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NATIONAL RESEARCH COUNCIL

ITS America

Association of Metropolitan Planning Organizations

Organizing for Regional Transportation Operations Conference

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Introduction

The "Organizing for Regional Transportation Operations Conference," conducted January 11-12, 2002 in Washington, D.C., was a joint initiative of five national associations and the U.S. Department of Transportation. The purpose of the conference was to discuss the challenges of multi-jurisdictional partnerships for metropolitan regional transportation operations and to establish potential next steps for supporting and advancing these partnerships nationwide. The conference was organized and hosted by the Intelligent Transportation Society of America/Transportation Research Board Joint Subcommittee on Regional Operating Organizations (ROOs). Sponsoring organizations included:

- American Association of State Highway and Transportation Officials (AASHTO)
- Association of Metropolitan Planning Organizations (AMPO)
- Institute of Transportation Engineers (ITE)
- Intelligent Transportation Society of America (ITS America)
- Transportation Research Board (TRB)
- U.S. Department of Transportation, Federal Highway Administration (FHWA)

The conference featured interactive panel discussions related to:

- Achieving Results in a Cooperative Environment
- Engaging the Public Safety and Emergency Response Communities
- Involving the MPOs.

Keynote speakers Matt Edelman—Executive Director of TRANSCOM, the Transportation Operations Coordinating Committee for the New York-New Jersey-Connecticut region—and Lieutenant Robert Ricker of the New Jersey State Police discussed regional cooperation for transportation and emergency management in the New York-New Jersey-Connecticut region and TRANSCOM's role in the World Trade Center disaster of September 11, 2002. Introductory speakers—Jonathan Gifford, Steve Lockwood, and Craig Roberts—relayed the history and context for development of ROOs and the challenges that metropolitan areas face in providing regional transportation operations services.

A number of key themes emerged from the conference discussions:

- The need to advance transportation operations on a regional scale is driving cooperative efforts among jurisdictions.

- Interagency partnerships for regional transportation operations take various forms; the critical factor is how partners are able to achieve results.

- Partnerships depend on the development of trust among participants through working together to achieve common goals; as this trust develops over time, achievement of increasingly difficult goals is possible.

- An individual leader or "entrepreneurial bureaucrat" is key to the success of many partnerships by helping to martial resources and broker cooperation among partner organizations.

- Cooperative partnerships are often accountable to their constituent organizations, elected officials, and customers. Requiring performance standards for voluntary cooperative partnerships may stifle collaboration.

- Transportation operations and public safety share many of the same goals; opportunities are numerous for collaboration between the two communities.

- The same tools and relationships used in a crisis situation are used in everyday transportation management.

- Many MPOs are active partners in advancing regional transportation operations, and MPOs bring significant strengths to transportation operations partnerships. However, MPO leadership is only one of several forms of regional partnership. Furthermore, many MPOs are not funded, staffed, or disposed to leading an operations initiative, in which cases, it is appropriate for partnerships to develop through other forums.

In light of the key themes that emerged, participants agreed that ongoing outreach and education is necessary to continue to enhance awareness of the benefits of cooperative partnerships for transportation operations and to share best practices and lessons learned nationwide. The FHWA and five sponsoring agencies pledged to continue to support such education and outreach initiatives.

TRANSCOM's Role in the World Trade Center Disaster and its Aftermath[1]

Matt Edelman, Executive Director, TRANSCOM™

Our world has changed since September 11, 2001. We've come to recognize that safety is the first priority. Mobility is secondary. Delays are no longer important in the face of danger. On September 11, everyone understood this fact. Agencies acted to protect public safety and the public accepted the consequences. Just one example of this—in the days following the World Trade Center (WTC) disaster, New York City (NYC) Police decided to inspect every vehicle going across the Verrazano Narrows Bridge into Staten Island. This resulted in delays of 3.5 hours just to cross the bridge, but no one complained. This is evidence of how the world changed on September 11.

The disaster resulted in the immediate shutdown of all routes and modes into the city, including bridges, tunnels, highways, and mass transit. Usually the closing of any one bridge deck is an extraordinary event. However, there is no doubt that the Port Authority and transit dispatchers saved thousands of lives by their fast reaction in closing the WTC metro station immediately after the first plane hit.

At TRANSCOM™, initially we were overwhelmed by the massive amount of incoming information. There was an urgent need to get information out. Initially, phone, fax, and e-mail were the best methods. Word of mouth was also important. As time went on, a massive deployment of Intelligent Transportation Systems (ITS) was used to get information out to travelers all along the East Coast. In the final analysis, both low- and high tech-means of communicating information were important in our response.

The way TRANSCOM™ works, is that member agencies own the ITS systems. The agencies pay for the equipment costs, but they also control the systems. TRANSCOM™ asks member agencies to relay certain messages through their systems, but it is up to the agency to do so. Normally the system works very well.

On September 11, variable message signs (VMS) and highway advisory radio (HAR) helped us to get information out along the entire East Coast. Concentric information rings were used. Messages in the immediate vicinity might say "avoid Manhattan," outside the city limits they would say "avoid New York City, "and in the surrounding states and all along the East Coast, signs said "avoid the region." We also used these means to communicate route closings,

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[1] This section provides a transcription of the main ideas and relevant facts presented in the keynote speeches.

commercial vehicle restrictions, single occupancy vehicle bans, etc. These messages were coordinated with over 100 agencies throughout the East Coast. Messages also changed over time as conditions changed, so there was a constant need for coordination.

The hunger for information was unprecedented. Phone networks were overloaded in the immediate aftermath of the event. We needed to find a low-tech way of getting the word out, so we turned to our emergency fax and e-mail system. E-mail provided a convenient means of verifying that information was received redistributed. The information and the demand for information grew exponentially. When we sent information to one agency, they would ask us to send it to another, and each additional agency would ask for similar. The fax and e-mail network enabled our notification efforts to expand exponentially.

Now let's talk about ITS. The region is part of the EZPass system for toll collection. TRANSCOM™'s TRANSMIT system utilizes the EZPass transponders to monitor travel times on many key routes and bridges throughout the region. The TRANSMIT system helped us in the days following the disaster to monitor changing traffic conditions in real time. In the days following the event, many of the routes back into the city opened, but with various restrictions (SOV bans, commercial vehicle restrictions, etc.). There was great concern about whether these restrictions were imposed appropriately and how they would effect traffic in the region. We were able to use ITS to measure exact travel times on key routes and provide this information to our partners so they could adjust restrictions accordingly. Traffic operators had real-time snapshots of the traffic situation throughout the region. This was extremely helpful.

Video sharing was another important technology. The IRVN Interagency Remote Video Network allows interagency video sharing among agencies in the region. This system remained operational on September 11 and allowed approximately 30 agencies and bus operators to see video images from other agencies. The power of a picture is enormous in a situation like this. It reduced the number of calls for information, because agencies could see conditions for themselves. Incremental cost for implementing this capability is really minimal, relative to the gain. The cameras are already bought, the system enables us to leveraging technology more effectively.

The I-95 Corridor Coalition Information Exchange (EIN) Network was another important tool that allowed us to quickly and easily communicate with agencies throughout the Northeast. The EIN is a dial-up network, so there were initial capacity problems; however, it was an extremely effective and timesaving tool.

Most of our communications network was maintained through the disaster; however, we did lose some elements. One of the vaults for our wide area network was located near the WTC. The system was designed to be redundant, so if the hub in New York went down, it was supposed to switch to the hub in New Jersey and vice versa. However, when the vault was destroyed, so were wires that would the transmit the message to make the switch. We had not anticipated this, and will have to redefine what is meant by redundancy.

I'd like to talk a moment about low-tech coordination – the importance of quick calls and strong working relationships. The Port Authority (PA) runs the Staten Island Bridge. After the incident, the PA wanted to open the bridge but only if they could open it to all vehicles – law enforcement personnel were tied up and did not have time to sort traffic. However the Ver-

razano-Narrows Bridge on the other side of Staten Island was only opened to cars, and it was not feasible to stop and store all truck traffic on Staten Island. A compromise had to be worked out between the bridge owners – the Port Authority and Metropolitan Transportation Authority - and the New York City Police Department (NYPD). So, we TRANSCOM™ held a teleconference. NYPD indicated that they wanted to keep the Verrazano-Narrows Bridge open to emergency vehicles. Everyone understood that the case was closed – security over mobility. Trucks had to stay in New Jersey or divert to the Tapanzee Bridge.

During my years at TRANSCOM™, we have learned a lot about working with the public safety community. Working with police is different from working with transportation. Developing trust with police takes time, due to the risks that police officers take everyday. Police expect partners to be reliable, not just analytically capable. Police can be slow to come to the table in cooperative ventures and can be initially distrustful of technology. However, once convinced of the value of technology and information sharing police are passionate advocates. Emergency management and fire personnel are similar.

With that lead in I'd like to introduce Lieutenant Robert Ricker of the New Jersey State Police Department. Lt. Ricker is someone who understands the value of information sharing and reaching out to others. Lt. Ricker has forged an alliance for incident management between the New Jersey State Police and TRANSCOM™. He also actively participates in the I-95 Corridor Coalition. Lt. Ricker is someone who truly understands the notion of public service.

Incident Management Coordination in Northern New Jersey

Lieutenant Robert Ricker, New Jersey State Police

I am the Statewide Incident Management Coordinator, and am the liaison between the New Jersey State Police (NJSP) and the New Jersey DOT (NJDOT).

NJSP broke tradition when we started working with TRANSCOM™. Change comes slowly in law enforcement. Police typically do not use ITS, VMS, HAR and high-tech systems. I had to learn all the terminology—getting up to speed took a couple years. Convincing the old guard that using it was a good idea, took another couple years.

Police officers are out on the road everyday collecting information. We need TRANSCOM™ to disseminate this information. We need them to be reliable. Developing trust was the hard part. But, once established, the police rely on TRANSCOM™ for providing information as much as TRANSCOM™ relies on police.

In the police world, emergency events are ongoing. Prior to the WTC disaster, on June 23, 2001 a gasoline tanker truck overturned on Interstate 80, about 30 miles from NYC. The truck exploded, destroying part of the Interstate. The highway was reduced from four lanes to two lanes Westbound, which handles about 100,000 cars per day. We had to coordinate traffic efforts until the highway could be rebuilt. The highway reopened on September 10—the day before the WTC disaster. One problem ended, and another began.

Our partnership with transportation began in 1994 when the World Cup Soccer was played in New Jersey. We had to coordinate traffic around the arena, while allowing for the necessary security precautions. This required closing a state highway about five miles outside of NYC at 4:30 in the afternoon. This was the first major coordination effort among the Bergen County Police, fire, emergency medical services, NJSP and the NJDOT.

Due to cooperation established, a year later NJDOT approached the State Police and asked them to help the DOT manage the highways. We formed a partnership. NJSP dedicated officers to the NJDOT traffic operations centers. We helped NJDOT develop a culture of being response-oriented. In addition, the State Police gave NJDOT a channel on the police radio system. Over time trust developed.

One of the lessons we learned was the importance of conducting outreach. Outreach is really important when dealing with volunteers because people change. Outreach is not just a way to get a message out, but a way for agencies to better understand one another. When we formed the incident management partnership with NJDOT, we embarked on outreach effort to talk to mayors, elected officials, public works directors and local public safety agencies. Through the outreach effort, we learned how little fire and EMS normally communicated with the police. Better coordination developed as a result of the outreach effort.

Not all problems we deal with require high-tech solutions. Until two years ago, we had an overturned truck per month at a specific curve on Interstate-80. We approached the NJDOT to find out what the problem was and how it could be solved. We learned from the engineers that it was a complex geometric design problem that could not be easily corrected. Working together we came up with the idea of installing rumble strips to slow down trucks before they reached the curve, and it greatly reduced our problem.

We established an incident management structure in New Jersey. We have a Statewide Incident Management Coordinator and Regional Incident Management Coordinators. We are response oriented. When an accident has the potential for causing at least a two-hour road closure, incident management teams leave their homes to respond. At same time, NJDOT engineers respond and direct the DOT resources. When a police officer and an engineer who do not know one another are on the scene, they are not necessarily going to communicate. But when responders recognize one another, things get done. This is what happened on September 11—everyone worked together, regardless of what agency they were from.

As the Incident Management Coordinator, I am the liaison between the NJDOT and State Police. I am also the liaison with local police and fire agencies. The incident management program conducts post-incident response evaluations and deals with any problems that arise. We support the planning process related to traffic incident planning and diversion plans. We are in the process of developing diversion plans for state and interstate highway in NJ. We have finished plans for 12 of the 21 counties in New Jersey. Each county police, fire, and EMS department receives a copy of the plan.

Each partner in incident management has an important role. The NJDOT owns the state roadway system—it maintains the infrastructure, manages the traffic operations centers, and directs DOT maintenance crews. Local police and fire departments, operate under command and control structures. During incidents, they often help with providing first aid and traffic diversion routing.

Environmental agencies are another partner. Personnel from the New Jersey Department of Environmental Protection (NJDEP) often come to incident scenes. They can provide valuable information. One time a milk tanker rolled over and caught fire. The police were not concerned because the spilled substance was milk. The DEP personnel informed police that milk would cause a major fish kill if it got to the river. That was important information that none of us would have known if DEP had not been involved.

Another issue we have to deal with is the financial aspects. The political officials help with this.

We established a goal for the incident management program: If you give the right people the proper resources, authority, and responsibility, they will be able to manage the incident itself and the surrounding highway system with minimal expenditure of resources, allowing us to keep traffic moving.

TRANSCOM™ disseminates information. It updates local and county authorities, and when dealing with major incidents, updates agencies across state boundaries.

