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## First DSLR drama in Oslo

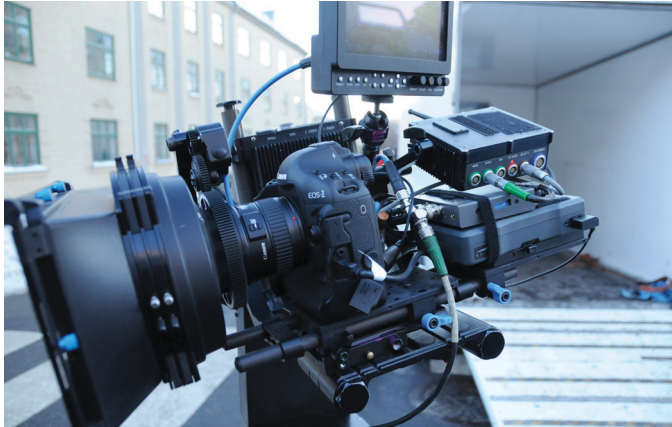
### DSLR Production

Norway's TV2 is believed to be the first broadcaster to shoot a complete drama series on a DSLR. The 10-part (23-minute) *Dags Univers* is a dark comedy about a marriage therapist who wants people to live alone. It is currently shooting in Oslo and is scheduled for prime-time transmission in the autumn. **David Fox** reports

*Dags Univers* is being shot with two Canon 1D Mark IV cameras, which were chosen mainly as a matter of timing. Håvar Karlsen, the B-camera Operator/2nd Unit DoP and Canon DSLR consultant on the series, "had used the 5Ds for some time, and from what I could see the results were quite promising, and when we heard news about the arrival of the 1D Mark IV we got in touch with Canon to be part of an early arrival testing [...] taking a calculated risk that the 1D would arrive in time for our production to start," explains Director of Photography Pål Bugge Haagenrud.

"Shooting under incredible low light levels was an advantage we wanted to take use of, since we are shooting in practical locations." The lighting has been planned with the option to use venetian blinds to control daylight coming through windows, and includes a few KinoFlos, a Dedolight 400 Par, a Dedolight 400 Octodome, a Dedolight 200 HMI, and 200 Dedo Octodome (with the option to use 200W HMI Tungsten globes and Daylight globes). "In addition we have found great use in a small shiny board with flex fill to bring out the eyes," he says.

"But we discovered through a hectic week of testing (as we got



The EOS 1D Mark IV with Scorpio remote, Marshall monitor, Red Rock baseplate, Globalmediapro battery and Blackmagic Design converter. Below: DoP Pål Bugge Haagenrud with the Canon rig



the cameras one week prior to principal photography) that since we have such a compressed file, we had to light the way we wanted it to look, and with my background of more than 25 years as a cameraman, shooting 16mm reversal as a starter, the allegory was simple: light it like you are shooting good old slides or reversal film." What you see is (more or less) what you get.

Canon Norway helped out, and supplied a range of prime lenses and three zooms. "We were able to shoot at T1.4, but we have discovered that focus is then so limited that it is hard for our seasoned veteran for more than 25 years as focus puller, Anders Legaard, to be close to hit the focus target on moving objects,

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Arri's Stephan Ukas-Bradley (left) demonstrates the Alexa prototype camera

## Wood urges study of 3D unknowns at HPA Retreat

### Hollywood Post

As Sky and other organisations move toward launching 3D in the home, David Wood, deputy director of the EBU Technical Group, urged the industry to look at a number of still unknown broadcast topics. Analysis by Carolyn Giardina

Is a common standard for 3D TV doable? Does there need to be worldwide or regional standards? Are we sure that 3D production suits all sports? Does 3D ever turn from 'wow' to 'ho-hum?', asked David Wood at the recent Hollywood Post Alliance Technology Retreat, a four-day event held in sunny Palm Springs, California, during which an estimated 400 industry leaders and attendees examined technology trends.

