

ARRI NEWS

IBC & CINEC ISSUE 2010

ALEXA PLUS

Wireless remote control for
the ALEXA camera system



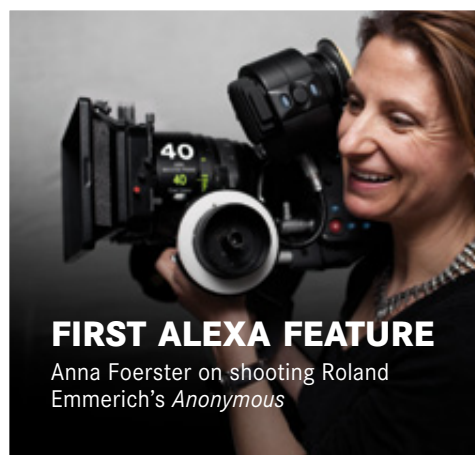
LED FRESNELS

A new concept for
focusable LED lights



ARRISCAN ARCHIVE

Unique archive and
restoration tools



FIRST ALEXA FEATURE

Anna Foerster on shooting Roland
Emmerich's *Anonymous*

EDITORIAL

DEAR FRIENDS AND COLLEAGUES

IBC 2010 marks a turning point in the way ARRI distributes news about its products and how they are being used around the world. You will have noticed that the ARRI News in your hands is a slimmer, sleeker version of its former self and very much focused on our activities at IBC and Cinec; the NAB issue will continue in the same vein. Complementing this printed edition and far exceeding it in terms of content variety and volume is a new online news platform that welcomes visitors to our corporate website at www.arri.com

Why have we made this change? Well, ARRI does too much and the world moves too quickly to be sharing our news only twice a year. The new website will allow us to be more responsive in a fast-evolving industry and timelier in our coverage



of productions making use of ARRI equipment.

On these pages and on the website you'll find details of exciting developments across all of our business units, from focusable LED Fresnels that combine new technology with established design to archive tools that are preserving our cinematic heritage and modular updates to the ALEXA digital camera system. Come and see us at the show; visit ARRI News online; but most importantly – get involved.

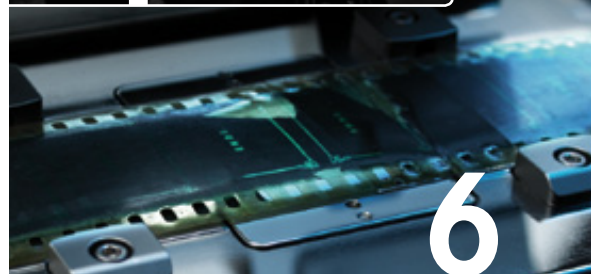
Dr. Martin Prillmann

Franz Kraus

CONTENTS

CAMERA

- 4** *Anonymous*: ALEXA's first feature film
- 8** Mscope in Cuba: *Angle Mort* and the D-21
- 12** 2-Perforation movements
- 16** The ALEXA universe expands
- 19** ARRI/FUJINON Alura Zooms
- 20** The right lens for the right job
- 24** ALEXA shoots Nissan Juke commercial
- 28** HD-IVS video assist on *The Lost Future*





16



8

20

LIGHTING

- 10 Focusable LED Fresnel lampheads
- 11 Innovative High Speed Ballasts
- 26 New products in the ARRILITE range

DI SYSTEMS

- 6 New ARRISCAN archive tools
- 14 Saving the past
- 22 Restoration of classic *Sissi* films
- 23 Archive workshop in Munich

ARRI NEWS ONLINE

- 30 Launch of online ARRI news platform

CONTACTS

- 32 EVENTS

Director Roland Emmerich and cinematographer Anna Foerster check the ALEXA's on-board monitor while filming a delicately lit interior scene.



ANONYMOUS

ALEXA explores Shakespearean England

The first feature film to have been shot with ALEXA cameras is *Anonymous*, an Elizabethan thriller with a controversial take on the true authorship of writings attributed to William Shakespeare. Set amidst London's shadowy theatrical and royal circles around the turn of the 17th century, the film features a strong cast of British stage actors and is directed by Roland Emmerich, best known for more explosive Hollywood action movies such as *The Day After Tomorrow* and *2012*. Emmerich worked with cinematographer Anna Foerster on the project, with whom he has collaborated since *Independence Day* in 1996.

ARRI News: This was your first digital feature – what were your thoughts going into the project?

Anna Foerster: I think that the moment I was confronted with digital was the moment we reached a level that is absolutely amazing and incomparable to what has come before. Of course I was nervous about the whole process, but decided that if I started thinking that this was all completely new then it would just get too confusing, so I



basically approached it as a new kind of film stock. I determined what ASA ratings I wanted to shoot at in what situations; it was just like testing a new film stock – you explore what its limits are at each end and then play within that safe area. But I had never experienced anything so capable of pushing the limits as this camera; I would not have had the courage to try the same extreme lighting with any film stock - things like having just one HMI beam and using the spill light and the bounce light from it as your main source.

AN: *Anonymous* is set at a time when fires and candles provided illumination – how did ALEXA handle low light situations?

AF: We did light a lot of scenes with candles and fire, but they were almost always augmented with other sources. The exciting part was that the candle or fire actually affected the environment; for example we put a candelabrum against a wood-paneled wall and you actually got sheen off that wall, because we were shooting at 1280 ASA at that point. You wouldn't push a film stock to that ASA because the amount of grain would have been taking away from the image.



AN: Several images from the film look like Vermeer paintings – was that a reference?

AF: We had long conversations about creating that Vermeer look, but for me another big reference for the candlelit scenes was Georges de la Tours. Roland and I looked at a lot of paintings and agreed that we didn't want an over-lit, over-colorful period film, because it wouldn't have been appropriate to the story. So we used harsh sunlight only very sparingly, although the few occasions where we did, we were amazed at what the camera could do. Again, in these situations I would have been quite scared if we'd been shooting on film, but I could see on the waveform monitor that we had detail in the highlights.

It's funny because I was always the one saying 'We should shoot on film' - all this time with film I knew the parameters and it was something I felt safe with. This was uncharted territory for me, but I have to say that I now

don't know how to turn back. I think that at this point filmmaking has reached a new era. That's not to say that film is dead, but for certain projects and situations, digital has become an option that is convincing in a way it never has been before.

AN: How manageable has the transition into postproduction been?

AF: The workflow is what's so fascinating about this camera. The footage lands in post the same day, ready for the visual effects people to check the greenscreens and start the compositing. From what I've heard, they've been amazed by how well the compositing is working, which is really good news. You have your dailies the same day and I think the editors found it amazing to be getting footage on the day it was shot. What was also impressive was that we had a quality control team that was able to deliver a report at the end of each day.

AN: What did Roland make of shooting with ALEXA?