On September 11, one of the State Police radio transmitters was on top of the WTC. The disaster knocked out radio communications in the region next to NYC. Cell phone service was also knocked out. We had to use pay phones to make calls. Making phone calls to all the owners of the transportation infrastructure to find out about roadway closings was not possible for us. TRANSCOM™ was able to provide us all this information in one call.

We had to close a number of NJ facilities that led to the George Washington Bridge and the Holland and Lincoln Tunnels. This required a coordinated effort with the NJDOT. NJSP were asked to assist with closing the PATH train stations, since all Port Authority Police were going into the city. All airports were closed including Newark Airport. This resulted in additional closings of routes going into the airport. When the port was closed, all roads going into it also had to be closed.

New Jersey Marine Police were involved in transporting people via ferry off the Manhattan Island to first aid stations set up on Liberty Island State Park. These stations treated two-thirds of the 800 injured individuals.

NJSP also set up a transfer station for staging over 300 ambulances, 150 police vehicles, and 100 fire trucks. This required a coordinated effort. We also had to coordinate volunteers from all over the Northeast. The State Police provided TRANSCOM™ with information about all of its activities. TRANSCOM™ disseminated and coordinated all information, including closings. TRANSCOM™ was a vital link on September 11, and we are grateful for their efforts.

Introduction to Regional Operating Organizations

Jonathan Gifford, Director, Transportation Policy, Operations and Logistics Program, George Mason University

Dr. Gifford presented the historical forces that set the stage for the development of regional operating organizations, and he discussed the value of ROOs for addressing today's transportation operations challenges.

Historically there has been a non-correspondence between regional problems and the local jurisdictions in place to solve those problems. Many transportation problems are multi-jurisdictional and require a coordinated effort within the region to solve. Solutions have included regional operating organizations or metropolitan road authorities.

The Federal government's first attempt, in 1913, to work with counties was not successful, due to power and authority problems. In 1916, the Federal Aid Highway System was instituted. It established a reliance on states but not local jurisdictions. Until recently, the entities created to administer the Federal Aid Highway System, largely State Departments of Transportation, maintained monetary control and set policies and priorities, rather than local or regional jurisdictions. Metropolitan Planning Organizations (MPOs), mandated by the federal government during the last decade, are a recent attempt at localizing solution to priority setting and funds disbursement. The 1990's saw the development of ad hoc regional operating organizations (ROOs) formed to coordinate transportation programs on a regional basis.

So, what is new about ROOs? First they are involved in operations, not planning. This allows ROOs to have a focused mission, initially centered on a single theme and, over time, evolving as appropriate to meet regional needs. Second, the composition of a ROO is locally determined and voluntary (as opposed to federally mandated); thus, the ROO is controlled locally. Third, the structure of the organization varies to fit the situation or problem faced by the region.

Why was a new organization or structure necessary to solve a region's transportation problems? Generally, a ROO is created for a certain purpose and, initially, is focused on that mission. A new organization can avoid the politics of existing organizations and more easily look at a new approach to old problems. The new organization can also mitigate fiscal or planning oversight problems.

ROOs are different from most existing institutions because they are not mandated. Generally they are smaller and more flexible than existing institutions. Although the concept of trying to foster regional cooperation is not new, ROOs are often in a better position to encourage it.

What does the future hold for ROOs? New regional organizations will be formed to solve specific problems. As ROOs' scope of services grow to involve new functions, two scenarios are likely – (1) a split among existing organizations with each assuming appropriate functions or (2) expansion of the existing organization to take on more roles. The proliferation of roles may cause coordination problems. In addition, the organization may lose the autonomy to move swiftly, which reduces the benefits of a separate organization. Overlapping authority also becomes more likely.

It is important to note that new organizations, such as ROOs, can be important and efficient for introducing new ideas, but that eventually new organizations become old. It is important to heed the lessons learned from more experienced organizations.

Operations and Institutional Challenges

Stephen Lockwood, Parsons Brinkerhoff

Mr. Lockwood defined transportation systems operations and management as:

Actions focused on managing the existing transportation system to maintain or improve its current performance — anticipating or responding to changing conditions — recurring or non-recurring.

He discussed the unique aspects of planning for operations and the challenges associated with integrating planning for operations with traditional 3-C transportation capital improvements planning processes.

In today's environment, regional operating organizations need to address a complete range of transportation services including:

- Routine traffic operation

- Ad hoc public safety/special events responses

- Planned construction disruptions

- Incident management

- Freeway management

- Traveler/shipper information.

Many of these operations services depend on common information and the ability for multiple organizations to respond to that information. This requires infrastructure to support information exchange and a forum for multi-agency discussion of response coordination. ROOs

often provide these coordination functions among transportation, public safety and others, in the absence of an alternative forum.

A second point to note, is that these services require real-time response. Consequently, ROOs must incorporate a real-time element in their services. This makes performance and systems attributes paramount.

Two types of planning are necessary at the regional level. The first is capital investment planning typically the domain of states and MPOs. The second is planning for the day-to-day coordination and management of transportation operations. This encompasses:

- Analysis of real-time performance
- Development of concepts of operations protocols, and communications standards
- Management and improvement of control systems
- Provision of traveler and shipper information
- Coordinating responses to incidents
- Co-planning disruptive activities.

Our success depends on the ability to integrate capital planning and operations, as the two are inherently linked. To do so, numerous stumbling blocks must be overcome. These frequently include:

- Lack of a comprehensive regional policy for transportation operations
- Difficulty monitoring performance attributes, due to a reluctance of agencies to contribute data and to be held accountable
- Cooperation among independent agencies and jurisdictions
- Lack of policy support and funding availability for non-capital alternatives
- Lack of a single entity with authority for operating and capital budgets
- Shortage of capital for development of operations infrastructure.

However, there are areas of overlap inherent to both processes, including the development of concepts of operations, creation of architecture and standards, and use of the same transportation infrastructure.

Institutional issues are the greatest challenge to advancing operations and planning. The bottom line is: there is no "one size fits all" model for success. Regional variations exist and are appropriate. Our challenge is how to support and empower these variations, but also institute accountability for operations planning.

Our Accomplishments and the Challenges Ahead

Craig Roberts, PBS&J

Mr. Roberts described defining characteristics of ROOs and discussed institutional challenges to their advancement.

The major challenges facing ROOs are institutional not technical. Development of solutions to regional transportation problems requires people from autonomous agencies to work together—a significant challenge in many metropolitan regions due to turf issues, competition for resources, and cultural differences among agencies. Technical tools can facilitate this cooperation, but are not means in and of themselves for addressing metropolitan transportation problems. Historically, development of cooperative operations oriented solutions and organizations to support those solutions have not received attention and investment at a level comparable to infrastructure development. Consequently there has been little incentive for agencies to make the effort to overcome institutional challenges to working together.

The national Intelligent Transportation Systems (ITS) program was largely the impetus for increasing focus on operations-oriented solutions on a regional scale. To be effective, ITS required integration and cooperation among regional partners. The same cooperation was needed to develop regional operations programs, such as incident management, that relied on ITS. Initially, it was thought that MPOs would be responsible for regional coordination of ITS infrastructure development and operations. However, MPOs were not leading the charge to implement ITS. Most MPOs had their hands full implementing ISTEA capital planning requirements and had few resources to take on additional functions. ITS was statutorily exempt from capital planning requirements, so was not a primary focus of most MPOs. Instead, ITS operational tests were conducted through the leadership of other organizations. In the 1990's, organizations (in essence partnerships) emerged to push ITS development. These organizations were organically grown to respond to specific ITS issues within the region, and each was unique.

However, these organizations did share some common characteristics, as indicated in the 1999 article "New Regional Transportation Organizations".[2] The genesis for each was the combination and coordination of resources from multiple agencies and private entities to accomplish a common regional vision. This vision transcended the responsibilities of any single agency, and, hence, was unique to the partnership. Many regional organizations were chartered by state or regional champions and relied heavily on state leadership and funds. Often personnel and functions were co-located to improve cooperation; however, individual agencies maintained sovereignty over their personnel. Sustainability of the organization relied on development of new champions, growth into new functions and increasing formalization over time. Sustainable funding for technical infrastructure development and upgrades were another critical element.

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[2] Briggs, Valerie, "New Regional Transportation Organizations," ITS Quarterly, Vol. 7. No. 3, Fall 1999.

Nomenclature has been an ongoing challenge to the ability to discuss and advance these organizations at the national level. Originally, we referred to these organizations as New Regional Transportation Organizations (NROs). However, that nomenclature was unpopular with some, who perceived that new organizations were intended to take authority from and were an affront to existing institutions. The intention of this nomenclature was not to criticize existing institutions or to advocate that new organizations take on their functions, but, rather, to recognize the need for appropriate forums for addressing newly emerging issues. At the national level, we began, instead, to use the terminology Regional Operating Organizations, to include the operations element that are a unique focus of these organizations.

The concept of a "virtual organization" is also important to understanding ROOs. A virtual organization is not a legal entity. Instead, it is simply a cooperative agreement among parties. Most ROOs start, and many exist indefinitely, as virtual organizations. In a virtual organization, none of the partners have given up authority or responsibilities. Despite their lack of legal status, virtual organizations do have an independent identity. Identity, often equated with a unique name and mission, is important because it legitimizes the organization and creates cohesion among participants. Virtual organizations may also have an independent budget and dedicated staff.

Another question of debate has been the issue of co-location. Interagency coordination can take place through co-locating staff in a common facility or through virtual means, relying on communications technology to connect staff in remote locations. The decision between these two options is based on circumstances like size, scope, and community culture. Advocates of co-location argue that it facilitates quicker decision-making, information sharing, and learning among partners. Another of co-location is that it requires a physical structure. A structure gives a "face" to organizations, which enhances community acceptance and builds validity.

Once a regional organization is established, how do we assure its continuity? Regional organizations are formed to solve real issues; however, their foundations are often built on champions, who generally have limited tenure in a specific position. Consequently, steps must be taken to help ensure continuity of the organization beyond the participation of any single champion. In addition to those factors already discussed—establishment of a name, independent identity, and physical structure—a number of other factors can increase sustainability. As in any organization, training is essential to ensure that institutional knowledge is not lost when staff move on. Reliable resources are also critical. A viable regional organization requires a commitment to maintain dedicated staff, common infrastructure, data, and facilities. Dedicated funds for on-going operations and technical upgrades are necessary beyond the initial infrastructure investment and start-up costs. Dedicated funding, such as a commitment through sales tax or set-aside from planning funds can make the difference between initial promise and long-term success of a regional organization.

So, how can we as an interest group encourage these organizations and the support the important functions that they are performing? One of the best methods of outreach is to encourage professional exchanges. It is hard for anyone who has ever visited a ROO, such as TRANSCOM™ or Houston TranStar, not to become a passionate advocate. U.S. DOT's support for executive scanning tours and exchanges through the Peer-to-Peer program has been tremendous in this regard. We must also continue to seek dedicated means of funding ROOs and their programs.

It is necessary to recognize that change is occurring in the transportation environment, and that the ability of transportation organizations, whether traditional or new, to be dynamic and responsive is increasingly important. We should recognize those institutions that are supporting flexibility and ingenuity. Ultimately improving overall transportation effectiveness helps each organization to do its job better. It is important to institutionalize knowledge, develop trust, and leverage capabilities facilitated through communication and information sharing. Regional organizations represent recognition and manifestation of the changing needs of transportation, and should be encouraged and supported.

Interactive Panel Discussion

Moderator: **Joseph Sussman**, Massachusetts Institute of Technology
Panelists: **Jack Whaley**, Houston TranStar
                               Dale Thompson, Arizona AZTech
                               Clive Rock, Vancouver TransLink™

Joe Sussman, Professor of Civil and Environmental Engineering and Engineering Systems, Massachusetts Institute of Technology

Dr. Sussman introduced the panel and related the genesis of regional organizations to the regional basis for economic activity.

Geographic scale is a driving factor for ROOs. The emergence of ROOs represent a shift in thinking about transportation, to a regional, rather than a local, scale. A regional scale focus for transportation reflects actual conditions and is in-line with the scale of related issues. For instance, environmental issues also need to be addressed at regional scale. Economic competition takes place at a regional rather than national scale. However, implementing transportation on a regional scale remains a challenge, and counter opinions are pervasive. The panelists are here to relay how their regions have addressed these challenges.

Jack Whaley, Director, Houston TranStar

Mr. Whaley described the development of Houston TranStar and relayed keys to success for ROOs.

The origins of TranStar are in the boom and bust of the Houston economy in the 1980s. In the early 1990s, Houston's economy was in a recession, and transportation agencies that previously had ample revenue from a strong local tax base, were strapped for cash. At the same time, transportation conditions were worsening. Agencies realized that they needed to pool resources to make any substantial improvements to the transportation situation.

In 1993, the Texas Department of Transportation (TxDOT), Metropolitan Transit Authority of Harris County (METRO), City of Houston, and Harris County formed Houston TranStar, the Transportation Management and Operations Partnership. They began plans to develop an integrated traffic management and control center for the greater Houston area that incorporated regional emergency management as well. Soon afterward, the Federal ITS Priority Corridor

program developed, and regional leaders saw this as an opportunity to implement some of their plans for the region. The TranStar partners applied together and received funds to implement 26 ITS projects in the region and build a joint operations center.

By 1996, the TranStar center was built, and the four agencies operated jointly out of the facility. Today 11 different departments have offices within the center. The center has become a place where people come to exchange ideas and develop common ground for discussions, particularly among transportation and law enforcement. It is also a focal point for transportation technology development and exchange in the region; the Texas Transportation Institute has an office in the building and all the partners are involved in ITS research and implementation.

