Communication Based Overlay Signal System Project Status

Board of Directors
Nov. 1, 2012

Background

- Issue Communications Based Overlay Signal System Design/Procure/Install Turn-key RFP - August 2010
- Awarded Prime Contact - October 2011
- Executed a Service Agreement with California High Speed Rail Authority (HSR11-04) for Federal Railroad Administration Funding – December 2011
- Issued Notice to Proceed (NTP) to Parson Transportation Group - January 27, 2012
- Executed Fiber Optic Option - April 26, 2012

CBOSS Project Requirement

Positive Train Control (Rail Safety Act 2008)

- Prevent Train to Train Collisions
- Prevent Overspeed Derailments
- Prevent incursions into established work zones
- Prevent movement through a misaligned switch

Additional Requirements:

- Enhanced Crossing Safety / Performance
- Improved Headways and Operational Flexibility
- Enforcement of Scheduled Station Stops
- Schedule Management
- Employee In Charge

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Design/Install System Turn-Key Contractor Scope of Work

- Subsystem and System Design & Integration
- Procurement of Materials and Equipment
- Installation / Testing / Commissioning
- Training, including Cab Simulator
- Backup Central Control Facility
- FRA Certification and Documentation
- Project Management
- Warranty
- Long-term Support

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CBOSS Project Solution Overview

- Interoperable Train Control Compliant Solution
- Onboard and Wayside – Incremental Train Control System Supplied by GE Transportation (Off the Shelf Product)
- Back Office Server Supplied by WABTEC
- Backup Central Control Facility with an ARINC Office System
- PTC Data Communication Network with a Fiber Optic Backbone

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Fiber Optic Network Benefits

- Immediate Benefits are for Caltrain CBOSS Project
  - Faster Data Transfer Capability between all PTC Subsystems
  - Increase Bandwidth for Greater Data Capacity
- Medium to Long Range Benefits for JPB
  - Improve Communication Reliability by Replacing Leased Lines along the Right of Way
  - Supports Numerous High Bandwidth Data Applications at Stations and JPB Facilities (Passenger Information, Security, Fare Collection)
  - Supports Future Traction Power System for Electrification
- Revenue Generation Opportunities for JPB
  - Fiber/Conduit Lease

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Contract Phasing

- Required to Support Project Funding Strategy
- Base Contract (Phase 1) – Notice to Proceed through CBOSS PTC Subsystem and System Critical Design (Includes Bond)
- Option 1 (Phase 2) – Subsystem and System Final Design, Factory Acceptance Test and Installation of Data Communication Subsystem with Fiber Optic Network Backbone
- Option 2 (Phase 3) – Remaining Subsystems and System Procurement, Installation, Testing, Training, Certification, Commissioning, Acceptance and Includes One-year Warranty.

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Phase 1 Major Accomplishments

- Completed Project Execution Planning
  - Approval of Project PEP
  - Project Baseline Schedule
  - Project Contract Deliverable Requirement List
  - Caltrain Interoperability Coordination Plan
- Prime Contract PTG Co-located at SF Caltrain Field Office
- Completed Project Preliminary Design & Approval
- Submitted Project PTC Development Plan to FRA
- Commenced Backup Central Control Facility Real Estate Search

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Phase 1 Major Accomplishments

- Met with UPRR and Other Tenant Railroads for Establishing the Interoperability Coordination Plan Process and Working Groups
- Monthly Project Reviews with CHSRA-designated Consultant
- Submitted Deliverable Packages (Tasks 1, 2, and 3) to CHSRA/FRA that are in agreement with HSR11-04
- Met with FRA/CHSRA to Discuss Project Status and Addressed FRA Comments in September 2012
- Commenced System and Subsystem Critical Design

Project Phase 1 Milestones

Description	Completion Date
Issue Notice to Proceed	Jan 2012A
Submit PTCDP to FRA	Mar 2012A
Complete Project Execution Planning	Aug 2012A
Complete Preliminary Design and Approval	Oct 2012A
FRA approval of Type Approval Variance Report	Nov 2012
Complete and Approval of Critical Design	Mar 2013

A – Actual

Project Phase 2 Milestones

Description	Completion Date
JPB Board Approval for Option 1 (Phase 2)	Jan 2013
JPB Issue NTP for Option 1(Phase 2)	Jan 2013
Complete Final Design and Approval	Sept 2013
Complete Fiber Backbone Installation	June 2014
Complete Data Communication Subsystem Installation	Oct 2014
Complete Factory Integrated System Demo	Sept 2014

Project Phase 3 Milestones

Description	Completion Date
JPB Board Approval for Option 2 (Phase 3)	July 2013
JPB Issue NTP for Option 2 (Phase 3)	Aug 2013
Commence Wayside, Cab, Office Subsystems Installation	Nov 2013
Commence Pilot Segment Testing	Oct 2014
Commence Field Integrated Testing	Jan 2015
FRA Safety Certification	Sept 2015
System in Service	Oct 2015
Final System Acceptance	May 2016

Project Total Installed Cost

Description	Turn-Key Contractor Cost	Total Project Cost
Project Planning and Procurement	0	$4.6MM
Phase 1 - Contract NTP – Critical Design	$16.3MM	$25.3MM
Phase 2 - Final Design and DCS Installation Including Fiber Backbone	$35.3MM	$51.0MM
Phase 3 - Field Installation, Testing and Commissioning through Acceptance & Warranty	$86.5MM	$150.1MM
Total	$138MM	$231 MM

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Next Steps

- JPB Award Option 1 (Phase 2) Contract for $35.3 MM - January 2013
- Issue NTP for Option 1 (Phase 2) -Subsystem and System Final Design, Factory Acceptance Test and Installation of Data Communication Subsystem with Fiber Optic Network Backbone – January 2013
- Completion of Phase 1 (Base Contract) - March 2013
- Completion of JPB-CHSRA Agreement of HSR11-04 - April 2013

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Questions?

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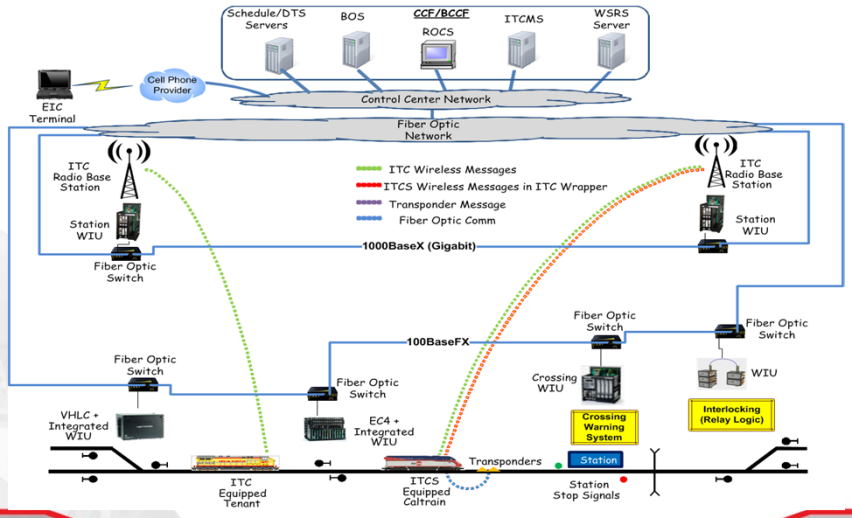
CBOSS PTC Architecture



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