



# RESEARCH WITHOUT BORDERS

## The Growing Role of International Cooperation and Collaboration at the Transportation Research Board

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Michael D. Meyer (left), Georgia Institute of Technology; TRB Executive Director Robert E. Skinner, Jr.; and Josef Mikulik, Transport Research Centre, Czech Republic, participate in an international research roundtable in 2007. TRB programs are opening avenues of international research across the globe.

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As the words of the Disneyland song remind us, "It's a small world after all." This observation applies more today than it did 92 years ago, when the National Advisory Board on Highway Research—later the Highway Research Board (HRB)—was established. Today the organization, renamed the Transportation Research Board (TRB) in 1974, is more international, as measured by the organization's activities, the functions it supports, the composition of attendees at the Annual Meetings and other TRB conferences, the topics of the research presented and published, the cosponsorship of major international transportation events, and the adoption of formal memoranda of understanding (MoUs) with major research organizations in Europe.

The growing international element in much of what TRB does reflects the advantages of collabo-

rative research and the expanding efforts of key stakeholders—such as state departments of transportation (DOTs)—to partner with and learn from colleagues around the world. At least 10 states—from California to Minnesota, from Alaska to Georgia—are collaborating on research projects with governmental or research entities in Europe, the Middle East, and Asia.

Transportation professionals around the globe are in closer contact through advances in transportation, telecommunications, and information technology. Individual researchers, research centers in other countries, and TRB have come to see the similarity of the challenges faced in transportation sectors around the world. The resources available for a comprehensive study of transportation problems are limited, making increased international cooperation and collaboration valuable for conducting research to address the challenges.



This circa-1967 brochure detailed the international research activities of TRB, then called the Highway Research Board—for example, distributing publications in 59 countries and developing cooperative arrangements with more than 40 organizations throughout the world.

A double drum winch (lower right) is used to power a simple, easily constructed pile driver in an image from *Low-Cost Water Crossings*, a compendium from the Transportation Technology Support for Developing Countries project. TRB produced the publication in 1979 under the sponsorship of the U.S. Agency for International Development.

### Decades of Tradition *Opportunities for Outreach*

World events and individuals from outside the United States have played a role in shaping TRB's history from the outset. According to Fred Burggraf and M. Earl Campbell, the primary authors of *Ideas and Actions: A History of the Highway Research Board, 1920–1970*, the contributions of research to the war effort during World War I changed America's thinking about the value of research (1). The Board built on this new support during its first five years, initiating the Annual Meetings and adopting other mechanisms to facilitate the gathering and dissemination of information.

In 1924, the Board designated “contact men,” charged with creating a two-way flow of information between state highway departments and the Board. The inaugural class of university contact men included a non-U.S. researcher at the University of Mexico.

In 1928, Roy W. Crum became director of the Board and three years later started serving as the HRB representative to committees of the Permanent International Association of Road Congresses (PIARC), now known as the World Road Association. According to *Ideas and Actions*,

In 1941 Director Crum attended the Pan-American Highway Congress in Mexico City. Upon his return, the Executive Committee took note of the opportunity to extend informational service into the neighboring Pan-American states and authorized Mr. Crum to explore the possibility for arranging translations of pertinent publications into Spanish for distribution in Mexico and the Central and South American countries. (1, p. 107)

International activities necessarily were curtailed during World War II and in the early postwar years.

A dramatic change occurred in June and September 1959, when HRB participated in exchange visits with soils engineers from the Soviet Union. The American Society of Civil Engineers coordinated the exchange, which the National Science Foundation funded. In 1965, the HRB Executive Committee established a Special Committee on International Cooperative Activities in response to requests from highway engineers in other coun-



ARCHIVE PHOTO

J. Jakob, Director, Swiss Federal Road Administration, welcomes attendees to a symposium on concrete roads in Bern, Switzerland, in 1973. Active from 1965 to 1976, the TRB Special Committee on International Cooperative Activities gleaned information on research activities abroad and participated in international conferences.

