



# ITS PULSE

Volume 4  
Issue 1  
March 2005

Special Vendor  
Edition

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## President's Message

by Leslie Spencer Fowler, Kansas Department of Transportation

### Welcome to Kansas!

The Kansas official slogan of "KANSAS as big as you think" has application to the ITS Heartland 6th Annual meeting in Topeka, Kansas. It could be said that this year's combined ITS Heartland Annual Meeting and MOVITE spring meeting is "as big as you think" because of the commitment of sponsors, vendors, members, attendees, and presenters for this 2005 annual meeting.

A month before this annual meeting, sponsorship and exhibitors' registration have already exceeded last year's registration. Each year attendance at the meeting has increased, and this meeting is no exception.



The vitality from sponsors and exhibitors add to the excitement and energy of the meeting. I encourage attendees to take time at the annual meeting to meet with sponsors and exhibitors to discuss your ideas and plans. This meeting will provide attendees the wonderful opportunity to see first hand at the sessions and by visiting the exhibit hall what ITS and MOVITE partners can provide

to turn your plans into reality. In addition to the sessions, the exhibit hall, and networking, there are two workshops.

This issue of the *ITS Pulse* features some of the Heartland's ITS partners in the private sector. As you read the *ITS Pulse*, I hope you will see that the ITS Heartland 6th Annual Meeting in Topeka, Kansas, at the Capitol Plaza from March 14-17, 2005, is an opportunity you don't want to miss!

### FREE MARKETING OPPORTUNITY

If you are a member of ITS Heartland and have an Internet Web site, please contact Dennis Kroeger ([kroeger@iastate.edu](mailto:kroeger@iastate.edu)) to create a link to your Web site from the ITS Heartland Web site. Just send him your URL.

### ITS America 2005: "Connecting Ideas, Partners, and Solutions"

15th Annual Meeting and Exposition  
May 2-4, 2005  
Phoenix Civic Plaza, Phoenix, Arizona  
[www.itsa.org](http://www.itsa.org)

# Black & Veatch

Black & Veatch is a proud sponsor of the annual meeting of the ITS Heartland Chapter of ITS America and the Missouri Valley Section of the Institute of Transportation Engineers. We are a leading global engineering, consulting, and construction company offering 20 years of experience in the design of streets, commercial and arterial roadways, highways, bridges, and of course, intelligent transportation systems.

Black & Veatch recently completed a state-of-the-art ITS program, called "KC Scout," in Kansas City, Kansas and Missouri. Our services included:

- Developing a communications architecture, based on an ATM-over-SONET design, to support traffic from 75 CCTV cameras, 37 dynamic message signs, and 200+ vehicle detection stations to the Traffic Operations Center in Lee's Summit, Missouri.

- Performing field investigations to place ITS components and 90+ miles of fiber-optic cable.
- Detailing equipment for 226 field equipment cabinets and a new Traffic Operation Center.
- Developing detailed communications design, including plan drawings, architecture diagrams, routing schematics, interconnection block diagrams, sample splicing diagrams, and specifications for fiber-optic cable, data transceivers, and Ethernet transceivers (media converters) as well as highway advisory radios and video encoders/decoders.
- Creating specifications for vehicle detection stations, remote traffic microwave sensors, and field equipment cabinets.



## BLACK & VEATCH<sup>LLP</sup>

- Integrating existing MoDOT District 4 Headquarters with the new Traffic Operations Center housing workstations, a 9'x14' projection screen, plasma screens and redundant power systems.
- Assisting in development and continued expansion of [www.kcscout.net](http://www.kcscout.net).

We feel the outcome of the project is best described by the client:

"This project will be a true benefit to the Kansas City Metropolitan Area thanks in great part to Black & Veatch"

- Sabin Yanez, District Engineer,  
Missouri Department of  
Transportation (2003)

# RuggedCom Inc

## Deploying Ethernet for ITS

The use of Ethernet in ITS offers many advantages, including cost effective real-time control, and seamless interoperability between devices. Punishing environmental conditions found in roadside traffic control cabinets though, can cause these benefits to be lost.

