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See a Future for Yourself in CG?

Opportunities abound, but be prepared to work hard

By Margo McCall

If you're interested in working in computer animation, better get used to the law of supply and demand. Animation companies sign up new hires in droves when studios green-light big-budget projects. And as a project's delivery time approaches, you can go from a 50-hour workweek to never seeing the inside of your home. Then after the project wraps, you'll suddenly see more of your home than you ever wanted.

Such is life for someone working in computer generation, or CG, a relatively new—and highly competitive—field that despite its volatility still attracts legions of technical people eager for a dynamic workplace and chance to make their mark.

Hot Sectors

“Some years, everybody is hiring, and other years, nobody’s hiring,” consultant Fran Zandonella told attendees at a Siggraph professional development session recently. “You need to be ready to be unemployed. You need to be ready to work around the clock.”

Don't forget the details

As testament to CG's drawing power, the Siggraph job-hunting session was packed. Ranging from graduating students to mid-career professionals, audience members listened raptly as instructors Zandonella, recruiter Pamela Kleibrink Thompson, and Sony Pictures Imageworks executive Stan Szymanski shared their advice on how to get jobs in the field.



Kleibrink Thompson said sometimes it's as simple as creating an impressive demo reel and not forgetting to put your name and contact information on your resume. “The employer actually wants to find you—make it easy for them,” she said.

Szymanski, meanwhile, advised applicants to be honest, research the job opening and interviewers, and “don’t talk smack about current employers, past employers, or co-workers.”

Programs churn out grads

Barely a decade old, CG requires an army of talent—everyone from artists, animators, and directors to programmers, hardware developers, and producers—to put the next Shrek or Kung-Fu Panda on the screen. To fill the void, numerous digital media degree programs are now pumping out graduates.

A number of schools offer distinguished CG programs. The more technically oriented include Carnegie-Mellon University, Massachusetts Institute of Technology, Stanford University, University of Utah, and University of Washington. California Institute of the Arts, San Francisco Art Institute, Ringling College of Art & Design, and Savannah College of Art & Design, meanwhile, offer top-notch arts-oriented programs.

And where will all those graduates work? In North America, they’ll stream into the entertainment capitals of Los Angeles, New York, and Toronto. In Asia, South Korea

Suggestion

has been an animation powerhouse since before computers were used, Japan has established itself as a center for computer-graphics innovations, and India is positioning itself as a low-cost alternative.

Zandonella warned that breaking in takes plenty of persistence and determination. "Lots of people apply, but only a few get the job," she said.

Technical degree essential

For technical positions, it helps to have a degree in engineering, math, physics, or computer science. If you don't have a degree yet, you can try to prove yourself by completing a project or writing and selling software you've created. But Zandonella cautions that degree-holders are the norm. For instance, at Disney Feature Animation, one-third of employees possessed bachelor's degrees, another one-third held master's degrees, and the remaining one-third had PhDs.

A variety of technical jobs are available in CG. Programmers and IT systems/support personnel can get hired for a particular show or for an entire company. Engineers are needed to write software and design user interfaces. And technically minded people can end up as technical directors for lighting, modeling, characters, shading, or special effects.

Specializing in one area, such as hair, fur, or cloth, can prove an advantage. "If you specialize, you'll be more in demand and get a better salary," Zandonella advised.

It's useful to know a variety of software programs and be comfortable working on Windows, Linux, and OSX platforms. A scripting language like Python or PERL, C or C++, Java, and OpenGL or mel are good for starters. Third-party applications such as Houdini, Maya, and XS1 are important to know for effects.

A penchant for art or photography, knowledge of object-oriented programming and design specs, as well as the ability to write and document good code, report bugs, and communicate with documentation specialists, round out the list of desired skills.

Keep your skills sharp

And the ability to work on a team is paramount. "There's no lone coder sitting in a cube. That's very rare these days," Zandonella said.

Furthermore, don't expect to rest on your laurels anytime soon. "This is a very competitive industry, so you always have to keep your skills sharp even after you get the job," she said.



More work is available in the gaming industry than in movies. Medical imaging, scientific visualization, and photography provide interesting niches. Because most jobs are project-based, when you're working, it's important to set aside money for continuing education and future unemployment. Zandonella said it also doesn't hurt to have a skill to fall back on in times when CG work is scarce.

Above all, be prepared to work intensely hard for up to six-month stretches. "Sometimes people don't go home. They have hairdressers coming in and people picking up your laundry," Zandonella said. "If you're not willing to be dedicated, find another job." **CW**

(Photo courtesy of Siggraph: L'homme a Tete de Poule," entry in the Computer Animation Festival)

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