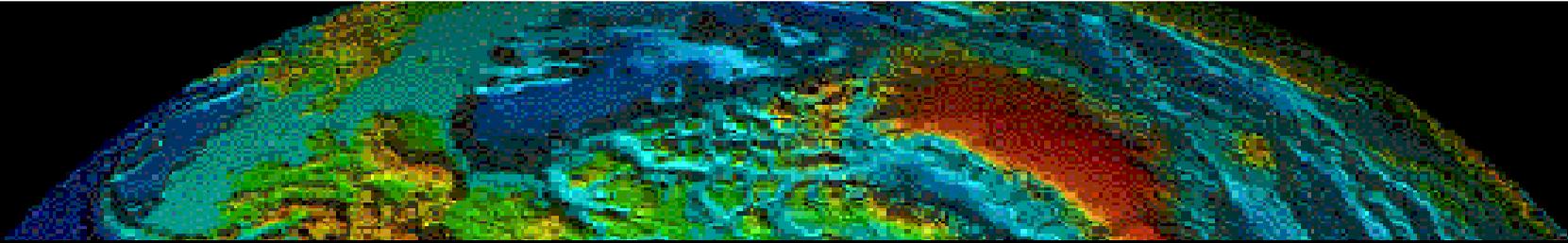
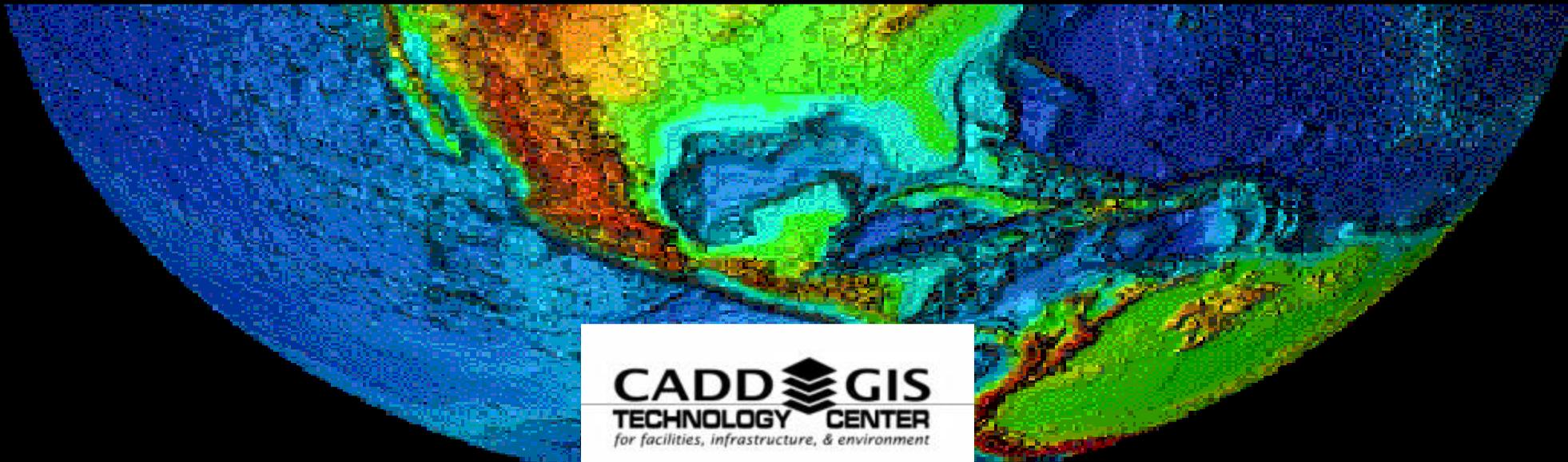


Center's Internet Web Page URL Address: <http://tsc.wes.army.mil>



**Spatial Data Standards (SDSFIE)
for facilities, infrastructure, and environment
and
Facility Management Standards (FMSFIE)
for facilities, infrastructure, and environment**

BENEFITS, COORDINATION, & DEVELOPMENT HISTORY



CADD/GIS Technology Center



for facilities, infrastructure, and environment

- Originally established as the “Tri-Service CADD/GIS Technology Center” in 1992 at the Army Waterways Experiment Station, Information Technology Laboratory, Vicksburg, Mississippi .
- Established by the Army (including Army Corps of Engineers), Navy, and Air Force (i.e, Tri-Services).
- Center’s name changed to “CADD/GIS Technology Center for facilities, infrastructure, and environment” in July, 1999 to reflect a broader mission.
- CADD – Computer Aided Design & Drafting
- GIS – Geographic Information System

About the Center

- **Mission Statement**

CADD

Establish a multi-agency vehicle to coordinate facilities, infrastructure and environmental use of Computer Aided Design and Drafting and Geographic Information Systems (CADD/GIS) activities within the Department of Defense (DOD) and with other participating governmental (federal, state and local) agencies, and the private sector. This includes setting standards, promoting system integration, supporting centralized acquisition, and providing assistance for the installation, training, operation, and maintenance of CADD/GIS and facilities management (FM) systems.

GIS

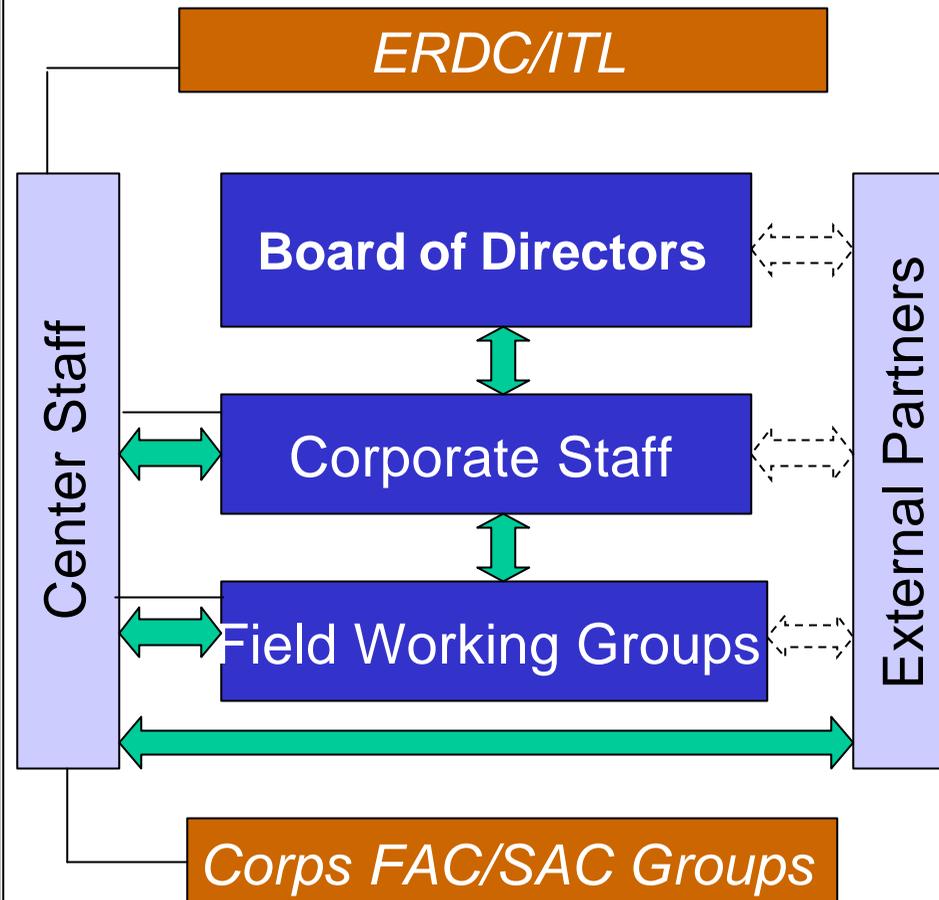
The *New* CADD/GIS Technology Center

Federal Partners:

- USACE
 (Military Programs)
 (Civil Works)
 (Research and Development)
- Naval Facilities Command
- Air Force Civil Engineer
- Marine Corps
- General Services Admin.
- NASA
- Coast Guard
- Department of State
- Defense Logistics Command
- FAA

Federal Associates:

- Architect of the Capitol
- Army Reserve
- National Guard
- Veteran;s Affairs
- EPA
- Department of Interior
- DOE



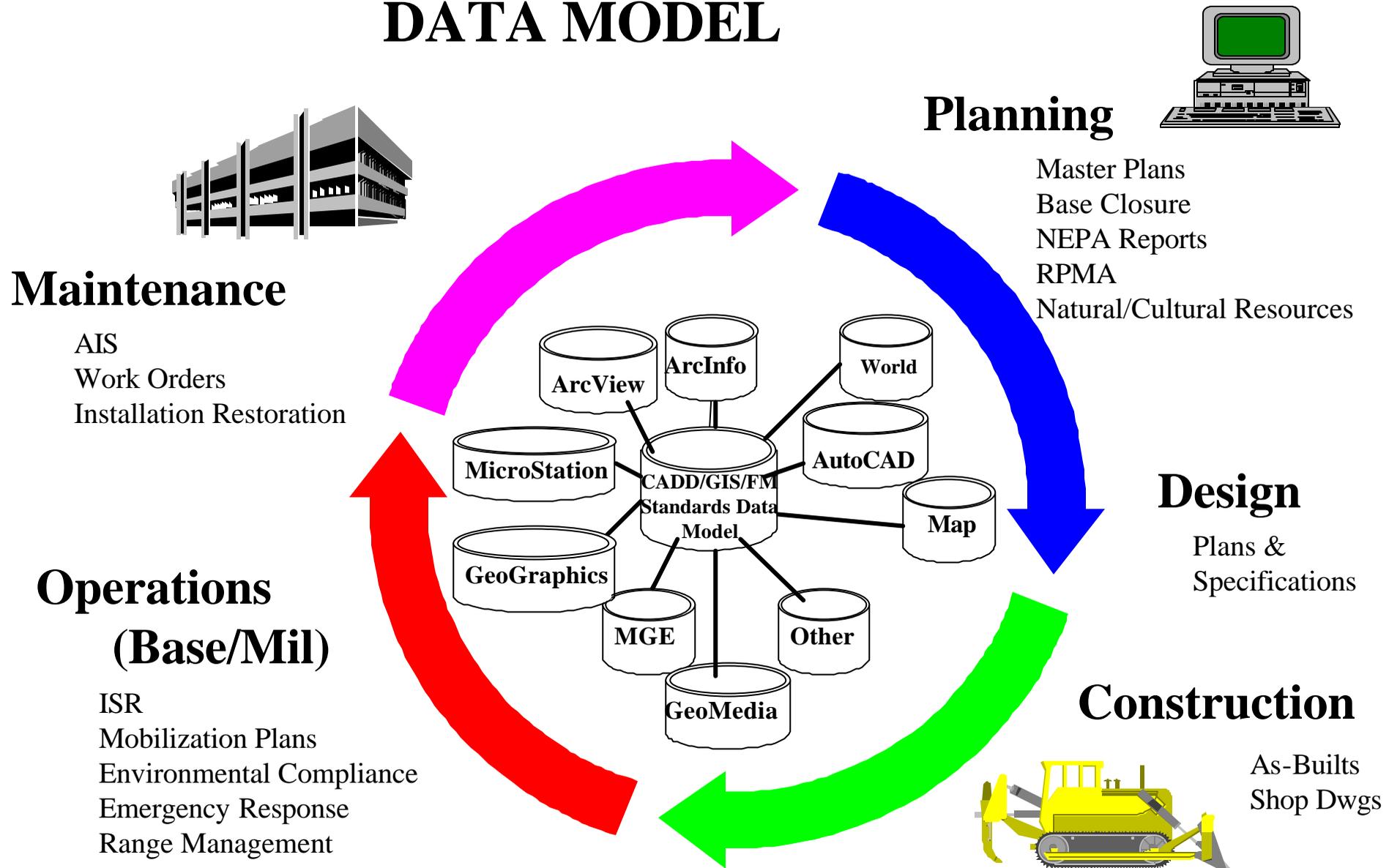
Industry Associates:

- ESRI
- Autodesk
- Bentley
- Intergaph

Societies/Organizations

- NIBS
- CSI
- AIA
- IFMA
- ISO
- ANSI
- ASTM
- ACS
- Nature Conservancy
- OGRIP
- PaMAGIC
- National Assoc.. of Counties