AF: Roland felt that it was perfect timing to do this movie just as the prototype ALEXA became available, with the possibilities of going to such extremes with the images and

“I think that at this point filmmaking has reached a new era.”

making use of candlelight. He's just so pleased with how it all looks; we were laughing about there being no turning back to film now! He has very much been a film person, but I think now, after working with the ALEXA, he is very excited. I've worked with him for many years and I can clearly see when he is excited about something, and he is definitely excited about this camera!



Read the full length interview online:
www.arri.com/goto/1009/anonymous



Anonymous was shot at Studio Babelsberg in Berlin, where the many sets recreating Elizabethan London included a replica of The Rose theatre, which also serves as The Globe theatre in the film.

ARCHIVE

TECHNOLOGY



Any ARRISCAN can be retrofitted with the ARRI 16 mm and 35 mm Wet Gates. After initial installation, the machine can be switched from normal to wet gate scanning quickly and easily.



ARRISCAN

In cooperation with film archives and restoration experts worldwide, ARRI has developed a series of specially designed tools for digitizing fragile, historical films with the ARRISCAN film scanner.

Increasingly, the benefits of digitizing film material are being realized by archives that hold rare, valuable film collections spanning the last 115 years. The ARRISCAN has unlocked incredible opportunities to preserve our cinematic heritage by restoring and archiving these treasures for future generations.

While the standard ARRISCAN, with its cold LED illumination and gentle, variable film transport, is able to cope with much archive material, damaged film and unusual formats are common challenges for archive scanning. With an aperture that is wider and taller than a standard 35 mm frame, the new, pinless ARRI Archive Gate has enough headroom to allow frames to be stabilized after scanning. Severely damaged film can be scanned with ease, as can non-standard film formats and frame sizes.

The ARRI Sprocketless Film Transport enables the ARRISCAN to digitize the oldest, most vulnerable and even unperforated film materials with staggering quality and stability – a feat that no other machine can match. Though it can be used with many rare and delicate film formats, this specialist option was designed especially for Lumière perforated material. Many international archives hold such material, so the Sprocketless Film Transport will bring new life to a wealth of century-old films. This modular system can be

installed on any ARRISCAN, with the switch from normal to sprocketless transport taking less than a minute.

Unlike other wet gates, the 16 mm and 35 mm ARRI Wet Gates utilize a unique system that minimizes contact with the film and therefore avoids the risk of scratching

ARCHIVE GATE



SPROCKETLESS TRANSPORT



irreplaceable materials. The ARRI system deals with imperfections by gently cleaning away dust and filling scratches with a liquid that has the same refraction index as the film, while being less toxic than the industry standard Tetrachlorethylene.

MSCOPE COVERS THE BLIND SPOT

Directed by Dominic James, *Angle Mort* is a French-language Canadian thriller that was shot in Mscope with ARRIFLEX D-21 cameras and anamorphic lenses by cinematographer Jérôme Sabourin, CSC. Set in South America but filmed in Cuba, it follows the misadventures of a young couple who unwittingly cross paths with a serial killer while on a driving vacation. The metaphoric title refers to that fatal angle of view where you cannot see a car behind you while driving – the blind spot.

Mscope is a unique format that combines the cinematic aesthetic of anamorphic cinematography with the economy of HD acquisition. The Mscope process utilizes the entire 4:3 image area of the D-21 sensor and outputs dual HD signals that are combined in post to create a 2.39:1 picture of higher resolution than standard HD.



ARRI News: What discussions led to the choice of Mscope and the D-21?

Jérôme Sabourin: All but one of the reference films Dominic and I watched together were shot 2.35:1 anamorphic, so really it was the way he envisioned framing the characters and the action that took us in that direction. When I saw the storyboards I could tell straight away that anamorphic would be perfect for this film, but unfortunately we absolutely did not have the budget for a 35 mm anamorphic movie. Mscope made it possible for us to shoot anamorphic with the budget we had.

AN: What was your recording solution?

JS: To begin with we planned to shoot with an SRW-1 HDCAM SR deck, but it was a bit heavy for the kind of shooting we needed to do and when you're in Cuba it can get a bit complicated in terms of batteries. I had this slightly crazy idea of trying a new recording device I had seen at NAB a few months earlier, which was called the Ki Pro, from AJA. At first everybody told me that it was impossible to shoot Mscope with the Ki Pro because there was no two-channel HD, but I was determined to at least try. It occurred to me to synchronize two units by using this very new technology called time code! So all we did was put two Ki Pros in a simple aluminum case and hooked them together with a Denecke Dcode SB-3 time code generator. Someone just had to press two record buttons instead of one, and that was it.





The vivid colors of Cuba contributed to the look for *Angle Mort*

AN: Did two Ki Pros in a metal case still have advantages over an SRW-1 deck?

JS: Huge advantages: the aluminum casing was a lot lighter than an SRW-1, even with a battery attached, and just two small Anton Bauer batteries would last half a day. It was very quick to set up; you could simply put it on a table and press record - there were no settings and also you could rewind to check the footage. The great thing about ProRes 422 is that it's a very lightweight format, so you can do away with the offline; right away you're editing with material that will be used as the master. And of course these Ki Pro units are incredibly cheap; you can have several spare in the truck and put one in the post facility - you can distribute them all over the place.

The beauty of Mscope is that you don't have to merge everything in the reconform. We found an incredibly easy way to make Final Cut Pro merge the odd and even fields together; we did a test with a ten-minute clip during prep, containing about two hundred cuts, and there wasn't a single glitch with the synchronization. I didn't want to take any risks because we were going to be shooting in Cuba, far away from any support, so we spent three days trying to break the system and crash the hard drive, but we couldn't do it.

"Mscope made it possible for us to shoot anamorphic with the budget we had."



AN: How did you create and control the look, both on set and through postproduction?

JS: It was very easy because we had Cinetal Davio units with us in Cuba. I created a look with Iridas SpeedGrade and patched it through a Davio into the monitor in the editing room and did the same thing for the dailies, so I kept control of the look. I actually own the Davios myself, because I want to keep my look protected. I think there's a big problem with intellectual property because creating a look

can be four or five days' work with a colorist, but if you just hand that look over to a facility then anyone can have it.

Mscope with the D-21 has an advantage over all the other anamorphic systems on the market because what you see on set truly represents the final feel of the movie. It's the same in the editing room - everything is absolutely correct and it already looks beautiful, which is always good for the DoP. I love that creative aspect of Mscope because I can see right away what I'm doing and the 'wow' effect on set makes a huge difference.



Watch the movie teaser online:
www.arri.com/goto/1009/anglemort

ILLUMINATING DEVELOPMENTS

A NEW FOCUS FOR LED LIGHTING



Dimmer and focus controls

ARRI's tungsten Fresnel lights are workhorses of the industry and relied upon by lighting designers the world over. By combining the cool-burning, energy-efficient advantages of LED illumination with the controllable versatility of traditional Fresnel fixtures, ARRI has taken the best of both worlds and created a truly revolutionary lamphead. The groundbreaking technology that has made this possible represents a milestone in the incorporation of LED technology into the film industry.

