Waddell
Software Development LLC

Improving your productivity through software development

Project Updates

Severn Trent Laboratories

Severn Trent Laboratories (STL) is largest group of environmental analytical laboratories in the United States. These laboratories come from diverse backgrounds and offer a full range of complimentary services that make STL a leader in the industry.

STL-Knoxville is a full-service environmental analytical laboratory providing services to consulting firms, government and industry. Their specialty organics laboratory offers the analysis of dioxins and furans in a variety of environmental matrices by high-resolution gas chromatography/mass spectrometry. This capability has also been employed in the ultra-trace analysis of PCB's, PAH's and pesticides.

Bill Waddell spent over ten years building and supporting an environmental laboratory information management system in a company with similar capabilities. This specific experience, coupled with his knowledge of legacy operating systems, made him a perfect match for STL-Knoxville's needs.

In mid-1999, Waddell Software Development LLC was contracted to review the data retrieval and transfer processes and design programming changes to eliminate the need for operators to manually input data. The system was designed by WSD president Bill Waddell and written in Visual Basic at the customer's request.

The set of conversion programs named **IsoCalc©** has been successfully installed at STL-Knoxville to automate the data handling for the analysis of dioxins and furans. The operators can now select a sample batch, review the Peak List and assign specific compound names to any of the peaks. After identifying peaks, the operator can open a Result List displaying only those compounds of interest with corresponding Retention Times, concentration, detection limit, recovery percentage and any applicable flags. Once approved, the results are stored in a local server to be collected soon after by the centralized corporate computer network.

Glen Raven Inc.

In 1996, Glen Raven Inc. a yarn company based in Glen Raven, North Carolina, realized that to stay competitive, it needed to modernize its dyeing process. The privately held company sent executives around the country to find the best equipment, then spent several million dollars creating what is acknowledged to be one of the most-advanced dye-house operations in the industry.

Why outsource to Waddell Software Development?

- *Reduce fixed costs.*
- *Increase skills and experience.*
- *Cover any gaps in capacity.*
- *Manage IT costs more effectively.*
- *Stay focused on your core business.*

Waddell Software Development LLC also provided written User Manuals, program based Help files and trainer assistance to support the success of this conversion. In addition, test scripts were designed and tested prior to installation to validate the programs.

In 2001, the programming partnership continues as Waddell Software Development in collaboration with the staff at STL-Knoxville modify **IsoCalc©** to automate the data retrieval and reporting of samples analyzed by US EPA Method 1668A for HRGC/MS of PCBs. This will give STL-Knoxville the capability to report all 209 specific PCB congeners.

Turnaround Time - Dioxin Analysis - 8290, 1613, Method 23
Analysis Date to Quantime Data Entry

Graph* illustrating dramatic decrease in TAT - <u>after</u> IsoCalc© fully implemented.
*.pdf copy available at WaddellSoftware.com

Glen Raven update continued from page 1 ...

Today, Glen Raven's dye house is almost totally controlled by robots, which select the proper yarn spools and then insert and remove those spools from the dyeing chambers. Humans don't touch the yarn until it is ready to be packed.

An integral part of this complex production operation is the programmed link between the process control system and the administrative order control system. This connection was critical because it allowed the production plant to focus on the highest priority orders.

The communication programming was written using the C++ language by an outside contractor. The programs themselves were functional, but lacked technical documentation and object oriented features. Glen Raven did not have programmer on staff that was proficient in C++. This left them in a vulnerable position regarding current programming modifications, as well as future on-call program support for these systems.

Waddell Software Development, LLC was contracted to create documentation so that in the future programmers could understand the function, scope and flow of these C++ programs. Appropriate comments describing the interactions of the program segments were added to the code. External documentation will soon be created to speed up future efforts to write new features into the programs, as well as, minimize the time required to upgrade to new versions of the programming language. Furthermore, Waddell Software Development has become familiar enough with the system to provide programming enhancement and debugging on an on-call basis.