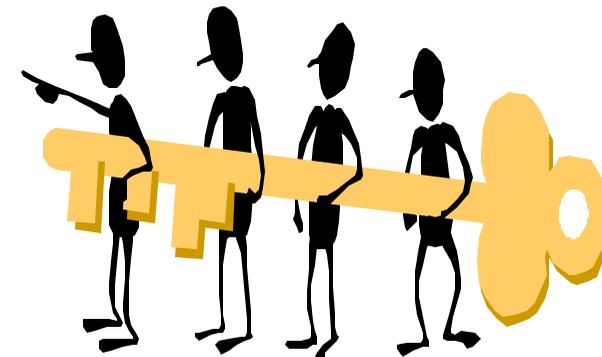
PROJECT LIFE-CYCLE DATA MODEL



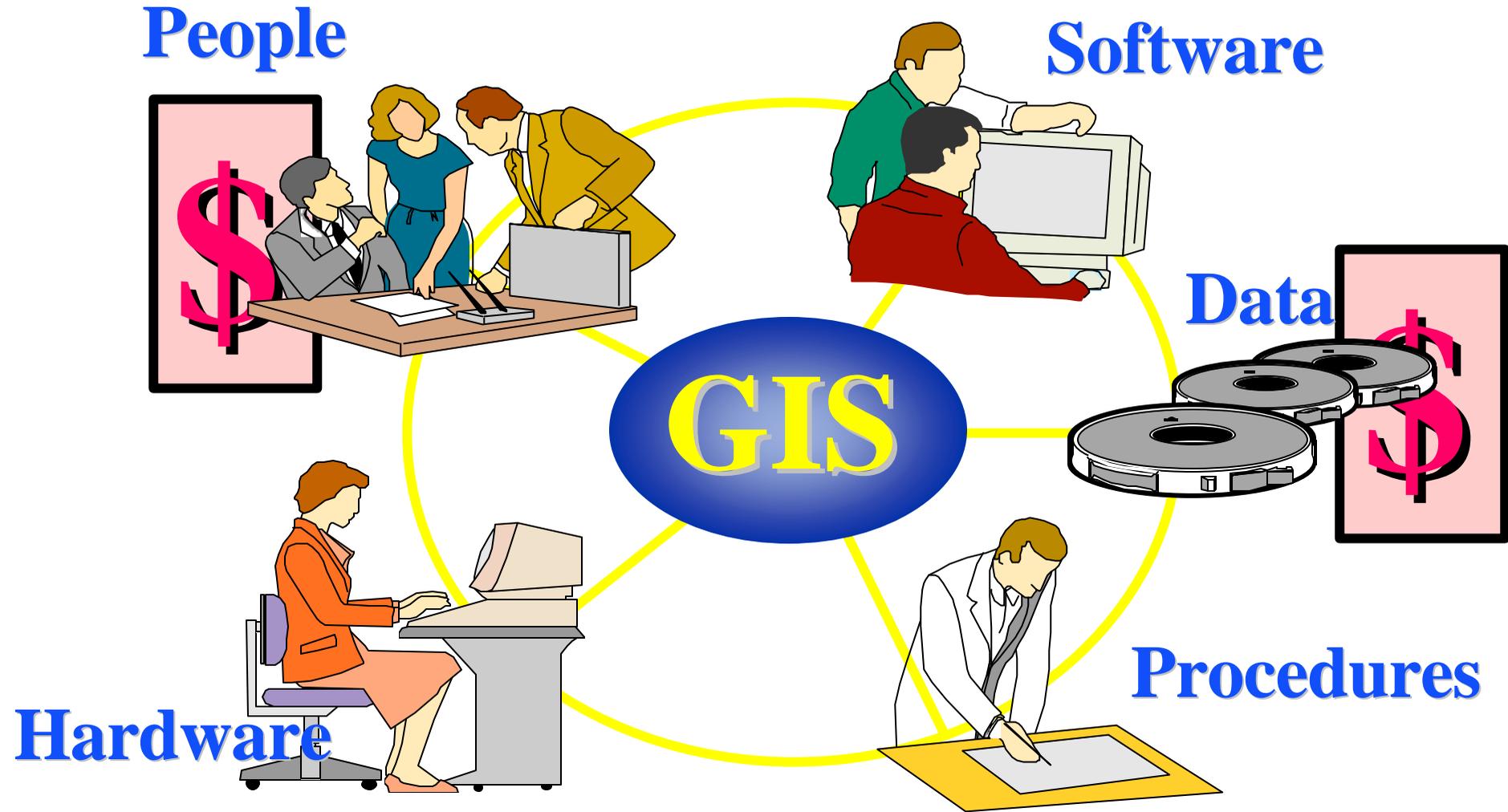
The Center's Approach to Standards

- **Current Efforts**

- Architect-Engineer (A-E) Deliverables Guidelines
 - A/E/C Guidelines
 - GIS/Spatial Data Guidelines
- Architectural/Engineering/Construction (A/E/C) CADD Standard
- Spatial Data Standard (SDSFIE) (GIS)
- Facility Management Standard (FMSFIE) (GIS & CADD)
- Electronic Bid Solicitations (EBS)
- CADD & GIS Object Standards



Geographic Information System



What is Geospatial Data?

Definition from Executive Order 12906:

- “Information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the earth.”
- “This information may be derived from, among other things, remote sensing, mapping, and surveying technologies. Statistical data may be included in this definition at the discretion of the collecting agency.”

Geospatial Data Systems (GDS)

- Any automated system that employs data referenced to a location on the earth.
- Includes Geographic Information Systems (GIS's), Land Information Systems (LIS's), Remote Sensing (RS) Systems, Image Processing (IP) Systems, Computer-Aided Design and Drafting (CADD) Systems, Automated Mapping/Facilities Management (AM/FM) Systems, and Automated Mapping (AM) Systems.

Benefits of Using a GIS Data Standard

- Standard GIS and FM Data Collection Requirements
- One Training Program
- Common GIS and FM Software Applications
- Standard Implementation Procedures and Requirements
- Common Data Model which Permits the Sharing of Data
- Nonproprietary Data Model (SDSFIE & NCITS 353)

Benefits of Using a GIS Data Standard

☞ Common Data Model which Permits the Sharing of Data

– Fort Bragg

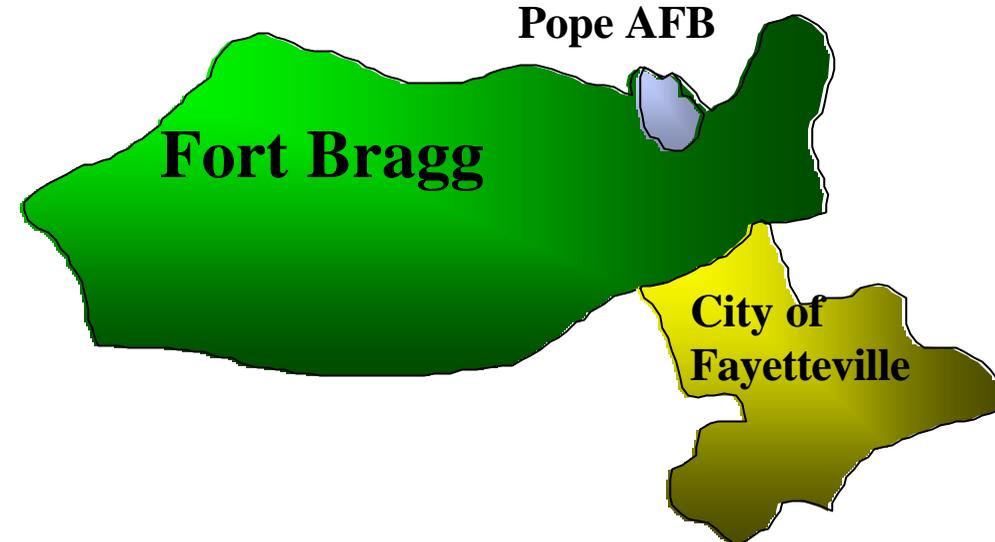
- ◆ Pope AFB Assets
- ◆ BRAC and Mobilization Plans
- ◆ Utilities and Drainage Interface

– Pope Air Force Base

- ◆ Site Drawings and As-Builts

– City of Fayetteville

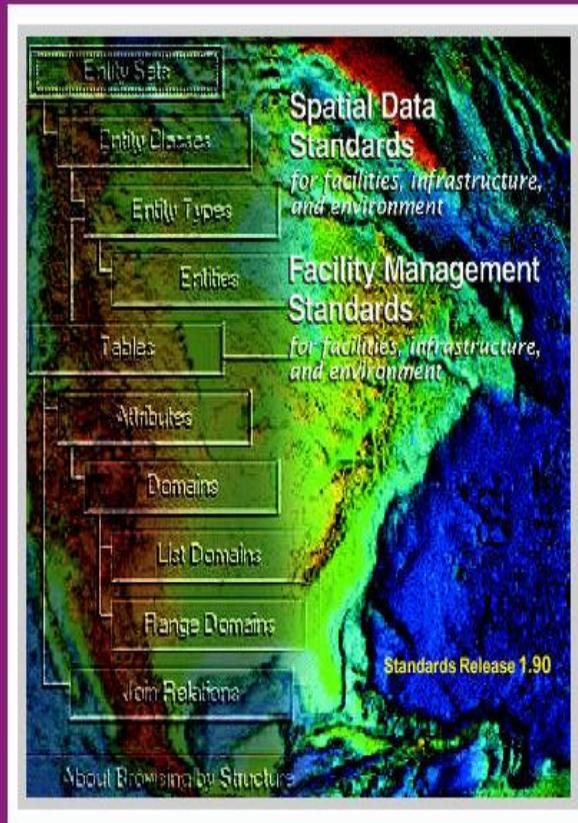
- ◆ Hurricane Evacuation Plan
- ◆ Cadastral Data and Demography
- ◆ Utilities and Drainage Interface



Benefits of Using a GIS Data Standard

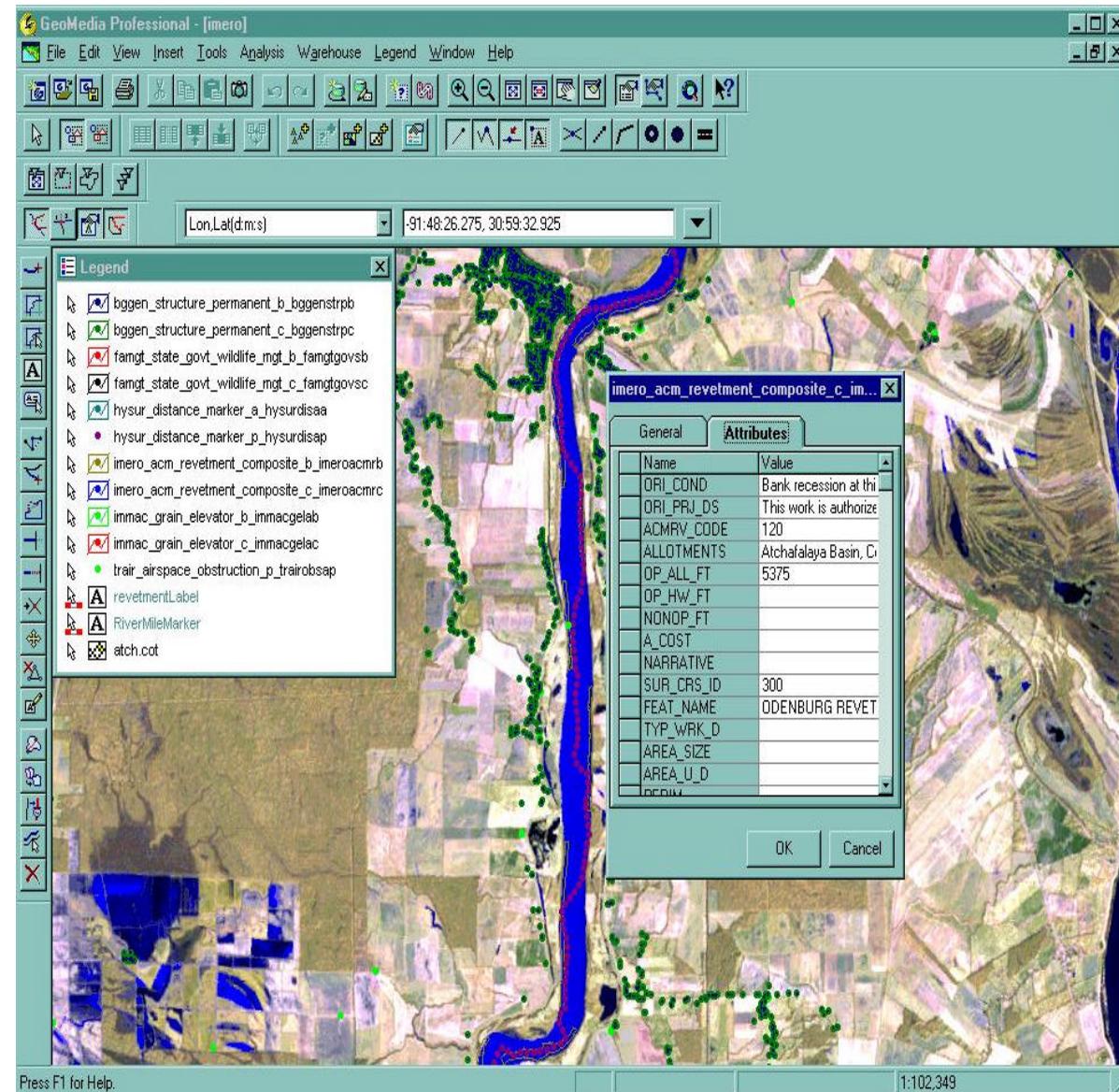
One Training Program

- Total of 7 SDSFIE Implementation Workshops provided in FY99 - FY2001.
- Total of 222 students.
- Next Workshop scheduled for February 5 – 7, 2002



