when doing a single camera show or a 2-camera show, there is no need for camera TC to match sound TC. Therefore I recommend record run TC as a much better choice for those applications.

Top O' the Howdy. Until next time. — Sean

THX

The World's Only Performance And Quality Standard For Digital Cinema Products.

Announcing THX Digital Cinema Certification

For nearly two decades, THX has represented the gold standard for presentation quality in thousands of the world's best performing theatres. Today, this legendary status continues with the introduction of the all-new THX Digital Cinema Certification Program. Now, a new generation of high performance Digital Cinema products are realizing the status of THX Certification, assuring new levels of image and sound quality combined with experience and expertise that is uniquely THX.

The THX Digital Cinema Certification Program is comprehensive, objective and highly detailed. Its components include virtually every factor that affects playback performance including compression, encryption, transmission, reliability and operational activities. As a result, you'll experience consistent performance levels, easy and logical user-interface, unsurpassed product reliability and longer product life cycles.

It's Digital Cinema as only THX can deliver it.

For more information, contact Tim Schafbuch at 415-492-3961.

Boeing ICE (In Cinema Equipment)
The Boeing Satellite Systems, Inc.

TECHNICOLOR® DIGITAL CINEMA
Powered by QUALCOMM™

Technicolor Digital Cinema's Auditorium Management System™.

BARCO

Barco D-Cine Premiere DLP Cinema Projector

AVICA

Avica FilmStore™ A500 Single Screen Server
Avica FilmStore™ A550 Multiplex Cache Server
Avica FilmStore™ A2900 Multiplex Central Server

© 2002 THX Ltd.

hdtv

THE CONSUMER FRONT

by DALE CRIPPS

Replacing NTSC television with a completely incompatible HDTV standard is like changing the side of the road upon which we drive for the sake of the view. This nation is doing that at a cost of hundreds of billions of dollars. Not before a leisurely evening of enjoyment with HDTV in their own home do people know why this transition is fully under way, and why it is needed. Most executives from broadcast, cable, satellite, programming, manufacturing, and especially Congress still don't own or have use of a HDTV set in their home. As a result they wrestle with issues before them using theory and logic rather than an impassioned understanding that defies words.

Indeed, the progress of HDTV, now in its third year of commercialization, has not been as brisk as its core of supporters had hoped. It has been given the amber light in most press reports, some even the red light. That has released naysayers to gloat about being right about their dire predictions of HDTV's ultimate casualty. But HDTV is not a market failure. The latest figures drawn from the Consumer Electronics Association this last week show sales of DTV products for this May rose 110% over the same period last year. It is a defiant survivor who has withstood all the forces of Hell unleashed against it (daily for the last 20 years in which I have covered the story). Ghastly and discouraging retail demonstrations have done the business no good and giving it the duty of paying off the national debt has decidedly added a burden upon its broad shoulders. True, no part of the television market is enjoying lush profits from HDTV yet, though manufacturers are doing well enough, sort of.

I just laid down today's Wall Street Journal after I read of the deep losses within the Japanese electronics manufacturers. Is that good news? I don't think so. With every failure in Japan you will lose something from the HDTV world. I am not saying it will not be replaced by emerging countries like China, but what's the point? I was told by the head of the NHK Laboratories at this year's National Association of Broadcasters convention in Las Vegas, who was traveling with an old friend of mine, Morio Kumabe, who for ten years headed the HDTV broadcast services from satellite under the flag of the High-Definition Promotion Association - a group of about 100 major Japanese companies first brought together by the former head of Mitsui. Kumabe said that a "huge success" for HDTV in this country would save Japan. I had heard from colleagues of mine earlier that these Japanese companies were in deep trouble and this WSJ article today rather confirms it. If Japan comes to believe that we have any kind of value in the marketing of their salvation — a successful market for HDTV —why can't we ask them to help us? It would seem to me it is becoming in everyone's best interest to capitalize on the demand that this product produces in everyone who sees it, and focus everyone involved to make it THE product to seek out and buy. As the consumer sector of the market we in this community of interest are the ONLY strength in which they can rally around.

And that's how I see it.— Dale

This means Victory.

