backdrop

Interview by chief editor
Karen Moltenbrey

Monstrous Effects

Tippett Studio's monster destroys digital Manhattan

Producer JJ Abrams and director Matt Reeves tried to keep the main focus of their recent film Cloverfield *secret during months of pre-publicity. The strategy worked well, as moviegoers flocked to theaters to finally get a look at the monster that destroys New York City. Yet, the folks at the visual effects and animation facility Tippett Studio knew that monster well, very well. That's because Tippett's team, helmed by visual effects supervisor Eric Leven and creative leads Tom Gibbons, Chris Morely, and Steve Reding, completed key dramatic and complex digital effects shots involving the monster and the deadly parasites, integrating them within the film's photographic and digital environments.*

"The monster, which had been kept tightly under wraps by the filmmakers, is garnering praise from film critics and fans alike for its fearsome contribution of murder and mayhem to the movie," says Jules Roman, Tippett's CEO. Adds Leven: "We loved working on Cloverfield*; it was a fantastic opportunity to breathe life into a monstrous 25-story character shown from a unique perspective. What boy doesn't grow up wanting to make giant monster movies—smashing buildings, stomping on tanks, and blowing things up?"*

Tippett's crew was responsible for scenes including the carpet-bombing of 10 blocks of Manhattan, an entire sequence—composited together to look like a single shot—dedicated to the deadly parasites, digital rats, and a full-CG shot of the creature in all its glory that lasts for more than 60 seconds. In order to feel like it was part of one continuous take, multiple shots were stitched together to give the movie the aesthetic feeling of found footage shot by an amateur.

Here, Leven discusses Tippett's work behind this project.

Q ***What was Tippett responsible for in the film?***

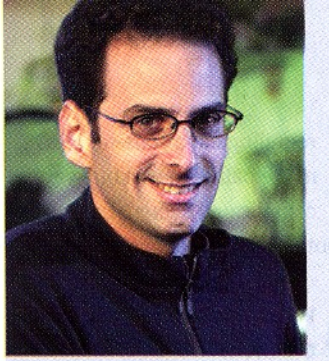
A Tippett Studio was responsible for all the creature animation and related visual effects in the film; anytime a monster is on screen, the work belongs to Tippett, with the exception of a few crossover shots that were created in coordination with Double Negative in London. So, the creatures, the building destruction, rockets, explosives, and other military weapons, and, of course, all the shots involving the smaller, deadly parasites.

Q ***You were also tasked with compositing the monster into shots?***

A Yes. Most VFX companies will agree that it's better to "own" the shot from top to bottom, and Tippett is no exception.

Q ***So, how many shots did Tippett do?***

A Tippett was responsible for around 60 shots. The larger monster is in about 20 shots; the smaller ones in 12 or so. There were several shots that didn't contain the monster but were part of sequences that did, so after discussions with Double Negative, we decided to do the effects in those shots, to keep the sequences together. That work consisted mostly of replacing greenscreen with a digital city, but there's always other work to be done—stitching plates together to make them appear seamless, adding tracer bullets and skylines, replacing greenscreens, and so forth. Plus, digital rats. Real rats are difficult to train, and Tippett has a lot of experience with CG rats (for instance, Templeton in *Charlotte's Web*).



Eric Leven *served as one of the visual effects supervisors on the recent horror film* Cloverfield *and directed the work done at Tippett Studio.*

Q ***How was the work divvied up with Double Negative?***

A Double Negative did all the non-creature VFX work—background replacement, CG vehicles, environments, matte paintings, etc. Their work is amazing, some of the very best visual effects that you'll never notice. The entire evacuation scene was shot on a greenscreen lot; you'd never think it wasn't actually shot in NYC. I've never had a more pleasant experience with another facility; there was none of the usual secrecy and red tape to wade through. The two studios shared everything and really worked together as one visual effects unit. It was our job to make sure that the filmmakers, none of whom had any experience with CG characters and very limited experience with CG in general, were able to get their vision on the screen, and I think we were pretty successful doing just that.