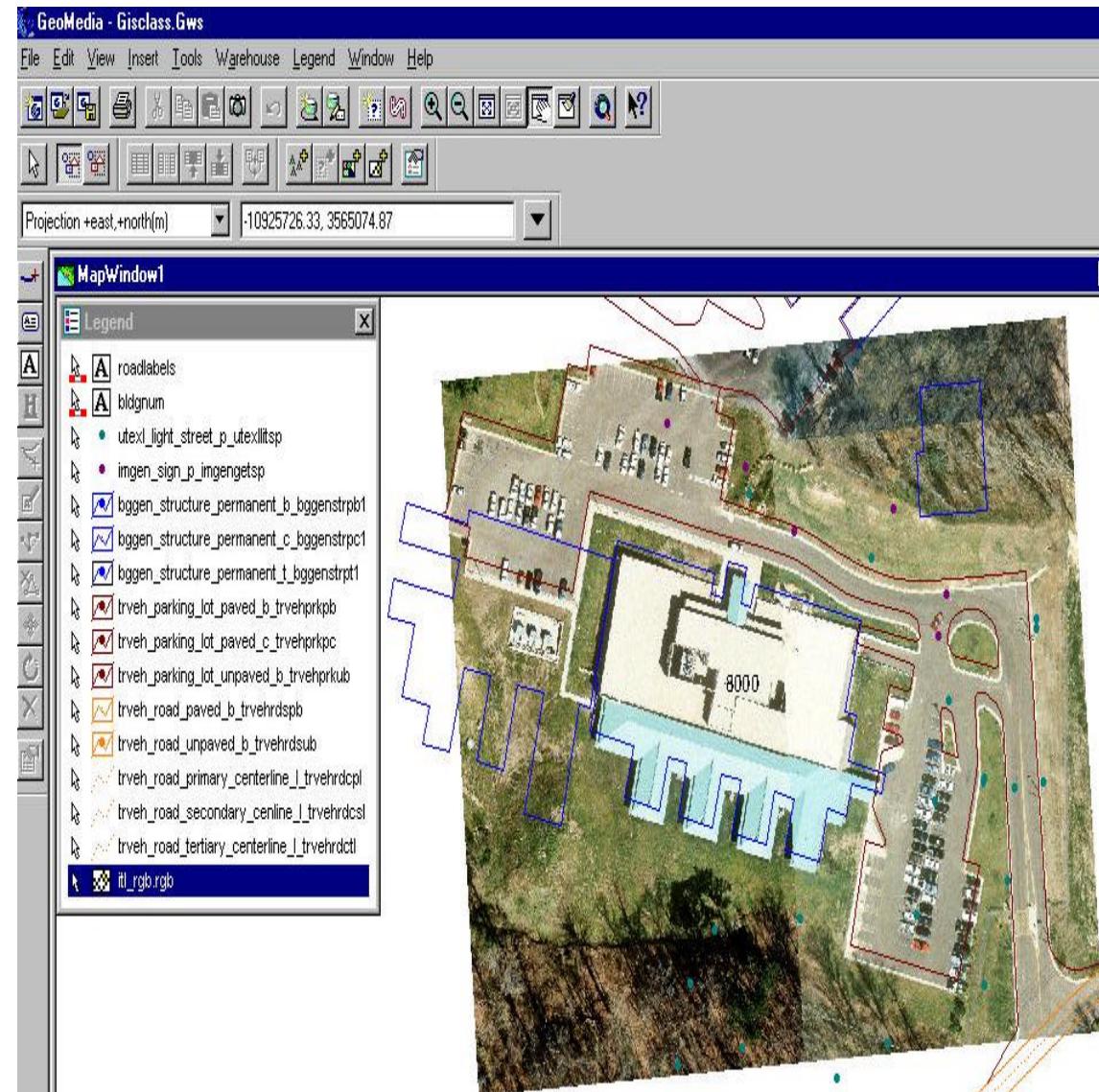
Benefits of Using a GIS Data Standard

- Atchafalaya Basin GIS is SDSFIE compliant.
- New Orleans District (CEMVN) currently uses Intergraph MGE & GeoMedia.
- CEMVN will not lose data investment if they migrate to ESRI ArcGIS (or other GIS software vendor) in future.

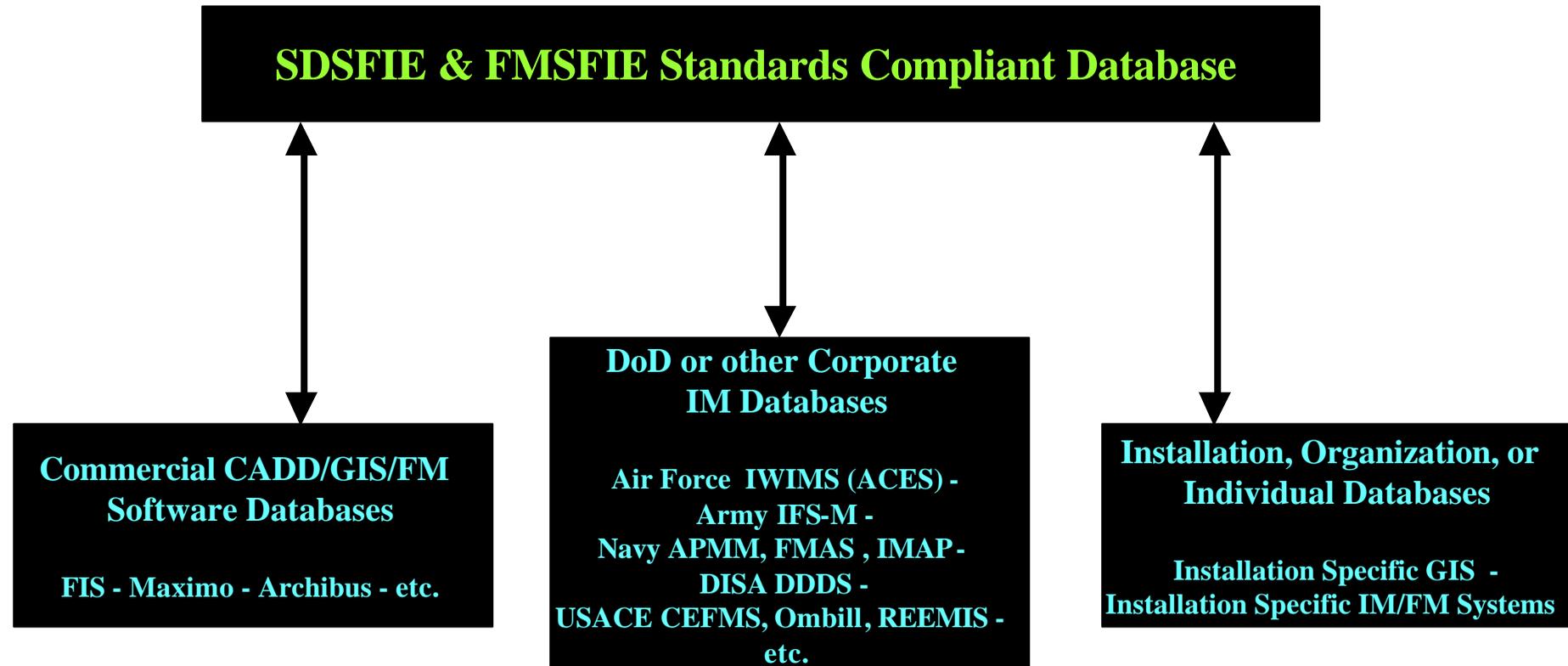


Benefits of Using a GIS Data Standard

- GIS for Waterways Experiment Station, Vicksburg, MS based upon SDSFIE.
- Both ESRI ArcView & Intergraph GeoMedia GIS uses data from same SDSFIE compliant Oracle database.



The SDSFIE & FMSFIE Data Model provides the ability to share data



Spatial Data Standard for facilities, infrastructure, & environment (SDSFIE)

-
- CADD/GIS Technology Center Project No. 96.013.
- Website - <http://tsc.wes.army.mil/products/TSSDS-TSFMS/tssds/html/>
- Called Tri-Service Spatial Data Standards (TSSDS) prior to July 1999. Acronym SDS was used from July 1999 until January 2001. Acronym changed to SDSFIE in January 2001.

Facility Management Standard for facilities, infrastructure, & environment (FMSFIE) -

- CADD/GIS Technology Center Project No. 96.015.
- Website - <http://tsc.wes.army.mil/products/tssds-tsfms/fms/fmsprods.asp>
- Called Tri-Service Facility Management Standards (TSFMS) prior to July 1999. Acronym FMS was used from July 1999 until January 2001. Acronym changed to FMSFIE in January 2001.

96.013 – Spatial Data Standard (SDSFIE)

Scope: Development, improvement, and testing of Geographic Information System (GIS) Standard, called Spatial Data Standard for facilities, infrastructure, & environment (SDSFIE).

Objective: Provide a common non-proprietary data format for GIS development, thereby reducing costs and providing a vehicle for sharing GIS data sets among federal partners, commercial/private concerns, and government installations.

Products: (1) GIS data standard, (2) Interactive software tools, (3) Implementation guidance and technical reports, (4) Digital symbol sets, (5) Distribution via CD-ROM and Internet download, (6) Internet web site, (7) Workshops, and (8) Limited Customer assistance.



Spatial Data Standard (SDSFIE)

for facilities, infrastructure, & environment

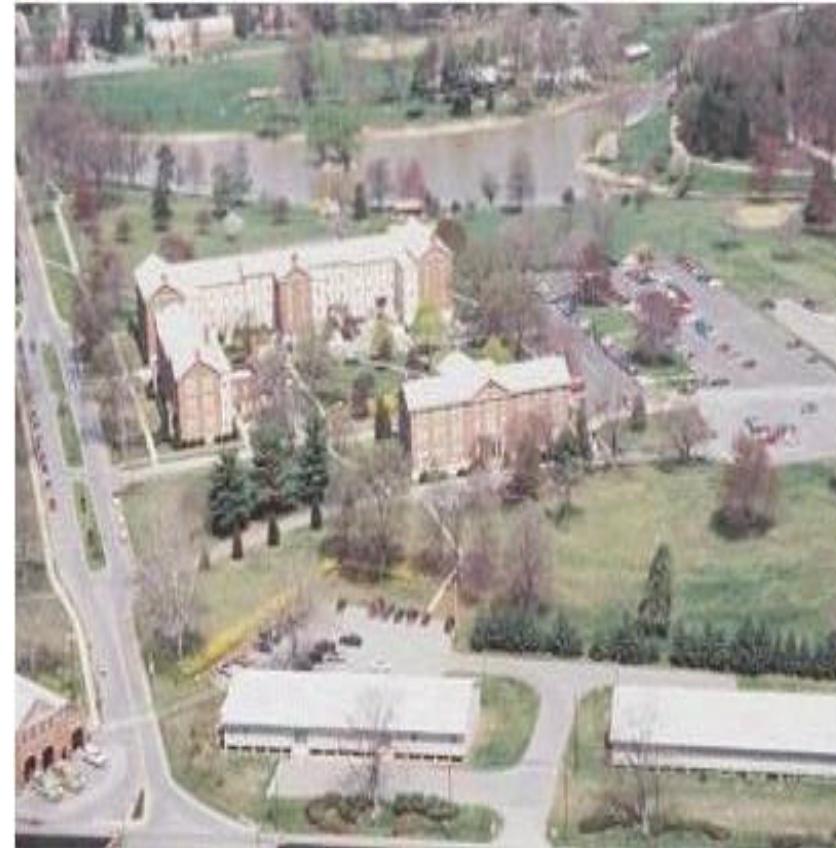
- Provides a standard graphic and nongraphic (database) format and structure for GIS implementations.
- Provides a “nonproprietary” standard designed for use with commercially available “off-the-shelf” GIS and relational database software.
- Provides a GIS implementation schema for approved FGDC geospatial related data standards, and appropriate approved DISA data elements.
- Provides a grouping of geographically referenced (geospatial) features (i.e., features which can be depicted graphically on a map at their geographic location (coordinate). Each geospatial feature has an “attached” Attribute Table containing pertinent data about the geospatial feature.

96.015 – Facility Management Standard (FMSFIE)

Scope: Development and testing of a standard for life cycle Facility Management (FM) implementations, called Facility Management Standard for facilities, infrastructure, & environment (FMSFIE).

