Will smart technologies lead to smart communities? Not without a plan.

The promises offered by next-generation technology – to build safer communities, to create efficient networks, to expand the realm of possibility – are not guaranteed. As new developments trigger discussions about accommodating future technologies, such as 5G infrastructure and dedicated driverless vehicle lanes, the enormous potential for building smart communities has become a critical issue.

There is no shortage of thought about what smart cities might become and what it will take to build them, yet fundamental questions remain: Who should own and operate the technology? Should municipal platforms be customizable or standardized? Should networks be public or proprietary? The answers to these questions have far-reaching consequences with respect to whom smart city technology will actually benefit: primarily tech companies, or cities and their residents.

There can be no one-size-fits-all solution for building smart cities, smart villages, or smart towns. Each community is widely diverse in terms of what it needs, what it can afford, and what it is capable of operating. Every aspiring smart community will need a context-specific approach, context-specific technological products, and broad context-specific collaboration with a variety of local institutions and stakeholders. This emphasis on context-specific solutions is a double-edged
sword — on the one hand, it prevents the automatic implementation of easily reproducible technological solutions; on the other hand, it forces local municipalities to make conscious, careful, long-term decisions about how smart city technology can impact the fate of their communities.

These moments of consciousness offer spectacular opportunities for municipalities to expand local autonomy, redefine their needs, and mold their futures — but only if public officials are willing to do some heavy lifting. Municipalities may have to overcome steep learning curves in deploying new technologies and adopting new workflows.

It will be prudent to start small, to maintain a narrow focus, and to clearly define the goals for adopting new technologies — the first steps in building a smart community will not be the same everywhere, and each municipality must take the fate of their community in their own hands as they evaluate and implement new technologies. At the end of the day, the ultimate goal of using smart technologies to build smart communities must be to expand the realm of possibility for those who live there.
President’s Message
By Allan Pacada

Welcome all, welcome Fall! And just like that, the summer season has quickly come and gone. This past July, we teamed up with ITS Wisconsin on July 18th to host a joint lunch meeting at Wells Street Tavern in downtown Delafield. With over 50 members from both organizations in attendance, featured speaker Brandon Lamers of WisDOT presented on “Dynamic Part-Time Shoulder Use”. This is a practice that WisDOT SW Region hopes to use on the Madison Beltline highway. The meeting also featured the 2019 Ken Voigt Award presentation. This year’s recipient was Christian Sternke of TADI. The Wisconsin Section sponsored his registration and travel to the ITE International Annual Meeting and Exhibit in Austin, TX. Hear more about Christian’s experience in an article included in this newsletter.

Later this summer, the Section joined forces with the Wisconsin chapters of ASCE, ITS and WTS on August 15th for a social event cruise on the Milwaukee River. The hour and a half cruise went up the Milwaukee River and a portion of the Lake Michigan Lakefront. The group shared appetizers, drinks, great weather and a good old time!

In September, the Section held their annual joint breakfast meeting with WTS at the WisDOT Southeast Region office in Waukesha. Brian Porter of WisDOT presented on the recent development of the WisDOT Safety Certification Process (SCP).

Be sure to watch your inbox this fall for information regarding the 2020 Wisconsin Section Board Elections, including candidate information and ballot instructions.

Please mark your calendars and visit our website (itewisconsin.org) for details on the following upcoming events:
- October 28th – UW Madison & Platteville Student Chapter Night in Madison
- December 12th – ITE Wisconsin Annual Meeting in Delafield

Thank you again for your support of the Wisconsin Section and we look forward to seeing you at our future events! Please ask me or any one of the Board members if you would like to become involved in any of the many volunteer opportunities within our Wisconsin Section. If you have any questions or comments about the Section, please contact me at apacada@hntb.com

Thank you to our generous sponsors this year: raSmith, HNTB, TAPCO, Ayres Associates, Transmart/EJM and SRF Consulting Group.

Allan Pacada
ITE Wisconsin Section President
Recent Meetings, Events, and Awards
ITE / ITS Wisconsin Lunch Meeting – July 18, 2019
By Andre Ost

On July 18, our Wisconsin Section held a joint meeting with ITS Wisconsin at the Wells Street Tavern in downtown Delafield.

