Next Generation ITS Transit Technologies - USDOT Perspective

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Next Generation Surface Transportation

Intermodal + Connectivity

Drivers/Operators

Infrastructure

Vehicles and Fleets

Wireless Devices
Safety is #1 Priority

One Tragedy Too Many...
On November 4, 2010, a city bus struck two young brothers, 10 and 12 years old at around 7pm. The pair was crossing a street when the bus turned left, striking the two children in the crosswalk. The younger brother died from injuries.
Transit Safety Scenario #1 – Pedestrians vs. Turning Buses

Pedestrian Warning Application for Transit Vehicles

Option 2

NOTE:
Option 1—This option includes sending an alert when the crosswalk signal has been activated.

Option 2—This option includes the use of a pedestrian detection system to detect the presence of a pedestrian in the crosswalk.

Drawing not to scale
Transit Safety Scenario #2 – Right-Turn In Front Crashes

Vehicle Turning Right in Front of a Transit Vehicle

DRAWING NOT TO SCALE
Greater Mobility through Connectivity

Real-time Data Capture and Management

Data Environment

Vehicle Status Data
Infrastructure Status Data
Weather Data
Truck Data
Transit Data

Dynamic Mobility Applications

Reduce Speed 35 MPH
Weather Application
Transit Signal Priority
Real-Time Travel Info
Fleet Management/Dynamic Route Guidance
Signal Phase & Timing Adjusts Real-Time Conditions
Safety Alerts and Warnings

U.S. Department of Transportation
Sample Short-Term Mobility Applications

- Dynamic Transit Operations
- Connection Protection
- Dynamic Ridesharing
- Smart Evacuation
Longer-Term Visions

• Holistic Journey
  • “first mile” & “last mile”
  • all modes, including air travel, all the time
• Integrated Transportation Intelligence
  • real-time and archived info
  • integration with common tools, such as calendars
• From V2V to J2J Communications
  • jetpacks
For More Information.....