Enterprise Standards:
2000 Software Domain

Category:
2800 Geographic Information Systems (GIS) - Server

Definition:
Geographic Information Systems (GIS) are a combination of hardware, software, data, (both attribute and geographic) and trained personnel, all working together to manage information to help make better decisions. Together, they provide powerful tools for and analysis of spatial information and automated cartography. It is an emerging technology that has a wide range of uses in all sectors of the economy, for natural resources management, transportation planning, inventorying landcover, economic development analysis, customer market analysis, utility siting, and crime tracking, to name a few.

Rationale:
The Environmental Systems Research Institute, Inc. (ESRI) is the industry leader of GIS software with a wide range of capabilities. The software provides for enterprise-wide management of digital geospatial data and development of customer applications along with powerful tools for ad-hoc analysis and a wide range of output and presentation capabilities as well as World Wide Web data dissemination possibilities.

The rationale for selection of the ESRI suite of products is based on the following considerations:

1. Most state agencies with analytic GIS capabilities are currently using ARC/INFO, the flagship software of ESRI. There is a large, literate installed base of users in the Commonwealth.
2. Data produced using the ARC/INFO software are compatible with desktop mapping GIS software and can be accessed directly by ArcView 3.0 the standard desktop mapping software.
3. ARC/INFO runs on a variety of hardware platforms already in use in the state.
4. ARC/INFO runs on the approved operating systems of the Enterprise IT Standards.
5. Because of the pervasive use of ARC/INFO software in the Commonwealth at the state, local and federal level and private sector, geographic data created is generally accessible. Another strength of the software is that it includes a large number of data conversion modules to facilitate data exchange with other software packages.
6. Due to the complexity of the software training costs are high. However, the state currently has a significant number of staff already trained and highly skilled in the use of this software. The Office of GIS and the Governor's Office for Technology, Division of IT Training have cooperated to establish a series of GIS training classes using ESRI instructors, some State government instructors, and some private sector at the training center in Frankfort. A weeklong introduction to ARC/INFO class is available.

Approved Standard(s):
Compatible with the approved server operating systems

Approved Product(s):
ARC/INFO rev 7.X and its ancillary modules for UNIX and Windows NT/2000.

Justification:
Given that virtually all of the installed software already is ARC/INFO, no formal migration strategy is recommended. By adopting this as the standard, all future purchases for analytic GIS will be from the ESRI suite of software.

Technical and Implementation Considerations:
Agencies should consider ARC/INFO installation on the Windows NT as the platform of choice. Although acceptable, the UNIX operating environment is more complex and supports intensive and should be considered for only the most experienced GIS developers and users. ARC/INFO requires considerable training to become fully proficient in the use of the software and development tools.

Emerging Trends and Architectural Directions:

Review Cycle:
Annually

Timeline:
Revision date: July 1, 2002
Effective date: July 1, 1997