I-95 Corridor Coalition Vehicle Probe Project Overview

Rick Schuman, INRIX
A partnership of transportation agencies from Maine to Florida with affiliates in Canada

- Formed in 1993
- Region has a $4.5 Trillion economy
- Model for interagency cooperation and coordination since the early 1990’s
- Volunteer organization
- Based on four “C’s”
  - Consensus
  - Cooperation
  - Coordination
  - Communication

http://www.i95coalition.org
Vehicle Probe Project

• From Request for Proposal:
  • “The Coalition is supporting…
  • a regional traffic monitoring system…
  • a continuous source of real-time transportation system status information within the Corridor.
  • …will serve as a rich source of traveler information and will provide invaluable inputs to existing and future management tools….
  • It is the intent of the Coalition to encourage innovative, non-invasive detection technology, while taking advantage of existing data where available.”
Project Timeline/Milestones

• Procurement Process
  • RFIs: October 2006, February 2007
  • RFP Published: April 2007
  • Proposals Submitted (5): June 2007
  • Contract Awarded: December 2007

• Early Project Milestones:
  • Initial Task Order: February 2008
  • NJ Expansion Task Order: June 2008
  • Service Operational: July 1, 2008
  • Initial Validation: July – October 2008
  • NC Expansion Task Order: November 2008
  • SAFETRIP Task Order: January 2009
  • Initial Validation Results Published: January 2009
INRIX Role – For This Project

**Aggregate Content**
- Aggregate traffic & related content from >350 sources
- Largest GPS Probe Network in the World
- 90% of Available Sensors in the US
- Other Traffic Flow Sources
- Traffic Incident Data
- Traffic Metadata to Enable Predictions
- Other Dynamic Content

**Analyze & Process**
- Enhance data using advanced error detection algorithms
- Real-Time Historical & Predictive Traffic
- Traffic-Influenced Routing
- Information
- Search

**Deliver Solutions**
- Distribute to customers via Connected & Broadcast Services
- Web
- Mobile
- Public Sector
- Enterprise
- Fleet
- Broadcast Media

**Connected Services**
- Automotive
- Portable Navigation
Project Highlights

Contract
- 3 years – options to 10 years
- Task Order contract with U of Md
- Member agencies can:
  - Expand coverage
  - Add source data
  - Access consulting services
  - Extend project duration

Core Task
- Traffic data feed
- Monitoring web site
- Data archive
- Coverage
  - ~1500 freeway miles
  - ~1000 arterial miles (donated)
Project Highlights (2)

Data Feed – XML Stream
- Content
  - Speed, Travel Time, Real-Time “Score”
  - Expected Speed, Free Flow Speed
- Road Segments
  - “TMC” location codes
- Update Rate/Latency
  - Agencies access ~ every 1 mins
- Per Project Interface Guide

Monitoring Site
- Agency access only
- View all data in real-time
- Pure browser-based
- Access to data archive

Costs
- Mobilization: $150/centerline mile
- Annual Fee: $750/centerline mile

Use terms
- Codified in Data Use Agreement (DUA)
- Full use rights for agencies
- All members see all coverage
- No redistribution to 3rd parties
Project Requirements

RFP Requirements

**What**
- Avg Error ± 10 MPH
- Avg Bias: ± 5 mph
- For 4 Bins: <30, 30-45, 45-60, >60 MPH
- Latency: ≤ 8 minutes
- Update Rate: ≤ 5 minutes
- Data Reliability: ≥ 95%
- Data Availability: ≥ 99%

**When**
- Flow > 500 VPH on a segment

**Where**
- Core Freeways, Expansions
- Not Core Arterials

Requirements Validation

- Next Presentation…
Current Coverage
• Freeways: ~ 3500 Centerline miles
• Arterials: ~ 900 Centerline miles
• From NJ to NC
• ~ 10,000 Road Segments

Data Access (through 5/26)
• 12 agencies executed DUA
• 162 monitoring site users
• 28 data feed users

Availability since July 1, 2008
• Monitoring Site: 99.90%+
• Data Feed: 99.93%+
Monitoring Site Snapshot

I-95 Traffic Monitoring

Traffic Settings
Screen Settings
  - Full Screen
Center Map
Washington D.C.
TMC Sets
  - Freeways
  - Arterials
Legend
- Green: Free
- Yellow: Moderate
- Red: Heavy
- Black: Stop and Go
- Road Closed

6/2/09
Friday, Memorial Day Weekend (2009)

New York City/Northern NJ Exodus

Incident I-95 in Southern VA

6/2/09
Summary and Looking Forward

• Breakthroughs/Models for Others
  • Data and Performance Requirements
  • Proves Technology Approach – GPS Probe data viable
  • Multi-agency procurement
  • Broad coverage – using consistent location referencing
  • “Beyond border” coverage
  • Data Use Terms/Data Use Agreement
  • Validation Approach

• Focus Going Forward
  • Ongoing validation – improvements based on findings
  • Applications/Uses of Data
  • Project Expansion
    • North and South of current coverage area
    • Going deeper in coverage area
Contacts

Project Contacts

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Project Information

• www.i95coalition.org
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