

# Appendix A

## National I-10 Freight Corridor Study

### Phase II – Corridor ITS Integration



Meeting Location: 801 S. Grand Avenue, Los Angeles, CA

Meeting Minutes: 11/30/04

#### TAC Attendees:

Dilara Rodriguez,  
CALTRANS  
Bill Tournay, CALTRANS  
Steven Glascock, LADODT  
Jeff Pierce, MS DOT  
Al Brantley, MS DOT  
Tim Wolfe, AZDOT  
Don Vaughn, ADOT  
Peggy Thurin, TXDOT  
Adrian Apodaca, NMDOT

#### Consultant Staff & Peer to Peer Attendees

Arno Hart, WSA  
Mark Berndt, WSA  
Jeff Hochmuth, WSA  
Dottie Shoup, NDOR  
Phil DeCabooter, WISDOT  
Mark Nelson, MNDOT

#### Introductions

Ms. Rodriguez welcomed everyone to Los Angeles and thanked them for making the trip. Everyone was then asked to introduce themselves and their affiliation.

#### Overview of Previous I-10 Study Efforts

Arno Hart gave a slide presentation summarizing the Phase I study effort initiated in 2002 and completed in early 2004. Mr. Hart reviewed the seven capacity enhancement scenarios examined in the Phase I effort. Mark Berndt followed Mr. Hart with additional details regarding the methodology used in evaluating ITS investments across the corridor. In Phase I, the ITS scenario development included a corridor-wide inventory of ITS implementation efforts undertaken by each of the member states and MPOs along the I-10 Corridor. Implementation was examined from the standpoint of major user service bundles as defined in the ITS National Architecture:

- CVO/ITS and CVISN
- Statewide/Regional Traveler Information
- Rural Traffic Management
- Rural Transit Mobility
- Metropolitan Traveler Information
- Metropolitan Traffic Management
- Metropolitan Public Transit Management

Mr. Berndt indicated that unlike the other six scenarios that were evaluated using a level of service (LOS) indicator, the ITS scenario was evaluated using a benefit-cost approach using a tool developed for the FHWA: SCReening Analysis for ITS or SCRITS. Using the SCRITS tool the consultant team found a benefit to cost ratio of 3-

to-1 for ITS investments that would integrate largely existing systems along the corridor. Most of the capital investments envisioned would be for communication infrastructure and some hardware such as variable message signs.

Mr. Berndt indicated that based on the high B/C ratio estimated in Phase I from the ITS scenario, it was recommended that funds remaining in the original budget be used to continue momentum gained by the I-10 coalition by examining how ITS integration across the corridor could be undertaken. A secondary goal of the Phase II effort was conducting preliminary work necessary to position the corridor to capitalize on ITS integration program funding anticipated in the next transportation reauthorization bill.

### **Peer to Peer Presentations and Discussion**

*Prior to the meeting, a request was sent to the ITS Peer to Peer (P2P) Program sponsored by FHWA, asking if they would support a peer exchange on the topic of ITS integration along major Interstate corridors. Representatives from several major trade or ITS corridor initiatives were contacted about their willingness to participate in the meeting. The following participants agreed and provided overview presentations on the corridors they represent:*

- Mark Nelson representing the North/West Passage ITS Corridor
- Phil DeCabooter representing the Gary-Milwaukee-Chicago Corridor
- Dottie Shoup representing the High Plains Coalition/Corridor
- Tim Wolfe representing the CANAMEX Corridor

Before the meeting the participants were asked to consider a number of questions in preparing their materials:

- *Brief history/description of your organization*
- *How is the corridor supported?*
- *What percent of your activities are directly related to freight*
- *What percent of your activities are directly related to general ATIS and ATMS?*
- *What have you accomplished in CVO/freight?*
- *What are you planning on accomplishing with CVO/freight?*
- *What CVO/freight stakeholders do you have from the private side?*
- *What CVO/freight stakeholders do you have from the public side?*
- *How are governance issues of your organization handled?*
- *How are responsibilities delegated?*
- *What advantages does a corridor approach offer?*
- *What challenges does a corridor approach offer?*
- *What has been your greatest success?*
- *What has been your best “lesson learned”?*

