

**International Workshop on ITS Benefits:
How Evaluation Results Are Used in Transportation Decision-Making**

Thursday, November 9, 2000
Turin, Italy

Proceedings

9:00 – 9:10 Welcome, Introduction, Purpose of Workshop

Dr. Richard Mudge, President of Compass Services/A Division of U.S. Wireless and chair of the ITS America Benefits, Evaluation and Costs (BEC) committee that hosted the workshop, welcomed participants and previewed the day's schedule of speakers. The workshop agenda is available online at EDL# 13314, <http://www.itsdocs.fhwa.dot.gov/jpodocs/edlbrow/@901!.pdf>. (Each document described in these proceedings can be found online by either one of two ways: directly at the website address listed or indirectly at the U.S. Department of Transportation's Electronic Document Library [EDL] website <http://www.its.dot.gov/welcome.htm> by browsing through the list of documents to find its document number.) The workshop attendance list is available online at EDL# 13333, <http://www.itsdocs.fhwa.dot.gov/jpodocs/proceedn/@@01!.pdf>.

9:10 – 10:30 Session 1: Panel – How Evaluation Results Are Used in Transportation Decision-Making

Dr. Christine Johnson, Director of the ITS Joint Program Office at the U.S. Department of Transportation moderated the panel, and presented the speakers with a challenging question that she has been trying to answer in the U.S. Dr. Johnson finds that the reason many state agencies in the U.S. decide not to implement ITS is that they lack information on ITS benefits and costs. However, her office has invested considerable resources in compiling ITS benefits and costs data from evaluations conducted in the U.S. and abroad. She speculated as to the source of these complaints despite the Federal effort. Are the methodologies used in evaluations seen as flawed? Are the data seen as inapplicable to a state agency's own particular situation? Dr. Johnson cited the example of Minnesota, where ramp meters have been shut down for a six-week test period due to public pressure, despite the fact that the Minnesota Department of Transportation has collected quantitative data on the benefits of this ITS technology for several years.

Tom Warne, Executive Director of the Utah Department of Transportation (DOT), provided the perspective of U.S. state departments of transportation. Mr. Warne said that his comments also reflect views within the American Association of State Highway and Transportation Officials (AASHTO), of which he is president. In his experience, transportation investment decisions are not always based on empirical quantitative data. In fact, politics and public perception are frequently overriding factors. He said it is necessary to balance investment in traditional transportation projects, such as construction of new roads and preservation of existing ones, with innovations such as ITS. In addition, many states have had major problems with implementing large software technology projects, such as computerization of the driver's licensing systems, and ITS may be suffering the unfortunate consequences of these unrelated technology failures. He gave the example of photo enforcement of speeding ("photo radar"), which was implemented in Utah a few years ago, but withdrawn after some members of the state legislature were caught by this technology violating the law.

Mr. Warne said that, in order to gain constituents' support, ITS advocates need to express the ITS benefits in terms that are meaningful to their audience. He added that the message that ITS reduces travel time is a particularly successful strategy. In fact, he asserted that travel time is a more important performance measure to the public than safety. Furthermore, statistics on the safety benefits of ITS are viewed by many decision-makers to be of dubious value at this time.

Mr. Warne recommended public-private partnerships as one of the key elements to successful ITS deployment, although these partnerships raise difficult public policy issues. If ITS systems are supplemented with advertising by the private sector, what are the rules under which advertisers can be accepted? What if a beer company wants to advertise, or a company that provides goods and services that are unacceptable to the community?

Mr. Warne concluded his talk with four summary points:

- State DOT's need to strike a balance between preservation of existing assets and investment in new technologies, e.g. ITS.
- State DOT's recognize that the benefits of ITS are there, but we need to communicate these benefits to elected officials in ways that are meaningful to them and the public.
- Politics will always be a factor in investment decisions, so ITS advocates need to figure out how to leverage the political process to our advantage.
- State DOT's need to develop policies and procedures that will best leverage limited resources. Public-private partnerships are a key example of such successful techniques.

