



Using modern technologies to understand the past

Not just a map—GIS technology comes to New Orleans cemetery

by Ann Masson

New Orleans' entrance into the new world of high-tech imaging and data management at a cultural site is happening in one of the city's oldest places.

Have you ever lost your way on the labyrinthine paths of St. Louis Cemetery Number I? Once a visitor leaves the Basin Street gate area, confusion is almost inevitable. Where is that handsome wrought iron cross? Which direction is the Claiborne tomb? Although there is a certain pleasant mystery attendant to such confusion, being able to locate a particular tomb has its advantages. While Sam Wilson's popular guide to the cemetery contains a route marking the major tombs, until the University of Pennsylvania's GIS project, no detailed map has been available to visitors—and this computer-based tool is much more than just a map.

GIS is the acronym for Geographic Information System, an advanced technology that integrates geographical

information with other data to facilitate visualization and analysis. The term includes the hardware, software, data, and operating personnel necessary to the process. The core data is the spatial location of the object, site, or feature, often defined by longitude, latitude, and elevation. Once this is obtained, layers of information from many different sources can be integrated into the system. Maps, photographs, natural features, and documentary information are but a few examples. Capturing and editing the data is tedious and time-consuming, but the reward is that GIS can integrate and visually present information that is difficult to associate in any other way.

The technology can also create 3-dimensional perspectives of both natu-

ral and constructed physical features. This can help users understand existing conditions, visualize the effect of proposed changes, or test hypotheses about site alteration. GIS can produce screen or paper graphics to convey

Deadspace A cemetery collaboration

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Preservation in Print is featuring a series of articles reporting new discoveries, technological developments, conservation techniques, and preservation progress at one of America's most outstanding cultural landscape sites—St. Louis Cemetery Number 1 in New Orleans.

Now more than two centuries old, St. Louis Cemetery Number I is the focus of a cooperative effort to develop a model conservation plan that can be used to preserve other local cemeteries, as well as set the direction for future efforts at St. Louis. Named "Deadspace" by participating University of Pennsylvania graduate students, the complex project utilizes modern technology to aid in understanding history and conditions at the site.

While the restoration of three model tombs is the project's centerpiece, other valuable work is being accomplished. Surveys and maps, drawings and photographs, materials analyses and scientific tests, and an exciting new website are some of the products resulting from the work of faculty and students from the University of Pennsylvania and Tulane's School of Architecture. Funds for the first phase, which is nearing completion, were provided by the National Park Service through the Department of Culture, Recreation and Tourism, Office of Cultural Development, Louisiana Division of Historic Preservation; The Samuel H. Kress Foundation; Save Our Cemeteries, Inc.; and the New Orleans Archdiocese. The Department of Culture, Recreation and Tourism has extended its support to the second phase, and additional funds are being sought from other sources.



information, analysis, or simulations—literally creating views that have never been seen before. Once captured, the data can be updated and manipulated in

myriad ways to increase understanding and enable better decision-making.

GIS is being used more and more in government, business, and community endeavors, and it is heralded as the mechanism by which global environmental change can be analyzed. It's also catching on in cultural resource projects where large quantities of physical and documentary data must be analyzed to accomplish preservation and planning goals. One example is the creation of a database for the fifteen Civil War battlefields in the Shenandoah Valley of Virginia, part of a long-term project to inventory sites for the American Battlefield Protection Program.

"Deadspace" is the first cultural site project in New Orleans to utilize GIS technology. The database will include digital maps of about 700 individual plots and tombs, each surveyed by location, erection date, type, style, builder, materials, condition, repair, and demographics of the interred. It will also contain maps of topography, vegetation, walls, and paths. Processing capabilities will include spatial queries, statistical analyses, simulations, predictions, and site allocation. Users will be able to pose questions such as: Where are the tombs in the worst condition? Who owns a particular tomb? When was it built and who is buried there? The sys-

tem will also address future possibilities by creating "what if" scenarios related to such subjects as visitor routes, drainage, and conservation. GIS will also be used to create animations and other evocative visualizations to help solve problems and enhance public appreciation.

On-line now at the website are some exciting new ways to view St. Louis Cemetery No. 1. Each tomb has a map number by which users can access visual and archival information about each. The database incorporates survey and documentary information from the Historic New Orleans Collection, detailed recent survey forms with condition assessments, photographs from previous surveys and antique sources, new project photos and drawings, and a wealth of other information. This is just the beginning. One day, a researcher will be able to obtain, for instance, a 3-dimensional image of tombs built by people with Spanish surnames. Or a map of all cast-iron fences. Or a list of tombs that need assistance, along with detailed conservation plans.

Futuristic, yes, but not too far away. New Orleans' entrance into the world of high-tech imaging and data management at a cultural site is taking place at one of the city's oldest remaining historic places. GIS is a tool to ensure its future, not only as a burial place, but also as an authentic manifestation of the past.