Justin Schueler presented the 2019 Ken Voigt Young Member award. The Ken Voigt award recognizes achievement in transportation by ITE members age 35 and younger. Applicants write a paper reporting on a transportation project that they were involved with. Congratulations to this year’s winner Christian Sternke of TADI. The Wisconsin Section paid for Christian’s travel and registration for the 2019 ITE International Meeting and Exhibit in Austin, TX. In addition to Justin, the award committee included Erin Schoon, Tristan Hickman and Andy Utic.

The feature presentation was by Brandon Lamers of WisDOT on the topic “Dynamic Part-Time Shoulder Use (DPTSU) for the Madison Beltline from Whitney Way to I-39/90”. The Madison Beltline has deteriorating pavement and operational issues during peak periods. WisDOT SW Region is studying both resurfacing the highway and resurfacing with DPTSU. The resurfacing proposed for both alternatives will provide 10-15 years of service until a longer-term solution can be implemented for the Beltline.

DPTSU, also known as “Hard Shoulder Running”, uses the shoulders part-time for travel during the peak periods. The inclusion of DPTSU is a cost-effective interim solution to address the recurring congestion experienced along the corridor. It is expected that the travel time reliability will significantly be improved with DPTSU. WisDOT also used FHWA’s Interactive Highway Safety Design Model (IHSDM) to compare alternatives and determined predictive crashes are not anticipated to increase with DPTSU. The proposed DPTSU system would use both static and dynamic signage. The following illustration is a rendering of the proposed DPTSU signage.
WisDOT will be conducting Public Meetings in the summer of 2019 to gain feedback on both alternatives. The project is planned for construction in 2021.

Thanks to Brandon for an interesting and informative presentation. And thanks to all of the ITS WI and ITE WI members that attended.

**ITE, ASCE, WTS and ITS Wisconsin Summer Social – August 15th, 2019**

By Tristan Hickman

This past August, the ITE Wisconsin Section partnered with ASCE, WTS, and ITS Wisconsin to host a joint Edelweiss Boat Cruise in downtown Milwaukee. The 1.5 hour cruise provided a relaxing experience for attendees as they ventured down the Milwaukee River with a brief stop out to Lake Michigan to enjoy views of the downtown cityscape. Named the ‘Tailgate Cruise’, attendees were treated to complimentary local Milwaukee microbrews and Usinger brats. The weather couldn’t have cooperated more as we enjoyed temperatures in the low 70-degrees with a comfortable light breeze to keep the heat down. The event provided a great opportunity for a ‘boatload’ of engineers to cap off the summer enjoying conversation, great food and views of the city!
ITE / WTS Breakfast Meeting – September 11, 2019
By Andre Ost

On September 11th, the Wisconsin Section hosted a joint meeting with WTS (Women’s Transportation Seminar) at the WisDOT Southeast Region office in Waukesha.

The featured speaker for the meeting was Brian Porter, WisDOT State Safety Traffic Engineer, on the WisDOT Safety Certification Process (SCP). WisDOT’s recent implementation of Performance-Based Practical Design (PBPD) uses the SCP for determining and approving safety-driven roadway improvements on the system. Brian provided an overview of the new SCP, which is detailed in Chapter 11 Section 38 of the Facilities Development Manual (FDM).

Brian reviewed the five steps of the SCP including:
1. Sites of Promise by System Screening
2. Crash Vetting for the Sites of Promise
3. Contributing Geometric Analysis (CGA)
4. Safety Mitigation Certification
5. Safety Certification Document (SCD)

Brian indicated how the Department is working with FHWA to be a leader in predictive crash analysis. WisDOT will soon be providing calibration factors for HSM safety performance functions. Thanks to Brian for the great review of the Safety Certification Process.
As the recipient of this year’s Ken Voigt Young Member Award, I was given the opportunity to attend the ITE International Annual Meeting and Exhibit in Austin, Texas. This meeting was held jointly with the Texas District and with over 1,500 attendees, it was one of the largest annual meetings to date with people coming from all over the world. Events started quickly for me as I attended the first-timer’s orientation and reception on Sunday night before the official opening reception of the conference. At the orientation, we were told everything we needed to know about the meeting and shown around the conference center so we wouldn’t miss a beat the remainder of the conference. A reception followed where we were able to network with other first-time attendees and even meet members of ITE international’s board of directors. I would highly recommend attending these first-timer events for any ITE Wisconsin members who attend their first annual meeting in the future.

