

## - Paul Van Camp: Software Engineer -

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**Career Overview:** I have an extensive and diversified software background that includes many computer languages and support tools in applications such as servers, data management, media file manipulations, real-time control, and photo-realistic image generation.

**Skills:**

- *Computer Languages: Javascript, Python, C++, SQL, HTML, CSS, MEL*
- *Services: MongoDB, MySQL, TCP/IP, SSH, GIT, Subversion, Heroku*
- *Artist Tools: Maya, Houdini, Naiad, Nuke, Photoshop.*

**Education:** Bachelor's degree in Electronic Engineering from the State University of New York (S.U.N.Y.) at Stony Brook in 1979.

**Award:** In 2001 the *Academy of Motion Picture Arts and Sciences* issued me a Technical Achievement Award for my work on an image-processing program called Nuke. They categorized my contribution as an "original accomplishment that contributed to the progress of the industry." C++ was the computer language used.

### Employment History:

Independent: Software Developer - Feb '17 to Present-

Am writing software for a motor control system for Fantasy Engineering. This system uses PIC series embedded microcontrollers from Microchip and a PC based interface written in C++ and QML using the QtCreate IDE.

Also created a multi-game smart-phone app for photo contests and icebreaker games at parties that uses the MEAN (MongoDB Express AngularJS NodeJS) Rest API and website to service the app. The phone app was created with Ionic and is available on Android as well as iPhone. Website URL: <http://icepix.fun> Javascript was the primary language used.

SCEA (aka Sony Playstation): Full Stack Developer - May '15 to Feb '17 -

Created a Python and PyQt based tool used to categorize and upload media files to a cloud-based storage service. Also created an uploading queue for performing the uploading as a background task. This uploading queue was created with a MEAN stack (i.e. using MongoDB, Express, AngularJS, and NodeJS).

WEVR: Lead Pipeline Developer - Feb '14 to May '15 -

Led the creation of a proprietary media conversion pipeline for converting multiple video streams into 3D panoramic movies to be played using Virtual Reality headsets. This pipeline used the Python computer language, Nuke image-processing tool, and a Deadline Renderfarm.

Prime Focus World - Sr. Pipeline Developer - May '13 to Nov '13 -

Led a development team of three programmers in the support of ongoing development of an international production pipeline that allowed artists, supervisors, and producers in multiple facilities to engage in

tight collaboration while creating visual effects for multiple film productions. Python and C++ were used.

Rhythm and Hues - Sr. FX Water TD - Nov '12 to April '13 -

Worked as a Technical Director to create computer-generated water for the film *Percy Jackson: Sea of Monsters*.

Sony Imageworks - Sr. Technical Director - Feb '12 to June '12 -

Worked on the water team on Sony Picture's all-CG movie *Hotel Transylvania*. Used Naiad and/or Houdini to create physics-based water simulations. Coding in was C++, VEX, and Bash Shell.

Reliance Media Works - VFX Pipeline Supervisor - Oct '08 to Jan '12 -

Was responsible for creating a visual effects pipeline for a new studio. Created a MySQL based asset-manger for tracking and updating models, cameras, and other digital assets and created a Renderfarm manager for distributed execution of image rendering across hundreds of Linux based computers. Headed up development of all other aspects of the pipeline including dailies, I/O management, color management, and renderfarm submission tools as well as plug-ins for Shake, Nuke, Maya, Naiad, and Arnold. Used Python, pyQT, Bash scripting, and C++ in a dual OSX/Linux network.

ImageMovers Digital: Sr. Technical Director - Oct '07 to Oct '08 -

Was responsible for tool and look development for photorealistic fire in Disney's all CG stereoscopic feature film "A Christmas Carol". Since a major character in the story was composed of fire, that fire had to be art-directable so as to reflect character emotions and to scare the audience. C++ was the computer language used.

Meteor Studios: Sr. Technical Director - Nov '06 to Sept '07 -

Developed artist tools and shaders as well as created elements for CG atmosphere, dust, and damage effects for the film: *Journey to the Center of the Earth in 3D*. Also developed tools for creating foot imprints along with reactionary dust and debris (using C++).

Electric Effects: FX and Crowd Animator - March '06 to July '06 -

Did particle effects and crowd animation for hundreds of flying ghost creatures which appear in the Sci-fi channel movie *Librarian II*. Also worked on pipeline issues and did some basic character rigging.

Sony Imageworks: Sr. Software Developer - March '04 to March '06 -

Did software development and support for asset tracking, motion capture data clean-up, and hardware based particle rendering. Also created a proprietary computer language for manipulating a particle system developed for *Spiderman III*. C++ was the computer language used.

