Adaptive Signal Control Technology

NEITE Training Session
December 5, 2016 - 8:30 AM to 3:30 PM

DRAFT PROGRAM OUTLINE (9/20/2016)

I. Introductions and Outline for the Day (10 minutes)

II. Introduction to ASCT (20 minutes)
   a. Appropriate setting for ASCT
   b. Design Process for ASCT
   c. Major System Components (high level overview)

III. FHWA Model System Engineering Documents for ASCT Systems
   a. Overview of the Systems Engineering Process (30 Minutes + 10 Minute Break)
      i. Concept of Operation
      ii. System Requirements
      iii. Validation Plan
      iv. Verification Plan
      v. Activity: Apply Systems Engineering concepts to develop a system to watch the New England Patriots in high definition.
   b. Review sample ASCT Concept of Operation statements (45 Minutes)
   c. Review sample ASCT System Requirements statements (45 Minutes)
      i. Dependency/relationship to the Concept of Operations statements.

IV. Discussion of Commercial Off-The-Shelf ASCT Packages (90 Minutes + 1 Hour Lunch Break)
   a. SCOOT
   b. ACS-Lite
   c. SCATS
   d. InSync
   e. SynchroGreen

V. Custom ASCT solution - Using all the features of today's controllers (50 minutes + 10 minute break)
   a. Overview of communication networks
   b. Peer-to-Peer controller communication
   c. Overview of the High-Resolution data collection capabilities of today’s controllers
   d. Putting it all together: Framingham’s Hybrid-Adaptive System

VI. Costs associated with ASCT (20 minutes)
   a. Design (System Engineering, Modeling?, Plan Prep)
   b. Installation (including system verification and validation)
   c. Operations
   d. Maintenance

VII. Questions/Discussion/Wrap-up (30 Minutes)