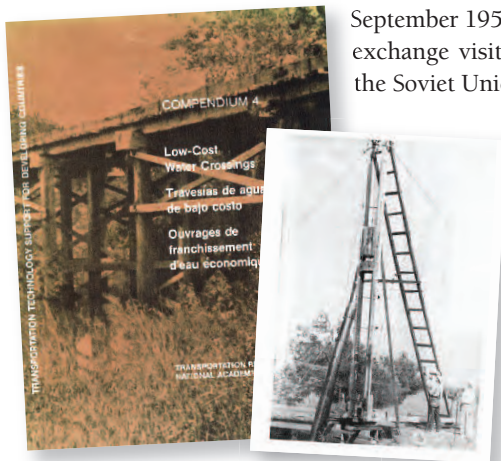
tries for a closer rapport with the Board. Wilbur Smith, who had worldwide consulting interests, was named to chair the committee.

### Expanding Contacts

The Special Committee started out with an impressive list of charges, including the expansion of international cooperative activities, the incorporation of translations and research abstracts from major foreign language publications into the Highway Research Information Services automated database, the planning of Annual Meeting sessions to present information on research activities abroad, the participation of staff and committees in international conferences, and the expansion of contacts and exchanges with similar organizations around the world (1, p. 108). The committee remained active until 1976.

A brochure produced circa 1967 boasted that the Board was mailing publications to individuals and organizations in 59 countries. The brochure also noted that HRB had established bilateral cooperative arrangements with 22 highway research agencies, 11 universities, and 8 ministries of public works throughout the world for the exchange of publications and research information.

In 1977, under the sponsorship of the U.S. Agency for International Development (USAID), TRB began a special project to enhance rural transportation in developing countries by improving access to information on the planning, design, construction, and maintenance of low-volume roads. Through the three-year project, USAID produced and distributed thousands of compendia and synthesis reports to developing countries around the world.



## Multinational Perspectives

In the early 1980s, two Executive Committee task forces studied the involvement of TRB in international activities. The task forces developed recommendations to increase TRB's effectiveness in sharing research results and in receiving information on transportation research from abroad that was applicable to the United States.

Through the efforts of the task forces, the Executive Committee established 12 action items, including the creation of a permanent International Activities Committee. The scope of that standing committee has not changed since its creation in 1983:

This committee is concerned with the evolution of an international perspective in all facets of all modes of transportation within the scope of the Board. In consultation with staff and volunteer leaders, it shall advise the Executive Committee and Councils on specific actions that will help to achieve that perspective, including implementation of the specific actions approved by the TRB Executive Committee. (2)

Responding to the recommendations from the two task forces, TRB began to reserve spaces for international members on each standing committee to gain multinational perspectives on the committee's area of interest. A committee could expand its membership of 25 by adding up to four seats specifically for international participants; the limit was raised to five in 2007.

## New Millennium Initiatives

TRB's international activities continued to expand during the 1980s and 1990s as the organization's portfolio grew. TRB entered the new millennium with an array of international activities that included comparative policy studies, internationally sponsored and



PHOTO: MARK ROSENBERG

cosponsored conferences, international university representatives, cooperative international scanning programs, the international sharing of bibliographic data, an international exchange for the analysis of pavement performance data, loaned international staff and visiting scholars, and more. Many of these activities did not derive from a conscious effort to achieve international scope but as logical outgrowths of shared interests in transportation problems and of the substantial need to address similar transportation challenges jointly.

In its 2002 strategic plan, the TRB Executive Committee included the assessment of opportunities for expanded international activities as an action item. The Executive Committee established a task force to review international activities and connections, assess the need for expanding or redirecting the activities, assess the interest of sponsors, and develop initiatives as appropriate.

