

# Peter Schwer

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<http://www.peterschwer.com>

## Education

**Masters: UCSD in Computer Science, 2004, 3.6 GPA**

- Emphasis in Computer Graphics and Vision

**Bachelors: BYU in Computer Science, 2002, 3.6 GPA**

## Skills

**Languages:** C++, C, VB, SQL, Java, Perl, Matlab, Javascript, HTML, XSL, makefile, shell scripting, Ada95, .NET languages.

**Graphics:** OpenGL, GLUT, GLUI, Direct3D, ESRI, C/JMTK, SVG

**Tools:** SunStudio, Visual Studio, Oracle, STL, MS XML, xdesigner, dbx, gdb, vi, uxmetrics, purify, quantify, CVS, Windows, Solaris and Linux Variants.

**Process:** SEI CMM Level 5, ISO 9001:2000

**Clearance:** Top Secret

## Experience

**Software Engineer, NIDS II, SAIC, 2004-present**

NIDS II is the targeting application at US Strategic Command for nuclear war planning (more than 1 million SLOC).

- Created an ESRI and C/JMTK based targeting mapping application demonstration and presented it to the Government customers resulting in kudos from USSTRATCOM (in Java).
- Selected as lead of Weapon Optimizer and developed new algorithm analysis and population processing methodologies yielding order-of-magnitude performance improvements. Also developed solutions to accommodate numerical instabilities in optimization routines.
- Implemented technical solutions that contributed to exceptional feedback from the customer including 99% and 100% award fees resulting in over \$321K in profit and a 10 out of 10 formal client assessment.

**Teachers Assistant, CSE190 Rendering Algorithms, UCSD 2003**

- Assisted students in developing a ray tracer. Judged rendering competition (see [http://graphics.ucsd.edu/courses/cse190\\_s03.html](http://graphics.ucsd.edu/courses/cse190_s03.html)).

**Lead Web Developer and Administrator, BYU 2001-2002**

- Programmed and administrated the RELATE web site. Involved working with ASP, XML, XSL, VBScript and legacy code (See <http://www.relate-institute.org>). Administered several web servers during a period of 1000% growth in site usage.
- Developed questionnaire generation software for web administered surveys (in XSL, SQL, ASP and VBScript).
- Developed a distributed report generation utility for complex custom reports (in XSL and Visual Basic using COM).

**Student, BYU and UCSD 1995-2004**

Notable projects:

- T-Splines modeling software (Masters Project with Dr. Sam Buss) (in C++).
- Thin-film fluid dynamics software for rendering watercolor paint (in C++).
- Facial expression synthesizer using ratio images (in Visual Basic).
- Shape-context matching software for object tracking (in Matlab).
- Server and client software for multiple-stream file transfers (in C++).