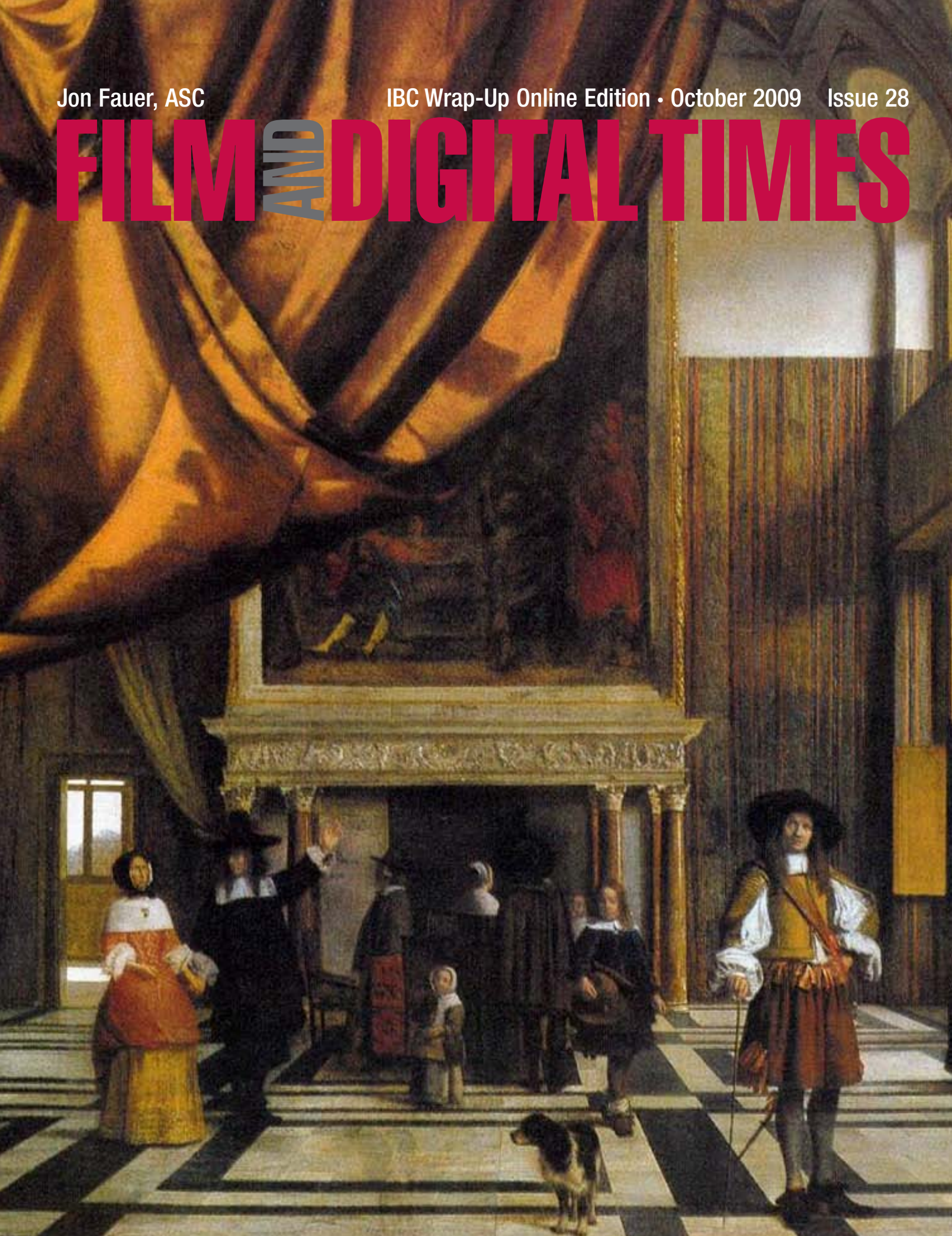
Jon Fauer, ASC

IBC Wrap-Up Online Edition • October 2009 Issue 28

FILM AND DIGITAL TIMES



FILM AND DIGITAL TIMES

The Journal of Art, Technique and Technology for Film, Video and Digital Production

Film and Digital Times is the journal and guide to technique and technology, tools and how-tos for Cinematographers, Photographers, Directors, Producers, Studio Chieftains, Camera Assistants, Camera Operators, Grips, Gaffers, Crews, Rental Houses, and Manufacturers.

It's published, written and edited Jon Fauer, ASC, an award-winning Cinematographer, Director, and author of 14 bestselling books (over 120,000 in print—famous for their user-friendly way of explaining things as if you were right there on location with him). With inside-the-industry "secrets-of the-pros" information from professionals who shoot, direct, light, design, and edit, Film and Digital Times is delivered to you by subscription or invitation, online or on paper. We don't take ads and are supported by readers and sponsors.

Foreign correspondents: Oli Laperal, Jr., Roman Hoffmann

Contributing photographers: Dorian Weber

Marketing Guru: John Johnston.

Contents

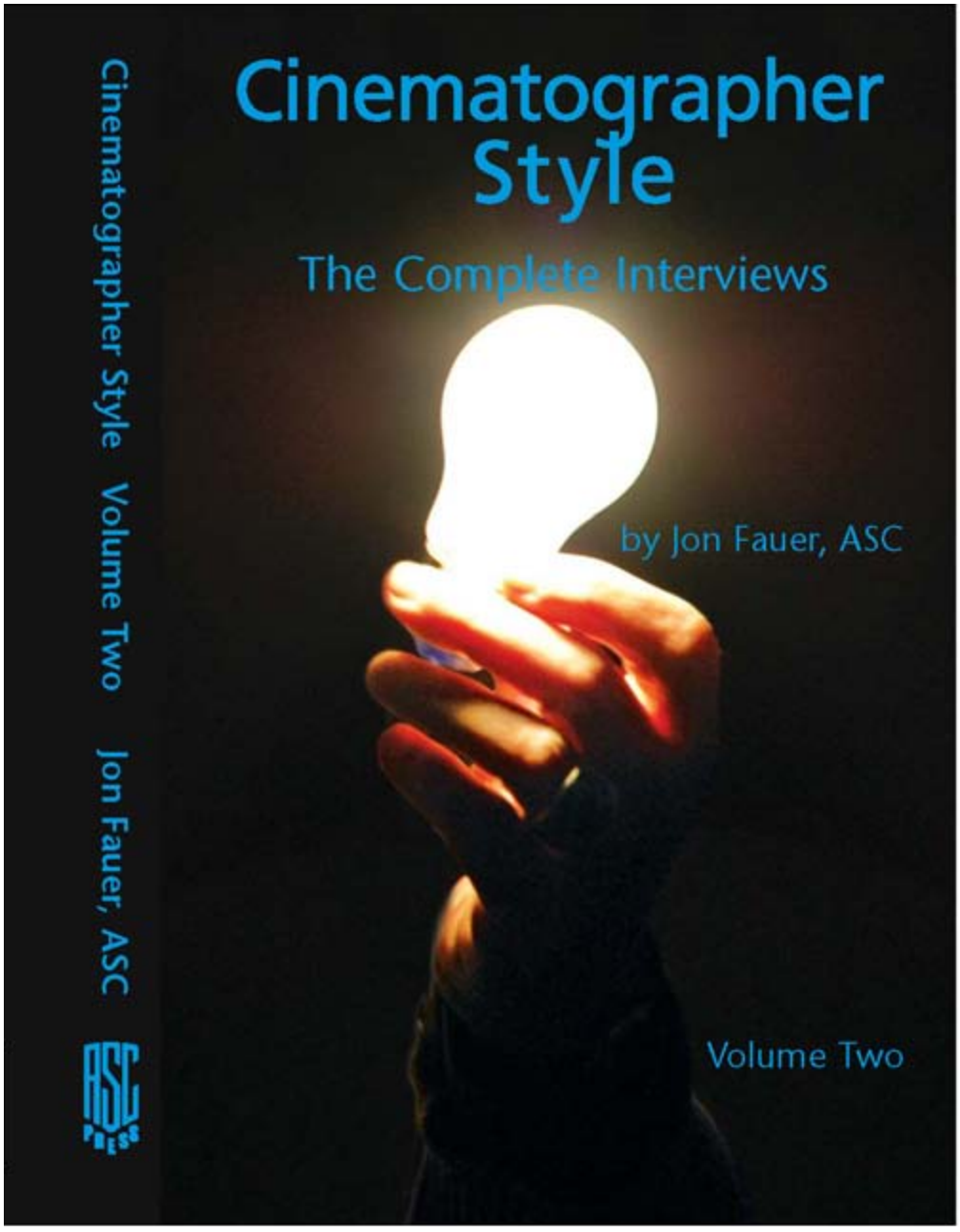
Special IBC Report

Our Special Online IBC Report begins with a lament on the sorry state of lighting paintings in many museums and galleries. The artist surely worked long and hard to express a mood or convey emotions with a careful representation of lighting, by lighting with the paints and brushes available. Several centuries later, the painting is hanging in a museum, lit with glaring lights. It's similar to the frustration a cinematographer feels when seeing ones work on an airplane where every overhead monitor is a different color.

We come full circle in our Lighting Paintings story at the end of this issue. Read about the new dedolights specifically designed for museums and galleries.

The rest of this issue takes you to Amsterdam and IBC, the huge trade show for film, television, broadcast and imaging. I hope it's almost as good as being there, without the jet lag.

CStyle Volume 2 Available October 12



Cinematographer Style, The Complete Interviews (Volume Two)

Here is the long-awaited completion of the *Cinematographer Style* trilogy: Film, Volume One and now Volume Two. With 55 remaining full transcripts of the interviews conducted from 2003 and 2005 for the feature-length documentary *Cinematographer Style*. As with Volume One, the pages are packed with advice, anecdotes, lessons and history from some of the world's top cinematographers. It's a dialogue on the art and craft of filmmaking, in which the authors of the images discuss their backgrounds, dreams, struggles and style. The lesson from these interviews is that cinematography is an art, like painting, writing or composing, and no two artists express themselves in the same way.

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Lighting with Paint

cover of FDTimes: The Council Chamber in Amsterdam Town Hall
Pieter de Hooch (b. 1629, Rotterdam, d. 1684, Amsterdam)
c. 1663-65. Oil on canvas, 113 x 99 cm
Museo Thyssen-Bornemisza, Madrid

Interior with a Mother Delousing her Child's Hair
also known as A Mother's Duty
Pieter de Hooch
c. 1658-60.
Oil on canvas, 52.5 x 61 cm
Rijksmuseum, Amsterdam

Pieter de Hooch, much maligned in previous issues of FDTimes, defended his multiple sources in this letter to our editor:

Dear FDTimes,

I don't know why you have it in for me, especially since you always find a convenient parking spot for your Rijksmuseum visits on the street named after me, Pieter de Hooch Straat.

Although I plead guilty to cheating my sources of light occasionally, surely you twenty-first century cinematographers do the same. If an unsympathetic director insists on staging a scene totally in the dark, away from all windows, I either have to cut a hole in the wall with my chain saw, or hide a light. As for your criticism of my multiple hot spots and shadows, surely you've used reflectors from time to time. Or you've taken advantage of those wonderful accidents of nature, like the herd of cows with giant polished bronze cowbells positioned outside a window to reflect light into my shot.

You were quite right about my "Interior with a Mother Delousing her Child's Hair." The little brat had been on set too many hours without the prescribed tutor time, her mother was threatening me with bodily harm, and the dog wrangler couldn't get the mutt to face camera. You correctly identified the natural sunlight coming in through the back window. However, the light outside the window on camera right came not from a 2.5K PAR, but from the reflections of twenty mirrors held by my assistants. So please, give me a break.

Sincerely, Pieter de Hooch

Pieter de Hooch is growing on me. Although I lambasted him in my advanced cinematography lectures at Columbia University for placing multiple suns outside the numerous windows he deftly provided in some of his paintings, he has a point. It looks good.

De Hooch was born in Rotterdam in 1629. Around 1650, he worked as a painter and linen merchant, living in Delft, The Hague, and Leiden (where he influenced, and was influenced by, Vermeer). From 1654 to 1657, De Hooch was a member of the painters' guild of Delft, and moved to Amsterdam in 1661. Two years later he was painting the magnificent "Council Chamber in Amsterdam Town Hall," *above, right.*

The Amsterdam Town Hall on Dam Square was designed by Jacob van Campen beginning in 1648. Today, it is the Royal Palace of the Netherlands, and open to the public when the royal family is away.

