Advancing Safety Through Innovation

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Jeffrey Onizuk
Intelligent Transportation System Joint Program Office
U.S. Department of Transportation (USDOT)
Multi-Faceted Federal Actions To Improve Safety

Data Sources: National Highway Traffic Safety Administration
A system defined by integrated communications & information technology

Advanced Transportation Management & Operations
- NextGen Air Traffic Control
- NG9-1-1 & AACN
- Integrated Corridor Management
- Bus-Rapid Transit
- Dynamic Message Signs

Vehicle-to-Vehicle/Infrastructure Communications
- Motor Vehicle Collision-Warning Systems
- Positive Train-Control
- Signal Phase & Timing
- Dynamic Pricing

Remote Sensing & Robotic Applications
- Robotic Inspection of Roads & Bridges
- Self-Sensing Materials
- Prototype Autonomous Vehicles
- Wireless Motor Carrier Inspections

Real-Time Travel Information
- Transit Arrival/Departure Times & Geolocation
- PNT-Enabled Navigation & Route Planning
- Real-Time Maritime Cargo Tracking

ICT Affecting Transportation & Travel
Toward a Data-Driven Transportation Environment

Real-Time & Static Data

Mobile Wireless Devices
Travel & Route Planning
Incident Notification/Warning
Convenience Services

PNT Systems
Tethered Products/Services
Active Safety Systems & Devices
Incident Response

Transportation/Transit Apps for Managers, Operators & Users
Actionable Information
Performance Measurement
Transportation Management

V2X-capable Vehicles & Infrastructure
DSRC
SPAT
Crash Avoidance Systems
Emerging Safety Applications for Transportation

- **DSRC-based vehicle-to-vehicle and vehicle-to-infrastructure communications technology**
  - Interoperable “connected vehicle” platform meeting minimum standards for collision avoidance capabilities
  - Positioning, speed and other time-critical data communications are secure, anonymous and free from spectrum interference
  - Supports innovation, including automation and multi-modal applications (i.e. bicycle and pedestrian safety and services)

- **Automated vehicles and operations**
  - Platooning and other automated benefits continue to mitigate limitations of human-operated vehicles
  - Systems enabled by real-time data for enhanced incident response and management
U.S. DOT Research & Implementation Priorities

- **2015 Connected Vehicle Pilots Deployment**
  - Partner with communities, academic research programs and industry to test DSRC-based safety communications and other applications
  - Currently seeking proposals for proof-of-concept for automation applications
Key Priorities: Education & Workforce Development

- U.S. needs a multi-disciplinary transportation workforce capable of meeting the demands of the 21st Century

- University Transportation Centers (UTC) Program is a vital federal partnership with leading academic transportation research institutes
  - Sponsors research on safety and other national transportation priorities
  - Educates the next generation of transportation thought leaders
  - Promotes tech transfer

- U.S. DOT’s Intelligent Transportation Systems (ITS) program offers technical assistance resources to support developers and early adopters
  - Webinar series and workshops on tools and best practices for implementation
  - Knowledge resources, including a research data exchange for deployment and a cost-benefits database
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