# International Roundtable Held at the 1984 TRB Annual Meeting

*A highlight of the 1984 TRB Annual Meeting was the International Roundtable on Monday afternoon, January 16. A total of 90 participants from 14 countries heard prepared discussions on the subject of international transportation research needs from the perspective of a dozen speakers. These discussions were reported in brief in* World Highways *(February 1984, Volume XXXV, No. 2, International Road Federation). The article below, which summarizes the discussions of the speakers, was prepared by Walter Hansen, a member of the TRB Committee on International Activities, and is based in part on the IRF article and on a transcript of the tape of the Roundtable discussions.*

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Financing and maintaining transportation infrastructures are main concerns of transportation authorities and researchers in both industrialized and developing countries. Research in these areas should be accelerated, according to the speakers at the International Roundtable, held as part of the Transportation Research Board's 63rd Annual Meeting in Washington, D.C., January 16-20, 1984. Additional research is needed in such diverse areas as alternate construction materials, highway safety,

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properties of tires, improved traffic management, and the transport of hazardous materials. The participants in the meeting universally agreed that the TRB Committee on International Activities can perform an extremely important role in encouraging multinational approaches to transportation problems.

The International Roundtable was chaired by Robert A. Hubbard, President, Wilbur Smith and Associates. Hubbard pointed out that the International Activities Committee, which he also chairs, is currently composed of representatives from a variety of areas, covering all modes, with membership from both the public and the private sectors. The principal purpose of the recently formed Committee on International Activities is the development of advice to the TRB Executive Committee and the Division Councils on specific actions that will foster enhanced international perspectives for TRB. The committee is in the process of determining where to place its emphasis and welcomes any advice and suggestions on this matter. (See *TRNews*, September-October 1983, for further discussion.)

Hubbard reported that, concurrently with the establishment of an International Activities Committee, for which Kenneth B. Johns, TRB Assistant Director for Regular Technical Activities, serves as TRB staff representative, the decision was made to expand each of its present standing committees to permit

*Top*
Robert A. Hubbard, President, Wilbur Smith and Associates, and Chairman of the TRB Committee on International Activities, chairs the International Roundtable at TRB's 63rd Annual Meeting.

*Right*
Geoffrey Margason, Director, Transport and Road Research Laboratory, United Kingdom, advocated increased emphasis on all aspects of maintenance, rehabilitation, and reconstruction.

*Bottom*
Lester P. Lamm, Deputy Administrator, Federal Highway Administration, addressing the International Roundtable, recommended concentrating on long-term, far-reaching research programs.

up to four additional members over the normal committee size limit of 25 to specifically include non-North Americans.

Lester P. Lamm, Deputy Administrator, Federal Highway Administration, U.S. Department of Transportation, in addressing the meeting, stated that in assessing research needs, it is important not to attempt to solve too broad a list of problems: "You can dilute your efforts to the point where none pays off."

Lamm recommended concentration on long-term, far-reaching research programs rather than those that seek results in 2 or 3 years. He also advocated a balance among all modes of travel and among problems that might befall an industrialized economy versus a developing economy. Some of the principal areas of research needs from his perspective include: structural design, pavement design, highway safety, and traffic operations.

Geoffrey Margason, Director, Transport and Road Research Laboratory, United Kingdom, observed that in the United Kingdom: "The role of government and of large corporate bodies in transport is reducing. The presumption can no longer be in favor of ready promotion and acceptance of large-scale developments or substantial operational support. Public expectations will be maintained with respect to personal mobility, safety, protection of the environment, and assistance for nonmotorized travel and groups with particular travel problems."

Margason noted that some of the main areas of research needs in the United Kingdom are transport planning; traffic management; highways and structures; safety and special groups; and energy, environment, and freight. Research requirements in transport planning involve such considerations as escalating costs of public transport subsidy, energy costs, and questions of equity for noncar owners. Questions on the balance of public and private transport need to be addressed in regard to improving the effectiveness and value for money spent on public transport services. The need in traffic management research is the development of broad management strategies for whole sections of the road network, including improved advice to drivers, and for more positive control.

Margason sees a reduced need for research into design techniques and construction methods applicable primarily to new construction, but believes that emphasis on all aspects of maintenance, rehabilitation, and reconstruction will increase. In addition, it is important to maintain a program on conservation based on improvements to vehicles, driving techniques, and traffic management.

Margason stated that there is a general belief that it is necessary to make new major thrusts in safety and to reach special groups. Behavioral studies to improve driver performance, improved characteristics of driving environment, increased coordination between medical and transport research, vehicle primary and secondary safety, and improved education and training are areas needing attention. Nonmotorized modes are expected to continue to make a contribution to personal mobility. Increasing the ability of disabled people to travel as normally as possible will remain a widely adopted objective.