To prevent network failures, it's important to deploy field-hardened Ethernet equipment like RuggedCom's RuggedSwitch™ RS900 series of Ethernet switches. They are engineered to perform reliably in just these sorts of conditions. DOTs and ITS managers around the world have chosen RuggedCom devices like the new RS900G, a compact 10-port Ethernet switch which exceeds NEMA TS 2, provides ultra-fast fault recovery, and

includes Gigabit Ethernet uplinks, enabling bandwidth intensive multicast applications such as video over IP.

For additional information contact Dave McGee, Regional Sales Manager - Midwest, RuggedCom Inc, - "Industrial Strength Networks" at 847-426-5606, [davidmcgee@ruggedcom.com](mailto:davidmcgee@ruggedcom.com), or on the Web: [www.ruggedcom.com](http://www.ruggedcom.com)

**For information about ITS Pulse, or to recommend articles for future ITS Pulse editions, please contact your state representative:**

- Kansas:** Steve Rockers
- Iowa:** Dennis Kroger
- Nebraska:** Jaimie Huber
- Missouri:** Tom Dancy
- Oklahoma:** Alan Stevenson

## ITS Pulse Contributors

**Thank you to the vendors and sponsors who supplied articles and photos for this edition.**

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**Layout and Design:**

Lisa Behrns, Olsson Associates



# Thanks to the Sponsors for your Contributions to the Annual Meeting

## PLATINUM

PB Farradyne/HWS Consulting  
WaveTronix, LLC

## FREE TUITION

CITE - The Consortium for ITS Training & Education

**A list of vendors and their booth number can be found on page 8.**

## GOLD

Black & Veatch  
HNTB Corporation  
Iteris, Inc.  
National Engineering Technology Corporation  
Olsson Associates  
SRF Consulting Group, Inc.  
TransCore  
The URS Corporation

## SILVER

Bucher, Willis, & Ratliff Corporation  
Garver Engineers  
General Traffic Controls, Inc.  
Jacobs Civil Inc.  
Traffic Engineering Consultants  
ThomTech Design, Inc.  
Shafer, Kline, & Warren, Inc.

## The Schemmer Associates Inc.

The Schemmer Associates Inc. provided the City of Lincoln, Nebraska with Intelligent Transportation Systems services on a major widening project for its most prominent arterial, "O" Street/U.S. Highway 34. A 1.4-mile section of the four-lane divided arterial was widened to six lanes. It currently carries up to 40,000 vehicles per day and is projected to handle up to 50,000 vehicles per day by the year 2025. The Schemmer Associates' traffic engineering team:

- Designed signal systems for 14 intersections and pedestrian crossings.
- Designed fiber optic communications between signal controllers, in support of the City's long-range communications plan, which The Schemmer Associates helped to develop in a previous project.
- Incorporated video camera detection devices at all new signal locations and two traffic-

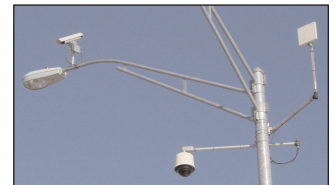
monitoring cameras at the major intersections of 56th and 70th Streets.

- Performed a detailed traffic analysis prior to



**East O Street, Lincoln, NE**

construction using TRANPLAN, SimTraffic and Synchro.



The Schemmer Associates' traffic engineers also helped the City develop strategic locations for portable dynamic message signs during construction, and assisted with message development for the sign displays as construction phases evolved.

In addition to ITS services, The Schemmer Associates provided other services including survey, preliminary and final design, right-of-way design, public involvement, and contract administration.

**THE SCHEMMER ASSOCIATES**  
LINCOLN (402) 488-2500    COUNCIL BLUFFS (712) 329-0300    OMAHA (402) 493-4800  
[www.schemmer.com](http://www.schemmer.com)

# SRF Consulting Group, Inc.

As a leader in the ITS evolution, SRF Consulting Group provides planning, design, implementation, integration, and evaluation services for traffic



management, advanced transit, and traveler information systems. We specialize in systems architecture, communications, and network design; vehicle detection technology; road-weather information system sensor technology; and systems integration. Our team of ITS professionals has real-world experience planning, designing, and implementing a wide range

of technologies, including wireless, cellular, fiber optic, and satellite communications.