"We owe it to ourselves to research the economic and behavioural issues. We owe it to the public to research physical effects," Wood said. "Is half a dozen people working on this enough for

a billion dollar industry? There should be more (research). What we have is anecdotes. I think we should add a word of caution to broadcasters, until we know the scientific evidence."

To these points, Panasonic CTO Eisuke Tsuyuzaki reported that Panasonic and the nonprofit Entertainment Technology Centre@University of Southern California are planning to conduct a study of motion in relation to stereo 3D. "We need to understand the biophysics and physiology of watching things in 3D," Tsuyuzaki said.

Professor Marty Banks of University of California at Berkeley has already conducted some studies, and he suggested that a health or science organisation might be able to provide additional research funding. Based on his work, Banks proposed that manufacturers consider the creation of 3D TVs with a user settings menu to accommodate variables such as viewing distance. This, he suggested,

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## Exploring the path to 3DTV

## Conference Preview

By Fergal Ringrose

We're very pleased to announce that well-known broadcast industry consultant John Ive will be our Chairman for 3D Masters 2010, held in association with the BKSTS. In fact both of these parties have worked with us over the four years of our previous HD Masters event — which is now replaced by 3D Masters — and we're very happy to continue these relationships for our June 22 event.

We are most grateful to stereo3D leader Quantel for coming in as our Platinum Sponsor. Gold Sponsors for the event are Decode, Digital Vision, Harris Broadcast, Miranda, SGO Mistika, Sony and Snell; and our Silver Sponsors are Canon, For-A, Fujinon, Hamlet and Phabrix. Sincere thanks to all sponsors for enabling us to stage this event.

In an already packed agenda for the day (with more speakers still to be confirmed), we will feature no less than four keynote presentations. Leading us off will be BSKyB Chief Engineer Chris Johns on 'Sky 3D: Year One'. Johns will look at key investment decisions facing broadcasters, bringing production costs down, and a vision for the future of Sky 3D and global 3DTV.

3Ality Digital Systems Chief Executive Officer Steve Schklair — featured on the front cover of our March issue — will guide us through practical experiences of a true world leader, from U2 3D to Sky 3D. He will discuss how (and how not) to shoot 3D, and lessons learned from 'training the trainers' on 3D production.

One of our keynotes will be 'a two-hander' from Screen Digest, with Senior Analyst Charlotte Jones focusing on Film & Cinema and Head of TV Technology Tom Morrod discussing the developing 3DTV market.

Our fourth keynote will be another 3D trailblazer — Phil Streather, owner of Principal Large Format, a specialist in stereo 3D production for all formats. Streather will provide insight and guidance for companies with ambitions in stereo 3D by laying out the basic toolset for 3D creation.

The key Production session will address acquisition challenges, new tools and stereography. Andy Millns, director, Inition will discuss stereo documentary challenges and present a wildlife case study. Telegenic Stereographer Adam Sculthorp will examine the

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but we have managed to nail it on designed shots with fantastic results," adds Haagenrud.

Having been used to carrying large cameras, such as the Arri BL4S with 1000-foot magazine and a 25-250 zoom, he saw this as "an opportunity of a lifetime to work fast with small and lightweight cameras — grab shots from impossible angles — but at the same time treat the camera as a single camera film camera, with good old Ronford Baker F15S fluid head and solid baby and standard [tripods] and a lightweight dolly."

Haagenrud loves the size of the camera, which makes it easy to put "in impossible places. Actors love it, but it must be mounted to look like a camera or people won't take it seriously."

The option to use 35mm lenses with the shallow depth of field was also a reason to use DSLRs — as was the budget. "I would love to shoot on Red or even Panasonic 3000, but now I'm not so sure. This show, done 65% on controlled locations, with exteriors in the low light period of winter in the Nordic light, harsh contrast is not a problem — so we can easily control the exteriors, and have been blessed with clouds on our exterior days," says Haagenrud.

Prior to production, they did a week of testing and Legaard decided to take the Red Rock Cinema package and totally strip it down and build it the way he would want a film camera to work. "We tried for a few days pulling focus from the lens, but eventually brought in the Scorpio follow focus, and Anders is now pulling focus from a 17-inch TV Logic monitor, and also a great help to control the exposure from his dark tent," he adds. "Since we are shooting with Canon Primes there is a great challenge to pull focus since the pull is so short on the barrel of the lens."