Francis B. Francois, Executive Director, American Association of State Highway and Transportation Officials, briefed those present on the Strategic Transportation Research Study (STRS), funded by FHWA and conducted by TRB over the past year. The study, generated by a widespread concern about the structural integrity of the U.S. highway system, discusses many areas of needed research.

The STRS approach was to identify projects in the research area that would meet a series of tests: Where would the research yield big payoffs if it works? Are there areas of research on which spending a little bit of money will have some great cost savings at the other end? Is the research in an area that is not being covered well by others? Does the research require an overall national approach for it to work? Does the research respond to new and potential changes in national policy? The areas on which STRS is currently focusing its attention include: bridges, load capacity of bridges, pavements, materials, pavement and maintenance management systems, traffic operations, and safety.

Francois stressed that there has not been enough intensive, solid research in recent years, particularly in the area of pavement design and maintenance. He believes that a need exists to learn more about the performance of certain engineering materials and how to predict the long-term performance of pavement. Research activity must be expanded, and the ways to do this must be considered.

Takeshi Kurokawa, Associate Professor, Institute of Socioeconomic Planning, University of Tsukuba, Japan, observed that the rapid economic growth experienced by Japan after World War II had brought about a large population influx into large cities, resulting in traffic congestion, insufficient housing, and environmental deterioration. Despite road improvements and upgrading of rail and rapid transportation facilities, there are still major transportation problems to be solved in the future, including traffic congestion around large cities, increasing rate of road accidents, and a still-inadequate road system.

Dr. Kurokawa pointed out future directions for transportation development in Japan, which include curtailment of resource and energy consumption, development of a rational urban transportation system, improvement of road safety and service level, appropriate traffic management and administration, environmental improvement of roads in relation to the adjacent areas, and the revitalization of the public transport system, especially the introduction of new transport systems.

Karl Hedman, Swedish National Road Administration, stated: "Roads must be improved to reduce costs for our indusdry. Better road safety is another important objective." Due to the oil-dependent economy of Sweden,

there are serious problems in funding roads and streets. Maintenance activities exceed new construction by far.

Sweden's road research is mainly carried out by three agencies: the Transport Research Board, the National Road Administration, and the Road Traffic and Research Institute. The Transport Research Board is currently involved in six subject areas of which the most important are socioeconomics and transport policy, logistics and freight transport, and road safety (with emphasis on the problems of children, young drivers, and the elderly).

The Swedish National Road Administration is concentrating on strategic planning methods, maintenance evaluation, methods to describe road conditions, computer-aided road design, near accident or conflict analysis, pavement performance models, bridge repair methods, and winter maintenance methods. Under investigation at the Road and Traffic Research Institute are unprotected and disabled road users, properties of tires, vehicle handling characteristics, public transport, night traffic, functional properties of surfacings, and methods to save energy.

Dr. Anil S. Bhandan, University of Tanzania, Dar-es-Salaam, presently on a 1-year assignment with the World Bank in Washington, D.C., believes that Tanzania is representative of many of the smaller, less economically developed countries in the world in that it is highly dependent on research output from the developed world. Dr. Bhandan stated that one area of major emphasis in countries like Tanzania is transportation planning. Basic policies do not exist, and it is a primary objective to develop a mechanism whereby policies are formulated that are appropriate to the level of economic and social directions to which the country wants to move.

Dr. Bhandan noted that the second area of major emphasis deals with construction materials. He believes that in view of high energy costs, it is important to find energy substitution materials and techniques for the construction of highway and transportation facilities.

Sudarsanam Padam, Ministry of Transport and Shipping, India, who is studying at Massachusetts Institute of Technology for a year, pointed out that there is a need for greater emphasis on public transport in India to provide greater mobility to people. Some of the problems faced in doing this involve the financing and management of the public transport facilities. He noted that due to the lack of financial resources, the transport systems are deteriorating, assets have been depleted, and reversal of this trend may take some time.

Padam stated that India is attempting to conduct research that would isolate financial performance and establish performance measures that are related to the efficient management of resources: "We have to identify and set values on the social obligations and values of public transportation, and restructure the farebox/subsidy relationship. At the same time, management must be made accountable for certain basic performance levels."

Terence G. Mackey, Department of Transport, South Africa (at present at Cambridge University, United Kingdom), indicated that one area of concern to South Africa is that of land use in transportation and questioned if TRB could make a valuable contribution in correlating the results of the historical effects of transportation investment on land use development. Mackey suggested that perhaps, with TRB acting as a general coordinator, these results could be obtained internationally and would be of tremendous value to all countries.