SRF has been instrumental in designing, deploying, and evaluating ITS systems for clients across the Midwest. Currently, we are working with

the Kansas Department of Transportation on two projects:

- **Advanced Transit Dispatch System.** SRF is overseeing the deployment of this system. Initially, an advanced trip reservation will be centrally deployed with local providers connecting via the Internet. Two-way messaging will also be available from local dispatch centers to their fleets using the state's 800 MHz radio communication system, and an AVL system will provide continual vehicle location information to better manage fleet resources.
- **Salina Dynamic Message Signs.** We are also designing Dynamic Message Signs around the Salina area for I-70 and I-135, which will primarily be used to warn travelers of adverse weather conditions and road closures.

SRF is a member of ITS America, serving on the Advanced Public Transportation and Advanced Traveler Information Systems Committees. We are also actively involved in ITS Heartland and have been members since 2000.



SRF's ITS Group is lead by Brian Scott, PE, who has 18 years of experience in transportation engineering with an emphasis on technical evaluation, ITS system architecture, communications, and requirements definition, and system design and integration for ITS projects.

For more information on our services, contact Brian Scott at [bscott@srfconsulting.com](mailto:bscott@srfconsulting.com) or 763.475.0010, or visit our web site at [www.srfconsulting.com](http://www.srfconsulting.com).

## Jacobs Develops Traffic Management Plan for Des Moines, Iowa

Jacobs led the development of a Traffic Management Plan for the Iowa Department of Transportation during its reconstruction of I-235. The plan includes traffic engineering, incident management, and intelligent transportation system services for reconstructing the 15-mile corridor along I-235 in the heart of Des Moines. Jacobs provided several services, including project management, traffic modeling, construction



phasing review, design review, ITS analysis/design, incident management, transit enhancement, transportation demand management, and public engagement

coordination. The result of the initial phase of the project was a Transportation Management Plan for the 5-year reconstruction period (2002 - 2007). Jacobs, with the Iowa DOT, is currently adapting the plan to meet the regional traffic needs as construction progresses.

For additional information contact Mark Flak at 312-612-6046 or Carrie Falkenrath at 314-335-4338.

**Join Us!** 6th Annual Meeting for ITS Heartland Chapter,  
Capital Plaza Hotel, March 14-17, 2005, Topeka, Kansas

# Mark your Calendar

**ITS America  
2005:15th Annual  
Meeting**  
**"Connecting Ideas,  
Partners, and Solutions"**  
**May 2-4, 2005**  
**Phoenix Civic Plaza,  
Phoenix, Arizona**  
[www.itsa.org](http://www.itsa.org)

**12th World Congress  
on ITS**  
**"Enabling Choices in  
Transportation"**  
**November 5-10, 2005**  
**San Francisco, California**  
[www.itsworldcongress.org](http://www.itsworldcongress.org)

**Next ITS Heartland  
Annual Meeting**  
**March 14-15, 2006**  
**Des Moines, Iowa**

## Iteris, Inc.

Iteris, Inc., a national leader in Intelligent Transportation Systems and traffic engineering, has a regional office in Lincoln, Nebraska. Michael Malone, Vice President-Heartland Region, leads Iteris' efforts for this region (including Nebraska, Iowa, Kansas and Missouri). Mike Malone has nearly



**Mike Malone**

twenty years of experience in the planning, design, and evaluation of transportation systems and has performed numerous traffic engineering, transportation planning, and ITS projects throughout the Midwest and Western United States.

