The NSDI Transportation Identification Standard

A Status Report

Presented at GIS-T 2001
April 10, 2001

Issues in Sharing Transportation Network Data

- Transportation network databases are widely used for different applications.
- Applications segment networks differently.
- Network databases are difficult to update.

Purpose of the Standard

- To establish common identifiers for ***chunks of road*** that can be used to share data without the need for geographic conflation.
- To create a template for feature-level metadata of road segments.
- To establish procedures for creating and updating network topology.
- To provide guidance on how to segment transportation networks.

Conceptual Foundations

- Based extensively on conceptual road data model developed under NCHRP 20-27.
- Adopts object-model approach to defining transportation features.
- Incorporates NSDI principles for developing a national transportation framework layer.
- Highly compatible with road datum concepts advocated by ITS location reference research.

Key Concepts

- Two principal data objects:
  - Framework Transportation Segments (FTSeg)
  - Framework Transportation Reference Points (FTRP)
- No implicit geometry or cartographic representation.
  - Geometry is simply an attribute of the FTSeg.
- No implicit link-node topology.
  - Network topology is specific to an application.

Who will be Impacted by the Standard?

- Transportation Network Data Developers
- Transportation Network Data Users
- GIS Software Developers
- NSDI Federal, State & Local Partners

Development Milestones

- Transportation ID Standard Proposed (May 1998).
- "Straw man" draft released (Nov. 1998).
- Draft revised by Technical Review Team (Dec. 1998).
- Second draft released (May 1999).
- Prototype testing (Sept. 1999 – June 2001).
- Third draft approved by FGDC for public review (Feb. 2001).
- Public Review and Comment Period (March – July 2001).
- Transportation ID Standard Endorsed as an FGDC Standard (Sept. – Dec. 2001).

Participants in Developing the Transportation ID Standard

- Reviews of Draft Standard:
  - State GIS Councils
  - Counties
  - Federal Agencies
  - State DOTs
  - MPOs
  - Transportation researchers
- Prototype Implementations
  - Monterey Bay MPO, Vermont, Kansas, Montana
- Implementation Interests
  - Hamilton Co. TN, Minnesota, Texas, Washington, Oregon, West Virginia, DVRPC

Implementation Issues

- Establish and maintain a national registry:
  - Designation and repository for information about transportation database authorities
  - Links to local transportation ID database sites
  - Repository for databases without local sites
- Develop additional guidance and conformity testing.
- Incorporate topology procedures in commercial GIS software.