Samantha's Big Screen Adventure: Nicole Kidman stars in Sony Picture's Bewitched

French philosopher Blaise Pascal once wrote: "Had Cleopatra's nose been shorter, the whole face of the world would have changed." Although it didn't change the course of sitcom television, Elizabeth Montgomery's nose in "Bewitched" surely enchanted viewers in some 254 episodes (1964-1972). All it took for this nose to cast a spell on us was that special twitch that millions of fans hopelessly tried to reproduce. Hopelessly, because the movement was apparently the happy consequence of a nervous wriggle of the actress' upper lip that no one else could imitate.

More than 40 years after it first appeared on television, the twitching nose effect is creating magic again—or so Sony Pictures hopes—as "Bewitched" gets the wide screen treatment under Nora Ephron's helm. Nicole Kidman plays Isabel, a real witch hired by superstar Jack Wyatt (Will Ferrell) to play iconic witch Samantha in a remake of the TV series. Yes, the movie Bewitched tells the story of people trying to shoot a new "Bewitched" series… Playing with the confusion, the filmmakers introduce characters that may be part of the Bewitched world or part of the real world… or both! — 06/24/2005

Bewitched

VFX Wizards Share Their Magic by Alain Bielik

"NICOLE DIDN'T NEED ANY DIGITAL HELP TO MAKE HER NOSE TWITCH. SHE DID IT LIVE," laughs Sony Pictures Imageworks' visual effects supervisor Carey Villegas (*Cast Away, Bad Boys II*). "The movie did require about 113 effects shots, though *Bewitched* was not a huge visual effects movie. So, it was kind of a change of pace. It gave us the opportunity to do things that were very different from what we usually do."

Because of the movie within the movie nature of the script, *Bewitched* required two different types of effects. First, there were shots in which the characters shoot episodes of the Bewitched TV show. For these effects, Ephron wanted to maintain the simplistic aspect of the original tricks with characters appearing or disappearing instantly. She only requested that the new shots didn't feature the background shifts of the original magic shots: those had been created by stopping the camera to allow a performer to walk in or out of frame. "The new version had to be cleaner than that, but not more fancy," notes Villegas. "Most of these effects were realized in camera. On the other hand, Nora wanted something more sophisticated for the real life magic, but still pretty simple in its concept. For these characters, magic is part of their

everyday life. It's a casual thing. The way we shot it had to reflect this: Isabel raises her arm and a glass simply appears in her hand."

Now You See Him, Now You Don't

During the course of the movie, Isabel's father, Nigel (Michael Caine), keeps appearing and disappearing in the most improbable locations. Ephron, director of photography John Lindley and Villegas imagined several shots in which the character materialized in places that he couldn't physically be in. For example, Isabel opens her front door against a wall and when she closes it, Nigel is standing behind it, although there was absolutely no space for him to appear there! For this shot, Kidman and Caine were photographed in separate passes and the two plates combined after Kidman had been rotoscoped. The shot—and the rest of the show—was composited with Flame and Imageworks' proprietary package Bonsai. For 3D animation, the studio employed Maya and Houdini associated to RenderMan.

In another shot, Nigel disappears when a truck passes in front of him while he's standing in the rain, holding an umbrella. Three separate plates were required to create this disappearance effect. First, Caine was photographed holding the umbrella while a truck drove by. The second pass was a clean plate that was used to remove Caine from the shot, after the truck had passed. The third plate featured the umbrella alone, held in position by a special rig and released on cue. Once combined, the three passes created the illusion of a man disappearing and his umbrella falling on the ground.

"My favorite Nigel appearance occurs on a studio lot. Isabel is walking between soundstages and Nigel comes out of a roman colonnade set," comments Villegas. "When he walks out of it, it looks like it's 20 feet deep or so, but then, two grips come in and carry it away, at which point you realize that it was just a painted backdrop, about four inches thick! In order for the shot to be funny, the backdrop had to apparently lean against a wall to emphasize the fact that Nigel couldn't have possibly come from the painted set piece. What we did was build a green box set at the entrance of an alleyway between two soundstages. It represented the volume of the colonnade set. Michael Caine was shot walking out of the set while two actors carried a green frame away. Then, in post-production, we extended the walls of the soundstages to create a continuous wall behind the set, replacing the alleyway by a digital wall. Then, we added a CG colonnade set behind Michael Caine. This element was later tracked to the green frame that was being taken away."