So does this.

Video Duplication

Camera Rentals Crews & Studios

Audio Production CD Duplication

Graphics & DVD Services

HD & SD Editing

HD & SD Telecine

Color Correction

From HD and SD post production services to equipment rentals, Victory Studios has everything you need to get the look of a winner.

In Los Angeles: 11755 Victory Boulevard, North Hollywood, CA 91606 • (818) 769-1776 In Seattle: 2247- 15th Avenue West, Seattle, WA 98119 • (206) 282-1776

www.victorystudios.com

the VICTORY STUDIOS

vericam

THE LOOK FOR "THE LOOK"

by Brian Cali

Director of Photography, Mark Smith using the Varicam camera on Steadicam, taping model Carrie Southworth on the fashion runway (right).

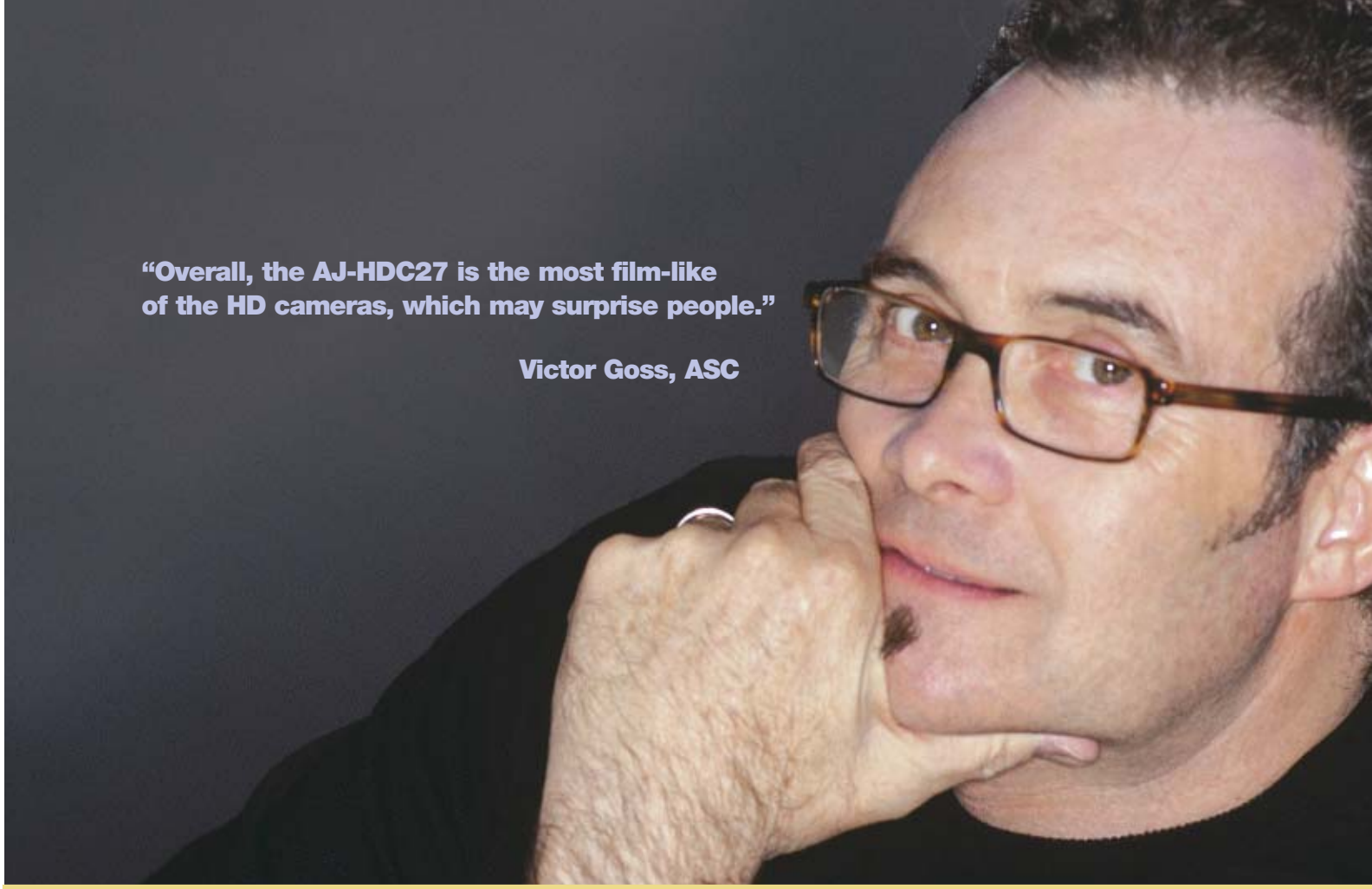
New York City was the stage for the production of the new independent film "The Look," a coming-of-age tale set in the modeling world. The film, shot on location in Manhattan, stars actress/model Carol Alt, who plays the contest manager, and aspiring actress and Elite model Carrie Southworth. The director is David Sigal, who makes his directorial debut. The producer is Seth Carmichael of Carmichael Films.