Led by Michael D. Meyer of the Georgia Institute of Technology, the task force recommended that the International Activities Committee develop a more strategic approach to identify and achieve interna-

Harvey Fineberg (*left*) and Michael McGinnis, Institute of Medicine, meet with Maryvonne Plessis-Fraissard (*right*), World Bank, at The National Academies' Workshop on Traffic Safety in Developing Nations in 2006.



PHOTO: RISSON PHOTOGRAPHY

Jean-Pierre Médevielle (*left*), then Secretary-General of the European Conference of Transport Research Institutes (ECTRI); George Giannopoulos, then President of ECTRI; and Robert E. Skinner, Jr. (*right*) display the historic 10-point memorandum of understanding between ECTRI and TRB, signed in January 2006.



PHOTO: RISSON PHOTOGRAPHY

Médevielle (left); Guy Bourgeois (center), then President, Institut National de Recherche sur les Transports et leur Sécurité; and a group of ECTRI representatives participated in TRB's first international research roundtable in 2007.

tional cooperation. The task force also recommended that the Executive Committee appoint a member to serve as International Secretary, and Meyer was named to the post in June 2004.

In response to the task force report, the Executive Committee adopted an international vision statement calling on TRB to look for partnering opportunities wherever possible. In fulfilling this mission, TRB has sponsored a reception for the growing number of international participants attending each Annual Meeting.

### Pursuing Partnerships

TRB pursued the plan with speed and vigor, strengthening and formalizing many international relationships, while seeking to expand international partnerships. Working with the European Confer-

ence of Transport Research Institutes (ECTRI), TRB fostered technical exchanges and supported young transportation researchers around the globe. As a result, ECTRI and TRB held a formal event in 2006 to sign an historic MoU to develop research partnerships across national borders. TRB hosted its first international research roundtable in 2007, with ECTRI representatives from 14 countries, to share information on common research topics and to explore prospects for research collaboration. ECTRI and TRB collaborate in identifying items that constitute an action plan, renewed every two years.

TRB has worked with PIARC since 1931 but signed a formal MoU in 2007 at the World Road Congress in Paris. As a result, TRB hosted PIARC's Technical Committee on Climate Change and the Environment at a special joint session with TRB's leadership at the 2009 TRB Annual Meeting. TRB commissioned three white papers for the session, exploring the prospects and challenges of climate change adaptation and of mileage-based pricing. Sue McNeil, University of Delaware; Cindy Burbank, Parsons Brinckerhoff; and James Whitty, Oregon Department of Transportation, authored the papers.

TRB built on these international collaborative efforts by working with the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) to host a U.S. exhibit at the 2010 PIARC Winter Road Maintenance Conference in Quebec, Canada. In 2011, TRB, AASHTO, and FHWA again sponsored a U.S. exhibit at the PIARC World Congress in Mexico City.

Also in 2011, TRB signed an MoU with the Europe-based International Transport Forum, agree-

At its 2007 World Road Congress in Paris, the Permanent International Association of Road Congresses–World Road Association signed a formal Memorandum of Understanding with TRB, cementing a partnership of more than 75 years.