Dr. W.F. Johnson, Transport Canada, addressed the unique perspective of the Canadian economy. "We have a smaller economy and more severe climatic conditions; and we are dependent on foreign trade. We must have transportation facilities compatible with that of our trading partners, notably the United States."

Canada has a common transportation technology, but not a common transportation policy, with the United States. Canada's highly urbanized population has created an advanced urban transportation system with emphasis on rail and light rail. Canada is also a leader in the international field of air and marine transportation research.

Santiago Corro, University of Mexico, acknowledged that for Mexico and many other Latin American countries, the main need in a general sense is the application of existing technology as opposed to new research. What is needed is the adaptation of available techniques from other countries to Mexico's variable conditions. While Mexico has some limited access roads, most are low-volume roads constructed under tight budget constraints. In addition, traffic characteristics in Mexico and most Latin American countries are quite different.

Corro agreed with the speaker from South Africa that we should have more interchange among countries, more cooperation, and perhaps improved techniques and procedures for applying present knowledge.

Charles Taylor, Director, Washington Operations, Association of American Railroads, believes that there is far too little research on railroad problems and that there is great commonality of problems in research needs among nations. He offered the four areas described below for consideration because of their commonalities with railroads in other countries and other transportation modes.

Human factors research is needed to improve the workplace for employees. AAR is alarmed by the high instances of physical stress related to injuries to employees and is convinced that they are in no way unique either to the railway industry in the United States or to railroads in other countries.

In the area of energy research, Taylor indicated that AAR would be interested to know the extent to which transportation modes in other countries are conducting research in such areas as alternative fuels, aerodynamics of transportation equipment, and fuel conservation in general.

AAR has various environmental research programs under way, ranging

from research on exhaust emissions for diesel locomotives to wastewater treatment for repair shops and facilities in the U.S. railroad industry.

A special area highlighted by Taylor was hazardous materials transportation. Specific needs include emergency response techniques and a real-time hazardous materials data base that could be accessed in real time, providing the kind of information needed to make intelligent decisions with regard to immediate first actions.

Dr. Rexford B. Sherman, Vice President for Research, American Association of Port Authorities, stated that the areas of greatest research need are up-to-date forecasts of trade and shipping activity, forecasts of charter markets, and comparative studies of port administration. There is also a need to gain a better understanding of the role and extent of public finance in port development at all levels. For the past 3 years, there has been an ongoing debate in the United States on the subject of user fees to pay for dredging and other federal services. An understanding of how port development, including navigation channel improvement and maintenance, is financed in other countries would be of great value in facing that major policy issue.

Other related research needs include the impact on ports of the various "bridge" concepts, particularly full landbridge routings between Europe and the Far East via the United States, U.S.S.R., Mexico, and Canada. Still other research would involve the trend (if it exists) toward regional load centers and feeder ports, the growth of specialty ports, and the role of small and medium-sized ports.

Olav Grimsbo, Norwegian Institute of Transport Economics, indicated that much of the research in his country is directed toward making transportation more effective and less resource intensive. In Norway, transport has been very regulated since 1947; however, deregulation is now in process and is the focus of much research on many policy questions.

Grimsbo stated that the economics of road maintenance is another area of research focus. Questions of winter maintenance standards, traffic operations, improved road friction, corrosion, and traffic safety are of particular importance to Nordic countries.

At the conclusion of the Roundtable discussion, Hubbard invited the delegates from the countries not making a report at this year's meeting to make a contribution at future meetings. He reiterated that TRB earnestly solicits the participation of non-North American members on its standing committees, noting that participation is not limited to attendance at meetings but is encouraged through correspondence and other written communication, including reports and exchanges of views and ideas.

## 1985 INTERNATIONAL ROUNDTABLE

Plans for the 1985 International Roundtable to be held during the 1985 TRB Annual Meeting were developed at the May 10-11, 1984, meeting of the TRB Committee on International Activities. The Annual Meeting dates are January 14-18, 1985, in Washington, D.C., with the Roundtable planned for Monday afternoon, January 14. The theme of the meeting will be International Transfer of Technology as related to the transportation infrastructure maintenance and operations. An international panel of senior professionals covering all modes of transportation is being invited to lead an open and informal forum. The panel members will present their experiences as either suppliers or receivers of international technology. The setting and format of the 1985 International Roundtable will encourage participation by all attendees. The TRB Committee on International Activities expects that the discussions will provide a basis for highlighting successful international technology transfer processes as well as any barriers that prevent the effective interchange of technology.

The TRB Committee on International Activities is also planning two special sessions on international trade for the 1985 Annual Meeting. The sessions will focus on the major trends and uncertainties influencing international trade patterns and the issues posed for transportation carriers, shippers, and public agencies. These sessions will be scheduled for Tuesday morning and afternoon, January 15, 1985.