Director of photography Mark Smith of Oh 7 Films, Jersey City, NJ, utilized the AJ-HDC27 VariCam to acquire "The Look," an independent movie that focuses on the adventures of teens who come to New York to enter a modeling contest. According to Smith, "It was a very demanding shoot. The director wanted to combine the elements of 24-frame story telling and some very particular stylistic choices with some elements of a reality television look/documentary feel, which he felt were appropriate to the subject matter and the audience the film is directed towards.

"To satisfy this required a tremendous amount of hand-held and steadicam work. Over 22 days, we shot 122 scenes, and with the exception of a couple of scenes in very tight interior spaces that proved very challenging, every scene was covered with multiple angles and setups."

"The VariCam performed really well and stacked up positively to all the production challenges. It is highly efficient to set-up with easy-to-navigate menus, which allowed us to change gamma settings, shutter speeds and parameters. The AJ-HDC27 worked nicely and is a great size and weight for steadicam work".

Smith said the AJ-HDC27's variable frame rates were an important creative tool throughout the shoot. "We overcranked many scenes for the slow-motion effect. Variable-frame capture helped extend the feel or moment of many scenes," added Smith. "I also experimented with the camera's time-lapse capabilities. We set up a wide shot of the Queensboro Bridge transitioning from light to dark." HD



"Overall, the AJ-HDC27 is the most film-like of the HD cameras, which may surprise people."

Victor Goss, ASC

VariCam

Variable Frame-Rate HD Cinema™ Camera

"In my 20-plus years as a cinematographer, I've used every camera that's come along. Film is here to stay, but when it comes to HD, Panasonic presents another choice, and to me, the VariCam™ clearly has a more film look. A lot of cinematographers are wondering: if they're required to shoot in HD, will they be able to achieve the same standards they've set in film? The answer is a resounding, yes!"

The VariCam received a 2002 Emmy Award for outstanding technological achievement

Victor Goss, ASC, has shot several projects with AJ-HDC27 VariCam cameras, including using four of the cameras to capture the upcoming TV mini-series "Carrie." To read more of Goss' comments and learn more about the variable frame-rate HD VariCam, go to ***panasonic.com/hdworld*** *or call* ***1-800-528-8601.***

Panasonic®
ideas for life

Stocking Television with High Definition Footage

by PAULA LUMBARD

The 2002 Fall Television and cable production season marks a new era for the stock footage business. Over the last several years, in preparation for the advent of HDTV, stock libraries had been inundated with requests for 35mm material with negative available. This was a stock library's worst nightmare: the risk to the negative, the cost of transfer, the time to transfer, the lack of material available after years of moving in the video direction. Only a few shows, such as "Reba" and the late "Education of Max Bickford", were shooting 24P HD last year.

Now there are over 35 network and cable shows shooting in HD with dozens more HD original made for TV movies and feature films in production. Many other shows still shooting on 35mm are now posting on HD. Is there stock footage out there for these shows?

My new company, FootageBank is the first stock library dedicated to representing HD material. Each day we hear from clients, such as Fox and Warner Bros., who have traditionally called out for 35mm film. Now, after checking with their editors or directors, they are quickly learning that 24P or 1080i footage will cut into their shows.