Which brings us to the beauty of De Hooch's painting, and the painting within the painting. The lighting is smooth and softly directional. Presumably the painting is being unveiled with a theatrical, opening curtain flourish. Since the effects of UV probably were not known in 1665, I'm sure the massive windows provided decent illumination throughout the year, without much danger of direct sunlight thanks to inclement Dutch weather.

The weather hasn't changed much in the intervening years, but the way to illuminate paintings in museums and galleries has progressed, not always for the better...as we shall see next...in "Lighting Paintings".

Lighting Paintings

Rembrandt Harmenszoon van Rijn
"The Nightwatch"
1642. Oil on canvas, 363 x 437 cm.
Rijksmuseum, Amsterdam

Our story of Lighting Paintings continues with a whirlwind tour of Amsterdam, playing hooky from IBC in the service of art.

It begins in the Rijksmuseum, where crowds of tourists are gathered around Rembrandt's "Nightwatch" and mercifully are not allowed to take pictures.

The combined UV effects of thousands of accidental flashes in museums that allow snapshots can't be good on old masters' paints or varnishes.

Anyway, the Nightwatch is well lit from the ceiling, and it's tilted forward to prevent kicks or glare from the lights.

Remember, it's a day scene, not night. There are no lanterns or torches in the shot. Look at the shadow of Captain Banning Cocq's on Lt. Willem van Ruytenburch's waist: hard and direct, lit with a shaft of direct sunlight or large HMI PAR.

Next stop, the Kloveniersdoelen—clubhouse of the Civic Guards of Amsterdam who commissioned the Nightwatch and five other giant group portraits for their great hall.

It turns out the Kloveniersdoelen is now the NH Doelen Hotel *(left)*, and the Great Hall on the second floor, left side, has now been divided up into guest rooms.

The paintings have all been moved, most of them to the Rijksmuseum and the Amsterdam Historical Museum.

The Civic Guard Gallery of the Amsterdam Historical Museum. Civic Guard Companies were militias to help defend the city. By the sixteenth century, they had become social and drinking clubs.

Rembrandt's "Night Watch" is part of this genre of group portrait painting in which each Guardsman had to pay to be included.

Soft illumination from above is pleasing, but direct lighting from PAR lights causes kicks and flares on the paintings' shiny surfaces.

Glaring at Paint

Here are three of the glaring paintings in the Civic Guard Museum. It's not the end of the world: you can walk left and right to lose the reflections and glare of the illuminating PAR lights. The vast size of the paintings and the space is breathtaking. At least you can see the paintings. In some museums, including a prominent one on top of a hill in Los Angeles, the illumination of paintings is so dark you almost need night vision goggles, which should be rented along with the audio tour headsets.

The Governors of the Binnengasthuis.
Cornelius van der Voort. 1617-18
Group portrait of the six governors of an Amsterdam charitable hospital.

Each governor paid fifty guilders to van der Voort, and three guilders to the frame-maker.

Civic Guardsmen from the Squad of Captain Abraham Boom and Lieutenant Antonie Oetgens van Waveren.

1623.

Claes Pieterszn Lastman and Adriaen van Nieulandt.

The Headmen of the Arquebus Civic Guard House.
1655.

Bartholomeus van der Helst

The well-fed administrators of the Civic Guard House are having a meeting. They are feasting on oysters and bread. The gentleman on the right is Gerrit Reynst, one of Amsterdam's most important art collectors.

Rembrandt House Museum

The Rembrandt House Museum—his single house was divided into two.

Rembrandt's studio is the largest room in the house. The windows face north, providing indirect, cool white light through windows that extend high up and are diffused by the dusty, mullioned glass. The position of the easel has been established from one of his drawings.

The tungsten illumination and hard shadows come from anachronistic lighting in the ceiling, which hopefully will be addressed in the future.

Rembrandt's paints were prepared and his canvases were stretched by assistants—seventeenth century ancestors of our camera assistants today (*opposite*).

It's a short walk from the Amsterdam Historical Museum to the Rembrandt House Museum (www.rembrandthuis.nl)

Your epiphanic moment comes after a short climb up the narrow stairs to his working studio.

Amid the collective gasps of astonished art-lovers, it's immediately apparent: the illumination in the studio looks just like the light in his paintings.

The soft, subdued single source comes from the combined effects of indirect, cool white light from the cloudy or rainy skies outside, through windows that extend high up and are diffused by the dusty, mullioned glass.

Rembrandt purchased the house in 1639. The neighborhood had been posh, but its wealthy merchants were moving to a newly fashionable part of town.

Rembrandt probably overpaid when he signed a "mortgage" of 13,000 guilders for the house. It was a huge expense, considering the Dutch West India Company had paid 60 Guilders for New Amsterdam on the Hudson ten years earlier.

Rembrandt lived here from 1639 to 1658. The house had been renovated by Jacob van Campen, the same architect who designed the Amsterdam Town Hall in 1648, depicted in de Hooch's "Council Chamber in Amsterdam Town Hall."

Rembrandt began work on "The Night Watch" the same year he moved in. Too large to fit in the studio, he worked on it in the back yard, with a temporary cover overhead.

Rembrandt did not follow the advice of Steve Burum, ASC: "always save for the rainy day." Although Rembrandt was at the height of his success and making a lot of money, he was unable to pay off the mortgage on the house. He was forced into bankruptcy, and his property and art collection were auctioned off in 1658 (the house sold for 11,000 Guilders). Rembrandt moved to a small rented house in a poor reighborhood, where he lived until his death in 1669.

Rembrandt's house was renovated, shored up (it was sinking into the marshy ground) and divided into two. Its condition deteriorated over the years. The City of Amsterdam bought the building in 1907, and the museum was opened in 1911.

Rembrandt House Museum

Rembrandt House Museum

Technology influencing technique: mixing and grinding paint meant you usually worked in a studio. Location painting was made possible partly by the invention of paint in tubes in 1841. Below: Rembrandt's props department: models for paintings. Was there an armadillo in any of his work?

Rembrandt House Museum

Visitors came from all over Europe to purchase prints of Rembrandt's etchings. Most people could not afford his paintings, but the affordable "mass-market" etchings were very popular. Could this have been "television" of the Dutch Golden Era?

Visitors would enter the house through this imposing entrance hall. They could wait in one of the chairs, while drinking coffee imported by the Dutch East India Company.

The walls displayed paintings by Rembrandt, his contemporaries and pupils. They were for sale. Rembrandt was not only a master artist but also a skillful art dealer. Buyers would be escorted to his elegant gallery, where they were served with a glass of chilled wine from a marble wine cooler.

Rembrandt produced over 300 etchings.

This room had an oak printing press on which he printed his etchings. (Etching uses acid to cut into the unprotected parts of a metal surface to create a print. Engravings are cut into the metal surface with tools.) The flat metal plate was inked, then wiped so only the indented grooves held the ink. The plate was then placed against a moistened sheet of paper, and run through the press. The wet etchings were then hung up on a line to dry, like laundry. There's a fascinating demonstration with lively museum artists who show you how it was done at the Rembrandt House.

For further reading: *The Complete Etchings of Rembrandt* by Gary Schwartz

IBC 2009 Report

IBC began life in England as a trade show for the broadcast and motion picture industries. As it grew, the only facility large enough for the 80,000+ visitors was Amsterdam's massive RAI.

RAI (Rijwiel & Automobiel Industrie) is Amsterdam's Bicycle and Automobile Industry Convention Center. With the number of bicycles in Amsterdam, it's easy to see how they can take up 12 huge showrooms when IBC is not in town.

The rest of this issue continues with a review of IBC 2009. Articles appear in order of surprise and new announcements, then proceed in the same kind of random walk as the walk we walked around the many vast halls of this remarkable trade show.


rai
rovi

IBC 2009

Ouch: Angénieux 24-290 Flambé, on display at True Lens Service's booth at IBC.

This Optimo Zoom Lens was in the fire at Universal a couple of years ago.

www.truelens.co.uk

New York was once New Amsterdam. Both cities are flat, densely populated, and surrounded by water. So why don't we have bicycles everywhere? And why can't NAB have decent dining al fresco? They may not have canals in Las Vegas...well, they do at the Venetian...

IBC 2009 Impressions

Outdoor dining next to a canal or on imported beach sand, appropriated named, "The Beach."

Decent Shepherd's, Beef, Caesar or Tuna Salad, Beefburger or Steak, Tortellini or Lobster Ravioli.

Quick take-out and eat on picnic tables: grilled hamburgers, chicken and curry on rice.

Coolers everywhere stocked with Heineken and espresso machines as well.

Or sit at the counter indoors and count sushi platters going by on the endless belt.

IBC 2009 Impressions

Curious: Amsterdam has lots of water, but they import sand for the beach at IBC. NAB has lots of Las Vegas desert sand, so surely it wouldn't be that difficult to bring in a few lagoons or lakes between North and South Halls.

Some exhibitors bemoaned the fact that IBC lasts for five days. But you need that much time to have a leisurely lunch, take your virtual Formula One car for a video game spin, read all the magazines on display, visit all the booths, rent a bike and pedal fifteen pleasant minutes from the RAI convention center to the museum district of Amsterdam for tours of the incomparable Rijksmuseum, Van Gogh Museum and Amsterdam Historical Museum.

P+S Technik D16

P+S Technik's D16...er...16Digital SR Mag was the surprise of IBC, and one of the hits. A secret so closely guarded, not even the moles at Film and Digital Times received advanced NDA warning.

Picture this. There are an estimated 20,000 Arriflex 16SR cameras out there (SR1, 2 and 3). It was arguably the most popular camera ARRI ever made: symmetrical design, it didn't assume every cinematographer was right eyed, right handed or right shouldered. The 16SR was designed to fits in an attaché case under your airline seat: in fact, the original one came with an optional leather-trimmed one that was the envy of business executives and fellow passengers everywhere. The 16SR didn't quite sit on your shoulder like the competitive purring cat, but proved rugged enough that cameras from 1977 are still running today, having shot millions of miles of film with little more than a few oil changes.

ARRI's D21 showed how many cinematographers like optical viewfinders—preferring to see when the shot was in or out of focus—as opposed to having someone yell across the set from a darkened tent, "hey, I think you might possibly be out of focus." The long, good rule of good camera operators has always been a binary decision. The shot was either in focus or out. There was never a wishy-washy middle ground. A shot was either good or bad.

Enter the D16. Pardon the renaming, it's just a lot easier to type than P+S Technik 16Digital SR Mag, and it pleasantly reminds us of optical viewfinders.

With a potential of 20,000 Arriflex 16SR camera owners out there from Kalamazoo to Kamchatka clamoring for something digital, enamored of optical viewfinding, their documentary-style camera already invested, paid off and ready for digital resurrection and reinvigoration. I'm thinking of it as a spa for classic cameras, and I expect the sheer numbers could make this camera P+S Technik's killer app, must-have product, home run hit of the year.

Joe Dunton, who like Alfred Piffl never met a camera he didn't want to modify, first introduced the concept 7 years ago with Hitachi electronics. Three Moore's Law cycles later, P+S Technik gives us 2K RAW, onboard storage, seamless post production, and more.

D16, smaller distant cousin of D21 and Alexa OV, uses the optical finder, spinning mirror shutter, and body of your beloved 16SR. It's as simple as snapping off your 16SR film magazine, changing the gate, and snapping this P+S Technik 16Digital SR Magazine onboard. You can control the magazine with on-board controls, a hand-unit, laptop or iPhone.

P+S Technik 16Digital SR Mag

The Normal 16 sized sensor is slightly recessed to prevent scratching. There's a protective low pass filter, which can be cleaned with your favorite sensor cleaners. (Do not use Acetone).
The gate area of your 16SR is easily modified to accept the digital magazine. Remove your existing 16SR gate with the six screws that hold it in place. Leave the existing shims in place. Replace with the modified P+S Technik Gate. Check your flange focal depth. It should be the same as before.

P+S Technik 16Digital SR Mag

Left to right, above: Konrad Seeger, Alfred Piffl, Simon Schleidt.
Below: Prototype model of 16Digital Mag throat with sensor.

P+S Technik's 16Digital SR Mag records to onboard, removable storage media in HD RAW (1920x1080) and 2K RAW (2048 x 1152) with a lossless compression.