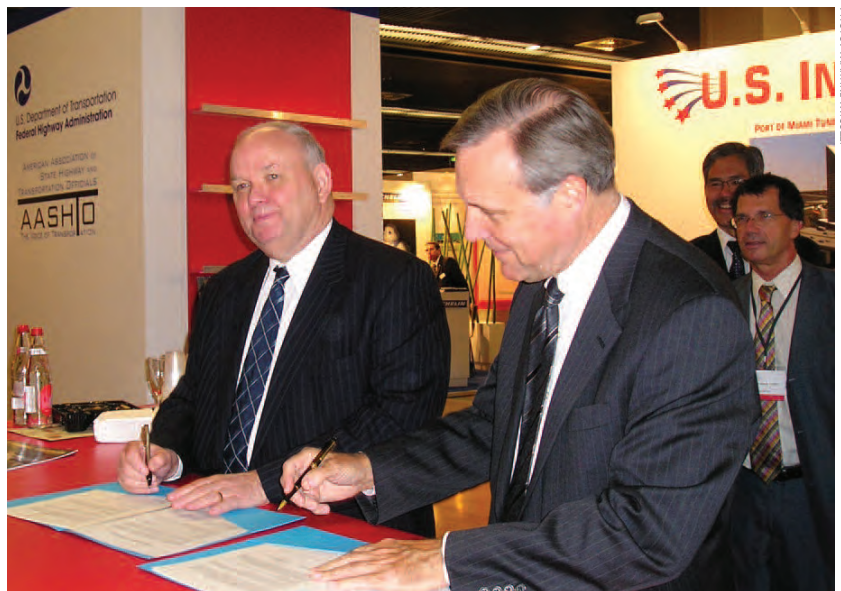


PHOTO: MARTINE MICCOZZI

ing to integrate TRB's online, searchable Transportation Research Information System (TRIS) database with the International Transport Research Database (ITRD). The combined TRIS-ITRD resource, known as TRID, is a multilingual catalogue that includes approximately 1 million transportation research references. TRID supplies researchers with a powerful tool for understanding the scope and magnitude of research under way worldwide on a large number of challenging transportation questions.

## Upward Trends

TRB's international impact and outreach have continued to grow and expand, and additional collaborative exchanges and research partnerships are expected between TRB and research organizations around the world. All trends are upwards—in almost every year of the past decade, the number of international participants attending the TRB Annual Meetings has grown (see bar chart, page 9); the participants come to present research findings or to learn about comparable activities in the United States and around the world.

At the HRB 46th Annual Meeting in 1967, 200 of the meeting's 3,311 attendees were from 17 countries outside the United States. In 2006, 1,230 international participants attended the annual meeting—comprising 12 percent of all attendees. In 2012, despite severe economic conditions worldwide, 1,748 international registrants from 70 different countries participated in the Annual Meeting, comprising more than 15 percent of attendees.

## Laying the Groundwork

In addition, the International Activities Committee is expanding its long-term international cooperative efforts. Working with ECTRI to implement key activities in the MoU, the committee performed a comprehensive comparative analysis of the similarities and differences in the institutional structures and funding sources in the United States and in the European Union for planning, implementing, and administering transportation research projects.

The report, *European–United States Transportation Research Collaboration: Challenges and Opportunities*, was published in 2009, laying the groundwork for collaboration (3). The report was disseminated widely via the Internet through postings on the TRB and ECTRI websites. In support of ECTRI, France's Ministry of Transport translated and republished the report in French.<sup>1</sup> The International Activities Committee views its role as bringing researchers from around the world together to increase communication, share ideas

<sup>1</sup> [www.ectri.org/Documents/Publications/Strategic-documents/WG10report\\_cooperationUE-US\\_pub\\_FR.pdf](http://www.ectri.org/Documents/Publications/Strategic-documents/WG10report_cooperationUE-US_pub_FR.pdf).



PHOTO: RISSON PHOTOGRAPHY

and research results, and develop research partnerships in multiple transportation arenas.

The committee reflects only a portion of the international presence in TRB, however—many technical standing committees have long had active and committed international members. But the number of international members has grown rapidly in the past decade, in part because of the expanded number of member spaces reserved for international researchers but also because of the global nature of research into key transportation topics.

TRB's nearly 200 standing committees include 771 committee members—almost 13 percent of all formal members—who are international scholars and researchers addressing questions in subject areas ranging from pavement materials to public transit to adaption to climate change. This number is almost four times what it was in 2002, when the total of international researchers serving as formal committee members was less than 200.

Representatives from TRB and the European Commission discussed transportation research collaboration at an informal meeting in 2010.

Members of an ECTRI working group analyze research infrastructure initiatives that would enhance the exchange of transportation knowledge across international borders.