Dr. Frank Van Erkel, Director of Strategy for the Netherlands Ministry of Transport (MOT), discussed his country's National Traffic and Transport Plan. The recently developed plan represents a major policy shift in the Netherlands. The Ministry of Transport has concluded that trying to get people out of their cars is an ultimately unsuccessful strategy. Instead, the MOT emphasizes the freedom that increased mobility gives the public, and that it is the shared responsibility of both the government and the citizens to preserve that mobility. Furthermore, public transport is promoted as one of many transportation options. The MOT is trying to educate the public that mobility has its price. Instead of undertaking the costly option of building more roads, the preferred option is more smart roads and smart vehicles making better use of existing infrastructure.

Steps that the MOT will take to achieve their ambitious goals are to focus on innovations, monitor developing technologies, intensify technology transfer and market development, and stimulate key research and promising technologies with governmental financial support. One of the MOT's new initiatives is a transition from the existing system of congestion pricing to setting toll levels by the distance traveled, called "km-pricing." The MOT hopes to complete the transition to km-pricing by 2010. Other areas of interest include automatic vehicle identification and automated vehicle guidance for cars, buses and rail.

The MOT's three major policy goals for the future are to accommodate growth of transport demand, improve accessibility, and improve safety and quality of life. In conclusion, Dr. Van Erkel stressed that development of governmental policy is an incremental process, noting that the MOT seeks partnerships with other countries, with the private sector, and with travelers.

Dr. Van Erkel's presentation "From A to B(etter): National Traffic and Transport Plan" is available online at EDL# 13330, <http://www.itsdocs.fhwa.dot.gov/jpodocs/edlbrow/@@01!.pdf>.

Takayuki Oba, Director of Information Technology for the Kochi Prefecture in Japan, began his presentation by describing his jurisdiction and its current transportation challenges. Kochi Prefecture is a rural, seaside area on Japan's southern island of Shikoku and was selected as one of five Model ITS Experiment sites in Japan by the National government. Kochi has a large percentage of elderly residents, a weak economy, and roads frequently closed due to weather. The Kochi Prefectural Government is responding to these challenges by investing in highway and airport construction, road operations and maintenance, public transport mobility especially for senior citizens, and tourism and traveler information.

Mr. Oba said that he feels that ITS can help improve utilization of existing infrastructure. Kochi Prefecture has a three-point approach for ITS deployment:

- Integrate ITS into a regional comprehensive Information Technology (IT) plan
- Develop core local communications network shared in partnership with related agencies
- Employ a Plan-Do-Check-Action (PDCA) cycle to utilize evaluation results for the next transportation decision-making activities

The main concept of Kochi's planned activities is establishment of an "information society for an aging community." Projects being pursued to achieve this goal include a demand-responsive bus system – the Nakamura City Bus – and information kiosks with map, traffic, weather and transit information. Mr. Oba said that the kiosk

project was an example of the PDCA cycle, in which the end result of an evaluation was used to identify better technologies and improve the information offered at kiosks.

Mr. Oba concluded his talk by discussing three factors he sees as necessary for successful ITS deployment:

- Public's perception. To date, the public has not been informed about ITS benefits.
- Government commitment, which is usually based on qualitative benefits data, such as stories and anecdotes. However, quantitative data, such as numbers and statistics, must also be available to back up the stories.
- Relationship between the National and local government. Local governments look to the National level for guidance on standards and systems architecture.

Mr. Oba's presentation "Key Issues on ITS Deployment and Evaluation" is available online at EDL# 13304, <http://www.itsdocs.fhwa.dot.gov/jpodocs/briefing/@9k01!.pdf>.

Gil Guedes, Technical Coordinator for the Brazilian Association of Highway Concessionaires (ABCR) provided the unique perspective of a private sector decision-maker responsible for transportation infrastructure. The Brazilian concession program now has 39 private toll authorities as members, with 10,496 km of roads, a figure that is expected to rise to 17,934 km by 2005. Investment in the program is estimated to be \$2 billion in U.S. dollars to date, with \$6 billion committed and \$10 billion expected for the future.