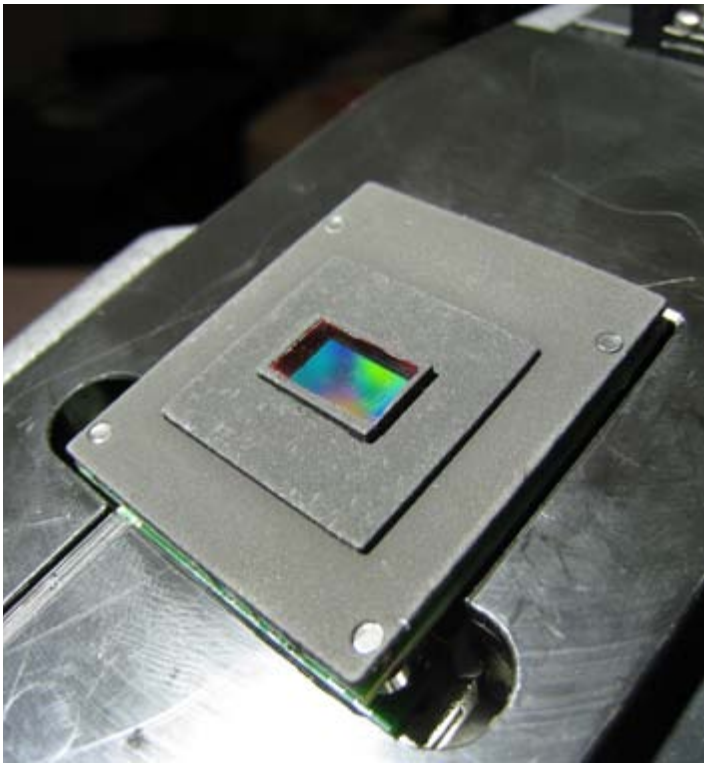
The unit at IBC had an HD-SDI output for viewing and recording in HD.

Operation of the camera is promised to be close to film, which means that you probably will place it on your shoulder, push the START button, and think more about composition, artistic matters and whether your return ticket is an aisle or window seat than whether the modern reincarnations of Nathalie Kalmus will come to haunt you about menu setups and look-up tables.

The sensor, positioned where the pressure plate was on the 16SR film magazine, is about the same size as a Normal 16 gate. When the magazine is snapped onto the camera, the sensor takes the place and position of the frame of film about to be exposed—52mm from the lens flange. You can use any 16mm or 35mm format PL lens that fits onto an SR

The 16 digital mag weighs 4kg / 8.8 lbs and runs off 12 or 24 volts, so it works with either 16SR1 and SR2 (12 volts) cameras or 16SR3 (24volt) cameras.

Expected delivery: beginning 2010. Expected price: around 20,000 Euros.



P+S Technik

Alfred Piffl, who never saw a camera he couldn't make better, head of P+S Technik.

Anna Piffl, P+S Technik Director of Marketing

ARRI Alexa

ARRI's Oliver Temmler and Marc Shipman-Mueller with design models of Alexa.
Alex OV-Plus (Optical Viewfinder) model, below.

What's in the Box?

ARRI's three new digital motion picture cameras were cinematographic home-runs at IBC. They were called by their code-names: Alexa. By the end of the show the catchy name had caught on, and it seems difficult to imagine calling these cameras anything else when they go into production starting mid 2010.

A really special view was reserved for the lucky or persistent few. ARRI's "whisper room" provided a sneak peak inside locked Pelican cases. The next pages may help answer the many questions we received: "What's it like? How does it feel?"

EV, EV-Plus and OV-Plus

As described in our IBC September issue, the three new ARRI Alexa digital cameras announced at IBC satisfy the superfecta of contemporary production: lighter, smaller, faster, cheaper.

Prices will probably start somewhere around € 50,000. The two entry level models (EV

ARRI Alexa

Jon Fauer, Oli Laperal, Jr. and Marc Shipman-Mueller in Whisper Room

Michael Goi, ASC, President of the American Society of Cinematographers was at IBC to present the ASC/Producers Guild Camera Test, and got a chance to play with the design study pre-prototypes.

Alexa Electronic Viewfinder with FLCOS (Ferroelectric Liquid Crystal On Silicon) microdisplay technology. Image area of 1280 x 720 pixels. High contrast and low distortion with an evenly illuminated viewing area. Auto-calibrating, temperature controlled LED light for reliable color.

and EV-Plus) use a new ARRI electronic viewfinder and a 16:9 picture area. The bigger-budget production camera (OV-Plus) will have an optical viewfinder, and will continue ARRI's legacy of offering a 4:3 sensor with a rotating mirror shutter. All three cameras will shoot 1-60 fps. The Plus models will have integrated wireless remote control for lens and camera operation.

Estimated arrivals are June 2010 for the EV, September 2010 for the EV Plus and December 2010 for the OV Plus. Early adopters and owners of ARRIFLEX D-21 cameras will get first dibbs, and will be offered an upgrade trade-in path.

All three Alexas use a single CMOS sensor (35mm format, totally new design) that promises higher sensitivity and dynamic range (wider exposure latitude) than before. They accept most 35mm PL mount lenses, including anamorphics. I modify my previous pronouncement of "all PL lenses" because astute readers noted that there are some odd-ball modifications and lenses in PL mounts out there.)

All three cameras have a base sensitivity of 800+ EI equivalent. Output options include on-board recording and multiple live HD and ARRIRAW feeds. The cameras' electronics are completely sealed for working in hostile, hot, wet, cold or miserable environments.

ARRI Electronic Viewfinders

Alexa EV and EV Plus come with high resolution ARRI Electronic Viewfinders. They use FLCOS (Ferroelectric Liquid Crystal On Silicon) microdisplay technology, with an image area of 1280 x 720 pixels. The optical design and coated glass optics provide high contrast and low distortion with an evenly illuminated viewing area. The auto-calibrating, temperature controlled LED light ensures true and reliable color representation over a wide variety of operating conditions.

Because the sensor of the electronic viewfinder equipped cameras has more pixels than needed for the 16:9 output, the electronic viewfinder can display an over-scanned viewing area that surrounds the frame, so you can see microphones creeping into your shot and C-Stands lurking at the edges. Zoom and other options are available to help you to judge focus and exposure. The small, self-contained finder is easily mounted in different positions: on the side for handheld, or in back for use with a geared head.

ALEV III Sensor

The new sensor is a 35 format, single CMOS, Bayer mask device with a 3.5K pixel count. ARRI's imaging technology consists not only of ALEV III, but also his entire entourage, including a high performance optical low pass filter pack, a powerful hardware imaging engine, advanced image processing firmware and a number of unique image processing steps.

Pixel Size and Pixel Count for HD and 2K DI

ARRI is positioning these digital cinematography cameras for HD television, commercials and feature films whose current output formats are HD 1920x1080 or 2K data. They feel that uncompromised and uncompressed 4K resolution will remain the domain of 35mm film for some time to come. In this era of expedited life cycles, I guess that would be about 18 months.

Three Amigos with Three Alexas

Left to right: Glen Kennel, ARRI Inc Chief Technology Officer with Alexa EV, JF with OV-Plus, Marc Shipman-Muller, ARRI Product Manager Cameras & Lenses, with Alexa EV-Plus

Image quality is affected by pixel size: larger pixels have a higher sensitivity and wider latitude, while smaller pixels provide better resolution with smoother stair-step edges. In addition, larger pixels output at lower data rates and can handle data more efficiently in the camera. Using larger pixels means that Alexa does not have to use data compression for its ARRIRAW outputs, and can provide uncompressed and uncompromised image quality.

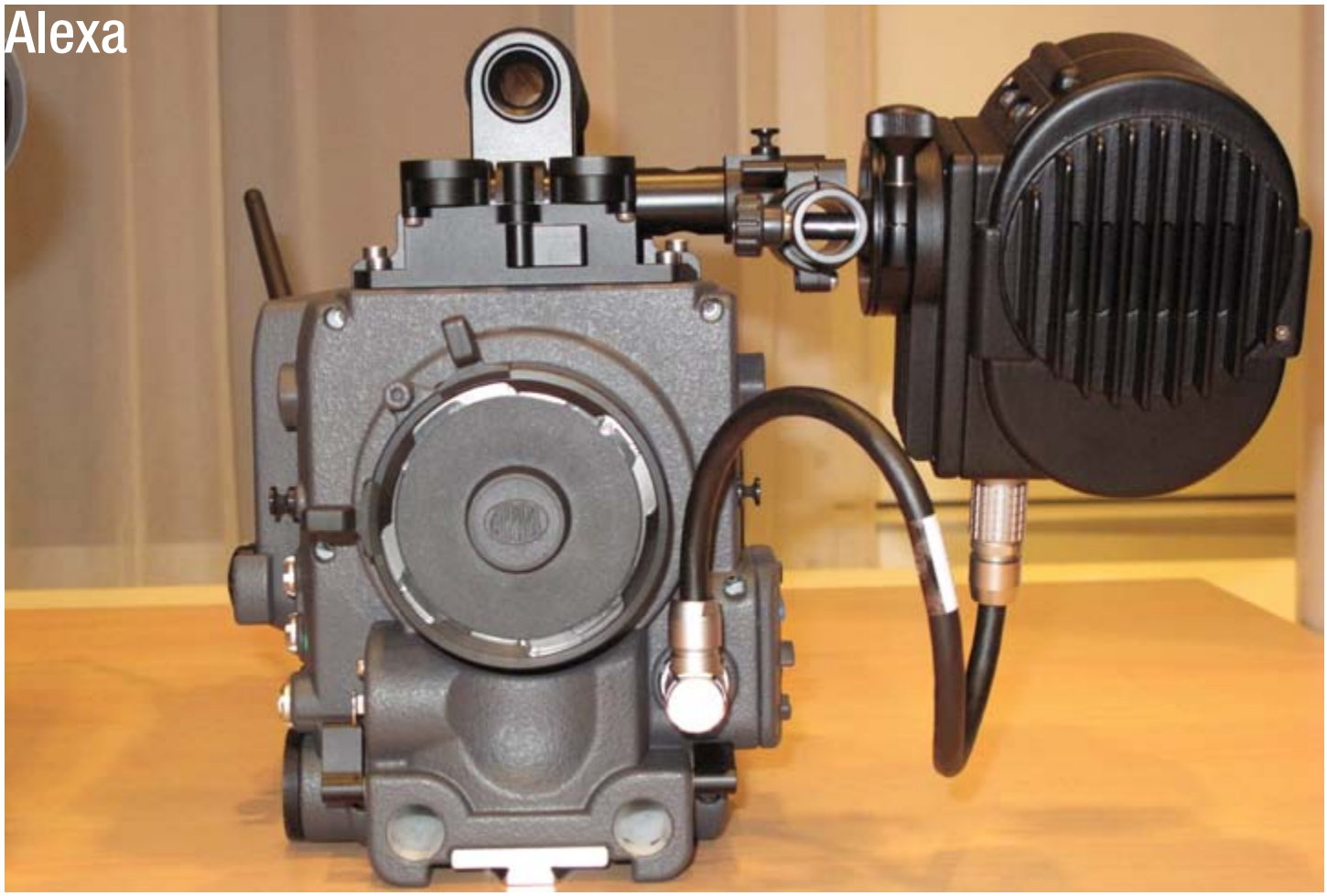
In designing a single 35mm format 3.5K sensor with HD/2K output for the Alexa cameras, 8.25 micron pixels were selected. (Your hair is about 50 microns thick.)

Think of sensors as buckets sitting out in the rain, and pretend the rain is a stand-in for photons of light. The larger the bucket, or sensor, the more light can be gathered. The smaller the bucket, the more buckets can be placed side by side (higher resolution), but they can't hold as much.

From this 3.5 K sensor, the new cameras generate images in HD or 2K. It does this through oversampling, which means that more pixels are captured by the sensor than are required for the output format, and the image is downscaled by the image processor.

For example, 2880 x 1620 sensor pixels are downsampled to 1920 x 1080 for HD output, and 3072 x 1728 sensor pixels are downsampled to 2048 x 1152 for a 16:9 2K DI. The A-OV Plus camera will be able to use even more pixels for 4:3 formats, with its total sensor pixel count of 3392 x 2200.

The camera manages to have a wider "exposure latitude" because its two 14 bit A/D converters deliver separate high and low gain signals that are then re-combined into a single 16 bit high dynamic range image. This is very similar to the way the ARRISCAN works, exposing each frame of film multiple times for highlights and low light areas.



