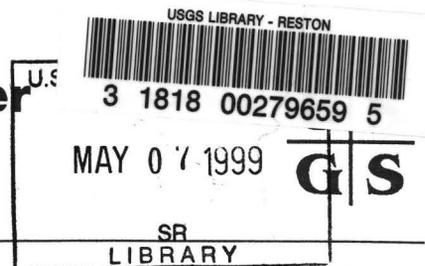


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Spatial Data Transfer Standard (SDTS)



Background

The Spatial Data Transfer Standard (SDTS) is a mechanism for the transfer of spatial data between dissimilar computer systems. The SDTS specifies exchange constructs, addressing formats, structure, and content for spatially referenced vector and raster (including gridded) data.

SDTS components are a conceptual model, specifications for a quality report, transfer module specifications, data dictionary specifications, and definitions of spatial features and attributes.

Advantages

Advantages of the SDTS include data and cost sharing, flexibility, and improved quality information, all with the potential for no loss of information during transfer.

Status

The SDTS was approved as Federal Information Processing Standard (FIPS) 173 in July 1992. Implementation was effective in February 1993, and use of the SDTS became mandatory for Federal agencies in February 1994. In June 1994, FIPS 173 was amended as FIPS 173-1, when the Part 4 topological vector profile (TVP) was added. The SDTS serves as the spatial data transfer mechanism for all Federal agencies and is available for use by State and local governments, the private sector, and research and academic organizations. The SDTS will be submitted to the American National Standards Institute (ANSI), along with the Part 5 Raster Profile, as a candidate geographic information systems (GIS) standard in the third quarter of 1995.

Implementation Support

The U.S. Geological Survey's (USGS) commitment, as the designated maintenance authority, is to increase use of the SDTS. This commitment includes the following activities:

■ Profile development—A profile is a clearly defined and limited subset of the SDTS, designed for use with a specific type of data. The most effective way to use the SDTS is to first define a profile; encoding and decoding software can then be designed to handle only the options in the profile. Part 4 of the SDTS consists of the TVP, which was adopted in June 1994 and is the revised component of FIPS 173-1. A raster profile is being developed and will be finalized in 1995.

■ Software development—The USGS is coordinating the development of public-domain software tools. One currently available tool is a software function library designed to support the ISO 8211 (FIPS 123) general information interchange standard used by the SDTS. Also under development is an extensive Toolkit to use for SDTS application development. Translators specific to USGS data structures are also being developed.

■ User guides—To address the complexity of the SDTS and to promote education, the USGS will coordinate the development of a series of user guides for the SDTS, for profiles and the profile development process, and for software support tools.

■ Spatial feature register—Part 2 of the SDTS contains a preliminary list of standard hydrographic and topographic features. The USGS SDTS Task Force is accepting submissions from the thematic working groups of the Federal Geographic Data Committee to the spatial features register, which will serve to update the current features and attributes in Part 2.

■ Conformance testing—The USGS is developing a conformance test suite that will validate commercial implementations of SDTS translators. The suite will test data sets, encoders, and decoders. The National Institute of Standards and Technology will coordinate beta testing of the test suite and will perform the conformance testing. Vendors are encouraged to participate in the development of these tests.

Online Information

The SDTS (FIPS 173-1, all parts) and related documentation are available in electronic form via anonymous FTP on the Internet at the following address:

ftp sdts.er.usgs.gov (192.55.108.165)
User: anonymous
After connecting: cd pub/sdts

The README file contains information on the contents of each subdirectory.

The SDTS home page can be found on the World Wide Web using one of the following Uniform Resource Locators:

file://sdts.er.usgs.gov/pub/sdts/www/
sdts/home.html

http://mcmweb.cr.usgs.gov/~sdts

For More Information

For additional information about the SDTS or how to participate in related development activities, contact:

U.S. Geological Survey
SDTS Task Force, MS 800
1400 Independence Rd.
Rolla, MO 65401-2602
E-mail: sdts@usgs.gov

Paper copies of the SDTS are for sale from:

National Technical Information Service
Computer Products Office
5285 Port Royal Road
Springfield, VA 22161
703-487-4600

Request FIPSPUB 173-1a for Parts 1, 2, and 3 of the standard; and FIPSPUB 173-1b for Part 4.

Request for Spatial Data Transfer Standard (SDTS) Information



1. Use this form to request the SDTS information listed below. If you request data on cartridge tape, please provide a blank tape.

2. To obtain SDTS FIPS 173-1, contact:

National Technical Information Service
Computer Products Office
5285 Port Royal Rd.
Springfield, VA 22161
703-487-4600

3. Return this form to:

U.S. Geological Survey
SDTS Request
1400 Independence Road
Rolla, MO 65401-2602
FAX: 314-341-0812

Name (first, middle initial, last)	Date	Telephone (day)
Company or Agency	<input type="checkbox"/> Federal <input type="checkbox"/> State/local <input type="checkbox"/> Private <input type="checkbox"/> Academic	FAX number
Address		
City, State, and ZIP Code		

- General SDTS information
- Topological Vector Profile
- Topological Vector Profile sample data sets and SDTS support software and documentation
- Draft Raster Profile
- Draft Raster Profile test data sets and SDTS support software and documentation

Specify medium for raster and vector profile data sets:

- 3.5" DOS diskette
- 3.5" Unix tar diskette
- 5.25" DOS diskette
- 1/4" Unix tar tape cartridge (please provide blank tape)

Please send me information on participating in the following SDTS development activities:

- Part 2— feature and attribute dictionary
- Attending workshops
- Additional vector profiles
- Additional SDTS software

SDTS FIPS 173-1 and other information are available in electronic form through Anonymous FTP on the Internet:

Internet address: sdts.er.usgs.gov
User name: anonymous
After connecting: cd pub/sdts