In addition to a high quality light field, the new, focusable LED fixtures feature a unique light engine with broad spectral distribution that provides the same vivid and lifelike color rendition as conventional tungsten sources. A further advantage is that existing front-end accessories can be used, making it far more economical for facilities to add the new fixtures to their inventories.

Ryan Fletcher, ARRI's product manager for LED lighting, comments, "The positive response from customers has been outstanding during the past two months of field testing. No longer must lighting designers learn new ways of working or sacrifice homogeneity and control in order to gain the benefits of LED technology."

At IBC and Cinec, ARRI is unveiling a bold new concept in LED lighting for film and television applications; its latest generation of LED fixtures will include focusable LED-based lampheads with a true Fresnel light field.



www.arri.com/goto/led-fresnel



The new LEDs feature the same sliding stirrup and disc brake technology as ARRI's True Blue range



HMI BALLASTS FOR ***HIGH-SPEED*** PHOTOGRAPHY

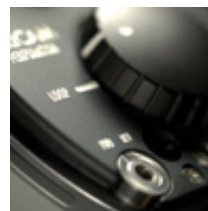
ARRI introduces a new generation of 1000 Hz High Speed Ballasts that meet the challenges of modern high-speed digital photography. The new ballasts make it simple to achieve high quality, flicker-free images at frame rates of 500 – 1000 fps and in many cases beyond. Behind this lighting breakthrough is new technology that supplies the lamp with a greatly raised 1000 Hz square wave current.

1000 Hz High Speed Ballasts are available for all wattages from 125 watts – 4000 watts, except 1800 watts.

2-PERFORATION MOVEMENTS

ARRI recently released new and improved 2-Perforation movements for the ARRICAM Studio, ARRICAM Lite and ARRIFLEX 235 cameras. These movements can be quickly and repeatedly exchanged with 3 or 4-Perforation movements by qualified technicians, bringing unique production benefits.

**ARRICAM STUDIO
ARRICAM LITE
ARRIFLEX 235**



“It saves time, it saves money and you don’t have to interrupt performances.”

The ARRI 2-Perforation movements offer budget-conscious productions an economical route to the image quality of 35 mm. With a native aspect ratio of 2.39:1, 2-Perforation delivers a cinematic, widescreen look that takes advantage of the full width of a 35 mm frame. As film is advanced by two perforations instead of the traditional four, previously unused space between frames is eliminated and so both film stock and film processing costs are approximately halved.

A 2-Perforation pipeline involves no extra work or expense once the decision to go through a DI has been taken; the ARRISCAN film scanner, for example, can scan 2-Perforation material just as easily as 3 or 4-Perforation footage. It is a simple matter to create a normal anamorphic release print from scanned 2-Perforation images.



Tengri: one of the first productions to make use of ARRI's 2-Perforation movements

USES 53%
Less Film Stock*

2-Perforation also allows for longer individual takes than conventional 35 mm, as each roll of film effectively lasts twice as long. One production that has already taken advantage of this is the *Caméra d'Or*-winning *Hunger*, on which cinematographer Sean Bobbitt, BSC shot an entire scene in a single, incredibly tense, 20-minute take. "I don't know of any other film format that we could have done that in," says Bobbitt.

Clearly 2-Perforation offers benefits as a widescreen format for feature films, but many television productions are also taking advantage of its cost savings and image quality. "You still have the depth, the tonality, the highlights, the color range and the subtlety of 35 mm, as well as the cameras, accessories and lens ranges," says cinematographer Adam Suschitzky, who shot the BBC mini-series *Emma* with ARRI 2-Perforation cameras. "It saves time, it saves money and you don't have to interrupt performances."

An ARRICAM Studio fitted with the new 2-Perforation movement can achieve running speeds of 1 – 60 fps forwards and 24 fps in reverse, while the Lite reaches 48 fps forwards and 24 fps in reverse. The ARRIFLEX 235 will run to 75 fps (forwards only) and all three cameras can utilize their full range of shutter opening options.

2-PERFORATION FILM MAGS LAST TWICE AS LONG

	Running time of 400ft magazine	Running time of 1000ft magazine
2-Perforation	8 min 34 sec	21 min 26 sec
4-Perforation	4 min 17 sec	10 min 43 sec
  		
ARRICAM STUDIO	ARRICAM LITE	ARRIFLEX 235

*To capture 10 hours of images: 2-Perforation needs 72 x 400ft rolls, 4-Perforation needs 154 x 400ft rolls. (Saving calculation based on 50ft waste with 4-Perforation and 25ft waste with 2-Perforation)

SAVING THE PAST

ARRI helps two national film archives preserve historic film collections



NITROFILM



ARRI offers a complete DI postproduction pipeline:
ARRISCAN - ARRICUBE - RELATIVITY - ARRILASER