The major challenges that the ABCR is now facing include a lack of financial resources to construct and maintain road pavement projects, and constant pressure to assure ABCR investors (including company shareholders and drivers who pay tolls) that the funds are well-spent. Another important challenge in Brazil is to improve coordination of public transport systems in urban areas, which are now very congested. ITS elements of the ABCR's current operations includes traffic management, roadside assistance and traveler information. Several elements of commercial vehicle operations, such as weigh-in-motion, are planned for the future.

Mr. Guedes stressed that it takes anywhere from six months to one year following the installation of a new ITS technology for the implementing agency to grow comfortable with it. In addition, agency personnel need training, technical assistance and financial assistance during this stabilization period.

The Brazil's concessionaires program has shown that the public is not opposed to paying tolls, however drivers need to see evidence that their toll money is being invested back into the road network. Finally, Mr. Guedes reported that Brazil is considering the development and adoption of a National ITS Architecture, which is expected to facilitate ITS deployment there.

Mr. Guedes' presentation is available online at EDL# 13305, <http://www.itsdocs.fhwa.dot.gov/jpodocs/briefing/@9L01!.pdf>.

Christine Johnson noted a common theme among all the speakers: the notion of starting with small experimentations and building upon the results of these pilot projects into larger ITS deployments. The small pilot projects seemed to emphasize the importance of gaining real-world experience with new technologies. She asked each of the panelists whether the evaluation community places too much emphasis on quantitative data, such as numerical "before" and "after" results. Various panelists answered that quantitative data are still needed to support qualitative data (stories) and real-world experience (tours).

Al Gullon, principal of the firm ACES and formerly with Transport Canada, expanded on Tom Warne's point about the safety benefits of ITS. Mr. Gullon noted that the true benefit of many transportation safety innovations is lost because analyses of quantitative data often fail to take into account the rapid rise in traffic volume. Normalizing for volume, i.e. converting results into "crashes per vehicle-miles-traveled", will show a dramatic increase in safety in recent years.

Eric Sampson of the U.K. Department of Environment, Transport and the Regions (DETR) noted that the U.K. is using a new way of assessing transportation projects: determining whether they are "socially inclusive" versus "socially exclusive." He asked Dr. Van Erkel if the Netherlands Ministry of Transport had conducted similar project

assessments. Dr. Van Erkel replied that the Netherlands MOT is trying to get people to think about the true costs of operating a private car, many of which traditionally have been hidden and/or borne by the government.

Carol Zimmerman of Battelle asked the panel to what extent are evaluations from other countries viewed as credible in their own countries. Frank Van Erkel and Takayuki Oba responded that in the Netherlands and Japan it is important to seek out ITS evaluation data from other countries. Tom Warne said that in the U.S. decision-makers are primarily interested in the experiences of locations similar to their own in terms of size, road network characteristics, population, etc. He went on to say that U.S. decision-makers view a certain percentage of international data as acceptable, but that ITS advocates will not be able to make their case with international data alone.

11:00 – 12:30 Session 2: Panel – What Do We Know About Intelligent Transportation Systems?

Prof. Ennio Cascetta of the University of Naples in Italy moderated the panel.

Michael McGurrin, ITS Program Director of Mitretek Systems, Inc. in the U.S., gave a presentation attempting to summarize what has been learned in the 10 years since the inception of the National ITS Program. Specifically, which ITS technology applications have been successful, which have not been successful, and what are the new research questions for the coming decade. One of the determining factors for success was the extent of deployment, i.e. success in the marketplace. Mr. McGurrin's presentation "ITS – What Have We Learned? A U.S. Perspective" is available online at EDL# 13306, <http://www.itsdocs.fhwa.dot.gov/jpodocs/briefing/@9m01!.pdf>. His findings, as well as white papers written by several other experts, are compiled in a compendium report *What Have We Learned About ITS?* available online at EDL# 13316, http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@9w01!.pdf.

