



I've just got back from two days at IBC in Amsterdam, predominantly to check out the current status of the RED One Camera and meet some of the guys on the team. Had a chat with Mike Curtis of HD For Indies and got away with poking fun at him despite never having met him before! Then had a loooong talk with Graeme Nattress of the Red development team about the camera. He's an ex-pat Brit living in Canada, working on areas such as the Bayer Filter De-Mosaic algorithms and the funky new Focus Assist (you can harass him with questions he's not allowed to answer in the forum).

The camera has gone through another re-design (which I believe has changed again already) and they're really pushing the modularity of the system. As well as the Red Cage there's now a Red Rail system for various mounting options, including tripod and hand-held uses, and the battery and digital magazine have been taken out of the camera for mounting either on the rail (as a counterbalance) or directly to the camera itself. There was also a first look at the 720p viewfinder (non-operating prototype) and the camera itself has more ports than you can shake a stick at (including HD-SDI's, Firewire 400/800, e-Sata and more). There were, however, two really big pieces of news.

The first is the announcement of Redcode specs and the Redcine workflow, two areas that have got me really excited. I'd discussed the possibilities briefly on the forum with Graeme without knowing what they had planned but what they've actually designed here is far beyond what I'd expected. There had been some chat previously about how 4k would be the preserve of big budget films as the storage and processing requirements would be out of range of smaller productions for some years. 4k RAW is around 325 MB/s uncompressed, which would require an expensive RAID array on set to capture. What the guys have done with Redcode is to create their own VBR Wavelet compression technology that brings the data-rate down to a very manageable 27MB/s (maximum – there will lighter compression settings for those that prefer it). This is around the same rate as Uncompressed Standard Def, which I know from experience can be edited on an iMac, and will be recordable using the onboard digital mags (hard drive & flash

drive). Suddenly 4k is open to everyone.

Redcine answers the question of which NLE's you can edit on - the answer is any of 'em. Redcine is the software that comes with the camera (in both PC and Mac flavours) to allow you to process your RAW data. Process the data, set all the levels, choose your favoured editing size, the full 4k, 2k, HD or SD (I'm told 576 will be available as well as 480) and what file format you'd like it as. Or, just for rushes viewing, use standard presets for simplicity and speed. To me, it looks suspiciously similar to the current film post-workflow, something a lot of us will appreciate.

The second major announcement (or rather unveiling) was the showing of the first 4k footage from the Mysterium sensor. Sadly I wasn't able to attend the big-screen events that were shown using the Sony 4k projector, but they did have the footage showing in the booth. Actually, the footage they'd shot was being shown on a 1080p Plasma screen, a 2K Apple 30" monitor and a (near) 4K ViewSonic monitor, so people attending the exhibition got to see it in three different formats. The footage itself consisted of various members of the Red Team lighting cigars and blowing bubble-gum, shots of Oakley glasses and a watch, and a tracking shot of one of Jim Jannard's Porsche's.

The shot of the Porsche was particularly interesting for several reasons. It's a white car shown against a black background, with great detail throughout the range and no crushing in the shadows or blowing-out of the highlights. The latter is more remarkable as one of the lights used in the set-up is in shot (in fact a flag on it really shows up the detail of the sensor as you can see the fibre hairs along the edge). Furthermore, there's no visible noise in the picture and no artefacts from the compression (the version shown in the booth was using Redcode rather than uncompressed). This is as seen on the Viewsonic VP2290b (3840x2400) - the image was cropped rather than scaled so it was the full 1:1 4k resolution. The only issue I had was that all the shots were in a controlled environment, no outdoor stuff or natural lighting. This was due to the short timeframe the team had to prepare it and I expect they will have more footage to show in the near future (hey guys, bring it to the UK!)

Graeme told me that you really had to push the levels to extremes before the noise

in the sensor became visible, at present they are quoting a Dynamic Range of >66dB but cinematographers at IBC who'd seen the big screen presentation were saying it looked even better than that (12-15 stops in film terms). We also discussed Redcode and he assured me that, along with being visually lossless (and from the examples they were showing it certainly looked it), it will work perfectly in effects & grading environments without any of the problems you associate with other compression technologies. When I asked about the Focus Assist, his answer was "why use the human eye when you can use Terminator's eye?" He also told me that, though there have been criticisms from some quarters at how Red has been using "Indie's" to generate interest and gather feedback, there are a number of extremely well known and respected DoP's who are backing the project. Graeme mentioned one name which, in particular, was a real surprise given comments made by a certain Director he works for.

All in all, what I saw at IBC and the discussion I had with Graeme gave me a great deal of confidence in the future of this camera. To date it's been a bit of a fanboy dream, but to see the ideal start to come to life was inspiring. Now if only I can find the money to reserve one...

Stephen Webb