

Redefining the Path to ITS Standards Training

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ITS PCB Strategy

Vision: To develop an ITS profession that leads the world in research, deployment, and innovative use of ITS technologies.



Legislative Basis

SAFETEA-LU

SEC. 5303. GOALS AND PURPOSES

(b) PURPOSES-The Secretary shall implement activities under the intelligent system transportation program to, at a minimum

(7) develop a workforce capable of developing, operating, and maintaining intelligent transportation systems;

TEA-21

SEC. 5203. GOALS AND PURPOSES

(b) PURPOSES-The Secretary shall implement activities under the intelligent system transportation program to, a minimum

(5) develop a workforce capable of developing, operating, and maintaining intelligent transportation systems



Develop the ITS Profession

- Design baseline ITS curriculum and/or model ITS programs
- Determine core competencies for the ITS professional
- Facilitate the incorporation of ITS training into academic programs
- Promote a certification equivalent to PTOE, PMP, INCOSE etc.
- Promote ITS workforce development



ITS STANDARDS TRAINING PROGRAM

Overview of ITS Standards

www.standards.its.dot.gov

- ITS-JPO is tracking 98 ITS Standards
- Maintaining an awareness of deployment and testing activities
- Eight ITS Standards have been developed using a Systems Engineering Process (SEP)
 - Standards include user needs, requirements, needs to requirements and requirements to design matrices, and design solutions
- The ITS community needs training and assistance deploying ITS Standards
- Since 2005, limited ITS Standards training has been offered
- The emphasis of the proposed training is to promote the use of all ITS Standards



Defining a New Training Program





- Involve industry stakeholders to ensure technical content meets the training needs
- Create training in a modular format to provide flexibility for trainees
- Create modules with different audiences in mind

Level I	<ul style="list-style-type: none">• Decision makers• Project managers
Level II	<ul style="list-style-type: none">• Project managers• Engineering staff
Level III	<ul style="list-style-type: none">• Engineering staff• Developers/coders

- Establish a Technical Advisory Committee (TAC)
 - Provides guidance and input to module development
 - Includes state and local public agencies, FHWA division offices, ITS subject matter experts, and professional development experts
- Deliver training via enhanced webinars, blended learning sessions, or classroom style
- Archived webinars to be available for the ITS community







Training Framework

	Acquisition Training	Testing Training
ITS Standards with Systems Engineering Content		
ITS Standards without Systems Engineering Content		