PHOTO: ECTRI



### Strategic Partnerships

The second Strategic Highway Research Program (SHRP 2), managed by TRB for the National Research Council, supplies another example of the international presence in TRB and of the international collaborative partnerships among researchers addressing major transportation problems. Congress authorized SHRP 2 in 2005 and subsequently extended the authorization to address some of the most pressing research needs in the U.S. highway

The 2009 publication *European–United States Transportation Research Collaboration: Challenges and Opportunities* was translated into French and republished by France’s Ministry of Transport.



system: reducing traffic deaths and injuries, rehabilitating aging infrastructure with minimal disruption to travelers, and resolving reliability problems caused by congestion and inadequate capacity. The program is designed to translate research results into professional practice.

SHRP 2 has formal MoUs with other nations. Two deputy ministers from the Canadian Transportation Agency have worked on the staff, on-site at TRB, at different times, since the inception of the program. Dutch and French transportation professionals also have contributed to SHRP 2 projects as loaned staff for extended periods (see sidebar, below).

Through an MoU with Finland, TRB is identifying sites suitable for research on the nondestructive test-

## Visiting Professionals Bring International Perspective

The second Strategic Highway Research Program (SHRP 2) has benefited from the expertise of professionals from Canada and Europe who are contributing to its mission and building international organizational relationships, collaboration, and integrated methods of research.

Abdelmename Hedhli joined SHRP 2 in 2010 through an agreement between TRB and the French Institute of Science and Technology for Transport, Development, and Networks (IFSTTAR). He focuses on projects to mainstream systems operations and achieve system reliability. These reliability projects include corridor planning, organization and business processes, incident management, geometric design, and intelligent transportation systems. Hedhli says that his work fulfills two goals: to establish relationships with fellow transportation researchers and to gain understanding of transportation research organization in the United States—particularly, TRB’s model of volunteer-driven, nonprofit research. Other areas of exploration include the process of research results implementation. A merger of the French National Institute for Transport and Safety Research and the Central Laboratory of Roads and Bridges, IFSTTAR is an example of the reorganization of transportation research in Europe, Hedhli notes.

A common challenge for Europe and America is how to make the most of limited funds for transportation research, observes Onno Tool, who comes to TRB and SHRP 2 from Rijkswaterstaat in the Netherlands. Tool splits his time between TRB and the Federal Highway Administration, guiding implementation of SHRP 2 reliability products. His goal is to open a two-way exchange of knowledge between Dutch and American researchers, enhanced by face-to-face interaction.

The different approaches to research in the two countries—the structured method of this program and the Netherlands’ more direct and hands-on style—have much to offer each other, Tool observes.

After more than 32 years with the Nova Scotia Department of Transportation and Infrastructure Renewal (TIR), Ralph Hessian retired as Director of Highway Engineering Services and in 2008 joined SHRP 2 as a visiting professional under an agreement with the Canadian Council of Deputy Ministers Responsible for Transportation and Highway Safety. While with TIR, Hessian had served as the Canadian liaison to the SHRP 2 Safety Technical Coordinating Committee. He now coordinates and manages capacity and travel time reliability research projects and disseminates SHRP 2 program research findings in Canada. Participating in SHRP 2 provides him an opportunity to contribute to new and developing

knowledge and to products that advance transportation practice, Hessian affirms.

Andrew Horosko began his longtime association with TRB as a visiting researcher with the first SHRP. Horosko returned to serve on the SHRP 2 oversight committee as Deputy Minister of Infrastructure and Transportation in Manitoba, Canada. When he retired in 2009, he took on an assignment to coordinate the six data collection sites in the SHRP 2 naturalistic driving study. An engineer by training and an administrator by practice, Horosko is inspired by the integration of technology and the free exchange of information among SHRP 2 participants. The first SHRP imparted a vision for a positive relationship between transportation professionals in Canada and the United States, he recalls, and he has observed the continued collaborative development under SHRP 2.