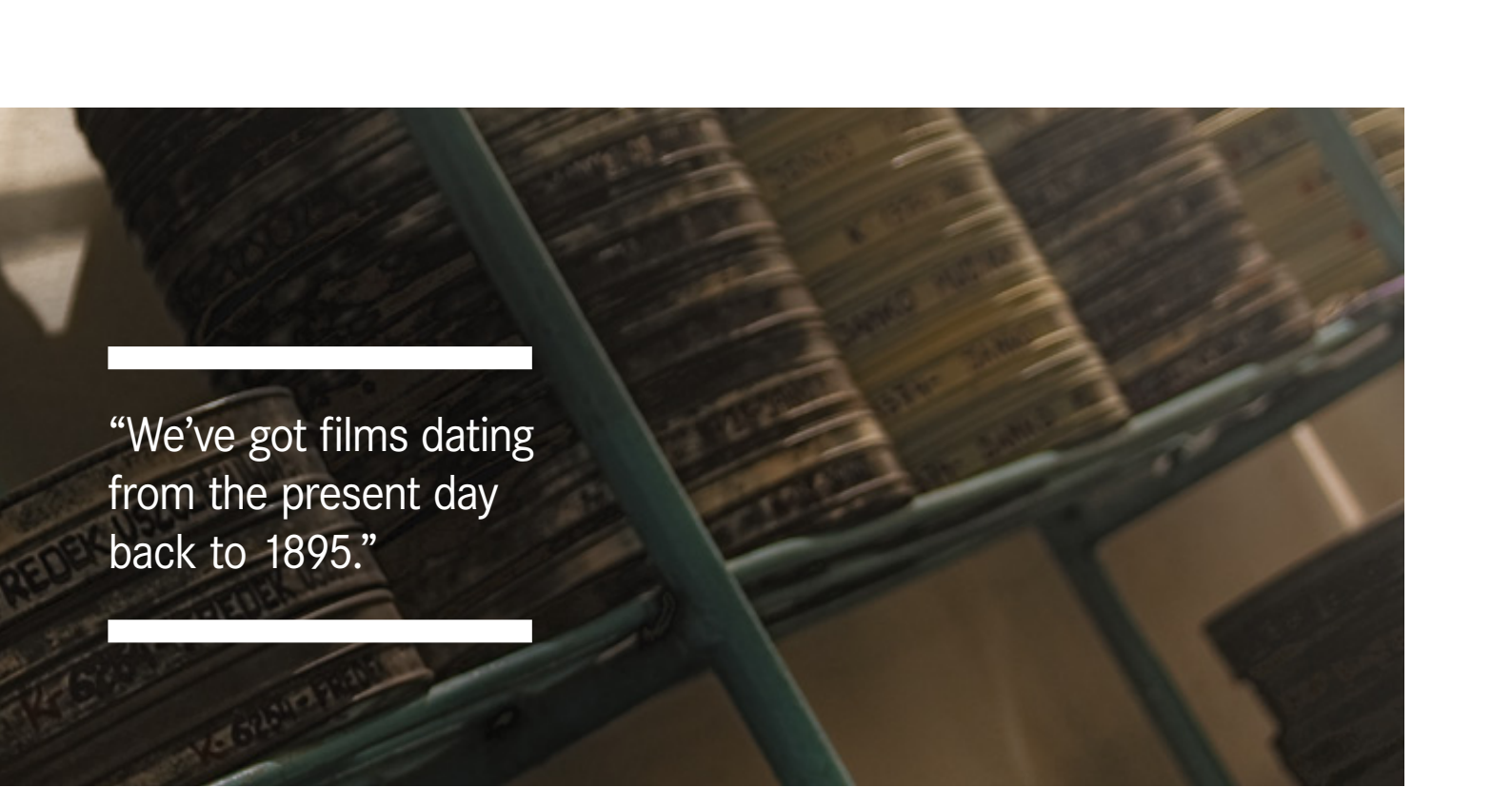
After investing in ARRI's class-leading digital postproduction tools, two major European national film archives are preparing to restore and preserve unique, delicate film collections. In England, the BFI National Archive has installed a 4K ARRISCAN equipped with tools developed by ARRI specifically for archive and restoration applications: 16 mm and 35 mm Wet Gates, and a Sprocketless Transport. Meanwhile in Warsaw, Filмотека Народова - the Polish National Film Archive - has taken delivery of the same package, with the addition of a 35 mm Archive Gate.

BFI NATIONAL ARCHIVE

Founded in 1935, the BFI National Archive is one of the largest film archives in the world. "The challenge we face is that our collection is incredibly diverse," notes Charles Fairall, Senior Preservation Manager at the archive. "We've got films dating from the present day back to 1895, an enormous span of time which incorporates all types of film, both in terms of format and different nitrate, acetate and polyester bases. The older materials can be extremely vulnerable and show evidence of all the usual distortions – shrinkage, warping and buckling."

The installation of the ARRISCAN archive tools will allow the BFI to exercise greater internal control over its preservation and restoration activities. "The funding to enable this effectively came direct from government," explains Fairall. "It was a one-off opportunity, so we had to get it right and it has to last us a long time. Our ultimate aim is to keep particularly vulnerable film materials in our own care. The keyword behind our decision to go with ARRI is preservation; we're a preservation operation and our fundamental concern when dealing with our collections is that we care for them properly."

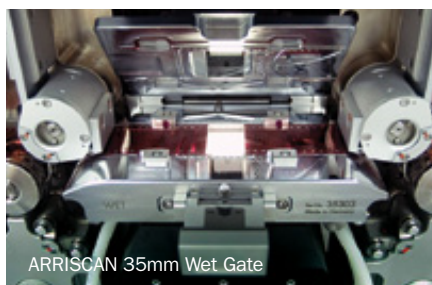
Plans have already been drawn up to start using the new equipment as soon as possible for *Rescue the Hitchcock 9*, the BFI National Archive's campaign to restore nine of Alfred Hitchcock's early silent films. With the ARRI Wet Gates included in its ARRISCAN package, the BFI will be able to remove dirt and scratches from delicate film materials as they are scanned. "Experience shows us



“We’ve got films dating from the present day back to 1895.”



that a wet gate process actually saves a huge amount of effort later on in a digital restoration,” says Fairall. “The ARRISCAN, equipped with these archive options, is a bespoke tool for archive film and its versatility suits our wide ranging needs; it was the package as a whole and ARRI’s holistic approach that tipped it for us.”



recorder with Auto Geometry Module and ARRICUBE Creator with an X-Rite Hubble colorimeter. “Our intention is to record the digitally restored materials back onto black-and-white separation masters for long term storage on film,” explains Smietanka. “The idea is to have a complete chain with the ARRISCAN and ARRILASER, in order to not only restore our collection, but also to preserve it for a long time to come.”

NITROFILM

In Poland, the ARRI archive tools will be put to first use on a project called Nitrofilm, which seeks to address damage and risk to a collection of more than 150 pre-war films that are in an extremely precarious state. “The first phase of the project is scheduled to last three years and will involve digitizing 43 films, three of which will be put through a complete digital restoration,” says Pawel Smietanka, Head of Film Restorations at Filmoteka Narodowa. “Most of the 43 films are on nitrate stock, and most of them exist only as positive prints, because during the war we lost about 70% of our collection.”

Among the films to be fully restored is a title that holds an important place in European cinema history. “It’s a German-produced film from 1918 called *Mania: A Story of Cigarette Factory Workers*, featuring the Polish star Pola Negri,” says Smietanka. “Like many of the other films, there is only one copy in existence, so we cannot take any risks in the digitization process; that’s why we did a lot of testing before we decided to go with the ARRI archive products.”

In order to guarantee the long term safety of materials being digitized as part of the Nitrofilm project, Filmoteka Narodowa has also invested in a 4K ARRILASER2 High Speed film



Visit the Nitrofilm website:
www.nitrofilm.pl



More about the BFI National Archive:
www.arri.com/goto/1009/bfi

THE ALEXA UNIVERSE

*Updates and accessories
extend the ALEXA toolset*

E X P A



ALEXA has been designed from the very beginning to be more than just another digital camera; it is a platform - a camera system that will accommodate a wide range of upgrades, extensions and accessories, now and into the future. All of the new products shown on these pages are based on this thoroughly modular and future-proof architecture. While the new ALEXA Plus model has an advanced electronics side cover for integrated remote control, the RCU-4 and WNA-1 extend the remote control options of both models by making the most of ALEXA's carefully crafted network capabilities. A set of cables for 3D sync and a low mode set further expand ALEXA's applications, unlocking some of the tremendous potential of the ALEXA system. It is the camera's expansive design that makes this possible, and that promises many more exciting advances in the future.

NDS

ALEXA PLUS



The ALEXA Plus is an upgrade to the ALEXA camera, adding built-in wireless remote control, the ARRI Lens Data System (LDS), an additional MON OUT video output, an additional RS power output and built-in position and motion sensors. Both ALEXA and ALEXA Plus share the same exceptional image performance, are simple to operate, reliable in even the most extreme environments and versatile enough to cover a diverse range of workflow and budget requirements. The ALEXA Plus will be available in January 2011 as a stand-alone product or as an upgrade to existing ALEXA cameras. Upgrades will be performed at ARRI service centers.