Alan Stevens, Senior Research Fellow at the Transport Research Laboratory (TRL) in the U.K. gave a presentation centered on a 1996 study that conducted a Strategy Assessment of 36 different ITS applications. (A Strategy Assessment is essentially a hybrid of a Socio-Economic Evaluation and a Technology Assessment.) Success was defined as whether or not the technology application offered "significant benefit," i.e. the benefits were more than 1.5 times the costs, as calculated in the study.

Mr. Stevens presented several developments since 1996 that have affected the deployment of these ITS technology applications, including emergence of new technologies, experience of ITS implementors and several policy changes at the city, inter-city, and Central government levels. Mr. Stevens concluded by attempting to answer the question: Why haven't all the apparently beneficial ITS technology applications been implemented? He said that benefit/cost ratio is but one of many factors that decision-makers consider when weighing different investment options. Other factors include allocation of costs and benefits across society, sensitivity analysis, consistency with policy objectives, interpretation of impacts, financial analysis, public acceptance, technical and financial risks, and legal and institutional issues. He gave the example of demand management, in which the mobility of certain individuals is limited in order to achieve the societal benefit of reduced traffic congestion.

William Johnson, Executive Director of Safety & Security for Transport Canada, commented that overall the European countries have better information transfer between the research and deployment communities than North American countries. Tom Warne added that evaluation results are needed quickly, both by operators of the technology being evaluated and by other locations considering deployment.

Mr. Stevens' paper upon which his presentation was based "U.K. Perspective on Cost-Benefits Assessment of ITS" is available online at EDL# 13307, http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@9n01!.pdf. The paper includes figures, tables and a detailed bibliography.

Dr. John Miles, Director of Ankerbold, Intl. in the U.K, summarized the evaluation methodologies contained in the CONVERGE validation quality (VQ) process. The CONVERGE-VQ process provides guidelines for all ITS research and demonstration projects funded by the European Community. The CONVERGE-VQ process uses the following categories of assessment: technical assessment, user acceptance assessment, impact assessment, socio-economic evaluation, financial assessment and market assessment. Dr. Miles showed how the CONVERGE-VQ process was used to build a business case for Traffic Control Centres (TCC) in the U.K. The TCC project is expected to reduce travel time, which is the most important ITS performance measure in the public's perception.

The TCC project will employ an innovative partnership arrangement so that the risks of operations and maintenance will be shared across the public and private sectors. Finally, Dr. Miles provided quantitative evaluation results for several successful ITS technologies: traveler information systems, urban traffic management systems and highway traffic management systems.

An abstract of the paper upon which Dr. Miles' presentation was based "Evaluation Results of ITS" is available online at EDL# 13308, http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@9_01!.pdf. To obtain a copy of the full paper, please contact Dr. Miles at jcm@ankerbold.co.uk. Dr. Miles' presentation is available online at EDL# 13309, <http://www.itsdocs.fhwa.dot.gov/jpodocs/briefing/@9p01!.pdf>.

Tetsuro Adachi, Manager at VERTIS in Japan, described the ITS Model Experiment project and presented a sample of the wide range of results from that effort. The ITS Model Experiment funded 19 ITS projects at five locations throughout Japan. (Two locations are Kochi Prefecture, described by Takayuki Oba in Session 1 and Toyota City, described by Yoichi Ishikawa in the Special Session.) A steering committee – called the Feasibility Study (FS) committee – developed an evaluation system for the ITS Model Experiments comprised of benefit evaluation, user acceptance evaluation, socio-economic evaluation (including benefit/cost analysis), technical evaluation, market assessment and financial assessment. Benefits evaluation focused on improvements in efficiency, safety and environmental impact. User acceptance evaluation focused on the user's realization of the effects, customer satisfaction and ease of use. The ITS Model Experiment was the first attempt in Japan to conduct ITS evaluations using a consistent evaluation policy throughout several locations and involving several different municipal governments as partners. Mr. Adachi concluded that the endeavor was successful, yielding positive evaluation results on the benefits of the ITS technologies tested. These results can be used by other municipal governments when considering their own ITS deployment.

