EXTREME MAKEOVER: At left, half of the frame is still under construction, with the actor in a leotard containing tracking markers against a green-screen cyclorama. At right, the final frame.

Programming Reality

How David Fincher, Goodby and Digital Domain crafted a complex virtual office for HP

BY GREGORY SOLMAN

Walking from his window office to the elevator, a CIO calmly passes through a timescape in which everything in view—from his outfit to the lighting to the view of distant skyscrapers from the windows—shifts as if moving through several years and different parts of many days. The interior design and décor, the workers busy in the background, even the floor beneath them rapidly evolve as the light flickers.

"As David put it, we were going to see the office go from $70 a square foot to $300," says Goodby, Silverstein & Partners producer Josh Reynolds of the new David Fincher-directed HP spot "Constant Change."

For Fincher and the Goodby team, making that leap required a state-of-the-digital-art approach. Almost nothing in the elaborately detailed spot is real except for the actors, and with the environment flipping an average of every five frames, the estimated $2-3 million project was unique in the scope of its cyber world.

The brief asked the agency to show that in a world of rapid change, the CIO remains unruffled with the help of HP's enterprise solutions. "We wanted a director who could illustrate a change of business in a way that hadn't been done before, and David rose right to the top," explains Reynolds.

Fincher refined the concept of change, deciding to transform the office's look, the time of day and the CIO's clothing every few frames and then working with art director Hunter Hindman and copywriter Rick Condos on everything from "the wardrobe to the executional ideas," Reynolds says.

Fincher, who directs commercials through Anonymous Content in Los Angeles, brought the project to executive producer Ed Ulbrich and visual effects supervisor Eric Barba at effects house Digital Domain. The director has worked with Ulbrich for 11 years, winning a gold Clio for Wieden + Kennedy earlier this month with the Nike spot "Gamebreakers," another complex Digital Domain effort.

Over four weeks starting in late January, Fincher laid out the spot in a 3-D, computer-generated animatic with the rough but sufficient image quality of a high-end videogame. Using a system in which the nomenclature of real-world filmmaking tools such as cranes, dollies and lights is replicated by computer, Fincher could determine his lens choices, camera angles and moves, and lighting cues in advance of the shoot. That data was then fed into a motion-control rig.

Fincher, Hindman and Condos concurrently ordered up wall, floor and fabric textures, furniture and the corporate logos for the digital sets the director envisioned. That way, as previsualization of the spot continued, a team of digital artists could start constructing the objects—from Herman Miller-style chairs to glass partitions to reception desks—that would eventually be composited in layers.

"The creative team worked out many of the decisions with David very early in the process, mostly to make sure the project stayed on strategy," says Hindman. "We were at Digital Domain with him three or four times a week."

The shoot took place over four days on a soundstage in Hollywood, with Kieran Mulroney, the brother of actor Dermot Mulroney, as the CIO. Against a green-screen cyclorama, Mulroney wore a black leotard with tracking markers so he could be followed by the Thomson Viper FilmStream digital camera. With the camera's moves locked in, Fincher could concentrate on Mulroney's performance and on choreographing the action with the lighting.

The digital camera allowed Fincher and editor Angus Wall of Rock Paper Scissors to cut shots together immediately after each motion-control pass, explains Reynolds. "The disadvantage is that we're choosing the 'hero shots' on the set, and once they're deleted, they're gone forever," he adds. "I'm glad we saved three or four shots, because there were slight performance differences we ended up preferring."

Back at Digital Domain in Venice, Calif., the Viper's uncompressed digital 2K files were transferred to Nuke, a proprietary compositing environment. For the next eight weeks, the effects house pushed the limit of its capabilities, Ulbrich says, testing new fabric simulators and applying the first intensive use of radiosity software, which helps make synthetic objects appear natural by calculating how light bounces around in real space. The cityscape outside the office windows was created through photogeometry, in which a 3-D model is extrapolated from 2-D images.

"It's no exaggeration that in some of the shots, there are more than a thousand layers," says Ulbrich, although he notes that in a CGI production, even a single glint can constitute a separate layer. "David is the smartest of directors from a technical point of view, but this production would have been complex even for highly seasoned vets."

The virtually all-digital production was especially appropriate for the high-tech client, adds Reynolds. "The fact that we were doing something that had only been done a couple of times before gave it cachet," he says. "They embraced that we were breaking new ground." ■