Marriage of Toll and ITS
IBTTA Annual Conference - Orlando

Adaptable Solutions
Driving Your Success
Agenda

Marriage of Toll and ITS Technology

- 3M and Federal Signal Technologies (FST)
- The ITS Ecosystem
- Electronic Vehicle Registration (EVR) – “The Path Forward”
Acquisition of Federal Signal Technologies Complete

**Interoperable AVI Technology**
- Passive 6c RFID Tags
- Multi-Protocol Readers

**Classification & Enforcement**
- Vehicle Classification
- ANPR Camera/OCR
- Digital Validation
- Branch Fulfillment Services

**Back Office Software**
- Toll Account Management
- Violation Processing
- DMV Records Management Integration Services

**Enabling Interoperable and Efficient All Electronic Tolling**
What is ITS?

- Applications
  - Congestion Mitigation
  - Travel Time Analysis
  - Collision Avoidance
  - Travel Guidance
  - Road Condition Monitoring
  - Bridge De-Icing
  - Traffic Signal Control
  - Signal Pre-emption
  - Intelligent Parking
  - Electronic Payment & Pricing
  - Transit Management
  - Commercial Vehicle Operations
  - Etc. etc. etc.

- Technologies
  - RFID (multiple “flavors”)
  - DSRC (multiple “flavors”)
  - GPS
  - Camera Technology (CCTV & ALPR)
  - Mobile Phone (hardware and transmission standards e.g. “3G”)
  - Vehicle integrated technologies
  - Driver feedback signs
  - In-vehicle signage
  - Predictive Analytics and other Value Added data processing techniques
  - Vehicle Identification and Classification
  - Multiple sensor technologies
  - Etc. etc. etc.
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*It's all very complicated, but the **motorist** is key*
Simplified ITS Model

- Gather Relevant Data
- Add Value to Data (Make it “Intelligent”)
- Feed Intelligent Data back to Motorist (Real Time)

Process **MUST** Focus on a Customer Problem!
The Good News

- Toll Already Has:
  - Sensor Technologies (transponders, cameras, loops, etc.)
  - Data Processing Capabilities (transaction processing)
  - Credibility/Experience in Transportation Management
  - Deployed, working systems

- Toll Can Enable ITS by Accelerating Adoption of Existing Technologies

Toll is Already a Recognized ITS Leader Today
The Challenge

- Interoperability (EZPass is a great model)
  - Technology
  - Business Rules/Processes
- Requires New Partnerships and Business Models
  - Toll can be an insular industry
- Complex Set of Stakeholders with Changing Needs

If Toll Doesn’t Lead, Some Other Industry Will
The Path Forward – Transportation Account

- Stakeholder Management!
  - ITS Is an Incredibly Complex Ecosystem with Many Powerful Stakeholders
  - Critical Stakeholders Include:
    - DMVs
    - DoTs
    - Public Safety
    - Government (multiple levels)
  - Goal: Motorists WANT transponders in vehicle!
Example: Electronic Vehicle Registration

- Vehicle Credential Enforcement
  - Identify and Capture Non-Registered Vehicles
  - Counterfeit Plate or Registration Documents
  - Identify Stolen Vehicles
  - Verify Technical Inspection / Emission Requirement

Value Proposition to Customer:
Enhanced Revenue Collection for Motor Vehicle Agency
Example: Electronic Vehicle Registration

- **Components**
  - In-Vehicle RFID Enabled “3rd License Plate”
  - Works With Existing RFID Reader Technology
  - ALPR Camera Back-Up System

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*Deploy Low-Cost AVI Technology in Every Vehicle*
Summary

- ITS Technology Exists Today
  - Toll Should Drive AVI Solutions (Tag & Plates)

- Applications Will be Driven by Customer Needs

- Path Forward Requires Managing New Stakeholder Groups

- Electronic Vehicle Registration is Most Logical Place to Start

**Toll Well Positioned to Lead ITS Revolution**