Above: front view of Alexa EV pre-prototype with electronic finder, and lightweight 15mm supports under PL mount.

Below: comparison of relative sizes of pre-prototype Alexa OV (left) and Alexa EV (right).

Alexa EV 360°

Design models: actual cameras may be different.

Alexa EV 360°

Alexa EV

Here's our rogue's gallery of gearheads. Mug shots showing the ergonomics of the pre-prototype models we saw at IBC. Remember, these are not working cameras, but rapid prototypes made as part of the pre-production process.

Cooling. That was an interesting subject. The internal electronics are totally sealed against dust, salt, spray and dirt. Heat is blown away from the sealed capsule with a quiet, replaceable 20 db fan. Since the bearings of a fan motor are usually the first thing to go, you can pull out the entire fan and replace it with a new one. Because the electronic compartment is sealed, the fan is only blowing against a "radiator" that collects the heat from inside the electronic's compartment, and not blowing salt water, sand or dust onto sensitive components.

The electronic viewfinder model shown here (EV) is lighter and smaller than the optical viewfinder (OV) model on the opposite page. Essentially, the basic cameras are similar, but the OV version adds a spinning mirror and optical finder assembly in front. The electronic finder attaches to many places around the camera, depending on your operating needs: front, rear, right side, and so on.

Alexa OV-Plus

The optical modules of the Alexa OV-Plus add a few inches to the front of the camera. Notice the extra area around the ARRI logo and the familiar bulge of the mirror shutter. There's no room for molded 15mm lightweight support holes. Also, notice that the OV camera includes the "Plus" features of wireless remote camera and lens control—identified by the rear antenna and the lens motor receptacles.

Smaller and lighter than an ARRICAM Lite. Anton/Bauer and IDX style 14 volt on board batteries can be used. The camera will automatically switch between the 24V and the 12V power inputs. We noticed 12 volt and 24 volt accessory receptacles. Monitoring will be flicker-free, courtesy of image frame-store technology.

There's a convenient handgrip rosette on the camera right side. I hope there will be a handgrip rosette on the left side as well—as it is on the Arriflex 16SR. The optical finder will swing over to either side of the camera body, and extends in and out like an Arriflex 435.

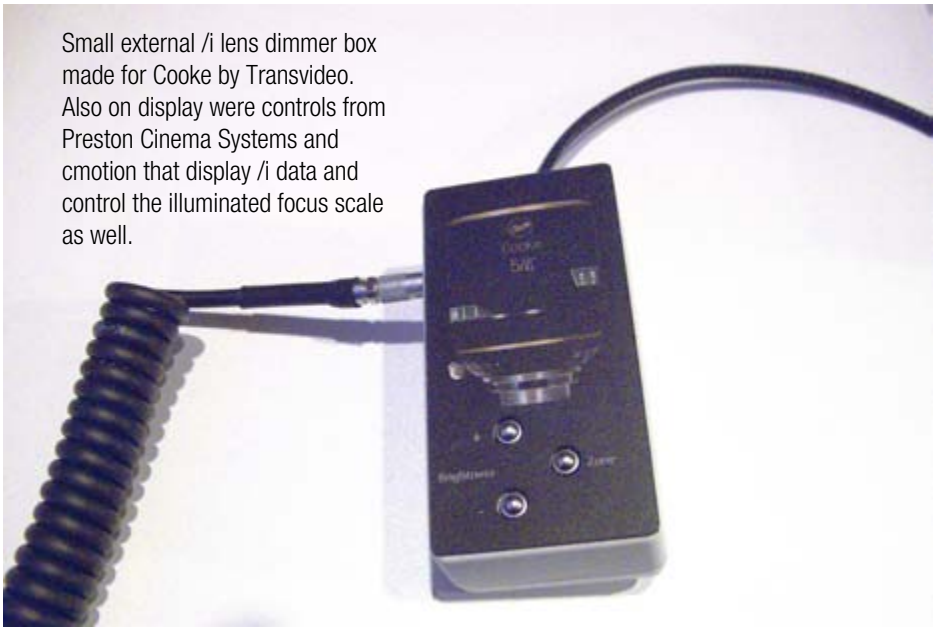
Alexa EV

Oli Laperal, Jr models the Alexa EV. The working prototype "breadboard" camera we saw at ARRI's IBC booth was impressive. It was easy to discern focus. The image was sharp, clear, crisp and correct even in very low light. Is this the point in time when technology gives us pixels smaller than the grains of a groundglass?

The ergonomics are good. The camera balances well on the shoulder, and the shoulder to eyepiece distance is easily adjusted. Notice how the PL mount is attached to a barrel that protrudes from the image plane of Alexa EV. I can hear Ron Dexter's bandsaw starting up. Like RED and the P+S IMS Interchangeable Mount System, it should be easy to install mounts of many different styles and formats.

One thing that was not introduced, but hinted at, was the possible availability of on-board, removable storage. We'll have to wait for NAB. I imagine you'll be able to choose HD or 2K uncompressed and RAW.

Cooke /i's



Small external /i lens dimmer box made for Cooke by Transvideo. Also on display were controls from Preston Cinema Systems and cmotion that display /i data and control the illuminated focus scale as well.

The /i's have it.

5/i

Just slightly less secret than P+S Technik's introduction of their 16Digital Magazine, Cooke surprised everyone at IBC who thought the big news was going to be delivery of the anticipated Panchro /i set of lenses.

Cooke unveiled an entirely new set of highspeed primes trimmed in gold: the new 5/i Prime Lens Set. All lenses are T1.4.

Focal lengths: 18, 25, 32, 40, 50, 65, 75, 100 and 135mm - designed for all PL mounted film and digital cameras.

They come with /i Technology, which is Cooke's open-architecture lens data system.

A really unique and helpful feature is the illuminated focus ring. No more Maglite cigars on night shoots. Tiny LEDs illuminate the focus scales on both sides of the lens. You can dim the lights with the iris ring (after tapping it to its end stop) or with external controls.

The simplest and fastest way to dim the illuminated focus scale is with the tiny control box manufactured for Cooke by Transvideo. You plug one end into the camera's RS receptacle and the other end goes into the /i receptacle on the lens. It controls intensity of both sides of the lens together or separately. These accessory boxes can be velcroed or attached to the camera body. I expect the next version will be smaller.

Wireless control of focus scale illumination was also shown on Preston Cinema System's FIZ and on Transvideo /i Monitors. (See Transvideo article in this issue.)

They must be working overtime in Leicester: delivery is expected later next month, and the first production run is reported to be sold out.

Panchro/i

Skeptics in the cinematographic community muttered, "Who's going to pay $7,400 for a T2.8 lens?" I guess they misunderestimated (*sic: Bushism*) the Cooke brand name, the color matching to other Cooke lenses, and the need for additional primes (smaller, lighter, more affordable) for multiple camera shoots.

The line was long for new Panchro /i series lenses, with the first production run sold out.

The Panchros are available individually: 18, 25, 32, 50, 75 and 100mm. A set of 5 lenses (25 through 100mm) gives you a break at $33,600.

Cooke Looks

Cooke Chairman Les Zellan, who steadfastly proclaimed it was a PL world many years ago, shown here with Sony F35.

Why is this man smiling? Robert Howard, CEO of Cooke Optics Limited, announced that they have sold out the first couple of production runs of both Cooke 5/i and Panchro/i lenses at IBC.

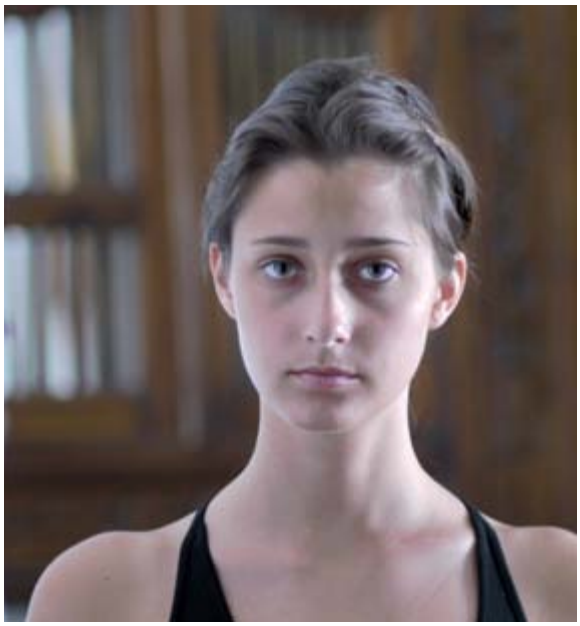
Geoffrey P. Chappell, Cooke Optics Director of Sales, after the closing bell.

Thomas Greiser, ZGC Sales and Support for Weisscam, SteadyFrame, OneBox, 3D Rig, P+S Technik 16Digital Magazine.

Fauer...Faure. Jon Fauer, Emmanuel Faure, Christian Faure. Faure père et fils are with Thales Angénieux.

Aaton Penelope with Cooke 15-40 CXX T2 Zoom Lens

What is /i?



Were they swarming around the Cooke booth to order 5/i or Panchro/i lenses? Asking what is /i? Debating the meaning of Cooke Look or why the Cooke Look Model isn't smiling? The answer to the latter is that she's too cool: models have "attitude," not emotion.

The answer to the middle question is, yes, there is a Cooke Look—just as every lens has its own unique look that goes beyond counting line pairs and test charts. Lenses are, after all, the brushes of the cinematographer, and, along with lighting, composition, camera movement and art direction, one of the tools that helps establish the style of a motion picture.

What is /i? It's Cooke's open-architecture lens data system, using encoders inside each lens to supply frame-by-frame real-time data about focal length, focus distance, iris, and lens name—for camera reports, script supervisors, editors, post production, and more.

London /i

Lens distortion? Distorted architects? Geoff Boyle tests the limits of Cooke /i data technology outside London's leaning City Hall, near the London Eye and Tower Bridge.

London /i Test

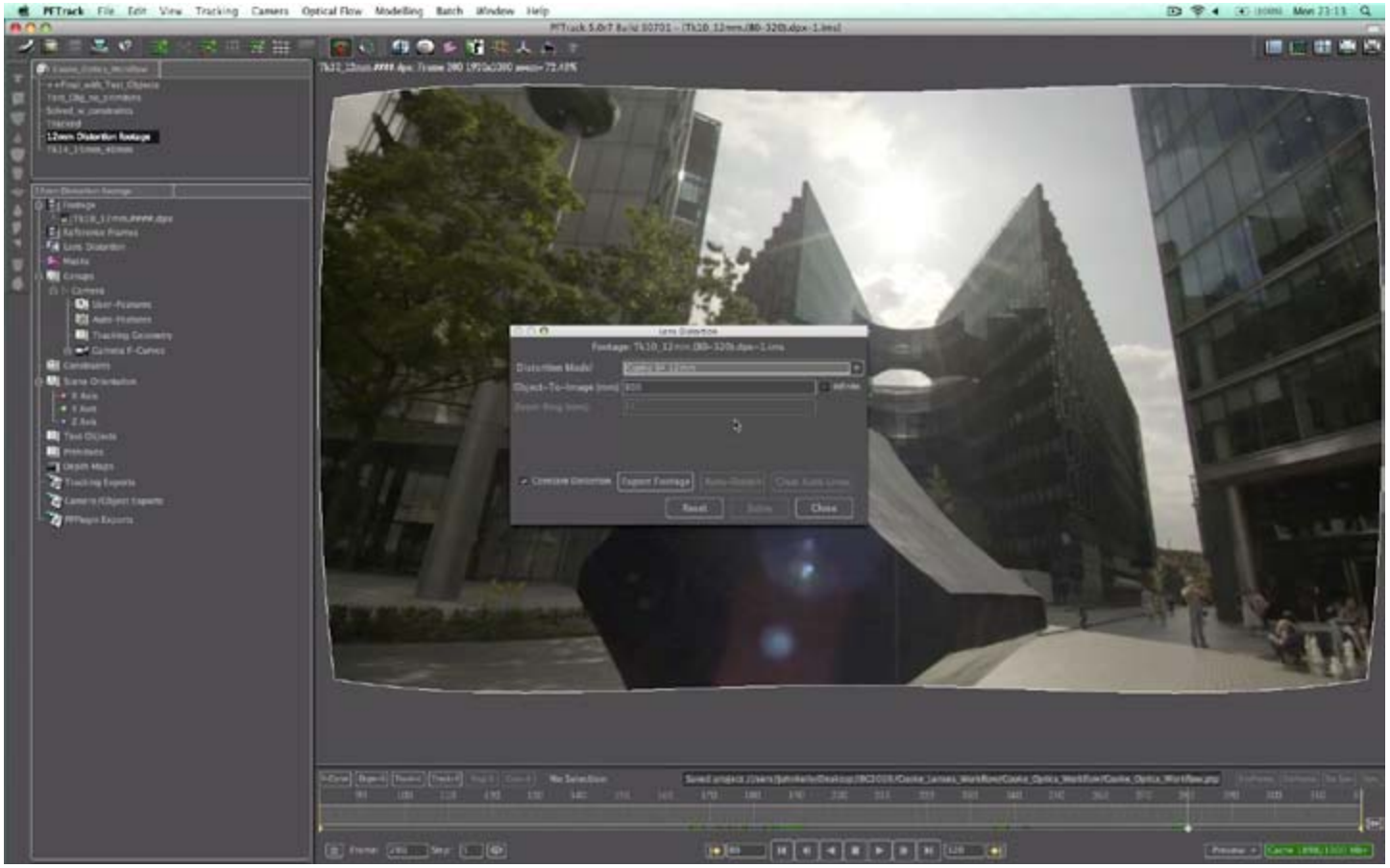
A couple of weeks before IBC, Geoff Boyle tested Cooke 4/i, 5/i and CXX 15-40mm lenses on a Sony F35 camera with a team from Cooke and Pixel Farm. The purpose was to show how /i metadata could help speed the post-production process when using Pixel Farm's PFTrack for visual effects compositing.

