Global Spatial Data Model - GSDM

(A Universal 3-D Model for Spatial Data)

The Global Spatial Data Model provides a simple, universal 3-dimensional mathematical foundation for the National Spatial Data Infrastructure (NSDI) which supports Geographic Information System (GIS) database applications in disciplines such as:

Surveying

Planning

Facilities
Management

Fleet
Dispatch

Transportation

Navigation

3-D
Core Concepts

- *Global X/Y/Z Rectangular Coordinates*

- *Origin at Earth's Center of Mass*

- *X/Y in Plane of Equator, Z is Earth's mean Spin Axis*

- *Rules of Solid Geometry & Vector Algebra*

- *Model does not distort physical measurements*

- *Standard Deviations Describe Data Quality*

- *Local users Work With Coordinate Differences*

- *Think globally - work locally*

Engineering

Mapping

Remote
Sensing

Computer
Graphics

Simulations

Avionics

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