What has been the most fun and surprising thing about this new venture is how excited the clients are to see the footage and how enthusiastic the producers and cinematographers of the footage are about the medium. There is a fervency in the HD community that is infectious.

I have the privilege to be working with and representing people who have been at the forefront of HD production and programming in the United States, Canada and Australia. An air of expectancy and pioneering spirit envelopes this community as they share information and resources and push the medium to discover its strengths and weaknesses. I like to imagine this is what it must have been like for DW Griffith when he was first experimenting with "flickers". This group of individuals includes Conrad Denke, owner of Victory Studios; Randall Dark, founder of HD Vision Studios; Barry Clark of Mandalay Media; award winning underwater filmmaker Howard Hall, and companies such as Over Canada (Jim Pattision Trade Group), Small World Travel (Seattle), Stonehenge Post Production (Canada), and The Kojo Group (Australia).

Because of the great need for HD stock shots, we are shooting both in 24P and 35mm which we transfer to HDD5. Since May we have shot in Austin, various areas of Los Angeles, Washington DC, San Francisco and Toronto. We have produced 24P mock news segments and talk show set-ups with Randall Dark directing and shooting. Some of these newsroom shots were licensed to "Touched by an Angel" within two days!

The library is growing almost as fast as our client list and it is great fun to get calls nearly every day from clients excitedly telling me how fabulous the images are. What more could an entrepreneur want? HD

Paula Lumbard is the founder and president of FootageBank in Venice, CA the first stock footage agency dedicated to high definition stock footage. Lumbard is a stock industry pioneer, having founded her first stock footage company in 1985.

High Definition is now available in print!

(ANALOG **VS.** HIGH DEFINITION)

This side is printed in standard 150 lpi. ◁ ▷ This side is printed in HDOP.

IMAGINE HDOP

(HI-DEFINITION ON PRESS)

Olympus Press brings you Hi-Definition offset printing. Imagine no limitations. Imagine seeing your vision become reality. Imagine being able to create your vision without compromise. Imagine printing in a new way. More vibrant and accurate color. Dramatic improvement in image resolution, and elimination of moirés.

For more information or a free brochure call **206.242.2700** or visit our web site at **olypress.com**.

OLYMPUS PRESS HDOP Hi-Definition On Press

Olympus Press is the printer for highdef magazine.

high definition FORUM

by ALAN CASSIDY

Alan Cassidy has been a producer for 25 years in Hollywood working for such companies as Stephen J. Cannell Productions, Universal Studios, Stu Segal Productions and many others.

I remember several years ago at Stephen J. Cannell Productions when we switched from editing on Moviolas to a new gizmo called an Ediflex and began viewing dailies on projected video instead of film. As co-producer on "The Commish", responsible for post-production, I began hearing unfamiliar phrases like "on-line", "off-line" and the ever-popular "telecine?" Some film editors adapted. Some older ones, threatened by a new world without sprockets, began checking their retirement options. Most of us faked it while we learned on the job. Studios wondered who would pay for the new technology, worried that directors would have too many choices, that standards didn't exist. There's nothing conservative about Hollywood except adapting to new technology. "What do you mean we have to HEAR actors speak?!" said the grandfather of the studio exec who passed on "Star Wars." Which brings us to the latest epic, "The Battle for Highdef" or as Willie Shakespeare penned so prophetically, "To def or not to def, that is the question."

I recently immersed myself in the HD world and have divided the industry into three categories: (1) the believers (2) the questioners and the (3) "I know all about it and the technology is not there yet." Hollywood is peopled by control freaks. We don't like what we can't control. But, unlike the NY blacksmiths at the advent of the auto, there is nothing to fear. Highdef is not replacing film, it is an alternative. As a DP from Louisiana likes to say: "I grew up in the delta, where the Mississippi flows into the Atlantic. High Definition is brackish water, neither fresh water nor salt water." And while I'm murdering metaphors, HD is not a horse or a donkey… it's a zebra.

