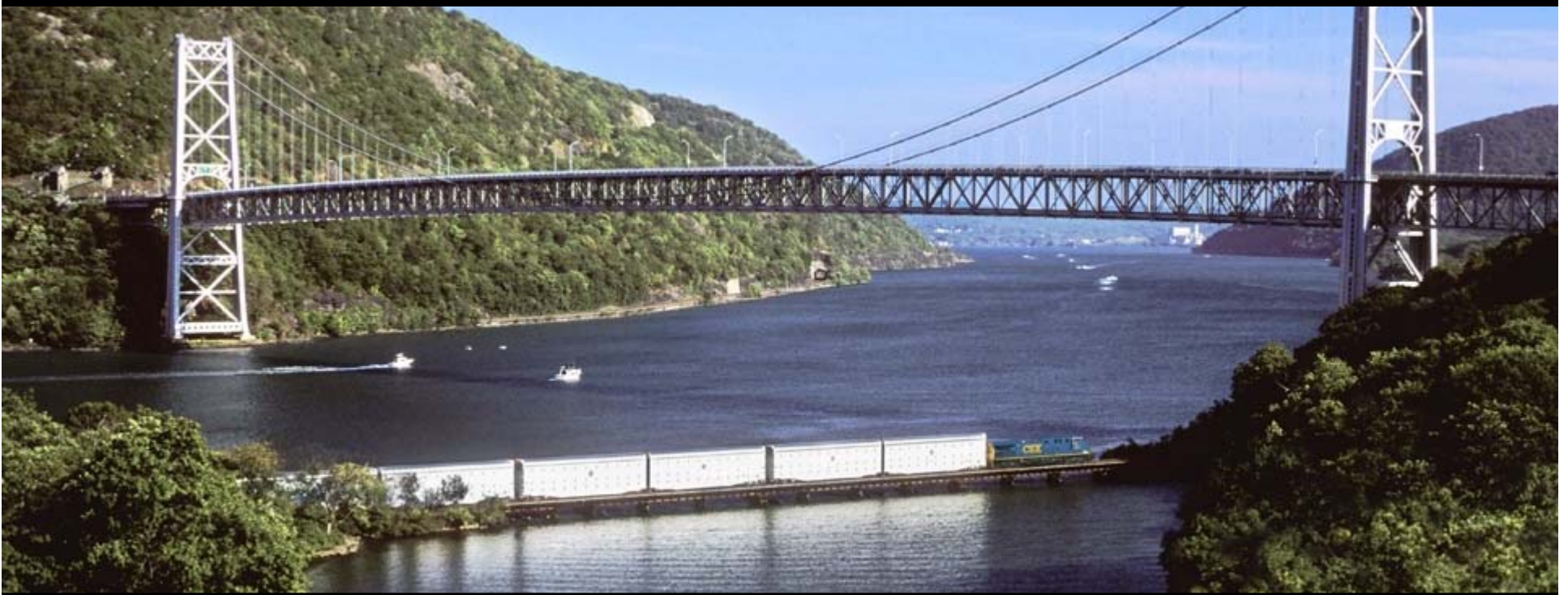


How tomorrow moves [CSX]



PTC 101
A primer for PTC at CSX

Congress mandated PTC implementation by the end of 2015

- Oct 16, 2008 - Railroad Safety Improvement Act signed into law
- July 21, 2009 – FRA Published Notice of Proposed Rule Making (NPRM)
- Jan 15, 2010 – FRA Published Final Rule
- Apr 16, 2010 - Deadline for Railroads to Submit PTC Implementation Plans to FRA
- Dec 31, 2015 - Deadline for PTC Implementation

Completing required work by 2015 is an ambitious goal

PTC legislation requires specific functionality



- PTC gauges upcoming signals, authorities, switches, operating conditions, locomotive position & speed
- PTC designed to warn engineer of need for action
- If the engineer fails to act, PTC system will engage locomotive brakes and bring train to full stop

If railroaders do their jobs correctly, PTC should never engage the brakes

Regulation requires the submission of three plans

- PTC Development Plan submitted March 24, 2010
 - Describes the PTC technology to be implemented
- PTC Implementation Plan submitted April 16, 2010
 - Describes when and where the PTC system will be implemented
 - How interoperability with class I's, commuters, and short lines will be achieved
- PTC Safety Plan required for PTC System Certification
 - Will describe how CSX will ensure the safety of the system
 - Contents include:
 - Railroad Training Plan
 - Procedures and Test Equipment
 - Operations and Maintenance Manual
 - Configuration and Revision Control Measures
 - Initial Implementation Procedures
 - Post Implementation Testing and Monitoring Procedures

Implementation Plan was approved August 24th

- PTC required on:
 - passenger routes
 - lines with one or more PIH cars and traffic greater than 5 MGT annually

- PTC Footprint
 - 3,600 locomotives
 - 10,300 wayside devices
 - 16,300 track miles (approx 76% of CSXT network)

- Requested Exclusions
 - 163 miles meeting FRA de minimis requirements (less than 100 PIH cars/yr)
 - Florida panhandle line (393 track miles) which has no passenger traffic and hasn't carried PIH since 2009

Why is PTC so challenging?