At the “Welcome to Austin” opening reception later Sunday night, I was lucky enough to be interviewed by Holly Stowell, the senior editor of the ITE Journal, about my Road Safety Professional (RSP) certification since she noticed my RSP1 ribbon attached to my name tag. I was featured in the ITE Austin 2019 Spotlight email the next day, which was a highlight for me. Being in Texas, a free Texas Hold’Em tournament was held for all attendees. Unfortunately, I lost early on and didn’t make it close to the final table, but it was enjoyable to play and talk with other engineers in this laid-back environment.

At the opening plenary session on Monday morning, I was privileged to witness Ken Voigt get recognized as the newest ITE international honorary member, the highest recognition of notable and outstanding professional achievement presented by ITE. Only 83 individuals prior to Ken have been honored since the first members were honored in 1933. It was inspiring to see a local engineer like Ken achieve such recognition. Following Ken’s honor, City of Austin Mayor Steve Adler welcomed us to Austin and spoke a great deal about the electronic scooters that can be found all around the city. Austin passed a city ordinance stating that scooter users should be treated as a similar user to a bicyclist; therefore, the city is looking to improve safety for these users as Austin averages over 450,000 scooter rides per month and even peaked as high as over 700,000 rides in March during South by Southwest (an annual music and film festival). Mayor Adler believes the scooters are having a positive effect on the city as now people want to improve the bike network, where it was a struggle to get support before the scooters. He sees them as a mode of transportation here to stay into the future.

Later that Monday, I watched students compete in the 10th annual ITE collegiate traffic bowl grand championship. The home team University of Texas ran away with the trophy over the University of Kentucky and Penn State University in the final round. I was impressed with not only the students’ level of knowledge and understanding of our profession, but their passion for it as well.

The power plenary session on Tuesday morning featured a panel of experts who explored the issues surrounding Mobility as a Service. The panel consisted of Roger Miller, the Secretary of Transportation in Washington State, Karina Ricks, director of the Department of Mobility and
Infrastructure in the City of Pittsburgh, Gabriel Scheer, the senior director of data policy and strategic partnerships for Lime (scooter company), and Kathleen Baireuther, from the markets and operations division of For Autonomous Vehicles LLC. Sitting in on this session was a unique opportunity to see viewpoints of representatives from both the public and private sector and how they collaborate to improve mobility in cities throughout America. Karina Ricks from the City of Pittsburgh brought up an interesting point about scrapping the need for a city-wide bike plan in the future, but instead to make a “slow lane” plan in order to accommodate more modes of transportation, such as scooters, that are becoming increasingly popular in urban areas. Gabriel Scheer noted that innovation needs to happen fast within cities to incorporate these “slow lanes” due to the increasing number of users that are not pedestrians or cars.

It was impressive to see the variety of technical sessions offered during the conference. From hearing about the best practices in speed management, to a panel discussion from multiple stakeholders on how to collaborate to reduce fatalities on our transportation system, one technical session I’d like to highlight was how to improve mobility and safety through alternative intersection design. We heard presenters discuss various alternative intersection designs, including DDIs, J-turns, and RCUTs. One particularly memorable presentation was by Peter Yu, who is going to be a senior in high school in the fall. Peter discussed his modified super street intersection design, which would be a 4-legged intersection where the major through movements would be free flow. Peter even showed us results of his VISSIM analysis to show how operations could be improved over a regular super street intersection. I’m very interested to see where Peter’s career takes him since he already has an advanced grasp of traffic engineering, planning, and design and has yet to even graduate high school.