Having recently met many industry people either investigating or trying to disprove HD, I've learned that while some remain unconvinced, many are excited to jump in with both feet, but a few diehards will surrender to HD like rabid gun-owners: "...when you ply my cold dead hands from my Arriflex."

I am a mechanical moron. Putting together bicycles at Christmas for my children made me perspire. I ask women where the dipstick is. I hear numbers, equations, techno-babble, the brain heads south. There is, therefore, no one more qualified to explain the Wonders of High Definition in its simplest form than this writer.

As needed I will try to tackle a basic element of High Definition. This time our exciting lesson will concern two competing "scanning" technologies, vital in the understanding of Highdef.

PROGRESSIVE vs INTERLACED

Scanning refers to the horizontal lines of resolution on the TV screen. Today's half-hour comedies and one-hour dramas are delivered 24P, 24 frames per second progressive, no interlacing of scan lines. Here's how it looks:

Interlaced images require the weaving of two video fields to create a complete picture. Though widely debated, progressive-scanned images deliver a higher quality picture than interlaced. Each television network has its own standard. NBC and CBS require 1080I (interlaced); ABC requires 720P (progressive); Fox, 480 (progressive).

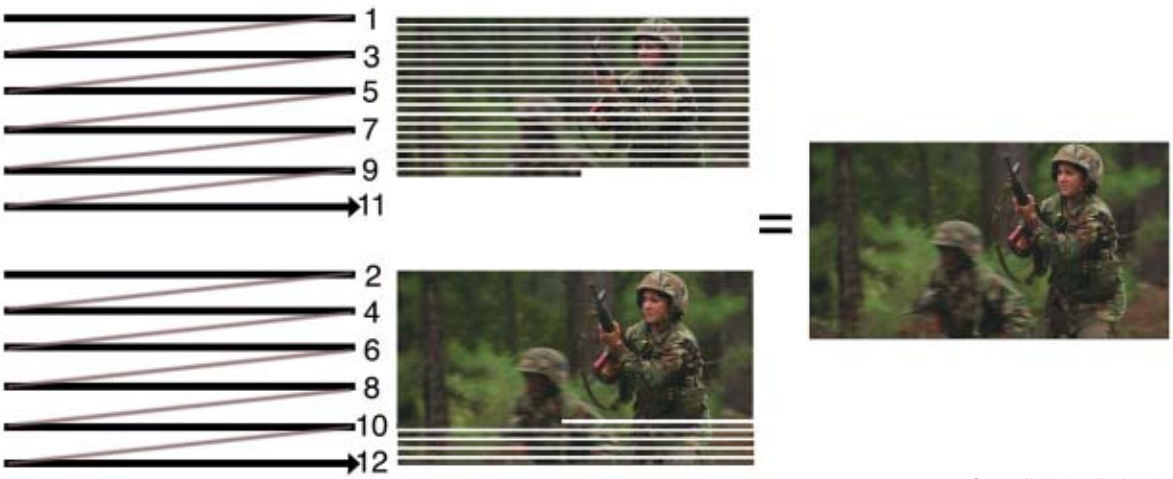
Analog TV sets have 525 lines (of which about 480 are visible). Today's analog TV's produce pictures with about 200,000 pixels or about 5,000 per square inch for a 40-inch TV.

TV language describes
VERTICAL SCAN LINES

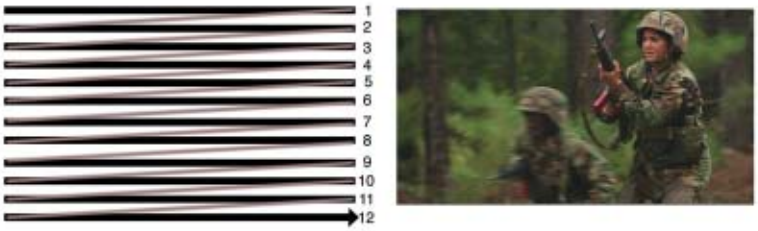
FILM language describes
HORIZONTAL PIXELS

480p (704 pixels x 480 lines)
720p (1280 pixels x 720 lines)
1080i (1920 pixels x 1080 lines)

MIES



Interlaced video describes a frame with two passes of alternating scan lines.



