

Maurilio Torres

Senior Software Engineer

Expertise

Database Design and Management, Programming

Education

M.B.A. (MIS), 1988

University of Minnesota, Minneapolis, Carlson School of Management

B.S. (Civil Engineering), 1979

Universidade Federal de Minas Gerais, Brazil

Professional Experience

2007 – Present

*Itasca Consulting Group, Inc., Minneapolis, Minnesota,
Senior Software Engineer*

2002 – 2007

*RenewData Corp., St. Louis Park, Minnesota
Senior/Lead Software Engineer*

1999 – 2002

*Pitney Bowes, Eden Prairie, Minnesota
Principal Engineer*

1996 – 1999

Senior Software Engineer

1994 – 1996

Staff Software Engineer

1988 – 1994

*Engenharia, Automacao e Controle - EAC, Sao Paulo, Brazil
Analyst/Programmer*

1987 – 1988

*The Minnesota Daily, University of Minnesota, Minneapolis, Minnesota
Analyst/Programmer*

Project Experience

Itasca Software Development: Software development activities associated with the Itasca codes based on a lattice scheme: *BLO-UP* (blast simulation), *SLOPE MODEL* (slope-stability analysis in fractured rock masses), and *XSite* (hydraulic fracturing in naturally fractured reservoirs); software development activities associated with the following Itasca commercial codes: *3DEC* (*3-Dimensional Distinct Element Code*), *PFC3D* (*3-Dimensional Particle Flow Code*), and *FLAC3D* (*Fast Lagrangian Analysis of Continua in 3 Dimensions*). Creation of an automated build-and-test server for Itasca codes. Port *XSite* to Linux platform. Implementation of parametric study capabilities in *XSite* with the ability to run several simulations in parallel using Sun Grid Engine. Creation of graphical user interfaces and data visualization tools (OpenGL based).

Research and Development

Software Design: Extensive database design and management; creation of the first prototype of RenewData Active Vault database schema, an Oracle database designed to minimize storage requirements for very large e-mail archives (currently being patented); participation in the design of a multi-tier, distributed, scalable, highly-available transportation system (TMS) and a set of tools to integrate the TMS seamlessly with other host applications with minimal disruption of existing processes; redesign and normalization of existing databases to comply with relational database models; design and development of several GUI applications; design of scanner controller allowing applications with different bar-code configurations to run in the same

computer with a single scanner, automatically resetting configurations between applications; design and development of a Virtual Device Driver (VxD) that allows a Windows-based application to “screen scrap” another application; porting of EAC systems from DOS to UNIX; and system-level support for Itasca codes.

Programming: Object-oriented programming, multi-thread programming, Agile Development; fluent in C/C++, Visual Basic/VBA, C#, 8086 Assembler, QT.

Management: Led a team of developers in the design and development of middleware to integrate logistics systems with host applications via screen scrapping, ODBC, and XML files.