Q ***Did Tippett do any all-digital shots?***

A We had one shot that was completely digital; it included the monster, a CG stunt double, the sur-

A rounding environment, a CG matte painting, and one very complicated camera move.The entire shot lasted 60 seconds.

Q ***What was so unique about the monster?***

A The large creature has a couple unique features. One is his skin, which has a translucent, pale quality. Gus Dizon was responsible for the actual creature paint work for us and was constantly looking at creepy reference pictures of translucent sea creatures. The monster also has a huge ape index, meaning his arms are much longer than he is tall, giving him a long reach (the better to destroy stuff with). We also had fun with his feeder arms, which are limbs near his center of mass, which, in theory, he uses to scoop things up and eat with. We used them primarily to bust up his profile and make sure he didn't look like a guy in a suit with just four limbs.

Q ***Which tools did you use to create the monster?***

A The commercial software includes Deluxe Paint (originally from EA), Autodesk's Maya, Pixar's PRMan, and Apple's Shake. Tippett's custom software stitches everything together and adds functionality to Maya and Shake. Our Maya muscle and character tools, as well as a number of Shake compositing nodes, are proprietary.

Q ***In terms of modeling, what was the most difficult part?***

A The creature designer, Neville Page, built hi-res models in Pixologic's Zbrush. Modelers John Koester and JJ Kang treated it as scanned data, and our first step was to rebuild them as lower-res models and displacement maps. We then changed the design slightly here and there for animation purposes, making knuckles larger or hips smaller, for example, so we could get the monster to move the way we needed him to move.

Q ***What was the most difficult part of animating him?***

A The first step was deciding how he would move. On all fours? On hind legs? On his knuckles? On his palms? Tail down like Godzilla? Or up like a *T. rex*? Elbows up? Down? That sort of thing. Tom Gibbons headed up our animation team and worked to figure out the best way to bring life to the monster. Once we established a look we liked and felt would work for the film, we had to come up with a speed at which the monster would move that would seem gigantic and menacing, but still have the necessary realism. It was important to break away from the 'slow-motion man in a suit' look and toward something far more realistic but still have the heft and weight of a 350-foot creature.

Q ***Did you use motion capture?***

A No. It was never considered for this project, given the non-humanoid shape of the creatures. Plus, we employ some of the finest character animators in the world, and it would be a waste to have them spend their time cleaning up mocap data instead of animating.

Q ***You created some environments, too?***

A There were many shots filmed against greenscreens that required large set extensions. While the bulk of this work fell to Double Negative, Tippett handled the set extensions in the crossfire sequence (where we see the army engage the monster), as well as in several other scenes. Ben VonZastrow was in charge of matte painting and digital environments. These were created by projecting multiple matte paintings onto 3D geometry laid out by our matchmove department, and painstakingly blending the CG set with the live-action plate.

Q ***Were there any special challenges?***

A We had a big surprise during post when the filmmakers decided that instead of bringing the monster down with a couple of missile hits to his body, they wanted to step things up a bit. What was supposed to be a shot of the monster standing in one place being shot became a tracking shot through 10 blocks of New York City as a B2 bomber appears and carpet-bombs the whole area, bringing the shot to 40 seconds total. I think we estimated that shot as taking 52 artist weeks—it was gigantic (and all on a low-budget show). Chris Morley, our compositing supervisor, had to composite the shot, layering countless live-action and CG elements.

Q ***Overall, what was the biggest problem you encountered when working on this movie?***

A It was getting the filmmakers to understand how visual effects works—the importance of turnovers on schedule, how our pipeline works, and, most importantly, what it means to have one of your characters be virtual. We needed these guys to understand that they were directing a performance, not just changing colors or contrast. In the beginning, there would frequently be discussions of adding a helicopter here or getting the monster to turn left instead of right as afterthoughts. As the production moved forward, Matt Reeves became more comfortable directing the monster as a character instead of a bunch of pixels on the screen, and we were able to work with that direction to finish the shots.

Q ***Now that the work is finished, is there anything else you want to say about this project?***

A I'll tell you the same thing I told Matt Reeves while shooting the crossfire sequence: We're out here with tanks, rocket launchers, squads of army guys, and one giant monster...we're living the dream! ❖