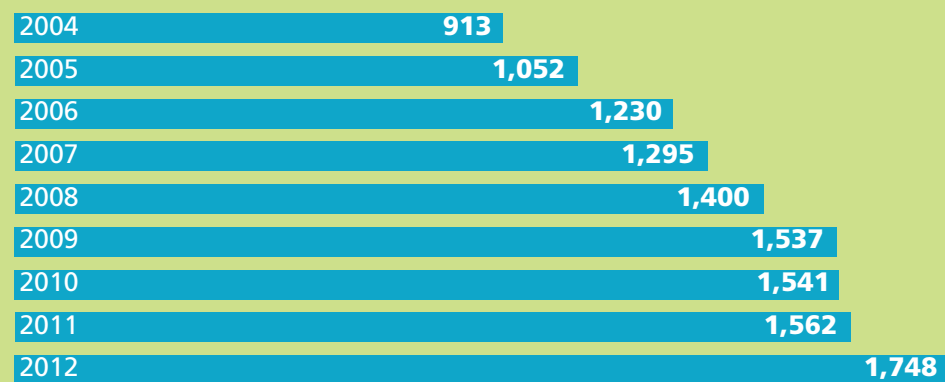
In their work with SHRP 2, Onno Tool (left) and Abdelmename Hedhli apply their expertise and develop collaborative approaches and exchanges.

## QUICK FACTS

### International Participation in TRB

- ◆ 70 percent of the people accessing TRID are from outside the United States.
- ◆ More than 20 percent of the 30,000 subscribers of the *TRB Transportation Research E-Newsletter* reside outside the United States.
- ◆ 771 of TRB's standing committee members—almost 13 percent—are from outside the United States.
- ◆ TRB's influence is global—in the past year, nearly 3.5 million visits or approximately 65 percent of all visits to TRB's website, [www.trb.org](http://www.trb.org), represented viewers in 216 countries outside the United States.
- ◆ The number of international attendees at TRB's Annual Meeting increased by 91 percent from 2004 to 2012 (see chart, below). The 2012 total represents 70 countries.

### Number of International Attendees at TRB Annual Meetings, 2004–2012



ing of highway materials and for cooperative research efforts. In addition, other countries are expanding their research efforts to parallel SHRP 2 work; for example, Canada is initiating its own naturalistic driving study, equipping cars to record drivers' movements under various situations to develop highway and in-vehicle safety improvements.

SHRP 2 undertakes its research through competitively awarded, merit-based contracts with researchers. A Swedish group was chosen as the prime contractor on one project, and subcontractors on other projects include researchers from Canada, Denmark, England, and the Netherlands.

The SHRP 2 staff communicates often with researchers around the world who are working on similar problems; some staff members serve on advisory committees for parallel work under way in Europe. In 2011, a SHRP 2 delegation was invited to a conference in China, to present the program's work in infrastructure renewal and traffic safety (see sidebar, page 11).

### Addressing Mutual Interests

The international presence in TRB activities and meetings, and TRB's partnerships and collaborations with similar research organizations around the

world, result from the recognition that research and analysis can help address the myriad global, common, and local problems productively and effectively:

Magnus Quarshie (*left*), Delin Consult; Sampson Asare, University of Virginia; and Adeyemi Fowe (*right*), Nokia Corporation, converse at the 2012 TRB Annual Meeting. Quarshie and Fowe were among the nearly 1,750 international attendees at the meeting, coming to Washington, D.C., from Ghana and Nigeria, respectively.

PHOTO: RIBBON PHOTOGRAPHY





A delegation of transportation professors from Lanzhou Jiaotong University in northwest China visited TRB in 2003 as part of a nationwide tour of academic, governmental, and private-sector institutions. Research partnerships allow countries to address global and local problems together.

