



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization:
Army Analytics Group

Project Name:
Arlington National Cemetery Gravesite Accountability Research Tool

**What social/humanitarian issue was the project designed to address?
What specific metrics did you use to measure the project's success?**

Over 147 years, various paper-based record-keeping systems used at Arlington National Cemetery resulted in a loss of confidence in the ability of the U.S. Army to properly manage and care for what is universally recognized as a national shrine. The inability to answer simple questions led to multiple investigations and inquiries. Arlington National Cemetery was easily one of the most audited and inspected government entities from June 2010 to the present. The Army Analytics Group (formerly the Army Data Center Fairfield) immediately began to evaluate and document the scope of the problem and the best business practices that could immediately ameliorate it. The goal of the project is to accurately account for all individual gravesites and memorials and to integrate multiple databases into a single authoritative set of information. The measure of success is the ability to bring all documentation into a single database and the method to do that is the Gravesite Accountability Research Tool.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

AAG scoped over 1.2 million individual records to be integrated into the research tool. Records varied in form from Civil War era logbooks to simple data entry systems designed to schedule events but lacking the auditability of enterprise-ready databases. AAG scoped the entire effort and realized the tool would be built as processes and data analysis was ongoing. Looking to the future, they leveraged emerging technology to produce data capture and analysis tools enabling the first-ever look at all cemetery records. AAG built and fielded an iPhone application to collect over 475,000 images of markers throughout the cemetery. This private app used industry best

practice to capture data once with minimal operator manipulation and transfer it directly to central data repositories. Eliminating the man-in-the-loop directly addressed the need to prevent the introduction of further human error. Some 500, 000 paper records were digitized into 4 separate efforts, which included scans of the documents and appropriate metadata. Two extant data systems, one belonging to the Veteran's Administration, were integrated and the data they held exposed to analysts. Although not considered wholly reliable, the data they held was the basis for establishing the data fields and format for the resulting data set. From these 1.2 million records, AAG programmers developed the detailed association tool that automated the initial linking of "like" records and allowed analysts from across the Army to review and associate them into a case management system. Knowing that the only constant was "place," AAG keyed the entire effort to this key field, which in turn allowed the first-ever full accounting of gravesites at Arlington National Cemetery. Due to incredible pressure to get started, AAG fielded an initial set of tools and continually made rolling modifications to increase capability and ensure reliability. The tool was in use before all the scans were completed and prior to the establishment of all business rules for analysis. This meant a constant workload and continual change. AAG stood up to the task, writing over 700 individual enhancements resulting in a research tool that enabled the Army to report to the Congress that we had reviewed all records.

Please list the specific humanitarian benefits the project has yielded so far.

The Army is given the sacred trust to run Arlington. The loss of faith that records were correct and that burials are given the due diligence they require meant that the Army did not live up to the high standards required. The only way to regain the faith and confidence of the American people was to move very quickly to establish a digitized and auditable database of all interments. The grief of losing a loved one should not be magnified, nor the grieving process extended, due to bad technology and the inability to audit records. AAG provided the information technology framework to immediately address a national disgrace, and in so doing, turned into a demonstration of how to quickly field cutting-edge technology to address a critical problem.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

The inability of the Army to accurately account for gravesites at Arlington National Cemetery was a national disgrace. AAG is providing the information technology expertise to gain and maintain accountability. The Congress, the Army and the American people demand that this be put right and never happen again. Using best practice database design and a web-based interface that serves data to analysts in the Washington, D.C., area, the California-based AAG is making a huge difference in how we maintain faith with those who have served and are interred at Arlington National Cemetery. They implemented a data life cycle that allows for collection, assessment, analysis, and disposition of data that represents the sacrifices of Americans across every war this nation has fought. Americans will never hear of the Army Analytics Group, but the work AAG has done and the technology they implemented touches each family and loved one. The true mark of their success is that they won't be noticed at all. And that is why we, as the technology community, should applaud their efforts and celebrate their selfless service.