Progressive-scan video describes a frame with one pass of sequential scan lines.

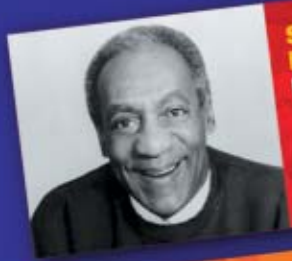
While one format may yield crystal-clear images (a documentary about undersea life where color and definition are important), a filmmaker might prefer the "distance" provided by an image that doesn't reflect reality. Some HD critics complain that Highdef is not forgiving, that the audience "sees everything." The last thing Steven Spielberg wants is to have his $100 million feature look like a videotaped soap opera. Unless we're looking into a microscope to find bacteria, there's mystery in the shadows. Bottom line: Highdef allows a greater range of possibilities, limited only by the imagination.

I really do know where the dip-stick is in my car, but don't ask me to shoot your next Highdef project. I will white-out both the exteriors and the interiors. The bottom line to this column and to the aforementioned debate is this: High Definition is not the Holy Grail. It's a fresh, exciting alternative that offers another color to the filmmakers' palette AND savings to the cost-conscious executive. It should be neither embraced in ignorance nor rejected for the same reason. The only dummies in this article are the people making films who don't do their homework.

More information can be found at http://www.adobe.com/support/techguides/premiere/prmr_interlace/prmr_interlace.pdf HD

YOU GOTTA KNOW

You gotta innovate. You gotta network. You gotta produce. You gotta NAB.



SEE ONE OF COMEDY'S BEST — LIVE!
NAB Opening Celebration with Bill Cosby
Sunday, April 6, 2003
The Bellagio Hotel and Casino
Ticket required.

Register for NAB2003 and the DVPW today and save!

Register by February 28, 2003 and save up to $300 off the regular price. Packages start at $325. For details and up-to-the-minute information, visit **www.nab.org/conventions/nab2003**

Sharpen Your Video Production Skills at the DVPW

Digital video lighting; motion graphics; encoding and compression for the Internet; digital audio for video editors; DVD authoring and more... Today's video production professionals have a vested interest in keeping up with the latest technologies and techniques available.

Become an expert yourself by participating in the **Digital Video Production Workshop (DVPW)**. The **DVPW** is an intense, two-day seminar that integrates today's best technology with the industry's most practical knowledge. The **DVPW** at **NAB2003** is your chance to broaden your horizons while gaining a unique understanding of the digital video production business from the innovators you admire. And there's no bigger or more comprehensive showcase of digital video, multimedia and broadcast solutions on the planet.

Make plans to attend the **DVPW** and **NAB2003**. Because if you wanna know, You Gotta Go!

NAB
THE WORLD'S LARGEST ELECTRONIC MEDIA SHOW
April 5-10, 2003 · Las Vegas, NV

DVPW: Saturday, April 5 – Sunday, April 6, 2003 • NAB2003: Conferences: April 5-10 • Exhibits: April 7-10

DVPW is produced in partnership with Digital Video Professionals Association.

hd lenses

By John Coyle, President of Cineflex

When it comes to getting some perspective, you can't beat shooting from the air. Giving a bird's eye view of the situation — whether it's from an airplane, helicopter or airship — allows you to immediately transport viewers to a place that the average person can't go. Thanks to the latest improvements in lenses and cameras, making big aerial impressions with HD imagery has never been more practical.

Our company, Cineflex, stands as the industry's leading specialist in designing and engineering aviation systems for broadcast and motion picture production. HD lenses from Canon, such as the HJ40x10B IASD, HJ11x4.7B IRSD and HJ21ax7.8B are a crucial part of the equation in our latest innovation: our V14-HD gimbal, or airborne camera mount.

Anytime you put something on an aircraft for shooting footage, it is best to be as small and light as possible. If it's not, something else important has to be left on the ground, like people, monitors or fuel. By using Canon lenses, which provide incredible HD imagery in the lightest and most compact package available, the V14-HD stands as an HD gimbal that truly "cracks the code", with a payload that is 100 lbs. lighter than standard film gimbals, not to mention being only 14 1/2" in diameter instead of 3 feet or more!

