

Dear Reader,

I am pleased to send you an article from Monday's Los Angeles Times Business section. The piece was based on EEI's study of digital artists and animators done for the Los Angeles Community College District. I have pasted the article below. The Times website has photographs as well. The study can be found on the home page of my website at www.entertainmentecon.org

<http://www.latimes.com/business/la-fi-animation7may07,0,5905384,full.story?coll=la-home-business>

TECHNOLOGY

Animators expanding their lines of work

By Richard Verrier

Times Staff Writer

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In a dark room inside NASA's Jet Propulsion Laboratory in La Cañada Flintridge, Koji Kuramura is giving space exploration the showbiz treatment.

The 41-year-old animator once guided the starship Enterprise when he helped craft "Star Trek" episodes. Now he's building a virtual launch pad for the Phoenix rocket that will blast off in August to survey Mars' polar ice caps. His work will be part of a five-minute computer-animated film that will simulate a front-row view.

"Our job is to bring some Hollywood pizzazz, the wow factor, to everything we do," Kuramura said.

Throughout Southern California, digital artists weaned on Walt Disney, "Star Wars" and video games are bringing their wow factor to scores of companies outside of entertainment that have discovered what a powerful business tool computer animation can be. It used to be that if you were an animator, you pretty much worked in movies, TV, commercials and video games. Now 55 industries nationwide use digital artists, a study by Los Angeles-based Entertainment Economy Institute found.

"Whether you're showing how a new heart valve works in 3-D, or how the rover landed on Mars, you're using the same skills and in many cases the same software tools that are used to make 'Spider-Man 3' or 'Happy Feet,'" said Kathleen Milnes, who coauthored the study funded by the Los Angeles Community College District.

As the premier training ground for animators, Southern California is creating a rich talent pool spreading through the workforce in such diverse fields as aerospace, toy manufacturing, forensics and biomedicine.

Toshiba Medical Systems Corp. in Orange County uses animated videos to train people to use MRI scanners. Toyota Motor Corp.'s design center in Newport Beach employs digital artists to create an online car catalog. Mattel Inc. in El Segundo plies animation in designing toys.

Architecture firm WPIIDC Inc. of West Covina has found that the medium helps elected officials and citizens visualize proposed shopping centers and other projects. The company, which employs three animators, created short films to help gain approvals for such projects as the Commons at Calabasas and a Wal-Mart Supercenter in Rosemead that had sparked a bitter community fight.

The 45-second Wal-Mart film opens with a dramatic bird's-eye shot of the Hacienda-style shopping center to the sound of chirping birds and soothing music. Then, the camera swoops in for a close-up of the entranceway, lined with potted plants, benches and decorative paving, as shoppers stream into the store.

"Animation has become an absolutely critical tool for architects," said Phillip Rudy, director of design for WPIIDC.

Animation once involved scores of workers who painstakingly drew and colored cells. Today, low-cost computers and enhanced 3-D software enable an animation studio to fit on a desktop, fueling a boom in the genre that has extended well beyond major Hollywood studios.

The Los Angeles region employed an estimated 3,870 digital artists in 2005, a nearly 85% increase since 2000, with wages averaging more than \$80,000 and elite artists making many times that.

Typifying the new breed of independent animator is Eric Keller, 37. He works from a cramped, one-bedroom Hollywood apartment where he runs a one-man company called Bloopatone that specializes in scientific applications.

Keller is helping researchers at Harvard Medical School see how the HIV virus hijacks human cells. On his computer, Keller is rigging a 3-D image that looks like a Christmas decoration gone haywire, a swirl of interlocking red, green and yellow ribbons, to simulate a strand of the virus.

"We see it as much more than pretty pictures," said Gael McGill, a Harvard-trained biochemist who hired Keller for the project and runs a multimedia science business. "We see animation as a powerful communication tool that allows us to better understand complex processes."

To pay the bills, Keller continues working freelance at a Venice studio that designs logos for movie titles and commercials. Last year, he designed the opening credits for ESPN's "NFL Prime Time" show. Although entertainment work might carry more cachet and gain Keller visibility, it's the medical work that is most satisfying for him.

"I feel like this work is extremely important," Keller said. "It's helping scientific progress."

Keller also takes classes at Gnomon School of Visual Effects to hone his skills. The school's director of industry relations, Pam Hogarth, says Keller is at the vanguard of what might be the future for many of the school's future graduates.

"The opportunities and the types of jobs that are open to our students are expanding every day," she said. "We're going to see computer animation in applications that we have never imagined."

JPL's Kuramura, a contract employee, hardly imagined his skills would be used on actual space work. A self-taught computer wizard, he grew up in Torrance with a passion for video games and science fiction. Heavysset and genial, he sports a boyish grin and is given to wearing T-shirts and jeans.

He keeps an assortment of "Star Trek" models and figures at his Burbank house that would be the envy of a middle school kid. On his desk is a model of a Cylon robot from the TV series "Battlestar Galactica."

Kuramura began his career at a video game company, later working on visual effects for "Star Trek: Enterprise" and other television shows and movies.

When that work ended, he launched his own side business with a partner. Forrec Group creates short animated movies that reenact traffic accidents and crime scenes for jurors, charging \$250 to \$1,000 per second of film. One project involved animating an attempted murder. Another showed a driver plunging into a ravine.

"I'm booked up until next year," Kuramura said.

His day job is now at JPL, which Caltech runs for NASA. In the 1970s, JPL's Jim Blinn pioneered simulations of the spacecraft Voyager, making him a hero in the visual effects world.

"It used to be the innovations were being done at Caltech and JPL and eventually trickling down to Hollywood," said Zareh Gorjian, JPL lead animator. "Now Hollywood is more of a driver of innovations in animation and we're the beneficiaries."

Gorjian first met Kuramura several years ago, when he needed help replicating the crinkles in the gold foil for the Odyssey spacecraft. He recruited Kuramura last year.

"I went from science fiction to real science," Kuramura said

With two or three missions a year, JPL now has ten animators. The missions require short films to help sell them to Congress and show the public what will be accomplished.

JPL's animators use images and data transmitted from spacecraft to create short films of Martian terrain or the gaseous rings of Saturn. "They're helping us visualize these other worlds that we haven't visited yet," said Eric De Jong, principal investigator with JPL.

When the Mars Reconnaissance Orbiter returned images of a giant crater, Kuramura and his colleagues made a short film giving a bird's-eye view of its striking gullies, possibly created by past water flows.

"In sci-fi, whatever looked good, we did," he said. "Here, you can't fudge real science."

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