Mr. Whaley described lessons learned from the TranStar experience:

- It was important to find strong advocates. TranStar had support from elected officials—in particular, Houston's Mayor who had also served as a TxDOT Commissioner and a Transit Authority Board Member—as well as from top officers within the DOT and transit organizations.

- Do not be daunted by the success of the older organizations. Those organizations started humbly as well. It is important to start someplace.

- Organizations will evolve as new problems arise. TranStar has adapted its organizational structure and management processes several times.

- Cooperation among partners is the critical factor. Whether partners are physically co-located or virtually connected is less important, although TranStar has had positive benefits from all the partners working in close proximity.

- Enable each agency to do what it does best. As an example, in TranStar, each partner took on a different responsibility for maintaining the building facilities, telecommunications and computer equipment, and managing payroll for the administrative staff. This method of task sharing has been very successful in implementing large, expensive ITS projects that would be difficult for any one agency to handle.

- The initial partnership agreement should be loose and flexible to account for changes over time. The partnership should leverage capabilities, not authority. This will depend greatly on developing trust among the partners.

- TranStar uses a three-tiered organizational structure. The executive committee was given a lot of power to steer the organization. Monthly meetings of this committee have worked well for TranStar.

- Continuous feedback is important. TranStar frequently polls constituents and adjusts its programs according.

- Expect growth over time. TranStar started primarily a freeway traffic management center, but is now deploying programs on local roads.

- Be creative in seeking and pooling resources.
  - The City of Houston used the TranStar partnership to implement coordinated control for its traffic signals. METRO received Federal Transit Administration funding for the project and implemented the project in the City limits, because it

helped their bus routes. The METRO engineers leveraged experienced Harris County engineers to provide signal system expertise.

- A motorist assistance program that provides help to broken down vehicles uses a number of resources. The county sheriff deputies drive the vehicles; TXDOT co-ordinates response and dispatch; METRO pays for the service; a private partner, Cingular, provides cell phones for the deputies; and the Houston Area Automobile Dealers Association provides vehicles.

- Work within the partners' management and political structures to find solutions to legal and institutional barriers. TranStar was successful in pushing for changes in state rules related to movement of broken down vehicles off the highway.

The key to all of this is cooperation.

Question: Is TranStar doing the operations functions that Steve Lockwood discussed in his opening speech?

Answer: Yes, today TranStar is doing all to a certain extent, but it didn't start that way. TranStar started with freeway management and later grew into incident management. Its scope has been growing according to the regional needs and as resources become available. Remember, small steps are not bad steps.

Question: I am interested in your three-tiered management structure. How does the organization communicate with executives? Does the three-tiered approach work?

Answer: It started out as a two-tier system, but the partners found that it was not effective. Three-tiers reflects the structure of the partner agencies, so TranStar implemented the middle tier, which was the leadership tier. The two-tier system was missing the people who implemented the decisions—the highest tier was mainly for planning and policy, and lowest tier was the operations personnel.

Question: Did you develop a Business model?

Answer: Yes, it was difficult to develop and is often revisited.

Dale Thompson, AZTech Program Manager, Maricopa County Department of Transportation

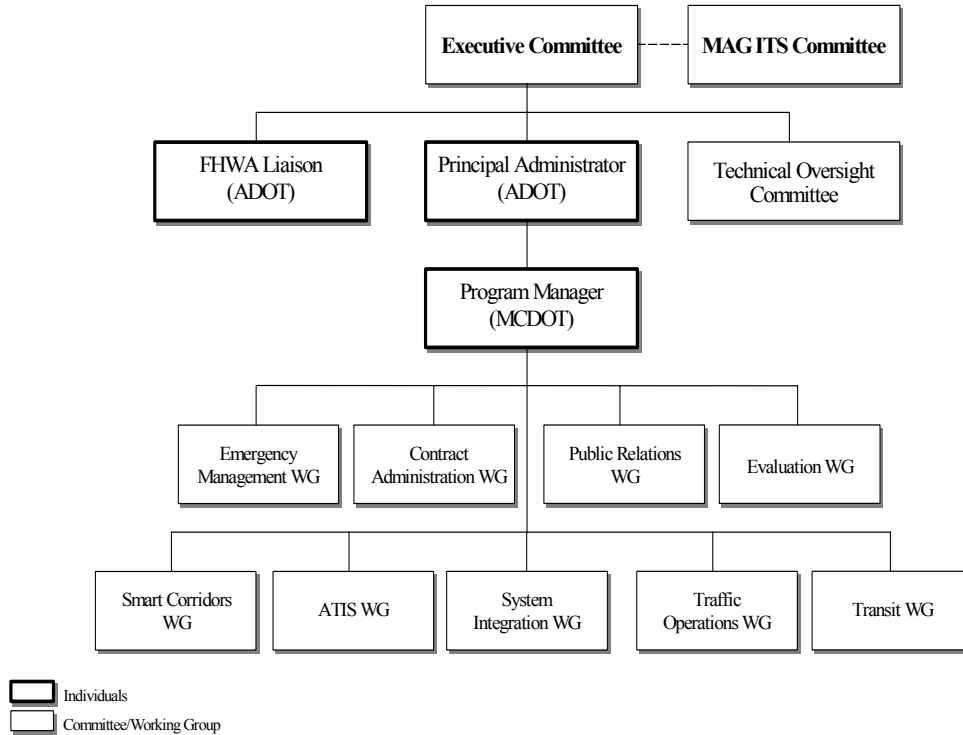*Mr. Thompson described the history of AZTech and its recent restructuring.*

AZTech is like baseball. It won big early. It was a model deployment that worked. As long as money was available, people rallied around the award. During the honeymoon period, when federal funds were coming in, many agencies contributed staff and resources. Several heavy hitters from the local and state transportation agencies were given management roles in AZTech, and a three-tiered management structure evolved (see Figure 1).

However, as federal funding for implementation ran out, the staff and high-powered champions went back to their original agencies or moved on, because there was no longer fund-

ing for them through AZTech. This caused problems. AZTech lost its resources and its institutional knowledge, and in essence, ceased to exist as a functional organization.

AZTech also faced the problem of having been oversold initially. The resulting implementation did not necessarily meet expectations. Many programs took longer than anticipated to develop and become viable; this is particularly true for traveler information.

Figure 1. AZTech Project Organizational Chart

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┌──────────────────────┐        ┌──────────────────────┐
│ Executive Committee  │ - - - -│  MAG ITS Committee   │
└──────────────────────┘        └──────────────────────┘

┌──────────────┐      ┌──────────────────────┐      ┌──────────────────────┐
│ FHWA Liaison │      │ Principal Administrator│     │ Technical Oversight  │
│   (ADOT)     │      │       (ADOT)         │      │     Committee        │
└──────────────┘      └──────────────────────┘      └──────────────────────┘

                      ┌──────────────────────┐
                      │   Program Manager    │
                      │      (MCDOT)         │
                      └──────────────────────┘

┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│  Emergency   │  │   Contract   │  │Public Relations│ │ Evaluation WG│
│Management WG │  │Administration WG│ │     WG       │  │              │
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│Smart Corridors│ │ ATIS WG  │ │   System     │ │   Traffic    │ │Transit WG│
│     WG       │ │          │ │Integration WG│ │Operations WG │ │          │
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Individuals
Committee/Working Group

Source: MAG, "MAG ITS Strategic Plan Update," Final Report Draft #2 (Phoenix, AZ: MAG October 9, 2000), p. 30.

About a year ago, efforts began to reconstitute AZTech. The partners began to think carefully about the role of AZTech in the region relative to the existing agencies. AZTech started primarily as a partnership between Maricopa County and the Arizona Department of Transportation. The partners looked at ways to increase the participation of the cities and local jurisdictions and strengthen AZTech's ties with public safety. They debated the appropriate organizational structure for AZTech's and its relationship to the Maricopa Association of Governments (MAG), the region's MPO, and determined the following relationships and responsibilities for each:

Figure 2. AZTech and MAG Relationship
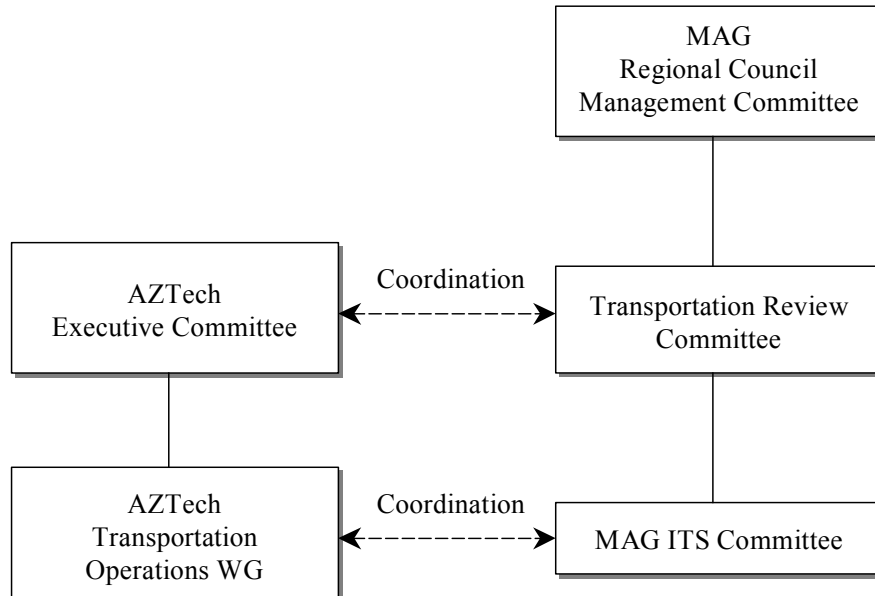
Figure 3. MAG and AZTech Responsibilities for Transportation Operations and ITS

MAG Responsibilities	AZTech Responsibilities
ITS Planning: • Regional infrastructure planning • Regional operations planning • Regional standards and architecture • Performance measures and evaluation • Regional telecommunications infrastructure • Public outreach • Training and capacity building	Regional ITS Operations: • Incident management coordination • Signal timing • Traveler information services • Transit operations • Traffic management coordination • Event management • Parking management • Regional transportation network management • Public outreach • Training and capacity building

Source: MAG, "MAG ITS Strategic Plan Update," Final Report Draft #3 (Phoenix, AZ: MAG December 22, 2000), p. 30.

After the evaluation the partners opted for AZTech to continue functioning as a virtual organization, with some new components, and new partners, in particular the public safety community.

From the AZTech experience, Mr. Thompson added the following lessons learned:

- The importance of champions to carry an organization through rough times

- The need to sustain and nurture relationships, and

- The value of outreach to the community. The community can be your advocate. This has been a strongpoint of AZTech.

Clive Rock, Manager Strategic Planning, Vancouver TransLink™

Mr. Rock described the history of TransLink™ and some of its successes, challenges and guiding principles.

The greater Vancouver metropolitan area includes 900-square miles approximately 2.1 million residents. Features of the region include 21 municipalities, diverse development patterns, ports, rivers, mountains, and the US/Canadian border. The area has a growing congestion problem, and currently about half of Vancouver's traffic originates outside of the city. Prior to 1999, Vancouver had no regional governance of transportation, despite the fact that 60 percent of rush hour traffic travels between jurisdictions.

TransLink™ developed from a comprehensive planning effort that recognized the need to link transportation management with revenue sources. Throughout the early 1990s, the Greater Vancouver Regional District (GVRD), which is responsible for regional comprehensive planning much like MPOs in the states, conducted a proactive community planning campaign, which culminated in the development of a series of strategic and functional plans, including the 1993 Transport 2021 Long- and Medium-Range Strategic Transportation Plans and the 1996 Livable Region Strategic Plan.

These plans, though valuable for determining a desired course of action, were not directly linked to a funding and implementation source. Canadian transportation legislation provided funding through grants on a project-by-project basis, rather than providing the type of stable ongoing funding that was needed to implement the plans. In 1996, when we examined progress toward the transportation plans, we recognized that little was being accomplished and alternative action was needed.

The challenge was compounded by the fragmentation of responsibility for transportation in the region. At the time, the Province of British Columbia (BC) had primary responsibility for public transportation, vehicle emissions testing, and many major roads (though it was in the process of transferring many roadways to local authorities). Municipalities controlled other roads with little regional coordination. The regional authority, the GVRD, was responsible for planning, but had few means of implementation.

In 1996, the GVRD approached the Province and launched an initiative to explore transportation governance and funding alternatives. In particular, the GVRD wanted institutional restructuring that would provide:

- Stable, predictable, and appropriate financing capabilities

- Local control and expanded transit service

- Coordination of the road system

- Programs for managing transportation demand.

The result was the formation of the Greater Vancouver Transportation Authority (TransLink™), which was authorized by the BC cabinet in 1998 and began operation in April 1999. TransLink™ was based on the notion of a regional authority and local agencies having cooperative control over transit and roads. The approach was intended to provide regional coordination of transit, roads, and transportation demand management as a single system, with operations under local control. Over 100 local and regional leaders, including 75 local elected officials, and 25 municipal staff were involved in developing TransLink™'s governance structure.

TransLink™ is responsible for management of the major road network, public transit, air quality management, transportation demand management, and ITS. The authority plans, funds, and oversees services, which are delivered through subsidiary companies, contractors, and local government partners (see Figure 4). TransLink™ does not perform any direct operations. Because of this, we refer to ourselves as a "steering, not rowing organization."