For the test, Geoff deliberately gyrated and gamboled while handholding shots to be used as background plates.

Normally, this kind of irregular movement would add a lot of frame-by-frame workload for the visual effects artist's workflow. However, by storing lens information, focus (and sometimes zoom) settings for each frame, Pixel Farm's PFTrack was able to save time and add accuracy to the process.

Since i/data identifies the individual lens to the post-production computer, it can seamlessly correct lens distortion. Yes, even the best lenses have some distortion somewhere—although I'm not sure what they can do for the wonderful building on the opposite page.

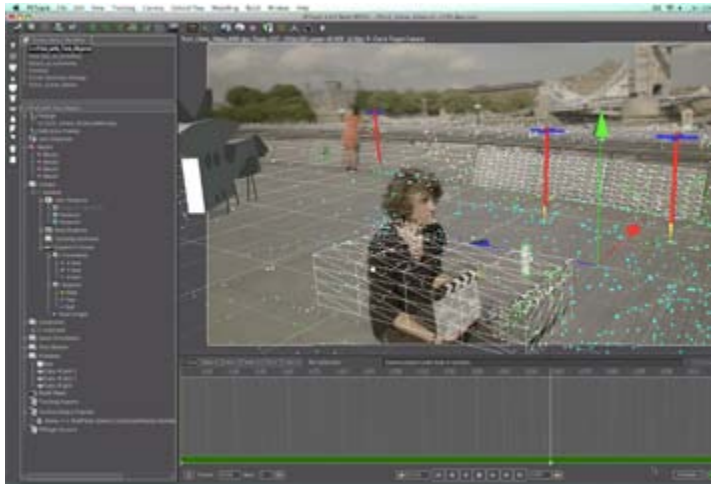
Match Mover, Match Mover Make me a Match



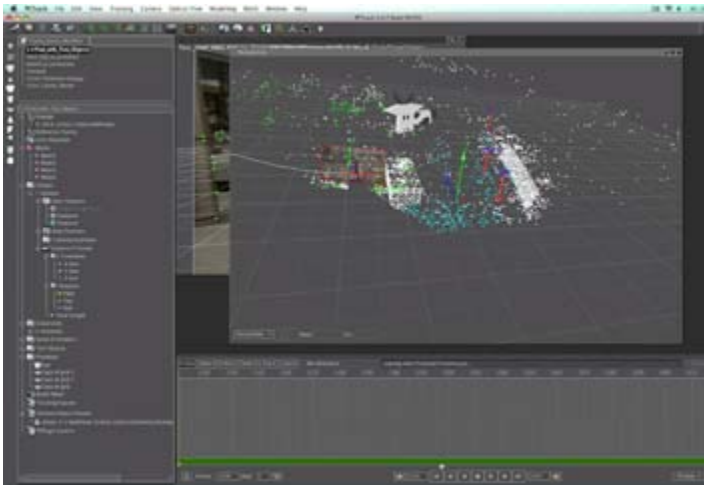
PFTrack is the sophisticated Match Mover software package from The Pixel Farm (www.thepixelfarm.co.uk).

What is Match Moving? Match Moving is the art of making your virtual camera—the one that "shoots" all the CGI—move and behave exactly like its real, live-action counterpart. Most major motion pictures use it. Let's say you're shooting *Harry Potter Returns as Hogwarts Headmaster.* For the opening Quidditch Game, you've managed to talk the Completion Guarantors into letting you dangle Daniel Radcliffe and his broomstick from a construction crane somewhere in the Scottish Highlands. But there's no way they're going to let you crash him through the spectator stands. You're going to have to composite those computer-generated elements in post.

If your producer was wise enough to have listened to the DP's request for /i lenses and the hardware to record it, you have just saved the production lots of time and money during the happy "marriage" of live-action to CGI (Computer Generated Images). How? As mentioned, every lens has its own particular characteristics and geometric distortions. Look at the example above. We see that it was shot with a Cooke S4/i 12mm lens. PFTrack has mapped the geometry of that lens, and can quickly adjust the CGI shapes to both the focal length and the geometry.



PFTrack adds tracking points. This is a handheld shot, moving left to right. Note the targets and sticks indicating CGI elements to be added.



A wider view of the live-action and CGI, including The Pixel Farm's pet CGI cow, which must also "follow" the live-action handheld move..

I imagine the fountain discouraged curious bystanders from looking at the new, top-secret (at the time) Cooke 5/i lenses.

Geoff Boyle with Sony F35 handheld, with Tower Bridge of London in background.

Left ot right: Les Zellan, John Kelly (Pixel Farm), Michael Lancaster (Pixel Farm), Danny Gagatt (DIT/AC, *kneeling with Sony F35*), Geoffrey Chappell, Geoff Boyle, Robert Howard. Photo by Daniel Gould, camera trainee (in PFTrack picture, opposite page, bottom left).

Transvideo and /i data

At IBC, Transvideo presented some compelling reasons to embrace /i lens data technology.

This was actually the first time the previously arcane subject of camera and lens metadata actually made sense to me.

I had always thought of it as lots of information that you stored and handed to the post production house, who either didn't have the right tools to use it or who were still working on making it work with their system.

It was one of those subjects like timecode on film: a solution in search of a problem that only two French people in the world understood or could explain. Jacques Delacoux is one of those exalted two.

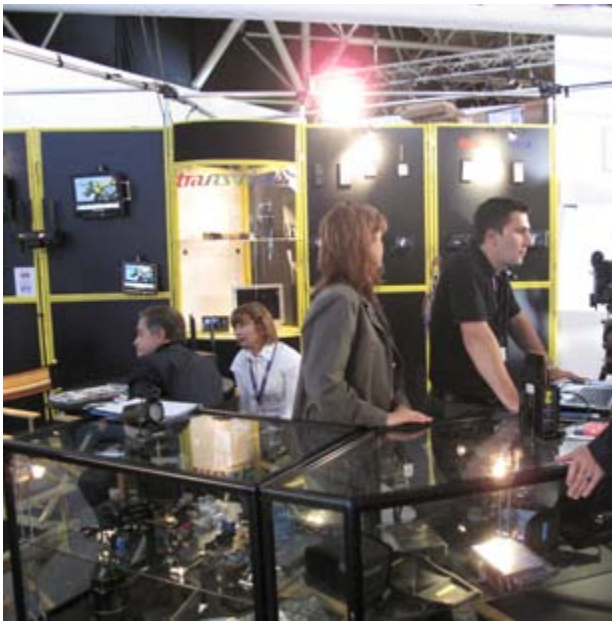
Jacques, along with Les Zellan and John Kelly of the Pixel Farm, enlightened me on the mysteries of /i. I'll try to share what they taught me.

/i data begins with encoders in the barrels of cine lenses. It's in all the Cooke lenses marked /i. It appeared that other lens manufacturers at IBC were interested in joining this open-architecture coalition.

ARRI LDS is sort of similar, but proprietary, and requires a camera with LDS contacts in the lens mount.

/i lenses send data either directly through the lens contacts or via a receptacle sticking out of the lens. It can be stored to an SD memory card, recorded to tape or drive, employed to tell wireless remote controls what kind of lens they're dealing with, or display the information on a monitor with /i data circuitry.

Here's the cleverness of what Transvideo is doing: take the /i metadata, and use it to display focus, iris, and depth of field right on the monitor.



Nadège Deschamps managing the Transvideo booth at IBC, along with Frederic Bittard at right.

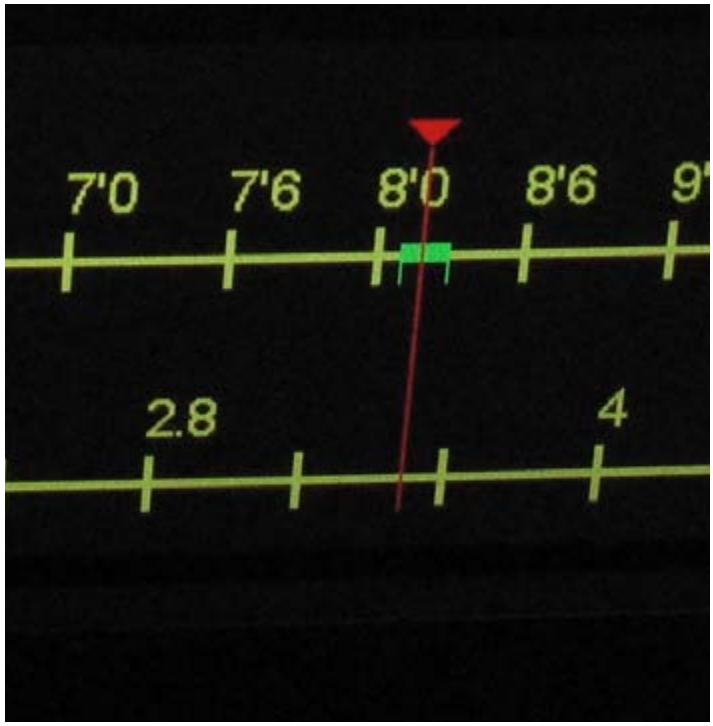
CineMonitorHD/i

Transvideo's CineMonitorHD/i Evolution Monitor is not only for Directors and DPs, but also for Camera Assistants and Script Supervisors. Put away your Kelly Calculators. Transvideo's new film and digital tool, shown at IBC, constantly updates you on depth of field in an easy-to-read display.

In the example above, the Cooke i lens is set to T3.47 and the focus is 8'2" (shown with the red line). The green box shows how much (or little) depth of field you have. This can be also helpful to camera assistant—it constantly updates your depth of field without having to enter any data manually.

The Cooke /i data system can also be a huge time-saver for any script supervisor who has a dedicated CineMonitor—I'd recommend the HD10 in wireless configuration. No longer does the scriptologist have to shout across the set to the AC, "What's your millimeter? T Stop?" Few things in life are more distracting to an actor poised behind the clapsticks, only to go into script-supervisor holding pattern while lens and camera data is painstakingly or painfully discussed.

There's also a histogram, timecode readout, and soon you'll be able to freeze, store, recall shots, monitor voltage, check audio, and remotely dim the Cooke 5/i focus scales from the monitor.



CineMonitorHD/i

Transvideo CinemonitorHD/i's ability to evaluate focus is a breakthrough new tool for video village.

No matter how much we complain about relegating the DP to a dark tent, it is often inevitable having to check focus of some of the latest cameras with eyepieces so vague the camera operator is often the one in the dark.

The vigilant DP, watching the shot, can instantly see whether the shot is sharp or soft by looking at the the edge outlines (blue edges in the picture above and below.)

The DP and camera assistant can also help decide whether it may or may not be necessary to do another take, having consulted the graphical depth of field display on the CineMonitor, what's in focus, and whether the depth of field allows any leeway.

