

***CANAMEX* – A Smart Tourist Corridor**

**Rocky Mountain ITS Annual
Conference**

John E. Taylor, P.E.

**October 2 - 4, 2002
Salt Lake City, Utah**



**Western Transportation Institute
Montana State University-Bozeman**

CANAMEX Corridor



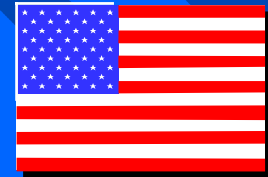
CANADA

(EDMONTON)



AMERICA

I-15, US 93
I-10, I-19



MEXICO

(MEXICO CITY)



Western Transportation Institute
Montana State University-Bozeman

CANAMEX

Mountains, Canyons & Deserts

Mountains of the North

(Glacier NP, Yellowstone NP, Grand Teton NP)

Canyons of the West

(Arches NP, Bryce Canyon, Grand Canyon NP, Zion NP)

Deserts of the South

(Death Valley NP, Saguaro NP, Petrified Forest NP)



CANAMEX Evolution

- NAFTA enacted during the Clinton administration
- Purpose: to promote trade among the three countries
- Designated several economic trade corridors
- AZ had been working with Mexico for several years to promote tourism and trade



***CANAMEX* Corridor Coalition**

Arizona

Nevada

Utah

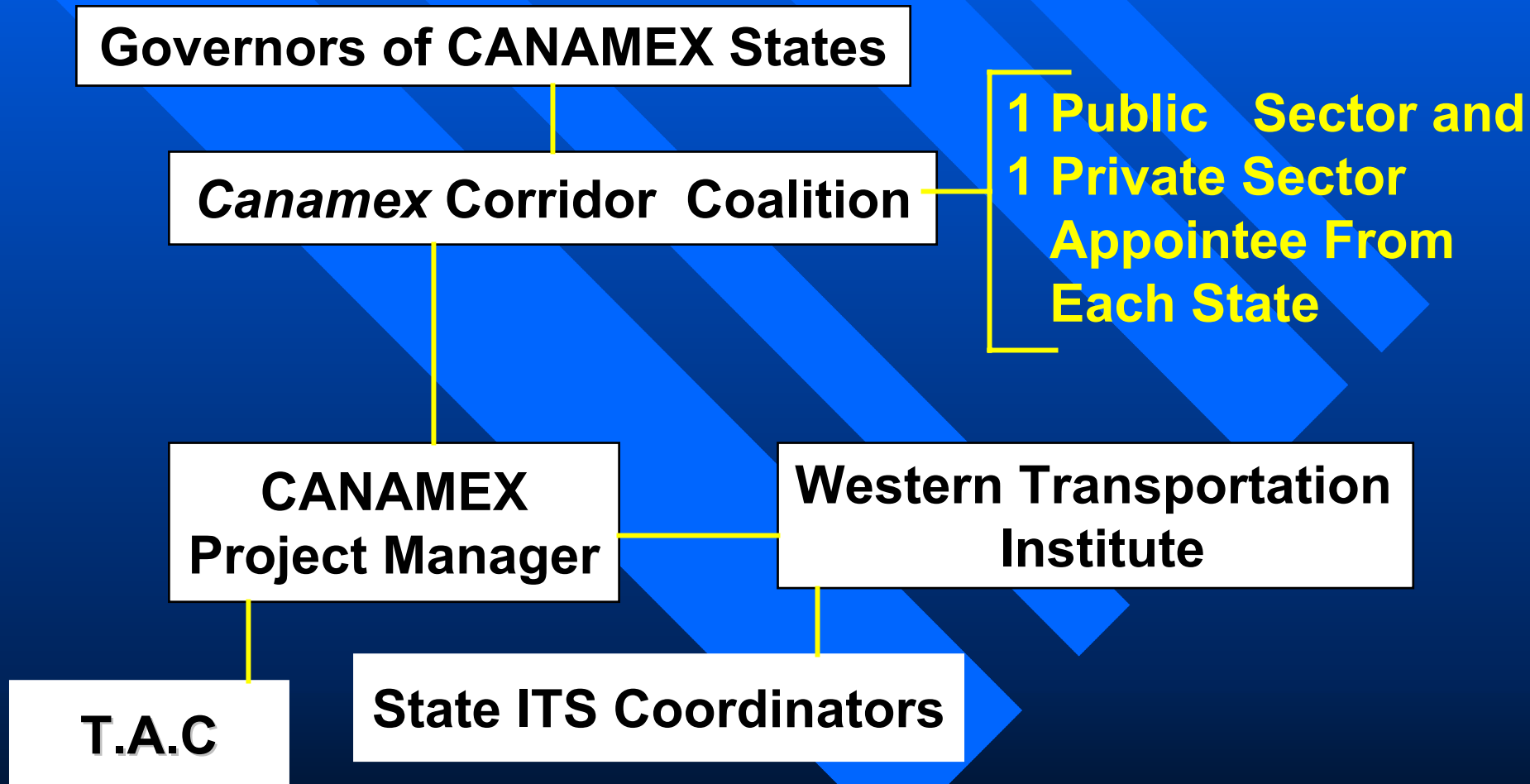
Idaho

Montana



Western Transportation Institute
Montana State University-Bozeman

CANAMEX: Organization



CANAMEX Initiatives

From Plan Published April 2001

1. **Smart Freight Corridor** (Bold)
2. **Smart Tourist Corridor** (Bold)
3. **Telecommunications Access for Rural Areas** (Bold)
4. **Corridor Highway Improvements**
5. **Smart Process Partnerships** (Bold)



CANAMEX: Smart Tourist

Corridor Action Plan

Emphasis Areas

- Define and develop services for tourists and other Corridor travelers to stimulate rural economy
- Develop a Corridor Operations Plan to enhance safety and incident management
- Identify the technological infrastructure to assure the above services are convenient, efficient and effective

CANAMEX

Buffalo



Tree



- Major goal of CANAMEX is to stimulate rural economy in the Corridor

- Amount of tourism is a leading economic indicator of regional economic health



Grizzly Dachshund

Fish



- CANAMEX will incorporate ITS to provide reliable and real-time information about Parks along the Corridor



***CANAMEX* State and National Parks in Proximity to Corridor**

Montana	7
Idaho	2
Utah	28
Nevada	4
Arizona	<u>5</u>

Total: 46



Western Transportation Institute
Montana State University-Bozeman

CANAMEX: Park Challenges*

- **Overcrowding**
- **Congestion**
- **Parking Problems**
- **Lack of Traveler Information**
- **Public Safety**

* Source: The State of ITS in the NPS; Volpe Transportation Center