TransLink™ established an ITS Corporation to manage ITS development within the region. The ITS Corporation is funded through shares sold to its constituent members.
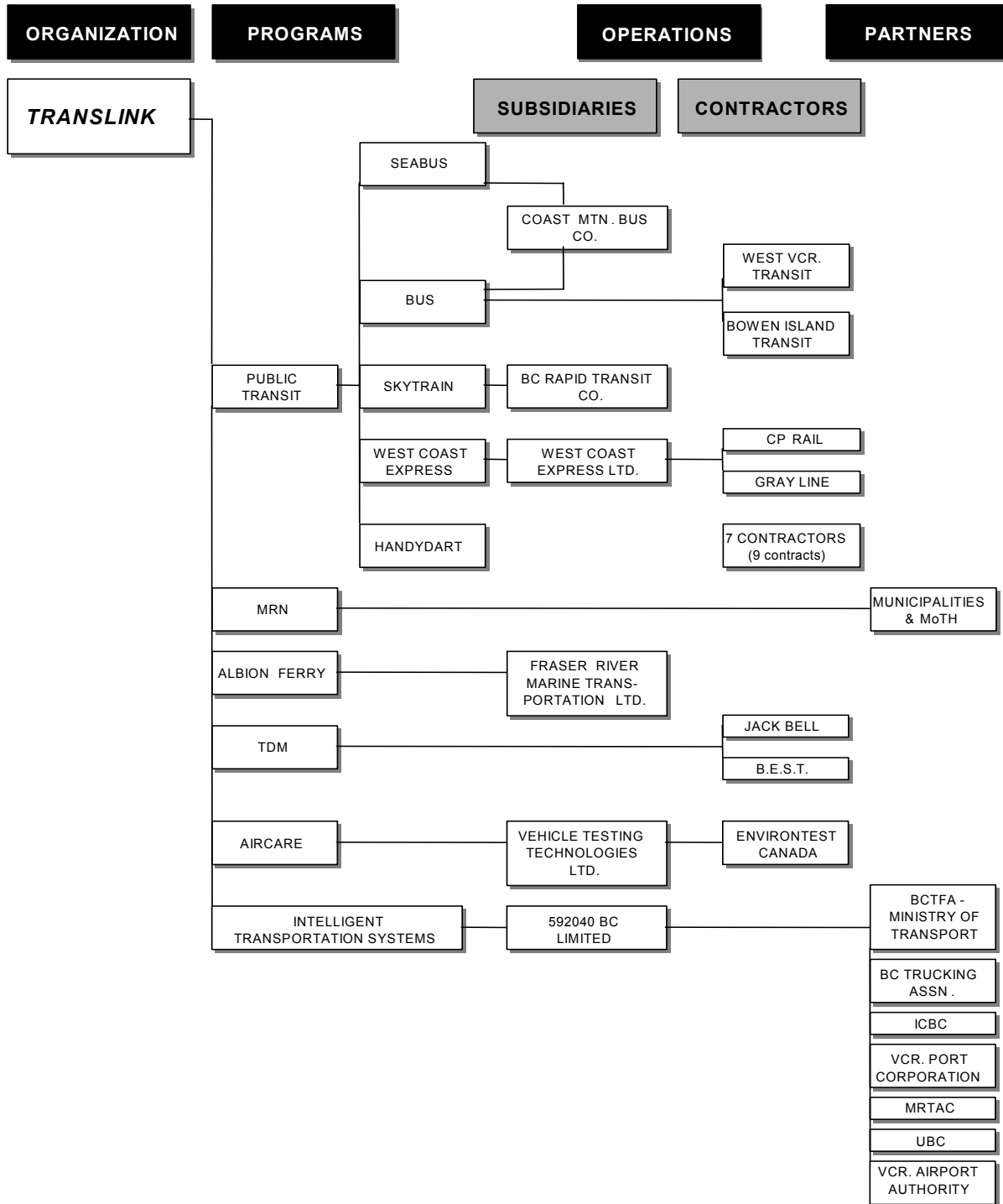
TransLink™'s governance structure includes 12 mayors and councilors of local municipalities and three provincial cabinet ministers. Each member receives one vote.

TransLink™'s revenue sources were designed to:

- Provide ongoing and stable funding for the authority

- Be derived from the region

- Have linkages to transportation.

Funding sources include: fuel taxes, residential and commercial property taxes, levies on residential electricity accounts, parking sales taxes, and emissions-testing fees.

Figure 4. Vancouver TransLink^{TM} Organizational Structure

ORGANIZATION	PROGRAMS		OPERATIONS	PARTNERS

			SUBSIDIARIES	CONTRACTORS

TRANSLINK

- SEABUS
- COAST MTN. BUS CO.
- BUS
  - WEST VCR. TRANSIT
  - BOWEN ISLAND TRANSIT
- PUBLIC TRANSIT
- SKYTRAIN — BC RAPID TRANSIT CO.
- WEST COAST EXPRESS — WEST COAST EXPRESS LTD.
  - CP RAIL
  - GRAY LINE
- HANDYDART — 7 CONTRACTORS (9 contracts)
- MRN — MUNICIPALITIES & MoTH
- ALBION FERRY — FRASER RIVER MARINE TRANS-PORTATION LTD.
- TDM
  - JACK BELL
  - B.E.S.T.
- AIRCARE — VEHICLE TESTING TECHNOLOGIES LTD. — ENVIRONTEST CANADA
- INTELLIGENT TRANSPORTATION SYSTEMS — 592040 BC LIMITED
  - BCTFA - MINISTRY OF TRANSPORT
  - BC TRUCKING ASSN.
  - ICBC
  - VCR. PORT CORPORATION
  - MRTAC
  - UBC
  - VCR. AIRPORT AUTHORITY

To date, TransLink™'s successes include:

- Increasing transportation investment

- Establishing consistent funding

- Enhancing cooperation among those involved with transportation in the region

- Providing a focus for transportation improvements and forum for discussion of regional issues

- Gaining regional buy-in

- Doing things "with" not "to" partners

- Establishing the ITS Corporation and developing a Regional ITS Strategic Plan

- Conducting a regional truck freight study (many partners participated in this, and will expand to include Washington State).

The authority also faces a number of challenges:

- High visibility (especially in times of budget cuts)

- High public expectations

- Achieving balance between urban vs. suburban, transit vs. road, goods vs. passengers, user fees vs. taxes

- Establishing an internal culture

- Governance and accountability

- Getting off of "welfare"

- Addressing future issues, such as energy, environment, and sustainability.

In summary, TransLink™ was created to fulfill a number of guiding principles:

- Integrate planning and service delivery

- Operate with a regional framework

- Consensus/partner based governance

- Transportation pays for transportation.

Even though we are very proud of what we have accomplished in establishing TransLink™, we recognize that TransLink™ will have to grow and change as our transportation environment does.

Question: Please comment on roles of government in land use planning in Canada.

Answer: In BC, the Province Growth Management Act requires regions to have a strategic plan. Cities must comply and sign off on the plan; however it is a regional plan. Plans must be updated every five years.

Question: Do you have tax-base competition between jurisdictions?

Answer: Yes, some push for mega-cities to eliminate competition. Under the current system, however, all cities are able to review major developments in transportation and provide comments to the planning body.

Question: Has the public been accepting of user taxes for transportation?

Answer: Some have, for example, the vehicle levy of $75 barely passed referendum. Originally it was much higher, but we reworked it and increased fuel and transit taxes. Once we were able to show how the taxes would improve the system and spread the burden across various modes of travel, acceptance increased to almost 80 percent. Most people want things to get better and grudgingly accept the price.

Question: Do you aspire to be an operating agency rather than coordinating one?

Answer: Generally no, we think the current system works well. That being said, we completed an ITS strategic plan recently, and TransLink^{TM} will take on some of the ITS operations functions. However, another organization performs the emergency operations.

Discussion

Kathy Stein led a discussion of achieving results in a cooperative environment. Participants discussed a number of related topics. In this document, participant comments have been grouped under relevant headings and do not necessarily reflect the order of the discussion. Text highlights have also been added to some comments, emphasizing the key themes that emerged from the discussion.

Focus on Regional Functions vs. Organizations

- Ron Kirby – The current focus on the term "organization" to describe regional cooperation is not effective. We should be focusing on the functions that require cooperation, such as:

    - Funding of operations, through CMAQ or other means

    - Coordinating traffic signals

    - Developing systems to collect and disseminate traveler and parking information (such as the Chicago system that provides parking information on VMS)

- John Corbin – We are not talking about the activities of a single regional organization, but how to coordinate regional *functions* across multiple jurisdictions. The question is how do we create uniformity, consistency and reliability of services across jurisdictions. For instance, regional traffic management should be coordinated uniformly across the region throughout all of its jurisdictions.

Best Practices in Regional Cooperation

- Ron Kirby – Some of the critical elements that impressed us in a recent visit to TRANSCOM^{TM} included:

    – Real time communications capabilities between independent organizations that impact each other

    – Dynamic approaches to transportation, for instance the ability to pull down construction barriers to relieve congestion from incident.

- Gary Simpson – In Baltimore, the transportation/public safety cooperative effort called the Baltimore Regional Council. Public safety and transportation officials from throughout the region meet regularly to discuss how improvements can be made to incident management. We were able to reduce the time spent on clearing fatal accidents from the roadway through a very simple process. The council developed a form that enables the first police or fire/rescue responder to remove deceased victims from the scene without having to wait for a medical examiner to arrive.

- Vince Pearce – Another good example of successful practices is the Southern California ITS Priority Corridor. Caltrans and its partners were able to accomplish technical integration to enable data sharing among 17 different traffic management systems in Southern California.

- Clive Rock – TransLink^{TM} coordinates a number of services for local jurisdictions, including:

    – Technical working groups

    – Joint maintenance contracts

    – Pooling of maintenance equipment (exploring possible use)

Planning for Operations

- Steve Lockwood – What makes an operating organization different from a planning organization is that an operating organization is engaged in activities that are going to effect performance in the short term (now, next week, or no more than a year from now); if not, then the organization is a planning organization. These are inherently different missions.

- Jim Wright – In operational planning, the thought process is short-term rather than the long-term approach needed for 3-C (capital finance) planning. This is a change in mindset for our planning organizations, which are used to thinking of planning in a 20-year time horizon.

Keys Elements of Regional Organizations

- Craig Roberts – A *compelling need* must be present to bring partners together. This need is usually time-sensitive and greater than regular problems faced on a daily basis. It must be compelling to the public and political community.

- Matt Edelman – The participants must be able to *solve real needs in a regional context*; when this is not happening, adding a new organization will not fix the problem. Political lines are irrelevant to solving problems, but they are real and must be recognized. People who advocate their jurisdictional needs verses regional needs must learn to bend. Regionalist also must "get real" about the existence of jurisdictional entities and power.

- Wayne Berman – Relationships and linkages are key. The value of *relationships* was the key to success in addressing with the September 11 tragedies. ROOs create an environment in which agencies working together becomes routine. ROOs sustain *interagency linkages*, for such activities as emergency management planning.

- David Zavatero – In a partnership, *all parties must gain*. For this to happen, two elements must be present:

  – Opportunities

  – *An environment that supports collective action.*

- Jonathan Gifford – There are three categories of change:

  1) Neutral change – neither side wins or loses

  2) Win-win – both sides gain

  3) Win-lose – one side loses something for another to gain.

  Situations one andtwo2 are good subjects for a ROO; however, the third may not be. Despite its inability to address the third condition, a ROO is still extremely valuable.

- John Corbin – A common element in all of the successful regional organizations is an individual leader—an *entrepreneurial bureaucrat*. This individual is visionary, patient, dedicated, and functions in a leadership role for many years.

- Dale Thompson – AZTech is in a transition from a project mentality to a long-range philosophy. AZTech supporters recommended the formation of a Regional Transportation District. The model we are proposing for the RTD is:

  – *Voluntary and consensus based*

  – *Accountable to a representative regional body*

  – *Authority to have a tax-base and stable funding*

  – *Ability to link land use decisions regional priorities*

- Valerie Briggs Kalhammer – Regional organizations do not grow out of plans but rather out of a great idea, which then leads to another great idea – resulting in the *growth over time* of an organization. The benefit of this type of unconstrained growth is the ability to be creative and flexible.

Accountability for Regional Operations

- Jack Whaley – TranStar's annual reports outline the operations programs of all the participating agencies and the impact those programs have made on the region.

However, TranStar is blamed for failures even though it does not have any real control over its member agencies or budgets.

- Clive Rock – TransLink^{TM} is accountable to the electorate and to the taxpayers. TransLink^{TM} board members are local elected officials. They are responsible to their electorates. Many decisions regarding funding and programs are decided by referendum. There are many different interest groups that TransLink^{TM} has to please (city, suburbs, transit, roadway, bike/pedestrian). We try to balance these interests in our overall programming.

- Gary Simpson – Requiring accountability of regional organizations is a turn-off to cooperation and may harm performance improvements. The B-ROCC, which includes seven counties, has an effect on all the partners. Each agency's decisions affect all of the surrounding jurisdictions. Through B-ROCC, the partners can discuss the impacts of a decision and everyone benefits. Individual organizations are accountable for their performance. An unconstrained forum for cooperation helps them improve performance.

- Craig Roberts – Most of these organizations are partnerships. Placing accountability on the partnership could be a barrier to cooperation. We have to be careful not to usurp the real power of regional organizations. Focus of the regional organization should be to help the partners to do their jobs. Accountability goes back to the parent organizations.

- John Corbin – Elected officials are ultimately accountable and have the influence to set standards for achievement. However, the real challenge with accountability is the lack of data to help policy makers pinpoint the transportation operations problems and measure progress toward goals. Data helps the public buy into a problem and possible solutions.

- Dale Thompson – Some key questions regarding performance measures remain: What are the expected outcomes? How do you determine performance requirements? FHWA could develop guidelines and establish incentive funding to encourage the use of performance measures.

Sustaining Member Participation

- Jack Whaley – TranStar is set up so partners are reliant on one another and share funding responsibilities. Partners put pressure on one another to fulfill their responsibilities.