Warner Bros. Animation: Lead Pipeline Developer - Dec. '02 to Feb '04 -

Created an effects pipeline for *Looney Tunes: Back In Action*, *Scooby*

*Doo Two* and future movie projects. Python, Perl, and C++ were used.

Centropolis Effects: FX Animator and Dept. Lead - Jan '01 to Nov. '02 -

Added CG dust, smoke, and flying spider guts to sequences for the film *Eight Legged Freaks* and worked on look-development for spaceship destruction sequences in the *Matrix* sequels.

Sony Imageworks: FX Software Engineer - Feb '00 to June '00 -

Assisted with muscle growth simulation to portray the appearance and disappearance of a man and a gorilla for the movie *Hollow Man*.

Disney: Software Developer - April '99 to Nov '99 -

Developed a flocking plug-in for animating simulated vehicular traffic for the movie *Bicentennial Man*. Did much of the final animation and assisted with the lighting and rendering for the final shots.

Square U.S.A.: Sr. FX Animator - Oct '97 to March '99 -

Created CG fire, fog, clouds, and dust for Square's all-CG *Final Fantasy Movie*. Worked with Maya, MTOR, Renderman, Shake, and Photoshop.

Digital Domain: Software Engineer - June '95 to Sept '97 -

Initially assumed responsibility for development of in-house image processing software (NUKE) and then transferred to production to become an artist. Worked as a programmer for *T2-3D*, *Chain Reaction*, *The Island of Dr. Moreau*, and *Dante's Peak* utilizing C++, TCL, and C-shell. As a Digital Artist I created an animated "evil planet" surface for *The Fifth Element* using Prisims, Renderman, and custom C++ code. For *Titanic* I was a member of the team which created CGI water elements.

Mass Illusions: Software Engineer - Nov. '94 to Feb. '95 -

Created a simple inverse-kinematics control program for a six-legged hydraulic motion-base used to simulate a flying vehicle in the movie *Judge Dread*. Also developed software to reconstruct the path of helicopter-mounted camera and reproduce the move with a Kuper motion-controlled stage camera.

Colortran Inc: Software Engineer - Feb. '91 to May '94 -

Developed software for theatrical lighting control systems. Wrote the control system for the Encore console which became one of the top selling lines of lighting consoles in the world. The consoles feature MIDI show-control interface and outputs DMX-512 lighting signals.

Forward Momentum Inc: Programmer/Engineer - Dec. '89 to Feb. '91 -

Created a graphical motion editor for Universal Studios' *Back to the Future* motion simulator theme park ride. Used Allen Bradley PLCs to create a show control system for Disney's *Ghosts, Myths, and Legends Haunted Tour of the Queen Mary*. Also wrote PLC software for controlling a fire-breathing dragon in MGM Grand's Las Vegas based stage production *EFX*. Installed robotic camera electronics for Hanna Barbera and Praxis

Film Works that were used in making the films *Pagemaster* and *Fortress*. Created a MS Windows based program for controlling complex lighting patterns used in an art sculpture displayed at The Center for the Arts at Yerba Buena Gardens.

Laser Media Inc: Manager of Digital Electronics - June '87 to Dec '89 -

Was manager of the R&D Electronics department. Developed a digitizing station for creating animations displayed with a laser, developed laser display equipment used for the *Pink Floyd World Tour* and other stage events, and developed a control system for a multiple output laser-simulation device using fiber optics in place of lasers.

Boss Film Corp.: Programmer/ Engineer - Jan '85 to April '87 -

For the films *Ghostbusters*, *2010*, *Fright Night*, and *Legal Eagles*, modified motion-control software to make it easier for camera operators to use. For the later films, I developed the software for a full-fledged motion-control camera system.

Singer Corp.: Programmer - Aug '83 to Jan '85 -

Led a group of three programmers, including myself, in the development of a 2-D graphics software package for use by the United States Army on large screen tactical computer systems.

Entertainment Effects Group: Programmer - Nov '82 to Aug '83 -

For the film *Brainstorm*, wrote software for a camera controller and then became a motion-control operator for the filming of effects.

Walt Disney Imagineering: Software Engineer - Feb '82 to Nov '82 -

Created software for an audio-animatronic playback system, worked on a video display controller at the EPCOT theme park, and documented the ride control system used on the Disneyland *Matterhorn* ride.

Burroughs Corp.: Electrical Engineer - Jun '79 to Feb '82 -

Did conceptual development work for Burroughs' Office-of-the-Future Multimedia-Digital-Local Area Network which was to combine voice, still images, and real-time light-pen annotations into both interactive and electronic-mail communications. The goals of this effort are still cutting-edge three decades later.