Storm Surfers 3D Puts Viewers in the Tube with Mistika

By Peter White

Surviving the rigours of filming big wave surfers in 3D was just one half of the battle in the production of Storm Surfers 3D, a multi-platform feature film and television series.

CREATED BY the Firelight Productions team of Marcus Gillezeau (EP) and Ellenor Cox (Producer), the project documents the exploits of renowned surfers Ross Clarke-Jones and Tom Carroll as they search out and ride giant waves.

The challenge facing Sydney-based post-production partner, Deluxe, was pulling together 1,500 hours of stereo footage to complete the feature and 4x1 hour series. A serious complication was the use of six different camera systems to capture the surfing action.

"I initially became involved eight weeks prior to shooting and the production had already decided they were going to shoot using a range of formats and then have everything transcoded into the Cineform codec," explained Deluxe's Efilm colourist, Luke Buckley. "The Cineform codec would act as a common container to hold all the different media from 10 cameras regardless of what format they were shot on."

Buckley started out processing daily rushes by providing basic first pass colour correction and stereo alignment using Cineform's Neo 3D software. The original intention was to transcode edited material from Cineform to DPX files to conform the final programmes and feature.

However, Buckley and post-production supervisor, Matt North, soon realised they needed more powerful tools when they received technical specifications for the delivery of the television series to 3net, a US-based 3D channel joint venture formed by Sony Corporation, Discovery Communications and IMAX Corporation.

MISTIKA ENTERS THE PICTURE

The initial issue was the generation of DPX files to enable conforming and Quality Control (QC). The massive amount of material in the Cineform codec that had to be synchronised and processed meant it was taking several weeks to provide feedback to the camera crews. It also became evident that the production had further technical issues to deal with in the form of colour correction, geometric distortions, retinal rivalries and stereoscopic optimisation.

Intense research revealed that the recent enhancements to Mistika, a combined Digital Intermediate and stereo 3D system from Spanish company SGO, would provide a solution to enable the post-production of Storm Surfers 3D.

Some of the latest stereo tools in Mistika, such as Equalize automated stereoscopic image-matching, were still in alpha development, but the Deluxe team was convinced of its abilities over any other product they had seen on the market and secured a system in November 2011 through SGO's Australasian reseller partner, Mojo Media Solutions.

"Mistika was more capable in terms of its ability to correct colour and geometric distortions between left and right eye than any other product we had seen," said Buckley. "Especially in terms of speed - we have various high end post-production suites but they would take six hours just to do one shot while Mistika would take two minutes."

Mistika's open SAN connectivity allowed it to be networked to Storm Surfer's production storage allowing Buckley to easily access the Cineform media.

"There was no moving or re-transcoding of files - we simply took EDLs from the editorial offline edit and conformed the Cineform media in its native format," said Buckley.

"Editorial provided a Quicktime reference and we would sync check with their offline. If they had speed changes we could complete them on the Mistika, as it was very flexible and able to do time warps and speed ramps. These were very fluid effects using optical flow algorithms. This helped a lot as we were dealing with water in the picture and gave a nice result in the end," said North.

The complexities of correcting stereographic images were also handled using Mistika.

"We were required to match both eyes for each camera format," said Buckley. "Some of the cameras were shooting side by side, some were two separate cameras, like a pair of GoPro HEROs, and the beam splitter was shooting with mirrors so colour correction was often an issue."

Deluxe also had to deal with the issues of geometric corrections and stereo stabilising where slight differentiations between left and right cameras would make a scene unwatchable. Minute differences in lenses and imaging chips as well as vibrating cameras, rolling shutters or camera timing could make a shot unusable.

MULTIPLE SUPPORT

3D productions need to be able to optically align and stabilise each frame to lock both images together and Deluxe worked closely with SGO technicians to improve images and the software features as development continued.

"SGO was very receptive to us telling them what we needed," said North. "Naturally there were teething issues as we moved through several betas and ended the project on a full release. Some things they fixed overnight, others would appear in a later version. SGO's local representative Stuart Monksfield was very supportive and was always on hand to ensure we had the kit working and there was no down time as a result.

"We also made multiple calls to Don Bland, 3net's Director of Development and Production - he was very supportive the whole way because he understood the magnitude of the wave in front of us."

TELEVISION COMPLETION - FILM NEXT

March 2012 saw 3net technically approve the first master of the television series and, with the television series completed soon after, attention moved to the post-production of the feature film.

"By that stage our Mistika workflow meant we were able to apply corrections from one timeline to another and have them ripple through where the same shots were used in the series and feature," said Buckley. "That then became the starting point - obviously the convergence point for sitting in front of a television was going to be completely different for theatrical projection but it meant we were not starting from scratch with each and every shot."

Final post work involved rendering from Mistika before grading and QC checks using Deluxe's Lustre suite to screen television material on a Sony monitor or the feature with a Barco projector.

BRIGHT FUTURE FOR 3D

Buckley, North and Deluxe General Manager Andrew Robinson are looking forward to discussing their next stereoscopic project with future clients having learnt the intricacies of producing 3D for film and television.

"Storm Surfers 3D was a challenging but rewarding project to work on as our first full stereoscopic experience," said Robinson. "Editorial production worked in-house with us here in Sydney to produce unique and exciting 3D content and I am very proud of our team and their results which will be seen around the world."

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