Objective: Provide a common nonproprietary format for the collection and management of FM data thereby reducing costs and allowing for the sharing of data sets among federal partners, commercial/private concerns, and government installations.

Products: (1) FM data standard, (2) Interactive software tools, (3) Implementation guidance and technical reports, (4) distribution via CD-ROM and Internet download, (5) Internet web site, and (6) Customer assistance.



Facility Management Standard (FMSFIE)



for facilities, infrastructure, & environment

- Provides a standard database format and structure for “business” and event data (e.g., inspections, repairs) related to SDSFIE geospatial features and/or A/E/C CADD objects, specifically for CADD/GIS Based implementations at Air Force, Army, Navy, & Marine Corps installations and Army Corps of Engineers Civil Works activities. Also provides a CADD/GIS Based FM standard for use by other Federal, State, and Local Government organizations, public utilities; and private industry.
- Provides a “nonproprietary” standard designed for use with commercially available “off-the-shelf” CADD, GIS, FM, and relational database software.
- Provides a grouping of related attribute tables containing “business and event data.
- The first FMSFIE release was included with the TSSDS/TSFMS Release 1.80, which was published on CD-ROM in February 1999.
- The FMSFIE will migrate to a Transactional Data Model in the Future. Development of the Transactional FMSFIE Data Model began in FY 2001.



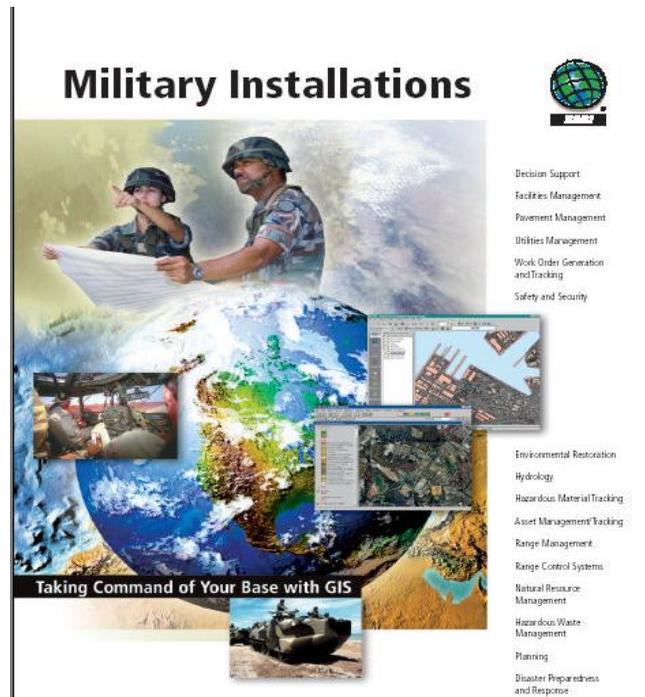
Spatial Data Standard (SDSFIE) - Coordination

- All DoD Organizations
- Other Federal Agencies
 - US Coast Guard
 - Veteran's Administration
 - Indian Affairs
 - GSA
 - EPA
 - FAA
 - Census Bureau
 - NASA
 - CIA
 - DOE
 - USGS
 - U.S. Forest Service
 - Housing and Urban Development
 - Panama Canal Commission
 - Tennessee Valley Authority
 - Department of Transportation
- CADD/GIS/Database Software Vendors
 - Intergraph
 - Bentley
 - Autodesk
 - ESRI
 - FIS
 - Maximo
 - Oracle
 - Microsoft
- Numerous State & Local Government Organizations, Universities, etc.
- Numerous Architect-Engineer Firms & Contractors

96.013 – Spatial Data Standard (SDSFIE)

SDSFIE Featured in ESRI Brochure -

- SDSFIE was recommended by ESRI as the preferred standard for GIS implementations, and featured in their brochure entitled “ESRI Military Installation Management GIS”.



Spatial Data Standards for Facilities, Infrastructure, and Environment

The Computer-Aided Design and Drafting (CADD)/GIS Technology Center for Facilities, Infrastructure, and Environment was established at the Information Technology Laboratory (ITL), U.S. Army Engineer Research & Development Center (Waterways Experiment Station [WES]), Vicksburg, Mississippi, in October 1992 to support the Army, Navy, Air Force, and Corps of Engineers. Since its creation it has expanded its role to support other federal, state, and local government organizations.

One of the major initiatives assigned to the CADD/GIS Technology Center is the development of the Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE). The SDSFIE is the only nonproprietary GIS data content standard designed for use with predominant commercial GIS and relational database software. The SDSFIE focuses on development of data content standards to facilitate shareability and interoperability with the enterprise GIS at Air Force, Army, Navy, and Marine Corps installations, U.S. Army Corps of Engineers Civil Works activities, and other federal government organizations.

This nonproprietary design, in conjunction with its universal coverage, has propelled the SDSFIE into a de facto standard throughout the Department of Defense other federal, state, and local government organizations; public util-

ities; and private industries throughout the United States and the world.

The CADD/GIS Technology Center annually updates and expands the SDSFIE. The SDSFIE (along with the Facility Management Standards for Facilities, Infrastructure, and Environment (FMSFIE)) is distributed via CD-ROM and the Internet (<http://isc.wes.army.mil>). A user-friendly interactive Microsoft® Windows®-based software application installs the SDSFIE/FMSFIE toolbox of software applications that facilitates the use of the standards and the development of an implementation schema.

The Center recently began an effort to develop a consolidated geospatial data model using object-oriented technology. In conjunction with ESRI, the Center is working to define an SDSFIE geodatabase implementation. In so doing, the Center will be able to move with and help lead the industry in developing a standard object-oriented data model for GIS.

For additional information, contact Bobby G. Carpenter, P.E., CADD/GIS Technology Center, e-mail: carpenb@wes.army.mil.





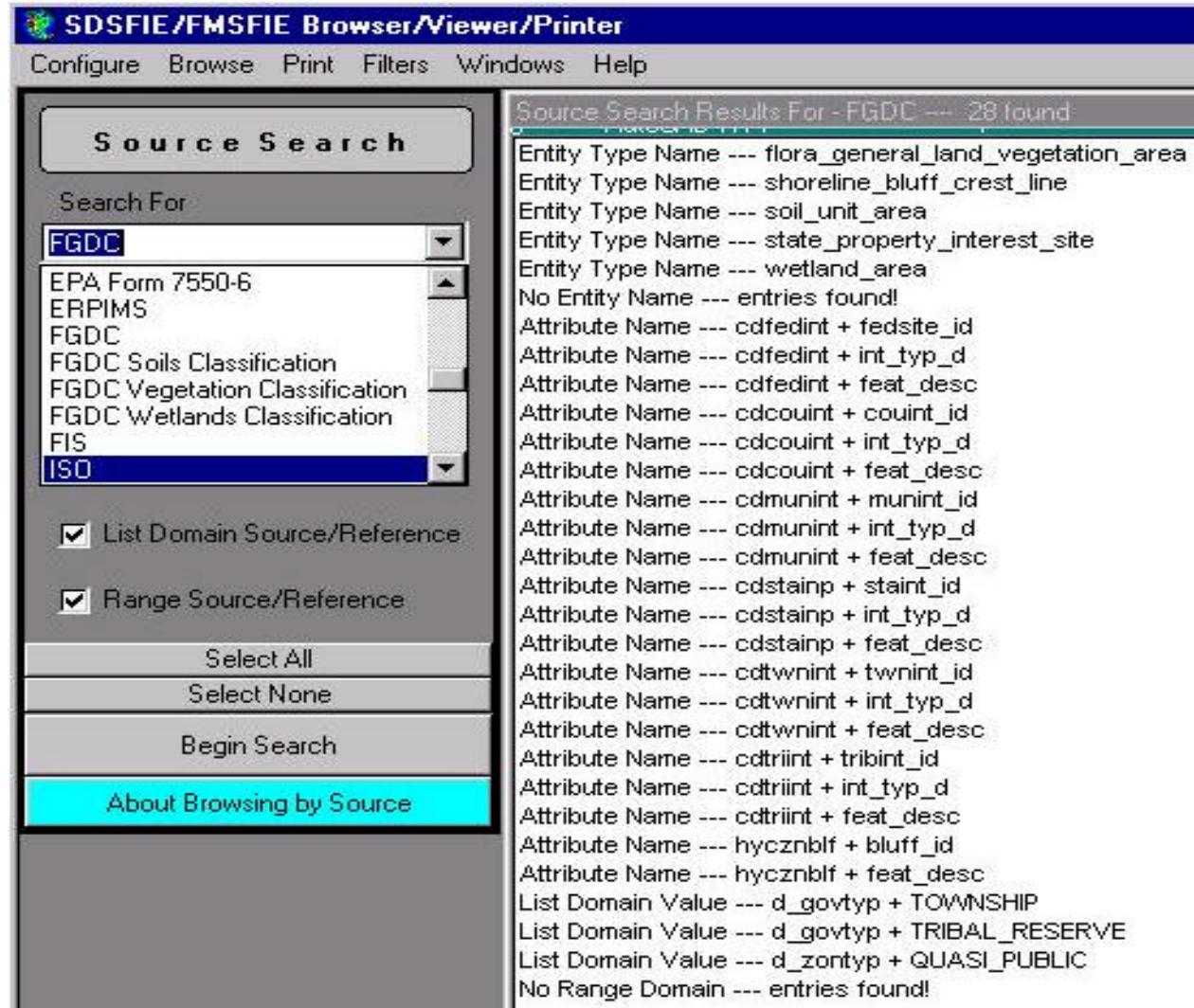
Spatial Data and Facility Management Standards - Coordination

Coordination Efforts With DoD & Federal Standards Development Initiatives Include:

- Federal Geographic Data Committee (FGDC)
 - *Center* Participation
 - Adoption of Subcommittee Products
 - Adoption of Metadata Standards
- Defense Information Systems Agency (DISA)
- Corporate Information Management (CIM) Initiatives
- Defense Environmental Security Corporate Information Management (DESCIM) Initiatives
- National Imagery and Mapping Agency (NIMA) (formerly Defense Mapping Agency (DMA)) Initiatives
- American National Standards Institute (ANSI)

Incorporation of Approved FGDC Data Standards

- The SDSFIE provides a GIS Implementation Schema for Approved Federal Geographic Data Committee (FGDC) Data Standards.
- Approved FGDC Soils, Vegetation, Wetlands, & Cadastral Classification Standards were incorporated in the SDSFIE.



NCITS 353

Incorporation of FGDC Wetlands Classification Standard

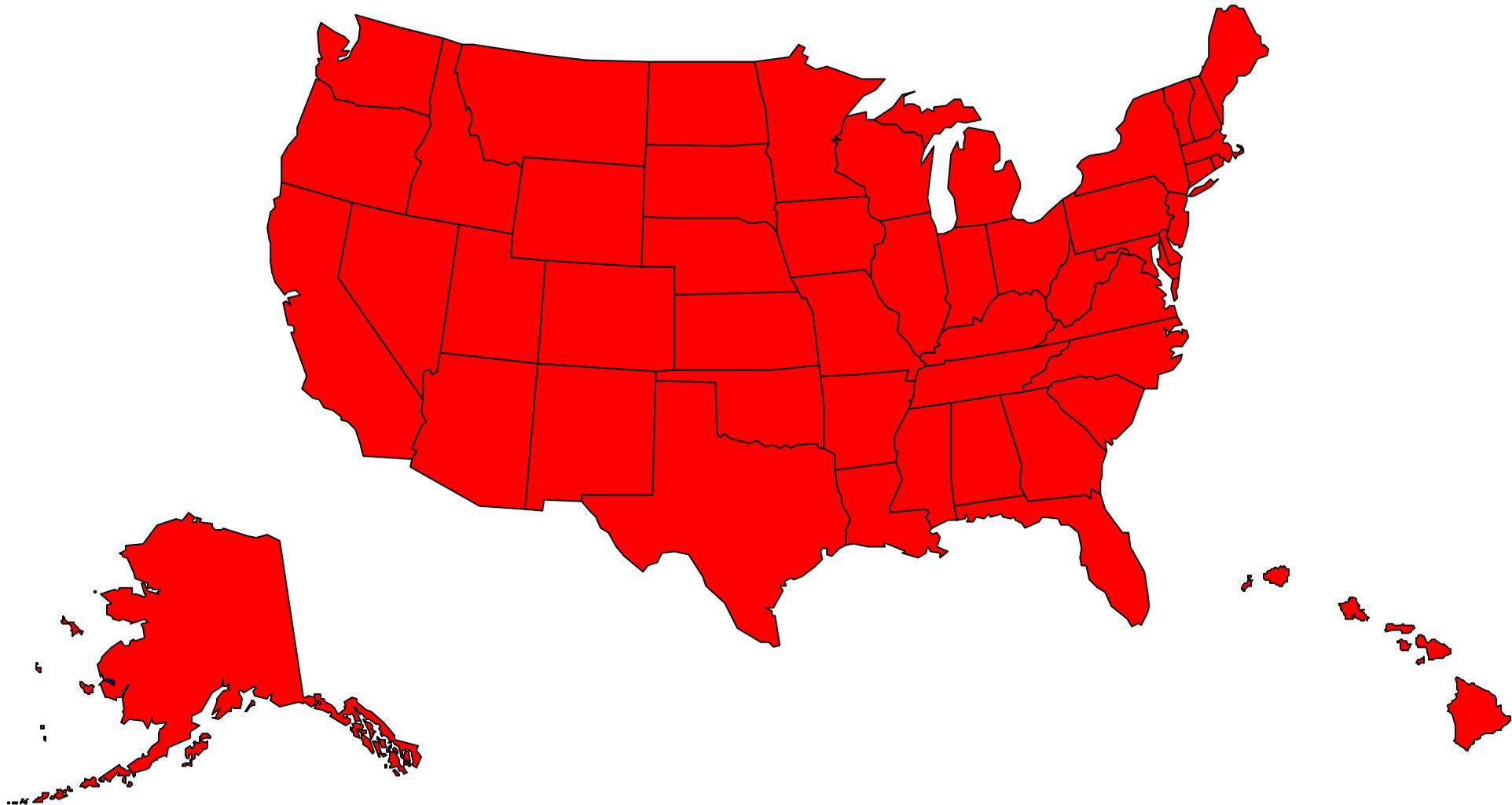
Entity Set	Entity Class	Entity Type	Attribute	Domain Value
Theme	Category	Feature Type	Attribute Type	Value
Hydrography	→ Wetland	→ Wetland	→	NWI Classification Code NWI pH Modifier Code NWI Soil Modifier Code NWI Special Modifier Code NWI Subclass Code NWI Subsystem Code NWI System Code NWI Regime Non-Tidal Code NWI Inland Salinity Code NWI Regime Tidal Modifier Code NWI Chemistry Coastal Salinity Modifier Code