- Dale Thompson – Emphasize the benefits of involvement – the regional organization is the only forum for addressing transportation operations issues that cross jurisdictional boundaries.

- Matt Edelman – TRANSCOM^{TM}'s 17 member agencies must unanimously approve the budget. This means that every member's needs must be met. The system also encourages members to come to collective agreements, so progress can be made.

Establishing a Regional Outlook for Transportation Operations

- Dale Thompson – A regional outlook for transportation operations is a departure from the current culture. Changing the culture is not easy. Consensus building is important. Partnership and trust are necessary. Even under ideal conditions, regional cooperation takes time to evolve.

- Jack Whaley – The regional organization must provide a forum for exchange of ideas in a safe environment. In lieu of a regional organization, a series of conferences among potentially effected agencies could spur thinking about regional operations.

- Ron Kirby – Having the opportunity for our local and regional leaders to visit TRANSCOM^{TM} and see first hand how other regions are able to do this successfully without stepping on anyone's toes was very eye opening. Because of our visit, we are looking at implementing a similar model in the D.C. area.

- Craig Roberts – When you have a chance to visit a place like TRANSCOM^{TM} or TranStar it is hard not to be impressed by what you see. The enthusiasm for what they are doing is contagious. The U.S. DOT's Peer-To-Peer is very important for making these kind of connections.

Overcoming Internal Stovepiping and Jurisdictional Turf Protection

- Jack Whaley – It is very important to have a neutral party involved to help broker solutions. That is one of the main responsibilities of the Director of a ROO.

- Dale Thompson – Its important to have multiple champions from each agency. ROOs need people at various levels in the partner agencies to get programs accomplished. They need multiple champions so the ROO does not suffer when a champion moves on.

Need for Programmatic Action

- Steve Lockwood – The public sector has a responsibility to provide quality transportation service at minimum cost. We cannot wait for conditions to be ripe for ROOs to form. We need to consider how to take programmatic action to set the stage for ROOs.

Interactive Panel Discussion

Moderator: **John Corbin**, Wisconsin Department of Transportation
Panelists: **Captain Gary Simpson**, Annapolis Police Department
Captain Mark Penn, Arlington County Fire Department
Steve Souder, Montgomery County 9-1-1 Emergency Communications Center
Donald Lumpkins, MD Emergency Management Agency Anti-Terrorism Coordinator

John Corbin, Traffic Incident Management Enhancement (TIME) and Freeway Operations Program Manager, Wisconsin Department of Transportation

Mr. Corbin introduced the public safety panel by relaying how the transportation community's view of the public safety community's role in transportation operations has changed over the last two decades.

In the 1980's and early 1990's, transportation communities used to determine their own plans for transportation operations programs and then invite public safety "to the table" to seek their "buy-in." He said that later, during the development of the national and regional ITS architectures, public safety was considered a "stakeholder." Only now is the transportation community beginning to understand the true role of public safety as "partners" in transportation operations. Mr. Corbin indicated that in many regions of the county, public safety lead transportation operations and view it as one of their day-to-day responsibilities. Mr. Corbin also offered two "provocative statements":

- The major challenges to transportation operations and regional organizations exist in the senior levels of many state DOTs.

- The day may come sooner than later when we are talking about regional organizations for public safety in which the transportation community may be invited to participate.

Captain Gary Simpson, Annapolis Police Department

Captain Simpson spoke about the public safety community's experience with the Baltimore Regional Operations Coordinating Committee (B-ROCC).

The B-ROCC was an outgrowth of a University of Maryland committee that was planning ITS for the region. The B-ROCC was formed to deal with the issue of clearing highway incidents quickly. Although the participants were used to working together, formalizing the B-ROCC created a new enthusiasm and cooperative attitude that enabled new tasks to be accomplished.

B-ROCC was a cooperative effort between agencies in the region. Participants included Baltimore Metropolitan Council's (the region's MPO) transportation committee, the Maryland State Highway Administration, public safety agencies, Maryland Towing Association, medical examiners, and other medical representatives. The Baltimore Metropolitan Council provided the staff support and space for B-ROCC to meet. The Maryland Department of Transportation provided funding for a consultant to assist with developing operations plans.

The B-ROCC's focus is on problems that require multi-jurisdictional solutions. The committee brainstormed areas of concern and selected for action those that impacted multiple jurisdictions. The committee meets monthly to discuss and develop solutions to improve regional incident management. One significant success of the committee was its development of a process that allowed faster clearing of fatal incidents on area highways. The B-ROCC developed a process by which the victim can be moved by authority of the first responder rather than waiting for the medical examiner to arrive on the scene. The B-ROCC committee identified the problem and had all the necessary players at the table to develop and implement an effective solution.

The B-ROCC has also spearheaded a number of joint initiatives, including:

- An experiment with inter-jurisdictional communication, involving leasing of Nextel phones for participating law enforcement agencies

- Instituting a pager notification system for State Highway Administration incident responders

- Organizing joint training exercises.

Based on his experience with B-ROCC, Mr. Simpson offered the following advice for developing regional organizations:

- In order to get participants involved, it is important to understand what is at stake and what motivates them. Law enforcement is often enticed by the perception that transportation has abundant funding for communications equipment, planning, etc.

- Often the fear of "losing turf" is at stake for agencies. However, in the end, partnering helps everyone be more effective. B-ROCC has increased the productivity of field

officers by reducing incident clearance time and sharing appropriate roles with other agencies (e.g., transportation agencies for directing traffic around incidents).

- Outreach to appropriate partners and resource availability are two critical ingredients for success.

- Public safety agencies put the most trust in their own kind. Public safety champions of regional organizations should be used to outreach to other public safety agencies.

- Management support is critical. Involve management in decisionmaking at the appropriate levels.

- The quality of information sharing among agencies is greatly enhanced through established trust. Regional organizations are excellent means of enhancing trust.

- Place a focus on customer service. Always look at how the process and customer service can be improved.

- Work toward establishing uniform operating procedures.

Captain Mark Penn, Arlington County Police Department

Captain Penn relayed lessons learned from the September 11 attack on the Pentagon in Arlington, VA and the improvements in multi-jurisdictional coordination efforts since then.

Captain Penn relayed the difficulties faced with coordinating response efforts with the exodus of employees from the Capital District. Although an official evacuation of the District was not declared, an evacuation effectively took place. Most government and commercial offices closed and employees were told to go home. This created rush hour conditions at midmorning.

Federal and commercial offices closed with inadequate consideration of how employees could get home. In addition to road blocks around the Pentagon, access was also blocked around many key political and military facilities, further complicating the traffic situation. Information about road blocks and transit closures was not being relayed adequately so commuters were not aware of which routes remained open.

The exodus complicated the response efforts at the Pentagon. The Pentagon is at the crux of several key transportation routes out of the city. Emergency vehicles needed these routes to access the Pentagon. Some routes had been blocked to allow for emergency access and staging. As the exodus began, response agencies had to rethink their staging and access routes to allow key routes to reopen.

The problems with the evacuation made it clear that the Washington, DC area agencies needed to do a better job of communicating and coordinating activities. Cooperation efforts already take place between many local and state agencies in Northern Virginia. The Arlington County Police and Fire departments have a combined dispatch system, and have mutual aid compacts with the surrounding Virginia counties, as well as Maryland counties. These relationships were critical during the emergency.

Public safety also has a positive history of working with the Virginia Department of Transportation (VDOT) in the Northern Virginia area to coordinate snow emergencies and highway incidents. The public safety community is familiar with VDOT's ITS in Northern Virginia's and has come to depend on VDOT to coordinates conference calls during snow emergencies. During the Pentagon response, VDOT provided important assistance in helping to get goods and equipment to the site. For example, VDOT and the Virginia State Patrol coordinated the transport of work boots from Wisconsin to the Pentagon site in less than 14 hours.

However the Pentagon disaster made clear the need to extend cooperative efforts to include the entire Northern Virginia, Maryland, and DC region and include federal and other partners. MWCOG has taken a leadership role in assembling a task force to address this need. The task force will leverage community (police, fire, transportation, hospital) as well as federal resources. The task force is also establishing relationships with local Red Cross and Salvation Army branches.

The federal presence in the Washington, DC region poses a unique challenge for integrating emergency management. Many federal agencies can act autonomously, without consulting local authorities. However federal agencies also bring a wealth of resources and capabilities. Federal agencies that provide resources for emergency management include:

- Bureau of Alcohol, Tobacco and Fire Arms
- Defense Intelligence Agency
- Department of Defense
- Department of Health and Human Services
- Department of State
- Department of Transportation
- Environmental Protection Agency
- Federal Bureau of Investigation
- Federal Emergency Management Agency
- Secret Service

Captain Penn closed by identifying needs for improving emergency response. These include:

- Implementation of an evacuation plan for the District of Columbia and development of adequate infrastructure to support evacuation
- Establishment of an interoperable communications system
- Provision of water access (for firefighting) along highways
- Provision of adequate load designs and turning radius on infrastructure to support emergency equipment access.

Steve Souder, Director, Montgomery County 9-1-1 Emergency Communications Center

Mr. Souder described the new Montgomery County 9-1-1 Emergency Communications Center that is being developed.

The Center will combine 12 existing dispatch and communications center into a single facility. The facility will also include the Montgomery County traffic incident management center. Mr. Souder cited the importance of interagency cooperation in enabling the development of the new center.

Question: How is the new Montgomery County center integrated with surrounding jurisdictions?

Answer: Maryland has an extensive ITS network, including video monitoring on freeways. Montgomery County's ITS system will be integrated with Maryland's system, allowing data sharing and coordination of traffic management. The county's police and fire communicate on an 800-MHz system that is supported by surrounding jurisdictions.

Question: Do integrated communications capabilities extend to the vehicles?

Answer: The Capital Wireless Integrated Network will provide seamless communication among divergent radio systems, once completed. The architecture has been developed, but implementation has not been completed.

Don Lumpkins, Anti-terrorist Coordinator, Maryland Emergency Management Agency

Mr. Lumpkins discussed the role of transportation in emergency management. He argued that transportation is an integral part of emergency management, and described three examples from recent events in Maryland:

- Train derailment – In July 2001, a train derailed in a tunnel beneath Baltimore. A hazardous chemical fire burned for five days, resulting in the need to evacuate the city. A major freight rail line was closed and telecommunications lines running through the tunnel were lost due to the incident, having profound impacts on transportation throughout the region and the east coast. Transportation agencies helped to evacuate the city.

- Anthrax terrorist incident – Transportation was a critical element in the response to the Brentwood postal facility Anthrax terrorist incident of October 2001. Pharmaceuticals to treat 30,000 people had to be transported into and across the state of Maryland by truck. Secrecy was needed regarding the operation, due to the high value of the shipment and the need to avoid sabotage or public alarm. The Maryland Department of Transportation (MDOT) arranged for the safe transport of the shipment through Maryland.

- Missile shipment incident – Also in 2001 a truck carrying cruise missiles for the military veered off the roadway. MDOT was involved in closing both directions of I-70

and re-routing traffic for 18 hours. MDOT also assisted in evacuating residents of nearby communities.

Based on these examples, transportation does have a critical and well-established role in emergency management in the State of Maryland. This role includes:

- Assisting with emergency response involving evacuations, road blocks, and traffic detouring

- Assisting in arranging for the safe transport of goods needed for emergency response

- Monitoring hazardous shipments traveling on the transportation network.

Mr. Lumpkins also suggested a number of areas where the relationships between emergency management and transportation can be improved:

- Expanding the number of local and regional transportation agencies involved in emergency response

- Improving information sharing among agencies

- Defining roles and accountability for transportation agencies in emergency response.

Discussion

Kathy Stein led a discussion of how to improve cooperation among the transportation and emergency response communities.

The following suggestions were made regarding means of furthering this goal:

- Improve communications among public safety and transportation agencies. Institute better processes for sharing information.

- Enhance the transportation community's understanding of the incident command and other emergency response processes

- Maintain relationships on an ongoing basis instead of only during major emergency events. Recognize that emergency response to big events is simply an extension of everyday emergency response activities. Build relationships around planning for large events, but extend cooperation to daily activities.

- Develop uniform national standards for transportation's role in emergency response.

- Recognize that technology is only a tool for coordination; people are the key.

- Consider establishing mutual aid compacts among transportation agencies.

A discussion of mutual aid compacts followed. Mutual aid compacts are agreements between agencies to assist one another with staff and other resources during an emergency or planned event. These compacts are not necessary for agencies to receive assistance from other jurisdictions, but reduce liability and streamline the process for reimbursing assisting agencies. Mutual aid compacts are required to use Federal or some state emergency management funds

for reimbursements. Mr. Lumpkins indicated that 30 states have established mutual aid compacts. In these compacts, agencies are not required to provide assistance when requested, but usually do comply. Steve Souder indicated that recent studies estimate that mutual aid saves $100 million a year to U.S. taxpayers.

Interactive Panel Discussion

Moderator: **Alex Taft**, AMPO

Panelists: **Melanie Crotty**, Metropolitan Transportation Commission,
San Francisco Bay
Linda Bolte, Chicago Area Transportation Study
Ronald Kirby, Metropolitan Council of Government
Steven Gayle, Binghamton Metropolitan Transportation Study

Alex Taft, Executive Director, Association of Metropolitan Planning Organizations

Mr. Taft introduced the panel and discussed how MPOs may be "utilized" to advance regional operations and management, based on concepts developed in recent AMPO and FHWA focus groups. He provided the following two quotes from the focus group reports:

With their track record and effective decision-making at the local level, and their growing experience in management and operations issues, MPOs are well positioned to play a major role in regional management and operations planning to reduce congestion and increase system reliability. The current role of all MPOs should be to develop the capacity to play an effective role as convener of meetings on metropolitan level operations planning.

