National Transportation Communications for ITS Protocol (NTCIP) Update
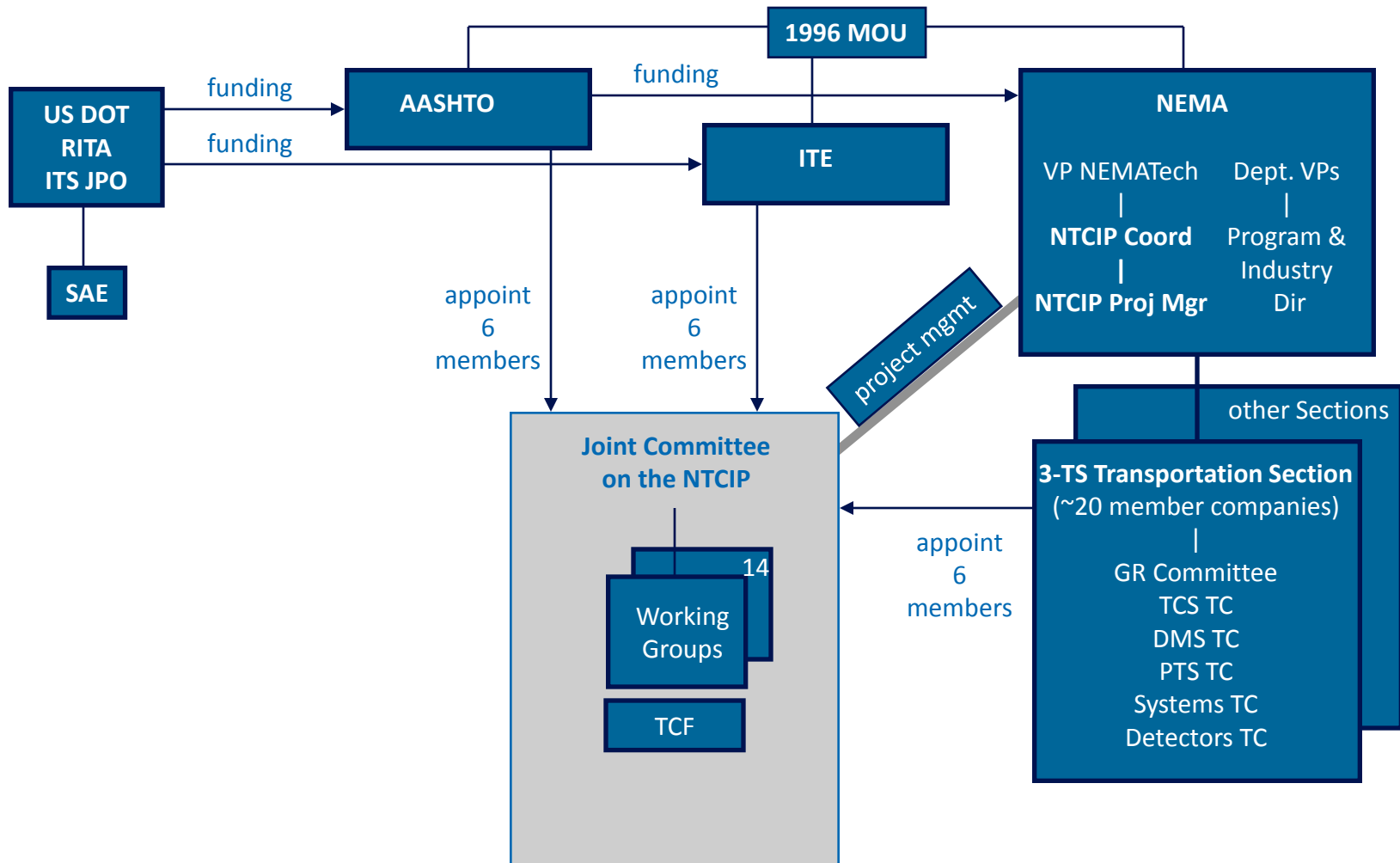
Presented by