Organizations Around the World have Requested or Downloaded the SDSFIE/FMSFIE



- | | |
|-----------|---------------|
| Australia | Sweden |
| Bahrain | Japan |
| Canada | China |
| Chile | United States |
| Columbia | Malaysia |
| India | Poland |
| Italy | South Africa |
| England | |

DoD Organizations in all 50 States Use the SDSFIE/FMSFIE



State Agencies in 20 States Have Requested the SDSFIE/FMSFIE



- | | |
|----------------------|----------------|
| Alaska | Kansas |
| Arkansas | Massachusetts |
| Arizona | Maryland |
| California | Mississippi |
| Conneticut | Montana |
| District of Columbia | |
| Florida | North Carolina |
| Georgia | North Dakota |
| Hawaii | Ohio |
| Indiana | Texas |
| | Wisconsin |

Universities in 22 States Have Requested the SDSFIE/FMSFIE



Arkansas

Colorado

Florida

Illinois

Indiana

Louisiana

Massachusetts

Minnesota

Missouri

Mississippi

North Carolina

North Dakota

New Jersey

New Mexico

New York

Oklahoma

Pennsylvania

Texas

Utah

Virginia

Washington

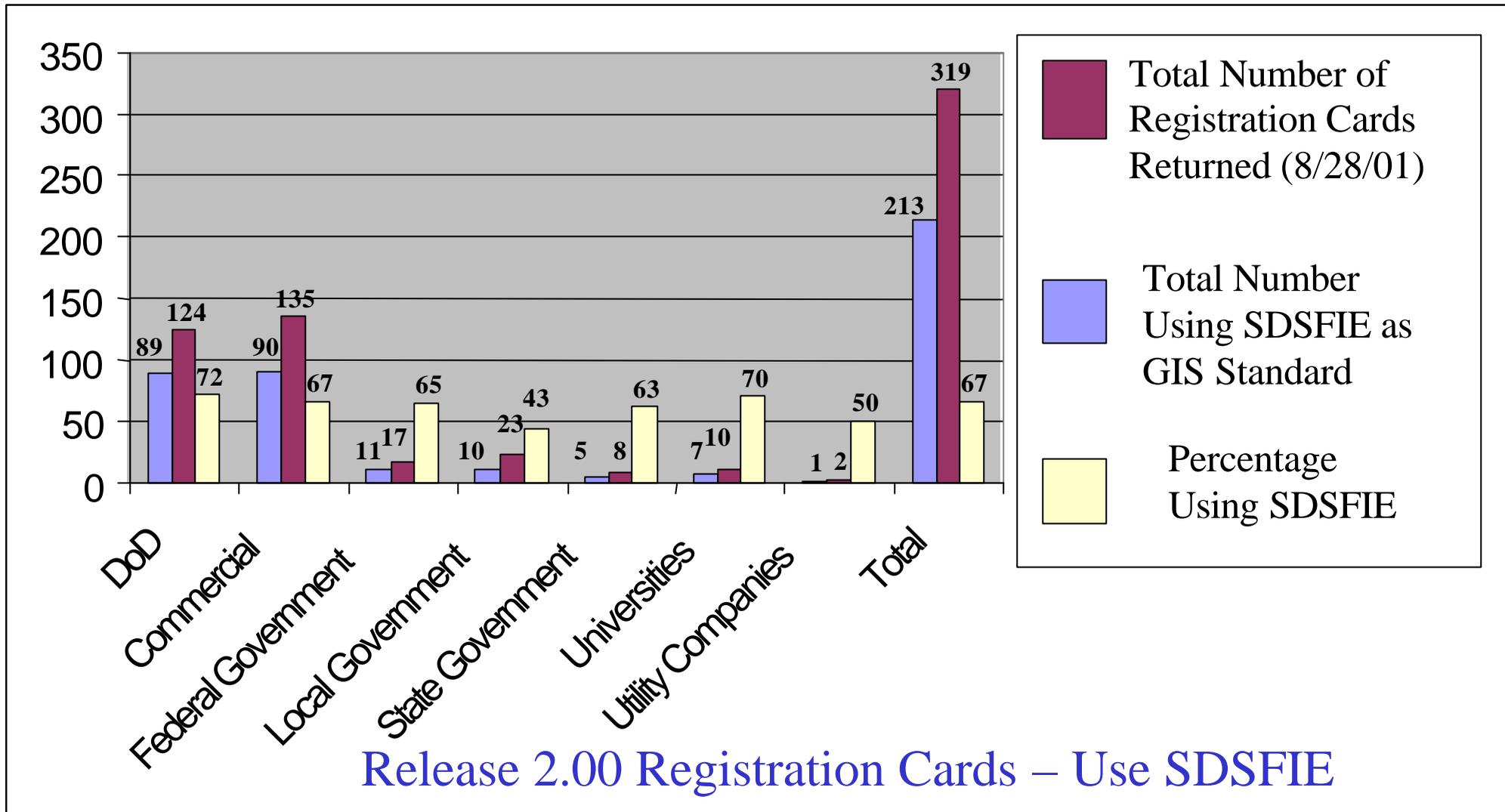
West Virginia

Local Governments in 30 States Have Requested the SDSFIE/FMSFIE

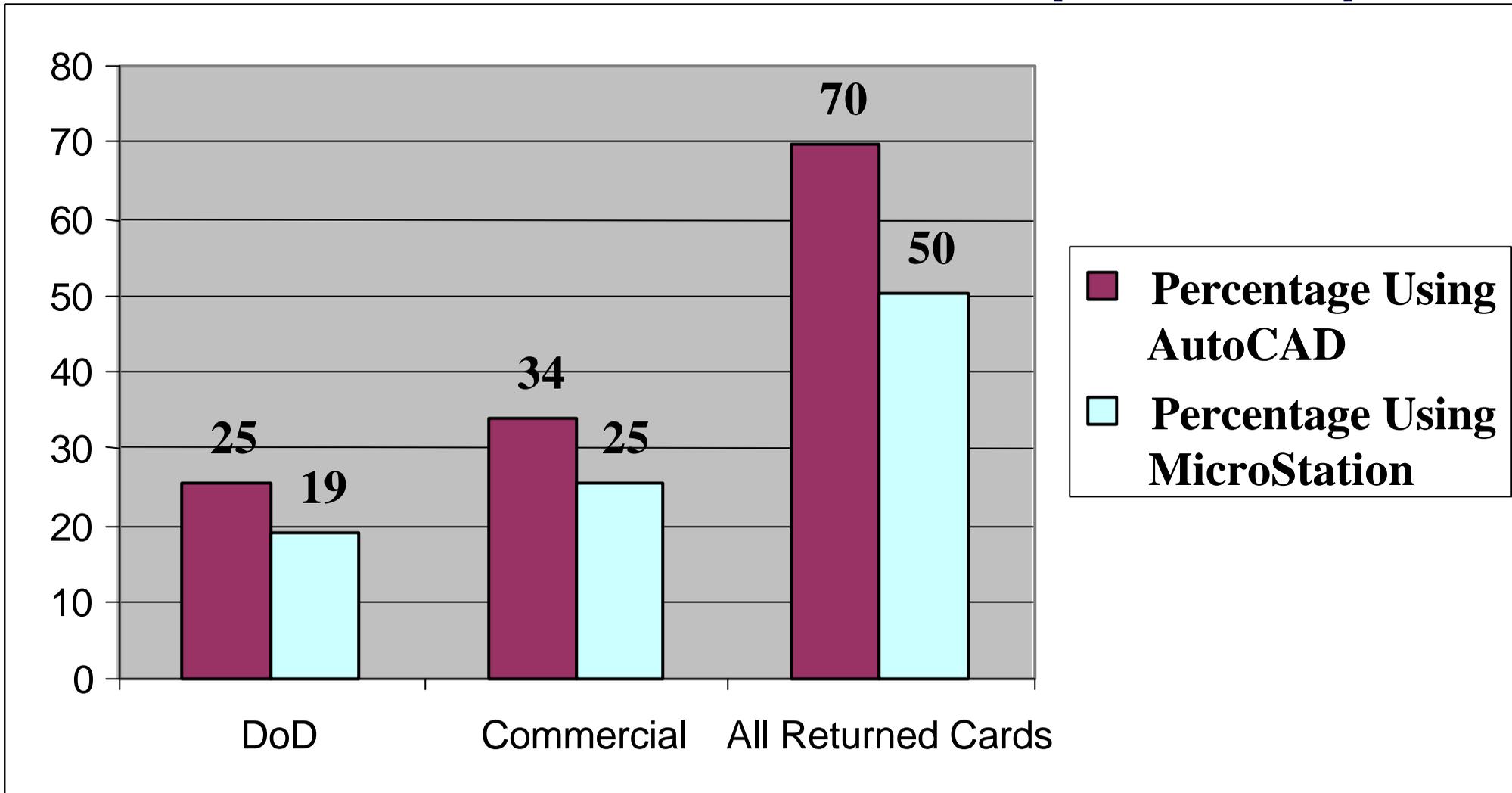


- | | | |
|-------------|----------------|----------------|
| Arizona | Kentucky | Pennsylvania |
| California | Maryland | South Carolina |
| Colorado | Maine | Tennessee |
| Connecticut | Michigan | Texas |
| Florida | Minnesota | Utah |
| Georgia | Missouri | Virginia |
| Hawaii | North Carolina | |
| Idaho | New York | Washington |
| Illinois | Ohio | Wisconsin |
| Indiana | Oklahoma | |
| Kansas | Oregon | |

96.013 – Spatial Data Standard (SDSFIE)

