



## SOLUTION OVERVIEW

# CISCO AND NET TO DRIVE INTELLIGENT ROADWAY SOLUTIONS

## CHALLENGE

Intelligent Transportation System (ITS) solutions are evolving and improving. Historically, many ITS solutions were standalone systems equipped with minimal communications capabilities. Transportation departments now recognize the need for integration and communication, and are deploying more networked solutions as a result. Networked solutions enable more rapid integration of various ITS solutions and the sharing of real-time information pertaining to congestion and other problems that affect the overall system. Additionally, statistics show that traffic recovery time is four times greater than the duration of any given traffic incident—making the delivery of a rapid response to traffic problems all the more critical for safety and the maintenance of a steady traffic flow.

## SOLUTION

The Cisco® Intelligent Roadway solution includes advanced traffic management solutions, traffic management centers, and advanced traveler information systems. This multiservice network enables more efficient and cost-effective operations when consolidated over a converged network. The Cisco solution for ITS deployment allows Department of Transportation (DOT) agencies to be ready for future applications such as transmitting information to and from vehicles and providing video streams of roadway incidents to emergency responders on handheld devices.

Cisco Systems® and National Engineering Technology Corporation (NET) work together to deliver a core infrastructure that takes full advantage of an agency's existing infrastructure, enabling administrators to use high-performance applications that improve the overall efficiency of roadways. The Cisco Intelligent Roadway solution consists of an intelligent information network that connects disparate network systems to improve the flow of traffic, reduce and minimize roadside incidents, and provide operators with a central view of the highway system—including data on road conditions, traffic, vehicle crews, and transit information. Both Cisco and NET work closely with transportation authorities to design and implement the ideal solution that will address each specific challenge.

## BUSINESS BENEFITS

NET's innovative designs—combined with Cisco Intelligent Roadway products—provide a robust, high-performance, and cost-effective solution for agencies that need to integrate traffic and transportation management system components across a wide-area network (WAN).

## SUPPORTING SERVICES, SOLUTIONS, OR PRODUCTS

From Cisco Systems:

- **Cisco Network Security Solutions:** Using advanced encryption and tunneling, Cisco network security solutions enable secure, end-to-end, private network connections over third-party networks—such as the Internet or extranets—and provides wireless protection software and intrusion detection system.
- **Cisco Core and Edge Network Solutions:** Cisco WAN core solutions tightly integrate IP and ATM technologies through tag switching, which allows IP services and ATM services to be delivered on a single infrastructure with dynamic bandwidth sharing between services.

- **Cisco Wireless Solutions:** The Cisco Aironet® Series of wireless LAN solutions integrates easily into an existing network as a wireless overlay, or creates freestanding all-wireless networks, enabling mobility and increasing productivity quickly and cost effectively.
- **Cisco IP Communications Solutions:** Enterprise-class solutions include IP telephony, unified communications, IP video- and audioconferencing, and contact center that facilitate more engaging and efficient interactions amongst employees, partners, and customers.
- **Cisco CWDM/DWDM Optical Solutions:** Employs multiple light wavelengths to transmit signals over a single optical fiber, maximizing the use of installed fiber cable and allowing new services to be quickly and easily provisioned over existing infrastructure.
- **Cisco Mobile Access Router:** The Cisco 3200 Series Mobile Access Router, designed for “always-on” connectivity, facilitates mobility of entire networks of communication devices in moving vehicles such as trucks, light rail, emergency vehicles, and automobiles.

From NET:

- **Full support for all aspects of ITS:** NET is a full service ITS consultant with expertise in advanced freeway, arterial and integrated corridor management, transit and parking management, regional system integration, advanced traveler information systems, and emergency services system integration.
- **Preliminary ITS Planning:** NET specializes in end-to-end ITS support. NET’s ITS operations specialists can help agencies develop regional ITS plans that provide the true operational benefits that agencies are looking for.
- **ITS Implementation Planning:** NET’s end-to-end ITS expertise makes them uniquely qualified to help agencies develop complete and realistic ITS implementation plans, that include all aspects, including field deployment, communications infrastructure, and central control systems.
- **Local and regional ITS Architecture:** NET’s hands-on operational and system deployment experience helps ensure that local and regional architectures are based on true operational needs and sound system design.
- **Detailed ITS design, deployment and Integration:** NET is a national leader in the design and deployment of integrated transportation management systems. NET has deployed award-winning ITS solutions throughout the country. Three of the eight awards at ITS America in 2004 were presented to agencies using systems designed and deployed by NET.
- **Maintenance and Operational Assistance:** Once systems are deployed, NET provides system maintenance and operational support to help ensure the most effective operations.

## WHY CISCO/NET ALLIANCE?

Cisco Intelligent Roadway, a unified, standards-based communications solution, takes advantage of existing investments in disconnected traditional systems to help transportation authorities capitalize on emerging operational, customer service, and security opportunities. NET brings the solution to life with a strategic end-to-end systems integration plan that encompasses design, build, installation, and maintenance. NET has integrated Cisco products into many award-winning transportation systems.

## ABOUT CISCO

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Today, networks are an essential part of business, education, government and home communications, and Cisco IP-based networking solutions are the foundation of these networks. Cisco hardware, software, and service offerings are used to create Internet solutions that allow individuals, companies, and countries to increase productivity, improve customer satisfaction, and strengthen competitive advantage.

## ABOUT NET

NET is a national consulting firm of engineers and planners, specializing in the planning, design, and implementation of area and regional traffic and transportation systems that integrate advanced technologies. Dedication to innovation and quality is a hallmark of NET's products and services.

## FOR MORE INFORMATION

For more information on Cisco Intelligent Transportation Solutions, visit <http://www.cisco.com/go/transportation> or contact your local account representative.

For more information on NET solutions, visit <http://www.nateng.com/>



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