## **North/West Passage Transportation Pooled Fund (TPF) Study**

Mark Nelson began the P2P discussion with an overview of the *North/West Passage TPF Study*. In early 2003, North Dakota, Minnesota and Wisconsin secured approval to initiate the development of the North/West Passage study along I-90 and I-94. Other states including South Dakota, Wyoming, Montana, Idaho and Washington have also expressed varying degrees of interest in the concept. The goal of the study is to:

*“Implement and evaluate integrated traveler information systems and coordinate maintenance operations across state borders.”*

Currently Minnesota is the lead state and the three participants have pooled a total of \$100,000 to conduct a number of low cost Phase I projects. The three states are currently working on a number of integration efforts such as common reporting standards, integrated communications capabilities and the development of a North/West Passage web site. Phase II projects have been under discussion and a strategic plan was recently drafted that includes the development of a high-level corridor architecture, automated road condition reporting and a Road Weather Info/Net.

## **The Gary, Milwaukee, Chicago (GCM) ITS Priority Corridor**

Next Phil DeCabooter provided an overview of the GCM Corridor. The GCM Corridor was one of the original four priority corridors designated by Congress in ISTEA in 1991. The corridor is comprised of segments of I-90 and I94 and traverses three states, 3 major urban areas and 16 counties. The corridor is organized into 8 committees/working groups and involves over 500 coalition members.

The corridor is engaged with the Intermodal Advisory Task Force sponsored by the Chicago Area Transportation Study (CATS). The coalition recently sponsored a two day Freight / Technology Security Showcase. Other major CVO related initiatives include the development of virtual weigh stations along the corridor, as well as coordinated Incident Management and Traveler Information systems.

## **High Plains ITS Coalition**

Dottie Shoup explained that the formation of the coalition essentially began with the request for an advisory sign on I-80. The coalition made up of UT, WY, CO, KS, NE and MO came together to address the often devastating impacts of weather in large rural areas of the high plains. Currently that region of the country experiences 5 to 7 major weather events each year that result in freeway closures for extended periods of time. Currently, the average response time for first responders to a crash or spill incident in this region is 45 to 90 minutes.

While the initial focus was on I-80 the coalition is seeking to coordinate ITS systems across a network of major CVO corridors, including: I-80, I-76, I-70, I-25, I-15, I-35 and I-44.

Ms. Shoup explained that the High Plains Coalition is taking a “all hazards approach” to systems integration, with the following goals:

- Web based system
- Exchanging data for regional wide corridor incident management
- Information standards

In the future they hope to add: dynamic incident routing, have real time information that can be edited from the field for emergency contacts, dynamic message signs (DMS), road weather information systems (RWIS) and cameras. To date the coalition has established a pooled fund study; a working group is preparing a concept of operations and defining functional requirements. The coalition has received significant interest from private sector interests in trucking and CVO insurance providers. The group has developed benefit estimates using data supplied by a major trucking firm in the area. The estimated cost for a major event exceeds \$5.5 million in lost time and productivity.

### **CANAMEX**

Tim Wolfe provided an overview of the CANAMEX corridor involving MT, ID, UT, NV and AZ. CANAMEX efforts have been organized through a Policy Committee, a Technical Advisory Committee and ITS Coordinators. An ITS study conducted in the corridor focused on Traveler Information and Tourism. ITS technology being deployed in the corridor includes: Variable message signs (VMS), road weather sensors, a 511 phone system, web pages and the linking of traffic management centers.

Currently the coalition is seeking funds for further deployment, developing an ITS white paper and focusing on low cost solutions.