Current Heartland projects include:

- NDOR Statewide CCTV Deployment
- Southeast Nebraska Regional ITS Architecture
- Wichita-Sedgwick County Regional ITS Architecture
- City of Beatrice, Nebraska Transportation Model Development
- City of Crete, Nebraska Comprehensive Plan Update



- MARC (Mid-America Regional Council) OGL (Operation Green Light) Communication Design

In addition, Forbes.com recently named Iteris' AutoVue Lane Departure Warning (LDW) system as one of "ten gadgets that will improve your life." Iteris' LDW technology is the first of its kind to be commercially available worldwide.

### About Iteris, Inc.

Iteris has assembled a team of the brightest, most innovative ITS, Traffic Engineering and Transportation Planning specialists in the industry to assist you with ITS, Communications Systems, Software Engineering, System Integration, Traveler Information, Transit, Traffic Engineering, Transportation Planning, Traffic Control Systems, Parking, and Research & Development.

For additional information, visit our website at: [www.iteris.com](http://www.iteris.com).

Contact Mike at 402-476-5101 or [m3@iteris.com](mailto:m3@iteris.com).

The Lincoln office is located at 140 N. 8th Street, Ste. 214, The Apothecary.

*Offices nationwide.*

## WaveTronix, LLC

**Fiber Optics Workshop:  
Thursday, March 17, 2005  
8 a.m. - noon**

*If you signed up, don't miss this opportunity!  
Breakfast will be provided.*



# PB Farradyne and HWS Consulting Group, Inc.

**PB Farradyne, the Intelligent Transportation Systems division of Parson Brinckerhoff Quade & Douglas**, is a diversified professional services firm with a strong local presence throughout the nation. The firm specializes in transportation planning, traffic engineering, design, software development, and systems integration for a host of advanced transportation management applications. Engineering and consulting services are offered in transportation, telecommunications, and information systems disciplines.

**PB Farradyne** offers a broad spectrum of reliable and innovative solutions to complex transportation problems. PB Farradyne, the leader in Intelligent Transportation Systems planning and deployment in the United States, was founded in 1984 to provide planning, engineering and implementation services to Federal and local government agencies.

In 1992, it was acquired by



Parsons Brinckerhoff Inc. (PB), the largest transportation design firm in the United States. This partnership of leadership in transportation design and intelligent transportation systems consulting results in powerful synergy and resources that can be

directed to large, complex projects. As a wholly owned subsidiary of Parsons Brinckerhoff Inc., PB Farradyne can utilize personnel and physical resources from PB and affiliated companies. PB has offices throughout the country, including Kansas City, St. Louis, Chicago, Lincoln, and Wichita, allowing PB to provide a wider spectrum of services while still maintaining the commitment to service of a local company.

**Please see us in Booth #3 for a demonstration of the MIST® transportation management system.**

**HWS Consulting Group Inc.** is a full-service consulting firm celebrating its 61st anniversary as an employee-owned firm. HWS began in 1944 as a small, primarily municipal engineering firm providing services in and around Lincoln, Nebraska. Today we provide services to public and private clients throughout the nation. Our longevity -- and our commitment to our clients who began with us in the 1940's -- is a tribute to the dedication and the continuing excellent quality of our HWS Team.

HWS has offices in Omaha and Lincoln, Nebraska; Denver, Colorado; Manhattan, Kansas; and Chicago, Illinois. HWS offers the following comprehensive transportation services:

- Over sixty years of professional integrity and competence.

- Roadway expertise ranging from urban intersection improvement projects to several miles of urban streets, rural expressways, and freeways.



- Transportation engineering services including corridor studies, transportation planning, intelligent transportation systems, traffic impact studies, traffic signal design and operation, traffic simulation, and travel demand forecasting.
- Environmental services including NEPA documentation, air quality studies, noise studies, and wetlands assessment.

Current projects that HWS and PB Farradyne are working on together include the Regional ITS Architecture and Traffic Incident Management Program for the Omaha-Council Bluffs Metropolitan Area Planning Agency and the design of the NDOR District Operations Centers throughout Nebraska.

