

Hot

MOVES

By G.K.
SharmanORLANDO LANDS ONLY PROFESSIONAL
MOTION CAPTURE STUDIO.

»» VICON's House of Moves has equipment that can capture the grace and complexity of a golf swing, enable surgeons to operate more efficiently and guide automotive engineers as they design more comfortable cars.



PHOTO COURTESY OF VICON HOUSE OF MOVES

None of the machines can record excitement, however — which is too bad. Local officials are thrilled that the giant of the motion-capture industry is coming to Orlando.

This fall, the company will move into the only professional motion capture studio on the East Coast,

one that will feature fully integrated film, video and audio facilities. It will share its cutting-edge digs with the Florida Interactive Entertainment Academy (FIEA), the University of Central Florida's (UCF) graduate-level school of video-game development.

The multi-million dollar investment comes from UCF, the City of Orlando and VICON. House of Moves' first-year revenues from its commercial use is expected to be close to \$500,000. Student projects and research will absorb the remainder of time in the studio.

"We're extremely excited," says Orlando Mayor Buddy Dyer. "We've had the building blocks, starting with Florida Interactive Entertainment Academy, in place. House of Moves is a significant

The gaming industry is less geographically limited, he notes, adding that the result has been a nationwide hodge-podge of high-tech hot spots, like Orlando.

facility, the athletes and other talent crucial to gaming projects won't have to cross as many time zones to get to work.

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— FRANK BILLINGSLEY

catalyst as we move forward and create a digital media mecca."

FIEA, and now House of Moves, are the centerpieces of a "Creative Village," Dyer's bohemian, high-tech vision for Orlando's revitalized urban core.

The Creative Village will be "truly a place where people will want to live, work and play in the digital media industry," Dyer says.

The region is going after digital media in a big way. It only makes sense, according to city leaders, given the symbiotic relationship between digital media and the area's existing industries: entertainment, modeling and simulation, healthcare, and medical research.

Digital media is of great significance to the area's economy, comments Frank Billingsley, the city's economic development director.

"House of Moves is a magnet to attract additional firms in digital media," he says, adding that it "helps establish Orlando as a destination for the digital media industry." The new location is also a coup for House of Moves, a subsidiary of VICON Entertainment, whose parent company is OMG PLC of Oxford, England.

A specialist in motion-capture technology, House of Moves' entertainment clients include *Superman Returns*, *Polar Express*, *Spiderman II* and *Titanic*. The list of video-game clients includes Electronic Arts, Ubisoft, Nintendo and Sega. And if the theme of the game is sports, chances are House of Moves had a hand in it.

"The entertainment industry traditionally has had its center of gravity on the West Coast," says Robin Pengelly, vice president of the company's entertainment division.


House of Moves, which has several U.S. locations, including its primary base in the Los Angeles area, likes to co-locate with clients or go to where there are significant capabilities, Pengelly explains.

With the opening of the Orlando

Central Florida also has an attractive pool of talent to draw from, he says — and one that House of Moves can have a hand in shaping.

FIEA is "unusually well focused," Pengelly says, teaching skills that are relevant and in demand, from an employer's perspective.

Speaking as a prospective employer, House of Moves wants to build the team of potential hires.

"We want to make the kids we want to recruit." 

» FREEZE FRAME

Motion capture, or mo cap, is a technique that digitally records movements for use in sports, entertainment, medical or industrial applications.

The technology has been around for a surprisingly long time — about a century, FIEA's Ben Noel says. Practical uses for it didn't take off until about 25 years ago, and House of Moves' parent company, VICON, was one of the early practitioners. Started by scientists at Oxford, its first uses were in the medical field.

Using mo cap technology for character animation in movies and gaming is relatively new and has only really become widespread in the past 10 or 12 years.

For animation and gaming purposes, mo cap saves time and creates more natural, lifelike movements than the traditional manual methods of animation. In sports applications, such as capturing a 140-mph golf swing, mo caps' real-time data can pro-

vide the information needed to diagnose problems or improve performance.

Though entertainment and gaming get most of the press, about half of the mo cap field is still devoted to medical and industrial uses. Clients include hospitals, auto companies, tractor manufacturers and NASA.

This is how it works: The person being "captured" wears a black suit with dots on it, which House of Moves' Robin Pengelly termed "a full-size photocopier for humans." High-resolution cameras sample the person's movements many times a second, recording the moves as animation data.

After processing, the data can be exported to computer animators, who associate the moves with a 3-D model and manipulate it using computer animation software. The result is more natural, lifelike movements than anything possible with previous technology.