

GIS in Transportation

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Most of the material for this topic is obtained from
various sources linked at:

<http://www.esri.com/industries/transport/index.html>



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GIS in Transportation

Areas

- Planning
- Design
- Construction
- Operations
- Safety and Security
- Maintenance
- Railroads
- Mass Transit/Public Transport
- Aviation
- Water Transportation
- Motor Vehicles Administration
- Intelligent Transportation System (ITS)
- Distribution and Fleet Management



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cube -base - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.citilabs.com/base/index.html>

Planning

cube

► Planning & GIS Models

- TransCAD – independent software system
 - (Caliper Corporation)
- CUBE – ArcGIS dependent

cube base

Cube
 Cube Base
 Cube Voyager
 Cube Dynasim
 Cube Cargo
 Cube ME
 Cube brochure

ArcGIS
 ArcView 8
 ArcGIS Spatial Analyst
 3D Analyst

Other Products
 Viper
 TP+
 Trips
 Tranplan
 Accmap
 Minutp

Cube Base has user interface elements designed explicitly for the development and application of models built using Cube Voyager, Cube Cargo, Cube ME, Cube Dynasim, Cube Polar, TP+, TRIPS and TRANPLAN.

Design and test your model

Application Manager uses a flow-chart system for designing, coding, documenting and running the model. Input and output data is shown in the context of the model and can be immediately viewed

click on the pictures to enlarge it

Done Internet

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Design

<http://www.esri.com/news/arcnews/fall03/articles/fall03gifs/p26p3-1g.gif> - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.esri.com/news/arcnews/fall03/articles/fall03gifs/p26p3-1g.gif>

ArcGIS Used for Roadway and Site Design With Extensions From CEDRA

Done Internet

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Proposed and Active DOTD Construction Projects

Refresh Map

Layers

Visible Active

- TOPS - Under Construction
- LETS - Projects to be Let
- NEEDS - Traffic Flow
- NGS Benchmarks 2/20/2002
- Place Name
- Interstate Shields
- Interstate
- US Congress
- LA State Senate
- LA State House
- DOTD Districts
- Control Sections
- Parish Name
- Parishes

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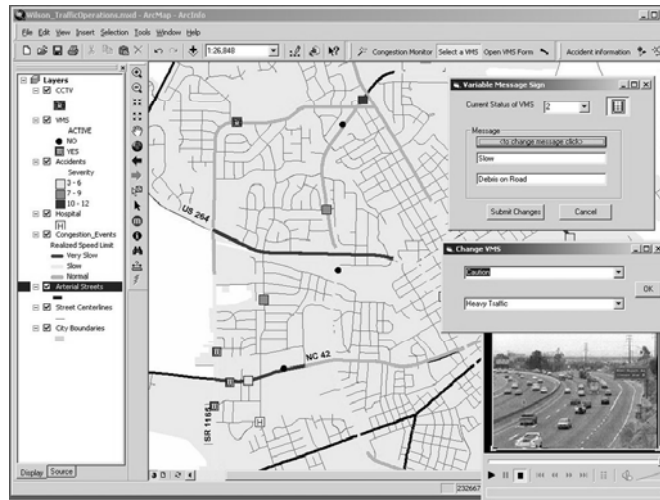
ESRI GIS decision support systems can now become weather-enabled with real-time, quality controlled weather data, available in shape, GRID, and image formats.

Operations

Provide remote access to maps and bridge data, including driving instructions over wireless networks.

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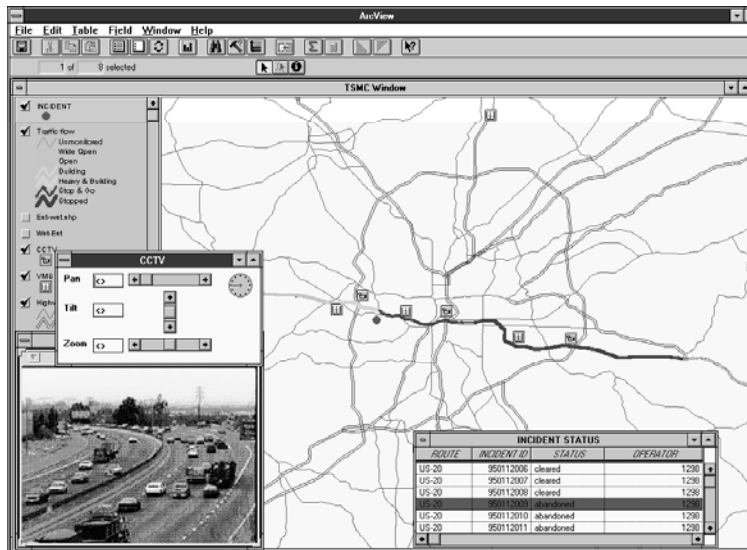
Real Time Info



