
Background

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October 21, 2009

T3 Webinars are brought to you by the ITS Professional Capacity Building Program (ITS PCB) at the U.S. Department of Transportation’s (USDOT) ITS Joint Program Office, Research and Innovative Technology Administration (RITA)
The Problem

• AVL/CAD systems generate large quantities of data
  – Dispatchers do not have sufficient time to digest the data for decision making in a normal operating environment
  – Dispatchers are unable to recognize patterns of operational problems
  – Available data and AVL/CAD capabilities are not fully utilized
The Problem (continued)

Late!
Early!
Off Route
Malfunction
ALARM!

HELP!
Where is the nearest replacement bus?
Do we have extra drivers?
How can I fix each problem?
What are the impacts to later service?

What is causing these problems!
Has there been an accident?
The Solution -- TODSS

- Develop enhanced capabilities and tools to help dispatchers and field supervisors:
  - Identify and prioritize problems as they occur
  - Make decisions to resolve operational issues before they become problems
  - Manage problems or incidents as they arise
  - Restore service with minimal disruption to the transit system
Resulting Activities

• FTA and ITS JPO launched an effort to help develop TODSS:
  – Met with transit agencies to discuss problems
  – Conducted workshops with transit agencies and AVL/CAD vendors to discuss issues, needs, and recommended actions
  – Worked with the industry to developed TODSS concept and core requirements, which:
    ▪ Identify and prioritize service disruptions
    ▪ Recommend options for restoring service
    ▪ Available at: http://ntl.bts.gov/lib/jpodocs/repts_te/13964.html
  – Conducted a competitive procurement to develop a prototype TODSS employing the core functional requirements
    ▪ Awarded project to Pace Suburban Bus System in 2006
Core Functional Requirements

- Provide for a common understanding between vendors and agencies concerning TODSS
- Help vendors reduce the cost of customization
- Help agencies with procurement specifications
- Solve problem of AVL/CAD data overload for bus dispatchers