The paper upon which Mr. Adachi's presentation was based "Feasibility Study of ITS Model Experiment Plan in Japan" is available online at EDL# 13310, http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@9q01!.pdf. The paper includes numerous quantitative results on the benefits of ITS technologies evaluated at the five ITS Model Experiment sites.

Jose Lobaco of the General Direction of Federal Motor Carriers at Secretary of Communications and Transports (SCT) in Mexico, like other speakers in this session, summarized successful, unsuccessful and emerging ITS technologies, as implemented in his country. Successful technologies included electronic toll collection, global positioning systems, computerized control of urban transport (electric trains and subway), intermodal freight transfer (from rail to commercial vehicles), and electronic data interchange. Unsuccessful technologies included urban traffic signal control, guidance on alternative routes using variable message signs, and ITS at international border crossings. Emerging technologies included digital route mapping, dedicated short-range communication, driver assistance technologies and weigh-in-motion. Technologies for which success has yet to be decided included commercial vehicle operations, intelligent highways, emergency response for transit passengers and automatic vehicle identification. Mr. Lobaco reported that the STC is constructing an ITS laboratory in Queretaro to test many of these emerging technologies.

Mr. Lobaco's presentation "What Do We Know About ITS?" is available online at EDL# 13331, <http://www.itsdocs.fhwa.dot.gov/jpodocs/briefing/@@b01!.pdf>.

14:15 – 14:45 Special Session: How Transportation Decision-Makers Use Evaluation Results at Local and Federal Levels in Japan

Dr. Richard Mudge moderated this special session that addressed ITS decision-making at the local and Federal levels in Japan.

Yoichi Ishikawa, Chief of the Toyota City Hall Planning Department, described the ITS projects that his city is undertaking in order to address traffic problems in that area. The challenges that Toyota City currently faces include permanent traffic jams in the city center and around large factories, an increase in short-distance trips for commuting, and increasing crashes rates. An advanced traveler information system was implemented to increase efficiency of road usage. Park and ride lots at special events and shared use of low emission vehicles were implemented to increase efficiency of automobile usage. Rigorous evaluations of all three projects were conducted.

One of the most impressive evaluation results showed that the advanced traveler information system reduced travel time by up to 4.5 minutes. Mr. Ishikawa's presentation is available online at EDL# 13311, <http://www.itdocs.fhwa.dot.gov/jpodocs/briefing/@9r01!.pdf>.

Shuetsu Shibuya of the National Police Agency (NPA) presented evaluation results from his organization's nationwide traffic management system. The NPA operates 160,000 traffic signals, 7.6 million roadside traffic signs, 30,000 infrared beacons and 2,000 closed-circuit TV cameras. The NPA uses Integrated Traffic Control Systems (ITCS), a subsystem of Universal Traffic Management Systems (UTMS) developed in-house, to control traffic signals and update traffic information. The ITCS is based on information obtained through two-way communication with in-vehicle equipment. An evaluation of the system showed that crashes decreased by 39% -65%, travel speed increased by 19%, travel time decreased by 16% and congestion decreased by 26%. The economic benefit to travelers was estimated to be \$29 billion in U.S. dollars, with the benefits outweighing the costs by a ratio of 16.7 to 1. Mr. Shibuya's presentation "Benefits of Traffic Facilities Installed by Police in Japan" is available online at EDL# 13315, <http://www.itdocs.fhwa.dot.gov/jpodocs/briefing/@9v01!.pdf>.

14:45 – 16:16 Session 3: Breakout Groups – What Can Evaluators Do Differently To Better Serve Decisions-Makers?