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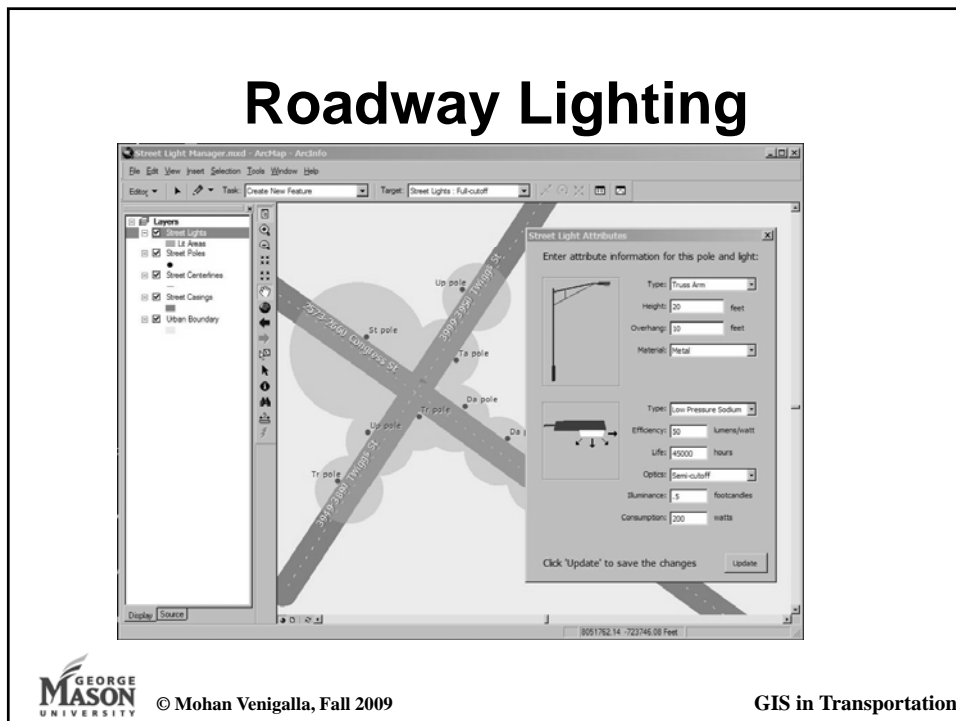
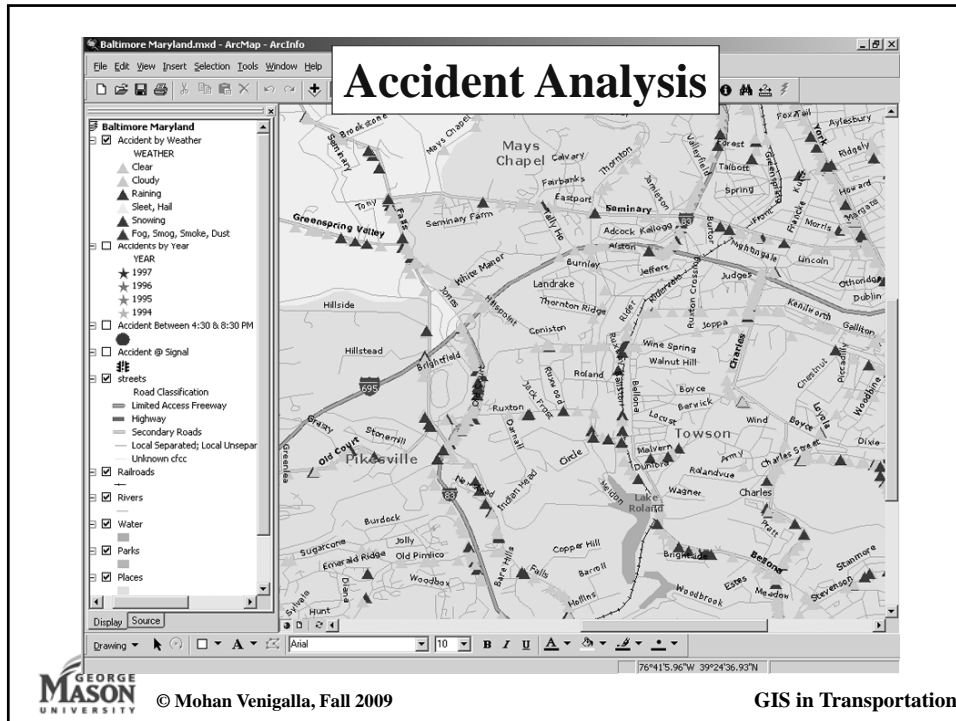
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Other ITS

