

# bob somers

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**video example work**  
vimeo.com/bobsomers  
**project blog**  
sigttou.com

## work

### CISCO SYSTEMS, R&D

*Graduate Level Software Engineering Intern*

Prototyped new graphical user interfaces for highly location-aware applications intended to run on a currently unannounced Cisco computing platform. Built prototypes of the interface using OpenGL ES on Google's Android operating system. Contributed to four patent applications related to the new platform that have been filed with the US Patent Office and are awaiting approval.

San Jose, CA 6/10 – 9/10

### CISCO SYSTEMS, TEST

*Software Engineering Intern*

Developed a testing framework named Calypso that stress tests SNMP performance of Cisco's service-provider routers. The framework creates complex polling patterns and generates graphical reports that identify and highlight critical performance bottlenecks. Calypso is being widely adopted throughout Cisco, won the Core Routing Unit's Test Innovation Award, and the prestigious Cisco RAS Award in Q2 FY 2010.

San Jose, CA 6/09 – 9/09

### IFIXIT

*Software Engineer*

Develop our Guidebook software platform for web-based manuals.

San Luis Obispo, CA 6/11 – now

### CAL POLY COMP. SCI.

*Grader and Lab Writer*

Grade assignments for Intro to Graphics and write CUDA labs.

San Luis Obispo, CA 9/10 – 6/11

### CAL POLY COMP. ENG.

*Open Lab Assistant*

Provide guidance to students taking embedded systems labs.

San Luis Obispo, CA 4/09 – 6/11

## school

### CAL POLY, SLO

*M.S. Computer Science*

Thesis: FlexRender: A distributed rendering architecture for ray tracing huge scenes on commodity hardware.

GPA: 3.86 9/10 – 6/12

### CAL POLY, SLO

*B.S. Computer Engineering*

Developed custom electronics for Supermileage Vehicle Team. Prototype car gets 2,358.7 mpg.

GPA: 3.33 9/05 – 6/10

### COURSEWORK

OpenGL Graphics

Advanced Rendering

Real-Time Graphics

Advanced Security

Computer Networks

Operating Systems

Parallel Programming

Computer Architecture

Comp. Sci. Fundamentals

Embedded Systems

PCB Design

Electronics Packaging

Circuit Analysis

Linear Algebra/Analysis

Business Law

Oral Comm.

Tech. Writing

Calculus

Physics

Capstone Project

Senior Project

### DELICIOUS BUZZWORD SOUP

**Langs:** C, C++, Lua, Java, Assembly, VHDL, PHP, SQL, XHTML, CSS, JS

**Tools:** Git, SVN, Qt, MSVS, HL2 SDK, Adobe Suite, Xilinx, AVR, Apache

## play

### CHRISTMAS LIGHTS

Designed and built a Christmas light animation system from scratch for fun. Over 9,000 lights on 32 dimmable channels synchronized to Christmas tunes broadcast over a low-power FM transmitter. Videos of the show in action at:

[vimeo.com/album/159981](http://vimeo.com/album/159981)

### CLUBS AND GROUPS

Cal Poly Game Development

*Club Treasurer*

Cal Poly Supermileage Vehicle

*Lead Electronics Engineer*

Cal Poly Symphony and Pep Band

*Trumpet Player*

Blue Devils B Drum Corps

*2008 Open Class Silver Medalist*

Boy Scout Troop 218

*Eagle Scout and Merit Badge Counselor*

### TWO CITIES GAME

Built a 3D game from scratch using C++, OpenGL, and GLSL. Worked on a team with 5 other programmers. Personally wrote dynamic cloud and circuitry-skyscraper shaders. Developed edge glow shaders and shockwave shaders for effects. Wrote custom HUD UI. Video at: [tiny.cc/2cities](http://tiny.cc/2cities)