Geospatial Transportation Information Section

- Geographical Information Systems Unit
- Highway Services Unit

GEOGRAPHICAL INFORMATION SYSTEM (GIS)

In the past, geographical information systems were assembled manually. Hardcopy maps, overlays, and transparencies were stored in filing cabinets rather than on computers.

Map data were compiled, and different layers were overlaid to create map composites. Then, attribute data were manually referenced. Now, with more advanced computer technology, map data, vector, and raster can be collected, layered, and stored digitally. Data are recalled by layer, as needed, to create map overlays or thematic maps.

With GIS technology, attribute data - such as addressing, ownership, soil classifications, utilities, traffic patterns, social, and economic - as well as other non-graphical information are stored in a database and then linked to graphical map data.

A GIS can perform queries of graphic and attribute databases and then output the data to the computer screen or plotting device. The results can be stored, creating new data layers in the system.

Data may also be shared among multiple users and different agencies via Internet and Intranet connections. Mobile units, including police, fire, and ambulance, can use the data in the field.

Aerial Data Service provides ground control networks and digital photogrammetric base mapping for the implementation

Program Planning & Administration Division (CP)

Geospatial Transportation Information Section (GTI)

GIS Unit

- -Centralized Roadway Geometry
- -Mapping
- -GIS Services
- -GIS Applications

Highway Data Services Unit

- -Roadway Inventory Data Processing and Maintenance
- -Roadway Statistics
- -Public Certified Mileage
- -Highway Performance Monitoring System

Geographical Information System (GIS) Update

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Geospatial Transportation Information

Where Have We Been

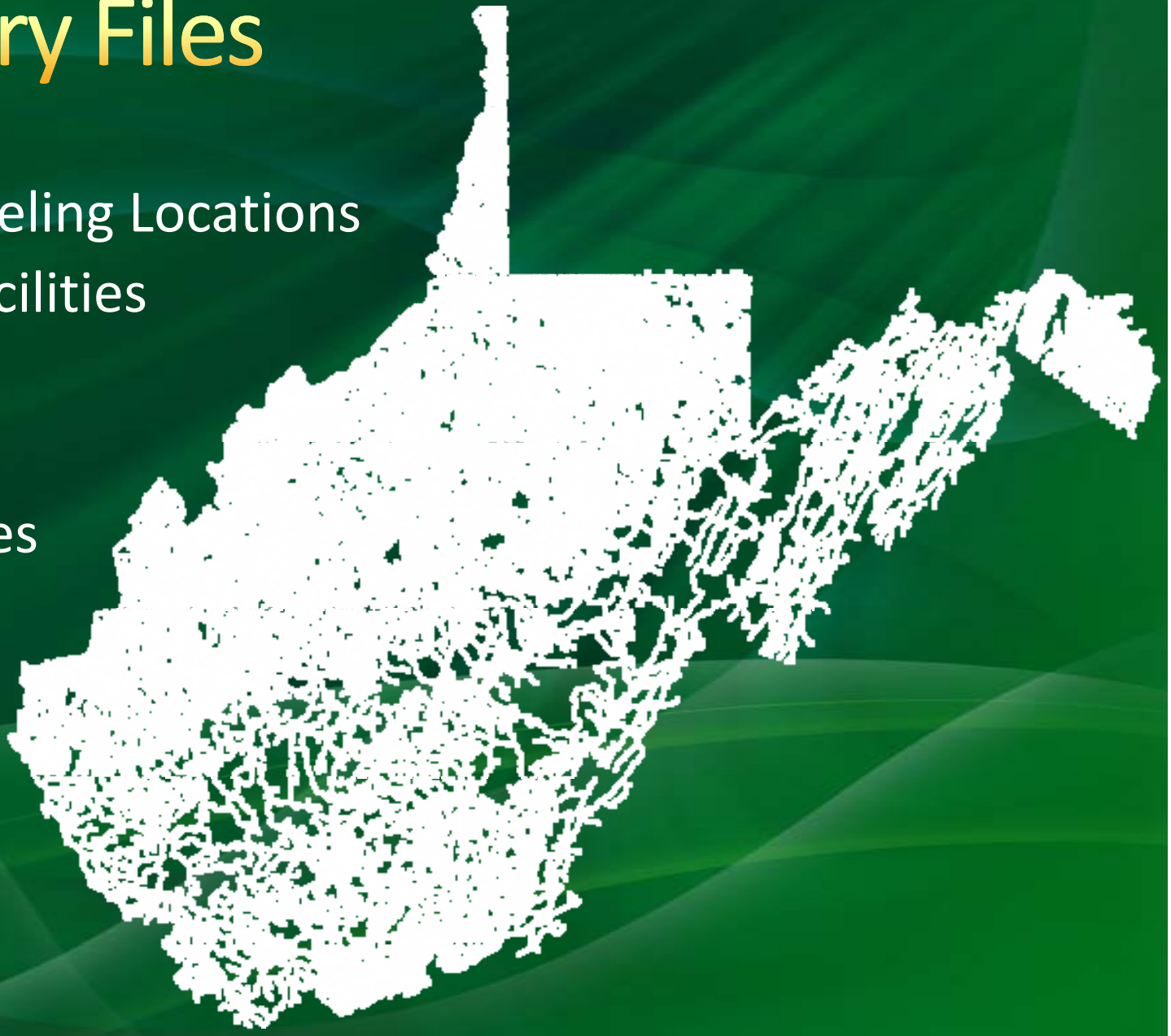
- 37,000 Miles of Road in the Geometry
- Cartographic Maps for Various Departments and/or Agencies

Finished Products Available

- Geometry Files
- Applications
- Web Resources
- Other

Geometry Files

- WVDOT Fueling Locations
- WVDOT Facilities
- Road Layer
- Rest Areas
- Park & Rides
- Airports
- Ports



http://gis.wvdot.com/gti/DataCatalog.aspx

Spatially Enabled Data

- STIP
  - Construction Projects
- RIL
  - AADT
  - Classification
  - Lane Info
  - Speed Limit
  - Etc.
- ARRA Projects

Custom Applications

- Environmental Screening Tool
- Everything Transportation (ET) Project
- National Guard/FEMA Flood Mapping Application (Mingo County)
- Snow Removal Ice Conditions Application
- STIP Application
- Stimulus Reporting Application

Web Resources

- WVDOT GTI Main Website
  - http://gis.wvdot.com/
- Mapping Applications
  - http://gis.wvdot.com/gti/WebMapping.aspx
    - WVDOT Fueling Locations
    - WVDOT Statewide Transportation Improvement Program
    - WVDOT River Port Locations
    - WVDOT Airport Locations
- Data Catalog
  - http://gis.wvdot.com/gti/DataCatalog.aspx
- HPMS Information
  - http://gis.wvdot.com/gti/HDS_HPMS.aspx

Other Resources

- New Fuel Location Books
- Training Courses Offered through Partnership with Rahall Appalachian Transportation Institute
- ArcSDE SQL Database to store, manage, & Utilize Data
- Custom Cartographic Products
- Spatial Analysis
- Straight Line Scanned Images on ApplicationXtender

Current & Future Projects

- Fleet Management
- CORS Stations
- Intersections
- Asset Management
- Additional Web Applications
  - With Search Capabilities
  - With Geoprocessing Capabilities
  - General Routing Directions & Routing by Milepost
- Stormwater Management
- GPS/GIS Enabled Field Data Collection
- Straight Line Diagram Viewer