CANAMEX ITS Applications *

- **Advanced Traffic Management Systems (ATMS)**
- **Advanced Traveler Information Systems (ATIS)**
- **Advanced Public Transportation Systems (APTS)**
- **Electronic Payment Systems**
- **Incident Management Systems**
- **Transportation Data Collection**
- **Law Enforcement**

*** Source: The State of ITS in the NPS; Volpe Transportation Center**

CANAMEX ITS BENIFITS

Advanced Traffic Management Systems (ATMS)

- Traffic control strategies can be developed based on **real time monitoring of traffic flow** using cameras, inductance loops, vehicle probes, etc.
- Gridlock at Park entrances can be prevented by **controlling traffic densities**.



CANAMEX ITS Benefits

Advanced Traveler Information Systems (ATIS)

Through use of DMSs, HAR, 511, internet,
keep Park visitors informed re:

- Road closures or other travel restrictions
- Weather conditions
- Parking availability
- Alternative routing
- Special events
- Overnight accommodations



CANAMEX ITS Benefits

Advanced Public Transportation Systems (APTS)

- **Transit vehicle arrival times using GPS**
- **On-board multi-lingual, interpretive services**
- **On-board sensors to assist operators to see through fog and darkness**
- **Detect animals, people and other obstacles on the roadway**
- **Improve safe operation of transit vehicles**



CANAMEX ITS Benefits

Electronic Payment Systems

- **Automated fee payment using smart cards or toll tags**
- **Significantly reduce vehicle queuing**
- **Lower Park operating costs**
- **Reduce tailpipe emissions**



CANAMEX ITS Benefits

Incident Management Systems

- **Herd jams**
- **Vehicle crashes**
- **Visitor coronary events or other illness**
- **Wildfires**
- **Flooding**
- **Terrorist threats**
- **Vehicle breakdowns**
- **Avalanche Monitoring / Control**



CANAMEX ITS Benefits

Transportation Data Collection

- **Vehicle classification**
- **Automated passenger counting**
- **Pavement and bridge management systems**
- **Enhance planning and operational needs**
- **Relative venue attractions**
- **Guide policy making**



CANAMEX Benefits

Law Enforcement

- **Speeding**
- **Crowd control**
- **Parking restrictions**
- **Consumption of alcoholic beverages**
- **Inappropriate behavior**
- **Visitor safety**
- **Evacuation Control**



ITS in National Parks

Yosemite (CA)
Yellowstone (WY, MT, UT)
Grand Canyon (AZ)
Acadia (MN)
Arches (UT)
Glacier (MT)
Bryce (UT)
Cumberland Gap (TN)
Great Smoky Mountains (TN)
Rocky Mountain (CO)
Shenandoah (VA)
Zion (UT)

