



### **TT3D Closer to the Edge – Stereoscopic Post Production Workflow at Technicolor**

Following our success in post producing and delivering the animated stereo feature 'Gnomeo & Juliet' for Disney, the Technicolor Creative Services team recently completed post on the live action TT3D Closer To The Edge.

Shot largely during the Isle Of Man TT Race in 2010, the film centres around Guy Martin...

The film consisted of eleven different source formats: stereo originated RED, footage from TV coverage of the TT event, EPK footage, historical archive and stills amongst others.

To achieve the high turnover of work necessary to finish within schedule, Technicolor devoted three suites to the project. The Baselight grading suite at Lexington St, Soho with a RealD projection system was used for the creative colour timing of the feature as well as final approval on all the stereo work. Baselight Assist, attached to the same storage and resources as the main suite, was used for more intensive colour matching and stereo sweetening of the images. A third suite, running Autodesk Smoke, offered **VFX across** the 2D and 3D versions of the feature.

Approx. 1400 shots throughout the feature required specialist post. These varied from straightforward colour match and geometry alignment to more complex compositing.

In order to track the progress of the team a live, collaborative database was created by post-stereographer Angus Cameron. This was available across production to track shot allocations, progress and sign off status and proved invaluable in keeping track of the complex show.

#### **Grading 'TT3D - Closer To The Edge' – A colourist's view by Paul Ensby**

Having been virtually born into a feature film laboratory environment at Technicolor, the mere notion of grading a mixed format digitally captured 3D documentary **seemed challenging**. At first, all seemed relatively straight forward as the initial conform of the various digitally camera captured material is taken care of and the reels start to come through ready for grading. We are working on only one eye, therefore 2D, with normal projector settings, a white screen and no 3D glasses in sight. Working on the Baselight grading system, we treated it just like any other 2D grade, making this version look as good as possible.

Then the fun starts with 3D. The silver screen is introduced, the projector settings change (including a dimmer lamp current) and the glasses are worn. The second eye is brought into the timeline and the grades are copied across from the other eye. The first thing you notice when the eyes are put together in 3D is the loss of luminance and to a lesser degree, colour saturation. Looking through the material and using the 2D version as a reference, I managed to find a good overall saturation and luminance shift which seemed to match the 2D in most of the scenes. Particular consideration and further amendments had to be made to the more extreme brighter or darker parts of the film.

The most challenging aspect of this production was that in 3D, many shots (left eye and right eye) were not matching each other – either in overall colour and density or parts of the image were



different. As an example a slight flare or reflection on one eye that is not on the other. Or maybe a reflective highlight popping out only on one eye; baring in mind this is a documentary involving newly polished Motorbikes going past the camera at high speeds. When watching these differences in 3D, the image or even part of the image becomes embroiled with 'polar' effects making the screen difficult to watch. An exhaustive process was undertaken at Technicolor to remove the parts of the frame by duplicating areas or in simpler cases, tracking a small mask with a grade to hide the effect. Around the same time, the post production Stereographer set the convergence level for each shot; part of the process where you can set the level of perceived depth for each shot. In some cases, this was adjusted on a dynamic level throughout the shot to help with the overall viewing comfort. For example, on 'TT3D' we had a mix of 3D captured material mixing in with 2D archive so to save the eye having to over adjust between shots, the convergence level near the cut point was tweaked. Without this process, a feature length movie can be tough to watch in 3D and in some cases, can cause nauseous discomfort.