

Gary Peterson
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Quick Summary

- Twenty five years of object oriented design and programming (Smalltalk, Java, JavaScript, Node.js, C++, ...)
- Part of five person team that developed framework and original software for:
<https://www.bentley.com/en/products/product-line/hydraulics-and-hydrology-software>
- Partnered with mathematician to develop map processing software (C++)
- Primary project, development and support person for sales, order and customer care application that generated 125,000 orders/week (Smalltalk, Java, HTML, CSS)
- Part of small team that supported, fixed, enhanced, and extended Cargill's "Platinum" Lynx system (Smalltalk, XML, SQL Stored Procs)
- Conducted research for the State of Minnesota and received perfect performance evaluation scores
- Computer science faculty at North Hennepin Community College (NHCC), Minnesota

Experience

Cargill, Wayzata and Hopkins, MN

2010 - Aug, 2017

- Mexico Mercurio Jupiter Unit XML interface -- Design & implementation of truck and train (composite) units. Exhaustive unit testing was required as an extreme schedule did not allow for quality control team testing before production deployment.
- Mexico Uniwin XML unit unload interface -- business required "unloads only" but flexible design allowed addition of loads (with out code changes) when business changed mind on this limitation. Allowed integration of Mexico scales.
- Implemented compuweigh smart truck XML unit interface using industry standard AgXML. Allowed integration of "Smart Truck" unmanned scale systems.
- Designed and developed unit entry import (spreadsheet source data). Allowed user to import e.g. 100-car trains rather than error-prone manual entry of each.
- Market Price Quote import (spreadsheet source data). Allowed user to import large lists of quotes increasing efficiency
- Design and implemented real time futures order interface. Allows user to have real time updates compared to daily updates. Source data: table insertions by delivery components.
- Designed and implemented Cornucopia XML unit interface. Allowed for integration of older legacy scale system.
- Developed "Patch Builder" used by Lynx Smalltalk team to build patch in minutes. Included post patch validation. Allowed timely system updates for QA team compared to previous lag times of up to a week.
- Migrated Lynx Application Server (LAS) system from Visual Works 7.4 to 7.9.
- Completed server upgrade and consolidation project including reconfiguration from six windows servers to one windows server utilizing available Unix server capacity.
- Developed Storage Accrual calculation subsystem. Parallel processing mechanism was developed because of limited calculation window and business concern over heavy weight of calculations. The parallel processors finish calculations in approximately 90 minutes, well under compared to maximum allowed time of ten hours.
- Cargill Risk Management Product interface redesign and re-implementation. The redesign reduced the CPU utilization from 100% to less than 1%.

Envirocience (EVS), Eden Prairie, MN

2006 - 2010 (with various projects 1996-2006)

- Developed and applied document generation system for several research projects. Research projects received perfect scores for the “Consultant Performance Evaluation” (difficult to attain) The research projects required extensive research, technical writing and communication.

Samples of technical writing:

<http://www.dot.state.mn.us/maintenance/pdf/research/SaltSanderCalibrationGuide.pdf>

<http://www.dot.state.mn.us/maintenance/pdf/research/AntiIcingGuide8Full.pdf>

<https://www.lrrb.org/pdf/2009RIC08.pdf>

http://clearroads.org/wp-content/uploads/dlm_uploads/09-02_WisDOT-0092-10-18-Final-Report.pdf

Deluxe Corporation, Shoreview, MN

1996 – 2006

Developer (Smalltalk and Java)

- Developed, supported and enhanced Sales, Order and Customer Care Software system for call center with approximately 500 users.
- Developed WYSIWYG editor for entering customized printed products. Editor featured background “ghost lines” as technique to guide users
- Part of small team that migrated entire Smalltalk system to new operating system during one year project.
- Built address parser, spell checker assistant
- Redesigned bank and codeline analysis subsystem from view-centric to model-centric design. Several quick enhancements followed redesign (that were being blocked by original design)

Vector Vision, Edina, MN

1995 - 2000

Mapping Software Programmer (C++)

- Programmer for several graphic and mapping programs including image positioning system program, which was a precision tool used by our clients for raster and vector image adjustment, insertion and matching. Program supported vector types including DXF, SHP, MIF, user ASCII FILES, and supported most raster types. Included custom mathematical algorithms for image control.

Haestad Methods (Bentley), Waterbury, CT

1993 – 1995

- Part of original five person software team who developed framework for hydrologic and hydraulic (H&H) object oriented framework and base classes for Haestad Methods (Bentley). This framework was used to build a large suite of H&H software used by tens of thousands of commercial users.
- On teams of two to five persons that developed H&H software (utilizing mentioned framework)
<https://www.bentley.com/en/products/product-line/hydraulics-and-hydrology-software>
- Developed mathematical software that modeled all possible Chow hydraulic profile for culvert hydraulics.

Education

- B.S., Civil Engineering, University of Minnesota, Minneapolis, MN 1987
- 40 Computer Science credits (after graduation)
- SCJP - Sun Certified Java Programmer
- Adjunct professor of computer science at North Hennepin Community College (NHCC), Minnesota

Hobbies

- Backpacking, biking, outdoors, and volunteering
- Math, Project Euler, etc.