



More power please, sir

Jonathan Cheetham and **Clare Heneghan** explain how Fusion 5 came to Motion FX's aid for the digital FX work on Roman Polanski's *Oliver Twist*.

As we knew that we would be working extensively on two features simultaneously at Motion FX – *Silence Becomes You* and Roman Polanski's shortly to be released *Oliver Twist* – we set about upgrading our VFX infrastructure and bringing in some additional equipment. We upgraded a lot of our workstations in terms of graphics cards, memory and processors for the compositing and rendering, and we installed high-performance servers that could handle high bandwidth with lots of artists working off them at the same time.

Handling two major film projects at the same time meant that expanding workloads and overlapping projects would be unavoidable. We also needed to expand our artist base, but because

the company was founded on the ability to ramp up and down as needed, this turned out to be a pretty simple task. We have no desire to become too large. We have always been very keen to work with small numbers of people wherever possible, as we believe that creativity flows better and is more concentrated in smaller, tighter groups.

Meanwhile, as the FX shot lists grew on both films, we had to make the fundamental decision to bring in further compositing seats. It was imperative that our existing creative staff of Cyborg, IQ and Maya artists found the transition involved in incorporating a new compositing package into our workflow relatively seamless. We could have gone to other manufacturers for our film compositing software, but our final

decision was to go with Eyeon's Digital Fusion (now renamed Fusion 5). In choosing Eyeon, especially with the new feature set in Fusion 5, we felt we had reaffirmed our commitment to being a creative and artist-driven company.

For the operators we had to find an extremely comprehensive toolset that was incredibly interactive and stable. When dealing with compositing systems, one big question is always what bit depth they can support. After Effects can handle 8-bit and 16-bit data, but Fusion, like Apple Shake, has the ability to process 32-bit floating-point information. We needed a program that would have all the features to do floating point compositing – and a node-based flow graph was a must.

Our choice came down to Fusion

and its closest competitor Shake. Priced roughly the same, and both targeted at visual effects for feature films and television, they share many similarities, both in how they operate and in the advanced features they offer. Being a Windows-based facility, one of the key factors for us was that Shake operates only on Mac OS X and Linux, while Fusion operates on Windows. Fusion's other great asset over Shake was that we feel it has been developed clearly around the artist.

As we had a very limited amount of time to learn and incorporate Fusion into our post-production pipeline, we had to rely on the teams in London and Canada for quick support and immediate training, which turned out to be exceptional. The production workflows and co-ordination for both films were very different, as *Silence Becomes You* was a completely digital film, captured on Viper cameras in uncompressed Log RGB 4:4:4 FilmStream mode [see *Look! No film in Showreel* issue 7 for fuller story], while *Oliver Twist* was a traditional 35mm acquisition.

Neither film was 'effects-driven' – all FX were supposed to be invisible – so we found that communication between the editing department and the visual effects teams became critical. It was soon established that the visual effects for both films needed very different skillsets, albeit both requiring a wide range of compositing and VFX techniques. For *Oliver Twist* there were a lot of digital extensions and sky replacements, which had to be tracked and seamlessly blended with live-action footage, without the aid of motion control. One of the key considerations was ensuring our digital post-production process matched the way that Roman Polanski had envisioned the look of the movie. He was ultimately interested in it looking real and convincing.

We had visual effects work ranging from the big establishing shot that opened the film and the shots where we extended the sets, down to the smaller shots, where you've got straightforward tasks such as wire removal, sky replacement and cleanup work, and where you could be removing elements of camera apparatus or adding further fog or rain. Either way,



all these shots had to be seamless, so the audience did not notice that any visual effects work had been done.

In contrast, many of the visual effects shots completed for *Silence* were more obvious to the audience – for example, the dream sequences and hallucination shots. *Silence* provided more creative freedom for the artist. We were able to make use of the fact that Fusion has one of the most powerful and intuitive 3D particle systems on the market. As we worked on these shots within the same application, it was very easy for us to work with the director from pre-vis to the final composite.

The compositing duties were split between Fusion 5, iQ and Cyborg, but all shots passed through Fusion for treatment of varying sorts. Fusion was more than capable of handling large volumes of shots. At its peak, the VFX pipeline consisted of 16 compositors working long shifts on 11 workstations. The compositing team also had access to a Fusion renderfarm, which at full capacity was running 21 processors, being shared at any given time between the six Fusion workstations. The renderfarm and our advanced network allowed for ultimate turnover, making the DPX renders easily manageable.

Over the past six months the Fusion

integration into our workflow has been exemplary. No sooner had we started than we began to apportion bigger shots meant for the bigger systems back to Fusion. This has proved to us that it is more than capable of scaling up to film work. As far as PC-based desktop compositing packages go, Fusion is still relatively unknown in the UK, compared with programs such as After Effects, but we believe it is a powerful and underrated piece of kit. From what we have seen and experienced in beta testing, Fusion 5 is a more than generous upgrade, with big improvements in workflow, speed and interactivity, and it now has an even more customizable interface. It offers a complete OpenGL 3D environment, including perspective and orthographic camera views and 3D lighting, 3D tracking import, 3D text and 3D particles.

Eyeon Europe helped us put together a remarkable team when it came to recruiting freelancers. Expanding our artist base is set to become easier still in the future, as they have now put a training programme in place, which involves taking on-board experienced freelancers looking to train up in Fusion and providing them with company placements to enhance and further their skillset.

The FX shots on *Oliver Twist* were largely 'invisible' – such as street extensions and sky replacements. Motion FX used the power of Fusion 5 to composite the scenes. Photos: Guy Ferrandis. Images courtesy of Pathe.

Jonathan Cheetham was lead compositor/head of post production for the project and **Clare Heneghan** was visual effects co-ordinator/senior visual effects artist. www.motionfx.co.uk