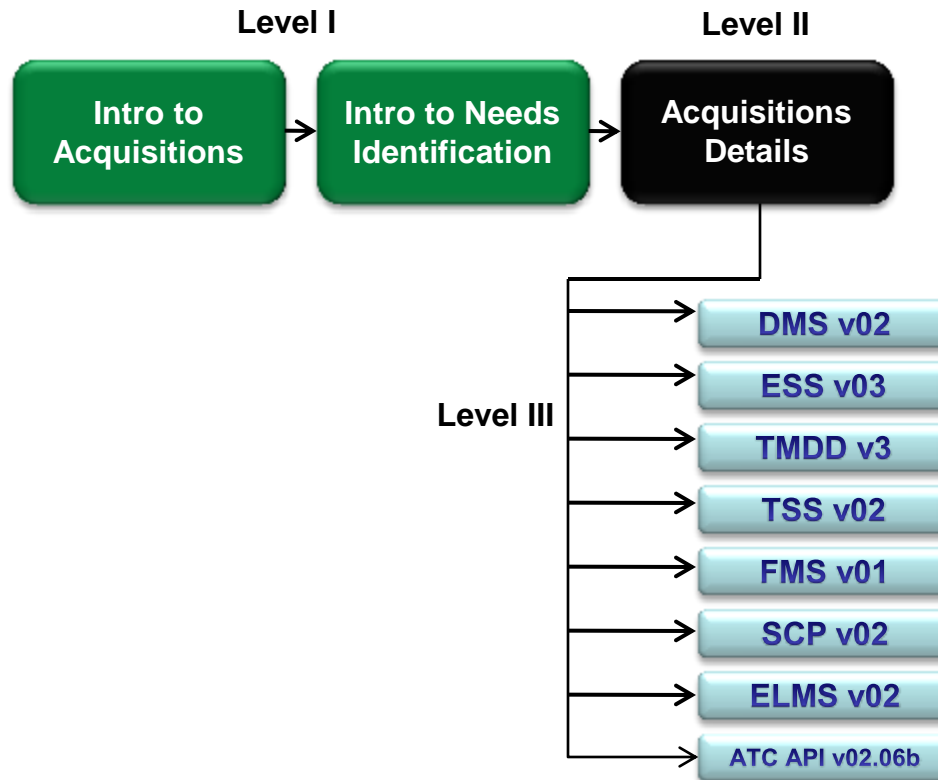


Training Framework

	Acquisition Training	Testing Training
ITS Standards with Systems Engineering Content		
ITS Standards without Systems Engineering Content		

Acquisition Training for SEP-Developed ITS Standards





Properly acquired ITS Standards products assist in testing



- This applies to the following ITS Standards:
- NTCIP 1203 v02 DMS, NTCIP 1204 v03 ESS, ITE TMDD v3, NTCIP 1209 v02 TSS, NTCIP 1210 v01FMS, NTCIP 1211 v02 SCP, NTCIP 1213 v02 ELMS, ITE ATC API v02.06b