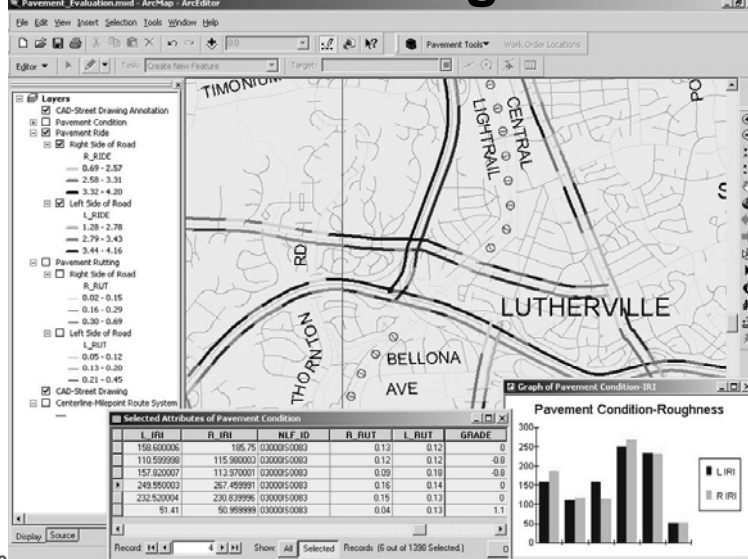


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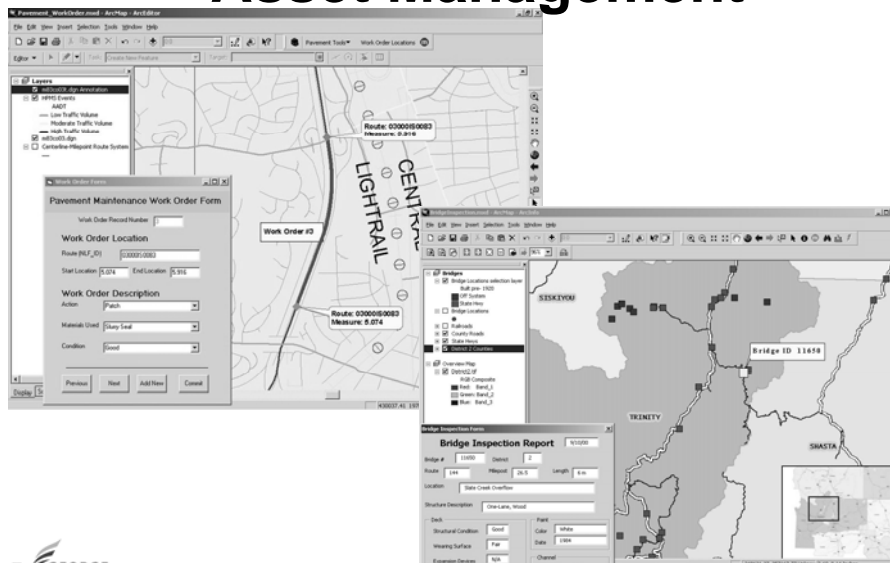
Pavement Management



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Asset Management



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GIS in Transportation

- Route planning and analysis
- Bus dispatch and emergency response
- Automatic vehicle location and tracking
- Track, power, communications, and signal maintenance
- Transportation planning and modeling
- Demographic analysis and route restructuring
- Accident reporting and analysis
- Bus stop and facility inventory
- Rail system facility management
- Paratransit scheduling and routing
- Ridership analysis and reporting

Mass Transit



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Water Transportation



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