### **Review of state ITS contacts survey across the I-10 Corridor**

As part of Task 1 efforts for this project Jeff Hochmuth contacted ITS coordinators in each of the I-10 States to get updates on ITS deployments and discuss their ideas for coordination across the corridor. Jeff began by noting that ITS operations lend themselves very well to corridor-wide efforts as opposed to improvements like geometrics, etc. He also discussed the indications at the federal level that ITS integration will be a major focus in the next reauthorization, but pointed out that CVISN initiatives have a separate funding stream, so the current efforts do not address CVISN implementation.

Based on the phone interviews conducted, Mr. Hochmuth indicated that there is not a close tie between CVO operations and ITS operations in the corridor at this time. He said that state ITS architectures are in various degrees of updates across the corridor and that architecture seems to be a constantly evolving process.

State respondents did speak about some high levels of coordination, primarily with:

- State Patrol Agencies
- FHWA
- FEMA
- Local agencies concerning Traffic Management Centers (TMCs)

Levels of coordination were more mixed between other groups:

- CVO credentialing agencies
- Police/fire
- Port facilities
- Customs
- Local agencies not concerned with TMC operations
- National coalitions

For all the I-10 states, ITS coordination efforts were more regional - typically around a single urban area, and the representatives contacted stated they did not always have good coordination across all districts. Most TMCs are operated by the districts, and he indicated that many were looking for increased responsibilities, additional coordination, deploying more sensors, expanding coverage, all good signs for future integration efforts. Jeff also explained that ITS development under the National ITS Architecture does not mean seamless interoperability, in fact most jurisdictions have “zero compatibility” with other TMCs. Most TMCs have focused on reducing congestion locally and are not set up to exchange information with other jurisdictions.

### **Open Discussion**

The concluding points from the state survey presentation raised a number of questions from the TAC regarding the National ITS Architecture and its purpose.

Mr. Hochmuth pointed to several examples from other jurisdictions - for a host of reasons many agencies planned ITS deployments around standards, but at the point of implementation different paths were taken. Many systems are proprietary and therefore are unable at this time to communicate with one another. Jeff indicated however that there is hope. XML a relatively new programming language is one avenue - (XML is a translation language) for getting compatibility. XML in concert with web based applications can provide a lot of compatibility. He cautioned however, that many jurisdictions are happy to push data to another system, but don't want other systems attempting to extract data out.

Jeff cite several existing national models of technology integration that maybe worth looking at:

- Aviation: At one time each airport had their own traffic control systems, but the need to coordinate flight information resulted in the development of a national system.

- National Weather Service: At one time every weather station collected their own data, but once again public safety drove coordination efforts.

FHWA has chosen to allow each MPO to develop their own systems and there are currently 75 TMCs all operating largely independent systems. It should also be remembered that some ITS deployments preceded the national ITS architecture. Detroit, Chicago, and Los Angeles have had TMC for decades so they preceded the national architecture. XML is a relatively new tool ...A very fluid area that is constantly changing.

The audience noted that the examples raised were moved forward to improve the safety of citizens. Having a safety focus may also serve ITS deployment - congestion may not be a compelling enough argument.

**Q: How do you generate interest in pursuing jurisdictional compatibility?**

As urban areas grow they may have more reasons for cooperation. Safety is another reason. There are a number of approaches that have worked across the country:

- Low hanging fruit
- Multiple user benefits
- Marketing - need to make the benefits tangible and personal

Other points captured in this discussion:

- In the past, ITS may have been oversold, so in recent years ITS has been a more difficult sell to DOT executives.
- Tourism is another compelling issue like economic development that can be on your side, however tourism is not a typical customer of the DOTs.
- Need to sell to the people at the top of the DOT - need to become more savvy about marketing the benefits of ITS integration. Need to make ITS politically attractive.
- Funding is another issues that is key - there is language in various reauthorizations

**What has been the practice in other corridors to structure a governing body for integrated ITS development/deployment?**

- CANAMEX had the 5 governors sign informal agreements to work together, but when a more formal agreement (policy level) was presented it was nearly the demise of the corridor.
- I-35 was also unsuccessful in getting a corridor wide memorandum of understanding.

