Slide 1

UTCS
Unified Train Control System

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June 3, 2009

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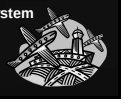
UTCS – What is it?

- **Unified Train Control System**
- **A Traffic Control system that safely and efficiently coordinates -**
  - **Train movement**
  - **Work activities by maintenance employees**

- **Analogous to an Air Traffic Control system**



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UTCS – Two Components

- **Base Dispatching System**
- **Advanced Movement Planner**

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UTCS – Base Dispatching System

- Integration
  - Dispatch sub-systems
    - Traffic Control
    - Track Warrant Control
    - Train Clearance
    - Train Sheet
  - NS system feeds
    - TYES (Yard & Inventory Management)
    - Crew Management
    - Train Service Register
    - GPS Location Information
    - Positive Train Control

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UTCS – Base Dispatching System

- Unification
  - One system supporting distributed dispatching
  - Processes standardized
  - Trains flow seamlessly
- High Availability/Disaster Recovery
  - Hardware
    - Two server sites
    - Internal redundancy
    - 99.99% availability
  - Dispatch from anywhere

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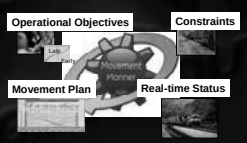
UTCS – Advanced Movement Planner

- Advanced Movement Planner
  - Think "Deep Blue"
  - An optimized Network Solution



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UTCS – Movement Planner (MP)

- Dispatching Today
  - Planning and execution by dispatcher
  - Short time horizons
  - Dispatcher territory centric

- Dispatching with MP
  - System develops plan and executes
  - Eight hour planning window
  - System planning across territories

- Factors
  - Infrastructure, Resource Constraints
  - Operating Plan
  - Operational Objectives
  - Schedule Adherence is the focus

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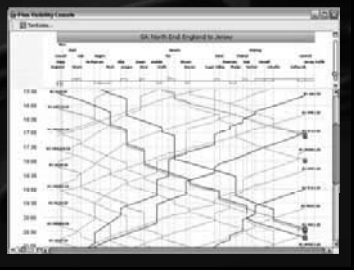
UTCS – MP Features



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UTCS – MP Field Trials

- Weekly trials
  - Georgia Division
  - Expanding focus and coverage
  - Progressively longer testing periods
  - Auto-router turned on

- Goals
  - Verify plan quality and feasibility
  - Identify usability opportunities
  - Establish users new workflow and role
  - Insight for training scenarios

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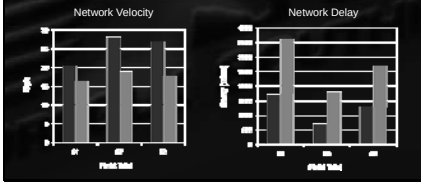
UTCS – MP Field Trials

- Great potential
  - Increased velocity
  - Reduced train delay
    - Improved on-time performance

Movement Planner
Dispatcher Alone



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UTCS – Status

- Three of the 11 divisions operating with base dispatching system
  - Georgia
  - Piedmont
  - Alabama
- In place to support the Charleston, SC to Charlotte OTC field trials
- Final stages of development for
  - Base dispatching system
  - Movement planner
- Lab and field testing of software

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UTCS – Future

- Two Path Implementation Scheme
  - Base Dispatch System
    - Central Division – July 2009
  - Movement Planner
    - Georgia Division – October 2009