Dr. Mudge then divided attendees into two breakout groups, which met separately to discuss questions prepared by the workshop organizing committee. Eric Sampson of the U.K. Department of Environment, Transport and the Regions and Job Klijnhout, Scientific Officer for the Transport Research Center (AVV) at the Netherlands Ministry of Transport facilitated the discussion. Carol Zimmerman, Vice President for Transportation Systems for Battelle and Dale Thompson, Traffic Engineer for the Maricopa County Department of Transportation in Phoenix, Arizona, served as recorders. These proceedings are based on their notes, as well as notes taken by Glenn Havinoviski, ITS Director for Wilbur Smith Associates. These proceedings were compiled by Amy Ellen Polk, Systems Engineer for the Jet Propulsion Laboratory.

Breakout group participants were asked to discuss the following four questions:

- *What economic analysis tools, such as benefit/cost analysis, are used in making transportation investment decisions in your country?*
- *In your opinion, what are the best practices in ITS evaluation?*
- *In your opinion, what lessons can be learned from successful applications?*
- *What is your opinion on the development of international standards for ITS evaluation?*

16:30 – 17:30 Session 4: Panel – Breakout Group Report Back and Reaction by Decision-Makers

Ramiz Al-Assar of the World Bank moderated this session, in which the breakout group facilitators summarized the results of each group's discussion. Then a panel of decision-makers from Session 1 gave their reaction. Mr. Al-Assar said that, in his view, a complete evaluation of ITS must examine the following factors: feasibility of the technology, systems interoperability, adequacy of the existing infrastructure, institutional issues, finance issues and risk assessment. He noted that the World Bank is particularly interested in innovative financing techniques, such as the Brazilian concessionaires program.

Mr. Al-Assar challenged workshop participants with two questions:

- How effective are existing evaluation techniques?
- How can ITS help the economically disadvantaged?

Mr. Al-Assar asserted that it is necessary to go beyond traditional benefit/cost analysis and integrate evaluation techniques from other disciplines in order to conduct a complete evaluation of ITS that will produce meaningful results.

Eric Sampson reported that his breakout group concluded the following points:

- There is a continual need for all types of information concerning ITS evaluation: quantitative evaluation results, qualitative evaluation results, methodologies, and especially contact information of practitioners.
- One resource that would be particularly helpful is a library of ITS evaluation case studies, containing examples of both evaluation successes and failures.
- In addition to this group meeting as a whole at the next ITS World Congress (see below), there was also a need expressed for more targeted workshops focused on specific topics.
- There is a continual need for research and development of new evaluation techniques, especially the integration of evaluation into ITS operations and maintenance.
- Supporters of evaluation need to improve how it is perceived by the rest of the ITS community. Currently, evaluation is perceived as something separate from deployment, operation and maintenance of ITS systems, whereas continual evaluation and feedback can lead to improvements at every stage of a technology's life-cycle. Some felt that more appealing terminology would help.
- There was support among the group for meeting again in conjunction with the 8th World Congress on ITS in Sydney, Australia September 30-October 4, 2001.

Job Klijnhout reported that his group provided the following answers to the discussion questions.

- Economic analysis tools, such as benefit/cost analysis, are used in transportation decision-making, however other factors, such as political considerations, will always be present as well.
- The integration of evaluation into all stages of project management is one of the most successful practices in ITS evaluation. The group called this practice Plan-Test-Learn-Adapt, building upon the Plan-Check-Do-Action cycle described by Takayuki Oba in Session 1.
- It is necessary to “tell the evaluation story” so that others can learn from the predecessors’ successes and missteps.
- There was no support in this group for development of international standards for ITS evaluation. However, there was support for an international effort to develop educational resources, such as training courses and a glossary of common terms of reference.
- There was support among the group for meeting again in conjunction with the 8th World Congress on ITS in Sydney, Australia September 30-October 4, 2001, and even sooner in conjunction with the ITS European Congress, in Bilbao, Spain June 20-23, 2001.

Ramiz Al-Assar noted that an excellent educational resource is the *ITS Handbook 2000: Recommendations from the World Road Association (PIARC)*, published last year and intended to help developing countries learn from the successes and missteps of countries that were early adopters of ITS. One of the appendices presents 16 case studies on ITS deployment. John Miles, one of the book’s editors, noted that there is already discussion of updating this section of the handbook. This comment led to a discussion of the different types of resources that are needed, and in particular who should fund development of these resources.