- Similar example in CA - willing to sign an informal agreement to cooperate, but have been unwilling to sign more formal agreement.
- GMC convenes its representatives twice each year, once at the AASHTO meeting and

**If the I-95 corridor is the model - how have they been able to get funding support? Has the support come from the State DOTs and political representatives?**

- I-95 is a separate corporate entity. They staff the corporate structure with 2 full time staff and an office. Have a process for generating project ideas that are then prioritized at their annual meeting. As the coalition has grown they have found it more challenging to manage. I-95 has had approximately \$5 million annually to pursue projects.
- May be a chicken and the egg dilemma - because they have money do they attract members, or was their ability to attract members what lead to their funding support?
- TRANSCOM and I-95 have been able to build off a history of a very formal agreement and process.

**What has been the measure of success in I-95? What are they showing as their successes?**

Many of the I-95 corridor presentations focus on incidents.

High Plains Corridor - Strictly state to state - builds upon existing architectures. Have a formal MOU with all five directors - in place for two years before any funds were requested. The MOU is not demanding - simply a statement of mutual cooperation Christine Johnson and ATA also facilitated a meeting to communicate purpose. Used WASHTO as a forum to convene and educate senior management.

**Why isn't AASHTO a forum for I-10 efforts?**

In many respects AASHTO has played a role in the development of the coalition. Many of the early discussions about pursuing the National I-10 Freight Corridor Study occurred at AASHTO meetings, and several updates during the study were presented to the Steering Committee at AASHTO meetings.

**Should the I-10 Coalition consider retaining professionals to market the corridor?**

Marketing is the key - but we (the coalition) must decide on the right targets. At the For ITS integration marketing to Congress and FHWA, which has been the emphasis to day may not be the key. We may need reexamine the marketing strategy and start with defining benefits from the ground up.

We can also identify stakeholders that are significant benefactors of corridor efforts. Need to find the big users and big benefactors.

On the other hand, in order for our states to remain engaged in this effort we need to find benefits and define the benefits to our own constituents, before we focus on private industry. It may be that the strategies need not start corridor-wide - we probably need to start locally, grow regionally and link up nationally.

### **Wrap-up**

The current study effort is focused on developing a framework for cooperative ITS deployments and cooperative operations across the I-10 corridor. The FHWA provides the following guidance on developing regional collaboration.

- The framework for regional collaboration and coordination is formed by five major elements: 1) Structure, 2) Process, 3) Products, 4) Resources, and 5) Performance
- *Structure* is the starting element for an ITS concept of operations.

### **Marketing Efforts:**

Before selling corridor cooperation to national policy makers, need to focus marketing efforts on senior management in state DOTs:

- Other corridors have had success using AASHTO as a forum.
- Identify national policy leaders who can act as champions
- Identify key industry stakeholders who see benefits
- Bring costs associated with incidents / congestion, and the benefits associated with ITS solutions down to a personal level.
- Find examples that are relative to each jurisdiction: Identify “horror” stories in each state on the corridor and what the impacts to commerce, public safety, etc.
- Conduct interviews/research with major freight stakeholders in the corridor.

### **Cooperation / Standards:**

Find one or two key emphasis areas that can be “sold” and developed at a local level, and grown to regional and eventually corridor wide in the future.

- Corridor wide: e.g. traveler information
- Regional: e.g. hurricane evacuation, standardized border crossings with Mexico
- Incident management rural vs. urban

### **Seek Out Low Hanging Fruit:**

- E.g., Explore the use of web-based information exchange of traveler information



- Develop standard “policies” on the use of VMS and HAR, and other standard information.

#### Cooperation / Standards:

- Need to explore how neighboring jurisdictions currently deal with data sharing.
- Identify opportunities to interface with the private sector – major carriers in the corridor.
  - Web portals
  - ??

#### Structure

- The structure should foster inter-regional cooperation within the corridor. Also, while ITS coordinators are the appropriate representatives for coordinating ITS efforts, there remains a need for a higher level TAC to carry and sell the message to senior management.