TEA-21 reauthorization legislation should require all MPOs to play the role as developer of metropolitan level operations plans and projects, if commensurate planning-side resources are prescribed for the role. In this role, MPOs would actively work with other agencies to develop metropolitan level plans and projects and would be responsible for developing an all-encompassing management and operations plan. [AMPO Operations and Management Position Paper prepared for the National Dialogue on Transportation Operations]

The management and operations concept should be presented as a positive challenge and opportunity for MPOs to improve system performance. It should not be viewed as another burden for MPOs in the context of transportation planning and certification. Importantly, educating local officials and sensitizing the decisionmaking process to management and operation issues should be an important part of an effort to improve the linkage between transportation planning and management and operations. [Recommendations of the Linking Planning and Operations Working Group – Federal Highway Administration]

Melanie Crotty, Transit Coordination and Access Manager, Metropolitan Transportation Commission (MTC), San Francisco Bay

Ms. Crotty described the MTC's role in transportation operations and some of the benefits and challenges of an MPO taking on this role. MTC is the MPO for the San Francisco Bay Area.

MTC's role in transportation operations evolved over time, beginning approximately 15 years ago with pavement management systems (PMS). MTC's role was primarily one of providing technical assistance to local jurisdictions, helping them to implement pavement management systems—thereby, helping them make the case to their city councils to invest in infrastructure maintenance.

MTC's later grew into managing the motorist aid program. MTC operates the freeway service patrol and call box system, which covers most of the Bay Area freeway network. The motorist aid program responds to over 100,000 customers per year. This is now a mature and relatively straightforward program.

In the last five to seven years, MTC has taken on some more "institutionally challenging" operations programs. These include:

- Transit coordination – MTC is working with BART and MUNI transit agencies to implement a fastpass for their joint patrons.

- Single fare card – MTC is leading a pilot program to test a single fare card system for three transit operators in the Bay Area.

- TransLink^{TM} electronic smartcard – In 1999, MTC executed a design-build-operated-maintain contract to develop an electronic smartcard system for six area transit operators. Phase I was launched in February 2002. Phase II expand the program throughout the region.

- Traveler information – MTC is partnering with the California Department of Transportation (Caltrans) to implement the TravInfo real time traffic information program. MTC also works with its transit partners to provide an integrated transit information program.

MTC's involvement operations grew out of its public outreach activities associated with the organization's long-range planning responsibilities. The public expressed an urgency to mitigate traffic congestion in the region and recognized that something needed to be done in lieu of adding roadway capacity. Those programs that the public has ranked the highest priorities in surveys and other outreach activities include:

- Signal timing

- Increasing bus ridership

- Improving transit

- Increasing the use of car and van pools

MTC considers these results as an endorsement of many of its key programs. Other valuable feedback received from public outreach include:

- Support for pilot programs – The public is supportive of small-scale testing of programs before expansion to the entire region.

- Desire for regional accountability – The public desires greater leadership and accountability for programs at the regional level.

Ms. Crotty outlined a number of strengths of the MTC (and other MPOs) for leading regional transportation operations programs:

- Relationships – MTC has relationships with highway, transit, business, environmental, and emergency response communities. The MPO regularly convenes meetings with these personnel for its long range planning activities; operations planning is a natural extension.

- Geographic fit – MTC's jurisdiction covers the nine-county San Francisco Bay Area, which is in consistent with the scope of development and customer commute areas.

- Procurement flexibility – MTC's role in managing ITS programs developed largely because of its flexibility in procurement, relative to other agencies. This enabled the design-build-operate-maintain contract for the TransLink^{TM} program and has been extremely valuable foradvancing ITS initiatives.

She also pointed out several disadvantages:

- Lack of facility ownerships – MTC does not own any elements of the transportation system, so it depends on partner agencies for implementing programs.

- Encroachment issues – Many of MTCs programs, especially the transit fare collection programs, impact its partner agencies bottom lines – their revenue generation and collection.

- Conflict between funding allocation and recipient roles – The MPOs statutory role is to allocate funds in an unbiased manner. Some feel that an MPO should not manage programs that it is responsible for funding.

- Staffing skills disconnect – MPO staff are primarily planners and do not necessarily have skills compatible with managing technical operations programs.

Ms. Crotty indicated that active partner participation and a continued focus on customer service are critical for overcoming these disadvantages.

Finally, Ms. Crotty anticipated future roles for MTC in transportation operations:

- Convener – Convening regional-scale multi-jurisdictional forums will continue to be one of MTC's core competencies. MTC is currently convening groups to develop a regional ITS architecture and a freeway concept of operations. MTC sees its role as convener, not as key influencers, in these projects.

- Championship – MTC expects to continue to champion regional operations projects, regardless of whether it is the lead or these projects. One example of MTC in this role is the recent regional transit marketing campaign. Upon request from area transit leaders, MTC provided seed money to help area transit agencies begin a joint marketing campaign; transit leaders are responsible for the program.

- Developer – TransLink™ is an example of MTCs role as incubator of new programs. MTC is open to the idea of spinning off TransLink™ and other programs and is working with a consultant to determine appropriate institutional arrangements.

- Operator – MTC anticipates continuing to manage those programs, such as traveler information, that are not appropriate for spin-off.

Linda Bolte, Deputy for Planning, Chicago Area Transportation Study (CATS)

Ms. Bolte described the CATS policy committee and its history in transportation operations and management.

The Chicago Area Transportation Study (CATS) Policy Committee is designated as the Chicago area's MPO, charged with decision-making authority for regional transportation plans and programs. The committee consists of 20 representatives of local governments and transportation agencies. The committee carries out its responsibilities through a number of committees, subcommittees and task forces.

In its 2010 transportation plan, adopted in 1989, the Policy Committee supported two initiatives that were significance for advancing transportation operations and management in the Chicago area:

- Strategic regional arterial system – The plan created a system of strategic regional arterials, which today includes 14,000 miles of arterial streets throughout the region.

- Operation Green Light – provided a funding mechanism for a range of transportation management issues, including
  - Incident management
  - Land use and transportation coordination
  - Transportation demand management
  - High occupancy vehicle (HOV)
  - Signal system coordination
  - Corridor development

The 2010 plan also spurred development of a Management and Operations Task Force within CATS. The task force included groups that had not previously been involved with MPO activities, including police and fire. The task force began a dialogue between these agencies and the transportation community.

However, interest in the task force waned over the years as other related activities picked up speed – for instance the Gary-Chicago-Milwaukee corridor coalition. However, CATS has continued to take a leadership role in some areas, for instance, construction disruption studies. Through a series of field tests, CATS has studied the traffic impact of lane closures. CATS has also been active in the GCM corridor and helped the region develop one of the first early deployment plans in the country.

Discussion of resurrecting the CATS Management and Operations Task Force began in spring 2001, in response to the FHWA's focus on the subject. Resurrection efforts were accelerated by the September 11 tragedies, when CATS began receiving media questions regarding their disaster management strategies. Consequently, a new Operations and Management (O&M) Task Force was formed and met for the first time in December 2001.

Many on the O&M task force are familiar with the recent national discussions regarding ROOs. The task force believes that additional layers of government are unnecessary and is leery of Federal requirements regarding ROOs. The task force is also opposed to federal requirements regarding performance measures, particularly if they are tied to funding eligibility. The task force is concerned about the time requirements for tracking data for performance measurement and that requirements may be unfairly biased toward newer transportation management systems, putting older systems, such as CATS' at a funding disadvantage.

Ron Kirby, Director of Transportation Planning, Metropolitan Washington Council of Governments (MWCOG)

Mr. Kirby described the relationship between councils of government (COGs) and MPOs and discussed MWCOG's transportation operations coordinating activities following September 11.

COGs and MPOs are often associated by not inherently the same. A COG is an association of local governments within a metropolitan area, formed to develop solutions to regional problems such as the environment, affordable housing, economic development, health and family concerns, human services, population growth, public safety, and transportation region. COGs are non-profit entities, supported by dues from participating jurisdictions and operating under a board of directors. MPOs are federally charted institutions responsible for developing regional transportation plans and allocating resources accordingly. Not all regions have COGs, whereas, all are required to have MPOs. MPOs may operate as part of the COG governance structure, separate to it, or in absence of a COG. Consequently, many MPOs are part of a larger regional organization responsible for initiatives other than just transportation planning. This is the case in the Washington D.C. metropolitan area, where the Transportation Planning Board (the region's designated MPO) is housed within the COG.

The MWCOG has been active in developing multi-jurisdictional cooperation for regional transportation operations programs since ITS funds became available in the early 1990s. Cooperation for these programs resulted in the region receiving several significant federal grants, including the SmartTraveler advanced traffic information system public-private partnership and the Capital Wireless Integrated Network (CAPWIN). CAPWIN was allocated $2 million in Federal funding and matched with an additional $6 million in regional funds. MWCOG also works with its partner agencies to determine regional priorities for funding operations programs such

as transit system rehabilitation and incident response. In addition to its successes, MWCOG has experienced some stumbling blocks in this area. In particular, efforts to implement interagency signal coordination and bus priority strategies were impeded by political conflict. In general, the MPO's role as a convener of discussions regarding planning and operations issues has increased in recent years with the support of the Board.

Following September 11, transportation agencies in the region recognized the need to better coordinate emergency response activities. MWCOG is working with its partners to coordinate processes and develop a viable decision-making structure for emergency response. The region is considering TRANSCOM™ as a possible model, since it is based on voluntary support and has been successful in a large multi-state, multi-jurisdictional region. A recent trip to TRANSCOM™, arranged by MWCOG for key decisionmakers, furthered interest in developing a similar coalition. However, obtaining funding to support the regional initiative continues to be a challenge.

Steve Gayle, Executive Director, Binghamton Metropolitan Transportation Study

Mr. Gayle relayed outcomes of the FHWA Linking Planning and Operations Working Group.

Mr. Gayle discussed the challenges associated with setting and achieving standards for transportation system performance. He indicated three alternatives scenarios for assigning responsibility for setting system performance standards. These responsibilities may fall to:

- Local agencies/system owners and operators
- MPOs in an oversight role
- External agencies (i.e., the Federal government)

Mr. Gayle indicated that local agencies are the most closely connected to the transportation system; however, these agencies may not have appropriate scopes of jurisdiction to establish performance measures to meet regional goals. Alternatively, the MPO is designed to have a regional scope. Mr. Gayle asked the audience to discuss keys to success and challenges for MPOs acting in this role.

Discussion

Kathy Stein led a discussion of MPOs involvement in management and operations and relationship to ROOs. Primary points from the discussion included:

- Most MPOs are interested in advancing ITS and operations in their regions, but are prevented from taking leadership roles due to lack of funding and staff capacity.
- ITS earmarks were successful at fostering multi-jurisdictional cooperation, because funds were allocated according to project needs, rather than single agency needs.
- Scanning tours are important means of advancing best practices
- Outreach and "getting the word out" about regional operations success stories is especially important in lieu of direct Federal support.

Summary of Conference and Sponsors' Closing Comments

Conference Summary

Valerie Briggs Kalhammer, Booz Allen Hamilton

Ms. Kalhammer summarized the conference discussions.

Themes from Panel 1: Accomplishing Results in a Multi-jurisdictional Environment

1) The driving factor for ROOs is the need for multiple agencies and jurisdictions to work together and share resources effectively to provide seamless transportation operations services.

2) There is still confusion associated with the nomenclature, Regional Operating Organization. A ROO is essentially a partnership, which is defined as a mutual agreement among parties to achieve some result. A ROO acts as the "table" that brings multiple parties together to address issues. It also has "continuity" – continues to exist over time, beyond the life of any one project.

3) Successful ROOs institutionalize processes of addressing regional issues that extend beyond the responsibility of any one agency. They help to perpetuate a "regional philosophy" among participants and decisionmakers in the region.

4) Development of ROOs is difficult. They are based on establishment of trusting relationships among partners. These relationships are tools that can be drawn upon in everyday situations and in crisis.

5) Individual personalities can have a strong influence, positively or negatively, on a ROO. Most successful ROOs are associated with an "entrepreneurial bureaucrat." This is an internal manager who guides and promotes the ROO to those in political circles. This person is generally a visionary who has adept people skills and trust of political decision makers. Champions, those who provide the initial impetus for a ROO and continue to help support it, are also important. However, entrepreneurial bureaucrats foster new champions and are often responsible for a ROO's long-term support and development.

6) Establishing an appropriate focus is important for a ROO. New ROOs are often challenged with what to address first and who to bring to the table. Advise from panel-

ists includes: start small, focus on most urgent needs first, focus on areas that provide measurable improvements in the short term.

7) ROOs have accountability at several levels:

   a. First, to elected officials

   b. Second, to and among partner agencies

   c. Third, to funding entities that are not jurisdictional partners (e.g., FHWA, customers)

8) ROOs create improvements that effect partners in three primary ways:

9) Win-Win—These improvements are usually based on coordination with requirements of any partner (e.g., through communication among parties involved in clearing roadway incidents, the Baltimore Regional Operations Coordinating Committee determined a legal means to enable first responders to move victims of fatal incidents sooner, thereby greatly reducing incident clearance time).

10) Leveraging—These are improvements that leverage various partners strengths and resources, enabling an activity that no partner could provide alone (e.g., For the Houston Motorist Assistance Program, TXDOT personnel answer and dispatch calls, Sheriff's deputies respond to provide assistance, Metro provides funding to compensate the Sheriff's deputies, a local wireless company provides free emergency calling, and the Houston Automobile Dealers Association provides free vehicles used for response).

