

NAVFAC Information Technology Center (NITC) – Onsite Support; GeoReadiness Repository (GRR)

"GISi understands that meeting the demand for staff augmentation means providing quality people and unwavering back-office support. Their staff has become a critical asset to this organization and an integral part of our team."

—Rosemarie Duncan, NITC GIS Project Manager

CHALLENGE:

Optimize Enterprise GIS performance for US Navy facilities and installations worldwide.

BACKGROUND:

Historically, the US Navy has maintained their facility-, infrastructure- and environmental geospatial-related data at regional centers of expertise across the continental US and overseas. Each of these regional centers required considerable IT infrastructure to support geospatial data storage and editing. Congress and the Department of the Navy mandated the consolidation of that IT infrastructure to reduce expenses and gain other benefits of economy of scale.

SOLUTION:

GISi designed and implemented the system architecture that enabled the US Navy to centralize all efforts related to infrastructure and environmental GIS.

RESULT:

With a central system capable of hosting all data and housing it at an existing Navy Enterprise data center, as well as leveraging Citrix(r), regional data editors can maintain their own data. This effort has resulted in the Navy's GeoReadiness Repository (GRR) at the NAVFAC Information Technology Center (NITC) in Port Hueneme, California.

In concert with Government database administration personnel and other contractors, GISi led the implementation of the Enterprise design. GISi stood up the Maintenance and Analysis (M&A) Geodatabases to provide the editing capabilities to the regional data maintainers. GISi also stood up publishing Geodatabases in the GRR to provide mapping-enabled applications a source of geospatial data that wouldn't interfere with the editing functions of the M&A geodatabases.

A total of 45 Geodatabase instances were implemented—using Oracle 10g, Solaris 2.9 and ArcSDE 9.1 in three separate tiers: Development, Acceptance and Production. This folded-in with the existing NITC Common Operating Environment—which utilizes the three separate tiers to ensure Enterprise availability and scalability.

NEXT STEPS:

GISi is currently in the process of migrating this complete infrastructure to the ESRI ArcGIS 9.2 suite—including installation and testing of ArcGIS Desktop 9.2, ArcSDE 9.2 and ArcIMS 9.2, as well as ArcGIS Server 9.2 for specialized capabilities and testing for future improvements.

As part of this migration, GISi is consolidating separate regional M&A geodatabases into user geodatabases using a single shared Oracle 10g Release 2 database—further reducing the database and system administrative burdens on the Enterprise hosting organization. As part of the migration, these new geodatabases are hosted in a Sun Solaris 10 environment—providing increased scalability and reliability.