The ALEXA Plus has all the features of ALEXA, as well as:

- **Built-in remote control features**

- ARRI Wireless Remote System (WRS) functionality
- real-time wired or wireless remote control of lens functions and camera REC/STOP

- **Built-in ARRI Lens Data System (LDS)**

- lens mount incorporates new LDS contacts
- numerical lens data and depth of field display in viewfinder and MON OUT
- lens metadata in ProRes, HD-SDI and ARRIRAW
- easier speed/iris ramps
- Lens Data Archive (LDA) for use with non-LDS lenses

- **Lens synchronization for 3D**

- **A second MON OUT output (1.5G HD-SDI)**

- **A third RS accessory power output**

- **Built-in position and motion sensors**

- **Quick switch BNC connectors**

- can be exchanged without camera disassembly



REMOTE CONTROL UNIT RCU-4

The Remote Control Unit RCU-4 is a compact and robust, cabled remote for the ALEXA and ALEXA Plus cameras. Having the exact same layout, display, buttons and other interface elements as the ALEXA cameras, it has a zero learning curve. All settings that can be made on the cameras can also be made remotely from the RCU-4, which is especially useful for 3D projects where the cameras may not be easily accessible in the 3D rig, for crane shots and for having an operator's control panel on the camera's left side. The RCU-4 will be available in January 2011.



WIRELESS NETWORK ADAPTER WNA-1

The Wireless Network Adapter WNA-1 is an accessory for the ALEXA range of cameras that allows any device with a WiFi connection to communicate with the cameras. This opens up a wide variety of options and opportunities, including camera remote control, metadata input and output, automated record keeping and easier sharing of information on the set. Since the ALEXA cameras are designed as web servers using the Bonjour protocol, any iPad, netbook, laptop or other WiFi device with a browser can connect to the cameras automatically, without any configuration. Each ALEXA has a basic remote control web page built-in: the Browser Remote Software (BRS-1). A camera control protocol, to be released later, will allow third party app developers to access ALEXA's functions and metadata. The WNA-1 will be available in January 2011.

ALEXA 3D CABLE SET

Much has been learned from the large number of ALEXA 3D projects that have already been shot using beta software of ALEXA's sophisticated 3D synchronization algorithms. The software is now available for all ALEXAs, facilitating stable and precise synchronization of two ALEXA cameras through the ALEXA EXT to EXT Cable. This cable accurately synchronizes the sensor timing and locks the HD-SDI outputs of both cameras without lag or jitter, assuring compatibility with most 3D monitoring and recording solutions. In order to simplify the setup and operation of two ALEXAs on a 3D rig, the ALEXA Ethernet to Ethernet Cable allows automatic synchronization of both cameras' settings. The ALEXA 3D Cable Set includes both of these cables.



ALEXA LOW MODE SET LMS-3

Custom designed for the ALEXA system, the Low Mode Set LMS-3 consists of a low mode plate and three feet. The low mode plate can be attached directly to the camera's top for the lowest possible profile, which has already proven a popular option for upside-down ALEXAs on 3D rigs. The feet allow the plate to be raised to accommodate the Viewfinder Mounting Bracket VMB-1, Battery Adapter Top for Gold Mount (BAT-G), Battery Adapter Top for V-lock (BAT-V) or other accessories. Seven rows of 3/8-16 mounting points on the plate provide just the right balance for a myriad of camera configurations. Additionally, the plate has mounting points for the Viewfinder Mounting Bracket VMB-1, the ALEXA Camera Center Handle CCH-1 (which must be mounted in reverse to ensure that the tape hook of the HEB-2 is still in the proper sensor plane position) and the 235 and D-21 low mode handles. Extra 3/8-16 mounting points on the front and side edges and two tape measure hooks make this an extremely versatile low mode set. The LMS-3 will be available in November 2010.



THE ALLURE OF ALURA

ARRI/FUJINON Alura Zooms hit the market

After being tested alongside ALEXA prototype cameras by specially selected cinematographers, the new ARRI/FUJINON Alura Zooms began shipping to customers this summer.

The wide Alura Zoom 18-80 and the long Alura Zoom 45-250 form a set of matched T2.6 PL mount cine zooms for digital and film cameras. Using the latest in optical design technology and innovative manufacturing techniques, they combine the highest optical performance and build quality with an amazingly small size, weight and price.

Both lenses exhibit high contrast and high resolution for sharp, punchy images. The special optical design ensures an evenly illuminated image on the sensor or film plane, while internal reflections have been greatly reduced through the use of Fujinon's multi-layer EBC (Electron Beam Coating) lens coating.

THE RIGHT LENS FOR THE RIGHT JOB



*Two trillion possible ARRI/ZEISS
lens sets – and all matched*

The ongoing collaboration between ARRI and ZEISS has produced the largest range of optically matched cine lenses that has ever been available to cinematographers. Between them, these two prestigious companies have over 250 years worth of experience in their respective fields - ARRI's unique camera expertise combining with the unrivalled optical excellence of ZEISS to create lenses that continually raise optical precision and camera integration to new heights.

“I’ve got to say that
the Master Primes
blow me away; they’re
just so fantastic.”

DoP Jon Joffin

By pushing the limits of design and manufacture, ARRI and ZEISS have produced optics that even five years ago would have been technologically impossible. From entire lens series to unique specialty lenses, the ARRI/ZEISS line-up offers staggering choice as well as dependable uniformity of optical performance for 35 mm, 16 mm and digital filmmaking. Extreme wide angle shots made with the new Master Prime 12 or close-ups made with the Master Macro 100 can be intercut with footage shot on existing prime and zoom lenses: it will all have the same color balance, even illumination and high resolution.

perfect choice for both film and digital productions. "The trend from analog film to digital recording technology creates broader requirements for high-end cine lenses than before," notes Umberto Liberatore, Cine Lenses Product Manager at ZEISS. "Due to the high optical performance of ARRI/ZEISS lenses, they represent the optimum solution for both digital and analog cinematography, and provide far more flexibility for a customer's investment."



IDEAL FOR 3D

The recent explosion of the 3D market has increased the need for lenses of the same focal length to perform as identically as possible. Fortunately, the exacting standards of precision and quality embodied in ARRI/ZEISS lenses put them ahead of the competition in this regard. "The latest optical and mechanical designs, innovative and



With over two trillion different possible combinations of the ARRI/ZEISS lenses that are currently available for sale – all of them matched – rental houses and cameramen can build an inventory suited to their individual needs without sacrificing optical consistency.

proven manufacturing techniques, and outstanding measuring technologies enable us to achieve consistency of quality and performance across our complete range of lens families," says Liberatore. "Therefore ARRI/ZEISS lenses are perfectly prepared for 3D applications and for even more stringent requirements they can be specially matched."