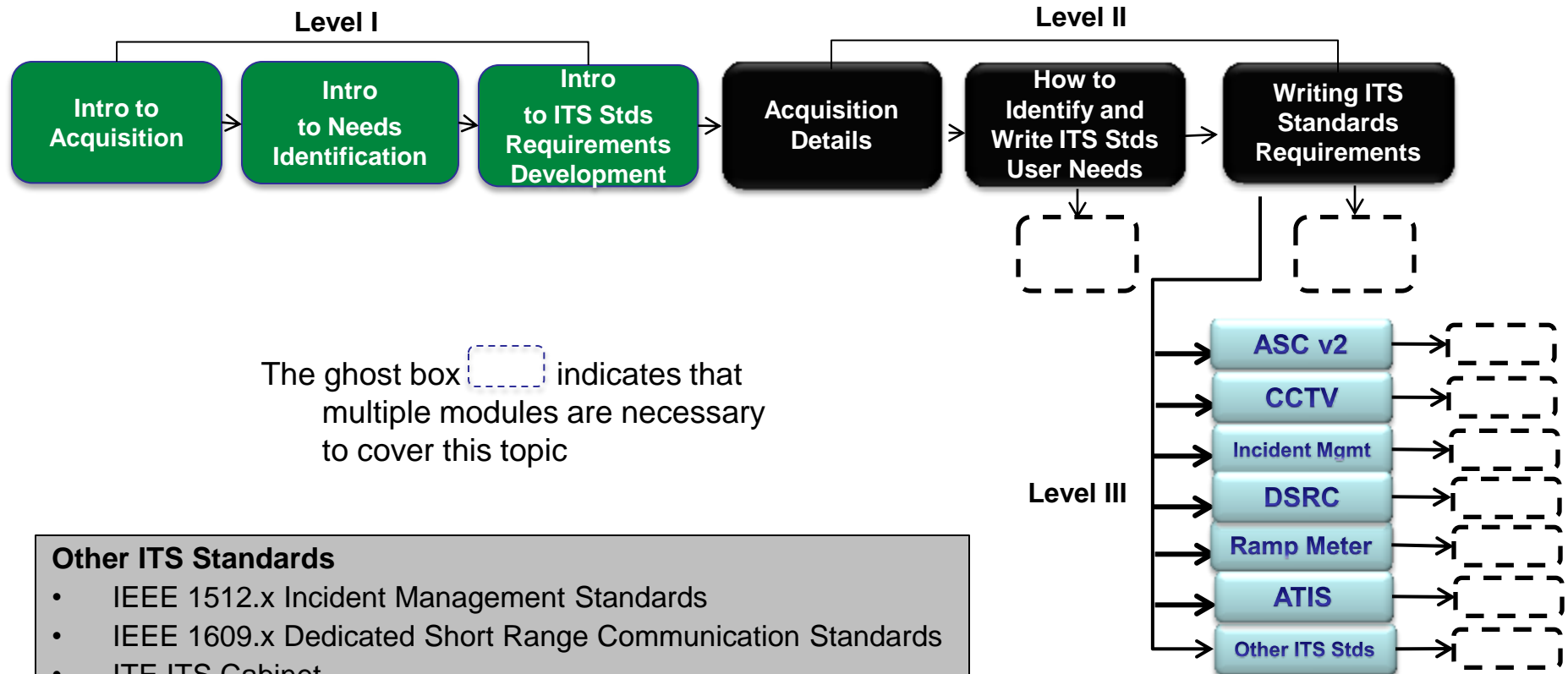



Training Framework

	Acquisition Training	Testing Training
ITS Standards with Systems Engineering Content		
ITS Standards without Systems Engineering Content		



Acquisition Training for Standards (No SEP Content)



The ghost box  indicates that multiple modules are necessary to cover this topic

Other ITS Standards

- IEEE 1512.x Incident Management Standards
- IEEE 1609.x Dedicated Short Range Communication Standards
- ITE ITS Cabinet
- ITE Advanced Transportation Controller 5.2
- NTCIP 1206 v03 Data Collection and Monitoring (DCM)
- NTCIP 1207 v02 Ramp Meter Control
- SAE J2735 DSRC Message Sets
- SAE 2354 Advanced Traveler Information System (ATIS)



Training Framework

Training modules will be developed similar to the acquisition modules.

	Acquisition Training	Testing Training
ITS Standards with Systems Engineering Content		
ITS Standards without Systems Engineering Content		







ITS Standards Testing Module Examples

ITS Standards with SEP-Developed Test Procedures	ITS Standards without Test Procedures
Introduction to ITS Standards Training	How to Develop Test Cases for Your ITS Standards Test Plan
How to Write an ITS Standards Test Plan	How to Develop the Test Procedures for Your ITS Standards Test Plan
How to Develop Testing Design Specifications for Your ITS Standards Test Plan	Applying Your Test Plan to the NTCIP 1202 Actuated Signal Controller Standard
Applying Your Test Plan to the NTCIP 1203 Dynamic Message Sign Standard	Applying Your Test Plan to the NTCIP CCTV Standards
Applying Your Test Plan to the NTCIP 1204 Environmental Sensor Systems Standard	Applying Your Test Plan to the ITE Traffic Management Data Dictionary (TMDD)



A New ITS Standards Training Program

ITS Standards Acquisition
and Testing Training...

	Acquisition Training	Testing Training
ITS Standards with Systems Engineering Content		
ITS Standards without Systems Engineering Content		

Developed for multiple audiences...

Level I	<ul style="list-style-type: none">• Decision makers• Project managers
Level II	<ul style="list-style-type: none">• Project managers• Engineering staff
Level III	<ul style="list-style-type: none">• Engineering staff• Developers/coders

Promoting the use of ITS Standards that support the deployment of interoperable systems



Year One Development

18 Modules covering:

- ITS Standards Overview
- Acquisition Core for SEP and non-SEP systems
- Acquisition Standard Specifics
 - Dynamic Message Signs (DMS)
 - Environmental Sensor Stations (ESS)
 - Traffic Management Data Dictionary (TMDD)
- Testing Core for SEP
 - DMS
 - ESS



Benefits of Training Program

- ITS Standards Training
 - Focuses training on Systems Engineering principles
 - Walks the user through the use of the standards from acquisition through testing
- Flexibility of Delivery Mechanisms
 - Interactive webinars
 - Blended learning
 - Classroom options
 - Train as needed
 - Individually
 - Group setting



Contact Information

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For More Information...

Please visit the following websites:



www.its.dot.gov

www.standards.its.dot.gov

Or follow us on:



http://www.its.dot.gov/rss_feed.htm



<http://www.its.dot.gov/exit/twitter.htm>