Transvideo

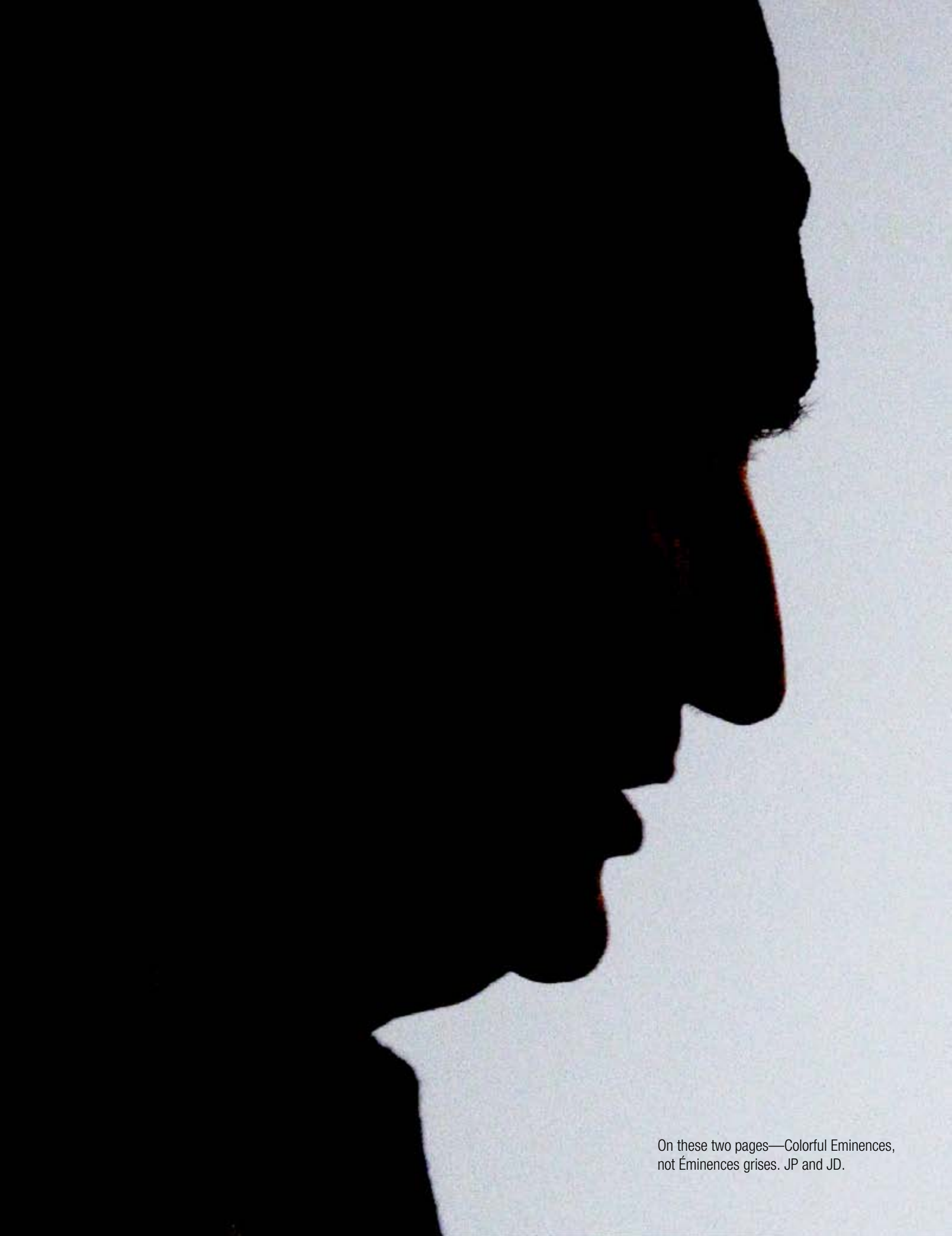
Jacques Delacoux, President and CEO of Transvideo, doing some last-minute /i data updates, and some serious lifting.

New technology is providing wireless video assist with longer range, freedom from interference, sharper images, and HD images. Clint Eastwood, above, on *Flags of our Fathers*, has a Titan receiver on an SD CineMonitor.

Transvideo' introduction of the TitanHD MiMo wireless transmitter/receiver suggests where things are headed. They were sending HD video across the hall to a receiver and monitor in Dedo Weigert's booth at IBC. Despite what may have been the epicenter of radio, cell phone and wireless signals on planet earth in mid September, the signal was clear and totally free of glitches or interference.

What's next? I guess we'll soon see a 5 Ghz wireless set: monitors with built-in bi-directional communication, /i data links, onboard recording and frame store—most of the things currently available at Transvideo's booth.

TitanHD Transmitter Unit
5GHz ISM COFDM MiMo,
HDSDI 4:2:2 RGB 10-bit signal,
RGB, YPrPb, SD Composite



On these two pages—Colorful Eminences, not Éminences grises. JP and JD.

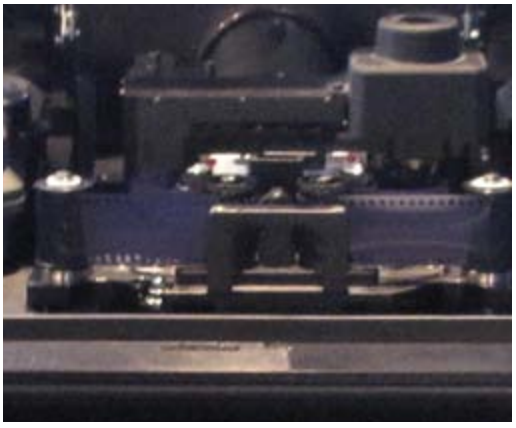

ORCA

Aaton

Most camera and production equipment companies exhibit in Hall 11.

Aaton chooses to parade Penelope along with Cantar and Aaton K in the midst of the sound and postproduction booths of Hall 6.

Aaton-K: the digital-to-film recorder for film-out and archiving. Uses the Penelope style movement.



Aaton

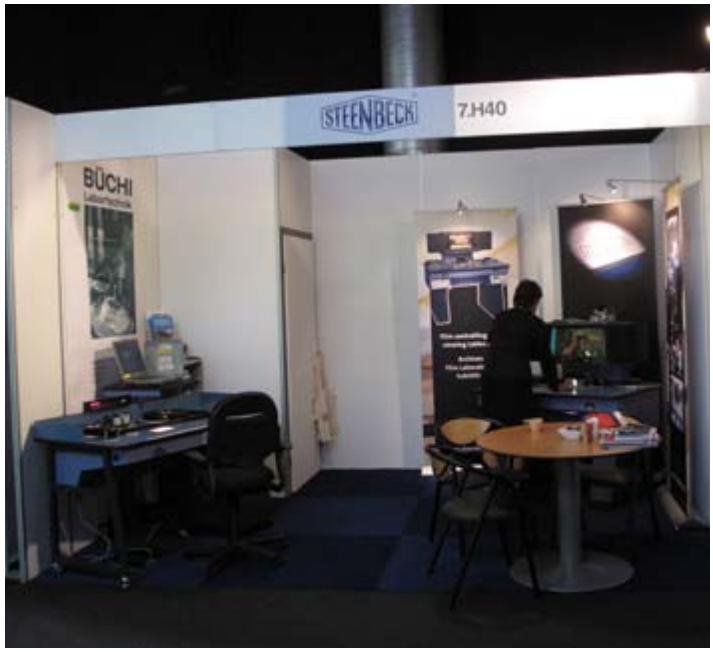
Patrice Lavergne, Product Manager of Aaton-K

Hall 6 was a window into the ephemeral world of backups of digital backups, hard drives guaranteed to crash, the time and place unknown—which was why the posters proclaimed "Scalable Reliable Archival For the Digital Age," and why archiving to film is such a secure and, in the long run, inexpensive choice.

If you're checking 35mm frames for resolution, grain or any other kinds of tests, this PEAK Stand Micro 50x is the magnifier to have.

Product 2008-50 measuring microscope.

www.peakoptics.com



Next door, in hall 7, it was good to see Steenbeck still displaying flatbed editing tables and rewinds.

Cartoni and Mo-Sys Turn Heads at IBC

If you're doing tabletop or underslung shots, chances are good you're using a Cartoni Lambda Head. I like to use it underslung from a Fisher 22 Jib Arm. Camera packages up to 40 kg/88 lbs can be quickly balanced, without tools, in a neutral, weightless position. I have to admit I'm usually more concerned with weightless balance than nodal/entrance pupil positioning.

Huh? Well, for underslung shots, I'm usually more interested in smooth moves than slight image shifts when panning or tilting. But for special effects and very demanding agency art directors, you often want to line up your lens so there is no image shift when you pan or tilt. This exalted state of equilibrium is the optical entrance pupil of the lens, mercifully indicated on the new set of Cooke 5/i lenses in plain English and numbers, but on most other lenses usually relegated to obscure reference books you never can remember to bring on set. The entrance pupil position, often incorrectly, but much easier to call "nodal point," is not even necessarily a position on the lens itself; very often it is a point in space around the camera body. The problem with all of this is that the "nodal point" isn't necessarily the balance point of the camera and lens, so you wind up with a barrel of Scuba weights to balance everything.

Cartoni Lambda / Mo-Sys Gyro Stabilized Remote Head

Enter the Mo-Sys Lambda camera support system, which provides a Mo-Sys gyro stabilized, electronic and software version of Cartoni's mechanical head. You can mount your camera and lens in its "nodal position" on the Mo-Sys Lambda head, and because it's a remote head, you can be less concerned about balance and spend more time on your operating. There's a choice of hand wheels, pan bar, or joystick. The main use so far is as a remote head on Technocranes: electronic sensors stabilize camera shake and wind buffeting. Motion control options are modular, seamless and simple if you require it.

Because it can carry camera systems up to 50 kg/110 lbs, the Mo-Sys Lambda is becoming a head of choice for 3D rigs—especially since its strong motors are not thrown off balance when the 3D lenses are moved forward, back, in or out during shots or when adjusted.

Abel Cine Tech

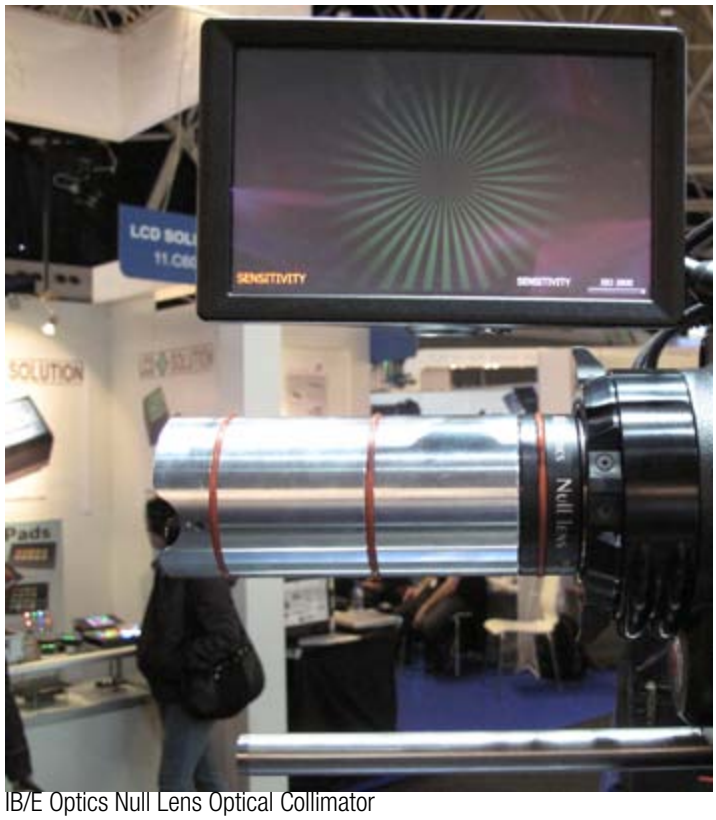
For your shot to be in focus, a state of flange focal nirvana must exist between lens and image plane. There are many things conspiring against this state of bliss: aluminum lens mounts that expand or contract with temperature, lenses improperly calibrated, cameras that have been dropped—that kind of thing.