PERFECT FOR DIGITAL AND FILM

While many lenses in the ARRI/ZEISS range predate the latest generation of digital cameras, their innovative design and exceptional precision mean they remain at the cutting edge of lens technology - the





A NEW SHINE TO THE CROWN JEWELS

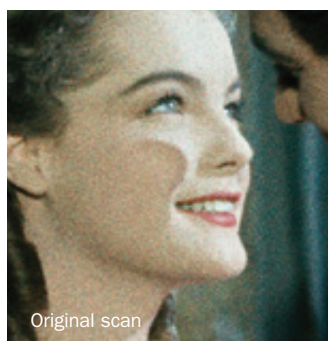


ARRISCAN and RELATIVITY restore classic European films

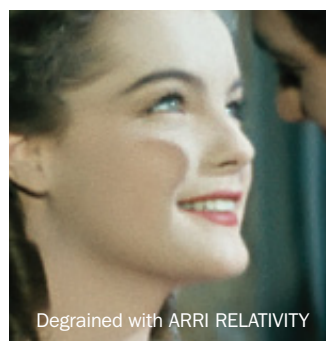
The ARRI Film & TV restoration and archive department is currently working on the HD remastering of four famous German films directed by Ernst Marischka and starring the

beautiful, Austrian-born actress Romy Schneider. *Victoria in Dover* (1954) and the *Sissi* trilogy (1955, 1956 and 1957) all feature Schneider as a real life European royal: Queen Victoria of the United Kingdom in the former and Empress Elisabeth of Austria in the latter three.

Broadcast every Christmas in Germany since 1967 and sold to 125 territories worldwide, the original *Sissi* film is enduringly popular, though currently only available in standard definition - the last telecine having been done in 1998. International distributors Beta Film recently decided that the time was right to create high quality HD versions of all four films for broadcast and Blu-ray DVD. After a rigorous testing period, Beta Film chose ARRI Film & TV for the image remastering and Taurus Media Digital for the sound remastering.



Interestingly, there exist two original camera negatives for each of the four films, as different language versions were created by cutting together alternative takes of every shot. The project therefore involves a total of eight completely unique camera negatives, all of which will be scanned on an ARRISCAN in HD resolution. The overriding goal of the remastering process is to maintain the well known and well loved pastel look of these films, while at the same time increasing the quality, brilliance and depth of the rich color palette. For this reason it was deemed vital to remaster from the original negatives, rather than dupe negatives.



Fortunately, the negatives are not in a particularly bad condition for their age, so the majority of the material can be scanned using the standard ARRISCAN transport with pin registration; those parts which are in worse shape can be scanned with pin registration disabled. Due to the gentle transport of the ARRISCAN, the fragile original negatives - which have already been handled too often - can be used without fear of further damage, avoiding the loss of quality that scanning dupe material would necessarily entail. The ARRISCAN is also able to handle the various splices in the original material without exacerbating the degradation.

All of the films were shot in Agfacolor, a color process that Agfa in Germany developed during the 1930s, in response to Technicolor and Kodachrome. The Agfacolor negatives lack orange masking and in contrast to 'normal' color negative, the blue layer of Agfacolor is the sharpest, while the red layer is the least sharp. This, however, can be compensated for during the scanning process due to the ARRISCAN's ability to set sharpness levels for each color channel separately.

After being scanned, the material will be put through the ARRI RELATIVITY system for grain management. By experimenting with various settings of the de grain and re grain filters offered by the software, a setting was found that greatly pleased Beta Film, as it significantly reduced the grain but still kept the look of a classic movie. Perhaps the biggest challenge of the restoration has been the removal of partial color flickering caused by variable deterioration of the negatives over the last half-century. The RELATIVITY de grain process smoothes this partial color flickering to a certain degree, and the remaining correction can be made using the Da Vinci Revival color correction software from Blackmagic Design.



Original scan



Restored and color corrected

ARRI ARCHIVE WORKSHOP

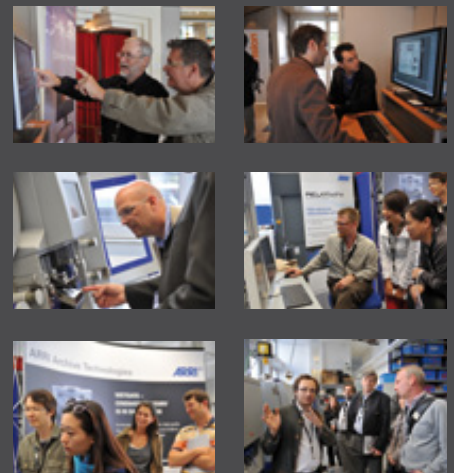


Guest speaker Mikko Kuutti

ARRI recently hosted its first major workshop on archive and restoration technologies, attracting more than 80 attendees from international film archives, post houses, broadcasters and manufacturers.

With so much attention currently being paid to new digital cameras, the workshop illustrated the importance of archiving the digital data being created and making the rich cultural heritage that already exists on film accessible in a digital world.

Feedback from the event has been overwhelmingly positive. John Palmer, Digital Film Bureau Manager at Ascent 142 in London, commented: "I thoroughly enjoyed the workshop, which had the right mix of informality and friendly professionalism; we're certainly interested in returning for future events."



Photos: © Bernd Schuller



For information and documentation,
please contact smaier@arri.de



"It's very sensitive and the image quality is really, really impressive."



An ALEXA mounted on a Scorpio Stabilized Head captures the action at Potsdamer Platz during filming of the commercial's explosive finale. Live action shots will be composited with CG elements to create the effect of a city lit up by the Nissan Juke.

ALEXA AND THE JUKE



French cinematographer David Ungaro recently turned to ALEXA for a television commercial advertising the Juke, Nissan's new, smaller, sporty SUV crossover. Produced by Wanda Productions in Berlin for advertising agency TBWA\G1, the visually bold commercial involved shooting in low light situations that perfectly suited the high sensitivity and minimal noise of ALEXA's sensor. Camera, lighting and grip equipment was supplied by ARRI Rental, Berlin; the commercial will first air in Europe on September 18th.

ARRI News: What was the concept for the commercial?

David Ungaro: The idea is that the Juke is going through a city at night where everything is dark; as the Juke drives by, spreading its infectious energy, it wakes up and energizes everything around it – lights, streets, buildings, people and electronic elements. Then for the grand finale, the Juke arrives at a big Times Square-type plaza with a concentration of illuminated billboards and posters. As the Juke drives by, they intensify and the scene culminates in an explosion of billboards.

AN: Other recent Nissan commercials have been filmed on 35 mm. Why was this one shot digitally?

