Meridian / PFS
MDSS Overview

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Solid Scientific Foundation

- **MPower™** weather forecasts
  - Ensemble-based
  - Meteorologist edited

- **HiCAPS™** pavement forecasts
  - Sophisticated Mass / Energy balance model

- Enhanced with **PFS MDSS Modules**
  - Validated with intensive field observation studies
Range of Solutions

- **Web-Based MDSS**
  - Offers agencies a simple pathway to full MDSS implementation

- **PFS MDSS**
  - Provides full-featured MDSS functionality

- **In-Vehicle MDSS**
  - Provides route-specific forecasts, recommendations and radar back into the truck
Web MDSS Solutions

- Provides an easy step up from the traditional maintenance weather service by adding maintenance recommendations & expected results
PFS MDSS

- Integrates past, present & future maintenance actions, weather, and road condition reports
  - Can function with MDC/AVL systems
- Adheres to resource constraints
- Dynamic & ‘standard practices’ recommendations
- Features geared toward all levels of management
- One-stop-shop concept
- Developed in concert with PFS states
Maintenance Actions

Modifications to Standard Practices

Results Expected from Proposed Treatment

Propose Alternative Treatment

'Optimal' Treatment & Expected Results

Results Expected from Proposed Treatment

Road Condition Observations / Analyses

Resources Used / Available

BLUE: Forecast / Theoretical

RED: Real-Time / Actual

BLACK: Applies to Both

SOLID: Automatic or Semi-Automatic Process

DASHED: User-Driven Process

High Resolution Gridded Weather Forecast Database

High Resolution Gridded Weather Observations Database

Maintenance Practices and Activities Databases

Roadway & Environment Characterization Database

Road Condition Analysis & Forecast System (RCAF)

MDSS Processing & Integration System

Observed & Analyzed Roadway State Databases

Available Resources Database

RWIS

Resources Used / Available

ROAD Condition Observations / Analyses

'Optimal' Treatment & Expected Results

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SOLID: Automatic or Semi-Automatic Process

DASHED: User-Driven Process
Provides an Integrated ‘Situation Display’ with Drill-Down and Looping Capabilities

“One Stop Shop” Concept
Integrates Past, Present, & Future Weather & Road Conditions and Maintenance Actions
Recommendations generated dynamically by MDSS or using customizable best practices
In-Vehicle MDSS

Two way data flow maximizes value of MDC/AVL systems