11) Win-lose—These are situations in which one or more parties clearly sacrifice to provide regional benefit (e.g., Transportation partners in the New York-New Jersey-Connecticut region coordinate construction schedules through TRANSCOM^{TM}. At times, partners voluntarily delay their construction schedules to avoid causing excessive burden on the transportation system, due to construction on parallel or adjoining routes. This can result in significant cost and political implications).

Programs that support win-win and leveraging improvements are the easiest to address and are good candidates for new ROOs. Win-lose improvements are harder to achieve in a voluntary, cooperative environment; however, well established ROOs have been able to address some of these problems once a regional philosophy and trust among partners is ingrained.

Themes from Panel 2: Engaging the Public Safety and Emergency Response Communities

1) Transportation and public safety are one and the same. They are both integral parts of the same mission: promoting a safe and efficient transportation system.

2) Several panelists echoed Matt Edelman's statement: "Once convinced, public safety will be your strongest advocate."

3) Opportunities are numerous for public safety and transportation to cooperate with one another and leverage each other's resources. These opportunities involve cooperation in both low-tech (e.g, verbal communication and coordination of activities) and high-tech (e.g., sharing technology) forms.

4) Transportation agencies aid public safety by providing information, communications, and tools. They support public safety officers in performing their primary duty: in-field operations.

5) The same tools and relationships are used in a crisis situation as are used in everyday transportation management. It is critical to establish these resources under normal operating condition, so they can be leveraged quickly in a crisis. Likewise those tools put in place and relationships established to address crisis, should be leveraged to the greatest extent possible on an everyday basis.

6) ROOs foster a cooperative spirit among partners, creating momentum that enables the accomplishment of coordinated programs beyond what may be possible through individual efforts.

Themes from Panel 3: Involving the MPOs

1) A primary component of ROOs is "utilizing" the strengths of each partner. MPOs can bring important strengths to a ROO.

2) Strengths MPOs commonly bring to regional partnerships include

   a. Similar regional geographic focus

   b. Experience convening multi-jurisdictional meetings and forums

   c. Regular contact with all transportation agencies and many other relevant communities (i.e., business, environmental, emergency response) in the region.

3) Relationships with elected officials

4) Some MPOs have additional strengths that they can bring to a ROO. For example, partners in the San Francisco Bay Area utilize the MTC for contracting and procurement of regional transportation operations programs, because MTC has fast and flexible procedures compared to others in the region.

5) While an MPO may be an appropriate body to coordinate and house a ROO in many regions, there are also reasons why an MPO does not always convene ROOs:

6) Some ROOs focus on a geographic area or mission that differs from the MPO's. This is commonly the case in corridor-focused ROOs, such as the I-95 Corridor Coalition. It is also the case in ROOs focused on specific operations activities that do not fit the regional MPO's staffing mix and mission. An example is Houston TranStar, which houses a multi-agency transportation and emergency management operations center.

7) ROOs require staffing and administrative resources. ROOs tend to be housed within whatever agency can dedicate these resources. This tends to be the agency from which a champion or entrepreneurial bureaucrat emerges to marshal these resources.

Sponsors' Closing Comments

At the close of the conference, sponsors provided brief comments related to conference results and next steps.

Susan Petty, Federal Highway Administration

Regional collaboration is essential and needs to be strategic and non-traditional. It is not important who does the operations functions but how they get done. Institutionalizing cooperative relationships enables maximum advancement potential at minimum costs. It is unlikely that new money will be available in the next Congressional authorization cycle. We can not wait for new incentive funding to push these types of initiatives. It is imperative that this professional community continue to push for innovation of the kind discussed here. We must continue to get the word out and help regional organizations through means other than federal support.

Mark Norman, Transportation Research Board

Partnership is the key word, not organizations. TRB is proposing to create a new standing committee on Regional Transportation Systems Management, as the association's focal point for advancing initiatives such as ROOs. The ROO subcommittee (which hosted the workshop) will be part of the new committee. Formation of the committee will be discussed and decided upon at this week's Annual Meeting.

Marcia Pincus, ITS America

A notable observation related to this conference was the focus on security and safety as a primary driving factor for ROOs. Congestion was discussed very little. This is evidence of a clear transition in thinking from previous discussions, and makes the need for ROOs even more compelling. ITS America is the parent of the ROO Joint Subcommittee along with TRB. ITS America was one of the primary sponsors of this conference and will continue to be actively engaged in advancing this cause.

Alex Taft, Association of Metropolitan Planning Organizations

AMPO was also a sponsor of this conference and will remain active in advancing regional transportation operations and management.

Edward Stollof, Institute of Transportation Engineers

ITE has been active in advancing regional operations through its leadership in the National Dialogue on Transportation Operations. Through the National Dialogue, ITE and FHWA sponsored the ROO research reports that were the foundation for this conference. The chal-

lenges related to institutional issues was a primary theme of the October 2001 National Dialogue Summit. Therefore, ITE expects to continue to be actively engaged in this issue.

Jim Wright, American Association of State Highway and Transportation Officials (AASHTO)

AASHTO's Board of Directors has named operations and management as one of its primary initiatives. As discussed at this conference and in related literature, state DOTs are often leaders of ROOs and primary funding sources. Consequently, AASHTO will also continue to stay engaged in these discussions.

List of Participants[3]

John Baniak
Executive Director
I-95 Corridor Coalition
77 Belmont Drive
Saratoga Springs, NY 12866
Phone: 518-584-4826
jbaniak@nycap.rr.com

Linda Bolte
Deputy for Planning
Chicago Area Transportation Study
300 W. Adams
Chicago, IL 60606
Phone: 312-793-0380
lbolte@catsmpo.com

Valerie Briggs
Booz-Allen & Hamilton
8283 Greensboro Drive
McLean, VA 22102
Phone: 703-917-2197
briggs_valerie@bah.com

Wayne Berman
Transportation Specialist
FHWA
400 7th Street, SW
Room 3404, (HOTM-1)
Washington, DC 20590
Phone: 202-366-4069
Wayne.Berman@fhwa.dot.gov

Anne Brewer
Asst. District Traffic Operations Engineer
Florida DOT
719 S. Woodland Blvd.
MS 3-562
Deland, FL 32720
Phone: 386-943-5319
anne.brewer@dot.state.fl.us

John Corbin
Freeway Operations
Wisconsin DOT, T.I.M.E. Program
633 West Wisconsin Avenue
Suite 1200
Milwaukee, WI 53203
Phone: 414-227-2150
john.corbin@dot.state.wi.us

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[3] Includes individuals registered for the conference originally scheduled for September 18-19, 2001 (which was postponed due to the September 11 tragedies) as well as those registered for and attending the January 11-12, 2002 conference.

Melanie Crotty
Manager, Transit Coordination & Access
Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607
Phone: 510-817-3280
mcrotty@mtc.ca.gov

Rob Draper
Scenic Byways & System Mgmt Team Leader
FHWA
400 7th Street, SW
Washington, DC 20590
Phone: 202-366-4649
rob.draper@fhwa.dot.gov

David Ekern
Associate Director
AASHTO
444 North Capitol Street, NW
Suite 249
Washington, DC 20001
Phone: 202-624-5868
dekern@aashto.org

J. Craig Forrest
Chairman
Baltimore Regional Transportation Board
111 W. Chesapeake Avenue
Room 326
Towson, MD 21204
Phone: 410-887-3554
cforrest@co.ba.md.us

Jonathan Gifford
Director, M.S. Professional Studies
George Mason University
3401 North Fairfax Drive
MS 3B1
Arlington, VA 22201
Phone: 703-993-2275
Jgifford@gmu.edu

Charles Goodman
Chief, Metropolitan Planning
FTA
400 7th Street, SW
Washington, DC 20590
Phone: 202-366-1944
charles.goodman@fta.dot.gov

Gene Donaldson
Intelligent Transportation Administrator
Delaware DOT
P.O. Box 778
Dover, DE 19903
Phone: 302-760-2306

Matthew Edelman
Executive Director
TRANSCOM^{TM}
Newport Financial Center
111 Pavonia Avenue, 6th Floor
Jersey City, NJ 07310
Phone: 201-963-4033
Edelman@xcm.org

David Ewing
Federal Rail Programs Coordinator
North Carolina DOT
400 North Capitol Street, NW
Washington, DC 20001
Phone: 703-402-8400
eewing@erols.com

Steven Gayle
Executive Director
Binghamton Metropolitan Transportation Study
P.O. Box 1766
Binghamton, NY 13902-1766
Phone: 607-778-2443
sgayle@co.broome.ny.us

Gene Glotzbach
ITS Engineer Administrator
Florida DOT
605 Suwannee Street
MS 90
Tallahassee, FL 32399-0450
Phone: 850-414-4980
gene.glotzbach@dot.state.fl.us

Dean Gustafson
Coordinator
NITTEC
93 Oak Street
Buffalo, NY 14203
Phone: 716-847-2450
dgustafson@gw.dot.state.ny.us

Patrick Irwin
Director of Transportation Operations - San
Antoni
Texas DOT
3500 NW Loop 410
San Antonio, TX 78229
Phone: 210-731-5249
pirwin@dot.state.tx.us

Scott Johnson
Transportation Specialist
FHWA
400 7th Street, SW
Room 3404
Washington, DC 20590
Phone: 202-366-9498
scott.johnson@fhwa.dot.gov

Linda Kleinbaum
Director of Policy
Metropolitan Transportation Authority
347 Madison Avenue
New York, NY 10017
Phone: 212-878-7206

Jeffrey Lingley
Director, Office of Travel Management
FHWA
400 7th Street, SW
Room 3401, (HOTM-1)
Washington, DC 20590
Phone: 202-366-1285
Jeffrey.Lindley@fhwa.dot.gov

Mohamed Ismail
Director, Transportation
MORPC
285 E. Main Street
Columbus, OH 43215
Phone: 614-233-4150
mismail@morpc.org

Ronald Kirby
Director of Transportation Planning
Metropolitan Washington Council of Governments
777 N. Capitol Street, NE
Suite 300
Washington, DC 20002-4239
Phone: 202-962-3310
rkirby@mwcog.org

Thomas Lambert
Vice President & Chief of Police
Metropolitan Transit Authority
810 N. San Jucinto
Houston, TX 77002
Phone: 713-615-6409
t102@ridemetro.org

Mark Maggio
Research Faculty
George Mason University
3401 North Fairfax Drive
3-B-1
Arlington, VA 22201
Phone: 703-993-2518
mmaggio@gmu.edu

Michael Meyer
Professor
Georgia Tech
790 Atlantic Drive
Atlanta, GA 30332
Phone: 404-395-2246
mmeyer@ce.gatech.edu

William Nicholas
Asst Director, Government/Public Affairs
NITTEC
93 Oak Street
Buffalo, NY 14203
Phone: 716-847-2450
wnicholas@gw.dot.state.ny.us

Mark Norman
Director, Technical Activities
TRB
2001 Wisconsin Avenue, NW
Washington, DC 20007
Phone: 202-334-2941
mnorman@nas.edu

Koorosh Olyai
Assistant Vice President
Dallas Area Rapid Transit
1401 Pacific Avenue
Dallas, TX 75266
Phone: 214-749-2816
olyai@dart.org

Thomas Palzer
Deputy for Operations
CATS - Chicago Area Transportation Study
300 W. Adams Street
Chicago, IL 60606
Phone: 312-793-3456
tpalzer@catsmpo.com

Vincent Pearce
Highway Engineer
FHWA
400 7th Street, SW
Room 3404, (HOTM-1)
Washington, DC 20590
Phone: 202-366-1548
Vince.Pearce@fhwa.dot.gov

Susan Petty
Director, Office of Transportation Technology
Serv
FHWA
400 7th Street, SW
Room 3401, (HOST-1)
Washington, DC 20590
Phone: 202-366-6577
Susan.Petty@fhwa.dot.gov

Marcia Pincus
Director, Operations, Evaluation & Partnerships
ITS America
400 Virginia Avenue, NW
Suite 800
Washington, DC 20024
Phone: 202-484-4663
mpincus@itsa.org

Laurel Radow
Transportation Specialist
FHWA
400 7th Street, SW
Room 3401, (HOST-1)
Washington, DC 20590
Phone: 202-366-2855
Laurel.Radow@fhwa.dot.gov

Clive Rock
Manager, Strategic Planning
Greater Vancouver Transportation Authority
1600 - 4720 Kingsway
Burnaby, BC V5H 4N2
Phone: 604-453-4562

Joerg Nu Rosenbohm
Senior Engineer
PB Farradyne, Inc.
3200 Tower Oaks Blvd.
Rockville, MD 20852
Phone: 301-984-6479
rosenbohm@pbworld.com

Catherine Ross
Executive Director
Georgia Regional Transportation Authority
245 Peachtree Center Avenue
Suite 900
Atlanta, GA 30303
Phone: 404-463-3010
execdir@grta.org

George Schoener
Director, Office of Metropolitan Plng &
Programs
FHWA
400 7th Street, SW
Room 3222/HEPM
Washington, DC 20590
Phone: 202-366-4067
george.schoener@fhwa.dot.gov

Peter Snyder
Senior Transportation Operations Specialist
New York State DOT
1220 Washington Avenue
State Campus, Building 5
Albany, NY 12232
Phone: 518-4571757
pjsnyder@gw.dot.state.ny.us

Erik Steavens
Planning Programs Coordinator
FHWA
400 7th Street, SW
HEPM-20, Room 3222
Washington, DC 20590
Phone: 850-942-9690x3008
erik.steavens@fhwa.dot.gov

Kathleen Stein
Principal
Howard\Stein-Hudson
38 Chauncy Street
Boston, MA 02111
Phone: 617-482-7080

R. Dale Thompson
Aztech & ITS Program Manager
Maricopa County DOT
2901 W. Durango Street
Phoenix, AZ 85009
Phone: 602-506-4611
dalethompson@mail.maricopa.gov

John Whaley
Director Houston TranStar
Houston TranStar
6922 Old Katy Road
Houston, TX 77024
Phone: 713-881-3259
jwhaley@houstontranstar.org

Jon Williams
Senior Program Officer
TRB
2101 Constitution Avenue, NW
Washington, DC 20418
Phone: 202-334-2938
jwilliams@nas.edu

Howard Wood
ITS Program Coordinator
Ohio DOT
1980 W. Broad Street
Columbus, OH 43223
Phone: 614-466-2255
howard.wood@dot.state.oh.us

Grant Zammit
ITS Specialist
FHWA
61 Forsyth Street, #17T26
Southern Resource Center
Atlanta, GA 30303
Phone: 404-562-3575
grant.zammit@fhwa.dot.gov

David Zavattero
ITS Program Manager
Illinois DOT
120 W. Center Court
Schaumburg, IL 60195
Phone: 847-705-4800
zavatteroda@nt.dot.state.il.us

This section presents profiles of regional organizations or programs, including:

- Southeast Wisconsin's Traffic Incident Management Enhancement (TIME) Program
- The San Francisco Bay Area Metropolitan Transportation Commission (MTC)
- New York State DOT Joint Traffic Operations Center (JTOC)
- The Gary-Chicago-Milwaukee (GCM) ITS Priority Corridor

These profiles are based on questionnaires completed by conference participants.