They use Blackmagic HDMI-to-SDI converters and encounter a few seconds delay from when the HDMI signal leaves the 1D to arriving at the video village (where it is also recorded onto Panasonic AVCAM solid-state recorders) and the on board monitor. "We do also encounter quite a bit of static electricity that make us lose the signal to the onboard monitor, forcing is to turn on/turn off the monitor to get the image — a little bit like rebooting the Red, but still hard to cope with the instability of this problem."



role of the stereographer. Andy Shelley, head of Development at Onsite will tell us how to project manage the recording of 3D TV. And David Wooster, partner in Can Communicate, will look at new acquisition technologies.

In Post, the first workflows for low budget 3D feature and 3D TV are being devised. What lessons have been learned by those at the cutting edge? e-Motion Consultant David Bush will discuss shooting and posting 3D from Red. Prime Focus Group Managing Director Anshul Doshi will explore 2D to 3D conversion, along with issues surrounding post on *Mortician 3D*, the UK's first 3DS feature. Michael Reuter, managing director of Paradise FX, will present a *Streetdance 3D* case study. And Richard Wilding, senior editing manager at Molinare, will tell us how to establish a 3D post pipeline.

Our Standards session will look at unifying the 3D chain. For 3D production and distribution costs to reduce in line with current HD costs, a set of standards is needed linking all parts of the chain from storage to in-home reception. Confirmed speakers are John Bird, principal consultant, Futuresource; Simon Gauntlett, technical director, Digital TV Group; Dr Sean McCarthy, chair, MPEG Working Group on 3D; and David Wood, head of New Technology, EBU (featured on the front cover of this issue).

Needless to say, our eventual speaker line-up will be subject to change — and our Broadcast session is still being finalised; news of this important session will follow in coming weeks. But already, lots to look forward to at our premier 3D broadcast TV event. You can register now at [www.3Dmasters2010.com](http://www.3Dmasters2010.com)

There was a corrupted file in the first week, "which we do believe can have to do with a long take," but 39 days into the production that was on the only file problem they had experienced.

## Getting the look

They shoot 1080 25p with no HLT (Highlight Tone Priority). Karlsen had read a lot online about HLT: "People were really uncertain about the pros/cons. After all, it's just a minor tweak in ISO settings to protect highlight. As we shoot mostly indoors, there's no need to complicate things." They also use 50p for slow motion work, and have selected a neutral picture style with sharpness, and contrast turned way down.

"The production house we are using are using Avid, so offline is being done there. I think the codec they went for is DNxHD 120, because of faster transcoding times. I did some online tests with some shots in H.264 and DNxHD 120, and after seeing more noise patterns, etc, in the 120 version, we decided we were going to assemble a H.264 online based on an Avid EDL. The online facility will then use uncompressed HD or DPX to the final master," explains Karlsen.

In grading, "we're going to apply noise reduction and sharpening as a general rule. We took off all sharpening in the camera to reduce moiré, and we are adding this in post to get the punch in the focus back," he adds.

"The main battle we are fighting every day with these cameras is rather focus than moiré. Since we have pulled the sharpness down in camera, focus can appear soft if not viewed in a proper full HD monitor. We know we have some moiré issues in certain scenes (background), but once the problem is identified, we always try to open the lens to hide the problem. In post (and especially in an SD master) we also have tools to reduce the issue. It remains to be seen how bad the issue is, but during shooting we haven't noticed too much," says Karlsen.

Improvements that Haagenrud would like to see to the 1D are the addition of zebra patterns, colour bar, controlled sound levels (which has recently been added to the 5D), XLR inputs "in the bottom of the 1D", and lenses with film style focus options.

He advises anyone contemplating using a DSLR to "treat it like a film camera, as much as possible. Light it like reversal film. Enjoy the loss of weight on your shoulder. Grab the frames it used to take hours to rig. Think multicamera."

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