Implement Cultural Resources Geospatial Database and Tool

Background:

DoD lacks an enterprise data management system for the cultural resources functional area. In the late 1990s the United States Air Force (USAF), through the Headquarters Air Combat Command, began a pilot study to develop such a system. A 1998 Legacy project compared data models in use from around the country in order to design a model more comprehensive and logical than the current Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) model. Once developed, this model was then populated with data from three USAF installations: Avon Park Range, Beale Air Force Base (AFB), and Langley AFB. The process of data entry was a valuable exercise in validating the provisions of the model and identifying those areas that required further refinement. With further Legacy Program support and in coordination with the CADD-GIS Center, the USAF developed the Military Cultural Resources Analysis Database (mCRAD) data model.

Objective:

The objective of this project was to further refine the mCRAD model refinement, and to promote its use within DoD.

To accomplish this, the project identified DoD installations in Virginia from which to obtain data to continue populating the data model. The goal of the statewide military application of the mCRAD was to identify strengths, areas for improvement, and to publicize its availability.

Summary of Approach:

ACC identified three DoD installations in Virginia that were willing to share their data for entry into the mCRAD format: Fort Eustis, Naval Base Norfolk, and Naval Weapons Station Yorktown. These installations were selected to draw upon the other three services not included in mCRAD previously, and to include diverse cultural resources. Geospatial and tabular data from each installation were entered into the mCRAD format. In addition, the project evaluated the method of capturing data on historic buildings and structures. Finally, the project considered the state of automation in State Historic Preservation Offices in states with DoD installations. These efforts permitted a revision of the mCRAD model to improve its applicability and coordination with existing systems.

Benefit:

Cultural resources occur on nearly every DoD installation. Accurate, up to date cultural resources information is essential to inform decision makers, support military operations with minimal constraints. facilitate project review, ensure legal compliance, and practice good stewardship. The mCRAD model is now used by the USAF to develop a cultural resources module for the Enterprise Environmental, Safety and Occupational Health-Management Information System (EESOH-MIS). Further application of the mCRAD model will assist DoD in balancing stewardship with readiness.

Accomplishments:

- Built a relational data model for cultural resources
- Produced the entity-relationship diagram
- Defined the user community
- Defined process requirements
- Coordinated with SDSFIE model
- Developed fact sheet and frequently asked questions
- Produced reports for FY98 and FY01 projects
- Populated model with data from 6 installations
- Built a web-based, controlled access, viewer
- Implemented mCRAD as the kernel of the USAF EESOH-MIS cultural resources module

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Copies of this factsheet and the mCRAD implementation report are available online at: https://www.denix.osd.mil/denix/Public/Library/NCR/archaeology.html