Decision-makers from the public and private sectors then provided their reaction to the findings of the breakout groups.

William Johnson, Director of Safety and Security at Transport Canada, offered advice on how to best structure an international committee to maximize value to the group’s members. He cited the example of the International Standards Organization committee 204, which on paper is composed of volunteers. However, various organizations quietly contribute significant resources to this committee “behind the scenes.” He cautioned workshop participants not to put too much emphasis on face-to-face meetings. Finally, he concurred with sentiments of both breakout groups against the development of international standards for ITS evaluation, instead supporting development of educational resources.

Tom Warne reiterated the importance of speed in getting evaluation results to elected decision-makers, noting that doing so is “impossible, but necessary.” He concurred with the breakout groups that, while quantitative evaluation data are used in transportation decision-making, other factors, such as political considerations, will always be present as well. He added that there will always be some decisions that are made in absence of any quantitative evaluation data.

Gil Guedes agreed with the need for the rapid transmission of evaluation results, adding that the ABCR is “designing the church as we build it.” He concurred with the need for training and education in ITS evaluation, and that ITS America, VERTIS and ERTICO would be appropriate co-sponsors.

Ramiz Al-Assar provided some lessons learned from the recently-launched effort to construct a traffic management center in Beirut, Lebanon. When construction is completed, the center will control over 250 traffic signals, 50-60 closed-circuit TV cameras, parking management and traffic enforcement. The World Bank worked with the Ministry of Transport and Public Works in Lebanon, using such evaluation techniques as internal rate of return (IRR) analysis and benefit/cost analysis, to measure progress toward the project’s goals and objectives. Key challenges faced included lack of institutional and educational capacity within the host country, and a fragile consensus among stakeholders.

Carol Zimmerman cautioned that field evaluations of new technologies, by definition, involve early adopters as the study population, and that it might be difficult to extrapolate the reactions of this group to the population overall. Dr. Joseph Peters, Program Assessment Manager at the ITS Joint Program Office of the U.S. Department of Transportation, countered that surveys of early adopters will reveal quickly what technologies will not work, because this group can be very forgiving of technology that is difficult to use. This comment led to a discussion of the importance of conducting scoping studies, i.e. surveying a population to ask them about their transportation needs. It was agreed that scoping studies are an excellent technique not just for evaluation, but also for policy development.

Richard Mudge and Joseph Peters both noted that since ITS America’s BEC committee was the main organizer of this workshop, many participants are looking to ITS America to continue to fund subsequent activities in this area. They cautioned, however, that both the ITS America BEC committee and the ITS Joint Program Office have expressed reluctance to fund these activities at the level they have in the past. Low-cost options proposed by the group included video conferencing, live web casts, an online compilation of published resources, and organizing events at international conferences that are integrated with the conference program instead of a separate workshop such as today’s event.

It was also noted that VERTIS and ERTICO do not have the permanent committee structure that ITS America employs, so essentially there is no Asian or European version of ITS America’s BEC committee. Workshop participants supported the creation of an international BEC committee, jointly sponsored by ITS America, ERTICO and VERTIS.

Note: The leadership of the ITS America BEC committee met in Washington, D.C. in late November to consider possible next steps following this workshop. A white paper describing the decisions reached at the meeting is available online at EDL# 13332, http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/@@c01!.pdf.

Richard Mudge gave his impressions of what participants have learned at the workshop:

- ITS is gaining acceptance as a legitimate part of the transportation solution by non-technical audiences, however, this is less true in the U.S. than elsewhere.
- Three groups are involved in the evaluation process: evaluators, executives in both the public and private sectors, and the public including elected representatives and the press. Each group requires that evaluation results be defined on its own terms.

Finally, Dr. Mudge reiterated the importance of telling the story of ITS failures as well as successes, noting that site tours and other face-to-face interaction provide an excellent way to promote such candid exchange of information.