◆ Global problems—such as climate change attributable to transportation emissions—cannot be addressed in isolation or by any one nation alone. Nations will need to identify and agree on possible corrective actions and work together to implement solutions.

◆ Common problems include safety, congestion, and obsolete or inadequate transportation infra-

structure. Although each nation can address these problems independently, working together offers opportunities to use research funds more efficiently while bringing multiple perspectives to bear on the problems.

◆ Local problems may affect only one region, or one country, or the borders between countries. Although the solutions must be local, decision makers in the affected areas can learn from the experiences of other countries. International exchanges allow researchers to share ideas with those who have addressed similar problems or who have conducted research that could be relevant to the needs of local transportation professionals.

In November 2011 TRB held a special workshop for stakeholders and international researchers and participants to begin the development of a new international strategic plan for TRB (see sidebar, page 12). The final elements of the plan are still to be determined, but TRB will continue its nearly century-old goal of promoting and facilitating international research collaborations that address major global and common transportation problems, as well as providing guidance for local solutions.

## Asian Transit Agencies Demonstrate Performance Measures for Improved Service

**M**any public transportation agencies in the United States use performance measures to maximize resources, improve operations and customer service, and meet strategic goals. In 2009, a team of professionals from transit systems throughout the United States visited four areas in Southeast Asia—Hong Kong; Singapore; Kuala Lumpur, Malaysia; and Taipei, Taiwan—to examine how public transportation agencies apply the results of performance measurements. The findings were published in TCRP Research Results Digest 95, *Performance Measurements and Outcomes*.

Team members gained familiarity with each agency's history, political structure, operation, management framework, and performance measurement systems. Among the challenges common to transit agencies in America and Asia are safety, cost control, and continued quality of service; areas of difference include population densities, politics, and levels of investment in transit. The review was organized around a performance measurement model comprising strategy devel-

opment, specific actions, reporting mechanisms, quality control, agency improvement methods, and strategy refinement.

The team found that the Asian transit agencies followed a model that made customer satisfaction a priority. The agencies established goals and objectives, developed strategies for meeting those objectives, defined performance criteria and targets, measured the progress, and developed inputs for future objectives. The models integrated some standards—such as benchmarking and those of the International Organization for Standardization—but whether these standards were integrated internally or were set by government regulators was not clear. Most performance targets, however, were based on past performance, instead of on specific goals. The research also showed that for most systems, continuous improvement was not always clearly articulated in an organization's strategies.

TCRP Research Results Digest 95 can be accessed at [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rrd\\_95.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rrd_95.pdf).





PHOTO: RIOH

Jinquan Zhang, Deputy Director General of China's Research Institute of Highways; Neil Hawks, first Director of SHRP 2; and Charles Fay, SHRP 2 Senior Program Officer, participate in a discussion at the China-U.S. Seminar on Highway Technology.

## China-U.S. Exchange Focuses on Highway Renewal and Safety

JAMES W. BRYANT, JR., AND CHARLES R. FAY

In June 2011, a delegation representing the second Strategic Highway Research Program (SHRP 2) participated in the China-U.S. Seminar on Highway Technology in Beijing. SHRP 2 committee members, contractors, and staff specializing in areas of renewal and safety research met with representatives from the Research Institute of Highways (RIOH), part of China's Ministry of Transport, to share research approaches and findings.

SHRP 2 renewal research is advancing tools for transportation agencies to complete highway projects consistently and quickly, while minimizing disruption to the community and producing long-lasting facilities. Renewal research products include the following:

- ◆ Advanced technological methods for locating underground utilities, including the tools for selecting the most appropriate technology for a project;
- ◆ Procedures to speed the evaluation of designs and the inspection of construction;
- ◆ Methods and materials for preserving, rehabilitating, and reconstructing roadways and bridges; and
- ◆ Alternative strategies for contracting, financing, and managing projects and for mitigating institutional barriers.