In closing, I would like to sincerely thank the ITE Wisconsin Section and the Ken Voigt Young Member Award committee for selecting me as this year’s award recipient and providing me the opportunity to attend the annual meeting. Thank you to Jeff Held (ITE Wisconsin treasurer/Strand Associates), Stephanie Olsson (TADI), and John Campbell (TADI) for generously writing testimonial letters for my award application. I would also like to thank my employer, TADI, for their support in me attending this annual meeting and for providing a challenging work environment where I can grow as an engineer. I would highly recommend every member of ITE Wisconsin to consider attending a future international meeting as the knowledge and professional connections I have gained will help me throughout my career for years to come.

Ken Vogt and Christian Sternke at Closing Reception
Upcoming Awards: Harvey Shebesta Award

The Wisconsin ITE Section has a $2,000 scholarship award presented annually to encourage students to consider Transportation Engineering in their studies and career aspirations, and to provide financial support to students who have demonstrated an interest and are likely to work in the transportation field. The award was named for Harvey Shebesta who was one of the founding members and the first President of the Wisconsin Section in 1966 and International President in 1980. Harvey also served on the ITE Technical Council as the first Section Technical Activities Department Head in 1968-69 and on the Board of Directors in 1970-71. Harvey graduated from the University of Wisconsin in 1950 with a B.S. degree in Civil Engineering and went to work for the Wisconsin State Highway Commission. In 1969, he was appointed District Engineer for the Milwaukee District. In 1979, he was appointed District Director of WisDOT's southeast district when the Department merged the Milwaukee and Waukesha Districts. He has served as chairman and member on many Southeastern Wisconsin Regional Planning Commission committees.

Application Deadline: November 22, 2019

ELIGIBILITY:
To be eligible for the scholarship, you must be either a full-time undergraduate or graduate student in a Wisconsin College or University, with course work and career goal emphasis on Transportation Engineering, and must be nominated by Transportation Engineering faculty of your school. A maximum of two students from any School can be nominated. (No family member or spouse of any Institute of Transportation Engineers - Wisconsin Section member is eligible to apply for or receive this scholarship award

More information regarding the submission procedure and evaluation criteria is available on the ITE Wisconsin website.

AWARD:
- Recognition at an ITE Section Meeting
- Plaque
- $2,000 scholarship

Questions regarding the Harvey Shebesta Award may be directed to:

Kelly Trac
E-mail: ktrac@klengineering.com
Phone: 608.663.1218
2020 ITE Wisconsin Section Elections!

ITE Members,

Below is the list of candidates running for the 2020 ITE Wisconsin Section Board.

- **Past President:** Allan Pacada
- **President:** Kelly Trac
- **Vice President:** Jeff Held
- **Treasurer:** Jess Billmeyer
- **Secretary:** Andre Ost

**Member Director - Ballot Selection:** Brian Scharles (Sr), Eric Frailing

Electronic ballots will be distributed to all members in November to vote for the Member Director. The nominating committee consisted of: John Bruggeman (Chair), Rebecca Szymkowski, and John Campbell. Please let Jess Billmeyer, ITE Wisconsin Section Secretary, (608) 828-8157 know if you have any questions.

See below for bios for Brian and Eric. Thank you both for running for the ITE Wisconsin Section board!

*Brian Scharles (Sr)*

Brian has over 30 years of ITS and traffic engineering experience. He received his bachelor’s degree in Electrical Engineering from MSOE in 1989 and his master’s degree in Civil and Environmental Engineering from Marquette University in 2000, as well as attending the Traffic Institute at Northwestern University. Brian has been an employee of TAPCO since 1988, where he is currently an ITS Engineer and Director of Signal & ITS Services. He is responsible for managing ITS and signal system design, installation, programming and maintenance, as well as the personnel who perform this work throughout the country. Brian has assisted in the integration of many ITS and communication projects for WisDOT, including traffic signal communications and vehicle detection & warning systems, which are still in operation today.

