



PROXY (David Collins), the apprentice will cross paths with new characters, such as venerable Jedi General Kota (Cully Fredricksen) and some more familiar faces, including a feisty young Alderaanian princess. "This story is very central to the *Star Wars* saga and in fact there are things that happen inside the story that, if they don't happen, then Han, Luke, and Leia don't happen," reveals self-confessed "*Star Wars* geek" Witwer, whose recent appearances also include roles in *Battlestar Galactica* and horror movie *The Mist*. "It's about a very important event in the *Star Wars* saga."

## A NEW ALLIANCE

Back across the Golden Gate Bridge in San Francisco, an hour's drive from the pastoral beauty of Skywalker Ranch in Northern California, the state-of-the-art Letterman Digital Arts Center houses teams of technicians from both LucasArts and Industrial Light & Magic. Previously based in separate premises close to Skywalker Ranch itself, both companies found themselves together following the move to their new HQ at San Francisco's historic Presidio complex. "About three years ago, when it became obvious that we were going to move to the Presidio with LucasArts, we started saying, 'We've got to have some stuff in common, let's talk to these guys,'" says Steve Sullivan, director of research and development at ILM. "Through brainstorming and bringing the best brains together from games and movies, it's an explosive mix," adds LucasArts' lead engineer Cedrick Collomb. "It's like in chemistry when you bring elements together and you don't know what's going to happen. Our game is the result of that."

The collaboration soon proved to be invaluable, with LucasArts using ILM's CloneCam motion-capture technology—the same technique used to turn Bill Nighy into squid-faced villain Davy Jones in the *Pirates of the Caribbean* films—to capture *The Force Unleashed*'s actors' likenesses in painstaking detail. "What we were doing was not just making one game," says LucasArts' software engineer Eric Johnston. "We were also creating a technology base that can combine some of ILM's work with our work and build this whole set of technologies so that we can do a whole lot of other stuff as well." Central to the development of *The Force Unleashed* were two brand new technologies that have practical application in both the world of videogames and movie special effects, Digital

Molecular Matter (DMM) and euphoria.

"DMM simulates the physical properties of materials that exist in the real world—wood splinters like wood, rocks break like rocks, glass shatters like glass," explains producer Julio Torres of the revolutionary technology. "For example, if you barely hit a pane of glass, it will just crack or fracture at the area of impact, but if it is hit with enough force the same glass will shatter completely. Every interaction is unique and different, yet faithful to what one expects to see in the real world." What's more, euphoria imbues non-player characters in the game with "bio-mechanical artificial intelligence," causing them to behave and react in a remarkably realistic manner. "For example, let's say there is a stormtrooper on a catwalk high above the floor," says Torres. "Using the Force, the player grabs a giant piece of metal and rams it into the catwalk's support system so that it tips over. With euphoria, the stormtrooper will try to keep his balance on his own. Failing that, he will actually reach out to grab the nearest item to stop his fall. This might be the catwalk's railing, but it might also be another stormtrooper who is already holding onto the railing—anything to keep himself alive."

## SYMPHONY OF DESTRUCTION

Back at Skywalker Sound, Audio Lead David Collins—who also moonlights as the voice of PROXY in the game—is putting the final touches to the key aspect of any *Star Wars* experience, the soundtrack. "The first time that I saw a DMM demonstration, I remember thinking, 'Well, how are we going to do this?'" recalls Collins. "The apprentice is breaking a pane of glass that's 20 feet tall, or crushing a giant Imperial walker, so we had to develop a system where we could have a lot of different, unique sounds play on certain levels of velocity and impact according to how metal bends and how wood breaks." What's more,