Bruce Schopp

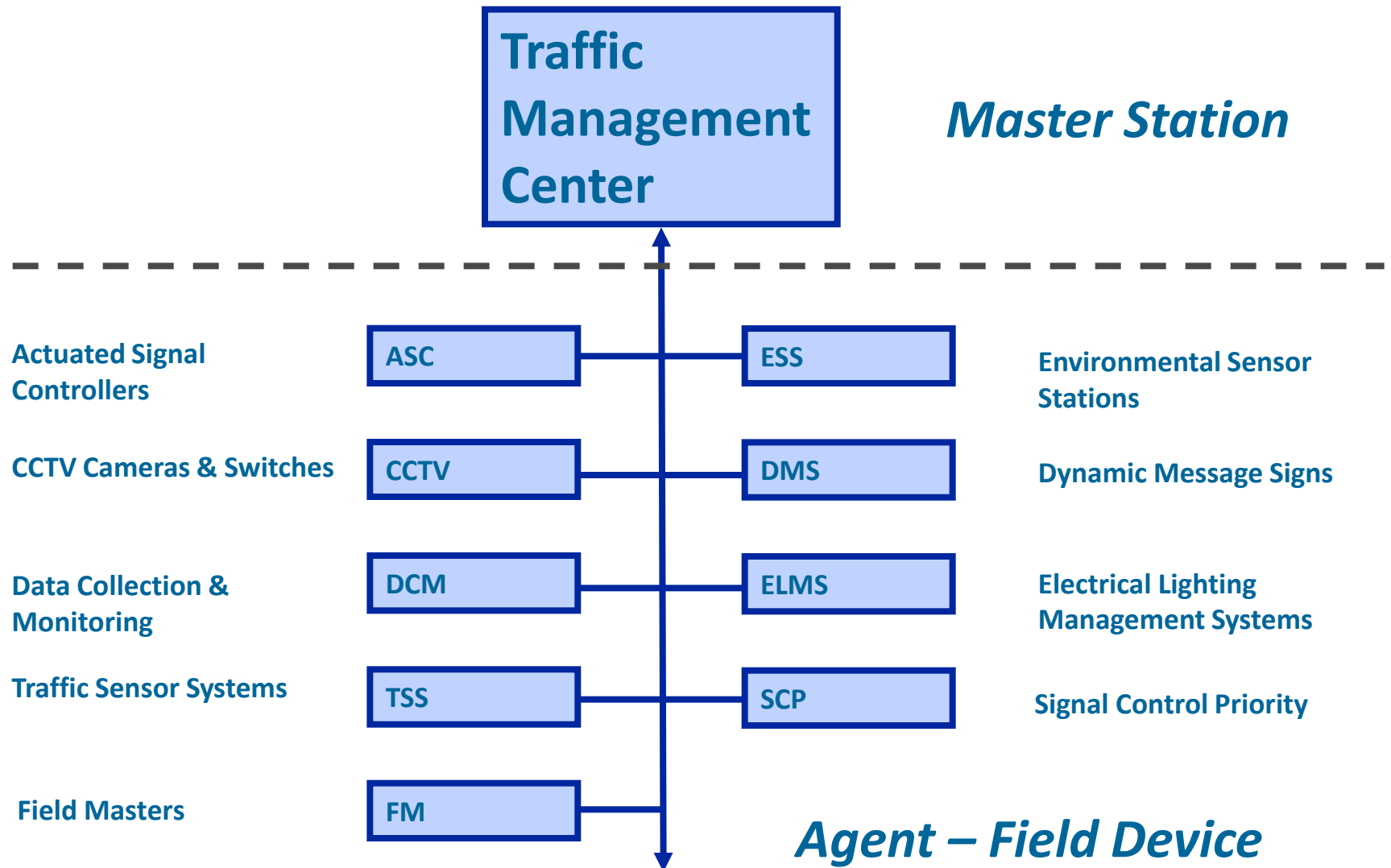National Electrical Manufacturers Association

ANSI – ESO Conference: Transatlantic Standardization Partnerships
on E-Mobility/Electric Vehicles, Energy, and Security

October 12, 2011

NTCIP Project Organization

1996 MOU

US DOT
RITA
ITS JPO

—funding→ AASHTO —funding→ NEMA

—funding→ ITE

SAE

NEMA
VP NEMATech   Dept. VPs
| |
NTCIP Coord   Program &
| Industry
NTCIP Proj Mgr   Dir

appoint 6 members

appoint 6 members

project mgmt

other Sections

Joint Committee on the NTCIP

14

Working Groups

TCF

appoint 6 members

3-TS Transportation Section
(~20 member companies)
|
GR Committee
TCS TC
DMS TC
PTS TC
Systems TC
Detectors TC

NTCIP Center-to-Field Standards

Traffic Management Center — Master Station

Actuated Signal Controllers	ASC	ESS	Environmental Sensor Stations
CCTV Cameras & Switches	CCTV	DMS	Dynamic Message Signs
Data Collection & Monitoring	DCM	ELMS	Electrical Lighting Management Systems
Traffic Sensor Systems	TSS	SCP	Signal Control Priority
Field Masters	FM		Agent – Field Device

