ITS Applications for Rural Transit Systems

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Agenda

- Definitions
- Applications
- Analysis
- Systems in Use
- Alternatives
- Summary
Definitions

- Actual Vehicle Location (AVL)
- Automated Transportation Systems (ATS)
- Customer Interface (CI)
- Common Operating Picture (COP)
- Dynamic Message Signs (DMS)
- Global Positioning System (GPS)
- Intelligent Transportation Systems (ITS)
- Transit Signal Priority (TSP)
- Vehicle Infrastructure Integration (VII)
Applications

Applications vary based on user and operator preference, capital and operating costs, staff experience/capabilities, and policy maker opinion. Communication systems available to the operator and user also limit system application.
Successful Systems in Use

• Driver initiated information
• Actual Vehicle Location
• SatCom Computer Aided Dispatch
• Text Messaging Systems
• Ticket Reading & Issuing Machine
• Dynamic Message Signs
• Transit Signal Priority
• Automatic Data Input
Technology Integration Challenges

- Card-based fare collection systems (Smart Card Technology)
- Automatic Data Exchange with Farebox
- Headsign Integration
- Video Surveillance Integration
Analysis

New technology makes ITS viable for rural transit providers. Low system costs and ease of operation allow even the smallest public transportation systems to incorporate ITS components into their operations.
Maximizing Integration

• Component integration that works:

Source: http://www.advantech.com/
Expectations

• User
  – Easy access to information
  – Accurate information
  – Reliability (available when needed)

• Provider
  – Low cost (purchase and operation)
  – Ease of use/trainability
  – Reliability
  – Easily justifiable to policy makers
  – Customer satisfaction
Summary

• ITS solutions provide opportunities to the unique operating environment of rural transit systems.
• Technological limitations outside of the transit system limit applications.
• Bottom line - Using the right ITS solutions can increase ridership.
Questions