Witchcraft: A breakdown of one of Nigel's classic appearances.
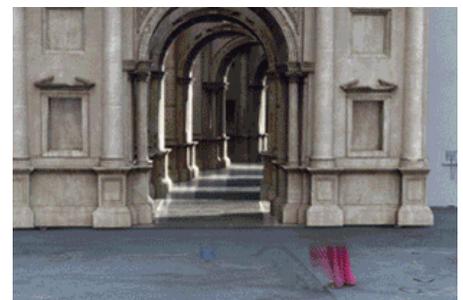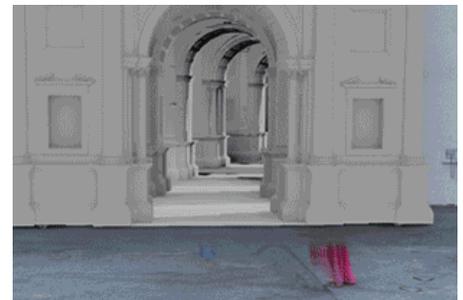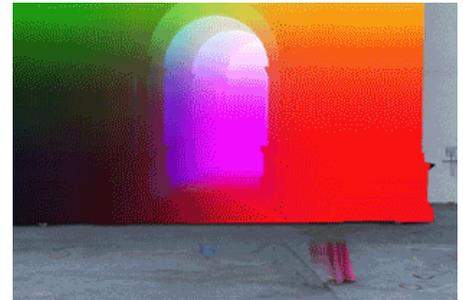
It's a Bird, It's a Plane, It's Super... Witch!

The trickiest aspect of the visual effects of *Bewitched* was to create the flying effects. "They were the most complicated shots, but yet they play a pretty small role in the movie. They were not meant to be a focal point of the story. We ended up with only four flying shots, but if you remember it, in the whole TV show, you actually saw Samantha flying on her broom twice or so. The first thing we did was a previs in Maya to get the concept behind the shots. For the shot of Isabel taking off in front of her home, we captured the background plate from a Technocrane. Then, we did a match-move and used that data to film a stunt double on green screen with motion control. We had a hanging rig with cables attached to a harness that the actress was wearing."

In the most complicated flying shot, Isabel gets mad at Jack and flies off in the most furious manner. "The shot was designed by John Lindley", recalls Villegas. "He compared it to getting in your car after an argument and peeling out. He wanted the same type of feeling, except that Isabel would be on a broom. We designed a move in which she shoots out in the sky, exiting frame, then flies back in to swoop down on Jack, spins around him and shoots out for good—all in less than two seconds. To capture the background plate, we used a development of the Spydercam rig that we had extensively used on the Spider-Man movies. Instead of being a two-point rig, the Talon Rig is built in a triangle formation. The camera is mounted on a motion-controlled head that provides pan and tilt. The system is suspended above the set by three motion-controlled cables connected to three towers. Since the cables are completely synchronized, by releasing one of them and pulling the other ones, we were able to move the camera absolutely anywhere over the surface covered by the triangle formation. It's a huge improvement on the Spydercam rig because you're no longer confined to a straight line. You can actually move within a volume. For this particular shot, we used the data from the previs to animate the real camera in a complex tear drop shaped curve."

The background plate was shot with Ferrell pretending to follow Isabel's flight path around him. Then, two different techniques were used to shoot Kidman's stunt double on greenscreen. For the first part of the shot, when Isabel takes off and exits frame, the performer was suspended from motion-controlled cables. For the part when she comes back and goes around Jack, Imageworks used a motion base that allowed a precise choreography of the complex movement that the character had to perform. The stunt double was seated on a fiberglass pan that had been molded

to fit her body from the back down to the knees. It was molded in the exact position that the character was supposed to be seated in. The pan was mounted on a post connected to a motion control rig that was pitched forward at about 15°. By wrapping the costume around the rig, Imageworks was able to conceal most of it. In this rig configuration, the broom was not mounted to anything: the actress was actually holding it, which gave a natural look to the way she was—apparently—seated on it.