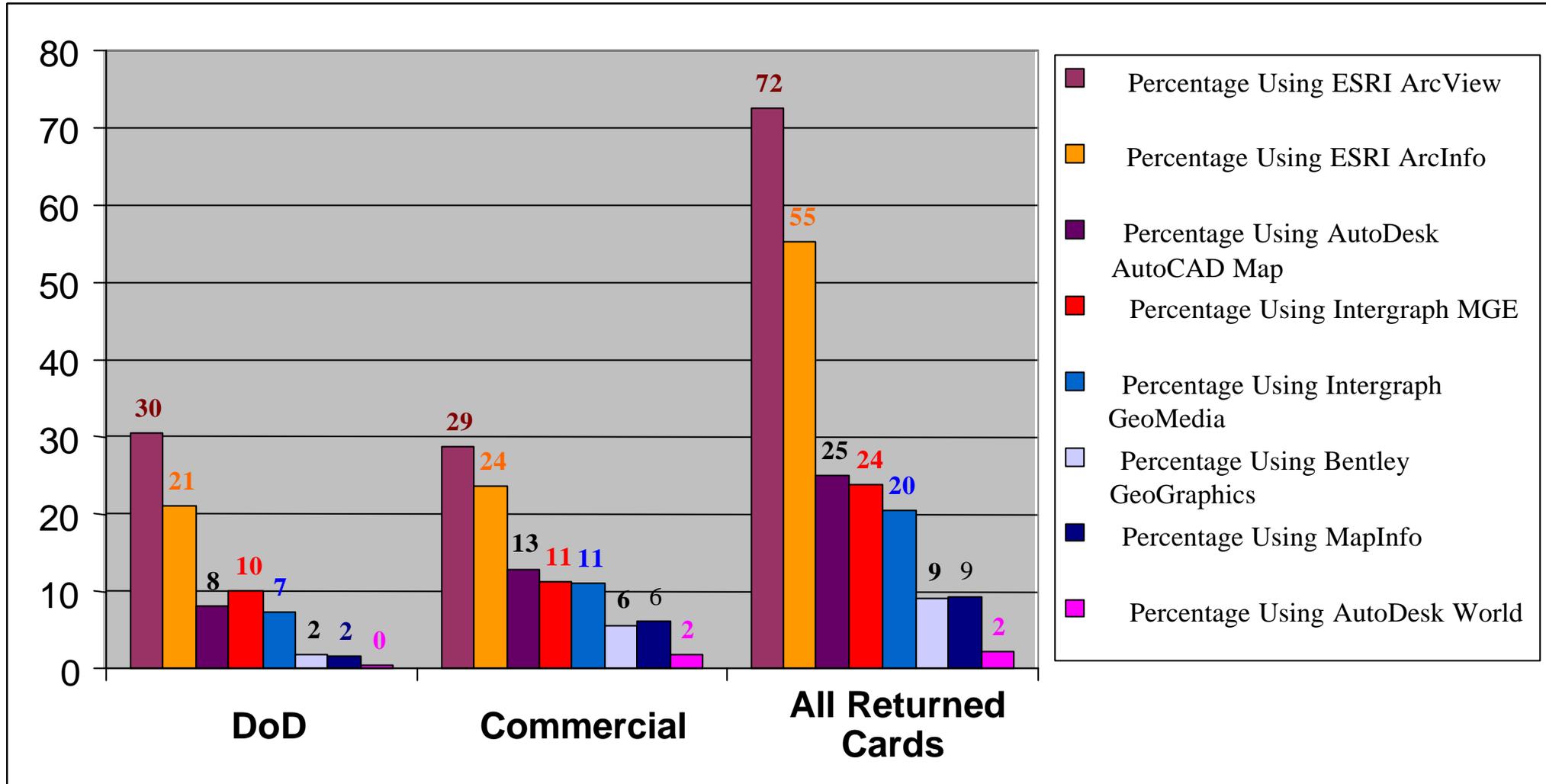


96.013 – Spatial Data Standard (SDSFIE)



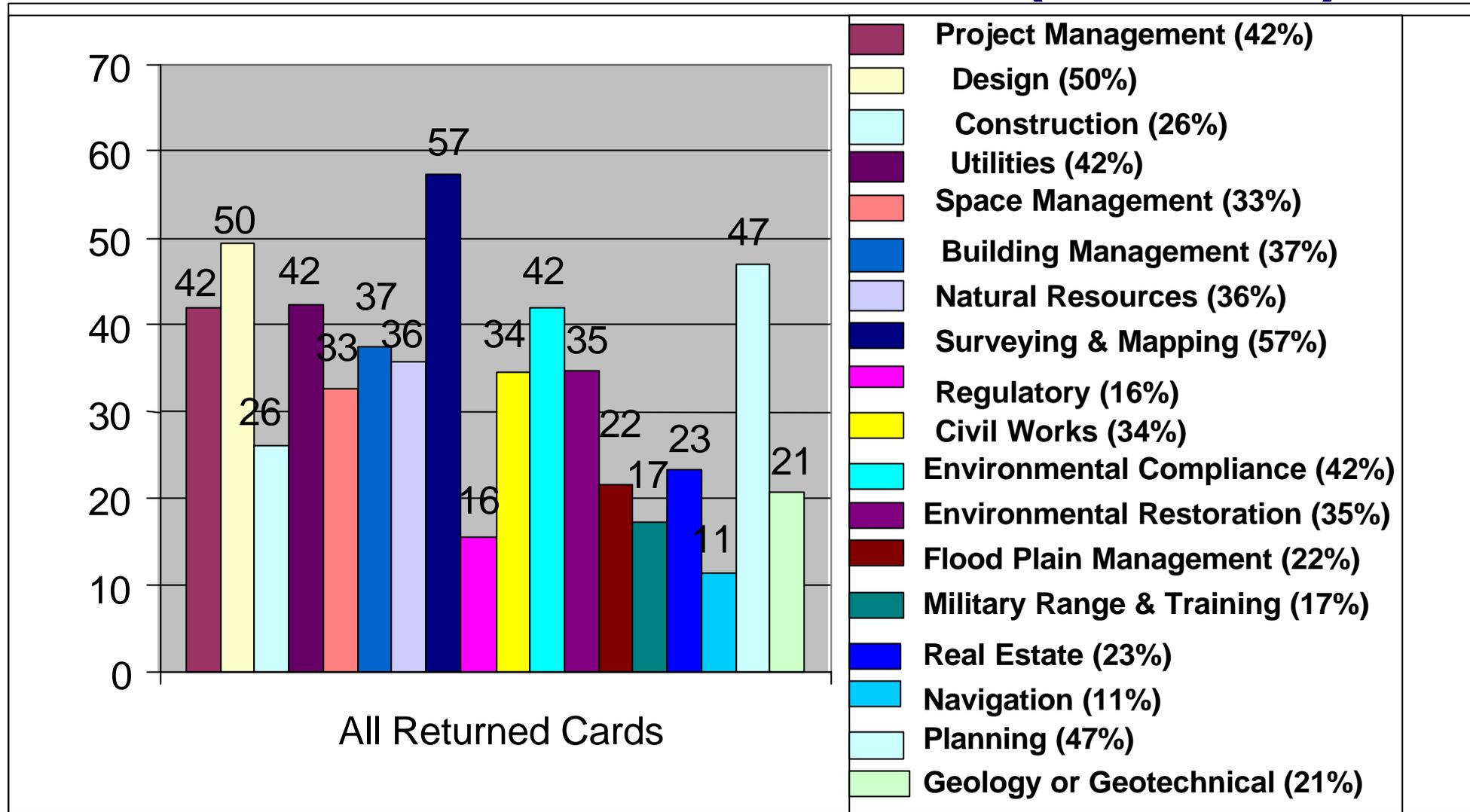
Release 2.00 Registration Cards – CADD Software Used

96.013 – Spatial Data Standard (SDSFIE)



Release 2.00 Registration Cards – GIS Software Used

96.013 – Spatial Data Standard (SDSFIE)



Release 2.00 Registration Cards – Use of CADD or GIS

Spatial Data Standard (SDSFIE) & Facility Management Standard (FMSFIE) - Development History

Spatial Data Standards for facilities, infrastructure, and environment (SDSFIE) (formerly called Tri-Service Spatial Data Standards (TSSDS) and Spatial Data Standards (SDS)) and Facility Management Standards for facilities, infrastructure, and environment (FMSFIE) (formerly called Tri-Service Facility Management Standards (TSFMS) and Facility Management Standards (FMS)).

PURPOSE

- ◆ Provide a standard for GIS and facility management (CADD and GIS) implementations at Department of Defense installations, Army Corps of Engineers Civil Works activities, and other Government organizations.
- ◆ Provide a nonproprietary standard designed for use with commercially available, off-the-shelf CADD, GIS, and relational database software.
- ◆ Provide a GIS implementation schema for approved Federal Geographic Data Committee Data Standards.

CD-ROM CONTENTS

- ◆ Windows-based SDSFIE/FMSFIE Applications (95, 98, NT, and 2000) Release 2.00 and Tutorial (Installs with SDS/FMS Release 2.00 Installation Program). Applications include the Browser, SQL Generator, Filter Maker, Filter Eraser, Geomedia Builder, Access Builder, and Access Data Creator.
- ◆ SDSFIE Symbol Sets for MicroStation, AutoCad, ArcInfo, and ArcView. (See ArcInfoSym.200, AutoCadSym.200, ArcViewSym.200, and MicroStaSym.200 directories).
- ◆ SDSFIE/FMSFIE Release 2.00 IDEF Models (.pdf and .eri digital format). (See Models.200 directory.)
- ◆ Technical guidance and documentation. See Guidance and Instructions Directories.
- ◆ GPS Tutorial (Compliments of Patuxent River Naval Air Station, Maryland). See GPS Tutorial directory.

Facilities • Infrastructure • Environment

Important contributions have been made by many past and present Department of Defense, other Federal government, State government, local government (city/county), and contractor personnel. All deserve our thanks and appreciation for their contributions to the SDSFIE and FMSFIE development effort. Of special note were the dedication and support of all past and present CADD/GIS Technology Center organizations, including Board of Directors (formerly Executive Steering Group), Corporate Staff (formerly Executive Working Group and Field Technical Advisory Group), Field User Groups (formerly Field Working Groups), and contributing subject matter experts. Special appreciation goes to all reviewers and GIS technical experts who provided invaluable comments and recommendations on this and past releases.

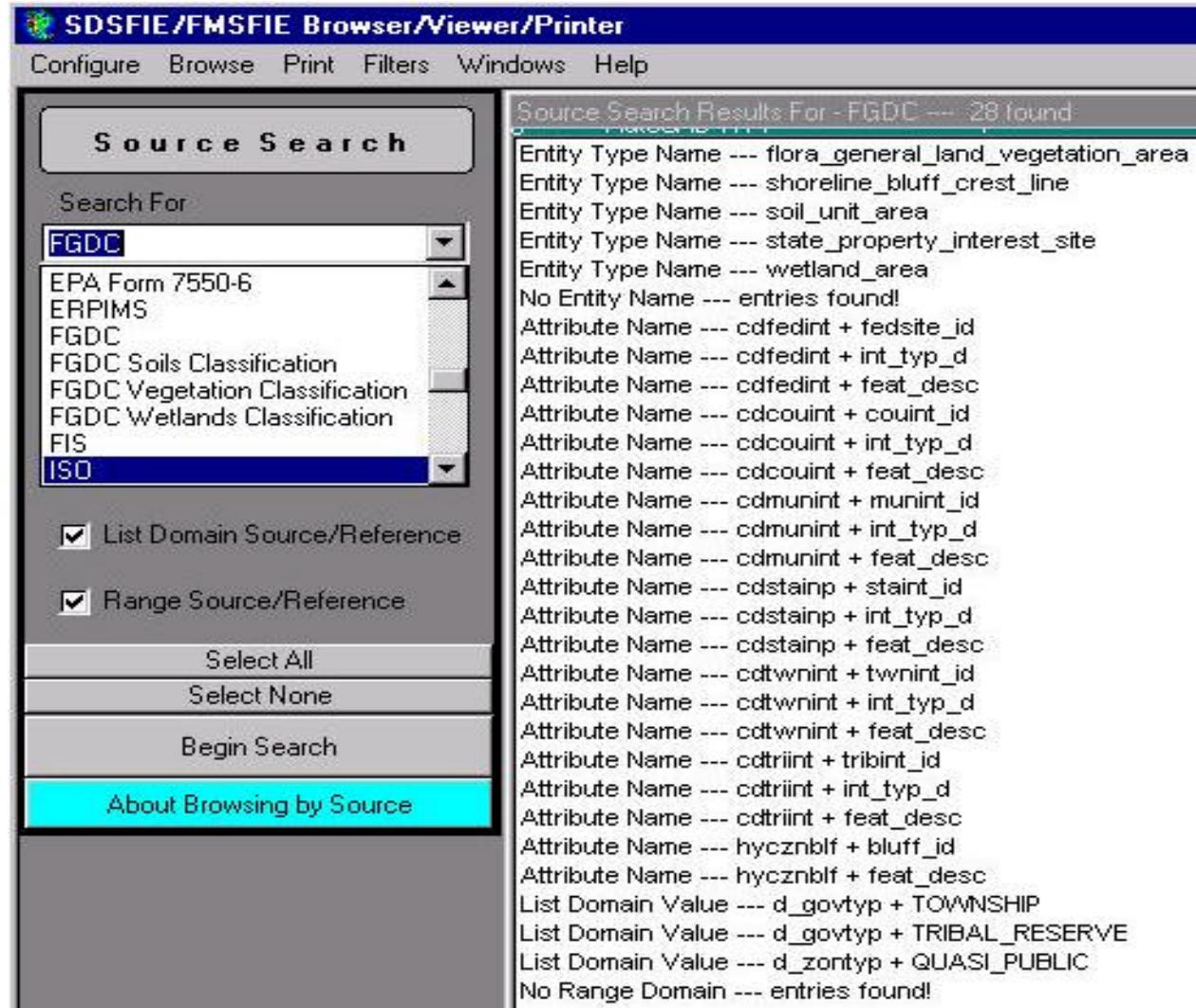
U.S. Army Corps of Engineers • U.S. Army • U.S. Air Force • U.S. Navy • U.S. Marines
 U.S. Coast Guard • Defense Logistics Agency • Environmental Protection Agency
 National Aeronautics & Space Administration • General Services Administration
 State Department • National Institute of Building Sciences

