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WEB Projects

Greenwood Streetscapes. I was part of a team funded by the Seattle Department of Neighborhoods to find ways to make it easier for people to design their streetscapes and get sidewalks built. As web consultant on the project I conceived and implemented a website that provides tools for collaborative planning and design, including interactive GIS mapping tools, both for capturing data about what people already know and do, and for enabling them to draw design ideas over existing City GIS layers and aerial photos. To see this project visit http://greenwood.streetscapes.org (to see more sign in as psorey / passwd: secret). You can see the code for it at github.com/psorey/neighbors_maps.

ZebraTime. Online time tracking that communicates with QuickBooks. Developed with a collaborator, we are currently refactoring the project for enterprise scalability.

9021twelfth.com Super simple CMS / website generator for a real estate agent; each house has its own website, such as 9021twelfth.com. Agent can easily upload photos, update text. Agent was currently using a commercial site to do the same thing, but they could not style it to her specifications.

PaulSorey.com Simple Sinatra site illustrating both my software project experience and my public art. You can see the code for it at github.com/psorey/paulsorey.com.

BBA-Design.net Simple website for a product packaging designer, designed by her, implemented by me.

PROJECTS utilizing SOFTWARE Development

Rain Drum Artwork. Cedar River Watershed Education Center, North Bend, WA. For artist Dan Corson and Seattle Office of Arts and Cultural Affairs. Technical design, fabrication and installation of digitally-controlled water drip system to make rhythms. Windows software provides the user interface for uploading MIDI files, converting MIDI files to serial signals to send to the controller. The embedded controller turns on and off solenoid valves to create rhythmical drops of water, and winterizes the system in freezing weather. Installed 2001. Upgrades to system 2005-2007.

Roadworks. Indoor hanging kinetic sculpture for atrium lobby space at Pierce County Central Roadway Operations Facility, Spanaway, WA. Commissioned by Pierce County Arts Commission. Structural engineers: AHBL. Budget $135,000. I made a 3-D model of the sculpture, then wrote software to analyze the model and create the instructions to drive the embedded controller (Atmel microcontroller) and map all the light addresses to positions on the sculpture. The embedded software models traffic on the 'roads' by creating a random number of vehicles with random trips and makes sure 'vehicles' do not collide at intersections. Installed 2008.

Fractal Tree Archway. Outdoor sculpture at Skagit Valley College in Mount Vernon, WA. Commissioned by Washington State Arts Commission. Budget $82,000. I made a 3-D application to explore fractal geometries of trees: by varying parameters of branching angle, taper rate, and length of branches I found a fractal tree that would create a pleasing archway. Completed 2010.

Salmon Waves. Hiram Chittenden Locks, Seattle, WA. Commissioned by 4Culture and Seattle Office of Arts and Cultural Affairs. Embedded controllers (Atmel) control rows of 40 LED's to create images of swimming fish at dusk. This was also the first artwork designed using my 3-D software, described above.

Sustainability Award Artwork. Commissioned by Seattle Office of Arts and Cultural Affairs. Collaboration with Sustainable Seattle. Budget $20,000. The identity of a ball is determined by RFID, and stepper motors control the motion of the balls along the track. The balls stop at certain points and trigger display of relevant information (HTML pages) on the computer monitor. Installed 2004.

Flock, Hanging sculpture for *Technology Zone Exhibit*, Pacific Science Center, Seattle, WA. Budget $25,000. My first 'embedded software' project, originally using a TRS-80 to drive the electronics. Later retro-fitted with HC11 microcontroller board, and programmed in assembler code. Installed 1995.

EMPLOYMENT

Sightworks, Owner. 1999 to present. About half my time is spent working on public art projects, many of which involve writing software. I write 3-D applications to assist in the design and fabrication of 3-D curvilinear forms made from sheet metal. I also take on various other projects that interest me, from 3-D modeling, to assisting other artists with technical issues, to writing web applications.

For the last two years my work has been mostly software projects in Ruby and Rails.

Jones and Jones, Architects and Landscape Architects, Seattle, WA. 1988-1999, and contract work in 2009. Landscape Architect on many interesting projects including Woodland Park Zoo, San Diego Zoo, Singapore Botanic Gardens.

The second half of my time there I worked on highway design projects and wrote a 3-D application, **RoadWorks**, that enabled us to take the lead role of centerline alignment for several highway projects in visually sensitive areas. I also wrote 3-D modeling and editing software for terrain models and built models of several zoo projects.

EDUCATION

University of Washington, School of Art, Seattle, WA, **Master of Fine Arts in Sculpture,** 1993.

I spent most of my two years studying how computers work, and embedded hardware and software design. I wanted to be able to animate my sculptures. Flock was my thesis project, described above.

Utah State University, Department of Landscape Architecture and Environmental Planning**,** Logan, UT, **Bachelor of Landscape Architecture**, 1984.

During my studies I was introduced to Grid, a primitive GIS program that ran on an Apple II. I tinkered with it to make it do weighted averaging of cells. I also tried to write a program that would draw three-dimensional fractal trees but failed.

SOFTWARE TOOLS from above projects:

- Ruby on Rails (2)
- Mapserver, OpenLayers, open source GIS mapping tools for the web (1)
- Ubuntu Linux / Apache2 / Postgresql / PostGIS VPS server setup on Slicehost
- Basic Linux administration
- Git / Javascript / Prototype / some HTML5 / SASS
- C++, MFC, mostly in MS Visual Studio, also on SGI workstations (10)
- Open Inventor, open source 3-D C++ library by Silicon Graphics (10)
- Zilog Z-80 and Motorola HC11 assembly language (3)
- Atmel microcontroller + gcc compiler (2)