DU: Well, firstly because I wanted to! Also, we shot side-by-side tests with the ALEXA and an ARRIFLEX 435 at night; we shot on 500 ASA stock with the film camera – pushed one stop and processed normally – and then 800 ASA and 1250 ASA on the ALEXA. We scanned the neg and had a look at everything, and the footage from ALEXA was far better for our purposes; there was much more detail in the shadows and also more definition. The ALEXA was so much more sensitive, which didn't necessarily mean we used less light, but it gave us the ability to see further into the darkness and into the far background. It also gave the visual effects team much more to work with.

AN: So the tests persuaded you to go with ALEXA; were production and the agency also convinced?

DU: Absolutely, and so was Philippe Andre, the director. He was unconvinced to



start with but when he saw the definition in the background, he was amazed. For instance on the test there were some posters in the distance; we could read them with the ALEXA, but not with 35 mm because they were blurred by the grain of the 500 ASA stock. Philippe wanted a bright, clear, night-time look, so the ALEXA at 1250 ASA suited our needs, even if it was slightly less organic than film; in the end we shot almost the whole commercial at 1250 ASA, recording to HDCAM SR in HQ 4:4:4 Log C, with an SRW-1 deck.

AN: What lenses were you using?

DU: We mainly used Master Primes, but there were a few shots with Angenieux zooms; for the night-time tests I was at T1.3 on the Masters and at 1250 ASA I was actually overexposed, so when it came to the real thing I didn't even have to shoot wide open, which was better for the focus pullers. Focus is very critical with digital cameras because you don't have the depth of the film, so it's extremely unforgiving.

AN: Did the dynamic range of the ALEXA sensor prove useful?

DU: It did, and I was able to get a good sense of the dynamic range from the tests and from talking with people at ARRI. For me, the range is about minus seven to plus six, so that's at least 13 stops. The bottom of the Log C curve is quite smooth because there is still some wattage going through the sensor even when you're really close to black, so there is detail there. For that reason I tended to expose for the highlights; I would look at the highlights in the frame and stop down slightly more than I would with film because I knew there was so much room in the blacks, and absolutely no noise.

AN: Having used ALEXA on a commercial, what kinds of productions do you think the camera is best suited to?

DU: Well, on Monday I start another ALEXA shoot – a five-week TV movie, so that's a completely different setup. I think the camera will be useful for all kinds of things, although I haven't yet seen ALEXA footage printed onto film, so I can't comment on feature films, but I know people are doing it. From my perspective this is the perfect camera for TV and commercials; it's not too heavy, it's very sensitive and the image quality is really, really impressive.



Watch a making-of video:
www.arri.com/goto/1009/juke/video



The full length interview can be read at:
www.arri.com/goto/1009/juke

NEW ARRILITE LIGHTING FIXTURES

Due to the continuing popularity of its ARRILITE range, ARRI has announced two new fixtures that represent the next generation of these traditional, open-faced lights.

The ARRILITE 750 Plus and ARRILITE 2000 Plus have been completely redesigned, offering a modern take on a well established lighting concept. With improved functionality and simplified maintenance, they perfectly cater to the demanding production environments of today's film and television industries. Despite being compact and lightweight, the new ARRILITEs exemplify the rugged and durable build quality for which ARRI is world-renowned.



Both lampheads feature a robust new aluminum housing that allows effective heat dissipation. At the rear of the housing is a large, heat-proof handle that facilitates easy maneuvering of the light, even when it is hot. Bulbs can be changed easily and quickly, without the need for tools of any kind.



AWARD-WINNING TECHNOLOGY



ARRIMAX Reflector



©A.M.P.A.S®

By using the same reflector and optical system as the ARRIMAX, the designers of which last year won a Scientific and Engineering Award from the Academy of Motion Picture Arts and Sciences (©A.M.P.A.S®), both new ARRILITE fixtures offer high light efficiency.



See Bill Holshevnikoff present the ARRIMAX:

www.arri.com/goto/1009/arrimax



A new accessory holder incorporates fittings that permit the Chimera Video PRO Plus S to be fitted directly, without an additional speedring. The accessory holder also enables usage of the 4-leaf barndoor and scrims designed for the ARRI 650 Plus, which is therefore ideally partnered with the ARRILITE 750 Plus in a kit, as they share the same accessories.

The ARRILITE 750 Plus is smaller and almost half a kilo lighter than the current ARRILITE 800 and ARRILITE 1000 fixtures, making it well suited to portable lighting kits used for location shooting and newsgathering. Although listed as a 750-watt fixture, it can be fitted with bulbs ranging from 800 watts all the way down to a 375-watt HPL bulb (invented by and licensed from David Cunningham).

In addition, it features an innovative one-arm stirrup that enables many different pan-and-tilt options and reduces overall size for easy transportation.

The ARRILITE 2000 Plus is more stable and far more compact than the current ARRILITE 2000. It features an improved focus mechanism and, like the 750 Plus, implements disc brake technology from the ARRI True Blue range of lampheads, which holds the fixture steady even with heavy accessories attached.





*Award-winning director and cinematographer
Mikael Salomon, ASC on the advantages of
high definition video assist*

A CLEARER VISION OF THE LOST FUTURE





Director Mikael Salomon, ASC (in red shirt on left and blue shirt in middle) takes advantage of HD-IVS while on location in South Africa.

HD-IVS allows ARRICAM and ARRIFLEX 435 cameras to output high definition video assist images of exceptional sharpness and dynamic range.



Set in 2510, *The Lost Future* is a post-apocalyptic vision of the world after exotic jungles full of dangerous beasts have reclaimed a landscape once dominated by humans. A desperate group of survivors, led by a hunter named Amal (Sean Bean), fights to survive the ravages of both predators and infectious disease. Produced by Tandem Communications for commissioning broadcasters RTL Television (Germany) and SyFy Channel (USA), *The Lost Future* was shot in Cape Town, South Africa, by cinematographer Paul Gilpin and directed by Emmy® Award-winner Mikael Salomon, ASC (*The Andromeda Strain*, *Band of Brothers*, *The Company*).

The ARRI HD-IVS uses innovative digital technology to create 1920 x 1080 high definition, wide dynamic range video assist images for the ARRICAM and ARRIFLEX 435 film cameras. With such significantly increased performance, the HD-IVS facilitates better judgment of focus and more visible detail, especially in shadow and highlight areas. Excellent color reproduction and low noise are combined with ARRI's unique Ground Glass Cancellation (GGC) technology to create beautiful, high resolution preview images.

ARRI News: What made 35 mm film the right format for *The Lost Future*?

Mikael Salomon: Well this is a TV movie and one of the delivery requirements from SyFy was that it had to be shot on film, not that I had a problem with that, because I like shooting on film! And actually we were shooting on very rough terrain with this project so shooting on film was a good thing,

because it's so easy to take a film camera into difficult environments.

AN: How did the HD-IVS come to be used on this particular production?

MS: I was visiting ARRI towards the end of last year and among other things they showed me the prototype of ALEXA and also a mock-up of the HD-IVS, as well as a software program that takes the grain out of the ground glass [GGC]. I was very impressed and mentioned that I would be doing this thing in South Africa and would love to use it.