Traffic Incident Management Enhancement (TIME) Program

1. Name of regional operating organization with which you are associated:

   Traffic Incident Management Enhancement (TIME) program – S.E. Wisconsin

2. Your role/position within the organization:

   John Corbin, Program Manager, WIS.DOT - Milwaukee

3. Please describe responsibilities and key achievements of the organization.

   TIME is to sustain and improve the safety and quickness of incident clearance on re-gional freeway corridors. TIME has developed a regional ITS architecture, planned for integrated corridor traffic management systems, expanded freeway traffic management systems, implemented several distinct freeway patrol models, and completed a strategic deployment and evaluation plan.

4. What agencies/jurisdictions currently participate in the organization? What are the pri-mary roles of each?

   State and county highway and law enforcement, fire and rescue, EMS, emergency man-agement (state and county), Milwaukee DPW, traffic media, and towing and recovery contractors participate collaboratively in operational problem solving.

5. How has the organization engaged the public safety community?

   Primary objective of TIME has been to protect emergency responders and clear traffic incidents safely and quickly.

6. How are MPOs involved in the organization?

   RPC is a member of TIME steering committee. RPC originated the concept of a regional traffic incident management program within the regional transportation plan in the 1980's.

7. How has the partnership overcome turf issues?

   By fostering cross-jurisdictional interpersonal relationships through regular meeting, joint projects and friendship.

8. Please indicate key funding sources for your organization's (1) projects, (2) administration.

   For both 1&2 state and federal (CMAG, NHS/STP), including earmarks. Other sources, such as public safety and homeland security are being investigated.

9. Please describe other keys to your organization's success.

   TIME is a formal, ongoing, administered, inter-jurisdictional, regional effort. It is sustained and evaluated.

10. What are the primary challenges the organization faces on a (1) national level, (2) state level, (3) local level, and (4) internally?

    a. Constraints on federal funding – e.g., limits on CMAC to 3 years of O&M.
    b. Limited ability of DOT to lead TIME and traffic operations due to strong influence of road-builders to only build roads.
    c. Political sensitivities to moving more regional traffic through the city
    d. See #2

11. Please indicate actions that can be taken to address the challenges, and what groups should be involved in those actions.

    Encourage development of transportation operations plans (TOPs) (or elements of transportation plans) at regional and state levels. These TOPs should address deployment of traffic O&M, including management strategies. Offer incentives for implementing the TOP, such as offering a waiver of local matching for some federal funds if these funds are used for projects within the TOP. These funds could be limited, for example, to 10% of the transportation improvement program.

San Francisco Bay Area Metropolitan Transportation Commission (MTC)

1. Name of regional operating organization with which you are associated:

    San Francisco Bay Area Metropolitan Transportation Commission (MTC)

2. Your role/position within the organization:

    Manager of Transit Coordination and Access

3. Please describe responsibilities and key achievements of the organization.

    *   Responsibility: MTC is the planning, financing and coordinating agency for the nine-county San Francisco Bay Area.
    *   Key Achievements (as a ROO): 1) Defining new approaches to system management to better integrate operations into the planning process; 2) Establishing regional operational programs to improve the travel experience for Bay Area residents; 3) Establishing and implementing transit coordination improvements.

4. What agencies/jurisdictions currently participate in the organization? What are the primary roles of each?

    MTC has established a partnership of transportation organizations to respond to the planning, financial, and coordination opportunities of ISTEA. Its responsibilities include: 1) Congestion Management Agencies (9 total): plan, finance, and implement county-level road improvements; 2) transit agencies and rideshare organization operations.

5. How has the organization engaged the public safety community?

    MTC communicates with the public safety community through our emergency response planning activities. We assist transit operators in developing and maintaining their Emergency Operating Plans. This allows us to work systematically with the public safety community. MTC assists transit operators in developing and maintaining their Emergency Operating Plans so that all plans comply with California's Standardized Emergency Management System (SEMS). This coincidentally enables MTC to engage the public safety community in a systematic way. SEMS protocols assume that life/safety issues are first addressed by the Incident Commander at the Scene. In most instances, the Incident Commander will be a law enforcement or other public safety officer. MTC's annual exercise enables transit operators to test their own staff's ability to contact the appropriate outside agency (which could include law enforcement/public safety/public health, etc.) that needs to respond.

    MTC also communicates with the public safety community through our efforts in the Freeway Concept of Operations (ConOps) Project. The ConOps project, sponsored by

MTC, Caltrans and the California highway Patrol is examining policies and procedures for freeway operations and recommending future improvements. We have had two public agency outreach sessions to local agencies, including emergency responders, local police, etc.

6. How are MPOs involved in the organization?

We are the MPO.

7. How has the partnership overcome turf issues?

As a general philosophy, we avoid turf issues by working up front with transportation partners to define plans, projects, and programs. Often, MTC is the only stakeholder with a regional perspective – no one else is equipped statutorily to assume the responsibility that we do. It naturally falls to us.

More specifically, when turf issues do arise, we have overcome them on a case-by-case basis. 1) For TransLink®, the regional electronic transit fare payment program, we are participating in a process that invites the transit operators to design a long term governance strategy that works best for them. Rather than defining what our role will be, we are defining what our requirements will be to assign the contract to a third party. 2) For the information programs, we are evolving to a strategy of flexibility for dissemination platforms. Our partners can integrate the tools (e.g., trip planning, traffic maps) we develop to appear to be parts of their program. MTC will directly provide these tools or services to the customer as well. 3) For our call box program, we outsourced the call answering portion to a private firm when CHP could no longer keep up with the call volume. We developed performance measurements and strict operating policies to ensure that CHP standards of expectations were met.

8. Please indicate key funding sources for your organization's (1) projects, (2) administration.

Funding sources by:

- Projects: Federal funding: CMAG; State: Transit Assistance (STA) funding, transportation Development Act (TDA) funding, Service Authority for Freeway and Expressway (SAFE), Transportation for Clean Air (TFCA) funding.
- Administration: Federal: planning funding; state: TDA; Local : HOV fines

9. Please describe other keys to your organization's success.

MTC's primary tool has been exhibiting leadership. We have dedicated significant internal resources, secured external resources, and expended political influence to ensure that programs have had the opportunity to develop. There is no specific language in our mission, or enabling statute, that requires MTC to operate the customer service program. We have instead recognized the travelers' needs and assembled a program to address their need. MTC does not feel that any special provisions or legislation needs to be de-

veloped to allow our experience to be duplicated elsewhere. All it requires is an organization to be willing to lead the way.

We do have some features that support our leadership. They include flexible enabling legislation, a nimble procurement process, and a jurisdiction (regional) that lines up well with customers' expectations for service provisions.

10. What are the primary challenges the organization faces on a (1) national level, (2) state level, (3) local level, and (4) internally?

Primary challenges:

- National Level: Need to relax eligibility of CMAQ program. Full potential of CMAQ program. Full potential of CMAG for operational projects is limited by air quality requirements.
- State: 1) Dedicating sufficient resources to support operations and maintenance for state programs. 2) Program eligibility and total funds available from Vehicle License Fee funding should be expanded.
- Local: 1) Meeting the needs of travelers — their expectations are high; the public sector needs to act like a business. 2) Keeping our partners engaged on system management— it is hard to divert them from their traditional focus of delivering a capital program. 3) Fully funding the capital program for large ITS programs, such as freeway management.
- Internal: Getting our organization to recognize and support our changing way of doing business.

11. Please indicate actions that can be taken to address the challenges, and what groups should be involved in those actions.

Actions to address these challenges:

- Federal: We need to resist the urge of establishing a separate new program and instead work to improve the existing CMAQ program. Our preference is to remove the three-year limitation on supporting *freeway* operations.

  The federal program should encourage support and leadership from state and local governments. Increasing program match requirements could increase local support to be 50/50. The federal program should also allow for regional flexibility, by recognizing that one size does not fit all.

  If there is a desire to create separate "system management" program, we strongly urge that the Federal program would offer large, **one-time only** grants to provide the funding to invest in "infostructure."

  Lastly, it is important to maintain the formula programs. The current practice of the ITS program being completely earmarked could grow to other programs.

- State and locals: We need to provide the leadership to make it happen! Perhaps to provide further motivation to make sure systems management is happening, the federal program could require that all regions develop a regional operations plan.

New York State DOT Joint Traffic Operations Center (JTOC)

1. Name of regional operating organization with which you are associated:

   New York State DOT – Joint Traffic Operations Center (JTOC) (Region 11)

2. Your role/position within the organization:

   Shift Manager – Mike Weinstein

3. Please describe responsibilities and key achievements of the organization.

   Working directly with JTOC partners (NYC DOTA & NYPD) to help control traffic flow in New York City. We control many variable message signs and highway advisory radio systems and monitor traffic conditions through CCTV. We also deal with TRANSCOM on all our incidents.

4. What agencies/jurisdictions currently participate in the organization? What are the primary roles of each?

   - NYS DOT – Maintain highways through construction initiatives, monitor traffic conditions with various ITS.
   - NYC DOT – Same as above except emphasis is on streets rather than highways.
   - NYPD – Patrolling all highways/streets and handling incident management. (again, TRANSCOM is an unofficial JTOC member).

5. How has the organization engaged the public safety community?

   No response.

6. How are MPOs involved in the organization?

   No response.

7. How has the partnership overcome turf issues?

   Roles were re-defined on September 11th. The beauty was that we were able to work together with politics playing only a small role. We knew what needed to be done and everyone cooperated. All the ground-work laid before the 11th proved effective.

8. Please indicate key funding sources for your organization's (1) projects, (2) administration.

   NYSDOT funds a consortium of consultants (I work for Urbitran, Inc, one of the 5). Each consultant hires staff and handles human resources and personnel issues separately.

9. Please describe other keys to your organization's success.

    Understanding of roles and helping each other.

10. What are the primary challenges the organization faces on a (1) national level, (2) state level, (3) local level, and (4) internally?

    - Keeping the I-95 corridor open and available for commuters passing through.
    - Developing coordinating relationships with neighboring regions like Long Island (Region 10) and Westchester County (Region 8)
    - Coordinating with NYC agencies while not stepping on toes.
    - Having 5 consultants running one center with employees from each company complicates issues like scheduling and keeping down overtime.

11. Please indicate actions that can be taken to address the challenges, and what groups should be involved in those actions.

    We are a work in progress and are constantly receiving advice and cooperation from our partners.

Gary-Chicago-Milwaukee (GCM) ITS Priority Corridor

1. Name of regional operating organization with which you are associated:

    Gary – Chicago – Milwaukee (GCM) ITS Priority Corridor

2. Your role/position within the organization:

    Wisconsin DOT project manager

3. Please describe responsibilities and key achievements of the organization.

    - Creates and administers multi-state transportation operations and ITS program plan
    - Maintains corridor ITS architecture that links 3 states' regional ITS architectures
    - Implement and operate tri-state 'gateway' traveler information system and data pipe
    - Have begun interstate corridor traffic inc. management and operational planning

4. What agencies/jurisdictions currently participate in the organization? What are the primary roles of each?

    Transportation (Hwy and Transit) and public safety agencies in 19 counties across 3 states

5. How has the organization engaged the public safety community?

   Through a heavy emphasis on traffic incident management enhancement

6. How are MPOs involved in the organization?

   At a distance ☺

7. How has the partnership overcome turf issues?

   - Careful and prolonged strategic planning
   - Actively administered inter-organizational structure

8. Please indicate key funding sources for your organization's (1) projects, (2) administration.

   State and Federal transportation program funds, including CMAG, NHS/STP, and earmarks

9. Please describe other keys to your organization's success.

   State transportation executive support and their limited involvement

10. What are the primary challenges the organization faces on a (1) national level, (2) state level, (3) local level, and (4) internally?

    - Complex interstate legal and institutional setting
    - Limited state DOT staff commitment to GCM program development and support
    - Lack of direct USDOT – FHWA involvement in GCM

11. Please indicate actions that can be taken to address the challenges, and what groups should be involved in those actions.

    - Expand federal support for multi-state transportation operations programs (GCM, I-95 coalition) in federal transportation reauthorization
    - GCM partner agencies need to establish a single individual as an administrator for the corridor, similar to I-95
    - Senior level USDOT FHWA JPO management needs to be directly involved in GCM, similar to I-95