NEWS RELEASE

Cisco Lights Path to Greater Road Safety, Fewer Traffic Headaches

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Internet of Everything Helps Cities Improve Safety and Traffic Flow With Cisco Transportation Suite
SAN JOSE, CA -- (Marketwired) -- 02/18/15 -- With more than one billion vehicles worldwide on the road triggering billions of hours of traffic congestion (including more than five billion hours of travel delay each year in the United States alone), a majority of private and public stakeholders rank transportation as the infrastructure most in need of a major investment. Today, Cisco (NASDAQ: CSCO) announced a suite of validated solutions that securely connect disparate transportation systems to increase safety and reduce roadside incidents, improve traffic flow, and provide a centralized view of highway systems. Utilizing the Internet of Everything, the Cisco® Connected Roadways solution creates an end-to-end infrastructure that helps enable vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) applications. This approach offers new business models and growth opportunities for transportation authorities, cities, automakers and freight operators; a safer driving experience for motorists; and the underlying infrastructure to help support self-driving vehicles in the coming years.

With mandates from the US Department of Transportation (USDoT), decision-makers are challenged with adopting new standards and infrastructure investments to stay up-to-date with regulations. According to the USDoT, 5.6 million crashes occurred in 2012 alone, resulting in more than 33,000 fatalities. The five billion hours of travel delay in the U.S. increase fuel consumption by 2.9 billion gallons, adding up to 56 billion pounds of carbon dioxide to the atmosphere each year. Connected vehicle technologies will further empower drivers and system operators to make informed decisions that can ultimately reduce traffic and transit delays and avoid potential collisions. Connected vehicle environmental applications will give travelers up to date information they need to make "green" transportation choices.

Cisco Connected Roadways addresses the interoperability requirements based on the Connected Vehicle Reference Implementation Architecture:

- ***Vehicle-to-Infrastructure Communication*** to improve safety, where on board Dedicated Short Range Communications (DSRC) radio from transit vehicles can interact with Traffic Safety System

(TSS) for Transit Signal Priority (TSP).
- ***Computer Aided Dispatch (CAD)*** dispatches information to field service technicians, mass transit vehicles or emergency services assisted by computer, via two-way radio, text messages or other forms of communication.
- ***Automatic Vehicle Location (AVL)*** which automatically detects vehicle location and securely dispatches the information via the GPS. With Cisco integration, third party partners can alert drivers through CAD/AVL about upcoming traffic incidents.
- ***Wireless Bulk Data Transfer*** gives fleet mass transit vehicles access to download multiple data types (e.g. schedules, announcements, route info, etc.) from a central repository over the Dedicated Short Range Communication interface to the onboard unit.
- ***System Management*** provides a comprehensive network management platform to perform FCAPS (fault, configuration, accounting, performance, security) functions for a transportation-focused system deployment.
- ***Cisco Services,*** which utilizes our industry leading experience to help improve system operational efficiency, scalability, security, and profitability with an end-to-end approach that aligns to business outcomes.

The suite of validated solutions is composed of Cisco IP Next Generation Network, Enterprise, Collaboration, and technology products. Solution highlights include:

- ***Cisco Industrial Ethernet*** ruggedized switches provide transport connectivity to Roadside Equipment components and can withstand wide ambient temperature ranges and harsh environments.
- ***Cisco 819 Integrated Services Router*** offers onboarding and roadside connectivity on vehicles to provide cellular and wireless connectivity. Ethernet ports connect Dedicated Short Range Communications (DSRC) radio to city-wide Unified MPLS transport network.
- ***Cisco Unified MPLS Transport*** provides a scalable and resilient backhaul of data traffic between the roadside and the data center.
- ***Cisco ISR 3945 and 4451-X Routers*** are the hub for Maintenance Yard networks.
- ***Cisco ASR 900/1000 Series Routers*** deliver scalable and resilient Unified MPLS transport infrastructure; interconnectivity between Roadside, Yard, Data Center, and Operations Center networks; and routing functionality for management of mobility and communications to and from vehicles moving around the roadside infrastructure respectively.

Supporting Quotes
Wim Elfrink, chief globalization officer and executive vice president, Industry Solutions, Cisco:
"Transportation agencies, cities, mass transit passengers and motorists all benefit from technology advancements for roadways and transportation. Cisco's latest transportation solutions provide a straightforward approach to improving the basic infrastructure individuals rely on. This can transform the everyday driving and transit experience with fewer accidents and delays occurring."

Bernd Datler, managing director of tolling, ASFiNAG GmbH
"We connected more than 70,000 sensors and 6,500 traffic cameras over fiber optic networks, giving us live feedback on our roads. Using this data, we can help route emergency vehicles, provide drivers with up-to-date information, and even adjust speed limits to alleviate traffic jams."

Gary Duncan, Chief Technology Officer, Econolite Group, Inc.
"Our Department of Transportation customers require a reliable and secure network infrastructure to meet the demands of the new Connected Roadway. We are excited to work with companies like Cisco to offer our customers a variety of leading-edge network technologies to provide the highest levels of performance to match their specific needs."

Dr. Joachim Taiber, CU-ICAR research professor and institute director, ITIC founder

"Cisco has been a terrific R&D partner in CU-ICAR's and ITIC's involvement in a DOE-funded wireless power transfer research project for electrified vehicles. Our research team was able to adapt the DSRC and router technology provided by Cisco to support the communication aspect of in-motion wireless charging as an emerging technology in electrifying roads, thus enabling zero-emission driving without battery-related range limitations."

Paul Gray, CEO, Cohda Wireless
"Cohda Wireless is proud to support the Cisco Connected Roadway Solution and help take one step closer to the 'Last Traffic Jam.' By connecting smart cars to smart roads, we can dramatically improve safety, mobility and the environment. By combining Cohda's vehicle communication capabilities with Cisco's networking expertise, we can think bigger and tackle the largest issues impacting today's driver."

Supporting Resources

- For more information about Cisco Connected Roadways, please visit: www.cisco.com/go/connectedroadways
- Cisco Connected Roadways video

About Cisco
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