AN: Did having HD-IVS on the cameras help you as director?

MS: Prior to this I hadn't shot on film for five years and as you know, one of the huge advantages of HD is that you can basically see what you're getting, so there's no real need to go look at dailies, at least not in terms of the image quality. In the past, the video assist image on film shoots hasn't been great, but now suddenly you have an image approaching the quality of real HD, which was a huge leap forward and it made the transition back to film much easier. I had got used to having a big monitor with a high quality image on HD shoots and now I had that on a film set as well, so it didn't feel like a step backwards.

AN: Did that mean you were spending more time in front of a monitor during takes than you normally would on a film shoot?

MS: Well I guess we're getting into bad habits with HD - spending more time in the video village than next to the camera; and in some instances that's true, but I do try to position myself by the camera as much as I can because that's where you have more interaction

with the actors. But I would always go back and look at the image on the monitor as well.

AN: Did Paul, your DoP, find it an advantage as well?

MS: Yes he did. On this shoot we didn't really watch anything back until we were all done, so it was a huge help to have a good image on the monitor. I think you may take more chances, artistically and visually, when you have a better image to go by.

AN: Did shooting in the jungle entail high contrast situations where the improved dynamic range of the HD-IVS made a significant difference?

MS: Well, yes and no. We were trying to avoid situations with very high contrast; for instance if you have both deep shadow and strong sunlight, you try to go backlit because then what you're looking at is effectively a low contrast image, except for the highlights, which are backlit so you don't need to worry about them; what you're really interested in is the definition and the detail in the shadows. Basically it was the improved overall quality of the image rather than just the dynamic range that was useful; you tend to trust it more that you normally would. As a cinematographer, when you're shooting on film you stand next to the camera and you don't judge the image quality by the monitor, but with the HD-IVS you actually can. Of course you still get a nice surprise when you see the end result on film, because it is still better, but you have a much clearer vision of what you're getting.

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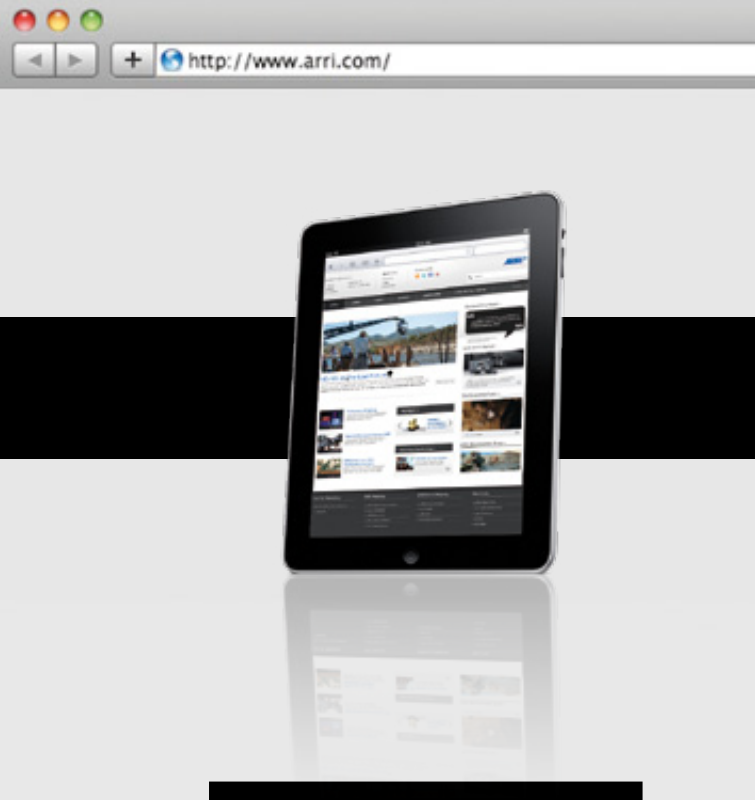
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“Our idea with the new-look website is to provide a resource to both our customers and the wider filmmaking community as a whole.”

ARRI is timing the launch of a revamped, news-based portal into its corporate website to coincide with IBC 2010. Visitors to ARRI's camera and lighting stand at the show will have the opportunity to explore the new pages and share ideas about content with members of the ARRI team.

The new welcome page of the ARRI website will feature prominent stories, case studies and interviews with top creative professionals in the film and television industries. As well as delivering information about the increasingly diverse range of ARRI products, which cover every stage of the production process, the website will showcase how these products are being put to use in the field. Content will be solicited from key partners and commentators, and attention drawn to developments affecting the entire industry.

“Our idea with the new-look website is to provide a resource to both our customers and the wider filmmaking community as a whole,” says ARRI Managing Director Dr. Martin Prillmann. “This resource will



ONLINE AND ON THE PULSE

ARRI launches web-based news platform



become increasingly valuable over time, as the site matures and the archive of articles expands. Our goal is to create a destination website where people can find good quality, trustworthy information. By taking a fresh approach and focusing on dynamic content, we'll be encouraging regular traffic to the site; it won't just change when we have new products, it will change all the time. Professionals worldwide use ARRI equipment every single day and they all have something interesting to say; we want to harness that."

Another function of the website will be to form a link between the corporate web

pages and ARRI's other online activities, such as its microsite about digital filmmaking: arridigital.com. "The ARRI Group already maintains a range of online resources and we are now increasingly involved with social networking sites such as Facebook, on which we have more than 20,000 active followers," continues Prillmann. "The new web pages will act as a central hub for all of these activities, around which the satellite sites will orbit. Facebook, Twitter and the ARRI Digital Forum give customers and fans a chance to contribute and comment, while RSS feeds and HTML subscriptions allow them to

decide for themselves how they keep abreast of the latest news from ARRI."

If you have suggestions for articles or would like to get directly involved in producing content such as production or video blogs, then visit the ARRI stand at IBC for a chat or drop a line to the ARRI marketing team.

www.arri.com

EXPO CALENDAR 2010/2011

*These are the key trade shows
and exhibitions where you can
find out about ARRl products
and services**

2010

September	10 – 14	IBC	Amsterdam
September	18 – 20	Cinec	Munich
October	19 – 21	Satis	Paris
October	21 – 23	Broadcast India	Mumbai
October	22 – 24	LDI	Las Vegas
November / December	27 – 04	Camerimage	Bydgoszcz

2011

February	08 – 10	Cabsat	Dubai
March	15 – 17	CPS	Moscow
March	21 – 24	Filmart	Hong Kong
April	06 – 09	Prolight + Sound	Frankfurt
April	11 – 14	NAB	Las Vegas
May	17 – 19	Testing Expo	Stuttgart
June	02 – 05	Cine Gear	Los Angeles
June	15 – 18	Koba	Seoul
June	21 – 24	Broadcast Asia	Singapore
August	TBC	BIRTV	Beijing

*Dates correct at time of press; please reconfirm before making travel plans.