Pushing the Limits of Motion Control

"The tricky part was that the camera was doing most of the movement, except for the rotation of the motion base," explains Villegas. "It meant the camera had to cover a lot of ground in a very small amount of time. The problem was no motion control rig can move that fast. We had to come up with our own system. We built a rollercoaster dolly in which the wheels securely captured the motion control track from the top and the bottom. We then mounted a motion control pan & tilt head on top of the dolly. The whole system was driven by a winch that was able to pull it on the track, and then have it stop and change directions within a couple of seconds. It was moving at over 40 feet per second. This was a significant advance compared to the speed of the fastest motion control unit, which is about 13 feet per second. However, we only had pan and tilt on the camera head. The sole translation movement that we had was on the track. The rest of it was turned into rotational movement. For example, in order to create a move in which the camera appeared to be moving up, we tilted the motion base down and tilted the camera up. It had the same effect as moving the camera up or down. The whole trick was to mathematically figure out how to turn the translation movement that we had into a rotational movement on screen. To this purpose, we used software that we had designed for I, Spy, a movie that I had supervised for Imageworks, and further developed it on Bewitched to be even more flexible."

Flight Plan: Director Nora Ephron and Nicole Kidman discussing one of the fillm's flying sequences.

The broomstick itself required some trickery, as it actually is a collapsible vehicle that can fit inside Isabel's purse. The effect was realized by having Kidman simulate the movement on a reduced version of the broom, and by adding a CG animation of the broomstick popping out. It necessitated a very precise tracking as the CG broomstick had to follow Kidman's hand movement. "Tracking was also essential in another shot in which Isabel makes a moustache instantly appear on a character while he's dancing," explains Villegas. "The moustache was created in CG and carefully added onto the character's upper lip."

Greenscreens were behind much of the magic in Bewitched

Family Affair: Nicole Kidman, Shirley MacLaine and Will Ferrell

Those Pesky In-Laws

Just like in the original TV show, Jack has to cope with the magical powers of his in-laws. For example, Uncle Arthur loves to appear in mirrors. In one shot, Jack walks in front of a mirror, in which we see his reflection, but when he comes back, it is Uncle Arthur's reflection that appears. In order to create this effect, Ferrell was shot in front of a real mirror, but while he walked away, the prop mirror was pulled from behind the set, leaving a hole in the wall with a greenscreen placed behind it. Ferrell then pretended to see Uncle Arthur's reflections in this imaginary mirror. Later, actor Steve Carrell was shot separately against a green screen and composited into the plate where the mirror used to be. Aunt Clara is no better as she favors sudden appearances in the fireplace. Actress Carole Shelley was filmed sitting in the fireplace while lifting her head up and her face was later added onto a stunt double. Imageworks also handled non magical effects, such as a sequence in which Jack and Isabel have a date at a romantic location overlooking Los Angeles at night. "The cityscape was first photographed at night with different exposures and the images later stitched together to create one continuous panorama," says Villegas. "We then shot the actors greenscreen and composited them in this background." Several shots were farmed out to two vendors: PacTitle handled wire removals while Picture Mill tackled the grocery store sequence in which Nigel appears on various food packages.

For Villegas, Bewitched was a welcome opportunity to a refreshing approach to visual effects: "Nora Ephron shoots her movies in a very traditional way and she wanted the effects to be simplistic. She didn't want anything that was too overpowering. Her movies are really about story and characters."

Dare we say that such is not always the case?

Alain Bielik is the founder and special effects editor of renowned effects magazine SFX, published in France since 1991. He also contributes to various French publications and occasionally to Cinefex. In 2005, he organized a major special effects exhibition at the Musée International de la Miniature in Lyon, France. Displays included original models and creatures from 2010: Odyssey Two, Independence Day, Ghostbusters, Cliffhanger, Alien vs Predator, Alien 3, Pitch Black and many more.

for more information about Carey Villegas, visit

CGVFX