**Please join PB and HWS on Tuesday evening for Sweets in our Suite!**

ITS Web sites

- [www.KCscout.org](http://www.KCscout.org)
- [www.GatewayGuide.com](http://www.GatewayGuide.com)
- [www.nebraskal80construction.com](http://www.nebraskal80construction.com)
- [www.safetravelusa.com](http://www.safetravelusa.com)
- [www.511ia.org](http://www.511ia.org)
- [www.kanroad.org](http://www.kanroad.org)
- [www.OzarksTraffic.info](http://www.OzarksTraffic.info)

# Olsson Associates

Since 1956, Olsson Associates (OA) have been providing our clients with complete and comprehensive design and consulting engineering services.

OA offers consulting engineering services in the fields of civil, municipal, structural, water resources, environmental sciences, mechanical/electrical, transportation and traffic, land planning, and power electrical engineering, as well as ITS services.

OA is currently providing services on multiple ITS projects, including:

**Operation Green Light (OGL), Phase 1** - OA is providing wireless communication design and implementation oversight for OGL.



**OLSSON ASSOCIATES**  
ENGINEERS • PLANNERS • SCIENTISTS • SURVEYORS

This phase will create communication connectivity among the OGL Center in Lee's Summit, Missouri, with approximately 600 signal controllers, three external traffic operation centers, and 32 external workstations throughout the Kansas City area.

As part of this project, OA will finalize functional requirements and network configuration design, evaluate and test wireless communication hardware, and monitor construction activities and approve final communication installation and implementation.

**Kansas Transportation Operations Center** - OA is part of the team studying the feasibility of a statewide transportation operation and management center for the state of Kansas. This

study has included meetings with over 150 stakeholders throughout the state and a scanning tour to Baton Rouge, Louisiana.

**Nebraska Department of Roads, Traffic Monitoring Cameras, Phase 1** - Olsson Associates is leading the team that is designing implementation of traffic monitoring cameras for NDOR. The design covers camera technology analysis, sight reviews, communication network design, and communication infrastructure design. This project is the first phase of implementation of more than 100 cameras across the state of Nebraska.

For more information about OA's ITS services, contact Steve Bahler at 402-458-5673 or email sbahler@oaconsulting.com. Visit us on the web at www.oaconsulting.com.

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# HNTB: A Longtime Leader in ITS

As a leader in the planning and design of the nation's bridges, highways, and toll roads, HNTB is adept at integrating technologies that equip surface transportation facilities to function at peak efficiency. Early adoption and a long-term commitment to the many facets of ITS technology have positioned HNTB as an ITS advisor to numerous state departments of transportation, municipalities and toll agencies. HNTB partners with clients to achieve the objectives of ITS: saving lives, time, and money.

As states and metropolitan areas move to wider deployment of ITS, agencies face a number of challenges:

- Maximizing the utility of investments
- Ensuring interoperability of systems
- Increasing the efficiency of legacy systems
- Coordinating participation and input from stakeholders

As a leader in the planning, design and deployment of ITS since the 1960s, HNTB is committed to partnering with our clients

**HNTB** from a project's inception to completion. We work to identify system needs and requirements, match requirements with available technologies and test them in real-world situations, and develop a comprehensive plan for operation, staffing and maintenance of the system.

In the ITS Heartland region, HNTB provides local ITS experience supported by national expertise. Recent projects in the region include ITS design on: I-70 in St. Louis; I-435 in Kansas; I-35 in Kansas; and the I-435/I-470/U.S. 71 Interchange in Missouri. HNTB's ITS planning contributions include: DMSs on the Kansas Turnpike; U.S. 69 in Kansas; and I-70 in Missouri.

For more information contact Chuck Miller, PE (816-527-2696, [CMiller@HNTB.com](mailto:CMiller@HNTB.com)) in our Kansas City office or Luis Porrello, PE (314-241-2808, [LPorrello@HNTB.com](mailto:LPorrello@HNTB.com)) in our St. Louis office.

## Vendors & Booth Number

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GDI Communications	20
Jamlogic (Traffic Technologies)	2
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Find us on the World Wide Web

[www.itsa.org](http://www.itsa.org) and [www.itsheartland.org](http://www.itsheartland.org)