More efficient route planning for cleaner air

BY JACK DANGERMOND, PRESIDENT

Over the years, ESRI has developed a number of applications that streamline vehicle fleet operations. The technology driving the development of these applications is now available as a comprehensive solution in *ArcLogistics Route*, a fully interactive and easy-to-use desktop routing and scheduling software application from ESRI. *ArcLogistics Route* improves the way home delivery and service vehicle fleets deliver goods and services.

Total vehicle miles traveled can be minimized using *ArcLogistics Route*. By reducing unnecessary and preventable route activity, *ArcLogistics Route* contributes to cleaner air by minimizing total vehicle emissions, as it reduces operating costs and improves customer service.

GIS routing solution

Traditional route optimization software depends on Euclidean or as-the-crow-flies distance measurements to determine ideal route sequencing. This can be extremely inaccurate and often results in gross underestimates of mileage. *ArcLogistics Route*, the premier geographic information system (GIS)-based routing solution, utilizes true street network topology to more accurately model time and distance.

Logical topology-based networks include variables such as overpasses, underpasses, one-way streets, speed limits and turn restriction conditions. The ability to visualize the interrelation between logistical and topographic factors provides better interpretation of data and improves the decision-making process involved in creating routes. When combined with state-of-the-art optimization techniques, this results in more practical and efficient route planning.

The GIS-based approach to route planning loads street and highway information in the form of X-Y coordinates from a geometric network database. This information is then presented to route optimization personnel as a map, where it can be accessed and manipulated with ease and clarity.

On time, all the time

ArcLogistics Route gives users the flexibility to have a second time window for service, and to set a grace period within which an order can be serviced and still be considered on time. Orders can be prioritized

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>
> —Jack Dangermond, ESRI

so that those of highest importance get routed first. It also allows second-day routing, which is helpful for users who need to route their vehicles past midnight. *ArcLogistics Route* ships with Crystal Reports and Dynamap/Transportation street data from GDT for use in the United States.

With annual sales of more than $370 million, ESRI has been the world leader in the GIS software industry for more than 30 years. Additionally, ESRI provides powerful GIS solutions to more than 300,000 clients in more than 189 countries. As the leader in GIS technology, ESRI offers innovative solutions that will help you create, visualize, analyze and present information better and more clearly. ∎

For more than 30 years ESRI has been helping people manage and analyze geographic information. ESRI offers a framework for implementing GIS technology in any organization with a seamless link from personal GIS on the desktop to enterprisewide GIS client/server and data management systems. ESRI GIS solutions are flexible and can be customized to meet the needs of our users. ESRI is a full-service GIS company, ready to help you begin, grow, and build success with GIS.

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ArcLogistics Route is a complete desktop vehicle routing and scheduling software. Using real street networks, ArcLogistics Route geocodes stops; optimizes routes and schedules; and outputs maps, directions, and reports. ArcLogistics Route operates under Windows 98 and 2000, Windows NT 4.0, and Windows Me.
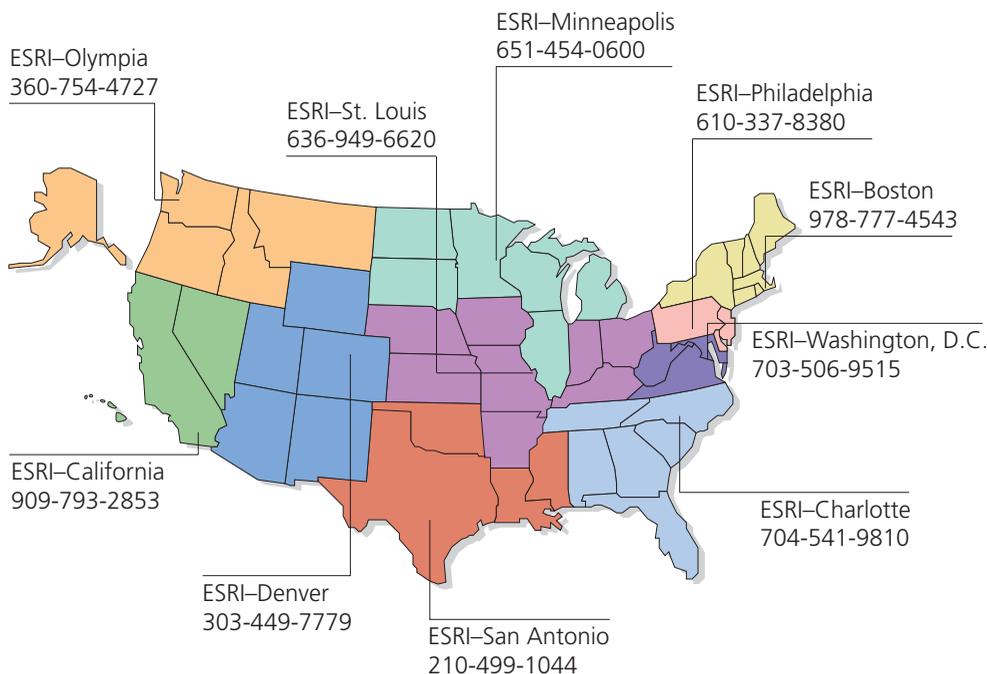
ArcIMS® software is the foundation for distributing geographic information system (GIS) data and applications on the Internet. ArcIMS provides a standard platform to integrate, share, and exchange GIS data from other agencies. ArcIMS supports Windows NT and UNIX platforms. For more information, please visit ESRI online at www.esri.com/arcims.

NetEngine software is a programmer's library designed for geographic network analysis such as networks defining streets, railways, utility and distribution facilities, or rivers. NetEngine provides the programmer the capability to define, store, traverse, and analyze many kinds of networks through a C application programming interface or through Visual Basic via a type library.

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