Orange County Regional Occupational Center

Pioneering 3D Graphics Before It Was a Thing

Where Do You Learn 3D Graphics for Film Before It Even Exists?

If you wanted to break into **3D graphics and animation for film** in the early '90s, you had a problem. The industry was still experimenting, schools weren't teaching it yet, and the **Internet didn't exist** to help you figure things out. There were no YouTube tutorials, no Udemy courses—just **books**. Lots and lots of books.

And so, I **bought dozens of technical manuals** from Barnes & Noble, choked them down, **read them multiple times**, and completed **every single lesson**. Every spare dollar I had went toward **books**, because I sure as hell couldn't afford a **formal education** at the time.

Still, I was determined.

The Orange County Regional Occupational Center – A Stepping Stone into the Future

Returning to **California (again)**, I brought with me something most people didn't have: **a personal computer workstation** and some *strategically acquired* software. My goal? **Master 3D tools before the industry even knew it needed them.**

The **Orange County Regional Occupational Center** had an **AutoCAD program** that I jumped into headfirst. AutoCAD 12 with **3D extensions** was cutting-edge at the time. I **graduated as the top student in my class** and immediately began applying what I learned to real-world projects.

Pushing 3D Graphics Before It Was Cool

While most people were still using traditional **illustration and paint software**, I started using **CAD and 3D graphics** to **design full-color static logos for clients**. The results were *insanely good*.

- The 3D software allowed me to **render logos faster** than traditional tools.
- The look was **new and amazing**—it appeared as if I had **photographed a physical logo** rather than drawn it.
- Clients loved it, and I quickly built a **side business** offering **3D-rendered branding** before anyone else was doing it.

The year was **1991-1992**, and while I was rendering futuristic designs, **Jurassic Park** was already in development. Spielberg—who was already my **favorite director**—was about to **change the game** for CGI in film. Little did I know, I would eventually **graduate from his alma mater, CSULB**.

Building a Powerhouse Workstation – With Donna's Help

Of course, all this **3D wizardry** required some serious hardware. That's where **Donna** was invaluable.

Donna **believed in me so much** that she maxed-out her credit card to help me **build my first serious workstation**. That's **true love, trust, and faith** right there.

The Specs:

- **Intel 386 processor** with a **math co-processor** (a must for 3D work)
- A whopping **8MB of RAM** (because why not go all out?)
- A **massive 130MB hard drive** (yes, megabytes!)
- A **gargantuan 15" CRT monitor** that weighed almost **50 pounds**

The Software Arsenal – The Best Tools (One Way or Another)

I made sure to get my hands on **the best 3D software available**, including:

- **AutoCAD 12 with 3D extensions** (great for precise modeling)
- **3D Studio by AutoDesk** (a game-changer for animation)
- **WaveFront** (workstation-class software, later used in big-budget productions)
- A few other **high-end 3D packages** (because one was never enough)

Recreating Star Wars Battles & Learning Animation the Hard Way

One of my biggest early projects was **recreating famous battle scenes from Star Wars** using **3D models**. I built a **library of as many Star Wars ships and vehicles as I could find** and got to work.

The most challenging? The **AT-AT Walker Battle** from *The Empire Strikes Back*.

The problem?

No surface detection. This meant keeping the **AT-AT's feet from melting into the ground** was a nightmare. I had to **manually adjust everything**, frame by frame, just to get a believable motion.

The World's First Fully Computerized Feature Film? Almost.

Shortly after that, I embarked on an **even crazier** project—one that, if completed, might have been **the first feature-length animated movie made entirely with computer graphics.**

The project was called *rAnt*.

- The story revolved around **a red ant in a world of black ants**.
- I planned to work **around the limitations** of the technology by using **photographic backgrounds** combined with **poly-primitive characters**.

- The ants were **animated, talked, and had their own little world**.

It was ambitious. It was groundbreaking. It was... doomed.

Before I could finish it, **Toy Story** (1995) happened, proving that **Pixar had the horsepower I didn't**. In retrospect, even if I had continued, I would have been **hopelessly underpowered** for a full-length feature.

Looking Back – At the Forefront of a Revolution

Being there at the beginning of **3D animation and CGI** felt like being part of a **secret society**—a group of nerds who **knew what was coming** before the rest of the world caught on.

- The industry was **changing** right before my eyes.
- **Rendering was a nightmare**, but we pushed through.
- **3D graphics were about to take over Hollywood**—and I had a front-row seat.

It was a **wild time to be a computer nerd.** And honestly? **I wouldn't trade it for anything.**