All PL lenses mounts should be collimated to an absolute 52mm flange focal distance. You should never have to adjust that immutable number, which is why film lenses have always used shims and successfully eschewed backfocus rings. (The reason video lenses were adjusted is because heat would expand and contract the aluminum bodies and mounts.) Ideally, your lens mount is stainless steel or some other metal that doesn't change thickness with changes in temperature.

Many digital cameras have lens mounts seemingly softer than silly putty, which is why you should invest in an IB/E Optics Null Lens Optical Collimator from Abel Cine Tech.

It lets you adjust the flange focal depth of the camera to the sharpest position. Attach the NULL Lens to the PL lens mount, loosen the clamp screws on the side of the camera's mount, turn it on and adjust until the Siemens Star becomes sharp.

Steve Cohen, Inside Sales, Abel Cine Tech



IB/E Optics Null Lens Optical Collimator

Mitch Gross, Applications Specialist, Abel Cine Tech

ZEISS

This was the first IBC show for ZEISS. Compact Primes (18, 21, 25, 28, 35, 50, 85 mm) available with focus scales in meters or feet, cost 12,200 for a set of 4 or 21,200 Euros for the complete set of 7. Includes a case.

Nicole Balle, Director of Public Relations, Carl Zeiss Camera and Cine Lens Division.

Holger Sehr, Project Manager, Product Development of the Camera Lens Division. Do not attempt—cutting Compact Primes in half on a band saw may void warranty.

Helmut Lehnhof, Product Manager Digital Cinema Lenses, with Compact Prime and ZEISS Sharp Max.

Compact Primes: 18mm T3.6; 21mm T2.9; 25mm T2.9; 28mm T2.1; 35mm T2.1; 50mm T1.5; 85mm T1.5. All have 14 iris leaves; 114mm front diameter; 288° focus rotation; color matched with Master Primes, Ultra Primes, and other ZEISS lenses.

Helmut Heier, Sales and Marketing Director of ZEISS and Nicole Balle.

How to Use the ARRI ZEISS Master Macro 100

Above: camera right side of Master Macro 100.
The three sets of number on the barrel mean:

- 1:1 is the magnification ratio
- .35 is the focus scale in meters or feet
- +2.3 is your exposure compensation.

Below: camera left side
The three sets of numbers are:

- 1:2.5 is the magification ratio—all the way up to 1:1
- .46 is the focus scale, in meters or feet
- +.9 is your exposure compensation, because the closer you focus, the more light is lost, and the more you have to compensate either by adding more light or opening the aperture.

Unlike some previous Macros from ARRI, whose irises were mechanically coupled to the focus, the new ZEISS Master Macro 100mm does not compensate exposure. You either do it manually by opening the aperture or by adding more light. You can also hook the aperture up to an iris motor and program the iris to open as you focus closer.

Quick review:

What does "Magnification ratio" mean? It's the ratio of the size of the image on film to the actual size of the object in real life.

Let's say we want to fill our frame with a close-up of a kiwi fruit. The 35mm format Academy frame measures 16mm x 22mm. So the image on film or the digital sensor will be 22mm wide. Most real-life kiwi fruits are 88mm wide. Our magnification ratio is therefore 22mm/88mm, or 1:4. The object on film or sensor is therefore ¼ life-size.

Next, let's will film a kumquat. We want to fill the 22mm wide frame. The kumquat measures 22mm wide. Our ratio is 1:1, life-size.

The only trouble is, there's an annoying optical law that says the lens absorbs more light at very close distances. These amounts of light loss are indicated by the green numbers.

When the Exposure Compensation is listed as +2.3 in the picture above, and you have lit the shot so you're reading T2.0—well, if you shoot the shot at T2 you're probably going to be fired, because it will be 2.3 stops underexposed. What you need to do is add enough light so you're reading T4.3. Now, when you open the iris 2.3 stops, you'll be properly exposed at T2.0.

Of course, for most macro shots, you'll be using a lot more light, and a better example would be a base exposure of T16. At 1:1, you'd open up 2.3 stops to T8 ²/₃.

Hawk Anamorphics

Hawk Anamorphic Lenses were seen at ARRI's IBC booth.

The 85mm T2.2 V-Plus *(above)* has a close focus of .6m / 2'. The V-Plus Series, launched in 2006, now consist of 14 prime lenses: 30, 35, 40, 50, 60 65, 75, 85, 100, 120, 135, 150, 180, and 250/350mm. Most of them are T2.2. Two additional wide angle and two telephotos are coming. There are also two zooms: 46-230mm and 300-900mm.

Vantage also makes (and rents) V-Lites: a set of 5 lightweight lenses: 28, 35, 45, 55, 80, 110mm. They are all T2.2 except the 110mm, which is T3. They are about the size of Cooke S4 spherical lenses, and are intended for handheld and Steadicam. Their optical performance is similar to V-Plus lenses.

Hawk Anamorphics work on PL-mounted 16mm or 35mm cameras. They are available with the standard 2x squeeze ratio for full-frame 4:3 formats. Hawk V-Lites are available in 2x squeeze, or with a 1.3x squeeze for 3-perf or 16:9 sensors.

There's also a set of V-Lite 16 Anamorphic lenses for 16mm: 14, 18, 24, 28, 35, 45, 55, 80, 110mm. 14mm-35mm are T1.5. Available in 2x squeeze for Normal 16 and 1.3x for Super 16.

Fujinon

We wanted to see how the new Fujinon 18-85 T2 zoom lens performed on a film camera. Jim Elias and Stephan Ukas-Bradley of ARRI worked with Chuck Lee of Fujinon to borrow a lens from the Fujinon booth at IBC and let us have a look.

The lens did indeed cover Big TV 4:3 without vignetting, and looked bright, very sharp and contrasty. Zooming tracked perfectly: crosshairs lined up on the same objects throughout the zoom range.

The remarkable thing about this new zoom is how fast and sharp it is. Further tests will probably show how well it competes with a case of Prime Lenses. For TV, commercials, episodic and features where speed is essential and there isn't time for lens changes, this 18-85 T2 Zoom should be just the thing.

Models of the other 3 lenses in the set were on display at the Fujinon booth: 14.5-45 T2, 24-180 T2.6, and 75-400 T2.8-T4. They should be ready in January.

Angénieux

Left to right at the Angénieux IBC booth: Edith Bertrand, Angénieux Corporate Communications; Dominique Rouchon-Picariello, Director of Zoom Division; Linda, Model; Chris Beauparlant, Director, Thales Components Corporation USA; Philippe Parain, CEO Thales Angénieux.

Optimo 17-80 mm T2.2 (4.7x) Zoom Lens
for 35mm format (PL mount)
Minimum Object Distance: .6 m / 2'
Weight: 5 kg / 11 lbs. Length: 326mm
Front diameter: 136mm

Optimo 15-40 mm T2.6 (2.7x) Zoom Lens
for 35mm format (PL mount)
Minimum Object Distance: .6 m / 2'
Weight: 1.9 kg / 4.2 lbs. Length: 186 mm
Front diameter: 114 mm

cmotion cvolution

Above, left to right: cvolution with focus/iris controls for left-handers and a black handle; cvolution with focus/iris and wooden handle, zoom module; iris slider module, cvolution with focus-only control and no slide-on handle cover.

Christian Tschida and cmotion have come up with a new, modular hand unit: cvolution. It economically addresses the vagaries and insecurities of being a freelance DP, camera assistant, or rental house.

Here's the thinking behind cvolution. You are awarded a job. You need a wireless system but can't afford the entire enchilada. The cvolution's modular design lets you start, for example, with focus control only. The job is successful. You're paid on time. What next? Buy the iris control of the cvolution system for a few dollars (or Euros) more.

Panic at 3 AM for the next two weeks. The phone doesn't ring. Your worst nightmares: you'll never work in this town again. Schedule a vacation to a beach far away, non-refundable tickets. Of course, the phone immediately rings with the dream job of the year. Cancel the vacation.

Heady feeling. Order more equipment: a cvolution zoom control to add to your now-growing system. And don't forget the custom-made wooden handle that slides onto the hand unit. Security for insecure times—and beyond...since the banking geniuses have officially declared the worldwide recession to be over.

Left to right: Tarun Kumar, Stephen Chappell, Luke Tai, Christian Tschida.

The cvolution main display, showing camera power, fps, shutter, wireless signal strength, cvolution battery status, lens information and more.

Steadicam Merlin

Canon 5D Mk II and the new Canon 7D balance nicely on Tiffen's Steadicam Merlin.

www.steadicam.com/handheldmerlin.html

Kinomatik for Canon HDSLR

There is an enormous aftermarket in clever ways to shoot with HDSLR Cameras.

Here's a well-balanced system for Canon 5D Mk II and 7D from Kinomatik and Frank J. Wurster—the same people who brought us the Movietube.

www.kinomatik.de

Sony finder and on-board Transvideo monitor.

Somewhere in there is a Canon 5D Mk II. Works with new Canon 7D.

Kino Flo

Frieder Hochheim, President of Kino Flo, on the left. New at IBC was pole-operated control for the lights: useful in studios.

Schneider Optics

Bill Turner, Schneider Optics

Rebel lenses. Produced by Schneider Optics, Powered by IB/E Optics. PL Mount prime lenses. Covers up to 28mm, maybe 31mm, image diagonal. Irises with 18 leaves. Virtually no breathing. All lenses have same dimensions: all focus and iris gears are in the same position. www.rebel-lenses.com

- 25 mm PL Prime Lens T2.2/25mm
- 35 mm PL Prime Lens T2.1/35mm
- 50 mm PL Prime Lens T2.0/50mm
- 75 mm PL Prime Lens T2.0/75mm
- 95 mm PL Prime Lens T2.0/95mm

Litepanels

Rudy Pohlert, Litepanels Presidentwith underwater SeaSun MicroPro.

Ken Fisher, Co-Founder of Litepanels, surrounded by 1x1 Panels at IBC.

Litepanels

Earlier this summer, August 22: Litepanels at the EMMY Awards, with the first-ever statues for Lighting Equipment Technology. *Left to right*: Fred Holmes, Ken Fisher, Kevin Baxter, Rudy Pohlert, Pat Grosswendt.

There were Litepanels all over IBC. Over 200 units were on loan to vendors, mostly in Hall 11. At my last count, there were 7 varieties of 1x1 Litepanels, the 1 foot x 1 foot Battery and AC powered lightweight, flat profile LED light:

- 3 Standard Litepanels 1x1 (The Workhorse) Lights: 5600°K Flood, 5600°K Spot, 3200°K Flood
- Litpanels 1x1 Bi-Color: dial in any color temperature from 3200°K to 5600°K Flood
- Litepanels 1x1 Bi-Focus: variable spot to flood focusing
- Litepanels 1x1 SuperSpot: A 5600°K beam focused to 15° angle (Regular 1x1 Spot focuses beam to 30° angle.)
- Litepanels 1x1 Low-Profile: Mounted to ceiling (or anywhere else), is only 3" deep, and tilts the LEDs at an angle 40° to the side.

This Magnificent Seven does not include the mathematical permutations of what happens when you stack 1x1's into 2x2's or 4x4's.

RED Epic

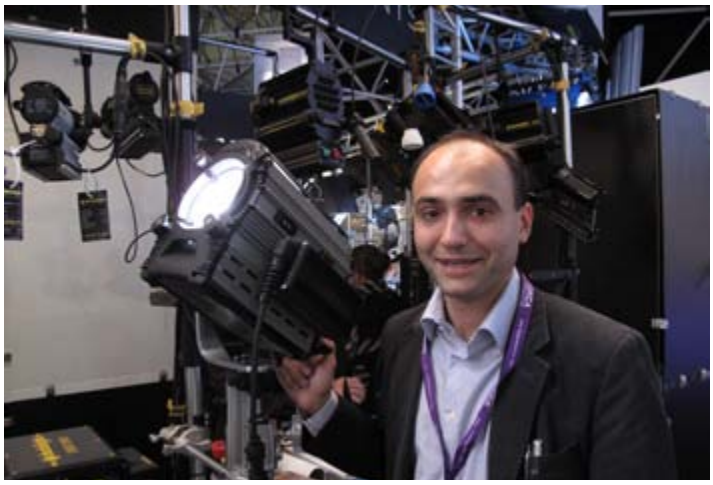
I miss the RED Tent, the lines, the bouncers, the buzz. In a performance from the Panavision PR playbook, the new RED Epic was shown "out of competition" in the lobby of the Big Theater at IBC. With modular design and cool styling, the Epic's Mysterium-X sensor (above) measures 15 x 30mm. Holy Univisium, that's Vittorio Storaro's divine 2:1 measurement.