Jan 2001

- TSSDS Release 1.20 - November 1993.
- TSSDS Release 1.40 - August 1995.
- TSSDS Release 1.60 - November 1996.
- TSSDS Release 1.70 - August 1997.
- TSSDS Release 1.75 - January 1998.
- TSSDS/TSFMS Release 1.80 – February 1999.
- SDS/FMS Release 1.90 – December 1999
- SDS/FMS Release 1.95 - April 2000
- SDSFIE/FMSFIE Release 2.00 – January 2001
- SDSFIE/FMSFIE Release 2.10 – January 2002
- SDSFIE/FMSFIE Release 2.20 – August 2002

Incorporation of Approved FGDC Data Standards

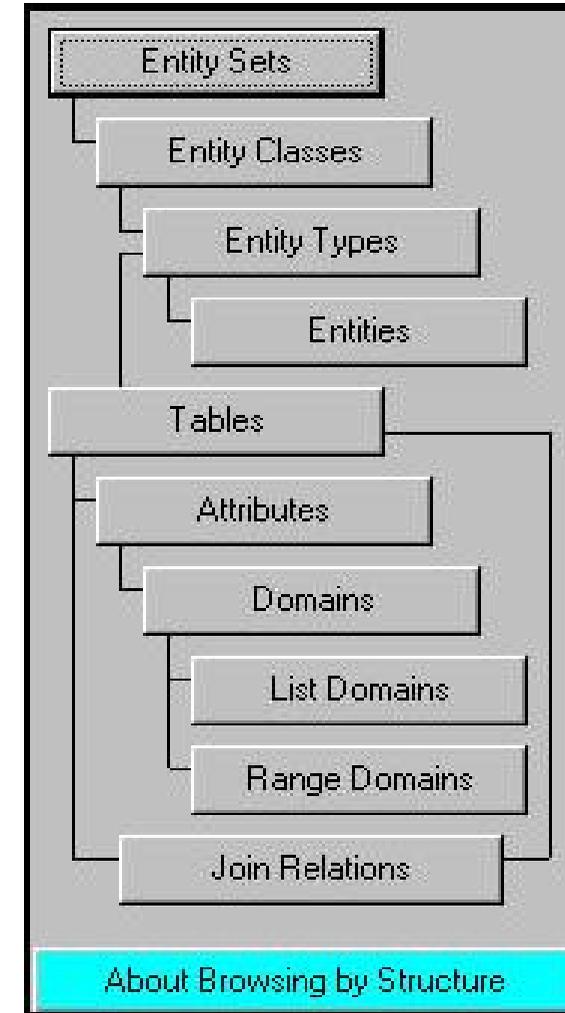
- The SDSFIE provides a GIS Implementation Schema for Approved Federal Geographic Data Committee (FGDC) Data Standards.
- Approved FGDC Soils, Vegetation, and Wetlands Classification Standards were incorporated in the TSSDS/TSFMS Release 1.80.



Tri-Service Spatial Data Standards (TSSDS) & Tri-Service Facility Management Standards (TSFMS) - Release 1.80

TSSDS/TSFMS Release 1.80 contained the Spatial Data Standards and the 1st Release of the Facility Management Standards.

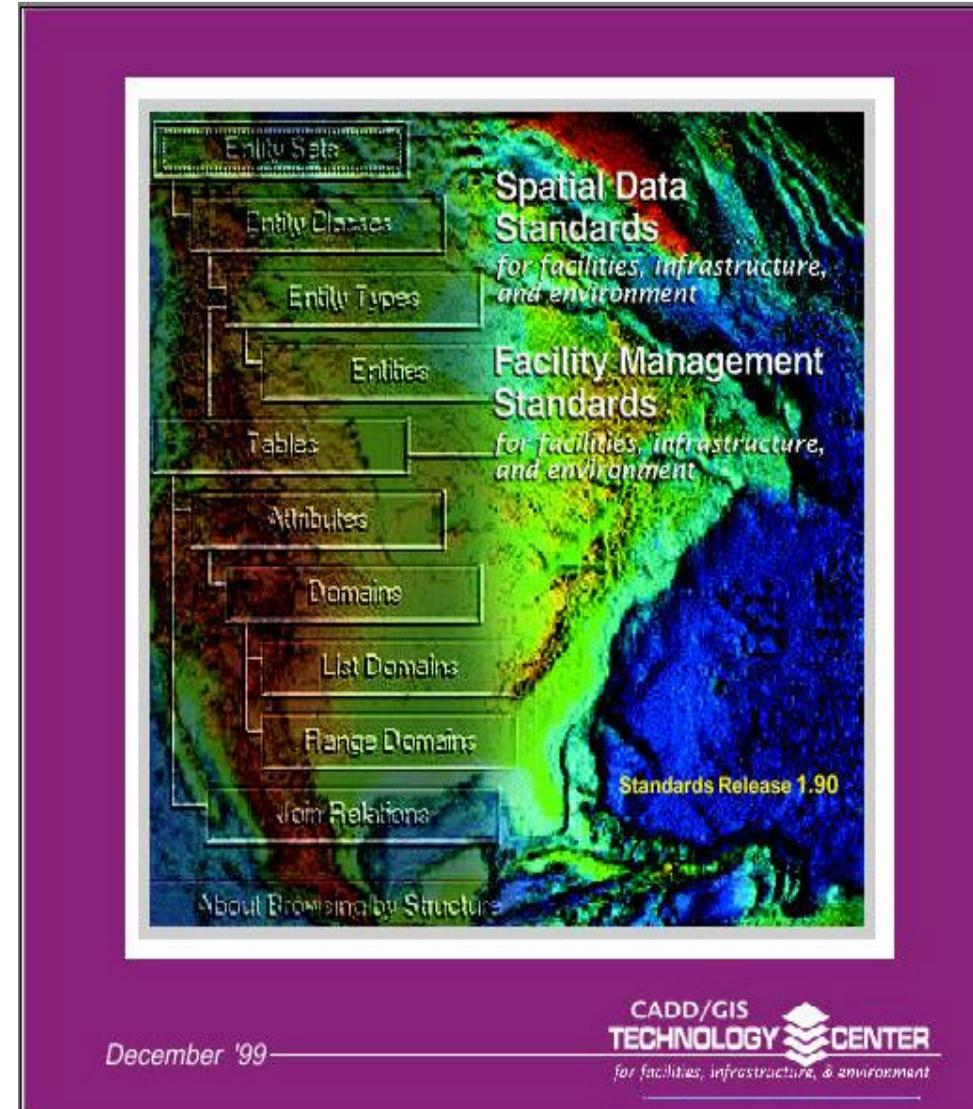
- Published in February 1999
- Over 4,400 CDs Distributed in 1999
- Over 1,100 downloads from Web Site by July 1999
- Major enhancements included:
 - Incorporation of FGDC Wetlands, Soils, and Vegetation Standards.
 - Incorporation of DISA data elements related to Facilities & Environmental Restoration/Compliance.
 - Incorporation of USACE Mississippi Valley Division's Regional Environmental & Engineering GIS (REEGIS).
 - Expansion of Military Range & Training.
 - Development of "Filter" Capability.
 - Upgraded Software Application (Browser & Generator).



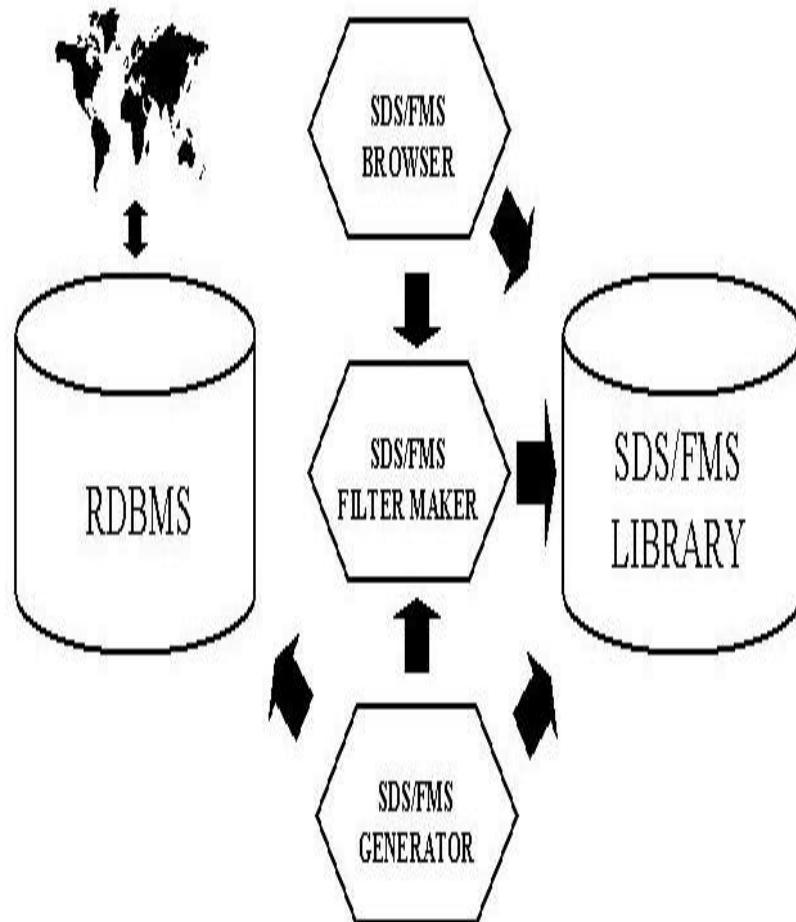
Spatial Data Standards (SDS) & Facility Management Standards (FMS) - Release 1.90

SDS/FMS Release 1.90 contained the Spatial Data Standards and the 2nd Release of the Facility Management Standards.

- Published in December 1999.
- Major enhancements included:
 - Updates to the SDS Symbol Sets and Symbology.
 - Development of one new Entity Set entitled "Future Projects".
 - Incorporation of new tables and domain values related to environmental sampling and analysis from Air Force Environmental Restoration Program Information Management System (ERPIMS).
 - Incorporation of new Features related to Military Range and Training and Corps of Engineers Civil Works Activities.

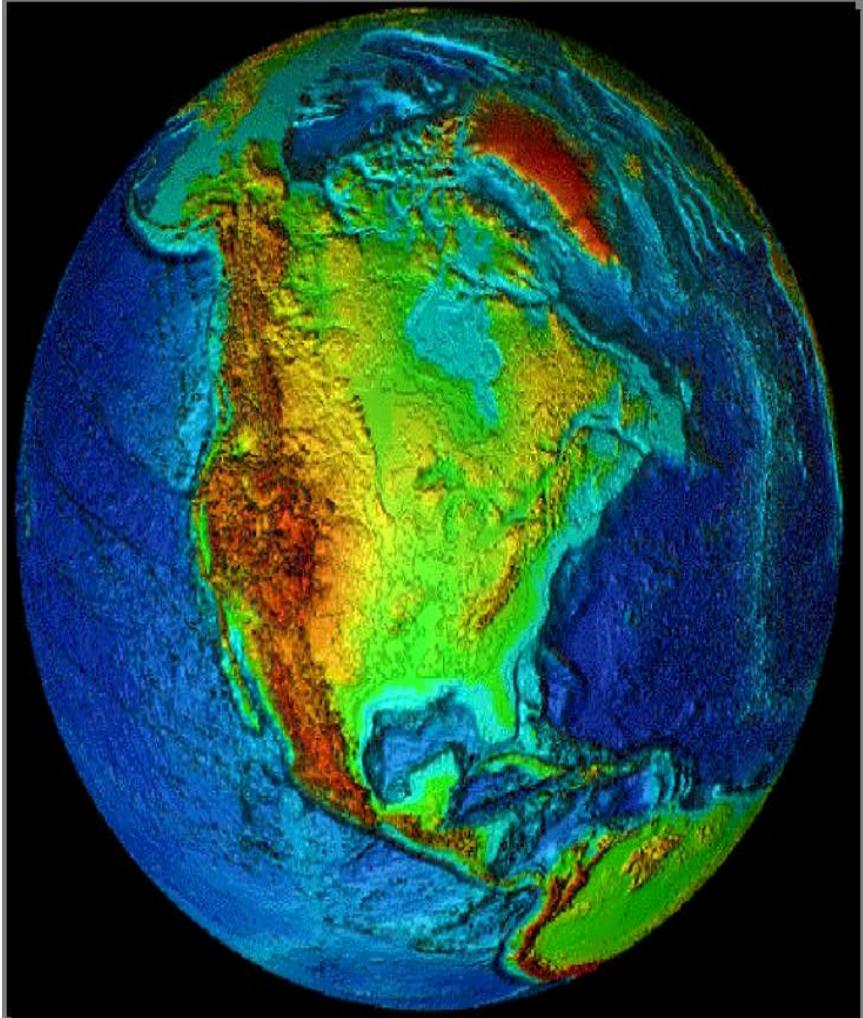


Spatial Data Standards (SDS) & Facility Management Standards (FMS) - Release 1.95



- Completed in April 2000.
- 500 CD-ROMs were published and distributed in May 2000 at the CADD/GIS Symposium & Exposition 2000 in St. Louis, Missouri.
- Major Enhancements included:
 - Developed Generator application for used with Intergraph GeoMedia.
 - Expanded Domain Tables based upon Air Force Environmental Restoration Program Information Management System (ERPIMS) database.
 - Incorporated additional U.S. Army Corps of Engineers (USACE) Mississippi Valley Division Regional Engineering & Environmental GIS (REEGIS) features.