Navigating C2F Framework
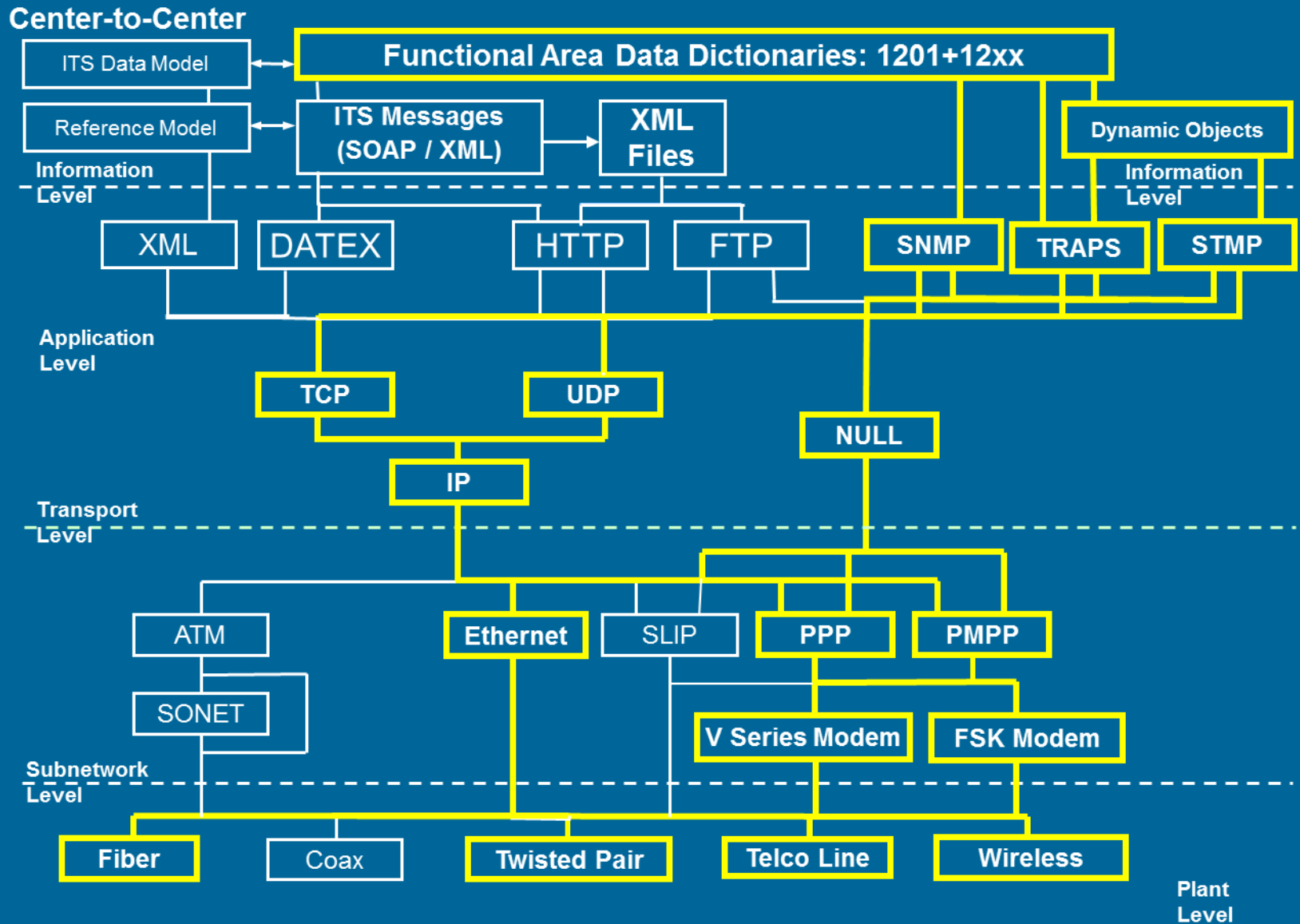
NTCIP Standards Framework
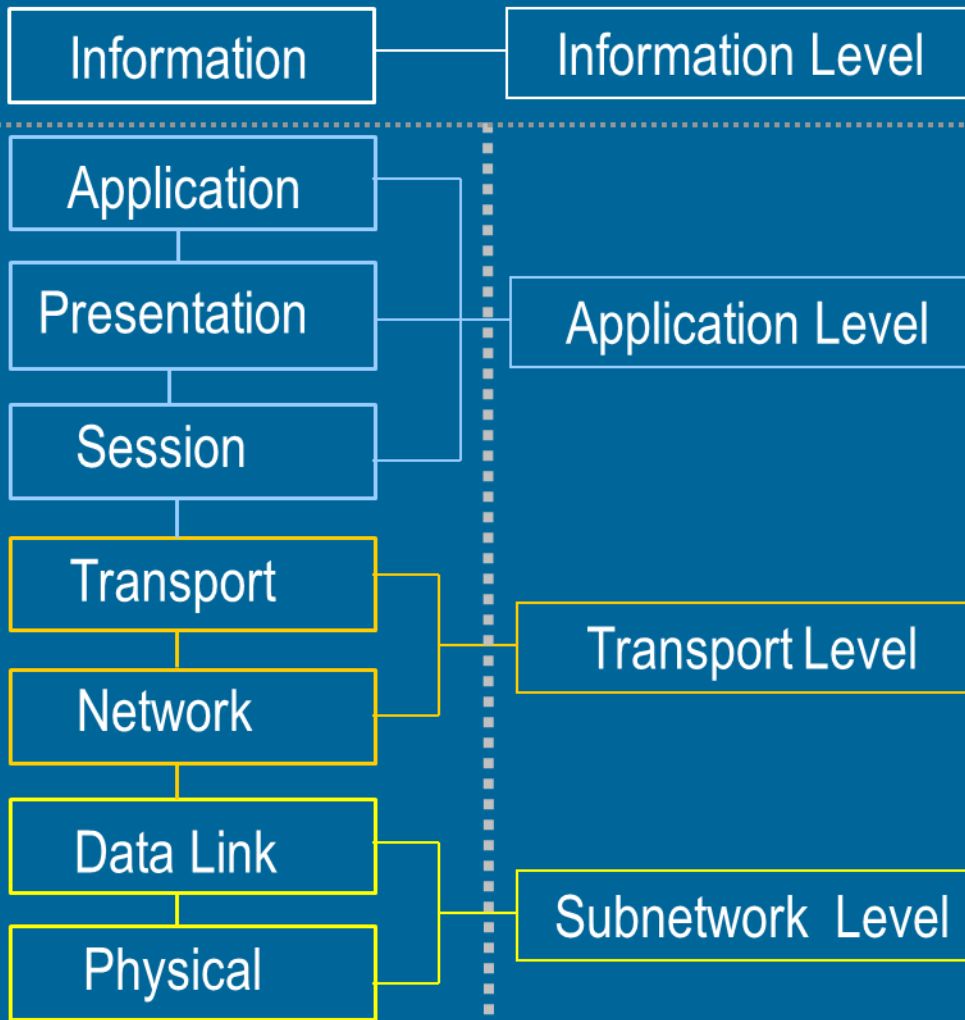
OSI Model	Level	Standards
Information	Information Level	**Subject matter data dictionaries** **Such as NTCIP 1201, 1202, etc.**
Application / Presentation / Session	Application Level	**NTCIP 2301-AP-STMF** **Defines: STMP/SNMP** **NTCIP 1103** **NTCIP 2302-AP-TFTP** **NTCIP 2303-AP-FTP**
Transport / Network	Transport Level	**NTCIP 2201-PT-NULL TT** **NTCIP 2202-TP-INTERNET**
Data Link / Physical	Subnetwork Level	**NTCIP 2101-SP- PMPP/RS 232** **NTCIP 2102-SP-PMPP/FSK** **NTCIP 2103-SPPPP/RS232** **NTCIP 2104-SP-Ethernet**

NEMA Transportation Standards

NEMA TS 2-2003 - Traffic Controller Assemblies with NTCIP Requirements, version 02.06.

www.nema.org/stds/ts2.cfm

1998 – letter ballot to approve 1998 version and rescind 1992 version.

2001 – letter ballot to approve TS 2-1998 Amendment 1.

2008 – letter ballot to reaffirm TS 2-2003 in October 2008, successful.

NEMA TS 4-2005 - Hardware Standards for Dynamic Message Signs (DMS)

 plus TS 4-2005 Conformance Table www.nema.org/stds/ts4.cfm

NEMA TS 5 – DRAFT – Portable Traffic Signal Control Systems

NTCIP Country Deployment

Canada – strong for signs

South Africa – Strong NTCIP (Prepared for 2010 World Cup)

Johannesburg Road Agency

- *All NTCIP signs, upgrade of 1,800 traffic controllers to NTCIP*

New Zealand -- *Competitive sign industry – Multiple NTCIP Suppliers*

China – Beijing Traffic System, Hong Kong Tunnel

Venezuela – Signs

Greece – Olympic Traffic System