OVERVIEW
Transportation agencies across the United States permit and route hundreds of thousands of oversize and overweight (OS/OW) vehicles daily. Delaying the movement of these vehicles due to cumbersome permitting systems can have a detrimental effect on the state, the commercial trucking industry, and the traveling public. A routing error for an OS/OW vehicle can also result in a significant safety risk for motorists and cause substantial damage to transportation infrastructure.

A few common issues associated with routing and permitting of these vehicles include:

- Large volume of permitting requests on a given day
- Lack of qualified staff to fulfill permitting requests
- Delayed access to roadway and bridge hazards (restrictions) information

AUTOMATED PERMITTING & ROUTING
Intergraph offers an automated permitting and routing solution that streamlines the OS/OW permitting process. This solution offers carriers a web-browser application to complete a permit request, generate a safe route, and automatically receive the permit without manual review.

Permitting staff also utilize this system to complete permit requests for walk-in and call-in customers. In addition to this capability, internal users have access to multiple functions that automate daily operational activities, including:

- Financial management
- Business intelligence and reporting
- Business rules configuration
- Workflow management based on business rules
- Extensive bridge analysis
- Broad information search
- Account and user management

Intergraph’s solution also gives you an in-depth application for managing roadway and bridge restrictions on the network, as well as seamless integration with commercial map providers such as Google, Microsoft® Bing, and NAVTEQ streets data.

SYSTEM FUNCTIONS
Intergraph’s OS/OW solution offers maximum flexibility and is delivered as a turnkey solution that can include, but is not limited to, the following components:

- Third-party Permit Manager Application
  - Document upload for required attachments
  - Financial management
  - Information search
- Route Planner Application
  - Auto-generate route
  - Bridge analysis
  - GPS integration
- Restriction Manager Application
- Business Intelligence & Reporting Application
- Enterprise Data Integration
  - GIS road network
  - Bridge management
  - Roadway characteristics
  - 511 incident information

If desired, Intergraph’s solution can be modularized to fit your need (e.g., if you only need automated routing and restriction management). Furthermore, if you already own an electronic permitting system, you can easily access the route planner through a modern web-based interface.
**PERMIT MANAGER APPLICATION**

If you need a permitting solution, Intergraph offers a third-party permitting application which includes a robust web-based interface for capturing vehicle and load information related to the requested permit. The Permit Manager applies business rules while automating the permitting process. Once all required workflow steps are completed, this application allows carriers to make payments and the staff to automatically issue a permit.

Other key functions of the permit manager include, but are not limited to:

- Financial management
- Document loading for required schematics
- Workflow accountability to ensure proper approvals and enforcement of business rules
- Integration with disparate systems, such as CVIEW
- User and account management

**ROUTE PLANNER APPLICATION**

Intergraph’s Route Planner application provides automated restrictive routing capabilities using a sleek graphical interface. Its GIS-enabled mapping function is useful for defining, testing, and visualizing the desired route. When performing route analysis, this application evaluates the vehicle parameters against the restrictions on the network to ensure the vehicle can safely pass. A number of optional workflow components are also offered based on your workflow requirements. These include, but are not limited to:

- Advanced bridge analysis (bending moment, VIRTIS, etc.)
- Output to GPS
- Integration with commercial map viewers (Google, Microsoft Bing, etc.)

The route planner offers a variety of intuitive input options for route origins and destination points, such as “street address,” “coordinates,” “street intersection,” or “select from map.” You can also save commonly used routes and recall them to expedite the routing process.

To ensure the selected route is accurate, the Route Planner displays the generated route and driving directions directly in the application window for review.

As an added value, all approved routes generated by the system are saved in the database for reporting and asset planning purposes. This allows you to plan long-term maintenance activities by helping you evaluate which roadways are traveled most often.

**RESTRICTION MANAGER APPLICATION**

Intergraph’s Restriction Manager application allows you to enter and manage restrictions on-the-fly to ensure that network constraints are up-to-date. You can also override an existing restriction, such as a bridge vertical clearance if needed. Common restrictions include “full blockage,” “reduced capacity,” and warning-type restrictions. A full blockage or reduced capacity restriction will impact the routing decision process, but a warning simply provides this information to the carrier on the permit document.

The restriction manager will allow point, linear, or area-type restriction. The first two restrictions are obvious, but in some cases it is necessary to close roads within an area for weather-related purposes. You can easily accomplish this with Restriction Manager. Simply define the area of interest and all roads that fall within that area will update to reflect the restriction value.

To ensure the selected route is accurate, the Route Planner displays the generated route and driving directions directly in the application window for review.

As an added value, all approved routes generated by the system are saved in the database for reporting and asset planning purposes. This allows you to plan long-term maintenance activities by helping you evaluate which roadways are traveled most often.

**ABOUT INTERGRAPH**

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize vast amounts of data to make processes and infrastructure better, safer and smarter. The company’s software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, operation and data management of plants, ships and offshore facilities. Intergraph SG&I provides geospatially powered solutions, including ERDAS technologies, to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is a wholly owned subsidiary of Intergraph Corporation responsible for the SG&I U.S. federal business.

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