SDSFIE & FMSFIE - Release 2.00



- Final Release 2.00 was completed in January 2001.
- Major Enhancements included:
 - Changed Acronyms to SDSFIE & FMSFIE.
 - Total Revision of Communications Entity Set.
 - Incorporated Space Management related features.
 - Incorporated additional real estate related data requirements from USACE REMIS/GIS effort.
 - Incorporated NIMA and DISA airfield data elements.
 - Incorporated additional environmental compliance and utility features and FM data requirements.
 - Made major enhancements to the SDSFIE/FMSFIE Toolbox (I.e., the suite of SDSFIE/FMSFIE Software Applications).

96.013 – Spatial Data Standard (SDSFIE)

Release 2.00:

- **Completed Final in January 2001.**
- **Distributed 3,000 CD-ROMs.**
- **Over 1,000 downloads from Internet web site.**
- **319 Registration Cards returned in FY01**
- **Expanded electronic tools (applications) to seven (Browser, SQL Generator, Filter Builder, Filter Eraser, Access Builder, Geomedia Builder, & Access Data Creator)**
- **Incorporated numerous customer comments and requests**

Spatial Data Standards / Facility Management Standards

Spatial Data Standards for facilities, infrastructure, and environment (SDSFIE) (formerly called Tri-Service Spatial Data Standards (TSSDS) and Spatial Data Standards (SDS)) and Facility Management Standards for facilities, infrastructure, and environment (FMSFIE) (formerly called Tri-Service Facility Management Standards (TSFMS) and Facility Management Standards (FMS)).

PURPOSE

- ◆ Provide a standard for GIS and facility management (CADD and GIS) implementations at Department of Defense installations, Army Corps of Engineers Civil Works activities, and other Government organizations.
- ◆ Provide a nonproprietary standard designed for use with commercially available, off-the-shelf CADD, GIS, and relational database software.
- ◆ Provide a GIS implementation schema for approved Federal Geographic Data Committee Data Standards.

CD-ROM CONTENTS

- ◆ Windows-based SDSFIE/FMSFIE Applications (95, 98, NT, and 2000) Release 2.00 and Tutorial (Installs with SDS/FMS Release 2.00 Installation Program). Applications include the Browser, SQL Generator, Filter Maker, Filter Eraser, Geomedia Builder, Access Builder, and Access Data Creator.
- ◆ SDSFIE Symbol Sets for MicroStation, AutoCad, ArcInfo, and ArcView. (See ArcInfoSym.200, AutoCadSym.200, ArcViewSym.200, and MicroStaSym.200 directories).
- ◆ SDSFIE/FMSFIE Release 2.00 IDEF Models (.pdf and .ar1 digital format). (See Models.200 directory.)
- ◆ Technical guidance and documentation. See Guidance and Instructions Directories.
- ◆ GPS Tutorial (Compliments of Patuxent River Naval Air Station, Maryland). See GPS Tutorial directory.

Spatial Data Standards / Facility Management Standards



Spatial Data Standards / Facility Management Standards

Facilities • Infrastructure • Environment

Important contributions have been made by many past and present Department of Defense, other Federal government, State government, local government (city/county), and contractor personnel. All deserve our thanks and appreciation for their contributions to the SDSFIE and FMSFIE development effort. Of special note were the dedication and support of all past and present CADD/GIS Technology Center organizations, including Board of Directors (formerly Executive Steering Group), Corporate Staff (formerly Executive Working Group and Field Technical Advisory Group), Field User Groups (formerly Field Working Groups), and contributing subject matter experts. Special appreciation goes to all reviewers and GIS technical experts who provided invaluable comments and recommendations on this and past releases.

U.S. Army Corps of Engineers • U.S. Army • U.S. Air Force • U.S. Navy • U.S. Marines
 U.S. Coast Guard • Defense Logistics Agency • Environmental Protection Agency
 National Aeronautics & Space Administration • General Services Administration
 State Department • National Institute of Building Sciences

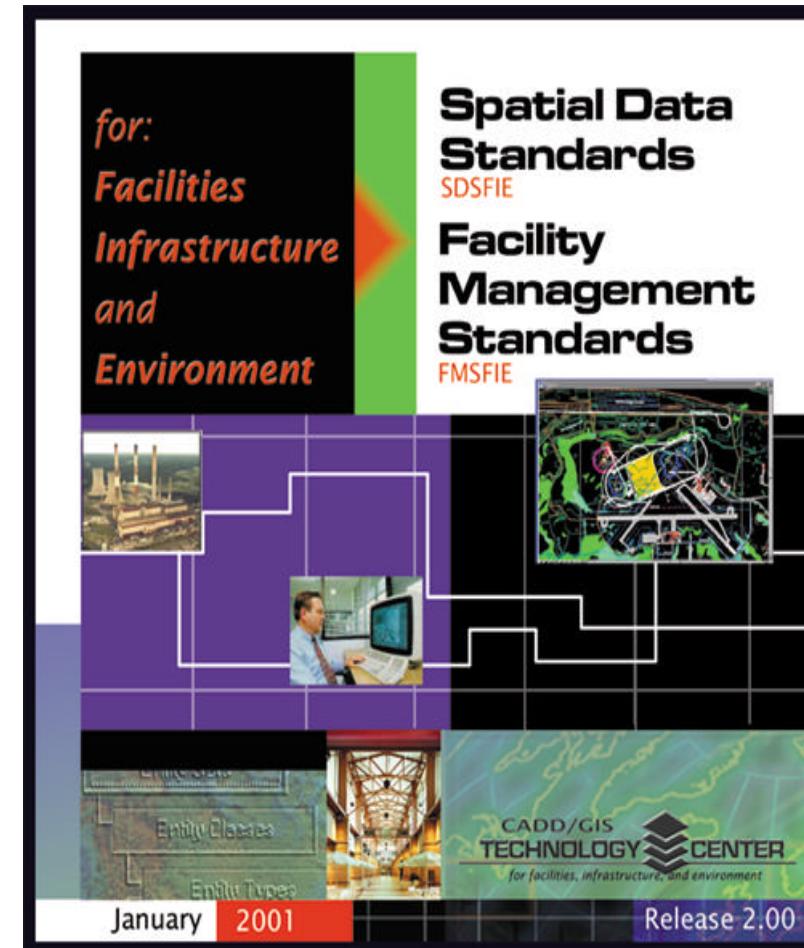
Jan
2001

Jan
2001

96.013 – Spatial Data Standard (SDSFIE)

Major Accomplishments (FY01):

- Completed & Distributed Release 2.00
- Completed Beta Release 2.10
- Completed Beta & Gamma ANSI SDSFIE (NCITS 353)
- SDSFIE featured in ESRI Brochure
- Provided Implementation Workshops
- Expanded and Upgraded Internet Web Site
- Expanded and Upgraded Electronic Implementation Tools (Release 2.00 & 2.10).
- Provided Customer Assistance



96.013 – Spatial Data Standard (SDSFIE)

Major Accomplishments (1st Qtr. FY02):

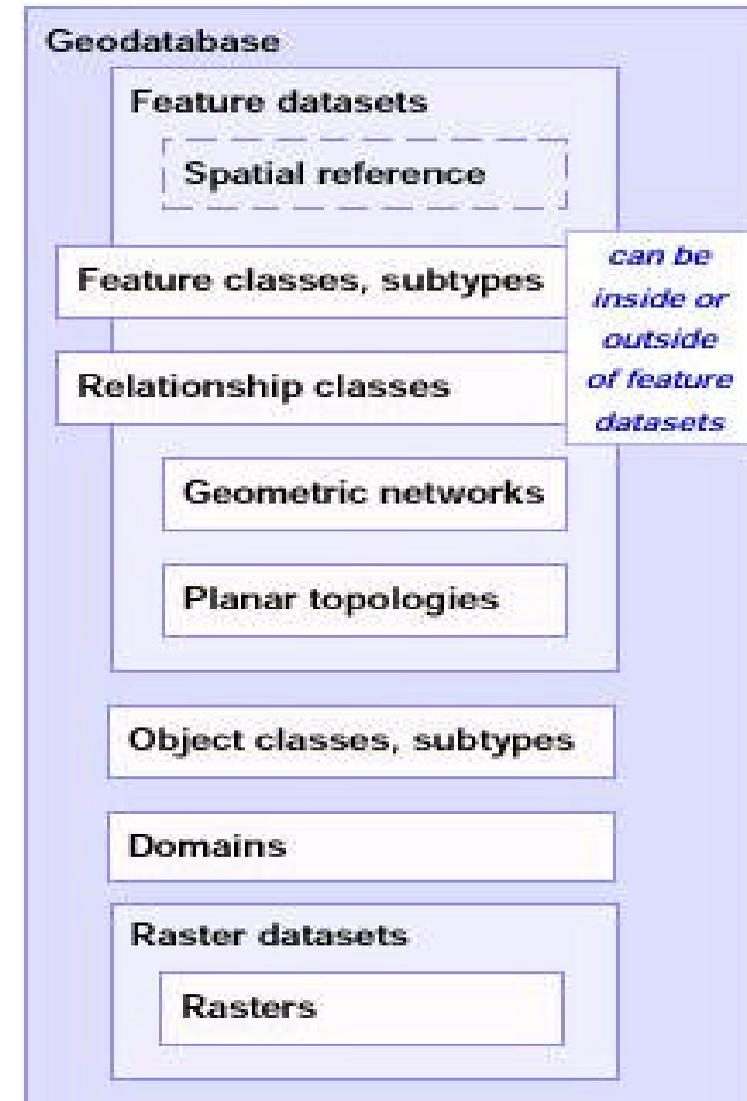
- Completed Release 2.10 - January 2002
- Final Approval of ANSI SDSFIE (NCITS 353) – November 2001
- Developed Geodatabase Builder tool for ESRI ArcGIS Customers (Release 2.10)
- Provided One Implementation Workshop – February 2002
- Expanded and Upgraded Internet Web Site
- Provided Customer Assistance



96.013 – Spatial Data Standard (SDSFIE)

Release 2.10:

- Completed Beta in September 2001.
- Quality Control review and testing completed in January 2002.
- Final completed in January 2002.
- Master CD completed on February 7, 2002
- Partnered with ESRI, Army National Guard Bureau, & Numerous GIS Users to develop SDSFIE compliant ESRI Geodatabase Template & Geodatabase Builder tool.
- Incorporated numerous customer comments and requests



96.013 – Spatial Data Standard (SDSFIE)

American National Standard Institute (ANSI) –

- <http://www.ansi.org/>
- Private, non-profit organization (founded in 1918) that administers and coordinates the U.S. voluntary standardization and conformity assessment system.
- Mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.

- Represents the interests of its nearly 1,000 company, organization, government agency, institutional and international members through its office in New York City, and headquarters in Washington, D.C.



96.013 – Spatial Data Standard (SDSFIE)

National Committee for Information Technology Standards (NCITS) –

- <http://www.ncits.org/index.html>
- NCITS's mission is to produce market-driven, voluntary consensus standards in the area of Information Technology (IT).
- Most of the standardization activities result in national (ANSI) standards and international (ISO/IEC) standards.
- NCITS is the forum of choice for information technology (IT) developers, producers and users for the creation and maintenance of formal IT standards.

- NCITS is accredited by, and operates under rules approved by, the American National Standards Institute (ANSI).
- NCITS currently has 612 published standards.
- NCITS's L1 Committee (Geographic Information Systems (GIS)) adopts, adapts, and/or develops digital GIS data standards. This technical committee is the U.S. TAG to ISO/TC 211. (<http://www.ncits.org/tcs.html>)

96.013 – Spatial Data Standard (SDSFIE)

NCITS 353 (Spatial Data Standard for Facilities, Infrastructure, & Environment) –



- November 1999 - NCITS L1 (GIS Technical Committee) approved concept of pursuing adoption of the SDSFIE as a national GIS standard (to be called NCITS 353).
- April 26, 2000 - NCITS L1 Committee approved development of draft NCITS 353 for public review and comment.
- October 19, 2000 – Draft NCITS 353 electronic template completed.
- July 3, 2001 – Public review and comment period completed.
- November 15, 2001 – NCITS 353 received final approval from NCITS Executive Committee.