

## Autodesk in Summer Blockbusters



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Autodesk's digital content creation solutions have been used by digital artists to realize their ideas for eye-catching visual effects in many of this summer's upcoming and released blockbuster films:

**Adventures of Shark Boy and Lava Girl** (Hybride Technologies, The Orphanage, R!OT)

**The Amityville Horror** (Asylum)

**Bewitched** (Sony Pictures Imageworks, Rhythm & Hues)

**Charlie and the Chocolate Factory** (Cinesite)

**Cinderella Man** (Digital Domain)

**Dark Water** (Digital Domain)

**Fantastic Four** (Meteor Studios, Pacific Title & Art Studio)

**The Hitchhiker's Guide to the Galaxy** (Cinesite)

**Land of the Dead** (Spin Productions)

**Lords of Dogtown** (Gray Matter FX)

**Mr & Mrs Smith** (Digital Dimension)

**Seven Swords** (Digital Pictures Melbourne)

**Stealth** (Digital Domain)

## Bewitched

To give *Bewitched* a supernatural flare, Sony Pictures Imageworks used Autodesk's Discreet Flame system with Burn on approximately 75 of the 113 shots it completed for the film. This included creating three of the film's broom flight sequences, creating a night skyline for Nicole Kidman and Will Ferrell's outdoor dinner date, and final compositing on the three shots of Kidman and Ferrell's blossoming garden in the film's closing scene.

The Flame system was also used to: make Michael Caine appear from within a Roman colonnade, make Elizabeth Montgomery's photo give "witchy" looks, and rewind and freeze time.



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"A significant amount of green screen work and compositing were required to create believable yet magical elements of the film," said Carey Villegas, the visual effects supervisor for *Bewitched*. "The Flame system's comprehensive toolset and sophisticated 3D compositing tools gave us great speed and flexibility in lending a creative touch to a classic remake, in which the visual effects' sole purpose was to enhance the story and characters - not overpower them."

## Land of the Dead

For *Land of the Dead*, Spin Productions used Autodesk's solutions to create the title sequence as well as 120 of its 300 visual effects shots. "We used Autodesk's Discreet Flame visual effects system to composite the 115-second title sequence, which consisted of approximately 100 layers every two seconds," explained Chad Malbon, visual effects producer for the film. "It was only through the Flame system's impressive speed and power that we were able to achieve this incredible amount of detail and layer depth," he added. The film's title design was created in the Flame system at 12-bit 2K resolution to provide the highest possible quality film print.

Jeff Campbell, visual effects supervisor and lead compositor for *Land of the Dead*, gave credit to Autodesk Burn background processing solution: "Burn allowed us non-stop productivity with no rendering down time. By using Burn we doubled the amount of work completed in a day, greatly improving our efficiency and leaving more room for creativity."

Initial rotoscoping, i.e. the manual frame-by-frame painting of individual film scans, for 12 shots involving crowd replication was accomplished with Autodesk Combustion desktop visual effects software. The Flame system was used to complete approximately 40 matte paintings as well as compositing this sequence's 145 layers, which included zombies, water and smoke.

## Seven Swords

For the epic Chinese feature film *Seven Swords*, in which warriors come together to protect a village from a ruthless military official, Digital Pictures Iloura used Autodesk 3ds Max animation software and sister company Digital Pictures Melbourne used Autodesk's Discreet Lustre digital color grading system.



The Lustre system enabled digital artists to maintain realism while creating specific looks for the film. For example, the Martial Village location looks peaceful and primitive and is contrasted with the coldness of the Pearly Gate Outpost. 3ds Max software was used along with hand animation to create the computer-generated spider weapon, which has several chains spinning randomly from a central axis and many small blades that are attached to the chains and react together.

### **Fantastic Four**

Meteor Studios used Autodesk's Discreet Flame and Discreet Inferno visual effects systems and Autodesk Combustion visual effects software to complete some of the 240 shots they produced for the science fiction film *Fantastic Four*. These shots were part of the action-packed Brooklyn Bridge sequence in which the Fantastic Four team uses their superpowers to save the day. Meteor Studios artists and technicians worked day and night to complete the shots on time, with the help of Autodesk solutions for rapid compositing and finishing.

Pacific Title & Art Studio worked on approximately 200 shots for *Fantastic Four*, using Discreet Inferno for one-fifth of them. A key scene created with the Inferno system and its 2D warper involved The Thing punching Mr. Fantastic in the stomach. Since Mr. Fantastic is stretchy, the punch goes through his stomach and hits the Human Torch, who is then thrust into a billboard. Pacific Title Art & Studio also used the Inferno system on the *Fantastic Four* trailer and color graded it with the Lustre system.

### **Mr & Mrs Smith**

Digital Dimension used Autodesk 3ds Max animation software extensively on *Mr & Mrs Smith*. In one scene, Angelina Jolie is cliff climbing with a friend. Jolie was filmed on a rock-climbing wall with blue screen. Using 3ds Max software, Digital Dimension then built a wire frame version of the cliff and expanded the scene to include a canyon. Jason Crosby, computer graphics supervisor at Digital Dimension, said, "Autodesk 3ds Max software proved to be a great tool for cranking out everything we needed on *Mr & Mrs Smith*."

### **Lords of Dogtown**

Gray Matter FX (GMFX) used Autodesk's Discreet Inferno system on several of the 50 shots it created for *Lords of Dogtown*, a film about the birth of California skateboard culture in the 1970s. The film's stunt doubles included some of the original skateboarders, known as the Z-boys, who were called upon to perform certain signature moves. GMFX then used the Inferno system to track, warp and composite the actors' faces onto the stunt doubles' bodies. They also used the Inferno system for various shots throughout the film that involved compositing and tracking.

### **The Hitchhiker's Guide to the Galaxy**

Most of the digital visual effects in *The Hitchhiker's Guide to the Galaxy* were created by post-production house Cinesite Europe, which has been involved with the film since 2003. Cinesite used Autodesk's Discreet Inferno visual effects system extensively on the film. The Inferno work included a main sequence



with bad guy Humma Kavula - a character inhabiting a partially completed human body. From the waist up Humma appears human, while below the waist he has 20 flimsy legs that bend and drag as he walks.

"In the main sequence, Humma Kavula moves across a table. A lot of complex digital cleanup work and intricately detailed interaction using multiple motion control passes were required," explained Adam McInnes, visual effects supervisor for Cinesite Europe. "Given its speed and sophistication, Inferno was definitely the best system for the job."

### **Adventures of Shark Boy and Lava Girl**

Autodesk's Discreet Inferno, Flame and Flint visual effects systems, Discreet Smoke editing system and Autodesk 3ds Max animation software were used to shape *Adventures of Shark Boy and Lava Girl*. In this children's film, director Robert Rodriguez employed the same advanced 3D techniques as those used in *Spy Kids*. "3ds Max software continues to be an integral tool in the creation of visual effects here at The Orphanage," explained visual effects supervisor Ryan Tudhope. "On Robert Rodriguez's latest film, *The Adventures of Shark Boy and Lava Girl in 3D*, the 3ds Max software's extensive features and ease of use helped us complete over 150 stereoscopic shots featuring complex digital environments, dynamics and characters."

Hybride Technologies also worked on a total of 150 shots for *Adventures of Shark Boy and Lava Girl*—approximately 15 minutes of the film over seven months—using Autodesk's Discreet Inferno, Flame, Flint and Smoke systems. Hybride used the Smoke system for pre-production work and color matching of high-definition shots.

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