Bill Waddell is the company's founder and senior systems analyst. Bill has decades of experience managing projects and improving information technology for organizations throughout the U.S. His contributions in problem-solving and project management have resulted in reduced costs, increased productivity, and long term efficiencies in a broad range of businesses.
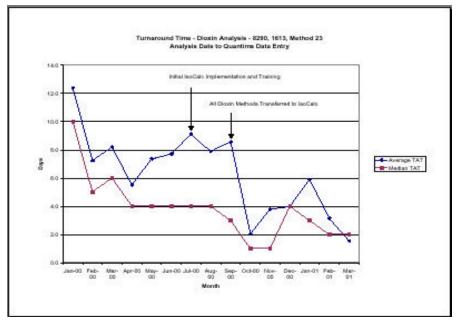

Phil Fields provides technical support in the form of user manuals, on-line help files, and test scripts for software validation. Phil has also developed web pages and provided on-site training sessions in Microsoft and Adobe products. Phil's previous experience includes marketing, customer service, cost accounting and PC-based solutions for a variety of organizations.

Web development updates

Orange EMS and Rescue Squad

OEMSRS has 150+ members serving as paid staff and volunteers operating out of four different station houses. Scheduling this many people, to cover a fast growing population base, had become a logistical challenge.

In 2000, Waddell Software Development LLC (WSD) was contracted to design and maintain a web site for the OEMSRS. The process began by posting general information about the Squad, including list of Officers, list of Directors, list of general membership and current communications from the Officers. It soon became apparent, however, that the web site could provide a far greater advantage to the membership.

WSD researched available web-based scheduling programs which would effectively allow any member with access to the Internet to enter a Members Only portal and be able to see the overlapping EMS, Rescue, Special Events, and training schedules weeks in advance. Furthermore, this web-based system could allow the members to sign-up for unfilled time slots or request trades, without leaving their homes.

WSD chose **WebEvent™** as the server based calendaring/scheduling program to mange its multiple calen-

www.OEMSRS.org

dars in an Internet environment. **WebEvent™** had several features, which made it the best program for OEMSRS's application. Full access to the **Web-Event™** source code meant that WSD could create custom calendaring and scheduling solutions, such as vehicle maintenance and individual training records. Because of its non-profit status, OEMSRS qualified for a substantial discount of its licensing fees. Additionally, the early support from the technical staff was valuable in the providing advice and an evaluation copy until the server and T-1 were ready for final installation.

The OEMSRS web pages and Members Only portal combine to provide a valuable public relations tool, as well as, a practical solution for the members to communicate with each other and maintain their in-house multi-calendar scheduling system.

Advanced Accounting Solutions, LLC

Advanced Accounting Solutions recommends and supports quality accounting software packages to small and medium-sized businesses. The company has had a domain name and web pages for several years, but wanted a new design to incorporate changes in branding. WSD designed a new site and transferred the files to an established hosting company within the contracted specified time frame and budget.

www.AdvancedAccounting.com

Future Projects

Playmakers Repertory

Waddell Software Development is excited about a new trade in-kind arrangement being worked out with the PRC. WSD will develop the web presence for the PRC's 2001-2002 season in exchange for advertising and other promotional considerations in the PRC's marketing campaign.

Aramco

Waddell Software Development has been asked to modify the **Web-Event™** Calendar/ Scheduling program licensed to the Saudi Arabian Oil Company, a global leader in the petroleum industry. The code needs to be modified so that Thursday and Friday were designed weekends and the normal work week started on Saturday.

CDC

Later this year a team of contractors will be working for the Centers for Disease Control in Atlanta to develop custom software to process data from time-of-flight mass spectrometry instruments. WSD's role will be to validate the program under strict QA/ QC guidelines.

Waddell Software Development

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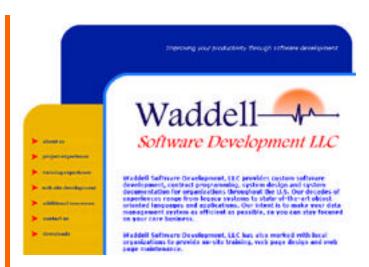Bill's Office Phone: 919.942.5888
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WWW.WADDELLSOFTWARE.COM**

What can Waddell Software Development do for <u>your</u> IT operations?

- **Reduce processing time**

- **Reduce manual data input**

- **Save data review time**

- **Reduce overhead costs**

- **Write user manuals**

- **Provide script tests for validation**

- **Train operators**

Visit Waddell Software Development's web site for a summary of our completed projects, profiles of our staff, description of additional resources, and a link to other web sites we have developed.