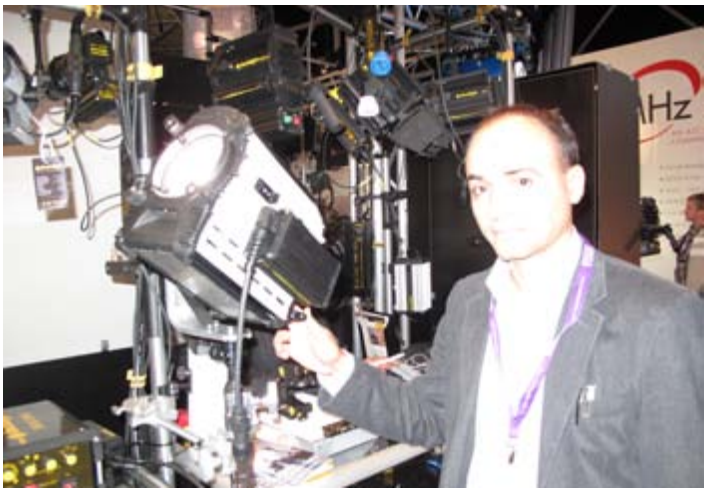
Epic "brain" with interchangeable PL, RED, Canon and Nikon lens mounts and sensor assembly. Not all PL lenses will fill the 30mm wide frame, since most were designed for a 24mm horizontal. So far, I think RED, UniqOptics and Zeiss Compact Primes are the only ones. Still lenses, of course, will cover the frame. Batttery, I/O and Recording modules cleverly snap on and off like a freight train.

New electronic viewfinder prototype appeared sharp and bright—probably FLCOS.

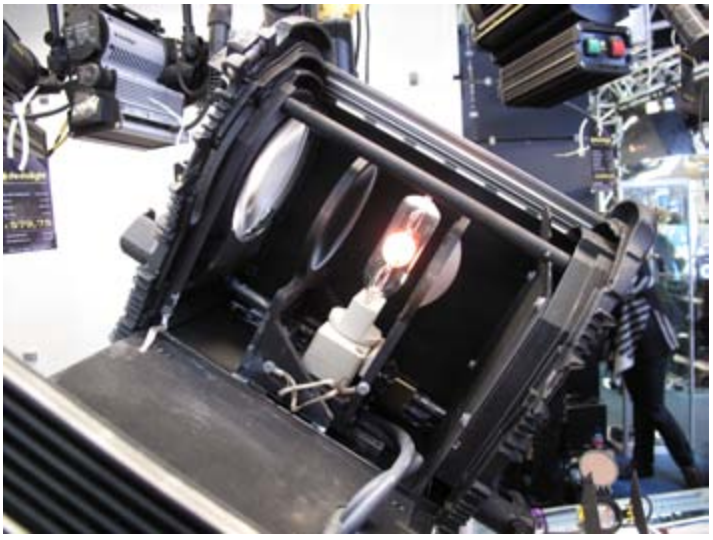
The handgrip contains a battery and controls. I/O receptacles in rear module.

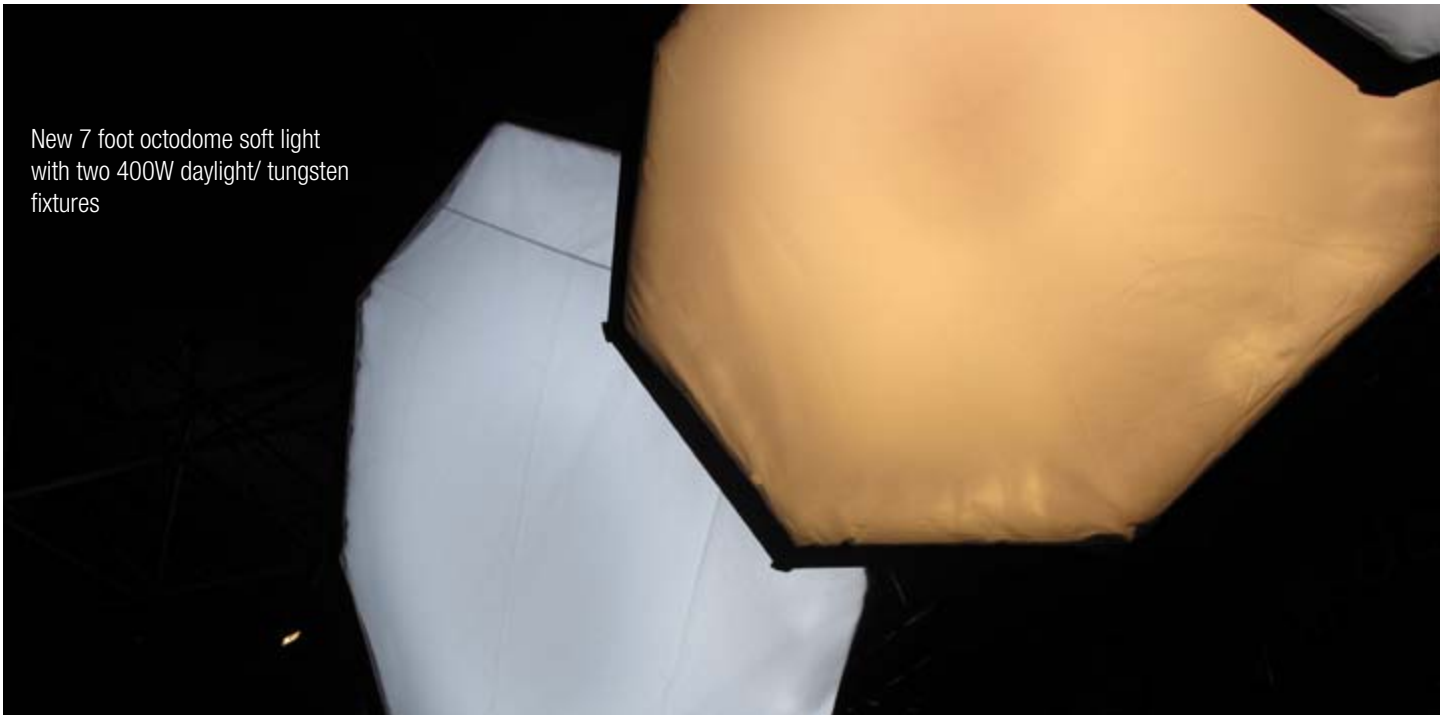
dedolight





Roman Hoffmann of Dedotec, with new 800/1200 watt daylight focusing light. It opens easily for bulb replacement, cleaning of lenses and service. (Do not attempt what we did, below: careful, it's hot. Unplug and wait until it's cool and not glowing.)





New 7 foot octodome soft light with two 400W daylight/ tungsten fixtures

Dedotec

Johnny Kurtz, Head of Dedotec Switzerland. www.dedotec.ch

New dedolight DLAD

DLAD mounts to Eutrack track

dedolight DLAD

dedolight DLAD for museums and practical in-set or architectural lighting.
In black, silver or white.
Attaches to Eutrac track (www.eutrac.com)

by Roman Hoffmann

Dedo Weigert is a restless inventor. His classic dedlolight with 150 Watt lamp puts out more light than a conventional 300 Watt or even 500 Watt Fresnel fixture. The precise shape of the beam, absence of most stray light, the extensive focusing range, very low (almost non-existant) UV level, and an enormous variety of accessories and projection attachments have attracted a lot of attention from people who light museums, galleries, displays and exhibitions.

So, Dedo started producing dedicated lights for museums and galleries. But they have different requirements than movies or TV shows.

In exhibition facilities the lights usually have to be installed on a pre-existing track like the eutrac surface tracks (www.eutrac.com) which power the lights and are a mount at the same time. There are some demands like the lifetime of lamps or the size, weight and color of a fixture which all museum light manufacturers have to meet.

Dedo's new museum lights have the lowest UV radiation among all fixtures of this kind. Some curators believe that a level of less than 10 µ Watt/lumen is needed to have long-term protection for sensitive materials as textiles, watercolors or oil paintings. Dedo offers 1 or maximum 2 µ Watt/lumen. This is provided by a special coating on the lenses in combination with special UV-stop lamps.

The next very important issue is: how "green" is your lighting? The dedolight museum fixtures use either low voltage lamps, which already have a higher light output than standard high voltage lamps (low voltage: ca. 40 l/W; high voltage: max. 25 l/W), or discharge lamps which again have an increased light efficiency (ca. 80 l/W).

In combination with the advanced optical system eventually you use less wattage and still get a very sufficient light output.

Traditional wall washers – lighting fixtures with asymmetric reflectors – have been around for a long time. But they are not focusable and are not very versatile. But asymmetric lights actually are very much needed as lighting almost always is done from an angle (in museums mostly from above).

The problem that you have to solve in this situation is the square law – when you double the distance you get only 25% light. But as the distance from the light source to the top of a painting is closer than the distance from a light to the bottom of a painting, the result is that the top of an artwork is much more intensely lit than the bottom.

After five years of development, Dedo and his team came up with an asymmetric lens that redistributes (not the mirror) the light and allows focus (change light intensity and beam angle) at the same time. You can also rotate the asymmetric lens if you need to light your object from the side or from below.

DLAD Lighting Paintings

Andre Ruzhnikov is a fine art collector and dealer. In his gallery (Aurora Fine Art Investments Fund) in the Ritz Carlton of Moscow, he installed dedolights to illuminate the collection. Roman Hoffmann conducted an interview with Andre Ruzhnikov recently. In addition to writing for FDTimes, Roman provides production services (www.pb-hoffmann.com) and is Marketing Director at Dedo Weigert Film in Munich, with a branch office in Moscow.

Roman Hoffman: Mr. Ruzhnikov, what influenced your decision to go for the dedolight museum fixtures?

Andre Ruzhnikov: We are an exclusive gallery and we were looking to install the optimum lighting system. We found that dedolight museum lighting system addressed all our lighting requirements.

Roman Hoffman: I have visited your gallery several times. Besides the impressive location, the whole gallery is very well lit. The actual exhibition halls can be entered from several sides, but no matter which entrance you take, you do not see any disturbing reflections on the paintings and vases although the ceiling is quite low. How was this achieved?

Andre Ruzhnikov: Dedolights have almost no stray light, so no matter where you position them the precise beam allows you to accentuate the artwork and nothing else. Using the super barn doors or the projection attachments provides even more creativity and precise positioning. It took some time until the position of each light head was determined to get rid of all disturbing reflections, but the precision lighting tools from dedolight were the essence of our concept.

Roman Hoffman: In your gallery, you have a special lighting style. The ambient light is very much dimmed down but the canvas of the paintings (and only the canvas, not the frames) is precisely lit by using the projection attachments with the built-in framing shutters. So when you enter the room, the first impression is that the paintings are like screens that glow. It seems to have been one of the criteria when you went for dedolight. How is this lighting style perceived by visitors and why do you personally like it?

Andre Ruzhnikov: All visitors and I personally love the lighting. We get only positive comments. Some of our clients have even expressed a desire to install the same lighting system in their homes and galleries. A client from Kiev requested us to help design and install the same system.

Roman Hoffman: I understand that you had a special challenge with your largest painting (2.70 x 2.10 meters) called "Survivors" by Ivan Konstantinovich Aivazovsky. How was it achieved?

Andre Ruzhnikov: We had to install the lights quite far away from the painting to avoid reflections. We used dedolights with a 150W ceramic lamp. This gave us, at a distance of 3 to 4m, enough brightness to still bring out the true structure and the colors of the painting.

Roman Hoffman: Which fixtures did you choose?

Andre Ruzhnikov: Most of our fixtures are the DLAD-CFU150. Those are fixtures that use a 150W ceramic lamp which gives you a very good light output. These fixtures go together with projection attachment with built in framing shutters. And as we mostly light paintings this is the only model we use.

A small secret is that we sometimes mix different color temperatures (we use two fixtures with two different lamp types – daylight and tungsten) to get more vivid colors.

Roman Hoffman: Where do you see advantages of these lighting instruments?

Andre Ruzhnikov: First, these lights are attractive, compact and efficient. Second, these fixtures are easy to adjust, control and maintain. Finally, the Dedo Weigert Film team provides excellent service. I am the best ambassador, I keep raving about the system.

DLAD Lighting Paintings

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