

lar shifts. Studies, based on National Register data, profile changing architectural trends reflected in building details and usage. Integrating this information into a GIS allows users to explore developmental changes at Port Penn. Because GIS allows the retrieval of a multitude of documents related to various themes, its value as a forum for multi-disciplinary research and planning cannot be overestimated.

Entire states can be profiled in GIS. MAPIT (Mapping and Preservation Inventory Tool), created by the National Park Service, is a GIS program created for SHPOs. With MAPIT, users can locate, inventory, and study a state's cultural resources. Similar to the Port Penn project, MAPIT links to databases, images, documents, and historic records, as well as extensive geographical data to provide as much information about each resource as possible. The MAPIT application is a customized version of ArcView7[®]. The pilot project, Virginia MAPIT, contains a state view; users can view and query cultural resources on a large scale to identify trends or distribution patterns. At the county view, cultural resources and their contexts are shown in detail emphasizing localized patterns and providing a preservation planning platform. Property view describes an individual site, linking to maps, documents, and images.

Each view reflects the SHPO organization containing specific functions for all seven program

areas. Specific data is made available to update, edit, browse, or for analysis. In addition, a wealth of context information provides a more complete set of tools for either viewing or manipulating cultural resource data, such as digital quadrangle maps, census data, political boundaries, physical features, or shared data from other agencies. This format integrates the SHPO's archival resources; paper files and paper maps are joined making them easier to use.

The goal of the MAPIT project is to develop an effective and powerful GIS tool for SHPOs and THPOs. GIS technology presents many new possibilities for historic preservationists: the integration of data with easy access and querying capabilities will make our cultural resources more accessible, ultimately benefiting the public. Maintaining accurate and current information, shared with other governmental agencies across states and regions within a cultural resource GIS, will also lead to better planning and decision-making, and, ultimately, better cultural resource management.

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Portable Non-Contact 3D Scanner

The ShapeWorks[™] scanner is useful for imaging archeological sites and artifacts. Carvings, pits, and objects can be easily and quickly scanned in the field with a portable version of the scanner. Vitana Corporation manufactures and markets this non-contact 3D scanner for modeling, reverse engineering, and archival applications. ShapeWorks[™] is a complete hardware and software solution that includes digitizer, motion platform, PC, and software to scan, align, merge, and



edit complex objects. The InSight sensor is made in four different versions with varying depths of field and accuracies from a 3 inch Depth of Field (DOF) to a large sensor with a 52 inch DOF; all are mountable on a panning motion platform that rotates up to 315 degrees. ShapeWorks[™] acquires 3D XYZ points in inches or mm at a rate of 15,000 per second. 3D files can be exported in many different formats from plain XYZ point clouds to WRL and DXF files. 3D editing and compression software is included. More information can be found at:

<www.vitana.com/shapeworks/index.html>.

*Tom Schoenhofer
Vitana Corporation*

*Scan of a bas-relief cast lead decoration
with 49,000 valid 3D points. Digital image
courtesy of Vitana Corp.*