

# STRATEGIC TECHNOLOGY AND RESEARCH

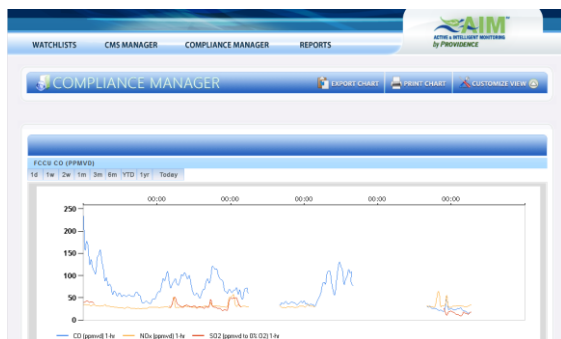
## Software Development

Mission Statement: Provide technological innovation and cost effective solutions to our clients.

The Strategic Technology and Research (STAR) Group is comprised of talented individuals with a diverse background. We bring a unique perspective to technical problem solving and provide our clients with cost effective solutions which leverage the most appropriate technology available. Although our solutions typically cross multiple disciplines, our services can be categorized into the following segments:

### SOFTWARE SOLUTIONS

Combining the software development capabilities of the STAR Group with the domain expertise of various Providence media groups allows us to provide turnkey environmental compliance solutions tailored to the specific needs of our clients.



### Web Based Software Solutions

- Data Acquisition and Handling for source monitoring
- Environmental Compliance System
- Greenhouse Gas Tracking, Reporting and Planning Tool
- TCEQ MSS Permit Compliance System
- Insurance Claims Tracking System
- Employee Resource Tracking System

### CUSTOM APPLICATION DEVELOPMENT

Custom web based software solutions using industry standard tools such as ASP, .NET 2.0 and 3.5, SQL Server 2005/2008, Ajax and Crystal Reports. These software solutions can meet the needs of a variety of environmental or business requirements and can be deployed as internet or intranet applications.

Robust Microsoft Office solutions including MS Access databases and MS Excel spreadsheets. Utilizing Visual Basic macros, these solutions provide data collection and notification features, as well as complex calculations and formatting.

### SYSTEMS INTEGRATION

Turnkey monitoring systems including Continuous Emissions Monitoring Systems (CEMS) and Mobile Air Monitoring Vehicles. These systems combine instrumentation, communications, software development, and data collection to provide an integrated solution.



Recent projects include

- CEMS (SO<sub>2</sub>, NO<sub>x</sub>, CO, CO<sub>2</sub>, NMOC)
- Mobile Air Monitoring Lab (Phoenix, Houston, Baton Rouge)
- Meteorological stations (solar powered, RF enabled)

### COMMUNICATIONS AND DATA COLLECTION

Experience with a variety of communications technologies:

- Wireless (Cellular, RF, 802.11)
- Wired (Fiber, TCP/IP, RS-485, RS-232, Modbus)
- Network (TCP/IP)

Experience with a variety of data collection technologies:

- Data loggers (Campbell Scientific, ESC)
- Process data historians (PI, Aspen, Wonderware)
- SQL Server (web services, automated file uploads)

### DATA ANALYSIS

Provide complex data analysis services to support a variety of industrial and environmental sectors. A recent project studied 14 years worth of air monitoring data for the San Joaquin Valley APCD to support environmental policy and control strategies.

### RESEARCH

Provide research and consulting services focused on developing new technologies and expanding the application of existing technologies. Current research efforts involve sophisticated image processing techniques which are capable of autonomous leak detection of gaseous hydrocarbons.



PROVIDENCE

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Providence Engineering and Environmental Group LLC

Offices located throughout Louisiana, Texas and Mississippi