



Enterprise GIS

Vision and Challenges of an Integrated NPS-wide Enterprise Geographic Information System (EGIS)

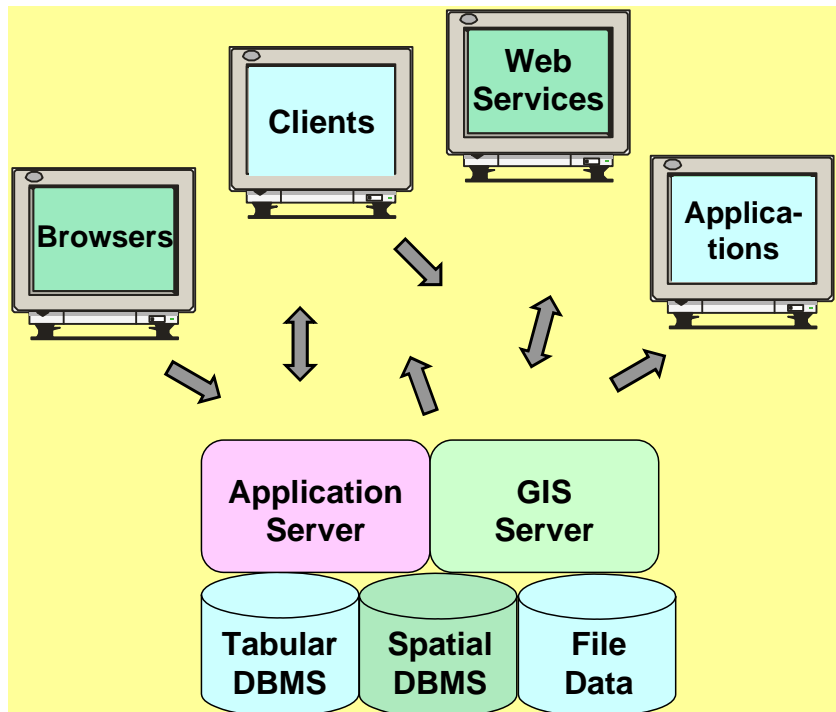
The NPS GIS Program and GIS Division (GISD) are collaborating to plan and develop an NPS-wide (enterprise) GIS that will provide authoritative data sources and information services to NPS programs and the GIS community. In August 2005, the NPS GIS Committee (GISC) met in Lakewood, Colorado to review and discuss the enterprise architecture concepts and planning needed to build an effective EGIS for the NPS.

To be successful with EGIS, NPS must adapt the current GIS environment. Now, GIS is predominantly utilized as a set of powerful desktop tools by individual users. Each user collects and maintains many layers of GIS data (often redundantly) for mapping and analysis. Authoritative data sets (if they exist) are generally available only as static files that users must acquire and install locally. With an EGIS service, users can access data layers directly from a geodatabase server with the option of utilizing the data dynamically or downloading areas of interest and working locally. With a versioned geodatabase and appropriate rights, users may “check out” the data, edit/update locally, and reload the updates to the server for other users to access immediately.

FY2005 discussions and planning have set the stage for an initial NPS EGIS implementation. FY2006 EGIS projects will be based on the Federal Enterprise Architecture reference models that align performance goals with business requirements, information services, technology, and source data (see diagram).

EGIS Partners

Effective deployment of EGIS requires data standardization and sharing among data stewards, and NPS programs play a major role. For example, the Land Resources Division is developing an NPS boundary data set as the first



Enterprise GIS will utilize relational database (DBMS) and server technology to provide a geodatabase of spatial data layers that support information services defined by program business requirements.

NPS GIS data layer, and the GISC is working with Facilities Management on a data standard for buildings and to map building footprints NPS-wide. In addition, Cultural Resources GIS is evaluating the building standard and has formed a CR GIS standards team. GISD is working with NPS Trials personnel to define a trails GIS layer standard, and will include available EGIS data in the Incident Management, Analysis, and Reporting System GIS pilot project. On another front, Natural Resources GIS is building a robust EGIS infrastructure and related GIS data models and standards. EGIS will complement the existing NR and GIS Data Store System that provides metadata and data services to NPS data managers and GIS practitioners throughout the Service (see <http://science.nature.nps.gov/nrdata>).

External partners are important to the success of NPS EGIS too. Ideas about data sharing with the National Geographic Society will be explored, and GISD is working with the DOI Enterprise Geographic Information Management Team and sister bureaus to share resources and develop a DOI-wide Geospatial Modernization Blueprint.

NPS EGIS planning and project initiation is one of the top ten priorities of the National Information Systems Center for FY2006.