With this HD system, instead of having to land after every ten minutes of shooting to change film reels, cinematographers can stay in the air, change tapes and keep on going. Image stabilization is brought to a new level with the extreme steadiness of our gimbal and the built-in Image Stabilization (IS) in many of the Canon lenses. This all adds up to less limitation on how your pilot can fly, while the improved aerodynamics of the HD gimbal makes the aircraft lighter and more maneuverable.

Just like on the ground, airborne HD gives the ability to check out footage immediately and re-shoot a scene on the same flight if necessary, instead of waiting for dailies. And while a heavy duty helicopter capable of handling film gimbals can run $1000 an hour or more, the light airplanes that can take on our HD gimbals might be as little as $200 an hour — no small savings!

HD is going to drastically change the way cinematography and newsgathering is captured from the air, and we owe a lot of the success of our breakthrough gimbal to lighter, more compact Canon lenses. HD

24P NISSAN CHOOSES

by WILLIAM CONNER

Varuna Films, a Los Angeles-based production company specializing in HD video projects, recently shot "running footage" of the new 2003 Nissan 350Z sports car in 24P HD using a Sony F900 camera and a variety of Fujinon HD lenses. The footage was shot for The Designory, an ad agency in Long Beach, California. It includes shots of the car on a desert racetrack and will be inserted into various commercial projects, including the car's promotional DVD and Nissan's web site. Varuna Films first 24P project was a feature film called "Up, Michigan!," shot in 24P by noted HD DP Mike Spodnik, who also shot the Nissan footage.

The decision to shoot 24P for Nissan was based upon the desire for instant playback, longer shooting times with HD as opposed to film (50 minutes versus 10 for a 1,000 foot film load), ability to adjust the look of the image in-camera, a one-day shooting schedule, and budget constraints.

"I challenge whether anyone can see the difference between 35mm and 24P — at least the 24P footage we deliver," said Jason Morgan, Vice President of Varuna Films. "By shooting in video, we could afford to constantly roll tape and capture a ton of usable footage between takes. We were able to truly collaborate with our client, The Designory. We could afford the time and money to capture everyone's ideas without getting stressed during a one-day only shoot. Plus shooting this project digitally meant we could stay within the digital realm for the promotional DVD for Nissan."

According to DP Spodnik, the right choice of cameras and lenses is essential in making an HDTV production successful. "The Fujinon Cine Style prime and zoom lenses set the mark in optics and design. They got on board the earliest, and as a result, many of the top rental houses all carry them. And I like the pictures they take."

The Fujinon HDTV lenses used were: the HAF5B-10 Cine Style wide-angle prime, HA8B-10 Cine Style prime, HAF12B-10 Cine Style prime, HA10x5B-10 Cine Style zoom, and HA10x5E HDTV hand-held ENG lens. HD

BIGGER IS BETTER!

Digital Juice

JUMP BACKS GO HIGH-DEF
with full 1920 x 1080 16:9 resolution

hd jump backs high definition

5 volumes

100 animations

$499 per volume or build a bundle and save

3 HD volumes for $999 save over $500

all 5 HD volumes for $1399 save over $1000

Order and see a complete gallery for all 5 volumes online @

www.digitaljuice.com

or call 1.800.525.2203

SOUL

A SINGLE FRAME OF FILM CONTAINS OVER 12 MILLION PIXELS OF INFORMATION AND THE FULL RANGE OF HUMAN EMOTION

When you want to move an audience, take someone's breath away, or perhaps hint at the mysteries of the human heart, naturally, you turn to film. Because only film sees the world the same way people do. Not in a rigid grid of binary code, but in the warm, human palette of true color and genuine light and shadow. With its greater tonal range, film gives you much more leeway to create mood and convey emotional depth. But beyond its expressive richness, film also captures more raw information. Which gives you more creative options later on. And ultimately, more opportunities to touch the human soul.

Make an informed choice when selecting your capture medium.
Visit www.kodak.com/go/story for the whole story.

there's more to the story

Kodak

© Eastman Kodak Company, 2002 | 1.800.621.FILM