- Interoperability
- Locomotive fleet age and mix
- Wayside plant age and mix
- Equipping switches in un-signalized territories
- Scale of changes and increase in workload
- Compressed timeline
- Unproven technology
- Heavy reliance on suppliers
- Huge capital requirements

Scale of PTC investment is significant: \$1.2B



3,600 Locomotives (Road Units and Switchers)



8,500 Signals + Related Wayside Improvements



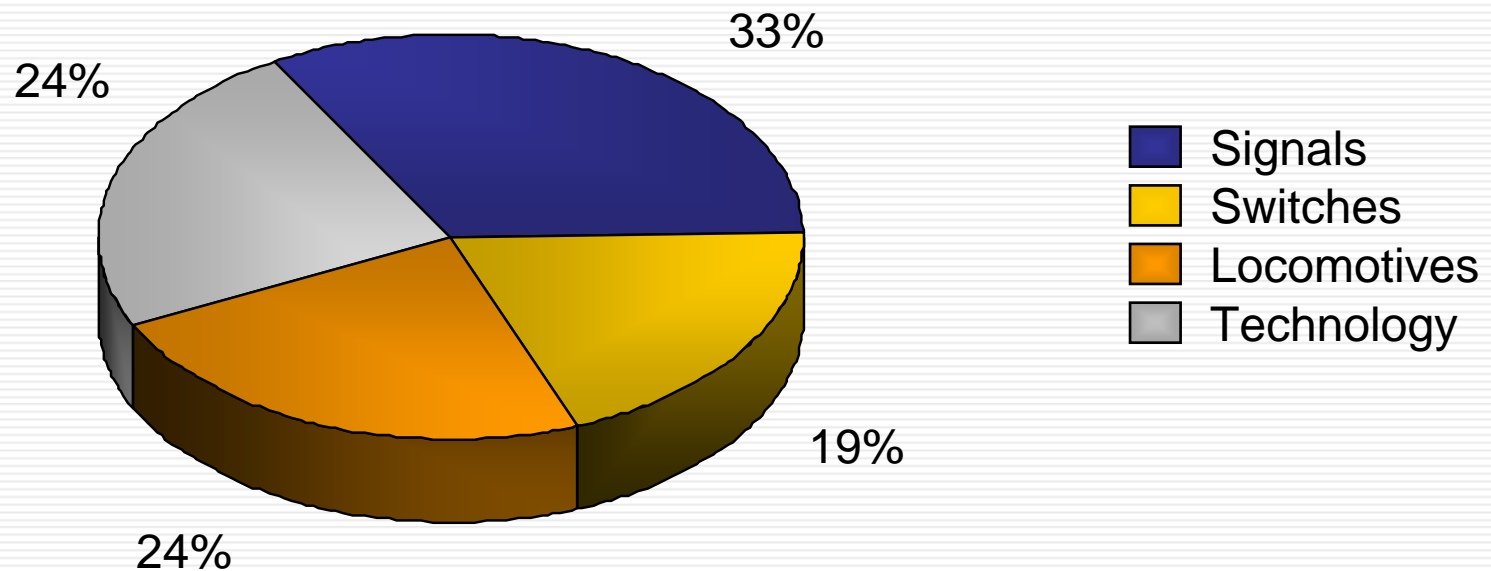
3,000 Switches (Non-signaled Territory)



Software Development, GIS enhancement, Systems Integration, Communications, etc

Wayside installations are half of PTC cost

2009-2015 PTC Investment



FRA places the cost benefit ratio for PTC at 22:1

- PTC will prevent a very small percentage of train accidents

- PTC will not prevent:
 - Track failure related accidents
 - Equipment failure related accidents
 - Grade crossing accidents

- *“FRA recognizes that the likelihood of business benefits is uncertain and that the cost-to-benefit comparison of this rule, excluding any business benefits, is not favorable” – PTC Regulatory Impact Analysis*