Brian has been a member of ITS Wisconsin for over 20 years, where he is on the planning committee, and in 2015 held the position of chapter president. In 2017 he was awarded the ITS Wisconsin Chapter’s Distinguished Service Award. Brian has also been an ITE member since 1991, and in 1993 was awarded the Martin Bruening Award for traffic and transportation engineering by the Wisconsin Section. Brian is a member of the Signal Committee and Pedestrian Task Force for the National Committee on Uniform Traffic Control Devices (NCUTCD). He is involved with research and development, and currently has 3 patents improving transportation technologies. Outside of work Brian enjoys volunteering with the FIRST Robotics program, teaching science and technology to students. Brian would invite the opportunity to serve as an ITE Wisconsin Member Director on the Wisconsin Section board.
Eric Frailing
Eric has over 12 years of experience in the traffic engineering field and is currently a Senior Project Engineer at MSA Professional Services, Inc. in their Madison office. He was born and raised in West Bend, Wisconsin, and currently resides in Sun Prairie with his wife. Eric graduated from the University of Wisconsin – Madison with a bachelor’s degree in Civil Engineering and a Technical Communications Certificate. He is a registered PE in three states, including Wisconsin, and is a registered PTOE. In his career, Eric has worked on a wide range of projects including roundabout and traffic signal design, traffic sign design, large and oversized vehicle analysis, microsimulation, and corridor studies in several states and Canada. He has also been involved with numerous traffic impact studies, intersection control evaluations, and public involvement campaigns.

Eric has been involved with ITE since 2002, starting as a student member while in college. There, he served as Vice President of the student chapter for several years. Since then, he has served on several ITE conference committees including the 2009 and 2013 Midwestern District Conferences, has presented at local and national ITE conferences, and is active in the Wisconsin SimCap group. In 2018, he was selected as the Young Professional of the Year for the Wisconsin Section. Outside of ITE, he has led the MSA Madison office Adopt-a-Highway cleanup group since its inception in 2013. Eric is also involved with the Friends of the Overture Concert Organ and the support of musical programming at his church. He also assists with public events for the Sun Prairie Fire Department. In his spare time, he enjoys cycling, photography, hiking state parks, and tinkering with Lego.

Call for Volunteers:
STEM Forward Future City Competition

STEM Forward is planning for the 2020 Future City competition on Saturday, January 18th at MSOE. ITE Wisconsin Section will sponsor the “Best Transportation System”. Please consider volunteering to judge the competition. If you are interested in volunteering, please contact Shana Brummond at shana.brummond@daarcorp.com.
Call for Volunteers: Join the New Communication Committee!

The Wisconsin Section is establishing a Communications Committee to focus on implementing the section’s communications plan and emphasize the section’s needs for communications strategies, tools, goals and objectives for communicating with our members. We are looking for two dedicated volunteers to help with this new committee - one to serve as the committee’s chair and one as a social media representative. These two members will collaborate with the rest of the committee (comprised of the Executive Board Liaison, Newsletter Editor and Yearbook Editor - all current executive board members) to utilize the communication tools to enhance information sharing with our section members. If you are interested in volunteering, please contact Allan Pacada at apacada@hntb.com.

Transportation Funnies

“It’s green, you color-blind, flea-bitten bonehead! Where’d you learn to drive?”
Upcoming Events

**October 28, 2019**  
ITE Wisconsin Section Meeting: UW-Platteville / UW-Madison Student Night  
Vintage Brewing Company, Madison [Register Here!](#)

**November 6, 2019**  
25th ITS Wisconsin Transportation Conference [Register Now!](#)  
Ingleside Hotel, Pewaukee

**December 12, 2019**  
ITE Wisconsin Annual Meeting, Delafield, WI

Do you have some information or a transportation haiku to share? The ITE Newsletter is an excellent medium for reaching section members. If you would like something published in the upcoming newsletter, please contact the 2019 Wisconsin Section Member Director, Andre Ost at (414) 266-9256 or [andre.ost@graef-usa.com](mailto:andre.ost@graef-usa.com)
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There is still time to become a sponsor for 2019-2020! Contact Joyce Murphy for more information.