To gain key insights into driving behavior, the SHRP 2 safety program is conducting a study of unprecedented scope and scale. Major highway safety research themes include the following:

- ◆ A naturalistic driving study (NDS) involving 3,100 volunteer participants driving instrumented vehicles;
- ◆ Collecting roadway data to correlate driving behavior with roadway design;

- ◆ Analyzing high-priority safety issues, with a focus on potential countermeasures; and
- ◆ Developing a rich database for future research.

The technical exchange opened and concluded with plenary sessions. Two days were devoted to technical breakout sessions; on the third day, participants visited RIOH's testing facilities outside of Beijing. In the opening plenary session, a RIOH representative introduced China's National Road Safety Science and Technology Action Plan, and SHRP 2 staff provided an overview of research in the four focus areas of capacity, reliability, renewal, and safety.

Participants in the breakout sessions on bridge and pavement technical issues discussed the state of highway and bridge infrastructure in China and in the United States. Emerging issues in the design, construction, maintenance, and preservation of pavements and bridges—as well as long-term data archival needs—also were explored.

In the safety-focused sessions, SHRP 2 representatives presented information on the NDS and on the roadway data collection projects supporting highway safety analysis. Other topics included the Highway Safety Manual, highway safety research in the United States, and the U.S. Road Assessment Program. RIOH representatives detailed China's National Road Safety Action Plan, summarized research on human factors in highway safety, and discussed China's road network risk assessment program.

For more information about SHRP 2 renewal research, visit [www.trb.org/SHRP2/Renewal](http://www.trb.org/SHRP2/Renewal); for information about SHRP 2 safety research, visit [www.trb.org/SHRP2/Safety](http://www.trb.org/SHRP2/Safety).

*Bryant is Senior Program Officer, Renewal, and Fay is Senior Program Officer, Safety, with TRB's Second Strategic Highway Research Program in Washington, D.C.*



PHOTO: MICHAEL KORANSKY

Traffic in Kunming, China. International partnerships can apply research and analysis to address global, common, and local problems productively.

More than ever before, TRB presents individual scholars, transportation organizations, and governmental research agencies around the world with the opportunity to interact at many levels to address

mutual interests in transportation in compelling and exciting ways. TRB's network of international activities provides forums for international transportation professionals to work together to create safer, more effective, efficient, equitable, and sustainable transportation systems, meeting the needs of a world that seems smaller even as transportation challenges loom larger.

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## Stakeholders Map out Routes for International Collaboration

In November 2011, a group of TRB representatives and stakeholders with international backgrounds and interests convened to identify actions, activities, and initiatives to strengthen international research collaboration. Among the possible initiatives examined were regular international symposia, organized around a topic of broad international interest, and programs for young researchers, in association with other TRB activities or linked to similar programs organized by the European Conference of Transport Research Institutes.

Participants discussed ways to develop connections between TRB standing technical committees and World Road Association committees—matching up interests, anticipating collaborative activities, sharing information, and encouraging teamwork—and to stimulate international participation on all TRB committees. Ideas for facilitating partnerships with international stakeholders included developing research area frameworks, supporting information exchanges among researchers working in the same fields, pairing projects with similar goals and scopes of work, and brokering in-depth collaborations among teams in the

United States and abroad working in related areas of research.

Participants also explored the establishment of international research programs—for example, an international cooperative research program that would acquire funding and select research topics and a strategic international research program that would specify research topics before obtaining funding.

Other proposals included the following:

- ◆ Conduct outreach to developing countries through capacity-building activities;
- ◆ Create an inventory of sister organizations outside the United States as potential partners;
- ◆ Designate a group within TRB to follow up on international proposals;
- ◆ Develop a mechanism for standing technical committees to provide input;
- ◆ Clarify the role and mission of the International Activities Committee; and
- ◆ Reexamine and redefine as needed the vision and goals first adopted for TRB international activities in January 2003.

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